



SAN FRANCISCO PLANNING DEPARTMENT

Executive Summary Mission Rock Mixed-Use Project CEQA Findings Planning Code Text Amendment Zoning Map Amendment Design Controls Development Agreement

HEARING DATE: OCTOBER 5, 2017

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Date: September 21, 2017
Case No.: **2013.0208 ENV/PCA/MAP/DVA**
Project Name: **Mission Rock (aka Seawall Lot 337 / Pier 48)**
Existing Zoning: Mission Bay Open Space (MB-OS); M-2 (Heavy Industrial) Zoning District;
Mission Rock Height and Bulk Districts
Block/Lot: 8719/002 and 006; 9900/048
Proposed Zoning: Mission Rock Mixed-Use District / Mission Rock Special Use District;
Mission Rock Height and Bulk District
Project Sponsor: Port of San Francisco and SWL 337 Associates, LLC
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Recommendation: **Approval with Conditions**

SUMMARY

On October 5, 2017, the Planning Commission ("Commission") will consider a series of approval actions related to the proposed Mission Rock Project ("Project"). The Commission has previously reviewed the Project as part of: 1) informational hearings on December 8, 2016; and 2) the Draft Environmental Impact Report ("DEIR") on June 1, 2017. The Commission has also heard about the Project in the context of the Southern Bayfront Strategy in informational hearings on March 9, 2017 and May 5, 2016. The following is a summary of actions that the Commission will consider at this public hearing, all of which are required to implement the Project:

1. Adoption of CEQA Findings, including a Mitigation and Monitoring Plan ("MMRP");
2. Recommendation to the Board of Supervisors to approve Zoning Map Amendments and Planning Code Text Amendments to establish the Mission Rock Mixed Use District and the Mission Rock Special Use District ("SUD") and to make conforming changes to Planning Code text regarding height and bulk controls and re Article 9 for Parcel P20;

3. Approval of the Design Controls (“DC”); and
4. Approval of the Development Agreement (“DA”)

Staff from the Planning Department, the Office of Economic and Workforce Development (OEWD), Port of San Francisco (Port) and other agencies have worked extensively with the developer, Seawall Lot 337 Associates, LLC, to formulate a comprehensive plan, entitlement structure and implementation program for the site.

The Project outlines a vision to reintegrate and restore the 28.1-Acre Site into the fabric of San Francisco to create an active, sustainable neighborhood. As set forth in greater detail in the Design Controls, Mission Rock will provide a concentration of City life and waterfront activity for the larger Mission Bay district, the Central Bayfront, SoMA and the City, providing a place for people to live and work in a mixed use, urban neighborhood. It will transform a surface parking lot into a neighborhood that prioritizes pedestrians, bikes and transit and water edge access. The Project will also deliver major new public spaces, including, among others, China Basin Park, a year-round regional facility that will serve greater San Francisco and the Bay Area community and Mission Rock Square, a focal point of the overall district, transitioning from the larger blocks of surrounding Mission Bay to an intimate scale similar to other San Francisco neighborhood spaces. It is proposed as a major civic space, with active space along its perimeter. The Project includes a re-imagined Terry A Francois Boulevard that supports an active working waterfront connects the Blue Greenway to China Basin Park and the Embarcadero, and establishes uninterrupted public waterfront access from Fisherman’s Wharf to Candlestick Point.

PROJECT DESCRIPTION

As envisioned, the proposed project would entail development of a mixed-use, multi-phase project at Seawall Lot 337 and Parcel P20, rehabilitation and reuse of Pier 48, and construction of approximately 5.4 acres of net new open space, for a total of approximately 8 acres of open space on the project site. The project would include up to 2.7 to 2.8 million gross square feet (gsf) of mixed uses on 11 proposed development blocks. The mixed-use development would comprise approximately 1.1 to 1.6 million gsf of residential uses (estimated at 1,000 to 1,600 units, 40% of which would be designated as below market rate), approximately 972,000 to 1.4 million gsf of commercial/office uses, and 241,000 to 244,800 gsf of active/retail and production uses on the lower floors of each block. Additionally, the project would include up to approximately 1.1 million gsf of above- and below-ground parking (approximately 3,000 spaces) in one or two centralized garages; 100 additional parking spaces would be allowed throughout the remaining parcels on the site. Also as part of the project, 242,500 gsf at Pier 48 would be rehabilitated for industrial, restaurant, active/retail, tour, exhibition, and meeting space use. The 11 blocks on Seawall Lot 337 would be developed with building heights ranging from 90 feet to a maximum of 240 feet for the tallest building, excluding the mechanical and other accessory penthouse roof enclosures and unoccupied building tops, subject to specified standards. The project would be built in several phases.

Of the 11 development blocks, 4 are designated as primarily residential, 4 as primarily commercial development, with the remaining 3 designated as flex parcels, where either residential or commercial could be emphasized (though total buildout by use would be limited to the overall ranges above as evaluated in the EIR.)

The project would introduce a new street grid with two new rights-of-way running north-south (one a traditional street and the other a pedestrian-priority shared public way) and two new rights-of-way running east-west. Streets would be designed to Better Streets standards and would feature robust dedicated bicycle facilities assuring the continuity of the Bay Trail through the site. The Design Controls (DC) document will assure that design of streets and of building frontages are well coordinated to create a lively public realm. Retail would be allowed in all buildings, and would be focused on the north-south pedestrian street (referred to in the DC as the “Shared Public Way”) and along the frontages facing China Basin Park. Frontages along Terry François would feature light-industrial production and similar uses in keeping with the established working waterfront.

Three parks would be incorporated into the project. China Basin Park would be enlarged to include 4.4 acres; facing China Basin on one side and the Bay on the other, the enlarged park would include a great lawn, small ballfield, entry plazas, and waterfront trails and access points throughout. A second park, 1.1-acre Mission Rock Square, would act as a town square at the center of the site, while a third waterfront open space, ½-acre Channel Wharf, would be established on a wharf between Pier 48 and 50. Smaller plazas and pedestrian thoroughways that connect these open spaces with the street network are also proposed at several locations, along with open space along the Pier 48 aprons, bringing the total public open space to approximately 8 acres.

As noted above, building heights would range from 90 feet to 240 feet tall, consistent with voter approved Proposition D (November 2015). Buildings would be required to step down at key locations, including to 60’ along the main retail pedestrian thoroughway and to 40’ along Terry Francois to assure that building streetwalls are well-proportioned to the fronting streets, waterfront, and open spaces. Buildings reaching up to 240-feet would be restricted to three specific locations. Parking would predominantly be provided in one or two centralized parking facilities, including an above-grade garage on the south side of the site along Mission Rock Street and possibly also in a below-grade facility underneath Mission Rock Square. The Design Controls document requires that the above-grade garage be fronted with ground floor active uses and residential use at all floors above the ground floor along Third Street, and at other key frontages with active frontage at the ground level.

SITE DESCRIPTION AND PRESENT USE

The project site currently includes an approximately 14.2-acre parking lot (referred to as “Lot A”), a 0.3-acre strip of land on the south side of the lot (referred to as Mission Bay Parcel P20), the 6-acre Pier 48 and the existing 2.2-acre China Basin Park. Existing streets, access areas, and a marginal wharf between Piers 48 and 50, bring the project site total to 28.1 acres. The existing Seawall Lot 337 site consists primarily of a paved surface parking lot holding approximately 2,200 cars, and no permanent structures. Pier 48, with sheds totaling approximately 181,000 gsf, is primarily used for indoor parking and storage/warehousing uses.

The lot portion of the site is zoned MB-OS; Pier 48 is zoned M-2 (Heavy Industrial); Parcel P20 is within the Mission Bay Redevelopment Project Area.

The site is located adjacent to the Mission Bay neighborhood, though not included within the Mission Bay Redevelopment Project Area (with the exception of the 0.3-acre Parcel P20). The site is generally bounded

on the west by Third Street, the City's major thoroughfare for the southeast quadrant of the City, on the north by China Basin Park, on the east by the Bay and Piers 48 and 50, and on the south by Mission Rock Street. The Bay Trail alignment runs through the east side of the site.

Seawall lots are tidelands that were filled and cut off from the waterfront by the construction of the seawall in the late 19th and early 20th centuries, and by the construction of the Embarcadero roadway which lies, in part, over a portion of the seawall. Seawall Lot 337, the largest of the designated seawall lots, is located just south of China Basin and for years has been used as a surface parking lot.

Through legislation, commonly known as SB 815, as amended by AB 2797, the California Legislature found that the revitalization of Seawall Lot 337 and Pier 48 is of particular importance to the State of California. Under SB 815, the Port is authorized to ground lease portions of the Project Site for the development of improvements that may be used for non-trust uses to enable higher economic development and revenues. Some of the revenues from these leases will be advanced initially to pay for infrastructure serving the Project Site, then repaid with project-generated special taxes and property taxes. The Port will use revenues from leases for non-trust uses, as well as its return on funds advanced for infrastructure investment, to preserve its historic resources and for other public trust consistent uses permitted under the state legislation.

Following a public solicitation process to implement goals and objectives developed through a multi-year community process, the Port Commission awarded the Developer (an affiliate of the San Francisco Giants) the opportunity to negotiate exclusively for the lease, construction, and operation of the Project Site in 2010. Negotiations resulted in a Term Sheet that the Port Commission and the Board of Supervisors endorsed in 2013.

Mission Bay Parcel P20, on the southern edge of SWL 337, is currently subject to the Mission Bay South Redevelopment Plan and is designated in that plan as a small open-space buffer. When it adopted AB 2797, the state legislature recognized the need to remove P20 from the Redevelopment Plan, on the basis that "the revitalization of Seawall Lot 337 . . . is of particular importance to the state." As such, AB 2797 calls for the amendment of the Redevelopment Plan to remove P20 without State-level review under Health & Safety Code Sections 34163(c)-(f) and 34164(a) and (b). The OCII Commission will consider taking action to remove P20 from the Redevelopment Plan subsequent to Planning Commission action on Mission Rock.

ENVIRONMENTAL REVIEW

On April 26, 2017, the Department published the Seawall Lot 337 and Pier 48 Mixed-Use Project Draft Environmental Impact Report ("DEIR") for public review (Case No. 2013.0208ENV). The DEIR was available for public comment until June 12, 2017.

On June 1, 2017, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting to solicit comments regarding the DEIR.

On September 21, 2017, the Department published a Comments and Responses document, responding to comments made regarding the DEIR.

On October 5, 2017, the Commission will consider certification of the Final Environmental Impact Report ("FEIR") for the Project, and will determine if it is adequate, accurate and complete.

In addition, on October 5, 2017, the Commission must adopt the CEQA Findings for the FEIR, prior to the approval of the Project (See Case No. 2013.0203 ENV/PCA/MAP/DVA).

HEARING NOTIFICATION

TYPE	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Classified News Ad	20 days	September 15, 2017	September 13, 2017	22 days
Posted Notice	n/a	Not Required	n/a	n/a
Mailed Notice	10 days	September 25, 2017	September 15, 2017	20

PUBLIC COMMENT

To date, the Department has not received any specific public comment in support or opposition to the Project, other than comments submitted regarding the DEIR that are responded to in the Comments and Responses document. The Project Sponsor and Port have engaged in a robust community outreach program throughout the development of the Project, which has been under development for many years. The project was the subject of a voter initiative, Proposition D, in November 2015, which approved (74% in favor) changes to height limits to accommodate the project by rezoning the project site to a new Mission Rock Height and Bulk District.

PLANNING COMMISSION REQUIRED ACTIONS FOR THE PROJECT

As summarized above, the Commission must take several actions to approve the Project. These actions include:

General Plan Consistency Findings

The Commission must adopt findings of General Plan consistency for all approval and implementation actions related to the project. These findings are included in the first approval action being considered by the Commission, which is consideration of the ordinance to amend the Planning Code and Zoning Maps. Note that these findings cover the future minor amendment to the Mission Bay South Redevelopment Plan to remove Parcel P20 from that Redevelopment Plan.

Planning Code Text Amendment – Mission Rock Special Use District (SUD)

On September 5, 2017, Mayor Edwin Lee and Supervisor Jane Kim initiated the ordinance that would amend the Planning Code to establish the Mission Rock SUD and make other conforming Code amendments.

The Mission Rock SUD will provide specific land use and development controls for the project site, which encompasses Seawall Lot 337, Parcel P20, and Pier 48. The Mission Rock SUD extracts and codifies basic zoning requirements found in the DC, including:

- Uses, including allowed uses per parcel and ground floor requirements

- Building Standards, including Off-Street Parking, Bicycle Parking, Dwelling Unit Exposure, Open Space for Dwelling Units, Permitted Obstructions and Signage.
- Incorporation by reference of the Design Controls document, which contains additional standards and guidelines for development of the site

In addition, the Mission Rock SUD outlines the design review process for the Development Phases, Vertical Improvements and Minor/Major Modifications to Building Standards. The Design Review procedures include:

- Phase Approval: An overarching “Phase application” will be submitted to the Port of San Francisco for approval in accordance with a Disposition and Development Agreement (“DDA”). The Phase approval would assure that the Master Developer is moving forward with infrastructure and community improvements at the same time as the development of the buildings (Vertical Improvements). The Phase approval is required before Planning can begin review on a specific Vertical Improvement.
- Design Review and Approval of Vertical Improvements: Design review and applications for Vertical Improvements (new construction of a building or any later expansion/major alteration or addition to a previously-approved building) will be submitted concurrently to Planning and the Port of San Francisco. Planning staff shall review these applications for consistency with the DC. The Planning Director shall have discretion over minor modifications (deviation of less than 10 percent from any dimensional or numerical standard in the DC), while the Planning Commission shall review and approval any major modification. Other than major modifications, the Planning Director would approve all Vertical Improvements.
- Review and Approval of Horizontal Development: Horizontal Development includes construction of utility infrastructure; recreational, open space, and public access areas; public rights-of-way; and other improvements in the public realm. The Port of San Francisco will be responsible for coordinating review and approval of all Horizontal Development by the appropriate City agencies, including Planning, and will include a public process for further refinement of the program by Phase and final design for the site’s public open spaces.

Also included in the Planning Code ordinance is amendment to Section 291, the Mission Rock Height and Bulk District, which was established through voter approval of Proposition D. The amendments to this Section provide further final delineation of height and bulk limits, all within the parameters established by the voters. Additional amendments reorganize the Section for readability to reflect adoption of the project. Text amendments also include modification of Article 9 to reflect the rezoning of Parcel P20.

Zoning Map Amendments

The same ordinance introduced on September 5, 2017 by Mayor Edwin Lee and Supervisor Jane Kim would also amend the Zoning Map and Height and Bulk District Map for the project site. The project site would be rezoned from MB-OS and M-2 to the newly created Mission Rock Mixed-Use Zoning District. The Mission Rock Mixed-Use Zoning District will provide reference to the Mission Rock SUD.

It should be noted that Height and Bulk Designations will remain the same as established through Proposition D, which established the Mission Rock Height and Bulk District and Planning Code Section 291; Section 291 designates sub-height zones across the site that range from 45-feet to 240-feet.

Design Controls Document (DC)

The DC articulates a vision and goals for the character of the overall project, and provides specificity on aspects of land use, building frontage, open space, streets and streetscapes, parking and loading, buildings, lighting, and signage. The scope of the DC is expansive, and includes standards and guidelines for each topic area. The following is a summary of the main chapters of the DC:

- *Land Use:* The Project will provide flexible land use regulations where a wide breadth of uses is allowed throughout. Of the 11 development blocks, 4 are designated as primarily residential (one of which also includes a centralized garage), 4 as primarily commercial development, with the remaining 3 designated as flex parcels, where either residential or commercial could be emphasized. Residential and commercial blocks are interspersed to help assure the new neighborhood is activated throughout the day and week and to create an interesting and lively diversity.

The land use controls also require active uses along almost all frontages, with particular retail focus along the pedestrian shared right-of-way, and along the park edges. Ground floor frontage along Terry Francois has been designated for production and maker uses in keeping with the industrial nature of the existing working piers.

Open Space Network: The Project will create approximately 8-acres of public open space throughout the site. The Project identifies three main open spaces as described above.

Streets and Streetscapes: The Project will establish a new street network, which will connect the project site to the larger City and the Mission Bay neighborhood. The street will be designed in compliance with the Mission Rock Transportation Plan and Infrastructure Plan, both of which are adopted along with the DA and DDA.

- *Parking and Loading:* The DC allows for the construction of a maximum of 3,100 parking spaces that would replace the existing surface parking lot and parking on Pier 48 (which together provide approximately 2,900 existing spaces). Up to 3,000 of these spaces would be in an above grade garage and possibly also in a below-grade garage beneath Mission Rock Square. Only up to 100 spaces total would be allowed on parcels other than these one or two centralized garages. The DC includes design regulations specifically for the above-grade garage to assure the structure would be appropriately treated and include active frontages at key locations.
- *Buildings:* The Project establishes standards and guidelines for massing and architecture, streetwall, building base and ground floor, facades and materiality, projections, roofs, residential building elements and open space, garages and service entry design, and sustainability. The DC emphasizes design considerations for pedestrians by including robust requirements for activation, modulation, and scaling building frontages with respect to the scale and function of the adjacent street or open space.
- *Lighting, Signage and Art:* Finally, the DC concludes with an approach towards lighting, signage/wayfinding and public art.

Development Agreement (DA)

The DA between the City of San Francisco and the Master Developer, Seawall Lot 337 Associates, LLC, will set forth vesting rights for the Mission Rock 28-Acre Site and establish a set of committed public

benefits. The vested elements include: the proposed land use plan and parcelization; the location and numbers of Vertical Improvements (buildings); the maximum density, intensity and gross square footages; the permitted uses; and the provisions for open space, vehicular access and parking. The Project's commitments to public benefits include:

- *Creation or improvement of approximately 8 acres of public open space*, including expansion of China Basin Park, creation of Mission Rock Square, creation of Channel Wharf, improvement of the Pier 48 aprons, and other pedestrian pathways and spaces throughout the site.
- *Rehabilitation of Pier 48*: The Project includes renovation and rehabilitation of Pier 48, including public access and maritime use of the Pier 48 aprons.
- *On-Site Affordable Housing*: The Project would create a significant amount of affordable housing units. Overall, at least 40% of the residential units developed on-site will be inclusionary units affordable to low and moderate income households.

Jobs & Workforce Development Program: The Project will implement a robust workforce commitment program to encourage local business participation, including a local hire participation level of 30% per trade. Vertical developers will contribute \$1,000,000 to OEWD in 11 parcel-by-parcel installments. Half of the funds will support community-based organizations that provide barrier removal services and job readiness training for individuals within at-risk populations, and half will support city programs that provide job training for local residents.

- *Transportation*: The Project would construct major new transportation infrastructure and would contribute toward other transportation and other infrastructure critical to serving Mission Rock through payment of a Transportation Fee in lieu of the existing TSF and Transit Impact Fee, estimated at about \$40 million. The Project includes a robust Transportation Demand Management program with a requirement to reduce single occupancy vehicle trips by 20% from baseline metrics.
- *Sustainability and Sea Level Rise Protection*: The Project would implement sustainability measures to enhance livability, health and wellness, mobility and connectivity, climate protection, resource efficiency, and ecosystem stewardship and provide funding sources needed to protect the Mission Rock shoreline and site from sea level rise. Most of the Project's site's grade will be raised to protect buildings and utilities against 66 inches of sea level rise (projected 2100).
- *Maintenance of Public Spaces and other Areas*: A services Community Facilities District will be established to provide private financing by the project for the cost of long-term management and maintenance of public spaces and certain portions of public rights-of-way with improvements that exceed basic city standards.
- *Community Facilities*. If requested, the Project will make available to the City up to 15,000 gsf of community space, which may be distributed in two or more buildings.

In conjunction with the Development Agreement, it is proposed that the Port and the Board of Supervisors would approve various transactional documents, including the DDA, which is between the master developer and the Port. Other City agencies retain a role in reviewing and issuing later approvals for the Project (for example, subdivision of the site and construction of infrastructure and other public facilities), as memorialized in the DA and other implementing documents. Among other things, the DA gives the master developer the right to develop the Project in phases accordance with the DDA and the DA, requires certain public benefits, describes the application of existing and future

City laws, and establishes fees and exactions. It is also proposed as part of approval of the DA that the City will consent to waive or modify certain procedures and requirements under existing Codes in consideration of alternative provisions in the DA and/or DDA.

ISSUES AND OTHER CONSIDERATIONS

- Office Development Authorization/Planning Code Section 321: Since the project site is under the jurisdiction of the San Francisco Port Commission, as provided in Planning Code Section 321(2)(a), new office space under the jurisdiction of the San Francisco Port Commission will count against the annual maximum limit. The Port of San Francisco will notify the Planning Department when new office development is authorized. An exhibit to the DDA, referenced in the DA, sets restrictions on when the project sponsor may seek permits to construct office space, effectively metering out the office components of the project over at least five years.
- Open Space/Recreation and Parks Commission: The Port of San Francisco would maintain ownership of all publicly-accessible open space on the site. Therefore, Planning Code Section 295 (Height Restrictions on Structures Shadowing Property under the Jurisdiction of the Recreation and Park Commission, aka Prop K) is not applicable to parks on the project site. None of the proposed structures on the site would shadow any existing or planned properties under jurisdiction of Recreation & Parks.
- Planning Code/Zoning Map Ordinance Errata: A set of errata is included in this packet as recommended amendments to the ordinance. These amendments are primarily corrections of typos and minor technical clarifications. Staff recommends that the Planning Commission include these errata in their resolution on the ordinance.

REQUIRED COMMISSION ACTION

In order for the Project to proceed, the Commission must:

- 1) Certify the Final Environmental Impact Report (FEIR) pursuant to the California Environmental Quality Act (CEQA);
- 2) Adopt findings under the California Environmental Quality Act (CEQA), including findings rejecting alternatives as infeasible and adopting a Statement of Overriding Considerations and the Mitigation Monitoring and Reporting Program (MMRP);
- 3) Recommend that the Board of Supervisors approve the ordinance amending the Planning Code Text to establish the Mission Rock Mixed Use District and Mission Rock Special Use District among other amendments, and amend the associated Zoning Maps, including the errata; and adopt the findings of consistency with the General Plan and Priority Policies of Planning Code Section 101.1;
- 4) Adopt the proposed the Mission Rock Design Controls (DC) document; and,
- 5) Recommend that the Board of Supervisors approve the Development Agreement (DA) for the Project.

BASIS FOR RECOMMENDATION

- The Project will add substantial housing opportunities in an infill, transit-accessible area and will put into more productive use an existing surface parking lot.
- The Project will provide space for job growth in an appropriate central city location very close to high quality local and regional transit, including Muni Metro and Caltrain, consistent with and advancing the objectives of Plan Bay Area;
- The Project will add retail and manufacturing uses that will contribute to the employment base of the City and bolster the viability of the neighborhood.
- The site is currently underutilized, and the addition of new ground-floor retail spaces and publicly-accessibly open spaces will enliven the streetscape and will provide new access to the waterfront.
- The Design Controls document will provide specific guidance for the character of the overall Project, resulting in high-quality architecture, extensive streetscape and public realm improvements, and abundant publicly-accessible open space.
- The Development Agreement will provide substantial public benefits in areas including affordable housing, funding for transportation improvements, workforce development, and historic preservation, among other benefits.
- The Project is, on balance, consistent with the Goals, Policies, and Objectives of the General Plan.

RECOMMENDATION:	Approval with Conditions
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Attachments:

Draft Motion-CEQA Findings

Draft Resolution-Planning Code Text Amendment & Zoning Map Amendments, General Plan and Planning Code Section 101.1 Consistency Findings

Draft Planning Code Text and Map Amendments Ordinance initiated by Board of Supervisors

Draft Motion-Design Controls Document Adoption

Draft Resolution-Development Agreement

[Draft DA Ordinance to be sent under separate cover]

Zoning Map, Height & Bulk Map, Aerial Photograph

DDA Summary

Housing Plan

Workforce Development Plan

LBE Utilization Plan

Development Agreement between City and County of San Francisco & Seawall Lot 337 Associates, LLC
TDM Plan

Mission Rock Design Controls

Mission Rock Sustainability Strategy

Mission Rock Transportation Plan

Mission Rock Infrastructure Plan



SAN FRANCISCO PLANNING DEPARTMENT

Planning Commission Motion No. XXXXX

HEARING DATE: OCTOBER 5, 2017

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<i>Project Name:</i>	Mission Rock (aka Seawall Lot 337 and Pier 48 Mixed-Use Project)	Fax:
<i>Existing Zoning:</i>	Mission Bay Open Space (MB-OS); M-2 (Heavy Industrial) Zoning District; Mission Rock Height and Bulk Districts	415.558.6409
<i>Block/Lot:</i>	8719/ 006; 9900/048	
<i>Proposed Zoning:</i>	Mission Rock Mixed-Use District / Mission Rock Special Use District; Mission Rock Height and Bulk District	Planning Information: 415.558.6377
<i>Project Sponsor:</i>	Port of San Francisco and SWL 337 Associates, LLC	
<i>Staff Contact:</i>	Mat Snyder – (415) 575-6891 mathew.snyder@sfgov.org	

ADOPTING ENVIRONMENTAL FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT, INCLUDING FINDINGS OF FACT, FINDINGS REGARDING SIGNIFICANT IMPACTS AND SIGNIFICANT AND UNAVOIDABLE IMPACTS, EVALUATION OF MITIGATION MEASURES AND ALTERNATIVES, AND A STATEMENT OF OVERRIDING CONSIDERATIONS RELATED TO APPROVALS FOR THE MISSION ROCK (AKA SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT) ("PROJECT"), LOCATED ON ASSESSOR'S BLOCK 8719 LOT 006 AND BLOCK 9900 LOTS 048.

PREAMBLE

The project sponsor, Seawall Lot 337 Associates, LLC, applied for environmental review of a mixed-use phased development at Seawall Lot 337, and rehabilitation and reuse of Pier 48 ("Project") on May 31, 2013.

The Project is located on an approximately 28-acre project site that consists of the following: the 14.2-acre Seawall Lot 337; the 0.3-acre strip of land on the south side of Seawall Lot 337, referred to as Parcel P20; the 6.0-acre Pier 48; the existing 2.2-acre China Basin Park; and 5.4 acres of streets and access areas within or adjacent to the boundaries of Seawall Lot 337 and Pier 48. The project site is adjacent to the Mission Bay neighborhood of the city and the Mission Bay South Redevelopment Area. The site is currently used for open space (China Basin Park); a surface parking lot (Seawall Lot 337 and P20); and indoor parking, storage, warehouse uses and special events (Pier 48).

The Project would include 2.7 to 2.8 million gross square feet ("gsf") of mixed-uses on 11 proposed development blocks on Seawall Lot 337, with building heights ranging from 90 feet to a maximum of 240 feet. The mixed use development would comprise approximately 1.1 to 1.6 million gsf of residential uses (estimated at 1,000 to 1,600 units, consisting of both market-rate and affordable housing), approximately 972,000 to 1.4 million gsf of commercial uses, and 241,000 to 244,800 gsf of active/retail uses on the lower floors of each block. Additionally, the Project would include approximately 1.1 million gsf of aboveground and underground parking (approximately 3,100 parking spaces) and rehabilitation of 242,500 gsf of space within Pier 48 to provide industrial, restaurant, active/retail, tour, exhibition, and

meeting space for reuse by an industrial use, specifically analyzed as a proposed brewery. The Project would also include a total of approximately 8.0 acres of open space. The Project is more particularly described in Attachment A.

Pursuant to and in accordance with the requirements of Section 21094 of CEQA and Sections 15063 and 15082 of the CEQA Guidelines, the San Francisco Planning Department, as lead agency, published and circulated a Notice of Preparation ("NOP") on December 11, 2013, that solicited comments regarding the scope of the environmental impact report ("EIR") for the proposed project. The NOP and its 30-day public review comment period were advertised in a newspaper of general circulation in San Francisco and mailed to governmental agencies, organizations and persons interested in the potential impacts of the proposed project. The Planning Department held a public scoping meeting on January 13, 2014, in the Bayside Room at the Port of San Francisco, Pier 1, The Embarcadero.

During the approximately 51-day public scoping period that ended on January 31, 2014, the Planning Department accepted comments from agencies and interested parties who identified environmental issues that should be addressed in the EIR. On the basis of public comments submitted in response to the NOP and at the public scoping meeting, the Planning Department found that potential areas of controversy and unresolved issues for the proposed project included: consistency of the Project with the Mission Bay Plan, the San Francisco Waterfront Plan, and the Mission Bay development guidelines; potential impacts along specific viewpoints, the waterfront and surrounding areas; the scale and height of the proposed project and the future use of Parcel P20; provision of affordable housing and population density; potential impacts on submerged cultural resources in the project area; increases in traffic and traffic congestion, connections to the City's transportation network, lack of public transportation in the area, pedestrian safety, traffic during game days, fair share contributions, and potential impacts of increased traffic on emergency vehicle delay; potential noise impacts from additional residents; potential greenhouse gas ("GHG") impacts, adequate mitigation measures for GHG impacts, and inclusion of a GHG emissions analysis consistent with Assembly Bill 32, the California Global Warming Solutions Act; potential shadow impacts along the waterfront, China Basin Park, and the proposed Mission Rock Square; potential impacts on loss of green space, and preservation of public lands for public and recreational use; adequacy of water and sewer systems with the addition of the proposed project, including a Water Supply Assessment; and potential impacts on the marine environment, as well as state- and federally listed species, and pile-driving impacts on fish, birds, and mammals. Comments received during the scoping process also were considered in preparation of the Draft EIR.

In June 2014, subsequent to the publication of the NOP, the City's voters approved Proposition B (Voter Approval for Waterfront Development Height Increases), which states that voter approval is required for any height increases on property, such as the project site, within the jurisdiction of the Port of San Francisco. Accordingly, on November 3, 2015, the City's voters approved Proposition D (the Mission Rock Affordable Housing, Parks, Jobs, and Historic Preservation Initiative), which amended the height and bulk restrictions for the project site by establishing the Mission Rock Height and Bulk District. Under Proposition D, the proposed heights for buildings on some of the proposed development blocks are lower than originally contemplated in the NOP, and there have been no increases in the height, density or intensity of development for the proposed Project since publication of the NOP.

To allow for flexibility to respond to future market demands and conditions, the project sponsor proposes flexible zoning and land uses on 3 of the 11 proposed development blocks on Seawall Lot 337. Specifically, Blocks H, I, and J are proposed to be designated to allow either residential or commercial as the predominant use above the lower-floor active/retail uses. The project sponsor would determine the

primary land uses of the three flexible zoning blocks above the lower floor (i.e., residential or commercial) at the time of filing for design approvals for block development proposals. These flexible blocks are analyzed in the EIR as ranges and land use assumptions (High Commercial or High Residential).

The San Francisco Planning Department then prepared the Draft EIR, which describes the Project and the environmental setting, analyzes potential impacts, identifies mitigation measures for impacts found to be significant or potentially significant, and evaluates project variants and alternatives to the Draft EIR Project. The Draft EIR assesses the potential construction and operational impacts of the Project on the environment, and the potential cumulative impacts associated with the Project in combination with other past, present, and future actions with potential for impacts on the same resources. The analysis of potential environmental impacts in the Draft EIR utilizes significance criteria that are based on the San Francisco Planning Department Environmental Planning Division guidance regarding the environmental effects to be considered significant. The Environmental Planning Division's guidance is, in turn, based on CEQA Guidelines Appendix G, with some modifications.

The Planning Department published a Draft EIR for the project on April 26, 2017, and circulated the Draft EIR to local, state, and federal agencies and to interested organizations and individuals for public review. On April 26, 2017, the Planning Department also distributed notices of availability of the Draft EIR; published notification of its availability in a newspaper of general circulation in San Francisco; posted the notice of availability at the San Francisco County Clerk's office; and posted notices at locations within the project area. The Planning Commission held a public hearing on June 1, 2017, to solicit testimony on the Draft EIR during the public review period. The Draft EIR public review period ended on June 12, 2017. A court reporter, present at the public hearing, transcribed the oral comments verbatim, and prepared written transcripts. The Planning Department also received written comments on the Draft EIR, which were sent through mail, fax, hand delivery, or email.

The San Francisco Planning Department then prepared the Comments and Responses ("C&R"). The C&R document was published on September 21, 2017, and includes copies of all of the comments received on the Draft EIR and written responses to each comment.

The C&R document provided additional, updated information, clarification and modifications on issues raised by commenters, as well as Planning Department staff-initiated text changes to the Draft EIR. The Final EIR, which includes the Draft EIR, the C&R document, the Appendices to the Draft EIR and C&R document, and all of the supporting information, has been reviewed and considered. The C&R documents and appendices and all supporting information do not add significant new information to the Draft EIR that would individually or collectively constitute significant new information within the meaning of Public Resources Code Section 21092.1 or CEQA Guidelines Section 15088.5 so as to require recirculation of the Final EIR (or any portion thereof) under CEQA. The C&R documents and appendices and all supporting information contain no information revealing (1) any new significant environmental impact that would result from the Project or from a new mitigation measure proposed to be implemented, (2) any substantial increase in the severity of a previously identified environmental impact, (3) any feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the environmental impacts of the Project, but that was rejected by the project sponsor, or (4) that the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

On October 5, 2017, the Planning Commission by Motion No. XXXXX, found that the Final EIR was adequate, accurate, and objective, reflected the independent judgment of the Planning Commission and that the C&R document contains no significant revisions to the Draft EIR, and adopted findings of significant impact associated with the Project and certified the completion of the Final EIR for the Project in compliance with CEQA, and the CEQA Guidelines and Chapter 31.

The Planning Department prepared proposed Findings, as required by CEQA, regarding the alternatives, mitigation measures and significant impacts analyzed in the Final EIR and overriding considerations for approving the Project and a proposed mitigation monitoring and reporting program ("MMRP"), attached as Exhibit 1 to Attachment A, which material was made available to the public and this Planning Commission for the Planning Commission's review, consideration and actions.

The Commission, in certifying the FEIR, found that the Project described in the FEIR will have the following significant and unavoidable environmental impacts:

- The proposed Project would result in an adverse impact by increasing ridership by more than 5 percent on two individual Muni routes that exceed 85 percent capacity utilization under baseline conditions.
- The proposed Project would result in an adverse impact related to a substantial increase in transit delays on Third Street between Channel Street and Mission Rock Street.
- The proposed Project would have significant impacts on pedestrian safety at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street.
- The proposed Project would contribute considerably to a significant cumulative transit impact because it would increase ridership by more than 5 percent on one individual Muni route that would exceed 85 percent capacity utilization.
- The proposed Project would contribute considerably to significant cumulative impacts related to transit delays.
- The proposed Project would contribute considerably to significant cumulative pedestrian impacts.
- Construction of the proposed Project would generate noise levels in excess of standards or result in substantial temporary increases in noise levels.
- Operation of the proposed Project could result in the exposure of persons to or generation of noise levels in excess of the San Francisco Noise Ordinance or a substantial temporary, periodic or permanent increase in ambient noise levels in the Project vicinity, above levels existing without the Project.
- Construction of the proposed Project would expose persons to or generate excessive ground-borne vibration or ground-borne noise levels related to annoyance. Construction of the proposed Project could expose persons to or generate excessive ground-borne vibration or ground-borne noise levels related to damage to buildings.

- Construction activities for the proposed Project, in combination with other past, present, and reasonable future projects in the city, would result in a substantial temporary increase in noise or noise levels in excess of the applicable local standards.
- Construction activities associated with Project-related development, in combination with other past, present, and reasonable future projects in the city, would expose sensitive receptors to excessive ground-borne vibration related to annoyance and could result in similar impacts related to damage to buildings. (Significant and Unavoidable for Annoyance).
- Operation of the proposed Project, in combination with other past, present, and reasonable future projects in the city, would result in the exposure of persons to noise in excess of the applicable local standards or a substantial permanent ambient noise level increase in the Project vicinity.
- Construction of the proposed Project would generate fugitive dust and criteria air pollutants, which for criteria air pollutants but not fugitive dust, would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Significant and Unavoidable with Mitigation for Criteria Air Pollutants).
- During Project operations, the proposed Project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.
- During combined Project construction and operations, the proposed Project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.
- The proposed Project's construction and operation, in combination with other past, present, and reasonable future projects, would contribute to cumulative regional air quality impacts.
- The proposed Project would alter wind in a manner that would substantially affect public areas.
- The proposed Project, in combination with past, present, and reasonably foreseeable future projects, would alter wind in a manner that would substantially affect public areas.

The Planning Commission Secretary is the custodian of records for the Planning Department materials, located in the File for Case No. 2013.0208ENV, at 1650 Mission Street, Fourth Floor, San Francisco, California.

On October 5, 2017, the Planning Commission conducted a duly noticed public hearing at a regularly scheduled meeting and adopted this Motion No. XXXXX, adopting CEQA findings, including a Statement of Overriding Considerations, and adopting an MMRP, and adopted other Motions and Resolutions with respect to the Project.

On October 5, 2017, the Planning Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the various approvals necessary to implement the Project, including, but not limited to, Planning Code Text and Zoning Map Amendments, approval of the Mission Rock Design

Controls document, approval of a Development Agreement and made findings of General Plan consistency. (See Planning Commission Resolution and Motions numbers XXXXX, XXXXX, XXXXX and XXXXX. The Planning Commission makes these findings and adopts the MMRP as part of each and all of these approval actions.

MOVED, that the Planning Commission has reviewed and considered the Final EIR and the record associated therewith, including the comments and submissions made to this Planning Commission and the Planning Department's responses to those comments and submissions, and based thereon, hereby adopts the Project Findings required by CEQA attached hereto as Attachment A including a statement of overriding considerations, and adopts the MMRP, included as Exhibit 1 to Attachment A, as a condition of approval for each and all of the approval actions set forth in the Resolutions and Motions described above.

I hereby certify that the Planning Commission ADOPTED the foregoing Motion on Thursday, October 5, 2017.

Jonas P. Ionin
Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED: October 5, 2017

ATTACHMENT A

SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS; FINDINGS OF FACT, EVALUATION OF MITIGATION MEASURES AND ALTERNATIVES, AND STATEMENT OF OVERRIDING CONSIDERATIONS

SAN FRANCISCO PLANNING COMMISSION

October 5, 2017

In determining to approve the Seawall Lot 337 and Pier 48 Mixed-Use Project ("Project"), as described in Section I.A, Project Description, below, the following findings of fact and decisions regarding environmental impacts, mitigation measures and alternatives are made and adopted, and the statement of overriding considerations is made and adopted, based on substantial evidence in the whole record of this proceeding and under the California Environmental Quality Act, California Public Resources Code Sections 21000-21189.3 ("CEQA"), particularly Sections 21081 and 21081.5, the Guidelines for implementation of CEQA, California Code of Regulations, Title 14, Sections 15000-15387 ("CEQA Guidelines"), particularly Sections 15091 through 15093, and Chapter 31 of the San Francisco Administrative Code.

This document is organized as follows:

Section I provides a description of the project proposed for adoption, project objectives, the environmental review process for the project, the approval actions to be taken and the location of records;

Section II identifies the impacts found not to be significant that do not require mitigation;

Section III identifies potentially significant impacts that can be avoided or reduced to less-than-significant levels through mitigation and describes the disposition of the mitigation measures;

Section IV identifies significant impacts that cannot be avoided or reduced to less-than-significant levels and describes any applicable mitigation measures as well as the disposition of the mitigation measures;

Section V evaluates the different project alternatives and the economic, legal, social, technological, and other considerations that support approval of the project and the rejection as infeasible of alternatives, or elements thereof, analyzed; and

Section VI presents a statement of overriding considerations setting forth specific reasons in support of the actions for the project and the rejection as infeasible of the alternatives not incorporated into the project.

The Mitigation Monitoring and Reporting Program (“MMRP”) for the mitigation measures that have been proposed for adoption is attached with these findings as Exhibit 1 to Attachment A to Motion No. [REDACTED]. The MMRP is required by CEQA Section 21081.6 and CEQA Guidelines Section 15091. The MMRP provides a table setting forth each mitigation measure listed in the Final Environmental Impact Report for the Project (“Final EIR”) that is required to reduce or avoid a significant adverse impact. The MMRP also specifies the agency responsible for implementation of each measure and establishes monitoring actions and a monitoring schedule. The full text of the mitigation measures is set forth in the MMRP.

These findings are based upon substantial evidence in the entire record before the Commission. The references set forth in these findings to certain pages or sections of the Draft Environmental Impact Report (“Draft EIR” or “DEIR”) or the Comments and Responses document (“C&R”) in the Final EIR are for ease of reference and are not intended to provide an exhaustive list of the evidence relied upon for these findings.

I. PROJECT DESCRIPTION, OBJECTIVES, ENVIRONMENTAL REVIEW PROCESS, APPROVAL ACTIONS, AND RECORDS

The Project is located on an approximately 28-acre site that consists of Assessor’s Block 8719/Lot 006, and Block 9900/Lot 048 and the following: the 14.2-acre Seawall Lot 337; the 0.3 acre strip of land on the south side of Seawall Lot 337, referred to as Parcel P20; the 6.0-acre Pier 48; the existing 2.2-acre China Basin Park; and 5.4 acres of streets and access areas within or adjacent to the boundaries of Seawall Lot 337 and Pier 48. The project site is adjacent to the Mission Bay neighborhood of the city and the Mission Bay South Redevelopment Plan area. The site is currently used for open space (China Basin Park); a surface parking lot (Seawall Lot 337 and Parcel P20); and indoor parking, storage, warehouse uses, and special events (Pier 48).

The project sponsor (Seawall Lot 337 Associates, LLC) of the Seawall Lot 337 and Pier 48 Mixed-Use Project (the “Project”) proposes a mixed-use, multi-phase development at Seawall Lot 337; rehabilitation and reuse of Pier 48; and construction of approximately 5.4 acres of net new open spaces, for a total of 8.0 acres of open space on the project site. The Project would include up to 2.7 to 2.8 million gross square feet (“gsf”) of mixed uses on 11 proposed development blocks on Seawall Lot 337, with building heights ranging from 90 feet to a maximum of 240 feet. The mixed use development would comprise approximately 1.1 to 1.6 million gsf of residential uses (estimated at 1,100 to 1,600 units), consisting of both market-rate and affordable housing), approximately 972,000 to 1.4 million gsf of commercial uses, and 241,000 to 244,800 gsf of active/retail uses on the lower floors of each block. Additionally, the Project would include approximately 1.1 million gsf of aboveground and underground parking (approximately 3,100 parking spaces), and rehabilitation of approximately 242,500 gsf of space within Pier 48¹ to provide industrial, restaurant, active/retail, tour, exhibition, and meeting space for reuse by an industrial use, analyzed as a proposed brewery. The Project would also include a

¹ Pier 48 is a separate parcel from the 11 Seawall Lot development blocks, and an additional parcel under Mission Rock Square may also include the underground garage.

total of approximately 8.0 acres of open space. The Port of San Francisco (Port) owns the entire project site.

The Project proposed for adoption also includes 4 variants. A variant, or a combination of variants, could be implemented along with the Project as explained below. Variant 1 – District Energy/Bay-Source Energy Capture, would provide a district-wide heating and cooling system, with hot and cold water piped underground to individual buildings in lieu of chillers and boilers in each building. Variant 2 – Entertainment Venue, would accommodate up to 4,000 patrons and up to 50 events per year on one of the proposed project buildings. It would replace 100,000 sf of either industrial/manufacturing uses at Pier 48 or commercial/retail uses on Block E. Variant 3 – Reconfigured Parking, would not construct a 700 parking space subterranean garage at Mission Rock Square; instead, these 700 parking spaces would be located in the parking garage at Block D2, increasing its capacity from 2,300 to 3,000 spaces. Variant 4 – Hotel Use, would provide a hotel with approximately 200,000 gsf in a building that otherwise would have been residential. It would reduce residential units by about 200.

The Project and all of its variants are defined and more particularly described below in Section I.A.

A. Project Description.

1. Project Location and Site Characteristics.

The project site encompasses approximately 28 acres and includes several areas: Seawall Lot 337, Parcel P20, Pier 48 and the adjacent marginal wharf, China Basin Park, and Terry A. Francois Boulevard. China Basin Park is the only existing open space on the project site. Most of the project site is paved, with Seawall Lot 337 and portions of Parcel P20 used mainly as a surface parking lot and the Pier 48 structure used for indoor parking and storage and warehouse uses. Seawall Lot 337 and Pier 48 are also used for special events.

Seawall Lot 337 is an approximately 14.2-acre site that is bounded by Terry A. Francois Boulevard to the north, Terry A. Francois Boulevard and Piers 48 and 50 to the east, Parcel P20 and Mission Rock Street to the south, and Third Street to the west. Pier 48 is bounded by the Bay to the north, east, and south and Terry A. Francois Boulevard to the west. China Basin Park is bounded by China Basin to the north, the Bay to the east, Terry A. Francois Boulevard to the south, and Third Street to the west.

Seawall Lot 337 is public trust land and covered by special State legislation (Senate Bill ("SB") 815) that allows nontrust uses under specified circumstances. Seawall Lot 337 is currently occupied by a paved surface parking lot (Lot A) and pop-up retail. Lot A includes approximately 2,170 parking spaces for vehicles. The existing surface lot provides parking for patrons of AT&T Park and parking for approximately 500 daytime commuters. In addition, the lot has provided space for special events and associated parking.

Parcel P20 is a 0.3-acre (14,000 sf), approximately 20-foot-wide, strip of land adjacent to the south side of Seawall Lot 337, along the north side of Mission Rock Street. Parcel P20 is within

the Mission Bay South Redevelopment Plan area. Parcel P20 is public trust land, but Assembly Bill ("AB") 2797 authorized actions to add Parcel P20 to Seawall Lot 337, which lifted public trust restrictions on Parcel P20.

Pier 48 is a pile-supported, approximately 261,000 sf (6.0-acre) facility (including the pier structure and aprons). About 181,200 gsf of Pier 48 consists of enclosed warehouse space that includes two one-story main sheds (Shed A and Shed B) that are connected by a one-story connector shed (Shed C) at the east end of the pier. All three sheds are approximately 40 feet in height. Between Shed A and Shed B is an approximately 33,800 sf uncovered "valley". Currently, Shed A and Shed C are used for parking of up to 700 total vehicles for AT&T Park events and special events.

Pier 48 is the southernmost pier structure within the Port of San Francisco Embarcadero Historic District ("Embarcadero Historic District"), which is listed in the National Register of Historic Places. Pier 48 is identified as a contributory resource to the Embarcadero Historic District but is not individually listed as a historic resource. The Pier 48 substructure includes the east apron. The northern and southern aprons are separate wooden structures and independent of the concrete Pier 48 substructure. Public access has never been available to the northern (20,300 sf), southern (21,000 sf), or eastern (4,700 sf) aprons.

Approximately 2.2 acres of the northern portion of the project site are improved as China Basin Park and perimeter walkways. The project site includes approximately 3.5 acres of Terry A. Francois Boulevard. The 1.4-acre Pier 48 and Pier 50 access areas are located directly to the west and south of Pier 48. To the south, between Pier 48 and Pier 50 and east of Terry A. Francois Boulevard, is the 0.50-acre marginal wharf.

2. Project Characteristics.

The Project includes the construction of approximately 2.7 to 2.8 million gsf of mixed-use, multi-phased development on the proposed 11 development blocks (Blocks A through K) on Seawall 337. The buildings proposed on Seawall Lot 337 could range in height from 90 to 240 feet, depending on the land use. The tops of upper buildings (towers) may extend up to 20 feet (40 feet on Block F) vertically above the maximum designated building height. In addition, the project site would include above-ground and below-grade parking and pedestrian and vehicular streets on Seawall Lot 337. The Project also includes the rehabilitation and reuse of the existing Pier 48 structure.

Three of the Seawall 337 development blocks (Blocks A, F, and K) would be designated as primarily residential above the lower-floor active/retail uses, and four blocks (Blocks B, C, E, and G) would be designated as primarily commercial above the lower-floor active/retail/production uses. One block (Block D) would include parking (D2), active/retail, and residential uses (D1). An additional parcel under Mission Rock Square may also include an underground parking garage. The project sponsor proposes flexible zoning and land uses on three of the 11 proposed blocks (Blocks H, I, and J) in order to respond to future market demands. These blocks are proposed to be designated to allow either residential or commercial as the predominant use above the lower-floor active/retail uses. The project sponsor would determine

the primary land uses of the three flexible zoning blocks above the lower floor (i.e., residential or commercial) at the time of filing for design approvals for block development proposals. These flexible blocks are analyzed in the EIR as ranges and land use assumptions (High Commercial or High Residential), as described below. Active/retail uses would be permitted on the lower floors of any of the commercial, residential, parking, or flexible blocks.

The specific residential unit mix has not been determined. New rental housing built for the Project would exceed inclusionary housing requirements set forth in Section 415 of the City's Planning Code. The project sponsor has agreed to restrict 40 percent of the onsite units to inclusionary affordable housing targets. Affordable housing would be provided in a balanced manner throughout the phasing of the Project.

Commercial land uses include nonretail commercial work spaces such as office, R&D/biotech, lab, institutional, medical, and other similar nonretail uses. The lower-floor areas of the proposed onsite development on Seawall Lot 337 would contain shops, restaurants, cafes, regional- and neighborhood-serving retail uses, community spaces, and production uses. In addition, active/retail uses may be provided in potential rooftop lounges on Blocks A, G, and K and in a limited number of permanent retail kiosks and small stand-alone retail spaces in China Basin Park and Mission Rock Square.

The Project would result in a total of approximately 8.0 acres of new and expanded parks, open space areas, and shoreline access areas. The new or expanded areas would include China Basin Park (which would be doubled in size from 2.2 to 4.4 acres) and a waterfront promenade, Mission Rock Square, Channel Lane, and Channel Wharf. These areas would be connected by a network of pedestrian-oriented public streets. In addition, the new or expanded open spaces onsite would be linked to the Blue Greenway.

Pier 48, including the Pier 48 section of the seawall and bulkhead wharf, would be rehabilitated consistent with the Secretary of the Interior ("SOI") Rehabilitation Standards and the SOI Guidelines, and the Port of San Francisco Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures ("Port Historic Guidelines"). The existing pier sheds and valley would be repurposed to accommodate a range of uses, such as industrial/production, associated general office and storage, active/retail, restaurant, tour and exhibition space, and event-related uses, and public access with the potential for expanded maritime uses on the aprons and along Channel Wharf. The industrial use tenant would occupy all usable interior shed space and the currently open-to-sky valley space of Pier 48. The main interior modification to Pier 48 would include the construction of an approximately 28,500 gsf mezzanine in Shed A that would "float" and not be attached to the historic concrete shed walls. At Project completion, the Pier 48 sheds would include approximately 209,000 gsf of useable space, consisting of the 182,000 gsf industrial use, specifically analyzed as a proposed brewery use; 12,000 gsf restaurant; 1,400 gsf active/retail area; and 14,000 gsf exhibition space/museum. The tenant would also use the Pier 48 valley for loading and storage, and the existing aprons would be repaired as part of the Project, for a total of 288,500 gsf at Pier 48.

Seismic upgrades, which would occur over an approximately 16-month period, are necessary in order to support the proposed uses at Pier 48. The scope of the seismic upgrade consists of

replacing 675 existing piles with 106 new piles. The 106 new piles would be located below a new, heavily reinforced concrete apron. The modified portion of the aprons would be approximately 12 feet wide, 6 feet deep, and 40 feet long, and located on both the north and south perimeter of Pier 48, replacing the exterior pier deck at those locations.

Block D would include an 837,200 gsf parking structure on Block D2 that would accommodate approximately 2,300 parking spaces and an additional 14,000 gsf of ground-floor active/retail. The block could also include 241,000 gsf of residential uses and ground-floor active/retail in a separate, but attached, building (Block D1). A 227,000 gsf parking garage under Mission Rock Square would provide an additional 700 parking spaces at the Project site. Additional parking could be provided within the proposed buildings (up to approximately 10 spaces each), for a total of approximately 3,100 parking spaces at the project site.

Design Controls would guide the physical development on the project site. The Design Controls would serve as a guide to the proposed development with respect to bulk, massing, setbacks, and other physical design and use aspects of the Project. Bulk and massing of the proposed buildings would vary by block, land use, and height. Buildings along Third Street would continue the Third Street streetwall, with 65- to 90 foot-high podiums, and buildings along Terry A. Francois Boulevard would step down to 40 foot maximum heights to reduce the height near the water's edge.

a. Land Use Assumptions.

The EIR analyzes two different land use assumptions at Seawall Lot 337 to capture the full range of possible land uses that could be developed on the project site (High Commercial and High Residential). Both assumptions would include the same building program, except on Blocks H, I, and J.

The High Commercial Assumption would include residential uses on Blocks A, D1, F, and K, with development of up to approximately 1.1 million gsf of residential uses (estimated as 1,000 units). Under the High Commercial Assumption, Blocks B, C, E, G, H, I, and J would contain commercial uses, providing a total of approximately 1.4 million gsf of commercial space. In addition, the High Commercial Assumption would include approximately 244,800 gsf of active/retail/production uses would be included in the lower floors of all development blocks. Under the High Commercial Assumption, the residential buildings on Blocks A, D1, and F could reach building heights of 240 feet (approximately 23 stories), and Block K could reach a building height of 120 feet (approximately 11 stories). Commercial buildings would range in height from 90 feet (approximately 7 stories) on Blocks E, H, I, and J to 190 feet (approximately 13 stories) on Blocks C and G.

The High Residential Assumption would include residential uses on Blocks A, D1, F, H, I, J, and K, with development of up to approximately 1.6 million gsf of residential uses (estimated as 1,600 units). Blocks B, C, E, and G would contain commercial uses, providing a total of approximately 972,000 gsf of commercial space. Approximately 241,000 gsf of active/retail space would be included in the lower floors of all development blocks. Under the High Residential Assumption, the residential buildings on Blocks A, D1, and F could reach a

maximum building height of 240 feet (approximately 23 stories), and Blocks H, I, J, and K could reach a maximum building height of 120 feet (approximately 11 stories). Commercial buildings would range in height from 90 feet (approximately 7 stories) on Block E to 190 feet (about 13 stories) on Blocks C and G.

b. Open Spaces and Parks.

The Project's approximately 8.0 acres of new and expanded open spaces would include China Basin Park, Mission Rock Square, Channel Wharf, Channel Lane, a waterfront promenade, pedestrian paseos, and new public access on the apron of Pier 48. Special events or assembly uses could occur at the proposed parks on a year-round basis.

The proposed expansion of the existing 2.2-acre China Basin Park to 4.4 acres would include the existing east-west portion of Terry A. Francois Boulevard. Program areas and elevation relationships would be designed to accommodate up to 66 inches of sea-level rise and a 100-year flood event while keeping most of the park accessible during a flood event. China Basin Park would include a range of activities, and China Basin Park would be connected to the Blue Greenway via a waterfront promenade that would offer waterfront access and views. China Basin Park would accommodate large outdoor gatherings of up to approximately 5,000 people. The 1.1-acre Mission Rock Square would be located in the center of Seawall Lot 337. Mission Rock Square would be framed by a mix of residential and commercial uses above active/retail uses on the lower floors of the surrounding blocks. Channel Lane would connect Mission Rock Square to the proposed Channel Wharf to promote pedestrian connections to the waterfront. Mission Rock Square would be able to accommodate assembly and special-event uses for up to approximately 2,000 people.

A new open space at Channel Wharf would be constructed in the location of the current marginal wharf between Piers 48 and 50, east of Terry A. Francois Boulevard. Channel Wharf would be a 0.5-acre paved plaza with public art, seating, and a drop-off area leading to the recreational uses at the project site.

Channel Lane, approximately 0.2 acre, would link Mission Rock Square to the Bay edge. Gathering spaces would be provided on either side of a ramp that would serve as egress/ingress for the Mission Rock Square parking garage. Except for the ramp to the parking garage, Channel Lane would not be accessible to vehicles.

The existing Pier 48 aprons, totaling 1.1 acres in size, require reconstruction for seismic and safety reasons. A waterfront promenade would be constructed on the aprons. The northern apron of Pier 48 would be prioritized for public access and accessible for maritime uses, and the eastern and southern aprons would be prioritized for maritime uses and open to the public, where there are no safety conflicts among uses and the configuration of the aprons can accommodate it.

c. Proposed Parking and Circulation.

New interior multi-modal neighborhood streets would be established throughout the project site. None of the new streets would include on-street parking. All streets within the project site would

be designed to comply with the intent of San Francisco's Better Streets Plan standards and guidelines. The Project would include neighborhood streets and shared streets.

The proposed new interior neighborhood streets are Exposition Street and Long Bridge Street, each in an east-west alignment, and Bridgeview Street, in a north-south alignment. These streets would provide primary vehicular connections to and from neighboring streets. All proposed neighborhood streets would be designed as slow-traffic areas. In addition, most streets would include loading areas.

Shared streets are characterized by a design that prioritizes pedestrian access over vehicular circulation. At the Project site, the Shared Public Way and Terry A. Francois Boulevard would be designed as shared streets. The Shared Public Way would conform to the applicable street typology, as defined in the San Francisco Better Streets Plan. Terry A. Francois Boulevard would conform to the working waterfront and shared streets typology, with manufacturing activities that would encourage bicycle and pedestrian access to the waterfront. The Shared Public Way would be located one block east of Third Street, extending from Long Bridge Street to the south to just beyond Exposition Street to the north. It would consist of a 60-foot-wide paved surface with no curbs (but possibly gutters). The Shared Public Way would make it possible for adjoining active/retail or restaurants to utilize the street sidewalks for outdoor seating, active/retail space, and street rooms, including flexible seating, small newsstands, kiosks, outdoor dining areas, and areas for small readings or concerts with stackable seating. Vehicular access would be limited primarily to deliveries or drop-offs/pick-ups associated with businesses on the street and emergency vehicles. When games or other major events are scheduled at the ballpark, the Shared Public Way would be closed to vehicles, with the exception of emergency vehicles.

Channel Street would be extended to link Third Street to the Shared Public Way for bicycles and pedestrians and provide vehicle access to the Mission Rock Square parking garage. Channel Lane, east of Mission Rock Square, would include an exit ramp from the underground garage to Terry A. Francois Boulevard. Channel Lane would also include a pedestrian connection on either side of the garage exit ramp for people traveling between Mission Rock Square and Channel Wharf. The Channel Lane exit ramp from the underground garage would be closed at all times, except during Giants games and major AT&T Park events.

The east side of Third Street between Channel Street and Lefty O'Doul Bridge would be improved with new sidewalks, curbs, and gutters. Along this segment of Third Street, the street may be restriped to allow for two 11-foot-wide travel lanes in each direction as well as a new southbound left-turn lane at Exposition Street. A 12-foot wide sidewalk would be provided on the eastern side of the street, from China Basin Park to Mission Rock Street.

The eastern portion of Mission Rock Street between Bridgeview Street and Terry A. Francois Boulevard would include a dedicated bicycle facility in order to connect the project site with the Blue Greenway system. Parking would be removed from the north side of Mission Rock Street between Bridgeview Street and Terry A. Francois Boulevard to accommodate the proposed cycle track.

The approximately 3,100 parking spaces would replace approximately 2,870 existing surface parking spaces at Seawall Lot 337 and parking spaces on Pier 48. Parking would continue to be provided for existing ballpark (2,000 spaces) and commuter users as well as project site users. Up to 2,300 spaces would be provided in an 837,200 gsf, 10-level, 100-foot above-ground parking structure on Block D2, up to 700 spaces within the three-level, 227,000 gsf Mission Rock Square below-grade parking garage; and up to 10 spaces within each of the other 10 development blocks, providing a total of up to 100 spaces. Parking could also be included on Pier 48 as a phased interim use but only until completion of the proposed Pier 48 rehabilitation and improvements. Vehicles would enter the parking structure on Block D2 from Long Bridge Street, Bridgeview Street, or Mission Rock Street. Each block would be permitted one driveway to off-street loading or parking on its Exposition or Long Bridge Street frontages.

The Transportation Plan prepared as part of the Project includes a program to coordinate parking and traffic at and around the project site, which would focus on AT&T Park events and other events in the area. The Project also includes a Transportation Demand Management Program ("TDM Program") that provides a strategy to manage the transportation demands created by the Project, consistent with **Mitigation Measure M-AQ-2.3 (Transportation Demand Management)**, identified under Impact AQ-2 under Section IV below.

d. Construction.

The Project phasing described in the Final EIR is an estimate and would be subject to change due to market conditions and other unanticipated factors and could extend beyond 2023. For purposes of construction phasing, the project site generally has been divided into four areas. Each area would consist of two or three development blocks and associated areas for streets and open spaces, as described in Table 2-10 on page 2-63 of the Draft EIR. Construction of Area 1 would occur from 2017 to 2020, Area 2 from 2018 to 2021, Area 3 from 2019 to 2022, and Area 4 from 2020 to 2023. Construction of each area would occur in four phases: (1) asphalt demolition and rough grading, (2) infrastructure, (3) foundations and buildings, and (4) paving and landscaping.

In addition to the pile driving required for the Pier 48 seismic upgrade and structural rehabilitation, the buildings and streets at Seawall Lot 337 would require pile driving. For the buildings, steel H-piles, an average of 230 feet in length, would be installed with a pile driver. In total, for all of the proposed buildings on Seawall Lot 337, approximately 3,880 piles would be required. For the streets, steel H-piles measuring approximately 145 feet in length would be installed with a pile driver. Approximately 500 piles would be needed to support the streets. Steel H-piles would also be installed to support the promenade and boardwalk at China Basin Park. It is assumed that approximately 200 piles with a length of 145 feet would be required in this area. During the entire construction period, an average of 6 to 10 piles would be installed per day.

e. Utilities.

With Project development onsite, new connections to the existing potable water main beneath Third Street and the existing main beneath Mission Rock Street are proposed. The existing main

beneath Terry A. Francois Boulevard would be removed and replaced with a new main to accommodate reconstruction of Terry A. Francois Boulevard. The Project would require the installation of a new onsite looped low-pressure water system. The Project may also include the installation of an onsite system of high-pressure water pipes to connect to the City's existing Auxiliary Water Supply System distribution system or an alternative solution, as coordinated with the SFPUC.

In order to meet the Project's site-wide water reduction targets and LEED requirements, the Project would include the following sustainable design elements: low-flow fixtures for lavatories, urinals, sinks, and showers to reduce domestic water demand by at least 30 percent; installation of required water meters and purple pipes; and treated graywater to meet 100 percent of the Project's flushing demands with nonpotable water. The Project would include the installation of an onsite looped recycled water system. A graywater treatment system is proposed for the Project, which would collect and centrally treat water from sinks, showers, and laundry facilities in selected blocks before distributing the nonpotable water to all buildings for flushing and site irrigation.

A series of 8- to 12-inch sanitary sewer mains would be installed onsite within the public street right-of-ways, which would then discharge to the existing 21-inch sanitary sewer system beneath Third Street. The existing combined main beneath Terry A. Francois Boulevard would be removed and replaced with a separate sanitary sewer main during reconstruction of Terry A. Francois Boulevard. This would serve the proposed new development and existing Piers 48 and 50.

Currently, wastewater and stormwater are collected separately, and most stormwater discharges directly or indirectly to San Francisco Bay. As directed by the appropriate City agencies or the Port, the project sponsor would remove existing storm drainage infrastructure within Seawall Lot 337, China Basin Park, and Terry A. Francois Boulevard. Storm drainage infrastructure would remain intact on Pier 48, which directly discharges runoff to the Bay within the Pier 48 structure. New storm drainage pipe infrastructure would be installed within the Project's proposed new interior streets. Storm drain lateral connections would be installed to serve the proposed development blocks and would be sized based on the individual block demands. Development blocks would implement stormwater treatment measures within the blocks or convey treatment flows to the centralized treatment areas within the open space areas prior to connecting to the storm drain system. Runoff from impervious portions of Seawall Lot 337 would be conveyed by gravity or force main for treatment in a northerly direction to bio-retention areas and rain gardens in Mission Rock Square, China Basin Park, and the Shared Public Way. Self-contained treatment would include pump stations for stormwater treatment flows and overflow from stormflows in excess of treatment flows, which would be applied at the north and south ends of the project site. The project sponsor will coordinate with SFPUC, the Port and other appropriate City agencies to implement the proposed storm drainage infrastructure.

f. Emergency Generators.

The Project would include emergency generators to supply power to key buildings and facilities during a power outage. It is anticipated that Seawall Lot 337 would include eight emergency generators, and Pier 48 would include two. Each generator would be a diesel-powered, 2,000-horsepower unit and operate an average of 50 hours per year.

g. Sustainable Design.

The project sponsor, the Planning Department, the Port, and other City agencies have designated the project site as a Type 1 Eco-District to help meet environmental goals. Multiple sustainable site approaches would be considered from the outset of horizontal development to enable vertical development design proposals to exceed Port Building Code requirements. The goal for the overall development includes LEED certification for all commercial office/retail buildings and residential development onsite. The project sponsor would implement a comprehensive Sustainability Strategy, which would include strategies toward achieving LEED certifications, outline the targets for carbon reductions, and explain how the infrastructure, buildings, and community would coordinate to achieve these targets consistent with the Design Controls..

3. **Project Variants.**

The following four variants which are described and analyzed in the Draft EIR modify limited features or aspects of the Project, and are available for selection by the project sponsor and decision makers as part of an approval action. For many environmental topics, the impacts under the variants would be the same as those of the Project. However, in some cases, the impacts under a particular variant would differ from the impacts identified for the Project. Unless otherwise stated in the findings below, the environmental impacts of the variants would be the same as under the Project, and all mitigation and improvement measures that would be required to reduce impacts associated with the Project would also be applicable to each of the variants.

a. Variant 1 – District Energy/Bay Source Capture.

Variant 1 would consist of a District Energy System ("DES") combined with use of an alternative energy source for heating and cooling. The DES would entail a district-wide heating and cooling system, with hot and cold water piped underground to individual buildings. The DES would comprise a centralized thermal generation plant which could be coupled with one of several energy capture sub-variants. It is anticipated that the approximately 25,000-gsf DES plant could be located either on Block A, within the parking structure planned for Block D2, or on Pier 48, although other blocks may be considered if found to be beneficial. It is anticipated that cooling towers would reach a height of between approximately 20 and 25 feet. The DES would also entail use of a closed-loop distribution system, using heated or cooled water to provide thermal energy through a network of buried pipes to the individual buildings.

The bay-source energy capture system would be the preferred sub-variant under Variant 1, and would use bay water for heat rejection in the warmer months and for a heat source in the colder months. The bay-source energy capture system would be combined with chillers, heat pumps,

and boilers at the DES plant to heat or cool the closed-loop distribution system. Three pipes, two for intake and one for outfall, would be placed on or just below the seabed and would each extend a maximum of between approximately 600 and 1,400 feet into the Bay. Two other sub-variants could be implemented along with DES instead of the bay-source energy capture system. Under the geothermal energy capture sub-variant, several wells could be installed where energy exchange between the groundwater and soil and a closed-loop heat-rejection and heat-source system would occur, and heat exchangers would transfer the energy from the well water system to the DES. The wells could be placed anywhere on Seawall Lot 337 and the depth of the wells could exceed the depth of the piles used to support buildings and infrastructure at the site and would comply with all relevant geotechnical requirements. Under the wastewater energy capture sub-variant, the sanitary sewer system would provide a heat sink for energy capture purposes and be used as an energy exchange source for the DES. Implementation of this Variant would be coordinated with and directed by the appropriate City, state, and federal agencies.

b. Variant 2 – Entertainment Venue.

Under Variant 2, an approximately 100,000 gsf indoor entertainment venue would be provided on the project site, either at Pier 48 (Option A) or Block E (Option B). This variant would replace 100,000 gsf of the industrial/manufacturing uses on or in Pier 48 or what would otherwise be 100,000 gsf commercial/retail uses at Block E. The entertainment venue would accommodate up to 50 events per year, with up to 4,000 patrons at each event. Vehicle trips associated with the entertainment venue would use the parking garage at Block D2 and no additional parking would be proposed.

c. Variant 3 – Reconfigured Parking.

Under Variant 3, the subterranean Mission Rock Square Garage would not be constructed. Instead, 700 additional spaces would be provided within the Block D2 parking garage, resulting in a total of 3,000 spaces in the Block D2 parking garage. To accommodate the increase in the number of parking spaces, this variant would add two levels of below-grade parking within the Block D2 garage. In addition to the two below-grade parking levels, the Block D2 garage would include stackers on the top three floors. The height and massing of the parking structure at Block D2 would not change, although the internal heights of the top three floors would be adjusted to accommodate the stackers. Under this variant, vehicle access on Channel Street would be prohibited from Third Street because vehicular access to the Mission Rock Square Garage would not be needed. Under Variant 3 the driveway to the Block D2 parking garage on the east end of Long Bridge Street, immediately west of Bridgeview Street, would not be developed.

d. Variant 4 – Hotel Use.

Under Variant 4, hotel uses would be included on the project site, in a building that otherwise would be intended for residential uses under the Project. The hotel would be approximately 200,000 gsf in size, with up to 300 rooms. This variant would result in approximately 200,000 gsf less residential space than the Project, which is estimated as approximately 200 units.

B. Project Objectives.

1. Project-Wide Objectives.

- Create a new waterfront neighborhood to serve Mission Bay and the Central Waterfront, inviting diverse public use and access to San Francisco Bay (Bay) by creating lively streets and parks and a distinctive design for living and working; preserve and rehabilitate Pier 48; and retain an authentic waterfront character.
- Set high standards for site-wide environmental sustainability, preparing for long-term site resiliency and setting high sustainability goals for the new buildings.
- Provide sufficient density and intensity for development and programmatic uses to achieve a vibrant all-day, all-season destination and, at the same time, meet the financial requirements of site preparation and the construction of affordable housing, streets, sidewalks, plazas, parks, sewers, water systems, and other utility and infrastructure systems.
- Develop parks and open spaces in a manner that complements and adds variety to the adjacent Mission Bay neighborhood, with multiple spaces that are usable and welcoming in all seasons. This includes maximizing the number of buildings fronting on open spaces or parks by developing the Project around waterfront parks and a central open space square that (1) can accommodate assembly and special-event uses, (2) is connected to other open space areas by a network of pedestrian-oriented streets, and (3) is surrounded by interactive ground-floor spaces that maximize circulation between active/retail ground-floor uses and exterior spaces.
- Develop and provide access for area residents and visitors to an inviting waterfront promenade segment of the Bay Trail/Blue Greenway through design of a bicycle, pedestrian, and transit-oriented community with well-designed parks, pedestrian-friendly streets, walkable blocks, and links to open spaces, taking advantage of the project site's unique proximity to Mission Creek, AT&T Park, and the Bay Bridge and the opportunity to expand and enhance the existing China Basin Park while also preserving access from Terry A. Francois Boulevard for industrial uses at Pier 48 and adjacent piers.
- Provide amenities to a wide variety of people, such as Mission Bay residents/families, Project residents, ballpark patrons, and employees of and visitors to UCSF and other area facilities and employment centers. The amenities would include, but are not limited to, parks, open space, recreation and entertainment opportunities, and a variety of retail and restaurant uses as well as a neighborhood focal point that provides appropriate amenities and active and vibrant public gathering spaces.
- Develop buildings and a pattern of blocks that add variety to the adjacent Mission Bay neighborhood, with varied form, scale, design character, and site-wide activity at ground-floor levels.

- Offer a mix of residential unit types, sizes, and levels of affordability to serve a diverse pool of potential residents.
- Add to the job-producing capacity of this site with diverse commercial/office building offerings, retail and service tenant spaces, and maker spaces for local artisans and entrepreneurs.
- Generate substantial incremental revenue to the Port for waterfront needs, which include preserving historic piers and other historic structures, constructing and maintaining waterfront plazas, and establishing open space, consistent with public trust requirements.
- Address the ongoing need for parking to serve AT&T Park patrons by replacing the existing Seawall Lot 337 surface parking with visitor and site-serving parking structures that address parking demand by ballpark patrons, working in combination with area street parking and other area structured parking resources.
- Optimize opportunities for sustainable transportation by encouraging walking, bicycling, and transit use and discouraging single-occupancy drivers and automobile use while ensuring minimum parking needs are met for site users and ballpark visitors.

2. **Specific Objectives – Seawall Lot 337.**

- Develop a mixed-used project on Seawall Lot 337, including sufficient residential density and commercial, parking, retail, open space, and related programmatic uses that will attract a diverse mix of workers, visitors, and residents and create a vibrant place that is active throughout the day, in the evenings, and on weekends.
- Provide sufficient flexibility and balance in the development program and a variety of building types, urban forms, heights, and floor plate sizes within the framework of an overall development plan to create an active mixed-use neighborhood. Design parking structures, to the extent feasible, to minimize conflicts between vehicles entering or exiting structures and area circulation, including bicyclists, pedestrians, or transit.
- Ensure that parking facilities and management strategies, in addition to serving onsite uses and AT&T Park patrons, support city-wide transportation plan strategies and goals to capture vehicle traffic coming into the city and transition the user to sustainable transportation modes, including Muni, Central Subway, and the T-Line.
- Encourage building forms that contribute to the beauty and variety of the city skyline, are placed to protect and promote public views of the Bay from various San Francisco neighborhoods, provide a transition in building heights by stepping down from Third Street toward the waterfront, and mark key destinations along the waterfront.
- Program lower floors of buildings with engaging retail and other active uses that serve and complement adjacent public spaces, meet the needs of the neighborhood, and accommodate artisan and other local business opportunities.

- Phase the construction of public infrastructure and facilities onsite to coordinate with the development of buildings.
- Implement a multi-faceted, coordinated resiliency strategy for Seawall Lot 337 that is responsive to the growing knowledge of sea-level rise, climate events, and the benefits of coordinated, sustainable utility systems.

3. **Pier 48 Objectives.**

- Reuse and rehabilitate Pier 48, a contributing resource in the Embarcadero Historic District, with a mix of uses, such as industrial, commercial, visitor-oriented restaurant, retail, tour, exhibit, meeting space, entertainment, parking, and recreational uses, while preserving its historic fabric.
- Provide opportunity for both maritime and public access on the pier's aprons, to the extent feasible, in a manner that complements and enhances the public use and enjoyment of the proposed China Basin Park and that is consistent with public trust requirements.
- Comply with the Secretary of the Interior's Standards for the Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (the SOI Rehabilitation Standards and the SOI Guidelines, respectively).

C. **Environmental Review.**

The environmental review for the Project is described in Planning Commission Motion [REDACTED], to which this Attachment A is attached.

D. **Approval Actions.**

The following is a list of anticipated approvals required for the Project:

1. **Local Agencies.**

a. **Planning Commission Actions.**

- Certify EIR.
- Recommend to Board of Supervisors Planning Code amendments to change the land use classifications for the project site and create an SUD, including design review procedures and related Planning Code amendments.
- Recommend to Board of Supervisors approval of a Development Agreement with the project sponsor.
- Make general plan consistency findings and priority policy determinations pursuant to Planning Code Section 101.1 and Planning Code Section 302.

- Approve the Design Controls.

b. **San Francisco Port Commission Actions.**

- Consent to Planning Code amendments and Development Agreement between City and project sponsor.
- Approve, subject to Board of Supervisors approval under Charter section 9.118, the Disposition and Development Agreement ("DDA") between the Port and the project sponsor; the Port's master lease of Seawall Lot 337 with the project sponsor; and a Port lease with the Pier 48 tenant.
- Approve the Infrastructure Plan, and various other transactional documents.
- Approve the Design Controls and conforming amendments to the Waterfront Land Use Plan ("WLUP").
- Approve, subject to Board of Supervisors approval, form infrastructure and community facilities financing districts over the project site, an infrastructure financing plan and rates and methods of apportionment specifying the authorized uses of tax increment and special taxes allocate to the districts, and request that the Board of Supervisors appoint the Port as the agent of the financing districts for all purposes authorized under law and the district formation documents.
- Approve, subject to Board of Supervisors approval under Charter section B7.320, a memorandum of understanding among the Port, the Assessor, the Treasurer-Tax Collector, and the Controller regarding property assessments, special tax levies, and allocation of special taxes and property tax increment to the financing districts for the life of the financing districts.
- Approve, subject to Board of Supervisors approval under Charter section B7.320, a memorandum of understanding for interagency cooperation between the Port and the City ("ICA") with respect to construction, inspection, and acquisition of public facilities that the project sponsor builds at the project site.

c. **Board of Supervisors Actions.**

- Affirm EIR certification (if necessary).
- Approve Planning Code amendments, including text and Zoning Map amendments, to change the land use classifications for the project site and create an SUD.
- Approve, under Charter section 9.118, the DDA between the Port and the project sponsor, the Port's master lease of Seawall Lot 337 with the project sponsor; and the Port's lease with the Pier 48 tenant.

- Approve an amendment to the Mission Bay South Redevelopment Plan to revise the project area boundaries.
- Approve a Development Agreement between the City and the project sponsor.
- Adopt ordinances forming infrastructure and community facility financing districts and approve an infrastructure financing plan and rates and methods of apportionment specifying the authorized uses of special taxes and property tax increment allocated to the districts.
- Approve under Charter section B7.320 a memorandum of understanding among the Port, the Assessor, the Treasurer-Tax Collector, and the Controller regarding property assessments, special tax levies, and allocation of special taxes and property tax increment to the Port for the life of the financing districts and the ICA.
- Approve ancillary legislation for the Project, if applicable.

d. **Other – Local Agencies or Departments.**

Implementation of the proposed Project will require consultation with or approvals by other City agencies or departments, including, but not limited to, the following:

i. **San Francisco Public Utilities Commission.**

- Consent to the ICA.
- Consent to the Development Agreement.

ii. **San Francisco Department of Public Health.**

- Approve a site mitigation plan under Health Code Article 22A (Maher Ordinance).
- Approve a monitoring and reporting plan for use of an alternative water supply (i.e., reuse of treated water for flushing or other nonpotable uses).

iii. **San Francisco Public Works.**

- Approve tentative subdivision maps.
- Consent to the ICA.
- Consent to the Development Agreement.

iv. **San Francisco Department of Building Inspection.**

- Approve site/building permits.

- v. **San Francisco Municipal Transportation Agency Board of Directors.**
 - Approve new street design, including bicycle path improvements and street lane configurations,.
 - Consent to the ICA.
 - Consent to the Development Agreement
- vi. **Commission on Community Investment and Infrastructure.**
 - Approve an amendment to the Mission Bay South Redevelopment Plan changing redevelopment plan area boundary.
 - Approve amendment to the Mission Bay South Owner Participation Agreement to remove obligations with respect to Parcel P20.
- 2. **State Agencies.**
 - a. **State Lands Commission.**
 - Approve the procedures for establishing the fair-market value of the development blocks, the form leases, and the Port's use of ground lease proceeds to pay for Seawall Lot 337 infrastructure costs in accordance with Section 4.5 of SB 815, as amended by AB 2797.
 - b. **San Francisco Bay Conservation and Development Commission.**
 - Approve major permit to authorize construction on Pier 48 and within the 100-foot shoreline band.
 - c. **San Francisco Regional Water Quality Control Board.**
 - Approve Clean Water Act Section 401 Water Quality Certification for Pier 48 rehabilitation work and, for Variant 1 only, for infrastructure for and discharge from Bay water heating/cooling system.
 - d. **California Department of Fish and Wildlife.**
 - Approve permit for Pier 48 rehabilitation work under California Endangered Species Act.
- 3. **Federal Agencies.**
 - a. **U.S. Army Corps of Engineers ("USACE").**
 - Approve Clean Water Act Section 404 permit and Section 10 permit under the 1899 Rivers and Harbors Act to authorize Pier 48 rehabilitation work.

b. **National Marine Fisheries Service.**

- Consult under Section 7 Endangered Species Act and Essential Fish Habitat Act, in connection with USACE permitting.
- Authorize incidental take under Marine Mammal Protection Act for Pier 48 rehabilitation work, if applicable.

E. **Findings About Significant Environmental Impacts and Mitigation Measures.**

The following Sections II, III and IV set forth the findings about the determinations of the Final EIR regarding significant environmental impacts and the mitigation measures proposed to address them. These findings provide written analysis and conclusions regarding the environmental impacts of the Project and the mitigation measures included as part of the Final EIR and adopted as part of the Project.

In making these findings, the opinions of the Planning Department and other City staff and experts, other agencies and members of the public have been considered. These findings recognize that the determination of significance thresholds is a judgment within the discretion of the City and County of San Francisco; the significance thresholds used in the Final EIR are supported by substantial evidence in the record, including the expert opinions contained in the Final EIR preparers and City staff; and the significance thresholds used in the Final EIR provide reasonable and appropriate means of assessing the significance of the adverse environmental effects of the Project. Thus, although, as a legal matter, the Commission is not bound by the significance determinations in the EIR (see Public Resources Code, Section 21082.2, subdivision (e)), the Commission finds them persuasive and hereby adopts them as its own.

These findings do not attempt to describe the full analysis of each environmental impact contained in the Final EIR. Instead, a full explanation of these environmental findings and conclusions can be found in the Final EIR and these findings hereby incorporate by reference the discussion and analysis in the Final EIR supporting the determination regarding the Project impacts and mitigation measures designed to address those impacts. In making these findings, the determinations and conclusions of the Final EIR relating to environmental impacts and mitigation measures, are hereby ratified, adopted and incorporated in these findings, except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

As set forth below, the mitigation measures set forth in the Final EIR and the attached MMRP are hereby adopted and incorporated to substantially lessen or avoid the potentially significant impacts of the Project. Accordingly, in the event a mitigation measure recommended in the Final EIR has inadvertently been omitted in these findings or the MMRP, such mitigation measure is nevertheless hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in these findings or the MMRP fails to accurately reflect the mitigation measure in the Final EIR due to a clerical error, the language of the mitigation measure as set forth in the Final EIR shall control. The impact numbers and mitigation measure numbers used in these findings reflect the numbers contained in the Final EIR.

In Sections II, III and IV below, the same findings are made for a category of environmental impacts and mitigation measures. Rather than repeat the identical finding dozens of times to address each and every significant effect and mitigation measure, the initial finding obviates the need for such repetition because in no instance are the conclusions of the Final EIR, or the mitigation measures recommended in the Final EIR for the Project being rejected.

F. Contents, Location, and Custodian of Records.

The record upon which all findings and determinations related to the Project are based (“Record of Proceedings”) includes the following:

- The Draft EIR, all appendices thereto, and all documents referenced in or relied upon by the EIR. (The references in these findings to the EIR or Final EIR include both the Draft EIR and the Comments and Responses document.)
- The Comments and Responses document, all appendices thereto, and all documents referenced in or relied upon by the EIR.
- All information (including written evidence and testimony) provided by City staff to the Commission relating to the EIR, the Project, and the variants and alternatives set forth in the EIR.
- All information (including written evidence and testimony) presented to the Commission by the environmental consultant and sub-consultants who prepared the EIR or that was incorporated into reports presented to the Commission.
- All information presented at any public hearing or workshop related to the Project and the EIR.
- Public testimony, both oral and written, presented to the Commission.
- The Mitigation Monitoring and Reporting Program.
- All other documents available to the Commission and the public, comprising the administrative record pursuant to Public Resources Code Section 21167.6(e).

The Commission has relied on all of the information listed above in reaching its decision on the Project, even if not every document was formally presented to the Commission. Without exception, these documents fall into one of two categories. Many documents reflect prior planning or legislative decisions that the Commission was aware of in approving the Project. Other documents influenced the expert advice provided to Planning Department staff or consultants, who then provided advice to the Commission. For these reasons, such documents form part of the underlying factual basis for the Commission’s decisions relating to the adoption of the Project.

The public hearing transcripts and audio files, a copy of all letters regarding the Final EIR received during the public review period, the administrative record, and background documentation for the Final EIR are located at the Planning Department, 1650 Mission Street, San Francisco. The Planning Commission Secretary, Jonas P. Ionin, is the custodian of records for the Planning Department and the Commission. The Planning Department has made all files available to the public and the Commission for consideration prior to the Commission's consideration of these findings and whether to approve the Project.

II. IMPACTS FOUND NOT TO BE SIGNIFICANT AND THUS DO NOT REQUIRE MITIGATION

Under CEQA, no mitigation measures are required for impacts that are less than significant (Pub. Res. Code § 21002; CEQA Guidelines §§ 15126.4, subd. (a)(3), 15091). As more fully described in the Final EIR and based on the evidence in the whole record of this proceeding, it is hereby found that implementation of the Project would not result in any significant impacts in the following areas and that these impact areas therefore do not require mitigation:

Land Use

Impact LU-1: The Project would not physically divide an established community. (DEIR pages 4.A-14 to 4.A-15, 6-55 to 6-56)

Impact LU-2: The Project would not conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect. (DEIR pages 4.A-15 to 4.A-20, 6-55 to 6-56)

Impact C-LU-1: The Project, in combination with other development within the city, would not physically divide an established community. (DEIR pages 4.A-20 to 4.A-21, 6-55 to 6-56)

Impact C-LU-2: The Project, in combination with other development within the city, would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect. (DEIR pages 4.A-21 to 4.A-22, 6-55 to 6-56)

Aesthetics

Impact AE-1: The Project would not have a substantial adverse effect on a scenic vista. (DEIR pages 4.B-23 to 4.B-35, 6-55 to 6-56, C&R pages 3-37 to 3-41)

Impact AE-2: The Project would not have a substantial adverse effect on a scenic resource. (DEIR pages 4.B-35 to 4.B-36, 6-55 to 6-56)

Impact AE-3: The Project would not have a substantial adverse effect on the visual character or quality of the site and its surroundings. (DEIR pages 4.B-36 to 4.B-43, 6-55 to 6-56, C&R pages 3-39 to 3-41)

Impact AE-4: The Project would not create a substantial adverse effect on light and glare. (DEIR pages 4.B-44 to 4.B-47, 6-55 to 6-56)

Impact C-AE-1: The Project, in combination with other foreseeable development in the surrounding area, would not have a significant cumulative impact on visual character or the quality of scenic vistas or public view corridors and would not cumulatively contribute to new sources of light, glare, or shadows. (DEIR pages 4.B-48 to 4.B-57, 6-55 to 6-56)

Population, Employment and Housing

Impact PH-1: The Project would not result in substantial population growth in an area, either directly or indirectly. (DEIR pages 4.C-16 to 4.C-20, 6-55 to 6-56)

Impact C-PH-1: The Project, in combination with past, present, and reasonably foreseeable future projects, would not induce substantial population growth either directly or indirectly or create substantial demand for additional housing, necessitating the construction of replacement housing. (DEIR pages 4.C-21 to 4.C-25, 6-55 to 6-56)

Cultural Resources

Impact CP-1: The Project, including rehabilitation and reuse of the existing historic Pier 48 structures, in accordance with applicable Secretary of the Interior's Rehabilitation Standards, as well as new construction on Seawall Lot 337, would not have a substantial adverse effect on a historical or potential historical resource. (DEIR pages 4.D-31 to 4.D-41, 6-55 to 6-56)

Impact C-CP-1: The Project, in combination with past, present, and reasonably foreseeable projects in the city, could result in a significant cumulative impact on historic resources. However,, the Project's contribution would not be cumulatively considerable. (DEIR pages 4.D-49 to 4.D-50, 6-55 to 6-56)

Transportation and Circulation

Impact TR-1: Construction of the Project would not result in significant impacts on the transportation and circulation network. (DEIR pages 4.E-100 to 4.E-103, 6-33, 6-56 to 6-57, 6-79)

Impact TR-2: The Project would not cause substantial additional vehicle miles traveled ("VMT") nor substantially induce automobile travel. (DEIR pages 4.E-103 to 4.E-108, 6-34, 6-57, 6-79 to 6-80, C&R pages 3-43 to 3-45)

Impact TR-5: The Project would not cause significant impacts on regional transit routes. (DEIR pages 4.E-126 to 4.E-129, 6-35, 6-58, 6-81)

Impact TR-8: Existing pedestrian facilities on the Third Street Bridge, the Fourth Street Bridge, and the Fourth Street/King Street intersection are sized adequately to accommodate pedestrian traffic generated by the Project. (DEIR pages 4.E-138, 6-35 to 6-36, 6-58 to 6-59, 6-81)

Impact TR-12: The Project could result in significant impacts on emergency access to the Project site or adjacent locations. (DEIR pages 4.E-148 to 4.E-151, 6-36 to 6-38, 6-59 to 6-60, 6-82 to 6-83, C&R pages 4-4, 4-7, 4-11 to 4-12, 4-10, 4-22, 4-24)

Impact TR-13: The Project would not result in a substantial parking deficit that would create hazardous conditions or significant delays affecting transit, bicycles, or pedestrians, and particular characteristics of the Project would not render the use of other modes infeasible. (DEIR pages 4.E-152 to 4.E-155, 6-38, 6-60, 6-83)

Impact C-TR-1: Construction of the Project would occur over an approximately 6-year time frame and may overlap with construction of other projects in the vicinity. (DEIR pages 4.E-155 to 4.E-156, 6-56 to 6-57, C&R page 4-19, 4-22, 4-24 to 4-25)

Impact C-TR-2: The Project's incremental effects on VMT would not be significant when viewed in combination with past, present, and reasonably foreseeable future projects. (DEIR pages 4.E-156 to 4.E-157, 6-57, C&R pages 3-43 to 3-45, 4-19, 4-22, 4-24 to 4-25)

Impact C-TR-5: The Project would not contribute considerably to significant cumulative impacts on regional transit routes. (DEIR pages 4.E-172 to 4.E-177, 6-58, C&R pages 4-19, 4-22, 4-24 to 4-25)

Impact C-TR-10: The Project would not contribute considerable to a significant cumulative impact on emergency vehicle access. (DEIR pages 4.E-179 to 4.E-181, 6-59 to 6-60, C&R pages 4-19, 4-22, 4-24 to 4-25)

Impact C-TR-11: The Project, in combination with past, present, and reasonably foreseeable development in San Francisco, would not result in cumulative parking impacts. (DEIR pages 4.E-181 to 4.E-182, 6-60, C&R pages 4-19, 4-22, 4-24 to 4-25)

Air Quality

Impact AQ-6: The Project would not result in significant exposure of sensitive receptors to asbestos during demolition activities. (DEIR page 4.G-84)

Impact AQ-7: The Project would not create objectionable odors that would affect a substantial number of people. (DEIR pages 4.G-85, 6-55)

Impact C-AQ-4: The Project's construction, in combination with other past, present, and reasonably foreseeable future projects, would not expose sensitive receptors to asbestos during demolition activities. (DEIR page 4.G-87)

Impact C-AQ-5: The Project's construction, in combination with other past, present, and reasonably foreseeable future projects, would not create objectionable odors that would affect a substantial number of people. (DEIR page 4.G-87)

Greenhouse Gas Emissions

Impact GC-1: The Project would generate GHG emissions but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing GHG emissions. (DEIR pages 4.H-12 to 4.H-31, 6-55 to 6-56)

Wind and Shadow

Impact WS-2: The Project would not create new shadow in a manner that would substantially affect outdoor recreation facilities or public areas. (DEIR pages 4.I-43 to 4.I-64, 6-55 to 6-56, C&R pages 3-61 to 3-63)

Impact C-WS-2: The Project, in combination with past, present, and reasonably foreseeable future projects, would not create new shadow in a manner that would substantially affect outdoor recreation facilities or public areas. (DEIR pages 4.I-65, 6-55 to 6-56, C&R pages 3-61 to 3-63)

Public Services and Recreation

Impact PS-1: The Project would increase demand for fire services but not to such an extent that construction of new or expanded facilities would be required. (DEIR pages 4.J-36 to 4.J-39, 6-52, 6-55 to 6-56)

Impact PS-2: The Project would increase demand for police services but not to such an extent that construction of new or expanded facilities would be required. (DEIR pages 4.J-39 to 4.J-42, 6-52 to 6-53, 6-55 to 6-56)

Impact PS-3: The Project would increase demand for school services but not to such an extent that construction of new or expanded facilities would be required. (DEIR pages 4.J-42 to 4.J-47, 6-52, 6-55 to 6-56)

Impact PS-4: The Project would increase demand for park and open space services but not to such an extent that construction of new or expanded facilities would be required. (DEIR pages 4.J-47 to 4.J-49, 6-52, 6-55 to 6-56, C&R pages 3-63 to 3-65)

Impact PS-5: The Project would not increase the use of existing neighborhood parks, regional parks, or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (DEIR pages 4.J-49 to 4.J-51, 6-52, 6-55 to 6-56, C&R pages 3-63 to 3-65)

Impact PS-6: The Project would include recreational facilities or require the construction or expansion of recreational facilities, but they would not have an adverse physical effect on the environment beyond that analyzed and disclosed in the EIR. (DEIR pages 4.J-51 to 4.J-52, 6-52, 6-55 to 6-56, C&R pages 3-63 to 3-65)

Impact PS-7: The Project would not increase demand for library services to the extent that construction of new or expanded library facilities would be required. (DEIR pages 4.J-52 to 4.J-53, 6-52, 6-55 to 6-56)

Impact C-PS-1: The Project, in combination with other development in the city, would not result in significant adverse cumulative impacts on fire protection, police protection, schools, parks, libraries and other services. (DEIR pages 4.J-54 to 4.J-56, 6-52 to 6-53, 6-55 to 6-56)

Impact C-PS-2: The Project, in combination with other development in the city, would not increase the use of existing neighborhood parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (DEIR pages 4.J-57, 6-52, 6-55 to 6-56)

Utilities and Service Systems

Impact UT-1: The Project would have sufficient water supplies available to serve the Project from existing entitlements and resources, and no new or expanded entitlements would be needed. In addition, the Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (DEIR pages 4.K-26 to 4.K-32, 6-53, 6-55 to 6-56)

Impact UT-2: The Project would not exceed treatment requirement standards of the Regional Water Quality Control Board and would not require or result in the construction of new wastewater or stormwater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (DEIR pages 4.K-32 to 4.K-36, 6-55 to 6-56)

Impact UT-3: The Project would comply with solid waste regulations and would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. (DEIR pages 4.K-37 to 4.K-39, 6-53, 6-55 to 6-56)

Impact UT-4: The Project would not encourage activities that would result in the use of large amounts of fuel, water, or energy or use these resources in a wasteful manner. (DEIR pages 4.K-39 to 4.K-42, 6-53 to 6-56)

Impact C-UT-1: The Project, combined with other development in the city, would have sufficient water supplies available from existing entitlements and resources; no new or expanded entitlements would be needed. In addition, the Project would not require or result in the construction of water treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects. (DEIR pages 4.K-42, 6-53, 6-55 to 6-56)

Impact C-UT-2: The Project, combined with other development in the city, would not exceed treatment requirements of the Regional Water Quality Control Board and would not require or result in the construction of new wastewater or stormwater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (DEIR pages 4.K-43 to 4.K-44, 6-53 to 6-55 to 6-56)

Impact C-UT-3: The Project, combined with other development within Recology's service area, would not exceed service area solid waste disposal capacity and would be expected to comply with federal, state, and local statutes and regulations related to solid waste. (DEIR pages 4.K-44, 6-53 to 6-56)

Impact C-UT-4: The Project, combined with other development in the city, would not result in wasteful, inefficient, or unnecessary energy use, and the Project, in combination with other development served by PG&E, would not exceed existing gas and electric supply capacity. (DEIR pages 4.K-44 to 4.K-45, 6-53 to 6-56)

Biological Resources

Impact BI-1: Construction and operation of the Project would not decrease water quality to the extent that a substantial adverse effect on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW, NMFS, or USFWS would occur. (DEIR pages 4.L-33 to 4.L-36, 6-55 to 6-56, C&R pages 3-65 to 3-77)

Impact BI-2: Changes in shading and habitat at Pier 48 would not result in a substantial adverse effect on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulation or by CDFW, NMFS, or USFWS. (DEIR pages 4.L-36 to 4.L-38, 6-55 to 6-56, C&R pages 3-65 to 3-77)

Impact BI-4: The Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or established native-resident or migratory wildlife corridors. (DEIR pages 4.L-50 to 4.L-52, 6-55 to 6-56)

Impact BI-6: The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (DEIR pages 4.L-54 to 4.L-55, 6-55 to 6-56)

Impact C-BI-1: The Project, in combination with future development in the city, would affect water quality but not to the extent that a substantial adverse effect on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW, NMFS, or USFWS would occur. As such, the Project's contribution would not be cumulatively considerable. (DEIR pages 4.L-55 to 4.L-56, 6-55 to 6-56, C&R pages 3-65 to 3-77)

Impact C-BI-2: Future development in the city may result in shading that could result in a substantial adverse effect on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW, NMFS, or USFWS. However, the Project would not result in a net permanent increase in shading of the Bay, and the Project's contribution would not be cumulatively considerable. (DEIR pages 4.L-56, 6-55 to 6-56)

Impact C-BI-4: The Project, in combination with future development in the city, would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or established native-resident or migratory wildlife corridors. (DEIR pages 4.L-57, 6-55 to 6-56)

Impact C-BI-6: The Project, in combination with future development in the city, would not result in a considerable contribution to significant cumulative impacts on local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance. (DEIR pages 4.L-58, 6-55 to 6-56)

Geology and Soils

Impact GE-1a: The Project would not expose people or structures to risk of loss, injury, or death involving rupture of a known earthquake fault. (DEIR pages 4.M-27, 6-55 to 6-56, C&R pages 3-77 to 3-81)

Impact GE-1b: The Project would not expose people or structures to risk of loss, injury, or death involving strong seismic ground shaking. (DEIR pages 4.M-28 to 4.M-29, 6-55 to 6-56, C&R pages 3-77 to 3-81)

Impact GE-1c: The Project would not expose people or structures to risk of loss, injury, or death involving seismically related ground failure, including liquefaction. (DEIR pages 4.M-29 to 4.M-30, 6-55 to 6-56, C&R pages 3-77 to 3-81)

Impact GE-2: The Project would not result in substantial soil erosion or the loss of topsoil. (DEIR pages 4.M-31, 6-55 to 6-56)

Impact GE-3: The Project would not be located on geologic unit or soil that is unstable or would become unstable and potentially result in lateral spreading, subsidence, liquefaction, or collapse. (DEIR pages 4.M-31 to 4.M-33, 6-55 to 6-56, C&R pages 3-77 to 3-81)

Impact GE-4: The Project would not create substantial risks to life or property through location on expansive or corrosive soil. (DEIR pages 4.M-33 to 4.M-34, 6-55 to 6-56)

Impact C-GE-1: The Project, in combination with other development within the city, would not substantially increase the risk of exposure for people or structures to seismic hazards. (DEIR pages 4.M-36 to 4.M-37, 6-55 to 6-56, C&R pages 3-77 to 3-81)

Impact C-GE-2: The Project, in combination with other development within the city, would not substantially increase soil erosion potential. (DEIR pages 4.M-37, 6-55 to 6-56)

Impact C-GE-3: The Project, in combination with other development within the city, would not substantially increase soil hazards. (DEIR pages 4.M-37, 6-55 to 6-56)

Hydrology and Water Quality

Impact HY-1: The Project would not violate water quality standards or waste discharge requirements and/or otherwise substantially degrade water quality. (DEIR pages 4.N-48 to 4.N-55, 6-55 to 6-56)

Impact HY-2: The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level. (DEIR pages 4.N-57 to 4.N-58, 6-55 to 6-56)

Impact HY-3: The Project would alter the existing drainage pattern of the site but would not result in substantial erosion or siltation onsite or offsite. (DEIR pages 4.N-58 to 4.N-60, 6-55 to 6-56)

Impact HY-4: The Project would alter the existing drainage pattern of the site but would not result in a substantial increase in the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. (DEIR pages 4.N-61 to 4.N-62, 6-55 to 6-56, C&R pages 3-81 to 3-86)

Impact HY-5: The Project would not create or contribute runoff water that would exceed the capacity of the planned stormwater drainage system or provide additional sources of polluted runoff. (DEIR pages 4.N-62 to 4.N-63, 6-55 to 6-56)

Impact HY-6: The Project would not place housing within a 100-year flood hazard area. The Project may place housing in areas that could be inundated by flooding due to sea level rise but would not exacerbate the frequency or severity of flooding or cause flooding in areas that otherwise would not be subject to flooding without the Project. (DEIR pages 4.N-64 to 4.N-65, 6-55 to 6-56, C&R pages 3-81 to 3-86)

Impact HY-7: The Project would not place structures within a 100-year flood hazard area. The Project may place structures in areas that could be inundated by flooding due to sea level rise but would not exacerbate the frequency or severity of flooding or cause flooding in areas that otherwise would not be subject to flooding without the Project. (DEIR pages 4.N-65 to 4.N-67, 6-55 to 6-56, C&R pages 3-81 to 3-86)

Impact HY-8: The project area is subject to flooding from tsunami inundation, but the Project would not exacerbate flooding or cause flooding in areas that otherwise would not be subject to flooding within the Project. The project site is not subject to inundation by seiche or mudflows. (DEIR pages 4.N-67 to 4.N-68, 6-55 to 6-56, C&R pages 3-81 to 3-86)

Impact C-HY-1: The Project, in combination with other foreseeable development in the vicinity, would not contribute considerably to cumulative impacts on water quality. (DEIR pages 4.N-69 to 4.N-70, 6-55 to 6-56)

Impact C-HY-2: The Project, in combination with other foreseeable development in the vicinity, would not contribute considerably to cumulative impacts on groundwater recharge and supplies. (DEIR pages 4.N-70 to 4.N-71, 6-55 to 6-56)

Impact C-HY-3: The Project, in combination with other foreseeable development in the vicinity, would not contribute considerably to cumulative impacts on storm drain capacity. (DEIR pages 4.N-71, 6-55 to 6-56)

Impact C-HY-4: The Project, in combination with other foreseeable development in the vicinity, would not contribute considerably to cumulative impacts on flooding. (DEIR pages 4.N-72, 6-55 to 6-56, C&R pages 3-81 to 3-86)

Hazards and Hazardous Materials

Impact HZ-1: The Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (DEIR pages 4.O-17 to 4.O-19, 6-55 to 6-56)

Impact HZ-2: The Project would not create a significant hazard to the public or the environment through the release of hazardous materials. (DEIR pages 4.O-19 to 4.O-23, 6-55 to 6-56)

Impact HZ-3: The Project would not create a potentially significant hazard for children at nearby schools from the emission or handling of hazardous or acutely hazardous materials. (DEIR pages 4.O-24, 6-55 to 6-56)

Impact HZ-4: The Project would not create a potentially significant hazard for the public or environment related to development of a hazardous materials site included in a list compiled pursuant to Government Code Section 65962.5. (DEIR pages 4.O-24 to 4.O-25, 6-55 to 6-56)

Impact HZ-5: The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (DEIR pages 4.O-25, 6-55 to 6-56)

Impact C-HZ-1: The Project, in combination with other past, present, and reasonably foreseeable future projects, would not create a significant hazard to human health and/or the environment involving the management or release of hazardous materials. (DEIR pages 4.O-26, 6-55 to 6-56)

Impact C-HZ-2: The Project, in combination with other past, present, and reasonably foreseeable future projects, would not create a significant hazard to human health and/or the environment involving the disturbance of subsurface hazardous materials. (DEIR pages 4.O-26, 6-55 to 6-56)

Impact C-HZ-3: The Project, in combination with other past, present, and reasonably foreseeable future projects, would not create a potentially significant hazard for children at

nearby schools from the emission or handling of hazardous or acutely hazardous materials. (DEIR pages 4.O-27, 6-55 to 6-56)

Impact C-HZ-4: The Project, in combination with other past, present, and reasonably foreseeable future projects, would not create a potentially significant hazard for the public or environment related to development of a hazardous materials site included in a list compiled pursuant to Government Code Section 65962.5. (DEIR pages 4.O-27, 6-55 to 6-56)

Impact C-HZ-5: The Project, in combination with other past, present, and reasonably foreseeable future projects, would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. (DEIR pages 4.O-27, 6-55 to 6-56)

III.

FINDINGS OF POTENTIALLY SIGNIFICANT IMPACTS THAT CAN BE AVOIDED OR REDUCED TO A LESS-THAN-SIGNIFICANT LEVEL THROUGH MITIGATION AND THE DISPOSITION OF THE MITIGATION MEASURES

CEQA requires agencies to adopt mitigation measures that would avoid or substantially lessen a project's identified significant impacts or potential significant impacts if such measures are feasible (unless mitigation to such levels is achieved through adoption of a project alternative). The findings in this Section III and in Section IV concern mitigation measures set forth in the Final EIR. These findings discuss mitigation measures as identified in the Final EIR for the Project. The full text of the mitigation measures is contained in the Final EIR and in Exhibit 1, the Mitigation Monitoring and Reporting Program. The impacts identified in this Section III would be reduced to a less-than-significant level through implementation of the mitigation measures contained in the Final EIR, included in the Project, or imposed as conditions of approval and set forth in Exhibit 1.

The Commission recognizes that some of the mitigation measures are partially within the jurisdiction of other agencies. The Commission urges these agencies to assist in implementing these mitigation measures, and finds that these agencies can and should participate implementing these mitigation measures.

Cultural Resources

Impact CP-2: The Project could cause a substantial adverse change in the significance of an archeological resource. (DEIR pages 4.D-41 to 4.D-46, 6-55 to 6-56, C&R pages 4-1, 4-9)

Project construction would involve the installation of piles to support project structures. Piles could be installed at depths where an archeologically sensitive interface exists, resulting in the possibility for project construction activities to encounter and adversely affect unknown archeological resources.

Mitigation Measure M-CP-2: Archeological Testing

Mitigation Measure M-CP-2 would reduce the potential Project impacts to significant archeological resources to less than significant by ensuring that an archaeological testing program is performed and that any discovered archeological resources are appropriately handled and documented.

Impact CP-3: The Project could disturb human remains, including those interred outside of formal cemeteries. (DEIR pages 4.D-46 to 4.D-47, 6-55 to 6-56, C&R pages 4-2, 4-9)

It is possible that human remains, particularly those outside a designated cemetery, may be encountered during construction activities.

Mitigation Measure M-CP-3: Treatment of Human Remains or Unassociated Funerary Objects

Mitigation Measure M-CP-3 would reduce the potential Project impacts to human remains to less than significant because it would require Project construction crews to stop work and contact the coroner in case of accidental discovery of buried human remains, and would ensure that the treatment of any human remains and associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable federal and state laws.

Impact CP-4: The Project could result in a substantial adverse change in the significance of a tribal cultural resource. (DEIR pages 4.D-47 to 4.D-48, 6-55 to 6-56)

Project activities could disturb unknown archeological sites that are considered tribal cultural resources, resulting in inadvertent damage to such resources.

Mitigation Measure M-CP-4: Tribal Cultural Resources Interpretive Program

Mitigation Measure M-CP-4 would reduce Impact CP-4 to less than significant, because it would require the Project to be redesigned to avoid adverse effects on significant tribal cultural resources, if feasible, or if preservation in place is not feasible, would require implementation of an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives.

Impact C-CP-2: The Project, in combination with past, present, and reasonably foreseeable projects in the city, could result in a significant cumulative impact on archaeological resources, tribal cultural resources, and human remains. However, the Project's contribution would be less than cumulatively considerable. (DEIR page 4.D-50, 6-55 to 6-56)

Undocumented archeological resources could be discovered during the development of identified cumulative projects, resulting in a significant cumulative impact. Although the possibility of finding human remains or tribal cultural resources is low at the Project site; the Project,

combined with other nearby cumulative development, could result in a significant cumulative impact.

Implementation of **Mitigation Measures M-CP-2 (Archeological Testing)**, **M-CP-3 (Treatment of Human Remains or Unassociated Funerary Objects)**, and **M-CP-4 (Tribal Cultural Resources Interpretative Program)** would mitigate this impact to a less-than-significant level. Therefore, the Project's incremental contribution to city-wide cumulative effects on archeological resources, human remains, or tribal cultural resources would not be cumulatively considerable because the Project would not contribute to a loss of valuable resources.

Transportation and Circulation

Impact TR-3: The Project would result in queues that would create traffic hazards. (DEIR pages 4.E-108 to 4.E-109, 6-35 to 6-36, 6-57, 6-80, C&R pages 3-45, 3-49 to 3-50, 4-2, 4-10, 4-21 to 4-22)

During both nonevent and event conditions near the easternmost driveway on Long Bridge Street to the Block D2 aboveground garage, eastbound vehicles would create a queue at the Long Bridge Street/Bridgeview Street intersection. This queue would in turn prevent westbound vehicles on Long Bridge Street from turning left into the Block D2 aboveground garage easternmost driveway along Long Bridge Street. These westbound vehicles would then queue into the Long Bridge Street/Bridgeview Street intersection and impede the flow of vehicles, bicyclists, and pedestrians and create potential hazards.

Mitigation Measure M-TR-3: Parking Garage and Intersection Queue Impacts

Mitigation Measure M-TR-3 would reduce queueing impacts at the Long Bridge Street/Bridgeview Street intersection to less than significant by prohibiting left turn movements at the easternmost parking garage driveway along Long Bridge Street at all times, thereby preventing vehicles destined to the Block D2 parking garage on westbound Long Bridge Street from impacting operations at the intersection.

Since Variant 3 does not have a driveway to the Block D2 parking garage on the east of Long Bridge Street, immediately west of Bridgeview Street, Variant 3 would result in a less-than-significant impact due to queues from the garage driveway on Long Bridge Street, and **Mitigation Measure M-TR-3** would not be required for Variant 3.

Impact TR-7: The Project would have a substantial adverse effect on pedestrian travel by creating potentially hazardous conditions for pedestrians adjacent to the Block D2 parking structure. (DEIR pages 4.E-135 to 4.E-137, 4.E-132 to 4.E-134, 6-35 to 6-36, 6-58 to 6-59, 6-81, C&R pages 3-45, 3-49 to 3-50, 4-21 to 4-22)

The quantitative parking garage queue analysis indicates that queues from the easternmost driveway on Long Bridge Street would extend into the adjacent Long Bridge Street/Bridgeview Street intersection and cause a pedestrian hazard. The queue analysis also indicates that the

queue from the westernmost driveway on Mission Rock Street would extend into the adjacent Third Street/Mission Rock Street and cause a pedestrian hazard.

Mitigation Measures M-TR-3, discussed above under Impact TR-3, and **M-TR-6**, identified in the discussion of Impact TR-6 in Section IV below, would reduce vehicle impacts on pedestrians from queueing generated by trips to the Project's Block D2 parking garage to less than significant because **Measure M-TR-3** would reduce queueing impacts at the Long Bridge Street/Bridgeview Street intersection to less than significant for the reasons stated above under Impact TR-3, and **Measure TR-6** would, among other things, restrict the westernmost driveway on Mission Rock Street to right-in, right-out access (and closing it during large AT&T Park events), establishing a "keep clear" zone in front of the easternmost driveway on Mission Rock Street to prevent westbound queues at the Third Street/Mission Rock Street traffic signal from blocking inbound access to the driveway, restriping the southbound left-turn lane at the Third Street/Mission Rock Street intersection to extend the length of the left-turn lane and providing advance traffic signal detection equipment to detect queueing and allow additional green time to alleviate queueing.

As explained above in the discussion of Impact TR-3, under Variant 3, the Block D2 parking garage would not include the easternmost driveway on Long Bridge Street and queues would not extend into the Long Bridge Street/Bridgeview Street intersection and cause a pedestrian hazard. Therefore, **Mitigation Measure M-TR-3** would not be required for Variant 3.

While the Project's impact related to pedestrian hazards would be less than significant, Improvement Measure I-TR-7 (Garage Access – Pedestrian Design Features) may be recommended for consideration by City decision-makers to further enhance pedestrian safety at garage entrances. Improvement Measure I-TR-7 would further reduce the Project's less-than-significant pedestrian safety impacts, as the design features would be provided at garage driveways to provide for safe crossings.

Impact TR-10: The Project would create potentially hazardous conditions for bicyclists and would interfere with bicycle accessibility to the project site or adjoining areas. (DEIR pages 4.E-142 to 4.E-145 , 4.E-132 to 134, 6-35 to 6-36, 6-58 to 6-59, 6-81, C&R page 3-45, 3-49 to 3-50)

Queues from the Block D2 parking garage's easternmost driveway on Long Bridge Street would extend into the adjacent Long Bridge Street/Bridgeview Street intersection and cause a bicycle hazard. The queue from the Block D2 parking garage's westernmost driveway on Mission Rock Street would extend into the adjacent Third Street/Mission Rock Street and cause a bicycle hazard. The movement of trucks backing into Pier 48 across the Blue Greenway along the east side of Terry A. Francois Boulevard could result in hazards with cyclists.

Mitigation Measure M-TR-10: Bicycle-Truck Interface at Pier 48

Mitigation Measures M-TR-3, identified in the discussion of Impact TR-3 above, and **M-TR-6**, identified in the discussion of Impact TR-6 in Section IV below, would reduce vehicle impacts on bicyclists from queueing generated by trips to the Project's Block D2 parking garage

to less than significant for the reasons stated above under Impacts TR-3 and TR-7. **Mitigation Measure M-TR-10** would reduce hazards to bicycle circulation related to the bicycle-truck interface at Pier 48 to less than significant by providing a highly visible crossing treatment, bollards, and detectable warning pavers at the Pier 48 driveway to warn cyclists and pedestrians of the driveway crossing, and providing traffic control staff at the junction of the Blue Greenway and the Pier 48 valley driveway during deliveries to manage bicycle and truck traffic.

As explained above in the discussion of Impact TR-3, under Variant 3, the Block D2 parking garage would not include the easternmost driveway on Long Bridge Street and queues would not extend into the Long Bridge Street/Bridgeview Street intersection and cause a pedestrian hazard. Therefore, **Mitigation Measure M-TR-3** would not be required for Variant 3.

While the Project's impact related to bicycle hazards would be less than significant, Improvement Measure I-TR-7 (Garage Access – Pedestrian Design Features) may be recommended for consideration by City decision-makers to further enhance bicycle safety at garage entrances. Improvement Measure I-TR-7 would further reduce the Project's less-than-significant bicycle safety impacts, as the design features would be provided at garage driveways to provide for safe crossings.

Impact TR-11: The Project's loading demand during the peak loading hour would not be adequately accommodated by the proposed onsite/off-street loading supply or in proposed on-street loading zones, which may create hazardous conditions or significant delays for transit, bicycles, or pedestrians. (DEIR pages 4.E-145 to 4.E-148, 6-36, 6-59, 6-81)

The curb space provided for commercial loading activities associated with Seawall Lot 337 uses would not meet demand during the peak loading hour for Seawall Lot 337 uses under either the High Residential or High Commercial Assumption. The shortfall in loading spaces would result in delivery vehicles double parking on interior streets such as Long Bridge Street and Exposition Street, which may result in hazards to cyclists and other vehicles.

Mitigation Measure M-TR-11.1: Commercial Loading Supply – Monitor Loading Activity and Implement Additional Loading Management Strategies as Needed

Mitigation Measure M-TR-11.2: Coordinate Deliveries and Tenant Moving Activities

Mitigation Measures M-TR-11.1 and M-TR-11.2 would reduce the Project's loading impact to less than significant by providing for ongoing monitoring and management of commercial loading and deliveries, and requiring the Project's transportation coordinator and in-building concierges to coordinate with building tenants and delivery services regarding timing of deliveries and moving activities.

Impact C-TR-3: The Project would not contribute to a major traffic hazard. (DEIR pages 4.E-158 to 4.E-159, 6-57, C&R pages 4-20, 4-22 to 4-23, 4-25)

Under Baseline plus Project conditions, the Project would result in a significant traffic hazard impact, given the parking garage queues and their impact on the Long Bridge Street/Bridgeview

Street intersection. Implementation of **Mitigation Measure M-TR-3, identified in the discussion of Impact TR-3 above**, would reduce impacts to less-than-significant levels by prohibiting left-turn movements at the eastbound driveway for the Block D2 parking garage on Long Bridge Street. Thus, long-term forecast traffic hazards are not expected in the study area, and the Project's contribution to cumulative traffic hazard impacts is considered less than significant with mitigation.

As explained above in the discussion of Impact TR-3, under Variant 3, the Block D2 parking garage would not include the easternmost driveway on Long Bridge Street and queues would not extend into the Long Bridge Street/Bridgeview Street intersection and cause a pedestrian hazard. Therefore, **Mitigation Measure M-TR-3** would not be required for Variant 3.

Impact C-TR-8: The Project would not contribute considerably to a significant cumulative bicycle impact. (DEIR pages 4.E-178 to 4.E-179, 6-58 to 6-59, C&R pages 3-49 to 3-50, 4-20, 4-22 to 4-23, 4-25)

Under 2040 cumulative conditions, there is a projected increase in vehicles at intersections in the vicinity of the Project, which may result in an increase in vehicle-bicycle conflicts at intersections in the study area. However, the numerous bicycle improvements that would be implemented by the Project and other Mission Bay development and infrastructure projects would define the bicycle network and would offset the risks associated with increase in vehicle volumes. For the above reasons, and because implementation of **Mitigation Measure M-TR-10: Bicycle-Truck Interface at Pier 48**, identified in the discussion of Impact TR-10 above, would reduce hazards to bicycle circulation related to the bicycle-truck interface at Pier 48 to less than significant, the Project's contribution to potential cumulative impacts would be less than significant with mitigation.

Impact C-TR-9: The Project could contribute to a significant cumulative loading impact. (DEIR pages 4.E-179, 6-59, C&R pages 4-19, 4-22, 4-24)

Implementation of **Mitigation Measures M-TR-11.1 and M-TR-11.2**, identified in the discussion of Impact TR-11 above, would reduce the Project's loading supply impacts to less than significant by providing for ongoing monitoring and management of commercial loading and deliveries, and it is not expected that unmet loading demand associated with the Project would be accommodated outside of the Project site or that unmet loading demand from other parts of the study area would interfere with the Project site. Therefore, the Project would not make a considerable contribution to cumulative loading impacts and cumulative impacts are less than significant with mitigation.

Air Quality

Impact AQ-4: Construction and operation of the Project would generate toxic air contaminants, including diesel particulate matter, and could expose sensitive receptors to substantial air pollutant concentrations. (DEIR pages 4.G-73 to 4.G-78, 6-15 to 6-18, 6-48 to 6-51, 6-71 to 6-75, 6-76 to 6-78, C&R pages 3-60 to 3-61)

Exposure to PM2.5

New residents and children in potential day care centers who may occupy the Project site prior to completion of the entire Project may be exposed to a portion of the Project's construction and operational PM2.5 emissions. For onsite maximally impacted receptors ("MIRs") in the study area currently outside the Air Pollutant Exposure Zone ("APEZ") under existing or future 2025 conditions but that would be located in the APEZ under existing/future plus Project conditions, the maximum modeled annual-average PM2.5 exhaust concentrations under Project conditions during construction is 2.3 µg/m³. This exceeds the contribution threshold of 0.3 µg/m³.

Mitigation Measures M-AQ-1.1 (Off-Road Construction Equipment Emissions Minimization), M-AQ-1.2 (On-Road Material Delivery and Haul Truck Construction Emissions Minimization), M-AQ-1.4 (Best Available Control Technology for In-Water Construction Equipment), and M-AQ-2.1 (Best Available Control Technology for Operational Diesel Generators), identified in Section IV below under Impacts AQ-1 and AQ-2, would reduce the impact with respect to exposing sensitive receptors to substantial levels of air pollution to less than significant, because **Mitigation Measures M-AQ-1.1, M-AQ-1.2, M-AQ-1.4, and M-AQ-2.1** would reduce PM2.5 exhaust concentrations to 0.3 µg/m³ for the onsite MIR, which would not exceed the threshold of significance. Under mitigated conditions, the onsite MIR would not be placed in a new APEZ, and the significance threshold for the Project contribution of an annual average PM2.5 concentration of 0.3 µg/m³ would not apply. Thus, with **Mitigation Measures M-AQ-1.1, M-AQ-1.2, M-AQ-1.4, and M-AQ-2.1**, PM2.5 exhaust concentration impacts for receptors currently outside the APEZ under existing or future 2025 conditions but that would be located in the APEZ under existing/future plus Project conditions would be less than significant with mitigation.

For Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use) the maximum annual average PM2.5 concentration would exceed the significance threshold of 0.3 µg/m³ for the onsite MIR currently outside the APEZ but that would be placed in the APEZ with the contribution from the Project (with each variant). The PM2.5 contribution at receptors under Variant 1 would be less than significant with mitigation, and the same mitigation measures would apply to this variant. The PM2.5 contribution at receptors under Variant 2 (Entertainment Venue) would be less than significant with mitigation, the same as that identified for the proposed project, and the same mitigation measures would apply to this variant.

Cancer Risk

For offsite MIRs in the study area that are currently located in the APEZ under existing or future 2025 conditions, the maximum modeled lifetime excess cancer risk under Project conditions for the offsite MIR is 24.4 per million (for combined construction plus operational emissions), which exceeds the cumulative contribution threshold of 7.0 per million for receptors within the APEZ.

For onsite MIRs in the study area that are not located in the APEZ under existing or future 2025 conditions but that would be located in the APEZ under existing or future 2025 plus Project

conditions, the maximum modeled lifetime excess cancer risk under Project conditions during construction plus operation is 140.2 per 1 million. This exceeds the contribution threshold of 10.0 in 1 million.

For offsite MIRs that are not located in the APEZ under existing or future 2025 conditions but that would be located in the APEZ under existing or future 2025 plus Project conditions, the maximum modeled lifetime excess cancer risk under Project conditions during construction plus operation is 108.4 million. This exceeds the contribution threshold of 10.0 per 1 million.

Mitigation Measures M-AQ-1.1 (Off-Road Construction Equipment Emissions Minimization), M-AQ-1.2 (On-Road Material Delivery and Haul Truck Construction Emissions Minimization), M-AQ-1.4 (Best Available Control Technology for In-Water Construction Equipment), M-AQ-2.1 (Best Available Control Technology for Operational Diesel Generators), and M-AQ-2.3 (Transportation Demand Management), identified in Section IV below under Impacts AQ-1 and AQ-2, would reduce the impact with respect to cancer risk to less than significant, because these measures would reduce the lifetime excess cancer risks below the applicable thresholds of significance by reducing off-road and generator PM10 exhaust emissions, on-road truck PM2.5 emissions, barge PM10 exhaust emissions, reducing emergency generator PM10 exhaust emissions, and reducing particulate matter emissions from operational vehicle trips.

The lifetime cancer risk at receptors under Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use) would be less than significant with mitigation, and the same mitigation measures would apply to the variants.

Impact AQ-5: The Project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (DEIR pages 4.G-78 to 84, 6-18 to 6-20, 6-52, 6-75 to 6-78, C&R pages 3-57 to 3-61)

The Project, without the implementation of mitigation measures, potentially could conflict with primary goals of the 2010 Clean Air Plan to reduce emissions and decrease concentrations of harmful pollutants, and to safeguard the public health by reducing exposure to air pollutants that pose the greatest health risk.

Mitigation Measures M-AQ-1.1 (Off-Road Construction Equipment Emissions Minimization), M-AQ-1.2 (On-Road Material Delivery and Haul Trucks Construction Emissions Minimization), M-AQ-1.3 (Low-VOC Architectural Coatings), M-AQ-1.4 (Best Available Control Technology for In-Water Construction Equipment), M-AQ-2.1 (Best Available Control Technology for Operational Diesel Generators), M-AQ-2.2 (Reactive Organic Gases Emissions Reduction Measures), and M-AQ-2.3 (Transportation Demand Management), identified in Section IV below under Impacts AQ-1 and AQ-2, would reduce the impact with respect to conflict with or obstruction of the 2010 Clean Air Plan to less than significant, because the Project would be consistent with the 2010 Clean Air Plan, particularly with implementation of the mitigation measures listed above, in addition to project-specific measures to reduce pollutant emissions. Additionally, the Project would be consistent with the

2010 Clean Air Plan by incorporating various Clean Air Plan control measures, such as land use and local impact measures, energy and climate measures, and TDM measures, all of which are incorporated in the Project. The Project would also not hinder implementation of the Clean Air Plan.

Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use) would be consistent with the 2010 Clean Air Plan because they would incorporate mitigation measures that include offsetting residual ROG and NOx emissions above significance thresholds. Additionally, Variants 1 through 4 would be consistent with the 2010 Clean Air Plan through the incorporation of control measures of the Clean Air Plan, including land use/local impact measures and energy/climate measures now required through the various components of the City's Greenhouse Gas Reduction Strategy as well as the transportation demand management measures that would be implemented through **Mitigation Measure M-AQ-2.3**. Variants 1 through 4 would also not hinder implementation of the 2010 Clean Air Plan. Variants 1 through 4 would not conflict with, or obstruct implementation of the 2010 Clean Air Plan, and this impact would be less than significant with mitigation.

Impact C-AQ-2: The Project's construction and operation, in combination with other past, present, and reasonable foreseeable future projects, could generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial pollutant concentrations. (DEIR pages 4.G-86 to 4.G-87, 6-15 to 6-18, 6-48 to 6-51, 6-71 to 6-75, 6-76 to 6-78, C&R pages 3-60 to 3-61)

The significance thresholds used to assess a project's impact on toxic air contaminants, as analyzed under Impact AQ-4 above, include consideration of the cumulative effects of existing and future reasonably foreseeable development. In addition, the Final EIR's analysis of Impact AQ-4 included an analysis of future conditions (2025) that includes all reasonably foreseeable development in the city. Thus, the project-level evaluation presented under Impact AQ-4 contains a cumulative analysis. As described therein, with implementation of **Mitigation Measures M-AQ-1.1 (Off-Road Construction Equipment Emissions Minimization), M-AQ-1.2 (On-Road Material Delivery and Haul Truck Construction Emissions Minimization), M-AQ-1.4 (Best Available Control Technology for In-Water Construction Equipment), and M-AQ-2.1 (Best Available Control Technology for Operational Diesel Generators)**, identified in Section IV below under Impacts AQ-1 and AQ-2, incremental Project contributions to PM_{2.5} exposure and cancer risks would be less than the relevant thresholds and this cumulative impact would be less than significant with mitigation.

Impact C-AQ-3: The Project's construction and operation, in combination with other past, present, and reasonable foreseeable future projects, would not conflict with, or obstruct implementation of, the 2010 Clean Air Act Plan. (DEIR pages 4.G-87, 6-75 to 6-76, C&R pages 3-57 to 3-61)

As discussed above under Impact AQ-5, the Project would not interfere with implementation of the 2010 Clean Air Plan, and because the Project would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the

state and federal ambient air quality standards, the Project will not contribute to a cumulative conflict with the 2010 Clean Air Plan. Implementing **Mitigation Measures M-AQ-1.1 (Off-Road Construction Equipment Emissions Minimization)**, **M-AQ-1.2 (On-Road Material Delivery and Haul Truck Construction Emissions Minimization)**, **M-AQ-1.3 (Low-VOC Architectural Coatings)**, **M-AQ-1.4 (Best Available Control Technology for In-Water Construction Equipment)**, **M-AQ-2.1 (Best Available Control Technology for Operational Diesel Generators)**, **M-AQ-2.2 (Reactive Organic Gases Emissions Reduction Measures)** and **M-AQ-2.3 (Transportation Demand Management)** would reduce the Project's cumulative impact with respect to conflict with or obstruction of the 2010 Clean Air Plan to less than significant for the reasons stated above in the discussion of Impact AQ-5.

Biological Resources

Impact BI-3: Impact pile driving and vibratory driving and extraction from construction of Pier 48 seismic upgrades could have a substantial adverse effect on fish and marine mammal species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW, NMFS, or USFWS. (DEIR pages 4.L-38 to 4.L-50, 6-21 to 6-26, 6-55 to 6-56, C&R pages 3-65 to 3-77)

Accumulated sound levels from Project-related impact pile driving could cause injury to fish of all sizes within 28 to 51 meters of the source of pile driving (without attenuation). With impact pile driving, peak-level injury thresholds of noise (before attenuation) could be exceeded within 10 meters for sea lions and up to 61 meters for harbor porpoises from pile driving activity. Therefore, impact pile driving may result in injury to marine mammals from peak noise and accumulated sound levels. With vibratory pile driving, accumulated underwater sound thresholds could also be exceeded within 10 meters of pile-driving activity for sea lions and up to 683 meters for harbor porpoises (before attenuation). With vibratory pile removal, accumulated underwater sound thresholds could also be exceeded within 10 meters of pile-driving activity for sea lions and harbor seals and up to 49 meters for harbor porpoises (before attenuation). Therefore, vibratory pile driving and removal may also result in injury to marine mammals from increases in accumulated sound levels. Given that harbor seals and sea lions are known to frequent the project site, impact driving, vibratory driving, and vibratory removal of piles could result in injury to these marine mammals. Impacts on harbor porpoises or grey whales are less likely because of their infrequent presence in the project area but are possible if present during pile-driving activity.

Mitigation Measure M-BI-3.1: Conduct Impact Hammer Pile Driving during Periods that Avoid Special-Status Fish Species' Spawning and Migration Seasons

Mitigation Measure M-BI-3.2: Pile-Driving Noise Reduction for the Protection of Fish

Mitigation Measure M-BI-3.3: Pile-Driving Noise Reduction for Protection of Marine Mammals

Mitigation Measures M-BI-3.1 and M-BI-3.2 would reduce impacts from Project pile-driving on fish to less than-significant by prioritizing vibratory pile driving wherever feasible, employing

a “soft start” technique that allows fish the opportunity to leave the impact area, implementing noise attenuation measures, and limiting impact pile driving to a season when special-status fish species are unlikely to be in the area, thereby ensuring that peak and accumulated sound levels would be below injury threshold levels (except immediately around the pile driver itself), that fish are not likely to be exposed to accumulative sound levels over a full day of pile driving and that the likelihood of affecting special-status species would be remote. **Mitigation Measure M-BI-3.3** would reduce impacts on marine mammals from Project pile-driving and removal activities to less than significant, by prioritizing vibratory pile driving, employing a “soft start” technique that allows marine mammals the opportunity to leave the impact area, implementing noise attenuation measures, monitoring marine mammal activity, and shutting down pile-driving activity when marine mammals enter a zone in which injury thresholds would be exceeded.

Construction of the bay source heating/cooling system under Variant 1 (District Energy/Bay-Source Energy Capture) may entail one additional day of pile driving. Under Variant 1, the one additional day of pile driving would result in a slightly higher impact on fish than the Project but would not change the conclusion that this impact would be less than significant with mitigation.

Impact BI-5: Construction of the Project could affect migratory nesting birds. (DEIR pages 4.L-52 to 4.L-54, 6-55 to 6-56, C&R page 4-18)

If construction of the Project occurs during the nesting season (February 1 to August 31), removal of existing shrubs and trees and/or rehabilitation of the sheds and piers on the Project site could result in the direct mortality of nesting adult or young birds, destruction of active nests, and/or disturbance of nesting adults, causing nest abandonment and/or loss of reproductive effort.

Mitigation Measure M-BI-5: Conduct Pre-Construction Surveys for Nesting Migratory Birds

Mitigation Measure M-BI-5 would reduce impacts on protected nesting migratory bird species from removal of shrubs and trees and/or rehabilitation of the existing sheds and Pier 48 to less than significant by requiring pre-construction surveys prior to any work occurring during the nesting season and implementation of measures to avoid disturbances to any active nests that are found, thereby ensuring that removal of protected nesting migratory bird species and their active nests would be avoided.

Impact C-BI-3: The Project, in combination with future development in the city, would not have a substantial adverse effect on a fish species or marine mammals identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW, NMFS, or USFWS due to pile driving. (DEIR pages 4.L-56, 6-55 to 6-56, C&R pages 3-65 to 3-77)

The Project, combined with other development projects in the city and along the San Francisco Bay shoreline, could result in cumulative impacts on special-status fish species and marine mammals if in-water pile driving is needed for other projects.

Implementation of **Mitigation Measures M-BI-3.1, M-BI-3.2, and M-BI-3.3**, identified in the discussion of Impact BI-3 above, would ensure that the Project's contribution to this cumulative impact would be less than cumulatively considerable, thereby reducing this impact to less than significant, by reducing the noise levels produced by pile driving and vibratory equipment, requiring monitor of pile-driving activity, ensuring that the potential for injury to fish would be minimized, and establishing a safety zone to minimize the potential for injury to marine mammals.

Impact C-BI-5: Construction of the Project, in combination with future development in the city, could affect nesting birds. (DEIR pages 4.L-57, 6-55 to 6-56)

The Project, combined with other development projects in the city and along the San Francisco Bay shoreline, could result in significant cumulative impacts on avian wildlife. Impacts could occur during Project construction if nesting birds are directly affected by grading or vegetation removal or indirectly affected by construction noise. The Project and future development would be subject to the provisions of California Fish and Game Code Sections 3503 and 3513 and the Migratory Bird Treaty Act. These provisions would reduce the impact of future projects along the Bay shoreline to a less-than-significant level. Implementation of **Mitigation Measure M-BI-5**, identified in the discussion of Impact BI-5 above, would ensure that the Project would result in a less than cumulatively considerable contribution to impacts on nesting migratory birds, and that cumulative impacts would be less than significant, by requiring pre-construction nesting surveys for migratory birds and implementation of measures to avoid disturbances to active nests.

Geology and Soils

Impact GE-5: The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (DEIR pages 4.M-34 to 4.M-36, 6-55 to 6-56)

Drilling and pile driving to for the proposed buildings on Seawall Lot 337 and for streets and the promenade and boardwalk at China Basin Park could affect the Colma and Franciscan Formations, both of which could contain significant paleontological remains or traces of paleontological remains.

Mitigation Measure M-GE-5: Accidental Discovery of Paleontological Resource

Mitigation Measure M-GE-5 would reduce Impact GE-5 to less than significant level by requiring training for construction crews to recognize paleontological resources by a qualified paleontologist, stopping work in case of discovering such resources, evaluation of those resources by a qualified paleontologist and, as appropriate, preparation and implementation of a recovery plan.

Impact C-GE-4: The Project, in combination with other development within the city, could result in impacts to paleontological resources. However, the Project's contribution would be less than cumulatively considerable. (DEIR pages 4.M-38, 6-55 to 6-56)

Construction activities associated with the Project could disturb or destroy paleontological resources, thereby contributing to the progressive loss of such resources. Cumulative growth and development in the city could have impacts if important paleontological resources are found during construction activities. Although the potential for other individual projects to affect important paleontological resources is unknown, given the number of projects in the city, it is probable that cumulative growth and development could have impacts on important paleontological resources.

Mitigation Measure M-GE-5, identified in the discussion of Impact GE-5 above, would reduce the Project's potential impacts on paleontological resources to less than significant for the reasons described above under Impact M-GE-5. Although cumulative development impacts related to paleontological resources would be considered significant, the incremental effects of the Project, after mitigation, would not be cumulatively considerable.

IV. SIGNIFICANT IMPACTS THAT CANNOT BE AVOIDED OR MITIGATED TO A LESS-THAN-SIGNIFICANT LEVEL

Based on substantial evidence in the whole record of these proceedings, it is hereby found and determined that, where feasible, changes or alterations have been required, or incorporated into, the Project to reduce the significant environmental impacts as identified in the Final EIR. It is further found, however, that certain mitigation measures in the Final EIR, as described in this Section IV, or changes, have been required in, or incorporated into, the Project, pursuant to Public Resources Code Section 21002 and CEQA Guidelines Section 15091, which may lessen, but do not avoid (i.e., reduce to less-than-significant levels), the potentially significant environmental effects associated with implementation of the Project that are described below. Although all of the mitigation measures set forth in the Mitigation Monitoring and Reporting Plan (MMRP), attached as Exhibit 1, are adopted, for some of the impacts listed below, despite the implementation of feasible mitigation measures, the effects remain significant and unavoidable.

It is further found, as described in this Section IV below, based on the analysis contained within the Final EIR, other considerations in the record, and the significance criteria identified in the Final EIR, that because some aspects of the Project could cause potentially significant impacts for which feasible mitigation measures are not available to reduce the impact to a less-than-significant level, those impacts remain significant and unavoidable. It is also recognized that although mitigation measures are identified in the Final EIR that would reduce some significant impacts, certain measures, as described in this Section IV below, are uncertain or infeasible for reasons set forth below, and therefore those impacts remain significant and unavoidable or potentially significant and unavoidable.

Implementation of one or more of the variants identified in the Final EIR would result in similar impacts to those identified in this Section IV for the Project, and would require the same mitigation measures as for the Project, unless otherwise stated for a particular impact.

Thus, the following significant impacts on the environment, as reflected in the Final EIR, are unavoidable. As more fully explained in Section VIII, below, under Public Resources Code Section 21081(a)(3) and (b), and CEQA Guidelines 15091(a)(3), 15092(b)(2)(B), and 15093, it is found and determined that legal, environmental, economic, social, technological and other benefits of the Project override any remaining significant adverse impacts of the Project for each of the significant and unavoidable impacts described below. This finding is supported by substantial evidence in the record of this proceeding.

Transportation and Circulation

Impact TR-4: The Project would result in an adverse impact by increasing ridership by more than 5 percent on two individual Muni routes that exceed 85 percent capacity utilization under baseline conditions. (DEIR pages 4.E-110-126, 6-35, 6-58, 6-80, C&R pages 3-42, 3-46 to 3-49, 4-2, 4-10)

The Project would result in adverse impacts to the 10 Townsend and 30 Stockton by increasing ridership by more than 5 percent on those routes that exceed 85 percent capacity utilization under baseline conditions.

The following mitigation measures require the project sponsor to pay its fair share contribution to SFMTA toward the cost of additional bus service or otherwise improving service on the 10 Townsend Line and 30 Stockton Line, as more fully described in the Final EIR.

Mitigation Measure M-TR-4.1: Provide Fair-Share Contribution to Improve 10 Townsend Line Capacity

Mitigation Measure M-TR-4.2: Provide Fair-Share Contribution to Improve 30 Stockton Line Capacity

Implementing transit line improvements as identified in **Mitigation Measures M-TR-4.1** and **M-TR-4.2** is expected to allow Muni to maintain transit headways, and would reduce the Project's impacts on the 10 Townsend and 30 Stockton lines to less-than-significant levels. However, because the method and total cost of providing additional service and SFMTA's ability to implement improvements is uncertain, the Project's impact would be considered to be **significant and unavoidable with mitigation**.

Impact TR-6: The Project would result in an adverse impact related to a substantial increase in transit delays on Third Street between Channel Street and Mission Rock Street. (DEIR pages 4.E-129 to 4.E-134, 6-35, 6-58, 6-80, C&R pages 3-45, 4-2 to 4-3, 4-10 to 4-11, 4-21 to 4-22)

The Project would add traffic that could affect the T-Third transit line on Third Street by causing transit delays due to intersection congestion from Project-generated traffic generated and queues of vehicle traffic at intersections and entrances to parking garages at the project site.

Mitigation Measure M-TR-6: Parking Garage and Intersection Queue Impacts on Transit Delay

This mitigation measure requires the project sponsor to implement various actions to reduce queuing of cars accessing the parking garage on Block D2, including eliminating left turns from the garage onto Mission Rock Street during large events; restriping the southbound left-turn lane at Third Street/Mission Rock Street to reduce intersection congestion; installing wayfinding signs to provide directions to parking; providing parking control officers to manage traffic; monitoring queuing at parking garages and taking further actions as necessary to reduce queuing that is causing transit delays, as more fully described in the Final EIR.

Implementation of **Mitigation Measure M-TR-6** would reduce transit delay impacts to being less than significant. However, at this time it may not be considered to fully resolve transit delay impacts because, and to the extent that, implementation of some of components of the mitigation (i.e., approval of restriping on Third Street and entering into an Event Management Agreement with the project sponsor to allocate parking control officers on site), requires SFMTA Board approval. Such approval is currently considered uncertain. Thus, based upon such current uncertainty of full implementation of **Mitigation Measure M-TR-6**, the Project's transit delay impacts would be considered to remain **significant and unavoidable with mitigation**.

Impact TR-9: The Project would have significant impacts on pedestrian safety at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street. (DEIR pages 4.E-138 to 4.E-142, 6-35 to 6-36, 6-58 to 6-59, 6-81, C&R pages 3-45, 4-21 to 4-22)

The Project would result in new pedestrian trips where pedestrians cross Fourth Street and would increase the number of vehicles traveling through unsignalized intersections on Fourth Street at Mission Rock Street and Fourth Street at Long Bridge Street, primarily to access the Block D2 parking garage on Mission Rock Street. This increase in the number of vehicles and pedestrians from the Project site may create potentially hazardous conditions for pedestrians while attempting to cross the street along these unsignalized intersections.

Mitigation Measure M-TR-9: Install Traffic Signals and Related Intersection Improvements at Unsignalized Intersections on Fourth Street at Mission Rock Street and Long Bridge Street

This mitigation measure would require the developer to fund and SFMTA to install traffic signals with pedestrian indications at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street, which would allow pedestrians to cross Fourth Street while northbound and southbound vehicle traffic is stopped, as more fully described in the Final EIR.

Implementation of **Mitigation Measure M-TR-9** would fully resolve pedestrian safety impacts such that these impacts would be less than significant. However, at this time, implementation of the signalization improvements is considered somewhat uncertain, because they will require SFMTA Board approval. Because of this uncertainty regarding implementation of **Mitigation**

Measure M-TR-9, the Project's pedestrian safety impacts would be considered **significant and unavoidable with mitigation**.

Impact C-TR-4: The Project would contribute considerably to a significant cumulative transit impact because it would increase ridership by more than 5 percent on one individual Muni route that would exceed 85 percent capacity utilization. (DEIR pages 4.E-159 to 4.E-172, 6-58, C&R pages 3-42, 3-46 to 3-49, 4-21, 4-23 to 4-24, 4-26)

The Project would make a considerable contribution to cumulative impacts on the 10 Townsend because the Project would add more than 5 percent to the cumulative ridership on this route that would exceed 85 percent utilization under 2040 cumulative conditions.

Mitigation Measure M-C-TR-4: Provide Fair-Share Contribution to Improve 10 Townsend Line Capacity

This mitigation measure requires the project sponsor to pay its fair share contribution to SFMTA toward the cost of additional bus service or otherwise improving service on the 10 Townsend Line, as more fully described in the Final EIR.

Implementing transit line improvements as identified in **Mitigation Measure M-C-TR-4** is expected to allow Muni to maintain transit headways, and would reduce the Project's impact on the 10 Townsend line to less-than-significant levels. However, because the method and total cost of providing additional service and SFMTA's ability to implement improvements is uncertain, the Project's impact would be **significant and unavoidable with mitigation**.

Variant 2 (Entertainment Venue) Variant 2 would contribute 2 percent fewer transit trips than the proposed project during the a.m. peak hour and 6 percent more transit trips during the p.m. peak hour than the Project, and thereby result in a significant cumulative transit impact. Variant 4 (Hotel Use) would contribute 2 percent more transit trips than the Project, and thereby result in a significant cumulative transit impact. **Mitigation Measure M-C-TR-4**, which involves providing a fair-share contribution to improve the 10 Townsend line capacity, would also be applicable to Variants 2 and 4. The impacts of Variants 2 and 4 related to transit impacts under cumulative conditions would thus be significant and unavoidable with mitigation, as with the Project.

Impact C-TR-6: The Project would contribute considerably to significant cumulative impacts related to transit delays. (DEIR pages 4.E-159 to 4.E-172, 6-58, C&R pages 4-214-23 to 4-24, 4-26)

The addition of Project vehicle trips that would result in queues at the driveways for the Block D2 parking garage and/or queues at intersections adjacent to the garage could result in transit delays that would affect operations of the T Third line during the a.m. peak hour. The queue impacts at the southbound left-turn lane at the Third Street/Mission Rock Street intersection during the a.m. peak hour would cause a significant transit delay impact.

Implementation of **Mitigation Measure M-TR-6**, identified under Impact TR-6 above, would reduce transit delay impacts to being less than significant. However, at this time it may not be considered to fully resolve transit delay impacts because, and to the extent that, implementation of some of components of the mitigation (i.e., approval of restriping on Third Street and entering into an Event Management Agreement with the project sponsor to allocate PCOs on site), requires SFMTA Board approval, and such approval is currently considered somewhat uncertain because it requires SFMTA Board discretionary action. Thus, based upon such current uncertainty of full implementation of **Mitigation Measure M-TR-6**, the Project's cumulative impact on transit delay would be considered to remain **significant and unavoidable with mitigation**.

Impact C-TR-7: The Project would contribute considerably to significant cumulative pedestrian impacts. (DEIR pages 4.E-178, 6-58 to 6-59, C&R pages 3-49 to 3-50 4-20, 4-23, 4-25 to 4-26)

Pedestrian volumes in the Project vicinity would increase between implementation of the Project and 2040 cumulative conditions due to build-out of planned Mission Bay developments in the Project vicinity. In addition, there would be a projected increase in background vehicle and bicycle traffic between implementation of the Project and 2040 cumulative conditions that could result in increased potential for pedestrian-vehicle and pedestrian-bicycle conflicts.

Implementation of **Mitigation Measure M-TR-9**, identified under Impact TR-5 above, would fully resolve pedestrian safety impacts associated with the Project such that such impacts would be less than significant by requiring the provision of traffic signals with pedestrian indications at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street, which would allow pedestrians to cross Fourth Street while northbound and southbound vehicle traffic is stopped. However, at this time, the approval of the signalization improvements is considered somewhat uncertain, because they will require SFMTA Board approval. For that reason, the Project's contribution to potential cumulative impacts would be considered to remain **significant and unavoidable with mitigation**.

Noise

Impact NOI-1: Construction of the Project would generate noise levels in excess of standards or result in substantial temporary increases in noise levels. (DEIR pages 4.F-31 to 4.F-40, 6-7, 6-38)

Because construction noise would exceed the ambient noise level by more than 10 dB at Mission Bay Block 2, the Project is expected to result in a substantial increase in ambient noise in the Project area for the duration of Project construction. It is possible that noise levels from Project construction would exceed the ambient noise level at future onsite residences by more than 10 dB, resulting in a substantial increase in ambient noise. Construction activities are anticipated to occur for at least 6 years.

Mitigation Measure M-NOI-1: Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Noise-Sensitive Land Uses.

Mitigation Measure M-NOI-1, together with **Mitigation Measure M-NOI-3.1 (Pile-Driving Control Measures – Annoyance)**, identified under Impact NOI-3 below, would reduce construction noise levels, as well as the severity of construction noise impacts on sensitive receptors, by requiring the preparation and implementation of a Construction Noise Plan to reduce construction noise, and requiring the use of "quiet" pile-driving technology and limiting pile-driving to areas where the least disturbance of existing sensitive land uses would occur, as more fully described in the Final EIR.

Although these measures would reduce construction noise levels, as well as the severity of construction noise impacts on sensitive receptors, because of the Project's close proximity to offsite receptors (and potentially occupied future onsite receptors during construction), it would not be possible to guarantee that the increase in ambient noise levels during construction would be less than 10 dB. In addition, it would not be possible to guarantee that noise levels at future onsite occupied residences would be below 90 dBA Leq during Project construction, because the Project phasing is not sufficiently detailed at this time to determine whether the Project's buildings could shield future residents from future construction noise. Therefore, even with incorporation of **Mitigation Measures M-NOI-1** and **M-NOI-3.1**, which would reduce the severity of this impact, the Project's construction noise impact would be considered **significant and unavoidable and unavoidable with mitigation**.

Potential construction noise impacts of Variant 1 (District Energy/Bay-Source Energy Capture) to noise-sensitive receptors would be the same on a daily basis as the Project, but would last one day longer, and the same mitigation measures would apply to Variant 1. Similar to the Project, impacts would be significant and unavoidable with mitigation.

Impact NOI-2: Operation of the Project could result in the exposure of persons to or generation of noise levels in excess of the San Francisco Noise Ordinance or a substantial temporary, periodic or permanent increase in ambient noise levels in the Project vicinity, above levels existing without the Project. (DEIR pages 4.F-40 to 4.F-55, 6-8, 6-38, 6-61, 6-83, C&R pages 4-12, 4-21)

Traffic Noise Impacts on Offsite Land Uses

Modeling demonstrated that noise levels along two roadway segments would increase by 3 dB or more in areas where with-Project noise levels affecting residential uses would exceed 60 dBA Ldn. In addition, Project-generated traffic would increase noise levels by 5 dB or more along one segment where existing and existing plus-Project noise levels were modeled to be 60 dBA Ldn or less.

Although it is likely that the residential developments located along segments where a Project-related substantial permanent increase in traffic noise may occur would not experience unacceptable interior noise levels, the Project's traffic would still result in a substantial permanent increase in ambient noise levels along the three segments. Although mitigation in the

form of sound walls was considered to reduce the Project's traffic noise impacts, it was determined that this mitigation would be infeasible in this dense urban area, with residential buildings located close to roadways. **Mitigation Measure M-AQ-2.3 (Transportation Demand Management)**, identified below in the discussion of Impact AQ-2, requires preparation of a transportation demand management plan with a goal of reducing one-way vehicle trips by 20 percent. This mitigation measure could reduce the amount of traffic on roadway segments that experience a significant traffic noise increase, but it would be speculative to quantify the precise number of vehicle trips (and hence vehicle-related noise) reduced along any given segment. Because these impacts could not be reduced to less-than-significant levels, traffic noise impacts related to a substantial permanent increase in noise would be **significant and unavoidable with mitigation**.

Inclusion of the entertainment venue under Variant 2 (Entertainment Venue) in place of other uses under the Project would result in a slight increase in p.m. peak-hour vehicle trips, which would result in a less than 0.1-decibel to approximate 0.3-decibel increase in traffic noise on a given roadway segment as compared to the Project. Redistribution of traffic under Variant 3 (Reconfigured Parking) would result in a 20 percent increase of p.m. peak hour vehicle trips along Mission Rock Street from Terry A. Francois Boulevard to Third Street, which would result in an approximately 1.5 decibel increase in traffic noise on this roadway segment as compared to the Project. Variant 4 (Hotel Use) would result in a slight increase in a.m. and p.m. peak hour vehicle trips, which would result in an approximately 0.2-decibel (dB) increase in noise levels on any given roadway segment. As such, project-generated noise impacts would be essentially the same under Variants 2, 3, and 4 as they would be under the Project, and **Mitigation Measure M-AQ-2.3** would also apply. As with the Project, traffic noise impacts to future offsite land uses would be significant and unavoidable with mitigation under Variants 2, 3, and 4.

Noise from Onsite Outdoor Use Areas to Offsite Land Uses

Due to uncertainties as to the nature and extent of future outdoor events at the Project site (including if amplified speech or music would occur at such events), the potential for the use of amplified sound equipment could result in noise levels in excess of standards established in the San Francisco General Plan or San Francisco Noise Ordinance.

Mitigation Measure M-NOI-2.1: Noise Control Plan for Special Outdoor Amplified Sound

This mitigation measure would require the project sponsor to develop and implement a Noise Control Plan for operations at the proposed outdoor entertainment venues to reduce the potential for noise impacts from public address and/or amplified music, as more fully described in the Final EIR.

Implementation of **Mitigation Measure M-NOI-2.1** would reduce this impact but, due to the close proximity of residences to the public open spaces and uncertainties regarding the frequency, duration and character of events with amplified sound, and because a variance to noise standards under Section 2909 of the City's Police Code for fixed sources of noise and from events subject to regulation by the Entertainment Commission may be sought, even though such

Police Code exceedances would be subject to review and permitted, this impact would be considered **significant and unavoidable with mitigation**.

Stationary Operational Noise Impacts

The potential exists for noise generated by stationary mechanical equipment (including HVAC units, emergency generators, and other building equipment) at Project buildings to exceed the property-line noise limits under the Noise Ordinance.

At a distance of 100 feet, the distance to the residential uses at Mission Bay Block 1, interior noise from Project HVAC equipment could result in an exceedance of the 55 dBA daytime and 45 dBA nighttime Noise Ordinance interior limits at nearby existing buildings.

Noise in the residential sleeping or living rooms of offsite uses (e.g., in the Mission Bay Block 1 residences) from Project emergency generators could the 55 dBA daytime and 45 dBA nighttime Noise Ordinance interior limits. Further, noise from emergency generators could also result in increases in ambient noise levels of 5 dB or more at property line of the equipment generating the noise.

Mitigation Measure M-NOI-2.2: Stationary Equipment Noise Controls

Implementation of **Mitigation Measure M-NOI-2.2** would reduce the Project's impact related to stationary equipment noise to less than significant, by applying specified noise attenuation measures that would ensure that noise from stationary equipment would not exceed the limits of the City's Noise Ordinance Section 2909(a) and (b) limits of 5 dBA and 8 dBA at residential and commercial property lines, respectively, or the Section 2909(d) interior noise limit of 55 dBA daytime and 45 dBA nighttime for residential land uses at the Mission Bay Block 1 and new Project residential buildings.

The centralization of the DES equipment associated with Variant 1 (District Energy/Bay-Source Energy Capture) into a single location could result in greater noise levels in the immediate vicinity of the equipment under Variant 1, compared to the Project. Due to the proximity between existing and future onsite receptors and the DES system under this variant, it is still possible that exterior noise levels at adjacent uses could be such that the interior 45 dBA nighttime noise level standard and/or the 55 dBA daytime standard may be exceeded. Compliance with Police Code Section 2909, which requires that the project sponsor provide acoustical treatments for stationary equipment under Variant 1 that reduces ambient noise levels to below the 55 dBA daytime and 45 dBA nighttime interior thresholds would ensure that the operational ambient noise impacts would remain less than significant, similar to the Project.

Truck Delivery Noise Impact on Offsite Land Uses

The offsite residential land uses closest to a potential loading location would be the future residential development in Block 9A of the Mission Bay Redevelopment Plan area, immediately south of the project site along Mission Rock Street, and the Mission Bay Block 1 residential uses, directly west of the project site. At both of these locations, potential noise levels would be

reduced because of attenuation over distance alone. In addition, buildings within Block 9A would be shielded from the nearby delivery location by Block H of the Project, thereby further reducing noise levels. Because standard construction can typically provide an exterior-to-interior noise reduction of up to 20 dB, interior noise levels would be much lower than the interior nighttime limit. Further, because the ambient noise level in the Project vicinity is estimated to be approximately 69 dBA Leq, noise from loading docks at offsite residential receptors would not result in a 5 dB increase above ambient noise levels and, thus, would not result in a substantial temporary or permanent increase in noise in these areas. No other loading dock locations at the Project site would affect existing or proposed offsite sensitive land uses. Impacts related to truck deliveries would be less than significant.

Traffic Noise Impacts on Onsite Land Uses

Noise levels along Mission Rock Street from Terry A. Francois Boulevard to Third Street would exceed 60 dBA Ldn (approximately 62 dBA Ldn), resulting in the exposure of proposed residences along these segments to noise levels in excess of the “satisfactory” level. Along this segment, the Project-related increase in traffic noise was modeled to be 12 dB.

CCR Title 24 requires new residences to incorporate noise insulation features to reduce interior noise levels below 45 dBA Ldn according to existing noise conditions, not future Projected noise conditions. Therefore, to ensure new sensitive receptors are not substantially affected by Project-generated traffic noise, future Project residences along Mission Rock Street from Terry A. Francois Boulevard to Third Street must be designed to meet the interior noise standard in CCR Title 24 given the anticipated 12 dBA Ldn increase in noise levels in this area.

Mitigation Measure M-NOI-2.3: Design of Future Noise-Sensitive Uses

Mitigation Measure M-NOI-2.3 would reduce the Project's noise impacts to future Project residents in buildings on Mission Rock Boulevard between Terry A. Francois Boulevard and Third Street to less than significant because it requires that noise attenuation measures be incorporated into these units as necessary to ensure that interior noise levels would be maintained at acceptable levels, even with future traffic noise increases.

Although designing the Project to ensure compliance with applicable noise standards would ensure that individual onsite residences would not experience excessive noise, the Project's traffic would still result in a substantial permanent increase in ambient noise levels along the segment of Mission Rock Boulevard between Terry A. Francois Boulevard and Third Street. This substantial permanent increase in ambient noise levels could not be reduced to less-than-significant levels because no feasible mitigation measures would be able to reduce the 12 dB increase resulting from the Project's traffic along this segment to less than the allowable 3 dB increase. Therefore, although traffic noise impacts to future Project residences would be less than significant with implementation of **Mitigation Measures M-NOI-2.3**, and **M-AQ-2.3 (Transportation Demand Management)** (identified below in the discussion of Impact AQ-2) could reduce traffic noise levels by reducing vehicle trips, it cannot be stated with certainty that **M-AQ-2.3** would reduce vehicle trips to the degree necessary to reduce traffic noise levels to

less than significant. Therefore, traffic noise impacts related to a substantial permanent increase in ambient noise would be **significant and unavoidable with mitigation**.

Inclusion of the entertainment venue under Variant 2 (Entertainment Venue) in place of other uses under the Project would result in a slight increase in p.m. peak-hour vehicle trips, which would result in a less than 0.1-decibel to approximate 0.3-decibel increase in traffic noise on a given roadway segment as compared to the Project. Redistribution of traffic under Variant 3 (Reconfigured Parking) would result in a 20 percent increase of p.m. peak hour vehicle trips along Mission Rock Street from Terry A. Francois Boulevard to Third Street, which would result in an approximately 1.5 decibel increase in traffic noise on this roadway segment as compared to the Project. Variant 4 (Hotel Use) would result in a slight increase in a.m. and p.m. peak hour vehicle trips, which would result in an approximately 0.2-decibel (dB) increase in noise levels on any given roadway segment. As such, project-generated noise impacts would be essentially the same under Variants 2, 3 and 4 as they would be under the Project. As with the Project, traffic noise impacts to future onsite land uses would be significant and unavoidable with mitigation under Variants 2, 3 and 4.

Truck Delivery Noise Impacts on Onsite Land Uses

Audible warnings from delivery trucks could cause sleep disturbance if they occur during the nighttime (including early morning) hours near residential uses. Therefore, interior noise levels from truck delivery operations would result in a substantial temporary or permanent increase in noise in excess of the applicable standards; in addition, onsite residential uses would be substantially affected by future noise levels at the project site.

Noise associated with trash or refuse facilities for both future residential and commercial-office uses could disturb or annoy any future nearby residents. If such facilities were to operate during nighttime hours, those operations could result in sleep disturbance.

Noise associated with parking cars includes engines starting and car doors slamming. Such noise can cause annoyance at adjacent residential uses if it is concentrated in one area, and if it occurs during the evening or nighttime hours, it could cause sleep disturbance.

Mitigation Measure M-NOI-2.4: Design of Future Noise-Generating Uses Near Residential Uses

Mitigation Measure M-NOI-2.4 would reduce noise impacts from the Project's noise generating uses near residential uses to less than significant, by require loading areas to be located on the sides of commercial-office buildings that face away from residential buildings to the extent feasible or loading areas to be designed with noise shielding, or restricting these activities to the daytime hours, by requiring trash and refuse facilities to be designed to incorporate appropriate noise-shielding measures, and by requiring the incorporation of appropriate noise-shielding measures into the Block D2 parking garage.

Impact NOI-3: Construction of the Project would expose persons to or generate excessive ground-borne vibration or ground-borne noise levels related to annoyance. Construction of

the Project could expose persons to or generate excessive ground-borne vibration or ground-borne noise levels related to damage to buildings. (DEIR pages 4.F-56 to 4.F-62, 6-61)

Annoyance

Although pile driving could occur at the boundary of the Project site, pile driving near the boundary would occur only for a short period of time compared with the total pile-driving period for the Project; most of the time, it would be occurring more than 100 feet from Mission Bay Block 1. Nevertheless, because pile driving could occur as close as 100 feet from nearby residences, it could result in vibration that would exceed the "strongly perceptible" threshold at the closest residences.

Because of the length of the construction schedule, it is possible that there could be occupied businesses and residences on the Project site while pile-driving or other equipment could be operating in the vicinity. Pile driving would most likely occur within 175 feet of new commercial uses and residences on the Project site, and vibration would be strongly perceptible. Thus, pile driving could result in ground vibration that could disturb new commercial uses and residences, and this impact could be significant.

Mitigation Measure M-NOI-3.1: Pile-Driving Control Measures - Annoyance

This mitigation measure would reduce potential vibration impacts on Mission Bay Block 1 residences and new onsite residential and commercial uses by requiring the use of "quiet" pile-driving technology and limiting pile driving to areas where the least disturbance of existing sensitive land uses would occur, as more fully described in the Final EIR.

Implementing **Mitigation Measure M-NOI-3.1** would reduce potential vibration impacts on residences of the Mission Bay Block 1 residences by requiring the use of "quiet" pile-driving technology and limiting pile driving to areas where the least disturbance of existing sensitive land uses would occur. However, pile driving is expected to occur close to the Project boundary and **Mitigation Measure M-NOI-3.1** may not be feasible at all times. The use of "quiet" pile-driving technology may not be possible because of site-specific soil conditions or specific technical or structural limitations at the Project site. Specifically, pile driving would occur along Third Street and Mission Rock Street; the Project boundary on Third Street is approximately 100 feet from the residential uses at Mission Bay Block 1. Thus, absent the use of "quiet" pile-driving technology, vibration from pile driving at these residences would be "strongly perceptible" and significant. No other feasible mitigation actions are available to further reduce vibration impacts on these sensitive receptors from pile driving. Therefore, this impact is **significant and unavoidable with mitigation**.

Implementation of **Mitigation Measure M-NOI-3.1** would partially mitigate vibration impacts on new onsite residential and commercial uses. However, because the Project site is a single confined area, pile driving could be necessary within 175 feet of new occupied commercial uses and residences. Even with implementation of **Mitigation Measures M-NOI-3.1** and **M-NOI-**

3.2, discussed below, vibration impacts related to annoyance at onsite uses would be **significant and unavoidable with mitigation**.

Building Damage

Because pile driving may need to occur within 100 feet of Pier 48, the potential exists for vibration-related damage to occur at this historic building.

Mitigation Measure M-NOI-3.2: Pile-Driving Vibration Control Measures – Damage

Implementation of **Mitigation Measure M-NOI-3.2** would reduce the Project's ground-borne vibration and ground-borne noise-related impacts related to building damage to less than significant, by requiring monitoring to ensure that vibration at Pier 48 would be limited to levels that have been recommended by an expert building evaluation team, such that building damage would not be expected to occur.

Impact C-NOI-1: Construction activities for the Project, in combination with other past, present, and reasonable future projects in the city, would result in a substantial temporary increase in noise or noise levels in excess of the applicable local standards. (DEIR pages 4.F-63 to 4.F-64, 6-61)

Construction activity associated with other projects located near the Project would result in similar noise levels and combine with Project construction noise to result in even greater overall noise levels. Because construction noise from the Project would exceed the ambient noise level at onsite residences by more than 10 dB, it can be assumed that the combined noise level from all construction projects in the area would also result in noise levels of more than 10 dB above ambient conditions. Therefore, the cumulative construction noise impact related to a substantial temporary increase in noise could be significant. Because Project construction would result in noise levels of more than 10 dB over ambient conditions, the project would make a cumulatively considerable contribution to this cumulative impact. Further, although construction of the development projects would generally comply with the City Noise Ordinance, combined noise from Project construction and other adjacent projects may result in overall noise levels in excess of 90 dBA Leq at sensitive receptors. As such, cumulative impacts from construction noise could be significant, and the Project's contribution to this potential impact would be considered cumulatively considerable.

Although **Mitigation Measure M-NOI-1 (Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Noise-Sensitive Land Uses)**, identified above under Impact NOI-1, would reduce construction noise levels as well as the severity of construction noise impacts on sensitive receptors, because of the Project's proximity to offsite receptors and adjacent future construction projects, it would not be possible to guarantee that the cumulative noise level at nearby sensitive receptors would be less than 90 dBA Leq. It would also not be possible to reduce the level of noise from construction activity compared with the ambient noise level. Therefore, even with implementation of **Mitigation Measure M-NOI-1**, which would reduce the severity of the Project construction noise impact, cumulative construction noise impacts would be **significant and unavoidable with mitigation**.

Impact C-NOI-2: Construction activities associated with Project-related development, in combination with other past, present, and reasonable future projects in the city, would expose sensitive receptors to excessive ground-borne vibration related to annoyance and could result in similar impacts related to damage to buildings. (DEIR pages 4.F-64 to 4.F-65, 6-61)

Annoyance

Cumulative effects related to construction vibration could occur if construction activities for other projects in proximity to the Project site involve impact equipment (e.g., pile drivers, impact hammers/hoe rams, jackhammers). Several parcels immediately adjacent to the Project site could undergo construction activities that would involve pile driving. Given the Project's overall construction schedule (with construction activities lasting between approximately 6 and 10 years, or more), it is possible that the construction, including pile driving, of reasonably foreseeable adjacent projects could occur simultaneously with the Project. Cumulative impacts could therefore be significant.

The Project would result in significant and unavoidable impacts related to vibration annoyance because pile driving would result in vibration levels that would be in excess of the "strongly perceptible" threshold at nearby sensitive receptors. Implementation of **Mitigation Measure M-NOI-3.1 (Pile-Driving Control Measure – Annoyance)**, identified above under Impact NOI-3 would help to reduce the severity of this significant impact; however, it may not reduce vibration to less than strongly perceptible and, thus, less than significant levels. Because it is possible that the construction of reasonably foreseeable adjacent projects could occur simultaneously with the Project, cumulative vibration impacts related to annoyance would be significant. Because no other feasible mitigation actions are available to further reduce vibration annoyance from pile driving at nearby sensitive receptors, cumulative vibration impacts related to annoyance would be significant, and the Project's contribution to that impact would be cumulatively considerable. The cumulative vibration impact related to annoyance as well as the Project's contribution to this impact is considered to be **significant and unavoidable with mitigation**.

Building Damage

As discussed under Impact NOI-3, vibration-related damage impacts from Project construction would be less than significant for offsite buildings and less than significant for onsite buildings (Pier 48) with implementation of **Mitigation Measure M-NOI-3.2 (Pile-Driving Vibration Control Measures – Damage)**, identified above under Impact NOI-3. Although construction activities in the area could combine (especially if pile driving were to occur close by) and result in cumulative vibration effects (and possibly associated vibration-related building damage), the Project's contribution to this cumulative impact would be reduced to less than significant with implementation of **Mitigation Measure M-NOI-3.2**, because it would require monitoring to ensure that vibration at potentially affected onsite buildings (Pier 48) would be limited to levels that have been recommended by an expert building evaluation team, such that building damage would not be expected to occur.

Impact C-NOI-3: Operation of the Project, in combination with other past, present, and reasonable future projects in the city, would result in the exposure of persons to noise in excess of the applicable local standards or a substantial permanent ambient noise level increase in the project vicinity. (DEIR pages 4.F-66 to 4.F-68, 6-61, C&R page 4-12)

Stationary Noise

Considering the proximity of Blocks 3E, 4E, 7E, 7W, 9, and 9A to the Project site, noise in the area would be expected to increase overall from Project development as well as cumulative development in the area. Operation of the Project, along with other development projects, could result in a significant cumulative impact. However, through implementation of **Mitigation Measure M-NOI-2.2 (Stationary Equipment Noise Controls)**, identified above under Impact NOI-2, as well as compliance with the Noise Ordinance and Title 24, the Project would be required to incorporate noise attenuation features, such as enclosures or barriers around HVAC equipment and emergency generators (and other noise-generating mechanical equipment), to reduce noise to allowable levels. Therefore, the Project's contribution would not be cumulatively considerable. This impact is considered less than significant.

Traffic Noise

The Project would make a cumulatively considerable contribution to the cumulative substantial permanent increase in noise along one roadway segment, Mission Rock Street between Terry A. Francois Boulevard and Third Street. Although potential mitigation measures, such as the use of sound walls, were considered to reduce the Project's cumulatively considerable contribution to the cumulative substantial permanent increase in noise along one roadway segment, it was determined that they would not be feasible in this dense urban area, with residential buildings located close to roadways.

Mitigation Measure M-AQ-2.3 (Transportation Demand Management), identified below under Impact AQ-2, which requires preparation of a transportation demand management plan with a goal of reducing the number of one-way vehicle trips by 20 percent, could reduce the amount of traffic on roadway segments that would experience a significant traffic noise increase, but it would be speculative to quantify the precise number of vehicle trips (and hence vehicle-related noise) eliminated along any given segment. Therefore, the cumulative traffic noise impact and the Project's contribution to this impact would be **significant and unavoidable with mitigation**.

Air Quality

Impact AQ-1: Construction of the Project would generate fugitive dust and criteria air pollutants, which for criteria air pollutants but not fugitive dust, would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (DEIR pages 4.G-43 to 4.G-55, 6-8 to 6-9, 6-39 to 6-41, 6-62 to 6-64, 6-76 to 6-78, C&R pages 3-52 to 3-57, 3-60 to 3-61, 4-4 to 4-6, 4-13 to 4-15)

Fugitive Dust

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust, which could contribute particulate matter to the local atmosphere. The Construction Dust Control Ordinance requires all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or expose or disturb more than 10 cubic yards, or 500 square feet, of soil to comply with specified dust control measures. Compliance with the regulations and procedures set forth by the Construction Dust Control Ordinance would ensure that potential dust-related air quality impacts would be reduced to a less-than-significant level.

Criteria Air Pollutants

Construction-related reactive organic gas ("ROG") emissions are anticipated to exceed the ROG threshold of 54 pounds per day in 2019 by approximately 11.6 pounds. Construction-related emissions of nitrogen oxides ("NO_x") emissions are anticipated to exceed NO_x threshold of 54 pounds per day from 2018 to 2021 by 15 to 102 pounds. ROG and NO_x thresholds would be exceeded during these years because that is when the majority of Project construction activities would occur and when the greatest number of construction phases would overlap.

The following mitigation measures, would require engines on certain types of construction equipment to meet higher emissions standards, would require 90 percent of all architectural coatings to have a maximum of 10 grams of VOC per liter, and would require the project sponsor to pay an offset mitigation fee for remaining NO_x emissions in excess of Bay Area Air Quality Management District ("BAAQMD") thresholds, as more fully described in the Final EIR.

Mitigation Measure M-AQ-1.1: Off-Road Construction Equipment Emissions Minimization

Mitigation Measure M-AQ-1.2: On-Road Material Delivery and Haul Truck Construction Emissions Minimization

Mitigation Measure M-AQ-1.3: Low-VOC Architectural Coatings

Mitigation Measure M-AQ-1.4: Best Available Control Technology for In-Water Construction Equipment

Mitigation Measure M-AQ-1.5: Emissions Offsets for Construction and Operational Ozone Precursor Emissions

With implementation of **Mitigation Measures M-AQ-1.1 through M-AQ-1.4**, construction-related ROG emissions would be reduced below the BAAQMD's thresholds of significance. NO_x emissions would remain in excess of the BAAQMD's thresholds of significance from 2018 to 2020, but 2021 emissions would be reduced below the threshold of significance. Because construction-related emissions of NO_x from 2018 – 2020 would remain significant even after implementation of **Mitigation Measures M-AQ-1.1 through M-AQ-1.4**, **Mitigation Measure M-AQ-1.5** is identified to reduce residual NO_x emissions. **Mitigation Measure M-AQ-1.5**

would require the project sponsor to pay an offset mitigation fee for the Project's NO_x and ROG emissions in excess of the BAAQMD thresholds, which would fund offsite emissions reduction projects in an amount that would be adequate to mitigate residual NO_x construction-related pollutant emissions.

Implementation of the emissions reduction project to be funded by the offset fees could be conducted by BAAQMD; this would be outside the jurisdiction and control of the City and would not be fully within the control of the project sponsor. **Mitigation Measure M-AQ-1.5** also allows the project sponsor to directly fund or implement an offset project; however, no such project has yet been identified. Therefore, the residual impact of construction emissions of criteria air pollutants (NO_x from 2018 – 2020) is conservatively considered **significant and unavoidable with mitigation**.

Construction-related criteria air pollutant emissions impacts of Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use), also would be significant and unavoidable with mitigation, even with implementation of **Mitigation Measures M-AQ-1.1 through M-AQ-1.4**, similar to the Project. Similar to the Project, **Mitigation Measure M-AQ-1.5** to offset emissions exceeding the BAAQMD significance thresholds would be required under all four variants, although the amount of emissions offset through **Mitigation Measure M-AQ-1.5** would be adjusted to the emissions calculated for any variants implemented. The residual impact of construction emissions of NO_x are conservatively considered significant and unavoidable with mitigation for Variants 1 through 4, for the same reason as for the Project.

Impact AQ-2: During Project operations, the Project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (DEIR pages 4.G-56 to 4.G-67, 6-42 to 6-44, 6-65 to 6-67, 6-76 to 6-78, C&R pages 3-52 to 3-61, 4-3, 4-6, 4-15 to 4-16)

Project operational emissions would be below thresholds of significance for PM₁₀ and PM_{2.5} and above the threshold of significance for ROG from 2021 to 2023 and each year thereafter and for NO_x from 2023 and each year thereafter (for High Commercial Assumption only). At full buildout in 2024, operational emissions of ROG would be 64 to 66 pounds per day over the threshold. At full buildout in 2024, operational emissions of NO_x would be 2 to 4 pounds per day over the threshold.

The following mitigation measures would require use of recent-year diesel emergency generators, would require the project sponsor to educate residential tenants and encourage commercial tenants to purchase products that are safer and better for the environment, and would require a Transportation Demand Management Plan with a goal of reducing estimated one-way vehicle trips by 20 percent and mobile-source ROG and NO_x emissions by 20 percent, as more fully described in the Final EIR.

Mitigation Measure M-AQ-2.1: Best Available Control Technology for Operational Diesel Generators


Mitigation Measure M-AQ-2.2: Reactive Organic Gases Emissions Reduction Measures

Mitigation Measure M-AQ-2.3: Transportation Demand Management

With implementation of **Mitigation Measures M-AQ-1.3 (Low VOC Architectural Coatings)**, identified above under Impact AQ-1, **M-AQ-2.1**, **M-AQ-2.2**, and **M-AQ-2.3**, operational ROG emissions would remain in excess of the BAAQMD's thresholds of significance from 2021 to full buildout and in each operational year thereafter for the life of the Project. Because operational emissions of ROG would remain significant, even after implementation of **Mitigation Measures M-AQ-1.3**, **M-AQ-2.1**, **M-AQ-2.2**, and **M-AQ-2.3**, **Mitigation Measure M-AQ-1.5** is identified above under Impact AQ-1 to reduce residual ROG emissions. **Mitigation Measure M-AQ-1.5** would require the project sponsor to pay an offset mitigation fee for the Project's ROG and NO_x emissions in excess of the BAAQMD thresholds, which would fund offsite emissions reduction projects in an amount that would be adequate to mitigate residual ROG operational pollutant emissions.

Implementation of the emissions reduction project to be funded by the offset fees could be conducted by the BAAQMD; this would be outside the jurisdiction and control of the City and would not be fully within the control of the project sponsor. **Mitigation Measure M-AQ-1.5** also allows the project sponsor to directly fund or implement an offset project; however, no such project has yet been identified. Therefore, the residual impact of operational criteria air pollutant emissions is conservatively considered **significant and unavoidable with mitigation**.

Operational criteria air pollutant emission impacts of Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use), also would be significant and unavoidable with mitigation, even with implementation of **Mitigation Measures M-AQ-1.3**, **M-AQ-2.1**, **M-AQ-2.2**, and **M-AQ-2.3**, similar to the Project. Similar to the Project, **Mitigation Measure M-AQ-1.5** to offset emissions exceeding the BAAQMD significance thresholds would be required under all four variants, although the amount of emissions offset through **Mitigation Measure M-AQ-1.5** would be adjusted to the emissions calculated for any variants implemented. The residual impact of operational emissions of ROG are conservatively considered significant and unavoidable with mitigation for Variants 1 through 4, for the same reason as for the Project.

Impact AQ-3: During combined Project construction and operations, the Project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (DEIR pages 4.G-67 to 4.G-73, 6-12 to 6-15, 6-45 to 6-48, 6-68 to 6-71, C&R pages 3-52 to 3-61, 4-)

Estimated mitigated construction emissions with the implementation of **Mitigation Measures M-AQ-1.1** through **M-AQ-1.4**, identified above under Impact AQ-1, combined with estimated mitigated operational emissions with the implementation of **Mitigation Measure M-AQ-2.1**, **M-AQ-2.2**, and **M-AQ-2.3**, identified above under Impact AQ-2 (i.e., mitigated project construction plus operational emissions) would be above the BAAQMD's threshold of significance for ROG

from 2020 to 2024 and NOx from 2018 to 2022, depending on the operational land use assumption.

Because construction plus operational emissions of ROG and NOx would remain significant even after implementation of **Mitigation Measures M-AQ-1.1 through M-AQ-1.4 and M-AQ-2.1 through M-AQ-2.3**, **Mitigation Measure M-AQ-1.5** is identified above under Impact AQ-1 to reduce residual ROG and NOx emissions. Pursuant to **Mitigation Measures M-AQ-1.5**, the project sponsor would be required to pay offset mitigation fees for ROG and NOx emissions in excess of the BAAQMD thresholds in an amount that would be adequate to mitigate residual ROG plus NOx emissions from both construction and operation combined. Under compliance with these mitigation measures, it is estimated that the remaining operational plus construction emissions offset required would be a maximum of 10.5 tons per year of ROG plus NOx (for year 2023).

Implementation of the emissions reduction project to be funded by the offset fees could be conducted by the BAAQMD; this would be outside the jurisdiction and control of the City and would not be fully within the control of the project sponsor. **Mitigation Measure M-AQ-1.5** also allows the project sponsor to directly fund or implement an offset project; however, no such project has yet been identified. Therefore, the residual impact of construction plus operational criteria air pollutant emissions is conservatively considered **significant and unavoidable with mitigation**.

Combined construction and operational criteria air pollutant emission impacts of Variant 1 (District Energy/Bay-Source Energy Capture), Variant 2 (Entertainment Venue), Variant 3 (Reconfigured Parking), and Variant 4 (Hotel Use), also would be significant and unavoidable with mitigation, even with implementation of **Mitigation Measures M-AQ-1.1 through M-AQ-1.4 and M-AQ-2.1 through M-AQ-2.3**, similar to the Project. Similar to the Project, **Mitigation Measure M-AQ-1.5** to offset emissions exceeding the BAAQMD significance thresholds would be required under all four variants, although the amount of emissions offset through **Mitigation Measure M-AQ-1.5** would be adjusted to the emissions calculated for any variants implemented. The residual impact of combined construction and operational emissions of ROG and NOx are conservatively considered significant and unavoidable with mitigation for Variants 1 through 4, for the same reason as for the Project.

Impact C-AQ-1: The Project's construction and operation, in combination with other past, present, and reasonable future projects, would contribute to cumulative regional air quality impacts. (DEIR pages 4.G-86, 6-62 to 6-71. C&R pages 3-52 to 3-57, 3-60 to 3-61)

Because the Project's construction NOx emissions, operational ROG emissions, and combined construction and operational NOx and ROG emissions would exceed the project-level thresholds for criteria air pollutants after mitigation, the Project would result in a cumulatively considerable contribution to regional air quality impacts. Pursuant to **Mitigation Measure M-AQ-1.5**, identified above under Impact AQ-1, the project sponsor would be required to fund an offsite mitigation project or pay offset mitigation fees for ROG and NOx emissions in excess of the BAAQMD thresholds. The fee would fund offsite emissions reduction projects in an amount that would be adequate with respect to mitigating residual combined ROG plus NOx emissions from

both construction and operation combined. Implementation of the emissions reduction project could be conducted by the BAAQMD; this would be outside the jurisdiction and control of the City and would not be fully within the control of the project sponsor. **Mitigation Measure M-AQ-1.5** also allows the project sponsor to directly fund or implement an offset project; however, no such project has yet been identified. Therefore, the residual impact of construction and operational emissions of criteria air pollutants is conservatively considered **significant and unavoidable with mitigation**.

Wind and Shadow

Impact WS-1: The Project would alter wind in a manner that would substantially affect public areas. (DEIR pages 4.I-6 to 4.I-24, 6-55 to 56, C&R pages 4-6, 4-16)

The Wind Study modeled and analyzed seven different modeling configurations for the Project. Overall, the configurations that include landscaping would result in a net reduction in the number of hazard criterion exceedance locations but introduce new wind hazard locations. This net reduction in the number of wind hazard locations with the inclusion of landscaping indicates that impacts related to the hazard criterion would be less than significant when evaluating impacts on the site-wide level. However, there may be temporary periods of time in which site-wide conditions as reflected in Configuration G (additional existing offsite landscaping in conjunction with increased tower setbacks and proposed onsite landscaping) are not met for several reasons. Landscaping is not necessarily permanent, requires maintenance, and takes time to reach a level of maturity that can be effective at mitigating wind speeds. Landscaping that is not installed at full maturity would not be as effective in baffling wind by the time the Project would be built out as assumed in the analysis. In addition, despite maintenance commitments, there could be occasions when trees die or need replacement, thereby temporarily worsening wind conditions until new landscaping is planted and reaches full maturity.

In addition, the fully built-out Project with mature landscaping was modeled in the Wind Study. However, it is possible that wind conditions during the approximate 6-year buildout period could be worse than the conditions reported in this analysis as certain blocks are constructed while others remain vacant. It is also possible that an economic slowdown or other factors cause a long-term halt to construction; if conditions exist at that time that are worse than conditions assumed in the analysis, those conditions could exist for an even longer period of time than that anticipated in the phasing schedule.

Mitigation Measure M-WS-1: Assessment and Mitigation of Wind Hazards on a Building-by-Building Basis

This mitigation measure would reduce wind hazard impacts by requiring an assessment of the effectiveness of the wind reduction measures as each building is proposed, thereby providing the most effective combination of wind reduction measures as each building is added to the Project site, as more fully described in the Final EIR.

Even with implementation of **Mitigation Measure M-WS-1**, the effectiveness of the mitigation is still uncertain because landscaping is considered an “impermanent” feature, meaning it may be

subject to change over time or through the seasons and thus is not effective at all times. In addition, the model assumed full buildout, but periods of time may occur before full buildout when wind conditions may worsen temporarily while some blocks are constructed and others remain vacant. Thus, impacts related to wind hazards are considered **significant and unavoidable with mitigation**.

Impact C-WS-1: The Project, in combination with past, present, and reasonably foreseeable future projects, would alter wind in a manner that would substantially affect public areas. (DEIR pages 4.I-25 to 4.I-24 to 4.I-30, 6-55 to 56, C&R page 4-17)

The Wind Study modeled and analyzed two modeling configurations for the analysis of cumulative wind impacts. On balance, under the Project plus cumulative buildings with increased setbacks on Project buildings, proposed onsite landscaping, and additional existing offsite landscaping configuration, the wind hazard exceedances on the Project site would be improved overall compared to the existing, existing plus Project with buildings only, and Project plus cumulative with buildings only configurations. The modeling configuration with increased setbacks on Project buildings, proposed onsite landscaping, and additional existing offsite landscaping shows a decrease in wind hazard exceedance locations and wind speeds, impacts would be considered less than significant, despite the creation of three new wind hazard locations. However, because of the uncertainty regarding the permanence of the proposed onsite and existing offsite landscaping, even with implementation of **Mitigation Measure M-WS-1**, identified above under Impact WS-1, which would assess the effectiveness of wind measures on a building-by-building basis, cumulative impacts are conservatively considered **significant and unavoidable with mitigation**.

V. EVALUATION OF PROJECT ALTERNATIVES

This Section describes the reasons for approving the Project and the reasons for rejecting the alternatives as infeasible. CEQA requires that an EIR evaluate a reasonable range of alternatives to the proposed project or the project location that substantially reduce or avoid significant impacts of the proposed project. CEQA requires that every EIR also evaluate a “No Project” alternative. Alternatives provide the decision maker with a basis of comparison to the proposed project in terms of their significant impacts and their ability to meet project objectives. This comparative analysis is used to consider reasonable, potentially feasible options for minimizing environmental consequences of the proposed project.

A. Alternatives Considered, Rejected and Reasons for Rejection.

The Alternatives set forth in the Final EIR and listed below are hereby rejected as infeasible based upon substantial evidence in the record, including evidence of economic, legal, social, technological, and other considerations described in this Section, in addition to those described in Section VI below, which are hereby incorporated by reference, that make these alternatives infeasible. These determinations are made with the awareness that CEQA defines “feasibility” to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” (CEQA

Guidelines § 15364.) Under CEQA case law, the concept of “feasibility” encompasses (i) the question of whether a particular alternative promotes the underlying goals and objectives of a project; and (ii) the question of whether an alternative is “desirable” from a policy standpoint to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.

1. Alternative A: No Project Alternative. (DEIR pages 7-4, 7-7 to 7-13, C&R pages 3-88, 4-26, 4-28, 4-31)

Consistent with Section 15126.6(e)(1) of the CEQA Guidelines, under the CEQA-required No Project Alternative (Alternative A), the Project site would remain in its current condition, mainly a paved surface parking lot, with the Pier 48 structure used for indoor parking and storage and warehouse uses, and no new development or redevelopment of existing uses would occur. Seawall Lot 337 would continue to operate as a surface parking lot for up to 2,170 spaces and an area for pop-up event space and retail. It would not be developed with a mix of residential, commercial, active/retail, and parking/loading uses. Parcel P20 would continue to function as a surface parking lot and would not be incorporated into Seawall Lot 337. No physical or operational changes would be made to the existing sheds, aprons, or the valley on Pier 48; seismic upgrades to the pier structure would not be implemented. China Basin Park would remain in its existing condition, and no additional open space would be developed onsite. No changes would be made to the circulation system that serves the Project site.

The existing development controls on the Project site would continue to govern site development and would not be changed by Planning Code and Zoning Map amendments, and there would be no changes related to a Special Use District (SUD) or the Development Controls and Design Guidelines (Design Controls). The Project site would remain under the existing density and height and bulk standards, as defined by the applicable Mission Bay Open Space (MB-OS), Open Space (OS), and Heavy Industrial Use (M-2) Districts as well as the Mission Rock Height and Bulk District.

The No Project Alternative would reduce the impacts of the Project because no new development would occur. The significant and unavoidable transportation and circulation, noise, air quality, and wind impacts of the Project would not occur. However, changes to the circulation system within the site that would occur as part of the Project and could result in beneficial impacts to the pedestrian and bicycle environment, such as the connection of the Project site with the Blue Greenway system, would also not occur under the No Project Alternative.

The No Project Alternative is hereby rejected as infeasible because, although it would eliminate the significant and unavoidable transportation and circulation, noise, air quality, and wind impacts of the Project, it would fail to meet most of the basic objectives of the Project. Because the physical environment of the project site would be unchanged, the No Project Alternative would achieve only one of the project sponsor’s objectives for the Project - addressing the ongoing need to serve AT&T Park patrons - because the existing parking for AT&T Park events on Seawall Lot 337 and Pier 48 would continue unchanged. It would not serve the public because it would not create a new waterfront neighborhood to serve Mission Bay and the Central Waterfront; promote diverse public use and access to San Francisco Bay (Bay) by creating lively

streets and new and expanded parks; preserve and rehabilitate Pier 48; provide a mix of residential unit types, sizes, and levels of affordability to serve a diverse pool of potential residents; add to the job-producing capacity of this site; implement design strategies to address sea level rise; and generate substantial incremental revenue to the Port for waterfront needs.

For these reasons, the Commission rejects the No Project Alternative as infeasible because it would not meet the basic objectives of the Project.

2. Alternative B: Reduced Intensity Alternative. (DEIR pages 7-5 to 7-7, 7-13 to 7-74, 7-125 to 7-130, C&R pages 3-88, 4-26, 4-29, 4-31 to 4-33)

The Reduced Intensity Alternative was selected for analysis because of its potential to reduce the Project's significant and unavoidable wind impacts as well as some transit delay and air quality impacts.

The Reduced Intensity Alternative would result in approximately 2.46 million gsf of building area on Seawall Lot 337, resulting in 240,000 to 340,000 gsf less building area at Seawall Lot 337 compared with the Project (depending on land use assumption). Building heights adjacent to China Basin Park (Blocks A and G) would be reduced from 240 feet and 190 feet, respectively, under the Project to 90 feet under the Reduced Intensity Alternative. The Reduced Intensity Alternative would result in approximately 1.2 million gsf of residential uses (estimated at approximately 1,235 housing units), which equates to an increase of 100,000 gsf compared to the Project's High Commercial Assumption and a decrease of 400,000 gsf compared to the Project's High Residential Assumption. The Reduced Intensity Alternative would result in approximately 966,000 gsf of commercial uses, which would result in a decrease of 433,900 gsf and 6,100 gsf of commercial uses for Alternative B, compared to the Project's High Commercial and Project's High Residential Assumptions, respectively. The Reduced Density Alternative would include 263,200 gsf of active/retail/production uses, an increase of 18,000 to 24,000 gsf as compared to the Project. Unlike the Project, the Reduced Intensity Alternative would not include flexible parcels on Blocks H, I, and J. Block H, which would be commercial, would include a 90-foot height, while Blocks I and J would be 120 feet and residential.

Under the Reduced Intensity Alternative, the 1.1-acre Mission Rock Square would not be constructed, and 2,400 parking spaces would be provided, compared to 3,100 spaces under the Project. The garage at Block D2 would be shifted to the west to accommodate relocation of the 240-foot high D1 tower to the corner of Mission Rock Street and Bridgeview Street under the Reduced Intensity Alternative, rather than at the corner of Mission Rock Street and Third Street as under the Project. All proposed changes to Pier 48 would remain as under the Project. Mission Rock Square would be replaced by the 120-foot-tall building on Block K, which would be relocated under the Reduced Intensity Alternative, and would have a larger building footprint (an increase from 25,000 to 33,000 square feet) and building square footage (an increase from 135,000 to 175,000 gsf). However, China Basin Park would be larger (an increase from 4.4 acres under the Project to 5 acres under this alternative), extending into the area where Block K would be located under the Project. Additionally, 0.5 acre or more of publicly available open space would be provided on rooftops of buildings on Block E and/or Block K, or a combination

thereof, which would not be included under the Project. All other open space areas proposed under the Project would remain the same under this alternative.

As explained in more detail below, the Reduced Intensity Alternative would reduce the Project's significant and unavoidable impacts related to wind, transit delay, construction and operational air quality emissions, and transit capacity, but would not reduce any of these impacts to less than significant. The Reduced Intensity Alternative could reduce the overall duration of construction, but on any given day construction noise levels would be the same as under the Project, so the Reduced Intensity Alternative would have similar significant and unavoidable noise impacts as under the Project. The Reduced Intensity Alternative also would further reduce the Project's less than significant shadow impacts.

Under the Reduced Intensity Alternative, buildings at Blocks A and G would each be 90 feet tall, compared to 240 and 190 feet under the Project, respectively. This reduction in building heights, and the open space at the northeast corner of the project site that would be created as a result of the relocation of Block K from the northeast corner to the center of the project site, are expected to reduce wind speeds that cause wind hazards. The Reduced Intensity Alternative, because of the repositioning of the 240-foot Block D1 tower to the east side of Block D2 (from the west side of Block D2 under the Project), is also expected to reduce wind speeds anticipated at certain locations with the Project, i.e., surrounding the intersection at the southwest corner of the site and areas near the Public Health and Safety Building. Therefore, compared to the Project, the Reduced Intensity Alternative would reduce some of the impact of strong winds from the west.

The reduced building heights at Blocks A and G under this alternative could result in the elimination of two wind hazard exceedance locations that would occur under the Project. However, this alternative is not expected to eliminate or affect the remaining wind hazard exceedance locations predicted within China Basin Park and along Third Street. Therefore, although the Reduced Intensity Alternative is anticipated to provide an overall reduction in wind hazard conditions, compared to the Project, it cannot be stated with certainty whether all of the hazard exceedance locations would be eliminated. Thus, **Mitigation Measure M-WS-1.1**, as required for the Project, would be implemented with the Reduced Intensity Alternative. Although wind impacts under the Reduced Intensity Alternative would remain significant and unavoidable with mitigation, they would be less than the wind impacts of the Project, particularly at the southwest and northeast corners of the site, and at portions of China Basin Park.

Transit delay impacts related to vehicle queuing and pedestrian and safety impacts at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street under the Reduced Intensity Alternative would remain significant and avoidable with mitigation, similar to under the Project.

Compared to the Project, the Reduced Intensity Alternative would result in somewhat lower emissions of all criteria pollutants for both construction and operation. Thus, the Reduced Intensity Alternative would reduce the Project's significant and unavoidable criteria air pollutant emission impacts somewhat, but these impacts would remain significant and unavailable with mitigation under the Reduced Intensity Alternative.

Transit capacity utilization impacts under the Reduced Intensity Alternative would be somewhat less than under the Project during the a.m. peak hour, particularly compared to the Project's High Commercial Assumption, and would be similar to those of the Project in the p.m. peak hour. Thus, the Reduced Intensity Alternative would reduce the Project's significant and unavoidable transit capacity impact somewhat, but the impact would remain significant and unavoidable with mitigation under the Reduced Intensity Alternative.

The Reduced Intensity Alternative would result in reduced development onsite and, therefore, could result in shorter construction periods. However, noise levels during at a given time would be similar to the levels expected under the Project. Thus, similar to the Project, construction noise impacts would be significant and unavoidable with mitigation. Operational noise impacts would be similar under the Reduced Intensity Alternative as under the Project and, therefore, the Reduced Intensity Alternative would have similar significant and unavoidable impacts related to traffic noise and outdoor use areas as the Project. The Reduced Intensity Alternative would require a similar number of piles as the Project and, therefore, annoyance impacts related to pile-driving would be significant and unavoidable with mitigation, similar to the Project.

Shadow impacts on the expanded China Basin Park, all affected portions of Mission Creek Park, the China Basin Building Promenade, and the southern portion of AT&T Park Plaza would be reduced as a result of the reduced building heights on Blocks A and G under the Reduced Intensity Alternative, compared to the Project. Under the Reduced Intensity Alternative, the repositioning of the Block D1 tower would move the shadow cast around, but would not result in additional shadow. Therefore, shadow impacts under the Reduced Intensity Alternative would remain less than significant, and would be reduced even further than the less-than-significant shadow impacts of the Project.

The Reduced Intensity Alternative is rejected as infeasible because, although it would eliminate two wind hazard locations contributing to the Project's significant and unavoidable wind impacts, would somewhat reduce the significant and unavoidable transit delay, criteria air pollutant emission impacts, and transit capacity impacts identified for the Project, and would further reduce the Project's less than significant shadow impacts, it would not reduce any of the Project's significant and unavoidable impacts to a less-than-significant level, and because it would not meet several of the project objectives.

1. The elimination of the centrally located Mission Rock Square and reduction of square footage would diminish the ability of the project to create a new waterfront neighborhood to serve Mission Bay and the Central Waterfront, inviting diverse public use and access to the bay and creating lively streets and parks. This is because the Project would no longer have a centrally located open space designed to have buildings open onto it so that it would be surrounded and activated by active/retail/production uses on the lower floors of development blocks, because the new waterfront neighborhood would be reduced in size, and because the site plan would not promote pedestrian connections to the waterfront to the same extent as the proposed site plan that includes Mission Rock Square.

2. It would not provide the same degree of density and intensity of development and thus would diminish the ability of programmatic uses to achieve a vibrant all-day, all-season

destination, due to the reduction of 240,000 to 340,000 gsf of building area on Seawall Lot 337, as compared to the Project.

3. The reduction in development would reduce the ability of the project to meet the financial requirements of site preparation and the construction of affordable housing, streets, sidewalks, plazas, parks, sewers, water systems, and other utility and infrastructure systems.

4. The elimination of the centrally located Mission Rock Square would reduce the amount of parks and open spaces and a key component of the planned open space, thus reducing the ability of the project to provide parks and open space in a manner that complements and adds variety to the adjacent Mission Bay neighborhood, with multiple spaces that are usable and welcoming in all seasons, including maximizing the number of buildings fronting on open spaces or parks by developing the project around waterfront parks and a central open space square. Mission Rock Square would accommodate assembly and special-event uses, help connect other open space areas by facilitating a network of pedestrian-oriented streets, and provide open space surrounded by interactive ground-floor spaces that maximize circulation between active/retail ground-floor uses and exterior spaces. The Reduced Intensity Alternative would not achieve these objectives to the same degree as the Project.

5. The elimination of Mission Rock Square and reduction of development square footage under the Reduced Intensity Alternative would reduce the provision of amenities including parks, open spaces, recreation and entertainment opportunities, and a variety of retail and restaurant uses as well as a neighborhood focal point.

6. The changes to the site plan that would eliminate Mission Rock Square, relocate Block K to the center of Seawall Lot 337, and enlarge the footprint of Block K under the Reduced Intensity Alternative would not achieve the objective of developing buildings and a pattern of blocks that add variety to the adjacent Mission Bay neighborhood to the same extent as the Project.

7. The reduction of development square footage under the Reduced Intensity Alternative would not achieve the objectives to offer a mix of residential unit types, sizes and levels of affordability to serve a diverse pool of potential residents; add to the job-producing capacity of this site; and generate substantial incremental revenue for the Port for waterfront needs; and develop a mixed-use project on Seawall Lot 337, to the same extent as the Project.

8. The reduction of development square footage and elimination of the centrally located Mission Rock Square surrounded by lower floor active/retail/production uses under the Reduced Intensity Alternative would not achieve the objective of including sufficient residential density and commercial, parking, retail, open space, and related programmatic uses that will attract a diverse mix of workers, visitors, and residents and create a vibrant place that is active throughout the day, in the evenings, and on weekends, to the same extent as the Project.

For all of the above reasons, the Reduced Intensity Alternative is rejected. Although it would reduce some of the significant and unavoidable impacts identified for the Project, it would not eliminate or reduce these impacts to a less-than-significant level and it would not meet several of

the project objectives or desirable City outcomes to the same extent as under the Project. It is, therefore, rejected as infeasible.

3. Alternative C: No Change to Pier 48 Alternative. (DEIR pages 7-5 to 7-7, 7-75 to 7-130, C&R pages 3-88, 4-26, 4-30, 4-33 to 4-34)

The No Change to Pier 48 Alternative was selected because of its potential to reduce noise and biological resource impacts associated with in-water construction or pile driving, traffic, loading, and pedestrian/bicycle conflicts at Pier 48, and also transit impacts and air quality and greenhouse gas emission impacts.

Under the No Change to Pier 48 Alternative, no new development or redevelopment would occur on Pier 48, and Pier 48 would remain in its existing condition. The existing sheds would not be rehabilitated, and no new uses or tenants would be introduced. The sheds would continue to be used on an interim basis for storage, exhibits, and event and AT&T Park parking. No repairs would be made to the northern, eastern, or southern aprons. The existing maritime uses along the aprons would continue to operate, although the aprons would be rezoned for open space use. Seismic upgrades to the Pier 48 structure would not be implemented; therefore, no in-water construction activities would occur. The pedestrian circulation network would not extend through Pier 48 as it would under the Project. Development on the remaining portions of the Project site under this alternative would occur as under the Project.

As explained in more detail below, the No Change to Pier 48 Alternative could result in shorter construction periods, but would result in similar significant and unavoidable with mitigation impacts related to construction noise and annoyance from ground-borne vibration from pile-driving to the Project. The No Change to Pier 48 Alternative would have no impacts on biological resources from in-water construction or pile-driving, compared to the Project, which would have less than significant impacts with mitigation. VMT impacts under the No Change to Pier 48 Alternative would be less than significant, and slightly less than the Project's less than significant impact. Impacts related to queuing at the Block D2 garage's easternmost driveway under the No Change to Pier 48 Alternative would be similar or slightly reduced compared to the Project, and as under the Project would be less than significant with mitigation. Loading impacts and impacts on pedestrians and bicycles generated by trips to the Block D2 parking garage under the No Change to Pier 48 Alternative would be less than significant with mitigation, similar to the Project. The Project's bicycle safety impact at the bicycle-truck interface at Pier 48, which would be less than significant with mitigation, would be eliminated under the No Change at Pier 48 Alternative. Transit capacity, transit delay, and construction and operational air quality pollutant emission impacts under the No Change to Pier 48 Alternative would remain significant and unavoidable with mitigation, although slightly or somewhat reduced in comparison to the Project. Greenhouse gas emissions under the No Change to Pier Alternative would be less than significant and slightly reduced compared to the Project's less than significant greenhouse gas emissions impact. The No Change to Pier 48 Alternative would result in no aesthetic or historic resource impact to Pier 48, compared to the less than significant impacts under the Project.

The No Change to Pier 48 Alternative would result in less construction activity, and less overall noise, than the Project, because Pier 48 would not be altered from its existing state and no in-

water pile-driving would occur. This could result in shorter construction periods; however, noise levels at a given time during construction under this alternative would be similar to the levels expected under the Project. Thus, as under the Project, construction noise impacts would be significant and unavoidable with mitigation. The No Change to Pier 48 would require a similar number of piles as the Project within the Seawall Lot 337 building footprint, which is closer to nearby sensitive receptors than Pier 48, and, therefore, annoyance impacts related to pile-driving would be significant and unavoidable with mitigation, similar to the Project.

Since no underwater construction activities associated with seismic upgrades at Pier 48 would occur under the No Change to Pier 48 Alternative, this alternative would have no potential to generate underwater noise and vibration from pile driving. Therefore, the No Change to Pier 48 Alternative would result in no impacts on fish and marine mammal species resulting from underwater construction activities, unlike the Project, which would have less than significant impacts with mitigation. Because no construction would occur for the rehabilitation of Pier 48 and the aprons, the No Change to Pier 48 Alternative would have less potential than the Project to contribute contaminants to or increase the turbidity of the Bay, potentially affecting fish. Impacts on water quality during construction would be less than significant, similar to the Project, but to a lesser extent because there would be less in-water construction at Pier 48. The No Change to Pier 48 Alternative would result in no impacts on habitat for special-status species as a result of Pier 48 seismic upgrades, compared to the less-than-significant impacts under the Project. Because Pier 48 would not be rehabilitated under the No Change to Pier 48 Alternative, potential nesting birds within this structure would not be affected, unlike the Project, under which impacts to nesting birds within this structure would be less than-significant with mitigation. However, as with the Project, if construction of the No Change to Pier 48 Alternative were to occur during the nesting season (February 1 to August 31), then the removal of shrubs and trees could result in the direct mortality of adult or young birds, destruction of active nests, and/or disturbance of nesting adults. Under the No Change to Pier 48 Alternative, implementation of **Mitigation Measure M-BI-5**, as required for the Project, would reduce impacts on protected nesting migratory bird species to less than significant.

The No Change to Pier 48 Alternative would generate slightly less daily VMT than under the Project. As with the Project, the No Change to Pier 48 Alternative would not cause significant additional VMT or substantially induce automobile travel. Therefore VMT impacts would be less than significant under the No Change to Pier 48 Alternative, and slightly less than the Project's less than significant impact.

The No Change to Pier 48 Alternative would result in similar or slightly smaller queues at the Block D2 parking garage as the High Commercial Assumption of the Project, as it would generate slightly fewer daily and peak hour vehicle trips. Westbound vehicles on Long Bridge Street waiting to turn left into the easternmost garage driveway would queue into the Long Bridge Street/Bridgeview Street intersection and impede the flow of pedestrian, bicycle and vehicle traffic. As under the Project, with implementation of **Mitigation Measure M-TR-3**, this traffic hazard impact would be reduced to less than significant.

Because it would not include reuse of Pier 48 for an industrial use, the No Change to Pier 48 Alternative would have lower peak loading demands compared to the High Commercial

Assumption for the Project and the same peak loading demands compared to the High Residential Assumption, which would not be fully accommodated by the proposed loading supply. As under the Project, **Mitigation Measures M-TR-11.1** and **M-TR-11.2** would resolve the loading shortfall and the loading impacts of the No Change to Pier 48 Alternative would be less than significant with mitigation.

The No Change to Pier 48 Alternative would produce slightly fewer bicycle and pedestrian trips during the a.m. peak hour and somewhat fewer during the p.m. peak hour, compared to the Project. As with the Project, the No Change to Pier 48 Alternative would cause pedestrian and bicycle hazards due to queues at the Block D2 parking garage driveways. With implementation of **Mitigation Measures M-TR-3** and **M-TR-6**, vehicle impacts on pedestrians and bicycles generated by trips to the Block D2 parking garage under the No Change to Pier 48 Alternative would be reduced to less than significant, as under the Project.

The No Change to Pier 48 Alternative would have similar significant pedestrian safety impacts as the Project at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street, and implementation of **Mitigation Measure M-TR-9** would reduce these impacts to less than significant, as under the Project. However, implementation of the signalization improvements under **Mitigation Measure M-TR-9** is considered somewhat uncertain, because they will require SFMTA Board approval. Thus, because of this uncertainty, the No Change to Pier 48 Alternative's pedestrian safety impacts at these intersections would continue to be considered significant and unavoidable with mitigation, similar to the Project.

Since there would be no reuse of Pier 48 with an industrial use under the No Change to Pier 48 Alternative, unlike under the Project, there would be no significant bicycle impact at the bicycle-truck interface at Pier 48. Implementation of **Mitigation Measure M-TR-10**, which provides for active management of the Pier 48 driveway crossing and the provision of flaggers whenever a truck has to back into the valley of Pier 48 across the Blue Greenway, would not be required under the No Change to Pier 48 Alternative. The impact of No Change to Pier 48 Alternative on bicycle safety would be less than significant, and less than the Project's impact, which would be less than significant with mitigation.

Impacts on transit capacity utilization associated with the No Change to Pier 48 Alternative would be slightly less or similar to those of the Project. The No Change to Pier 48 Alternative would have similar significant transit capacity impacts as the Project and **Mitigation Measures M-TR-4.1**, **M-TR-4.2**, and **M-C-TR-4** would also apply to the No Change to Pier 48 Alternative. Implementing **Mitigation Measures M-TR-4.1**, **M-TR-4.2**, and **M-C-TR-4** would allow Muni to maintain transit headways, and it would reduce the No Change to Pier 48 Alternative's impact to less than significant. However, because the method and total cost of providing additional service and the SFMTA's ability to implement improvements is uncertain, the No Change to Pier 48 Alternative transit capacity impacts would be significant and unavoidable with mitigation, although slightly less than under the Project. Transit delay impacts related to vehicle queuing and pedestrian and safety impacts at the unsignalized intersections of Fourth Street/Mission Rock Street and Fourth Street/Long Bridge Street under the No Change to Pier 48 Alternative would remain significant and avoidable with mitigation, similar to under the Project.

Compared to the Project, the No Change to Pier 48 Alternative would result in somewhat lower emissions of all criteria pollutants for both construction and operation. Thus, the No Change to Pier 48 Alternative would reduce the Project's significant and unavoidable criteria air pollutant emission impacts somewhat, but these impacts would remain significant and unavoidable with mitigation under the No Change to Pier 48 Alternative.

Because the No Change to Pier 48 Alternative would not include new industrial/production, office, retail, restaurant, or event-related operations at Pier 48, direct and indirect GHG emissions associated with Pier 48 would not be emitted, and this alternative's GHG emissions would be reduced compared to the Project. Therefore, impacts related to GHG would be less than significant and slightly reduced compared to the Project's less than significant GHG impacts.

Unlike the Project, the No Change to Pier 48 Alternative would not result in any changes to Pier 48, which is a scenic resource because it is a contributing resource to The Embarcadero Historic District. Therefore, the No Change to Pier 48 Alternative would result in no aesthetic impact on this contributing scenic resource, compared to the less-than-significant impact under the Project.

Unlike the Project, the No Change to Pier 48 Alternative would not physically alter Pier 48, which is a contributor to the National Register-listed Port of San Francisco Embarcadero Historic District and individually eligible for listing in the National Register. Therefore, this alternative would result in no impact on this historic resource, compared to the less-than-significant impacts under the Project.

The No Change to Pier 48 Alternative is rejected as infeasible because, although it would somewhat reduce the significant and unavoidable transit capacity, transit delay, and criteria air pollutant emission impacts identified for the Project and would avoid or further reduce the Project's biological resources impacts, bicycle safety impact at the Pier 48 bicycle-truck interface, aesthetics impact related to scenic resources, historic resources impact, VMT impact, traffic hazard impact, which would be less than significant with mitigation or less than significant under the Project, it would not reduce any of the Project's significant and unavoidable impacts to a less-than-significant level, and because it would not meet several of the project objectives to the same extent as the Project.

1. The elimination of rehabilitation and reuse of Pier 48 would diminish the ability of the project to create a new waterfront neighborhood to serve Mission Bay and the Central Waterfront, inviting diverse public use and access to the bay and creating lively streets and parks, because the diversity of uses at the project site and, particularly, along the waterfront, would be reduced and the Pier 48 aprons would not be rehabilitated to provide additional public access along and to the Bay.

2. The elimination of rehabilitation and reuse of Pier 48 would diminish the ability of the project to set high standards for site-wide environmental sustainability and preparing for long-term site resiliency, because the Pier 48 structure and aprons would not be seismically upgraded.

3. The elimination of rehabilitation and reuse of Pier 48 would diminish the ability of the project to develop and provide access for area residents and visitors to an inviting waterfront promenade segment of the Bay Trail/Blue Greenway, while also preserving access from Terry Francois Boulevard for industrial uses in Pier 48 and adjacent piers, because Pier 48 would not be reused with an industrial use and the Pier 48 aprons would not be rehabilitated to provide additional public access along and to the Bay.
4. The elimination of rehabilitation and reuse of Pier 48 would diminish the ability of the project to provide amenities that include parks, open spaces, recreation and entertainment opportunities, and a variety of retail and restaurant uses, because the open space uses along the Pier 48 aprons would be eliminated and the recreation, entertainment, retail, and restaurant opportunities and uses at Pier 48 would be eliminated.
5. The elimination of the rehabilitation and reuse of Pier 48 would diminish the ability of the project to add to the job-producing capacity of this site, because the addition of jobs at the industrial use at Pier 48 would not occur.
6. The elimination of rehabilitation and reuse of Pier 48 would diminish the ability of the project to generate substantial incremental revenue for the Port for waterfront needs, because the Port would not receive rent under the lease for the industrial use at Pier 48.

Because Pier 48 would not be rehabilitated and reused under the No Change to Pier 48 Alternative, this alternative would not meet any of the three Pier 48 project objectives: reuse and rehabilitate Pier 48 with a mix of uses, such as industrial, commercial, visitor-oriented restaurant, retail, tour, exhibit, meeting space, entertainment, parking, and recreational uses, while preserving its historic fabric; provide opportunity for both maritime and public access on the pier's aprons, to the extent feasible, in a manner that complements and enhances public use and enjoyment of the proposed China Basin Park and is consistent with public trust requirements; and comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

For these reasons, the No Change to Pier 48 Alternative is hereby rejected because, although it would somewhat reduce some of the significant and unavoidable impacts identified for the Project, and would avoid some impacts that would be less than significant with mitigation under the Project, it would not eliminate or reduce to a less-than-significant level any of the Project's significant and unavoidable impacts, and because it would not meet or would only partially meet several of the basic project objectives and City policy objectives. It is, therefore, not a feasible alternative.

VI. STATEMENT OF OVERRIDING CONSIDERATIONS

Pursuant to Public Resources Section 21081 and CEQA Guidelines Section 15093, it is hereby found, after consideration of the Final EIR and the evidence in the record, that each of the specific overriding economic, legal, social, technological and other benefits of the Project as set forth below independently and collectively outweighs the significant and unavoidable impacts

and is an overriding consideration warranting approval of the Project. Any one of the reasons for approval cited below is sufficient to justify approval of the Project. Thus, even if a court were to conclude that not every reason is supported by substantial evidence, this determination is that each individual reason is sufficient. The substantial evidence supporting the various benefits can be found in the Final EIR and the preceding findings, which are incorporated by reference into this Section, and in the documents found in the administrative record, as described in Section I.

On the basis of the above findings and the substantial evidence in the whole record of this proceeding, it is specifically found that there are significant benefits of the Project in spite of the unavoidable significant impacts. It is further found that, as part of the process of obtaining Project approval, all significant effects on the environment from implementation of the Project have been eliminated or substantially lessened where feasible. Any remaining significant effects on the environment found to be unavoidable are found to be acceptable due to the following specific overriding economic, technical, legal, social and other considerations:

- The Project will transform an approximately 28 acre site, most of which is now used as a surface parking lot, and which is not fully utilized most of the time (except for major events at AT&T Park) to create a vibrant mixed-use community, woven into the fabric of the surrounding Mission Bay and South Beach neighborhoods, without displacing any current residents or businesses.
- The Project will include development of approximately 1.1 to 1.6 million gsf of new housing, nearly all of which are expected to be rental and at least 40% of which will be inclusionary units affordable to low and moderate income households (from 45% to 150% of Area Median Income). This commitment will exceed the percentage required under the City's current Inclusionary Affordable Housing Program. Each vertical developer of commercial uses within the Project site's development blocks will pay Mission Rock inclusionary housing fees into an affordable housing fund administered by the Port and used to support the development of inclusionary units.
- The Project will create approximately 8 acres of major new and expanded parks, pedestrian plazas and rehabilitated public piers and wharves. China Basin Park will be significantly expanded into a regional waterfront park on China Basin, across from AT&T Park, featuring a major waterfront promenade, large grassy open spaces for casual recreation and special events, such as farmers' markets, youth play areas, gardens and picnic areas, shoreline access for personal watercraft and multiple dining options with outdoor seating. Located at the heart of the neighborhood and surrounded by shops and cafes, Mission Rock Square will serve as the social hub for residents and visitors alike. Mission Rock Square will include a large, multi-use lawn, sun deck, and café pavilion, and will be designed to host small-scale public events, such as art shows and movie nights. The wharf between Piers 48 and 50 (Channel Wharf) will become a public plaza with views of the Bay and working maritime uses. A services Community Facilities District will be established to provide private financing for costs of long-term management and maintenance of public spaces and certain portions of the public right-of-way.
- The Project will provide pedestrian-oriented shoreline access and open spaces that will serve as the northern entrance to the Blue Greenway, the planned network of open space and pathways running from the proposed China Basin Park south along the waterfront for 13 miles to

Candlestick Point. The Project will also feature pedestrian access on a refurbished apron surrounding Pier 48, portions of which may be shared with maritime uses, and several additional pedestrian-only plazas and linear open spaces that provide pedestrian connections through the neighborhood.

- The Project will include the rehabilitation of Pier 48 and its wharf in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The refurbished pier is expected to become an industrial use, generating new manufacturing jobs in the City. Pier 48 may also include a restaurant, museum and public meeting space. The apron around Pier 48 will be refurbished and improved, providing public access around the pier with spectacular views of San Francisco Bay and the Bay Bridge
- The Project will provide pedestrian and bicycle oriented streets including shared streets (the Shared Public Way and Terry A. Francois Boulevard), a dynamic range of space for shops, restaurants, cafés, neighborhood-serving retail uses, and community spaces as well as commercial/office and light industrial space. Space will be specifically zoned for light industrial, production, fabrication, manufacturing, and studios for crafts people and artists. This mix of uses will energize Mission Rock all day long, providing opportunities for small businesses and thousands of jobs.
- The plan for the Project, developed through a comprehensive, community-based planning process, emphasizes views and passages through the site to the Bay and surrounding landmarks. The small block sizes, tree-lined streets, and abundance of shops and restaurants will create a pedestrian experience that is both walkable and inviting. Taller buildings will be shaped to ensure ample sunlight to parks, and all buildings will be designed to frame comfortable, urban streets. Buildings will step down as they approach the water, as building frontages along the west side of the reconfigured Terry A. Francois Boulevard shall be no more than 40 feet in height, similar to the height of neighboring Piers 48 and 50. Variety in the sizes and shapes of buildings throughout the site will ensure a place that is visually interesting and continuously dynamic, creating a neighborhood for all San Franciscans to enjoy.
- The Project will provide convenient access to transportation options. The City's MUNI T-Line, which will connect to the new Central Subway, stops adjacent to the Project site, and the Caltrain station is a short walk away, providing convenient access to local and regional public transportation. The Project will provide a comprehensive strategy to manage the transportation demands created by the project by implementing a Transportation Demand Management Plan intended to reduce single-occupancy vehicle trips and vehicle miles traveled by fostering multiple modes of sustainable transportation, emphasizing pedestrian, bicycle, and public transit options. A new parking structure will be developed to replace the existing surface parking and to serve multiple users, including the new development and other nearby uses, including games and other events at AT&T Park. All Project parking would be unbundled (i.e., people who live and work at the Project site could choose whether or not to enter into separate, optional parking leases).
- The Project will implement a Sustainability Plan that provides leadership in long-term sustainability planning and design. Multiple site approaches will be implemented to achieve goals for integrated sustainable design, with the aim of creating a low carbon community.

Strategies may include centralized energy, passive heating and cooling, recycled water sharing system, photovoltaics and solar thermal, wind power, and reduction of vehicle miles traveled. The Project would promote sustainability at the site, building, and user level by incorporating Leadership in Energy and Environmental Design ("LEED") strategies

- The Project will implement resilient design strategies to respond to climate change and resulting sea level rise. The Project Site will be elevated at the center and sloped down to adjacent streets to accommodate projections of sea level rise through the year 2100. In addition, the Project will use drought and saline tolerant species in landscape plantings throughout the community. As the science of climate change and sea level rise continues to evolve, the Project will also provide adaptive management and design strategies to address future forecasts.
- The Project will provide increased revenue and other economic benefits to the Port. The Project site is publicly owned, and the development of this under-utilized property will generate significant revenues to the City and its Port, estimated at more than \$1 billion over the life of the Project, including increased rent payable to the Port, increased property, parking and sales taxes, and development fees. The Project site will be divided into separate blocks, and each block or building site will be separately leased for its fair market value, assuring maximum revenue to the Port. Under state law, increased rent will be dedicated to the preservation of historic piers and historic structures and for construction of waterfront plazas and open space. Development fees will provide additional direct revenues to affordable housing, public transportation, public art, and education. Infrastructure Financing District and Community Facilities District financing will be utilized to capture increased property taxes generated by the Project to provide funding for the construction, operation, and maintenance of project infrastructure and parks. Once the required infrastructure has been fully funded, the increased property taxes generated by the Project will be available to be used for important civic needs in other areas, such as affordable housing, public transportation, and open space along the waterfront.
- The Project will create thousands of temporary construction jobs and permanent jobs on and off-site. Planning, design, and construction work for the Project will provide substantial contracting opportunities for local contractors and professional service firms as well as many businesses, employers, and organizations. A Jobs and Equal Opportunity Program will be implemented to direct a portion of the jobs and contracting opportunities generated by the Project, to the extent possible based on the type of work required and consistent with collective bargaining agreements, to local, small, and economically disadvantaged companies and individuals. The Project will implement a program to maximize job opportunities for local residents consistent with San Francisco's Local Hiring Policy for Construction, including goals for targeted disadvantaged workers and career ladders for workers through apprenticeship programs, with a commitment to 30 percent local hire per trade.
- The Project will directly result in the investment of over \$150 million in improvements in transportation and other infrastructure critical to serving the community and the surrounding neighborhood, such as sewers, utilities, streets and sidewalks.
- The Project site, and much of the San Francisco waterfront, was transferred to the City to hold in trust for the benefit of the People of California pursuant to the Burton Act (Chapter 1333 of the Statutes of 1968, as amended). The City and State legislature have long recognized the

importance of providing for development of the Mission Rock Site at a variety of different heights to provide the substantial community benefits described above and to support the purposes of the Burton Act. Specifically, the Project would implement the leasing and development of the Project Site as described in California Senate Bill 815 ("SB 815"), adopted in 2007, as amended in 2016 by AB 2797, which require that increased revenues generated at the Project site support the purposes of the Burton Act, especially the preservation of historic piers and historic structures and construction of waterfront plazas and open space.

- The Project would be consistent with and would further the purposes of Proposition D (the Mission Rock Affordable Housing, Parks, Jobs and Historic Preservation Initiative), which was approved by the City's voters on November 3, 2015, which adopted official City policies to encourage the timely, phased development of the Project site in a manner consistent with the Project, and which amended the height and bulk restrictions for the project site by establishing the Mission Rock Height and Bulk District (Planning Code Section 291).

Having considered these benefits, including the benefits discussed in Section I above in "Project Objectives", which are incorporated by reference under this Section VI, the Commission finds that the benefits of the Project outweigh the unavoidable adverse environmental effects, and that the adverse environmental effects are therefore acceptable.

ATTACHMENT A, EXHIBIT 1

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
MITIGATION MEASURES FOR THE SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
<i>Cultural Resources (Archaeological Resources) Mitigation Measures</i>				
M-CP-2: Archeological Testing. Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the rotational Qualified Archeological Consultants List (QACL) maintained by the Planning Department archeologist. The project sponsor shall contact the Planning Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant, as specified herein, shall be submitted first and directly to the ERO for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of 4 weeks. At the direction of the ERO, the suspension of construction can be extended beyond 4 weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level of potential effects on a significant archeological resource, as defined in CEQA Guidelines, Sections 15064.5 (a) and (c).	Permittee for horizontal improvements, such as infrastructure, in public right-of-ways, and public spaces (hereinafter "infrastructure developer") or vertical developer(s) for work on vertical development parcels and related improvements (hereinafter "vertical developer(s)"), ¹ as applicable, to retain qualified professional archaeologist from the rotational pool of archaeological consultants maintained by the Planning	Prior to issuance of site permits.	Infrastructure developer or vertical developer, as applicable, to retain the qualified archeological consultant for the project who shall report to the ERO. Qualified archeological consultant will scope archeological testing program with ERO.	Considered complete when infrastructure developer or vertical developer(s), as applicable, retains a qualified professional archaeological consultant and archeological consultant has approved scope by the ERO and submits any required reports to ERO for the archeological testing program.

¹ Where applicable, "vertical developer" includes the Pier 48 developer.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
	Department.			
<p><i>Consultation with Descendant Communities:</i> On discovery of an archeological site² associated with descendant Native Americans, the overseas Chinese, or other potentially interested descendant group, an appropriate representative³ of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and offer recommendations to the ERO regarding appropriate archeological treatment of the site, recovered data from the site, and, if applicable, interpretative treatment of the associated archeological site. A copy of the final archeological resources report shall be provided to the representative of the descendant group.</p>	Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant.	For the duration of soil-disturbing activities and data recovery of potentially significant archeological sites.	Infrastructure developer or vertical developer(s) (as applicable) and/or archaeological consultant shall contact the ERO and descendant group representative upon discovery of an archeological site associated with descendant Native Americans, Overseas Chinese, or interested descendant group. The representative of the descendant group shall be given the opportunity to monitor archaeological field investigations on the site and consult with the ERO regarding appropriate archaeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archaeological site. Archaeological Consultant shall prepare a Final Archaeological Resources	Considered complete upon submittal of Final Archaeological Resources Report.

² The term “archeological site” is intended here to include any archeological deposit, feature, burial, or evidence of burial.

³ An “appropriate representative” of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American contact list for the City and County of San Francisco maintained by the NAHC or, in the case of overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the department archeologist.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
			Report in consultation with the ERO (per below). A copy of this report shall be provided to the ERO and the representative of the descendant group.	
<p><i>Archeological Testing Program.</i> The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine, to the extent possible, the presence or absence of archeological resources and identify and evaluate whether any archeological resource encountered on the site constitutes a historical resource under CEQA.</p>	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO. Development of ATP for a defined geographic area and/or specified construction activities.</p>	<p>Prior to any excavation, site preparation or construction, and prior to testing, submit an ATP for a defined geographic area and/or specified construction activities to and obtain approval by the ERO. A single ATP or multiple ATPs may be produced to address project phasing.</p>	<p>Archaeological consultant to undertake ATP in consultation with ERO.</p>	<p>Prior to any soil disturbing activities. Considered complete upon approval of the ATP by the ERO and finding by the ERO that the ATP is implemented.</p>
<p>At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If, based on the archeological testing program, the archeological consultant finds that significant archeological resources may be present, the ERO, in consultation with the archeological consultant, shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor:</p>	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO.</p>	<p>Upon completion of the archeological testing program.</p>	<p>Archaeological consultant to submit results of testing, and, in consultation with ERO, determine whether additional measures are warranted. If significant archaeological resources are present and may be adversely affected., the infrastructure developer or vertical developer(s) (as applicable), at its discretion, may elect to redesign a project, or implement data</p>	<p>Considered complete after ERO review and approval of report(s) on ATP findings.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
			recovery program, unless ERO determines the archaeological resource is of greater interpretive than research significance and that interpretive use is feasible.	
<p>A. The proposed project shall be redesigned so as to avoid any adverse effect on the significant archeological resource, or</p> <p>B. A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</p>	<p>Written report on ATP findings: Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO.</p>	<p>At the completion of each archaeological testing program.</p>	<p>Archeological consultant shall submit report of the findings of the ATP to the ERO.</p>	<p>After completion of archeological testing program.</p>
<p><i>Archeological Monitoring Program.</i> If the ERO, in consultation with the archeological consultant, determines that an archeological monitoring program shall be implemented, the archeological monitoring program shall include the following provisions:</p> <ul style="list-style-type: none"> The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological monitoring program reasonably prior to any project-related soil-disturbing activities commencing. The ERO, in consultation with the archeological consultant, shall determine what project activities shall be archeologically monitored. In most cases, any soil-disturbing activities, such as demolition, foundation removal, excavation, grading, utility installation, foundation work, pile driving (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and their depositional context; The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), know how to identify evidence of the expected resource(s), and know the appropriate protocol in the event of apparent discovery of an archeological 	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO.</p>	<p>The archaeological consultant, infrastructure developer or vertical developer(s) (as applicable), and ERO shall meet prior to the commencement of soil-disturbing activities for a defined geographic area and/or specified construction activities. The ERO in consultation with the archaeological</p>	<p>If required, archaeological consultant to prepare the AMP in consultation with the ERO. Infrastructure developer or vertical developer(s) (as applicable), project archaeological consultant, and infrastructure developer's or vertical developer(s) contractors shall implement the AMP, if required by the ERO.</p>	<p>Considered complete on approval of AMP(s) by ERO; submittal of report regarding findings of AMP(s); and finding by ERO that AMP(s) is implemented.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>resource;</p> <ul style="list-style-type: none"> The archeological monitor(s) shall be present on the project site according to the schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; If an intact archeological deposit is encountered, all soil-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile-driving/construction activities and equipment until the deposit is evaluated. If, in the case of pile-driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile-driving activity may affect an archeological resource, the pile-driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit and present the findings of this assessment to the ERO. Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO. 		<p>consultant shall determine what archaeological monitoring is necessary. A single AMP or multiple AMPs may be produced to address project phasing.</p>		
<p><i>Archeological Data Recovery Program.</i> The archeological data recovery program shall be conducted in accordance with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would</p>	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO.</p>	<p>Upon determination by the ERO that an ADRP is required. A single ADRP or multiple ADRPs may be produced to address project phasing.</p>	<p>If required, archaeological consultant to prepare an ADRP(s) in consultation with the ERO.</p>	<p>Considered complete upon review and approval of the ADRP(s) by the ERO.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to any portions of the archeological resources if nondestructive methods are practical.</p> <p>The scope of the ADRP shall include the following elements:</p> <ul style="list-style-type: none"> • Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations. • Cataloging and Laboratory Analysis. Description of selected cataloging system and artifact analysis procedures. • Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies. • Interpretive Program. Consideration of an onsite/offsite public interpretive program during the course of the archeological data recovery program. • Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and nonintentionally damaging activities. Final Report. Description of proposed report format and distribution of results. • Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. 				
<p><i>Final Archeological Resources Report.</i> The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. A separate, brief, non-confidential summary of findings that can be made available to the public shall be submitted with each FARR.</p>	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant in consultation with the ERO.</p>	<p>For infrastructure developer-prior to acceptance of work. Prior to issuance of Certificate of Temporary or Final Occupancy, whichever occurs first.</p>	<p>If applicable, archaeological consultant to submit a Draft FARR to ERO.</p>	<p>Considered complete on submittal of FARR and approval by ERO.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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<p>Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archeological Site Survey Northwest Information Center (NWIC) shall receive one copy, the ERO shall receive a copy of the transmittal of the FARR to the NWIC, and the Environmental Planning division of the Planning Department shall receive one bound, one unbound, and one unlocked, searchable PDF copy on CD of the FARR, along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or high interpretive value of the resource, the ERO may require a final report content, format, and distribution different from that presented above.</p>	<p>Archaeological consultant at the direction of the ERO.</p>	<p>Upon approval of the FARR by the ERO.</p>	<p>Archaeological consultant to distribute FARR.</p>	<p>Considered complete when archaeological consultant provides written certification to the ERO that the required FARR distribution has been completed.</p>
<p>M-CP-3: Treatment of Human Remains, Associated or Unassociated Funerary Objects.</p> <p>The treatment of human remains and associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable state and federal laws. This shall include immediate notification of the coroner of the City and County of San Francisco and, in the event of the coroner's determination that the human remains are Native American remains, notification of the Native American Heritage Commission (NAHC), which shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The ERO will also be immediately notified. The archeological consultant, project sponsor, ERO, and MLD shall have up to but not beyond 6 days after the discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines, Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing state regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects, as specified in the treatment agreement, if such an agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.</p>	<p>Infrastructure developer or vertical developer(s) (as applicable) and archaeological consultant, in consultation with the San Francisco Coroner, NAHC, ERO, and MLD.</p>	<p>In the event human remains and/or funerary objects are encountered, during soils disturbing activity.</p>	<p>Archaeological consultant or archaeological monitor or infrastructure developer or vertical developer(s) or contractor to contact San Francisco County Coroner and ERO Implement regulatory requirements, if applicable, regarding discovery of Native American human remains and associated and/or unassociated funerary objects. Contact archaeological consultant and ERO.</p>	<p>Considered complete on notification of the San Francisco County Coroner, ERO, and NAHC, if necessary, and completion of treatment agreement and/or analysis.</p>

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<p>M-CP-4: Tribal Cultural Resources Interpretive Program.</p> <p>If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource (TCR) and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.</p> <p>If the Environmental Review Officer (ERO) determines that preservation-in-place of the tribal cultural resource (TCR) pursuant to Mitigation Measure M-CP-2, Archeological Testing, is both feasible and effective, then the archeological consultant shall prepare an archeological resource preservation plan (ARPP). Implementation of the approved ARPP by the archeological consultant shall be required when feasible.</p> <p>If the Environmental Review Officer (ERO), if in consultation with the affiliated Native American tribal representatives and the Project Sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the TCR in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.</p>	<p>Infrastructure developer or vertical developer(s) (as applicable), archaeological consultant, and ERO, in consultation with the affiliated Native American tribal representatives.</p>	<p>If significant archeological resources are present, during implementation of the project.</p>	<p>Infrastructure developer, vertical developer(s), or archaeological consultant shall implement the project redesign, completion of archeological resource preservation plan, or interpretive program of the TCR, if required.</p>	<p>Considered complete upon project redesign, completion of ARPP, or interpretive program of the TCR, if required.</p>
Transportation and Circulation Mitigation Measures				
<p>M-TR-3: Parking Garage and Intersection Queue Impacts.</p> <p>The easternmost driveway on Long Bridge Street (i.e., closest to Bridgeview Street) shall be restricted to right-in, right-out access during all times. Restricted access could be accomplished by placing signage (i.e., on Long Bridge Street to direct westbound traffic to the westernmost garage driveway, and within the parking garage for exiting traffic to indicate outbound right</p>	<p>Infrastructure developer, garage operator, or vertical developer(s) of garage.</p>	<p>Prior to issuance of certificate of occupancy of Block D2 parking garage. Note: Mitigation</p>	<p>SFMTA, in consultation with the Planning Department and the Port, to review and sign off on detailed plans regarding driveways to ensure design will</p>	<p>Considered complete upon approval of the final driveway plans by SFMTA,</p>

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turn movement only allowed) as well as delineators of a sufficient length in the middle of Long Bridge Street to block left-turn access to the driveway.		Measure M-TR-3 is not applicable to Variant 3 (Reconfigured Parking).	sufficiently restrict movements at driveway to right-in, right-out.	Planning Department, and the Port.
<p>M-TR-4.1: Provide Fair-Share Contribution to Improve 10 Townsend Line Capacity.</p> <p>Upon completion and occupancy of Phase 1 of the proposed project and upon completion and occupancy of each subsequent phase as defined in the Development Agreement the project sponsor shall obtain from SFMTA the current ridership on the 10 Townsend and conduct an assessment of the capacity utilization at the screenline's Maximum Load Point (MLP) for weekday AM and PM peak hour conditions.</p> <p>If the capacity utilization exceeds 85 percent, a fair share contribution payment shall be made to SFMTA by the project sponsor, calculated as further provided in a Transit Mitigation Agreement described below, and attached to or incorporated into the Development Agreement. Such payment shall be adjusted, as appropriate, to the extent, if any, that the proposed project reflects either the High Residential Assumption or High Commercial Assumption based upon all phases of the proposed project that have been completed up to such date. Accordingly, the fair share contributions by phase may differ by scenario because the number of transit riders varies due to different mixes of land use.</p> <p>If the capacity utilization based on SFMTA's ridership data is less than 85 percent, then the project sponsor's fair share payment for that phase shall be \$0 and the process will repeat at the next subsequent phase. Each subsequent fair share calculation shall take account of amounts paid for prior phases, to ensure that payments are not duplicative for the same transit rider impacts.</p> <p>The project sponsor shall enter into a Transit Mitigation Agreement with the SFMTA pursuant to which the project sponsor will make a fair share contribution to the cost of providing additional bus service or otherwise improving service on the 10 Townsend. The fair share contribution as documented in the Transportation Impact Study for the proposed project shall not exceed the following amounts, in total across all phases:</p> <p>a. \$991,230 for High Commercial Assumption</p>	Infrastructure developer and/or vertical developer(s), Transportation Coordinator, and SFMTA.	Prior to issuance of certificate of occupancy of Phase 1 of the proposed project, enter into Transit Mitigation Agreement. Upon issuance of a certificate of occupancy for each phase of development as defined in the Development Agreement, SFMTA to provide ridership data and assess capacity utilization and, if capacity utilization exceeds 85 percent, the infrastructure developer/vertical developer(s) would pay fair share contribution fees as specified in this measure, which would be used by	Infrastructure developer and/or vertical developer(s) and Transportation Coordinator to obtain current ridership on the 10 Townsend from SFMTA and conduct an assessment of the capacity utilization associated with the project, as described in the measure. If the capacity utilization of the 10 Townsend line at its maximum load point exceeds 85 percent as measured at the completion of any individual project phase, and the SFMTA has committed to implement M-TR-4.1, the infrastructure developer shall provide a fair share contribution subject to the limits stated in M-TR-4.1 to capital costs for SFMTA to implement one of the designated capacity enhancement measures.	Considered complete upon execution of Transit Mitigation Agreement and payment of fair share contribution as described in this M-TR-4.1 for any phase of development for which such contribution is determined to be necessary.

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<p>b. \$782,706 for High Residential Assumption</p> <p>SFMTA will determine whether adding bus(es) or other measures are more desirable to increase capacity along the route and will use the funds provided by the project sponsor to implement the most desirable measure(s), which may include but is not limited to the following measures:</p> <ol style="list-style-type: none"> 1. Convert to using higher-capacity vehicles on the 10 Townsend route. In this case, the project sponsors fair share contribution may be utilized to convert the route to articulated buses. Some bus stops along the route may not currently be configured to accommodate the longer articulated buses. Some bus zones could be extended by removing one or more parking spaces at locations where appropriate space is available. 2. Instead of adding more buses to a congested route, increase travel speeds along the route which would allow for buses to move faster thus increasing efficiency and reliability. In this case, the project sponsor's fair share contribution may be used to fund a study to identify appropriate and feasible improvements and/or implement a portion of the improvements that would increase travel speeds enough to increase capacity along the bus route. Such improvements could include transit only lanes, transit signal priority, and transit boarding improvements. 3. Increase capacity along the corridor by adding a new Muni service route in this area. If this option is selected, the project sponsor's fair share contribution may fund the purchase of the new vehicles. 		<p>SFMTA to increase capacity.</p>		
<p>M-TR-4.2: Provide Fair-Share Contribution to Improve 30 Stockton Line Capacity Proposed Project.</p> <p>Upon completion and occupancy of Phase 1 of the proposed project and upon completion and occupancy of each subsequent phase as defined in the Development Agreement, the project sponsor shall obtain from SFMTA the current ridership on the 30 Stockton and conduct an assessment of the capacity utilization at the Maximum Load Point (MLP) on the route between the proposed project and Market Street for weekday PM peak hour conditions.</p> <p>If the capacity utilization exceeds 85 percent, a fair share contribution payment shall be made by the project sponsor, calculated as further provided in Transit Mitigation Agreement described below, and attached to or incorporated into the Development Agreement. Such payment shall be</p>	<p>Infrastructure developer and/or vertical developer(s), or Transportation Coordinator, and SFMTA.</p>	<p>Prior to issuance of certificate of occupancy of Phase 1 of the proposed project, enter into Transit Mitigation Agreement. Upon issuance of a certificate of occupancy for each phase of development as</p>	<p>Infrastructure developer or Transportation Coordinator to obtain current ridership on the 30 Stockton from SFMTA and conduct an assessment of the capacity utilization associated with the project, as described in the measure.</p> <p>If the capacity utilization of the 30 Stockton line at its maximum load point exceeds 85 percent as measured at</p>	<p>Considered complete upon execution and implementation of Transit Mitigation Agreements and payment of fair share contribution as described in this M-TR-4.2 for any phase for which</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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<p>adjusted, as appropriate, to the extent, if any, that the proposed project reflects either the High Commercial Assumption or the High Residential Assumption, the latter of which does not require any fair share contribution. The fair share contributions differ by scenario because the number of transit riders varies due to different mixes of land use.</p> <p>If the capacity utilization based on SFMTA's ridership data is less than 85 percent, then the project sponsor's fair share payment for that phase shall be \$0 and the process will repeat at the next subsequent phase. Each subsequent fair share calculation shall take account of amounts paid for prior phases, to ensure that payments are not duplicative for the same transit rider impacts.</p> <p>The project applicant shall enter into a Transit Mitigation Agreement with the SFMTA pursuant to which the project applicant will make a fair share contribution to the cost of providing additional bus service or otherwise improving service on the 30 Stockton. The fair share contribution as documented in the Transportation Impact Study for the proposed project shall not exceed the following amounts, in total across all phases:</p> <ol style="list-style-type: none"> \$417,691 for High Commercial Assumption \$0 for High Residential Assumption <p>SFMTA will determine whether adding bus(es) or other measures are more desirable to increase capacity along the route and will use the funds provided by the project sponsor to implement the most desirable measure(s), which may include but is not limited to the following measures:</p> <ol style="list-style-type: none"> Convert to using higher-capacity vehicles on the 30 Stockton route. In this case, the project sponsors fair share contribution may be utilized to convert the route to articulated buses. Some bus stops along the route may not currently be configured to accommodate the longer articulated buses. Some bus zones could be extended by removing one or more parking spaces at locations where appropriate space is available. Instead of adding more buses to a congested route, increase travel speeds along the route which would allow for buses to move faster thus increasing efficiency and reliability. In this case, the project sponsor's fair share contribution may be used to fund a study to identify appropriate and feasible improvements and/or implement a portion of the improvements that would increase travel speeds enough to increase capacity along the 		<p>defined in the Development Agreement, SFMTA to provide ridership data and assess capacity utilization and, if capacity utilization exceeds 85 percent, the infrastructure developer/vertical developer(s) would pay fair share contribution fees as specified in this measure, which would be used by SFMTA to increase capacity.</p>	<p>the completion of any individual project phase, and the SFMTA has committed to implement M-TR-4.2, the infrastructure developer shall provide the fair share contribution subject to the limits stated in M-TR-4.2 to capital costs for SFMTA to implement one of the designated capacity enhancement measures.</p>	<p>such contribution is determined to be necessary.</p>

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bus route. Such improvements could include transit only lanes, transit signal priority, and transit boarding improvements. 3. Increase capacity along the corridor by adding a new Muni service route in this area. If this option is selected, the project sponsor's fair share contribution may fund the purchase of the new vehicles.				
M-TR-6: Parking Garage and Intersection Queue Impacts on Transit Delay A. The westernmost driveway on Mission Rock Street (i.e., closest to Third Street) shall be restricted to right-in, right-out access and closed during large AT&T Park events. Restricted access could be accomplished by placing signage as well as delineators of a sufficient length on the center line on Mission Rock Street t, east of Third Street o block left-turn access to the driveway.	Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.	Prior to certificate of occupancy for Block D garage.	SFMTA, in consultation with the Planning Department and the Port, to review and sign off on detailed plans regarding driveways to ensure design will sufficiently restrict movements at driveway to right-in, right-out.	Infrastructure developer's/ garage operator's obligations deemed complete once construction of listed improvements are complete.
B. A "keep clear" zone shall be provided in front of the easternmost driveway on Mission Rock Street (i.e., closest to Bridgeview Street) to prevent westbound queues at the Third Street/Mission Rock traffic signal from blocking inbound access to the driveway. The Keep Clear pavement markings shall be placed in the westbound lane immediately in front of the easternmost driveway for the Block D2 parking garage.	Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.	Prior to the opening of the Block D2 garage.	SFMTA, in consultation with the Planning Department and the Port, to review and sign off on detailed plan regarding the easternmost driveway keep clear zone.	Infrastructure developer's/ garage operator's obligations deemed complete once construction of listed improvements are complete.
C. The southbound left-turn lane at the Third Street/Mission Rock Street intersection shall be restriped to extend the length of the left-turn lane to 350 feet. Advance traffic signal detection equipment shall be installed at the end of the newly striped left-turn pocket to detect when queues fill up the left-turn pocket and extend north to the end of the pocket near the Third Street/Channel Street intersection, allowing additional green time to be allocated to the southbound left-turn movement at the Third Street/Mission Rock Street traffic signal.	Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage	Prior to certificate of occupancy for Block D garage; sequencing and selection of interventions outlined within Item C shall be at the direction of the	SFMTA, in consultation with the Planning Department and the Port, to review and sign off on detailed plans regarding extension of the left-turn pocket on Third Street/Mission Rock Street.	Infrastructure developer's/garage operator's obligations deemed complete once construction of listed improvements are complete.

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	management staff, event staff.	SFMTA. In the case that the SFMTA identifies any of these intervention as technically challenging, infeasible, or undesirable because of resultant operational issues, other interventions must be selected.		
<p>D. Wayfinding signs including Static and Variable Message Signs will be installed to provide directions to the parking garages and to provide traffic alerts, messages, and alternate driving routes for drivers traveling to the Block D2 aboveground garage, to destinations in the vicinity, or through the area. Four High Visibility Static Signs will be installed, three on the approaches to the Third Street/Mission Rock Street intersections (for southbound, eastbound and northbound directions) and one for northbound drivers on Terry A. Francois Boulevard, south of Mission Rock Street. One permanent Variable Message Sign shall be installed for southbound drivers on Third Street, between King Street and Berry Street.</p>	<p>Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.</p>	<p>Prior to certificate of occupancy for Block D garage.</p>	<p>SFMTA, in consultation with the Planning Department and the Port, to review and sign off on detailed plans regarding wayfinding signs including Static and Variable Message Signs.</p>	<p>Infrastructure developer's/ garage operator's obligations deemed complete once construction of listed improvements is complete.</p>
<p>E. The project sponsor shall enter into an Event Mitigation Agreement with the SFMTA that provides for Parking Control Officers (PCOs) to manage traffic within the project site adjacent to the proposed project's parking garages and on Exposition Street (between Third Street and the Shared Public Way) during all AT&T Park events and on-site events with 15,000 or more attendees.</p>	<p>Infrastructure developer and/or garage operator, SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff,</p>	<p>Enter into Event Mitigation Agreement prior opening of the Block D2 parking garage. Prior to commencement of construction on the site, and on-going</p>	<p>Infrastructure developer and/or garage operator to enter in Event Management Agreement with SFMTA, who should provide for implementation of all of these items, as well as closure of the westernmost driveway during AT&T events per Item A.</p>	<p>Considered complete upon Infrastructure developer and SFMTA entering into Event Mitigation Agreement.</p>

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	event staff.	through the life of project.		
<p>F. The site's transportation coordinator shall be a member of the Mission Bay Ballpark Transportation Coordination Committee and provide notification prior to the start of any on-site event that would overlap with an event at AT&T Park or the Warriors arena.</p>	<p>Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.</p>	<p>Enter into Event Mitigation Agreement prior opening of the Block D2 parking garage. With commencement of construction, and on-going through life of the project.</p>	<p>Infrastructure developer and/or garage operator to enter into Event Management Agreement with SFMTA, who should provide for implementation of all of these items, as well as closure of the westernmost driveway during AT&T events per Item A.</p>	<p>Upon infrastructure developer and SFMTA entering into Event Mitigation Agreement and ongoing during project operations.</p>
<p>G. Traffic destined for the proposed project's parking garages will be monitored by the owner/operator during all AT&T Park events and on-site events with 15,000 or more attendees, and periodically during weekday a.m. and p.m. peak hours, to ensure that garage access queues do not affect operations of the T Third transit line. Action will be taken by the Mission Rock Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff, and/or PCOs assigned to event traffic management to implement real-time traffic management strategies (i.e., alternative traffic routing, temporal parking pricing, enhanced garage driveway controls, etc.) to reduce vehicle garage access queues so they do not affect operations of the T Third line.</p>	<p>Infrastructure developer and/or garage operator SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.</p>	<p>Enter into Event Mitigation Agreement prior opening of the Block D2 parking garage. With commencement of construction, and on-going through life of the project; the weekday (non-event) AM and PM peak-hour monitoring shall be conducted quarterly on a Tuesday, Wednesday, or Thursday of a</p>	<p>Infrastructure developer and/or garage operator to enter into Event Management Agreement with SFMTA, who should provide for implementation of all of these items, as well as closure of the westernmost driveway during AT&T events per Item A.</p>	<p>Upon Infrastructure developer and SFMTA entering into Event Mitigation Agreement and ongoing during project operations.</p>

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		non-holiday week.		
<p>H. If the SFMTA Director, or his or her designee, receives information that a recurring queue that could affect the operation of the T Third line is imminent or present, SFMTA shall notify the property owner in writing. Upon request, the owner/operator shall hire a qualified transportation consultant to evaluate the conditions at the site for no less than 7 days. The consultant shall prepare a monitoring report to be submitted to SFMTA for review. If SFMTA determines that a recurring queue does exist, the facility owner/operator shall have 45 days from the date of the written determination to abate the excessive recurring queue. Approaches to queue abatement could include but are not limited to: changing parking access and revenue collection system (PARCS) technology to process vehicles more rapidly, adjusting the layout of the garage's ground floor to accommodate more queuing vehicles within the garage, implementing peak-period surge pricing to encourage garage access and egress outside of times with recurrent excessive queues; installing additional variable message signage further upstream from the site to direct drivers to garage access routes away from affected intersections; and/or closing, limiting or controlling Mission Rock Street access from Third Street during times with excessive recurrent queuing and redirecting garage-bound traffic to Terry A. Francois Boulevard.</p>	<p>Infrastructure developer and/or garage operator vertical, SFMTA, Planning Department, Transportation Coordinator, onsite transportation staff, parking garage management staff, event staff.</p>	<p>As may be requested during operations, per written notification by SFMTA With commencement of operation of the Block D2 garage and on-going through the life of the project. If analysis is requested, the analysis shall be conducted during a period that is representative of standard traffic patterns, e.g. on week that does not contain a holiday, is not during winter break, or off-season, etc. The analysis period chosen by the infrastructure developer/garage operator and consultants must be approved by the SFMTA.</p>	<p>SFMTA.</p>	<p>Ongoing during project operations after opening of Block D2 garage.</p>

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M-TR-9: Install Traffic Signals and Related Intersection Improvements at Unsignalized Intersections on Fourth Street at Mission Rock Street and Long Bridge Street. Prior to issuance of approval of the third building site permit, but in no event later than the site permit for the Block D2 parking garage, the project sponsor shall provide funding to SFMTA, for a maximum amount of \$1 million for SFMTA to design and construct (1) a traffic signal at the intersection of Fourth Street/Long Bridge Street and (2) a traffic signal at the intersection of Fourth Street/Mission Rock Street. These improvements should be constructed by SFMTA prior to opening of the Block D2 parking garage.	Infrastructure developer, SFMTA.	Payment to SFMTA: Prior to issuance of approval of the third building site permit, but in no event later than the site permit for the Block D2 parking garage. Installation of traffic signals: Prior to opening of the Block D2 parking garage.	SFMTA.	Infrastructure developer's obligations deemed complete once payment is made. SFMTA's obligations deemed complete once traffic signals are constructed.
M-TR-10: Bicycle-Truck Interface at Pier 48. The project shall construct a highly visible crossing treatment across the driveway as well as bollards and detectable warning pavers that satisfy ADA requirements at the Pier 48 driveway's beginning and end locations along the Blue Greenway path to warn cyclists and pedestrians of the upcoming driveway crossing.	Pier 48 developer.	Prior to occupancy of Pier 48.	Planning Department will monitor.	Considered complete when crossing treatment is constructed.
The project shall provide a traffic control staff at the junction of the Blue Greenway and the driveway to the Pier 48 valley during deliveries to manage bicycle and truck traffic. A flagger shall be provided to manage bicycle and pedestrian travel along the Blue Greenway at the Pier 48 valley driveway whenever trucks back into Pier 48.	Pier 48 developer.	During deliveries.	Pier 48 developer to document arrangement for traffic control staff to manage traffic during deliveries. Planning Department to review documentation.	Ongoing during deliveries.

<p align="center">MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT</p> <p>NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.</p>				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>M-TR-11.1: Commercial Loading Supply – Monitor Loading Activity and Implement Additional Loading Management Strategies as Needed.</p> <p>After completion of the first phase of the proposed project and prior to approval of each subsequent phase, the project sponsor shall conduct a study of utilization of commercial loading spaces. The methodology for the study shall be reviewed and approved by the Planning Department prior to completion. If the result of the study indicates that fewer than 15 percent of the commercial loading spaces are available during the peak loading period, the project sponsor shall implement additional loading management strategies and/or provide additional or expanded off-street loading supply sufficient to meet the loading demand in subsequent phases of the project in either the garages or in off-street parking in individual buildings, consistent with the proposed project's design intent. Additional loading strategies could include (but are not limited to): expanding efforts to coordinate with parcel delivery companies to schedule deliveries to the site during hours outside the peak hour of loading, installing parcel lock boxes that allow parcel delivery personnel unsupervised access to enable off-hour deliveries, coordinating delivery services across buildings to enable the delivery of several buildings' packages to a single location, and/or encouraging deliveries to the retail and restaurant components of the projects to happen during early morning or late evening hours. The project sponsor may also address a shortfall by reserving parking spaces for smaller delivery vehicles such as autos or vans, which comprise approximately two-thirds of the vehicle types for freight delivery service, on the ground floor of the Block D2 garage during peak or appropriate business hours for small-vehicle deliveries and, in connection therewith, providing hand trucks, bicycles, or electric wheeled carts for distribution of packages to buildings throughout the site.</p> <p>If plans for individual buildings include a driveway to off-street loading or parking (maximum 10 off-street spaces) along a frontage that has a designated on-street loading zone, an equivalent amount or level of off-street loading space shall be provided to effectively replace the lost on-street loading area.</p>	<p>Infrastructure developer, vertical developer(s) or garage operators (as applicable).</p>	<p>Study completion: after completion of the first phase of the proposed project and prior to approval of each subsequent phase.</p> <p>If additional loading management strategies ongoing in subsequent phases are needed: after completion of each phase for which additional strategies are applicable.</p>	<p>Planning Department, in consultation with the SFMTA, will review and approve methodology of utilization study.</p> <p>Infrastructure developer, vertical developer(s), and garage operators (as applicable) will provide report to Planning Department on implementation of additional loading management strategies, if required.</p>	<p>Considered complete for each phase after Planning Department staff reviews and approves the study, in consultation with the SFMTA, and, if deemed necessary, the infrastructure developer, vertical developer(s), and garage operators (as applicable) incorporate provides a report of how it incorporated any additional management strategies for loading into each applicable phase.</p>

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<p>M-TR-11.2: Coordinate Deliveries and Tenant Moving Activities.</p> <p>The project's transportation coordinator and in-building concierges shall coordinate with building tenants and delivery services to minimize deliveries and moving activities during peak periods, and endeavor to spread deliveries across the full day and moving activities to time periods after regular working hours, thereby reducing activity during the peak hour for loading. Although many deliveries cannot be limited to specific hours, the transportation coordinator and in-building concierges shall work with tenants to find opportunities to consolidate deliveries and reduce the need for peak-period deliveries, wherever possible.</p>	<p>Project Transportation Coordinator and vertical developer(s).</p>	<p>Ongoing.</p>	<p>Planning Department will monitor.</p>	<p>On-going during project operations.</p>
<p>M-C-TR-4: Provide Fair-Share Contribution to Improve 10 Townsend Line Capacity Proposed Project.</p> <p>Upon completion and occupancy of Phase 1 and upon completion and occupancy of each subsequent phase of the proposed project as defined in the Disposition and Development Agreement, the project sponsor shall fund a transit capacity study to be reviewed and approved by the SFMTA. The project sponsor shall obtain from SFMTA the current ridership on the 10 Townsend and conduct an assessment of the capacity utilization at the screenline's Maximum Load Point (MLP) for weekday AM and PM peak hour conditions.</p> <p>If the capacity utilization exceeds 85 percent, a fair share payment shall be made to SFMTA by the project sponsor, calculated as further provided in a Transit Mitigation Agreement. Such payment shall be calculated in light of the project's progress towards one or the other of the development scenario (i.e. High Commercial or High Residential) as reflected by all phases of the project that have been completed up to such date. The fair share contributions by phase differ by scenario because the number of transit riders varies due to different mixes of land use.</p> <p>If the capacity utilization based on SFMTA's ridership data is less than 85 percent, then the project sponsor's fair share payment for that phase shall be \$0 and the process will repeat at the next subsequent phase. Each subsequent fair share calculation shall take account of amounts paid for prior phases, to ensure that payments are not duplicative for the same transit rider impacts.</p>	<p>Infrastructure developer and/or vertical developer(s), Transportation Coordinator, and SFMTA.</p>	<p>Prior to issuance of certificate of occupancy of Phase 1 of the proposed project, enter into Transit Mitigation Agreement. Upon issuance of a certificate of occupancy for each phase of development as defined in the Development Agreement, SFMTA to provide ridership data and assess capacity utilization and, if capacity utilization exceeds 85 percent, the infrastructure developer/vertical developer(s) would pay fair share contribution fees as</p>	<p>Infrastructure developer and/or vertical developer(s) and Transportation Coordinator to obtain current ridership on the 10 Townsend from SFMTA and conduct an assessment of the capacity utilization associated with the project as described in the measure. If the capacity utilization of the 10 Townsend line at its maximum load point exceeds 85 percent as measured at the completion of any individual project phase, and the SFMTA has committed to implement M-C-TR-4, the infrastructure developers shall provide the fair share contribution subject to the limits stated in M-C-TR-3 to capital costs for SFMTA to implement one of the designated capacity enhancement measures.</p>	<p>Considered complete upon execution of Transit Mitigation Agreement for each phase of development, for which this measure is determined to be necessary.</p>

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<p>The project sponsor shall enter into a Transit Mitigation Agreement with the SFMTA under which the agreement shall provide for the project sponsor to make a fair share contribution to the cost of providing additional bus service or improving service on the 10 Townsend by paying a fee. The fair share contribution as documented in the Transportation Impact Study from the proposed project shall not exceed the following amounts, in total across all phases:</p> <ul style="list-style-type: none"> a. \$391,179 for High Commercial b. \$324,595 for High Residential <p>SFMTA may determine that other measures to increase capacity along the route would be more desirable than adding buses and may use the funds provided by the project sponsor to implement these other measures, which include but are not limited to the following measures:</p> <ol style="list-style-type: none"> 1. Convert to using higher-capacity vehicles on the 10 Townsend route. In this case, the project sponsor's fair share contribution may be utilized to convert the route to articulated buses. Some bus stops along the route may not currently be configured to accommodate the longer articulated buses. Some bus zones could be extended by removing one or more parking spaces at locations where appropriate space is available. 2. Instead of adding more buses to a congested route, it would be more desirable to increase travel speeds along the route which would allow for buses to move faster thus increasing efficiency and reliability. In this case, the project sponsor's fair share contribution may be used to fund a study to identify appropriate and feasible improvements and/or implement a portion of the improvements that would increase travel speeds enough to increase capacity along the bus route. Such improvements could include transit only lanes, transit signal priority, and transit boarding improvements. 3. Another option to increase capacity along the corridor is to add a new Muni service route in this area. If this option is selected, the project sponsor's fair share contribution may fund the purchase of the new vehicles. 		<p>specified in this measure, which would be used by SFMTA to increase capacity.</p>		

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<i>Noise and Vibration Mitigation Measures</i>				
<p>M-NOI-1: Prepare and Implement a Construction Noise Control Plan to Reduce Construction Noise at Noise-Sensitive Land Uses.</p> <p>The project sponsor shall develop a noise control plan that requires the following:</p> <ul style="list-style-type: none"> Construction contractors shall specify noise-reducing construction practices that will be employed to reduce construction noise from construction activities. The measures specified by the project sponsor shall be reviewed and approved by the City prior to the issuance of building permits. Measures that can be used to limit noise include, but are not limited to, those listed below. <ul style="list-style-type: none"> Locate construction equipment as far as feasible from noise-sensitive uses. Require that all construction equipment powered by gasoline or diesel engines have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation. Idling of inactive construction equipment for prolonged periods shall be prohibited (i.e., more than 5 minutes). Prohibit gasoline or diesel engines from having unmuffled exhaust systems. Use noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby land uses. Ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds) wherever feasible. Monitor the effectiveness of noise attenuation measures by taking noise measurements. A plan for noise monitoring shall be provided to the City for review prior to the commencement of each construction phase. 	Infrastructure developer and/or vertical developer(s) (as applicable).	Prior to the issuance of building permits; implementation ongoing during construction.	Infrastructure developer or vertical developer(s) (as applicable) to submit the Construction Noise Control Plan to the Port's Building Permit Group. ⁴ A single Noise Control Plan or multiple Noise Control Plans may be produced to address project phasing.	Considered complete upon submittal of the Construction Noise Control Plan to the Port's Building Permit Group.

⁴ The Port may designate another agency, such as the Planning Department, to carry out monitoring and reporting, and any reference to Port responsibilities includes such designated agencies.

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<ul style="list-style-type: none"> Impact tools (e.g., jack hammers, pavement breakers, rock drills) used for project construction shall be “quiet” gasoline-powered compressors or electrically powered compressors, and electric rather than gasoline- or diesel-powered engines shall be used to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used; which could achieve a reduction of 5 dBA. Quieter equipment shall be used when feasible, such as drills rather than impact equipment. Construction contractors shall be required to use “quiet” gasoline-powered compressors or electrically powered compressors and electric rather than gasoline- or diesel-powered forklifts for small lifting. Stationary noise sources, such as temporary generators, shall be located as far from nearby receptors as possible; they shall be muffled and enclosed within temporary enclosures and shielded by barriers, which could reduce construction noise by as much as 5 dB, or other measures, to the extent feasible. 				
<ul style="list-style-type: none"> Prior to the issuance of the building permit, along with the submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection a list of measures for responding to and tracking complaints pertaining to construction noise. These measures shall include: <ul style="list-style-type: none"> Identification of measures that will be implemented to control construction noise. A procedure and phone numbers for notifying the Department of Building Inspection, the Department of Public Health, or the Police Department of complaints (during regular construction hours and off hours). A sign posted onsite describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction. Designation of an onsite construction complaint and enforcement manager for the project. 	Infrastructure developer and/or vertical developer(s) (as applicable).	Prior to the issuance of each building permit for duration of the project.	Infrastructure developer and/or vertical developer(s) (as applicable) to submit a list of measures for handling noise complaints to the Planning Department and Department of Building Inspection.	Considered complete upon review and approval of the complaint tracking measures by the Planning Department and Department of Building Inspection.

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<ul style="list-style-type: none"> ○ A plan for notification of neighboring residents and nonresidential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities that generate noise levels of 90 dBA or greater) about the estimated duration of the activity and the associated control measures that will be implemented to reduce noise levels. 				
<p>Mitigation Measure M-NOI-2.1: Noise Control Plan for Special Outdoor Amplified Sound.</p> <p>To reduce potential impacts related to noise generated by events in project outdoor use areas, the project sponsor shall develop and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the potential for noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements:</p> <ul style="list-style-type: none"> • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements for outdoor concerts, and shall comply with the Port of San Francisco's "Good Neighbor" standards, unless the Port Commission makes a specific finding that a particular condition is unnecessary or infeasible. • Speaker systems shall be directed away from the nearest sensitive receptors to the degree feasible. • In order to limit or prevent sleep disturbance, events with amplified sound shall, to the extent reasonable and appropriate given the nature and context of the event, end at 10:00 p.m. 	<p>Infrastructure developer and/or park manager, the Port, parks management entity and/or parks programming entity.</p>	<p>Prior to the issuance of event permit.</p>	<p>Infrastructure developer and/or park manager, the Port, parks management entity and/or parks programming entity to submit the Noise Control Plan to the Port.</p>	<p>Considered complete upon submission and approval of the Noise Control Plan by the Port, although the Noise Control Plan may be adjusted as needed.</p>
<p>Mitigation Measure M-NOI-2.2: Stationary Equipment Noise Controls.</p> <p>Noise attenuation measures shall be incorporated into all stationary equipment (including HVAC equipment and emergency generators) installed on all buildings that include such stationary equipment as necessary to meet noise limits specified in Section 2909 of the Police Code. Interior noise limits shall be met under both existing and future noise conditions, accounting for foreseeable changes in noise conditions in the future (i.e., changes in on-site building configurations). Noise attenuation measures could include provision of sound enclosures/barriers, addition of roof parapets to block noise, increasing setback distances from sensitive receptors, provision of louvered vent openings, location of vent openings away from adjacent residential uses, and restriction of generator testing to the daytime hours.</p>	<p>Vertical developer(s).</p>	<p>Prior to the issuance of certificate of occupancy for each building located on the site.</p>	<p>The Port's Building Permit Group to review construction plans regarding noise attenuation measures for stationary equipment.</p>	<p>Considered complete after submittal and approval of plans including noise attenuation measures by the Port's Building Permit Group.</p>

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<p>Mitigation Measure M-NOI-2.3: Design of Future Noise-Sensitive Uses.</p> <p>Prior to issuance of a building permit for a residential building on Mission Rock Boulevard between Terry A. Francois Boulevard and Third Street, a noise study shall be conducted by a qualified acoustician to determine the need to incorporate noise attenuation measures into the building design in order to meet Title 24's interior noise limit for residential uses as well as the City's (Article 29, Section 2909(d)) 45-dBA (Ldn) interior noise limit for residential uses. This evaluation shall account for the projected increase in traffic noise as a result of project traffic along Mission Rock Boulevard between Terry A. Francois Boulevard and Third Street and any new shielding benefits provided by surrounding buildings that exist at the time of development, future cumulative traffic noise increases on adjacent roadways, existing and planned stationary sources (i.e., emergency generators, HVAC, etc.), and future noise increases from all known cumulative projects located with direct line-of-sight to the project building.</p>	<p>Vertical developer(s) and qualified acoustician.</p>	<p>Prior to the issuance of the building permit for vertical construction of any residential building on each parcel on Mission Rock Boulevard between Terry A. Francois Boulevard and Third Street.</p>	<p>Port staff to review the noise study. A single noise study or multiple noise studies may be produced to address project phasing.</p>	<p>Considered complete after submittal and approval of the noise study by the Port.</p>
<p>Mitigation Measure M-NOI-2.4: Design of Future Noise-Generating Uses near Residential Uses.</p> <p>Future land uses shall be designed to minimize the potential for sleep disturbance (defined as exceeding 45 dBA at residential interiors during the hours of 10 p.m. to 7 a.m.) at any future adjacent residential uses. Design approaches including, but not limited to, the following shall be incorporated into future development plans to minimize the potential for noise conflicts of future uses on the project site:</p> <ul style="list-style-type: none"> • Design of Future Noise-Generating Uses. To reduce potential conflicts between sensitive receptors and new noise-generating land uses located adjacent to these receptors, exterior facilities such as loading areas/docks, trash enclosures, and surface parking lots shall be located on the sides of buildings facing away from existing or planned sensitive receptors (e.g., residences). If this is not feasible, these types of facilities shall be enclosed or equipped with appropriate noise shielding. • Design of Future Above-Ground Parking Structure on Block D2. For parking garage on Block D2, the sides of the parking structures facing adjacent or nearby existing or planned residential uses shall be designed to shield residential receptors from noise associated with parking cars. 	<p>Garage developer (for Block D2 garage) and vertical developer(s) (for commercial/office buildings),</p>	<p>Prior to the issuance of a building permit for each commercial/office building, and prior to issuance of building permit for Block D2 parking garage.</p>	<p>The Port's Building Permit Group to review construction plans to confirm that future noise-generating land uses meet the requirements of this Measure M-NOI-2.4.</p>	<p>Considered complete after submittal and approval of construction plans by the Port's Building Permit Group.</p>

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<p>M-NOI-3.1: Pile-Driving Control Measures – Annoyance.</p> <p>To reduce impacts associated with pile driving, a set of site-specific vibration attenuation measures shall be implemented under the supervision of a qualified acoustical consultant during the project construction period. These attenuation measures shall include as feasible, in consideration of technical and structural requirements and conditions, the following control strategy, as well as any other effective strategies to the extent necessary to achieve a PPV vibration level at neighboring properties of less than the strongly perceptible level of 0.10 in/sec.</p> <p>The project sponsor shall require the construction contractor to limit pile-driving activity so that the PPV vibration level at neighboring uses is less than 0.10 in/sec to the extent it is practical and necessary, and, to the extent it is practical, implement “quiet” pile-driving technology, such as predrilling piles, using sonic pile drivers, or using more than one pile driver to shorten the total duration of pile driving.</p>	Infrastructure developer and/or vertical developer(s) (as applicable), qualified acoustical consultant.	Prior to issuance of building permit for each proposed building.	Infrastructure developer or vertical developer(s) (as applicable) to submit the Construction Noise Control Plan (detailed in M-NOI-1) to the Port’s Building Permit Group documenting site-specific vibration attenuation measures. A single Noise Control Plan or multiple Noise Control Plans may be produced to address project phasing.	Considered complete upon submittal and approval of the Construction Noise Control Plan (including vibration attenuation measures) to the Port’s Building Permit Group.
<p>M-NOI-3.2: Pile-Driving Vibration Control Measures – Damage.</p> <p>To reduce the potential for damage to Pier 48, the following measures shall be implemented:</p> <ul style="list-style-type: none"> The Port of San Francisco shall be notified in writing prior to construction activity that construction may occur within 100 feet of the Pier 48 buildings. The project sponsor shall retain a structural engineer, an architectural historian, and a licensed historical architect (hereafter referred to as the building evaluation team) to evaluate potentially affected buildings and determine their susceptibility to damage. The structural engineer shall evaluate the building structure. The architectural historian and licensed historical architect shall evaluate architectural elements. This building evaluation team shall then establish building-specific vibration thresholds that will (a) identify the level of vibration affected historic buildings will tolerate so as to preclude structural damage to the building of a nature that would result in material damage to any historic features of the buildings, and (b) identify the level of vibration at which cosmetic damage may begin to occur to buildings. The building evaluation team shall inventory and document existing cracks in paint, plaster, concrete, and other building elements. 	Infrastructure developer and/or vertical developer(s) (as applicable), building evaluation team.	Prior to construction activities adjacent to Pier 48.	Infrastructure developer or vertical developer(s) (as applicable) to submit proposed building-specific vibration thresholds with input from structural engineer, architectural historian, and historic architect; an inventory of the condition of Pier 48; a vibration monitoring plan; and results of the inspection following construction activities to the Port’s Building Permit Group for review and approval.	Considered complete upon submittal and approval of documentation incorporating identified measures by the Port’s Building Permit Group.

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<ul style="list-style-type: none"> The building evaluation team shall develop a ground-borne vibration monitoring plan that will include monitoring vibration at the buildings of concern to determine if the established thresholds are exceeded. The project sponsor shall retain a qualified acoustical consultant or engineering firm to implement the vibration monitoring plan at Pier 48. As part of the monitoring plan, the consultant shall conduct regular periodic inspections for cosmetic damage to each building within 160 feet of planned ground-disturbing activity on the project site. Should vibration levels be observed in excess of the cosmetic damage threshold or cosmetic damage be observed below that level, the driving of piles within 100 feet of the Pier 48 structure (or within the impact distance determined by the study of building-specific vibration thresholds, per second bullet above, whichever distance is shorter) shall be halted until measures are implemented to prevent cosmetic damage to the extent feasible. These measures include use of alternative construction techniques, including, but not limited to, use of pre-drilled piles if soil conditions allow, use of smaller, lighter equipment, using vibratory hammers in place of impact hammers, and using pile cushioning or equipping the impact hammer with wooden cushion blocks to increase the period of time over which the energy from the driver is imparted to the pile. Should cosmetic damage to a building occur as a result of ground-disturbing activity on the site notwithstanding the use of alternative construction techniques, the building(s) shall be remediated to its pre-construction condition at the conclusion of ground-disturbing activity on the site. Should vibration levels be observed that reach the threshold designed to protect historic buildings from material damage to historic features, pile-driving within impact distances of the Pier 48 building, as determined by the building evaluation team, shall be halted and a structural bracing program or other appropriate protective measures for the potentially affected buildings shall be designed by the building evaluation team and implemented by the project sponsor. The structural bracing program or other protective measures shall be designed to prevent damage to the potentially affected buildings that could materially impair their historic resource status consistent with CEQA Guidelines Section 15064.5(b)(2). 				

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<p>In addition, the structural bracing program shall be consistent with the proposed rehabilitation of the Pier 48 buildings and meet the Secretary of the Interior's Standards for Rehabilitation.</p> <p>Following completion of construction, the project sponsor shall conduct a second inspection to inventory changes in existing cracks and new cracks or damage, if any, that occurred as a result of pile driving. If new damage is found, then the project sponsor shall promptly arrange to have the damage repaired in accordance with recommendations made by the building evaluation team.</p>				
<i>Air Quality Mitigation Measures</i>				
<p>Mitigation Measure M-AQ-1.1: Off-Road Construction Equipment Emissions Minimization.</p> <p>The project sponsor shall require all construction contractors to implement the following measures to reduce construction emissions.</p> <p>A. Engine Requirements</p> <ol style="list-style-type: none"> 1. All off-road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either USEPA or ARB Tier 4 Interim off-road emissions standards. Tier 4 final equipment, which may be largely available in the Bay Area, may be used to comply with this requirement (since Tier 4 final engines must comply with a stricter standard than Tier 4 interim engines, Tier 4 final engines meet Tier 4 interim standards and thus comply with this requirement). 2. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. 3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than 2 minutes at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The contractor shall post legible and visible signs in English, Spanish, and Chinese in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit. 	<p>Infrastructure developer and/or vertical developer(s) (as applicable).</p>	<p>Prepare and Implement Construction Emissions Minimization Plan: Prior to issuance of grading, excavation, or demolition permits and ongoing during demolition and construction activities.</p> <p>Quarterly Monitoring Reports: Quarterly after start of construction activities.</p> <p>Final Construction Report: After completion of construction activities but prior to receiving a final certificate of occupancy.</p>	<p>Infrastructure developer and/or vertical developer(s) (as applicable) or contractor to submit a Construction Emissions Minimization Plan to Port staff for review and approval.</p> <p>Quarterly reports to be submitted to Port staff documenting compliance with the plan for review and approval.</p> <p>Final Construction Report to be submitted to Port staff for review and approval.</p>	<p>Considered complete upon Port review and approval of Construction Emissions Minimization Plan, ongoing review and approval of quarterly reports, and review and approval of final construction report.</p>

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<p>4. The contractor shall instruct construction workers and equipment operators regarding the maintenance and tuning of construction equipment and require that such workers and operators properly maintain and tune equipment in accordance with manufacturers’ specifications.</p> <p>B. Waivers</p> <p>1. The Planning Department’s Environmental Review Officer (ERO) or designee may waive the requirement for an alternative source of power from Subsection (A)(2) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the contractor must submit documentation that the equipment used for onsite power generation meets the requirements of Subsection (A)(1).</p> <p>2. The ERO may waive the equipment requirements of Subsection (A)(1) if use of a particular piece of off-road equipment with a Tier 4 interim-compliant engine is not feasible or reasonable, the equipment would not produce the desired emissions reductions because of the expected operating modes, installation of the equipment would create a safety hazard or impair visibility for the operator, or there is a compelling emergency that requires use of off-road equipment that is not Tier 4 interim-compliant. If seeking an exception, the project sponsor shall demonstrate to the ERO’s satisfaction that the resulting construction emissions would not exceed the health risk thresholds of significance for cancer risk and PM2.5 concentrations with respect to sensitive receptors, as identified within the EIR under Impact AQ-4. If the ERO grants the waiver, the contractor must use the next-cleanest piece of available off-road equipment, according to the table below.</p> <p>3. Off-road Equipment Compliance Step-down Schedule</p> <table><tr><th>Compliance Alternative</th><th>Engine Emissions Standard</th><th>Emissions Control</th></tr><tr><td>1</td><td>Tier 3</td><td>ARB Level 2 VDECS</td></tr><tr><td>2</td><td>Tier 2</td><td>Alternative Fuel*</td></tr></table> <p>VDECS = Verified Diesel Emissions Control Strategies * Alternative fuels are not a VDECS.</p>	Compliance Alternative	Engine Emissions Standard	Emissions Control	1	Tier 3	ARB Level 2 VDECS	2	Tier 2	Alternative Fuel*				
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<p align="center">MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT</p> <p>NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.</p>				
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<p>4. How to use the table: If the ERO determines that the equipment requirements cannot be met, then the project sponsor must attempt to meet Compliance Alternative 1. If the ERO determines that the contractor cannot supply off-road equipment that meets Compliance Alternative 1, then the contractor must meet Compliance Alternative 2.</p> <p>C. Construction Emissions Minimization Plan</p> <p>Before starting onsite construction activities, the contractor shall submit a Construction Emissions Minimization Plan to the ERO for review and approval. The plan shall state, in reasonable detail, how the contractor shall meet the requirements of Section A.</p> <ol style="list-style-type: none"> 1. The plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, as such information is available, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed, the description may include technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. Renewable diesel shall be considered an alternative fuel if it can be demonstrated to the Planning Department or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from the transport of fuel to the project site will not offset its NOx reduction potential. 2. The project sponsor shall ensure that all applicable requirements of the plan have been incorporated into the contract specifications. The plan shall include a certification statement, stating that the contractor agrees to comply fully with the plan. 3. The contractor shall make the plan available to the public for review onsite during working hours. The contractor shall post at the construction site a legible and visible sign summarizing the plan. The sign shall also state that the public may ask to inspect the plan for the project at any time during working hours and explain how to request 				

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<p>to inspect the plan. The contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right of way.</p> <p>D. Monitoring</p> <p>After start of construction activities, the contractor shall submit quarterly reports to the ERO, documenting compliance with the plan. After completion of construction activities but prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report, summarizing construction activities, including the start and end dates, the duration of each construction phase, and the specific information required in the plan.</p>				
<p>Mitigation Measure M-AQ-1.2: On-Road Material Delivery and Haul Trucks Construction Emissions Minimization.</p> <p>The project sponsor shall require all construction contractors to implement the following measures to reduce construction haul truck emissions.</p> <p>A. Engine Requirements</p> <ol style="list-style-type: none"> The project sponsor shall also ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the project site (such as haul trucks, water trucks, dump trucks, and concrete trucks) be model year 2010 or newer. <p>B. Construction Emissions Minimization Plan</p> <p>As part of the <i>Construction Emissions Minimization Plan</i> identified above for Mitigation Measure M-AQ-1.1 Section C, the contractor shall state, in reasonable detail, how the contractor shall meet the requirements of Section A.</p> <ol style="list-style-type: none"> The plan shall include estimates of the construction timeline by phase, with a description of how the on-road haul truck fleet required for every construction phase will comply with the engine requirements stated above. The plan shall also include expected fuel usage (or miles traveled) and hours of operation for the on-road haul truck fleet. For on-road trucks using alternative fuels, the description shall also specify the type of alternative fuel being used. Renewable diesel shall be considered as an alternative fuel if it can be demonstrated to the Planning Department or the City's air quality specialists that it is compatible with on-road truck engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. 	<p>Infrastructure developer and/or vertical developer(s) (as applicable).</p>	<p>Prepare and Implement Construction Emissions Minimization Plan including engine requirements: Prior to issuance of a grading, excavation, or demolition permits and ongoing during demolition and construction activities.</p> <p>Quarterly Monitoring Reports: Quarterly after start of construction activities.</p> <p>Final Construction Report: After completion of construction</p>	<p>Infrastructure developer and/or vertical developer(s) (as applicable) or contractor to submit a Construction Emissions Minimization Plan including engine requirements to Port staff for review and approval.</p> <p>Quarterly reports to be submitted to Port staff documenting compliance with the plan for review and approval.</p> <p>Final Construction Report to be submitted to Port staff for review and approval.</p>	<p>Considered complete upon Port review and approval of Construction Emissions Minimization Plan, ongoing review and approval of quarterly reports, and review and approval of final construction report.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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a. See Mitigation Measure M-AQ-1.1 Section C, Part 2. b. See Mitigation Measure M-AQ-1.1 Section C, Part 3. C. Monitoring See Mitigation Measure M-AQ-1.1 Section D.		activities but prior to receiving a final certificate of occupancy.		
Mitigation Measure M-AQ-1.3: Low-VOC Architectural Coatings. The project sponsor shall use low-VOC (i.e., ROG) coatings, beyond local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 90 percent of all residential and nonresidential interior and exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 90 percent of coatings applied must meet the "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. After start of construction activities, the contractor shall submit quarterly reports to the ERO documenting compliance with this measure by providing an inventory listing the VOC content of all coatings purchased and applied during construction activities. For the reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall also contain a stipulation that low-VOC coatings must be used and a list of potential coatings shall be provided. A list of "super-compliant" coatings can be found on the South Coast Air Quality Management District's website: http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings .	Vertical developer(s).	At the start of construction activities and quarterly during construction and the project's operational lifetime.	Vertical developer(s) to submit initial report and quarterly reports to the Port's Building Permit Group documenting compliance for review and approval.	Ongoing throughout construction and operation.
Mitigation Measure M-AQ-1.4: Best Available Control Technology for In-Water Construction Equipment. The project sponsor shall require all construction contractors to implement the following measures to reduce emissions from in-water equipment. A. Engine Requirements <ol style="list-style-type: none"> 1. The project sponsor shall ensure that the construction barge shall have engines that meet or exceed USEPA marine engine Tier 3 emissions standards. 2. The project sponsor shall also ensure that the construction work boat engine shall be model year 2005 or newer or meet NOx and PM emissions standards for that model year. 	Pier 48 developer.	Prepare and Implement Construction Emissions Minimization Plan including barge and work boat engine requirements: Prior to issuance of a grading, excavation, or demolition permits	Pier 48 developer or contractor to submit a Construction Emissions Minimization Plan including barge and work boat engine requirements to Port staff for review and approval. Quarterly reports to be submitted to Port staff documenting compliance with the plan for review and approval.	Considered complete upon Port review and approval of Construction Emissions Minimization Plan, ongoing review and approval of quarterly reports, and review and

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<p>B. Construction Emissions Minimization Plan As part of the <i>Construction Emissions Minimization Plan</i> identified above for Mitigation Measure M-AQ-1.1 Section C, the contractor shall state, in reasonable detail, how the contractor shall meet the requirements of Section A.</p> <ol style="list-style-type: none"> The plan shall include estimates of the construction timeline by phase, with a description of how each in-water equipment piece (e.g. barge engines, work boats) required for every construction phase will comply with the engine requirements stated above. The plan shall also include expected fuel usage and hours of operation for in-water equipment. For in-water equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. Renewable diesel shall be considered as an alternative fuel if it can be demonstrated to the Planning Department or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. <ol style="list-style-type: none"> See Mitigation Measure M-AQ-1.1 Section C, Part 2. See Mitigation Measure M-AQ-1.1 Section C, Part 3. <p>C. Monitoring See Mitigation Measure M-AQ-1.1 Section D.</p>		<p>and ongoing during demolition and construction activities.</p> <p>Quarterly Monitoring Reports: Quarterly after start of construction activities.</p> <p>Final Construction Report: After completion of construction activities but prior to receiving a final certificate of occupancy.</p>	Final Construction Report to be submitted to Port staff for review and approval.	approval of final construction report.
<p>Mitigation Measure M-AQ-1.5: Emissions Offsets for Construction and Operational Ozone Precursor Emissions. Prior to the estimated first year of exceedance, the project sponsor, with oversight of the Planning Department, shall elect to either:</p> <ol style="list-style-type: none"> Directly implement a specific offset project or program to achieve emission reductions of up to 9.6 tons of ozone precursors to offset the combined emissions from construction and operations remaining above significance levels after implementation of identified mitigation measures. To qualify under this mitigation measure, the specific emissions reduction project must result in emissions reductions within the SFBAAB that are real, surplus, quantifiable, and enforceable and would not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Prior to implementation of the offset project, the project sponsor must obtain the 	Infrastructure developer.	<p>Implement a specific offset project or program: Prior to the estimated first year of exceedance and notify the Port within 6 months of completion of the offset project.</p> <p>Mitigation Fee: Installment for each development block to be paid</p>	<p>Implementation of specific offset project or program: Port approval of proposed offset program. Port verification of successful completion of offset program.</p> <p>Mitigation Fee: Infrastructure developer, BAAQMD, and Port to determine fee. BAAQMD and infrastructure developer to develop and implement MOU.</p>	<p>Implementation of specific offset project or program: Complete upon Port's verification of successful completion of offset program.</p> <p>Mitigation Fee: Complete for each block upon payment of fee</p>

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<p>Planning Department's approval of the proposed offset project by providing documentation of the estimated amount of emissions of ROG and NO_x to be reduced (tons per year) within the SFBAAB from the emissions reduction project(s). The project sponsor shall notify the Planning Department within 6 months of completion of the offset project for Planning Department verification.</p> <p>2. Pay a mitigation offset fee to the BAAQMD Bay Area Clean Air Foundation (Foundation) in installments, as further described below, with each installment amount to be determined prior to the estimated first year of exceedance. This fee is intended to fund emissions reduction projects to achieve reductions totaling up to 10.5 tons of ozone precursors per year, the estimated maximum tonnage of operational and construction-related emissions offsets required to reduce emissions below significance levels after implementation of other identified mitigation measures. This total emissions offset amount was calculated by summing the maximum daily construction and operational emissions of ROG and NO_x (pounds/day), multiplying by 260 work days per year for construction and 365 days per year for operation, and converting to tons. The amount represents the total estimated operational and construction-related ROG and NO_x emissions offsets required.</p> <p>The fee shall be paid in up to 12 installments, each installment payable at the time of application for a site permit for each development block, representing the portion of the 10.5 tons of ozone precursors per year attributable to each building, as follows: (a) Blocks A, G, and K: 6.6% or 0.70 tons per each development block; (b) Pier 48: 18.6% or 1.95 tons; (c) Blocks B, C, and D: 9% or 0.95 tons per each development block; (d) Blocks E and F: 10.3% or 1.08 tons per each development block; and (e) Blocks H, I, and J: 4.6% or 0.49 tons per each development block. The mitigation offset fee, currently estimated at approximately \$18,262 per weighted ton, shall not exceed \$35,000 per weighted ton of ozone precursors plus an administrative fee of no more than 5 percent of the total offset to fund one or more emissions reduction projects within the SFBAAB. The not to exceed amount of \$35,000 will be adjusted to reflect annual California Consumer Price Index adjustments between 2017 and the estimated first year of exceedance. Documentation of payment shall be provided to the Planning Department.</p>		<p>with site permit application for each block, if no specific project or program is identified. Enter into MOU with BAAQMD Foundation and pay offset fee in installments for each development block.</p>		<p>installment outlined in the MOU.</p>

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<p>Unless directly implementing a specific offset project (or program) as described above, the project sponsor would enter into a Memorandum of Understanding (MOU) with the BAAQMD Foundation in connection with each installment payment described above. The MOU will include details regarding the funds to be paid, the administrative fee, and the timing of the emissions reductions project. Acceptance of this fee by the BAAQMD shall serve as acknowledgment and a commitment to (1) implement an emissions reduction project(s) within a time frame to be determined, based on the type of project(s) selected, after receipt of the mitigation fee to achieve the emissions reduction objectives specified above and (2) provide documentation to the Planning Department and the project sponsor describing the project(s) funded by the mitigation fee, including the amount of emissions of ROG and NOx reduced (tons per year) within the SFBAAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project must result in emission reductions within the SFBAAB that are real, surplus, quantifiable, and enforceable and would not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement.</p>				
<p>Mitigation Measure M-AQ-2.1: Best Available Control Technology for Operational Diesel Generators.</p> <p>The project sponsor shall ensure that the operational backup diesel generators comply with the following: (1) ARB Airborne Toxic Control Measure (ATCM) emissions standards for model year 2008 or newer engines; and (2) meet or exceed one of the following emission standards for particulate matter: (A) Tier 4 interim certified engine or (B) Tier 2 or Tier 3 certified engine that is equipped with an ARB Level 3 VDECS. A nonverified diesel emissions control strategy may be used if the filter has the same particulate matter reduction as the identical ARB-verified model and BAAQMD approves of its use. The project sponsor shall submit documentation of compliance with the BAAQMD NSR permitting process (Regulation 2, Rule 2, and Regulation 2, Rule 5) and the emissions standard requirement of this measure to the Planning Department for review and approval prior to issuance of a permit for a backup diesel generator from any City agency.</p>	<p>Vertical developer(s).</p>	<p>Prior to issuance of permit for each backup diesel generator from BAAQMD.</p>	<p>Vertical developer(s) shall submit documentation of compliance to the Port for review and approval.</p>	<p>Considered complete upon review and approval of documentation by Port staff.</p>

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<p>Mitigation Measure M-AQ-2.2: Reactive Organic Gases Emissions Reduction Measures.</p> <p>To reduce ROG emissions associated with the project, the project sponsor shall provide education for residential and commercial tenants to help reduce area source (e.g., architectural coatings, consumer products, and landscaping) emissions associated with residential and building operations. Prior to receipt of any building permit and every 5 years thereafter, the project sponsor shall work with the San Francisco Department of Environment to develop electronic correspondence, which will be distributed by email annually to tenants of the project that encourages the purchase of consumer products that are better for the environment and generate fewer VOC emissions. The correspondence shall encourage environmentally preferable purchasing and include contact information and links to SF APPROVED. While microbreweries do not typically implement emission control devices, to further reduce ROG (primarily ethanol) emissions associated with Pier 48 industrial operations, the project sponsor shall implement technologies to reduce ethanol emissions if available and practicable. Such measures could include wet scrubbers, ethanol recovery and capture (e.g., carbon absorption) or incineration. At the time when specific designs for the Pier 48 use are submitted to the City for approval, the project sponsor shall provide an analysis that quantifies the emissions, based on the specific design proposal, and evaluates ROG emission control technologies.</p>	<p>Vertical developer(s).</p>	<p>Prior to issuance of any building permit and every 5 years thereafter.</p>	<p>Vertical developer(s) to work with the San Francisco Department of Environment to develop materials. San Francisco Department of the Environment to review and approve materials.</p>	<p>Considered complete after documentation provided to the Department of Environment of distribution of educational materials to residential and commercial tenants.</p>
<p>Mitigation Measure M-AQ-2.3: Transportation Demand Management.</p> <p>The project sponsors shall prepare and implement a Transportation Demand Management (TDM) Plan. The TDM Plan shall have a goal of reducing estimated aggregate daily one-way vehicle trips by 20 percent compared to the aggregate daily one-way vehicle trips identified in the project's travel demand memo, prepared by Advant Consulting, dated June 30, 2015 ("Travel Demand Memo"), and attached as Appendix 4-4 to the Draft EIR. The project sponsors shall be responsible for monitoring implementation of the TDM Plan and proposing adjustments to the TDM Plan if its goal is not being achieved, in accordance with the following provisions. The TDM Plan may include, but is not limited to, the types of measures summarized below by way of example. TDM Plan measures shall generally be consistent with the City's adopted TDM Program Standards and the draft</p>	<p>Transportation Coordinator and/or infrastructure developer to prepare the TDM Plan, which will be implemented by the Transportation Coordinator and will be binding on all development parcels.</p>	<p>Transportation Coordinator and/or Infrastructure developer to prepare TDM Plan and submit to Planning Department staff prior to approval of the project.</p>	<p>Transportation Coordinator to submit the TDM Plan to Planning Department staff for review and approval. Transportation Coordinator to submit monitoring report annually to Planning Department staff and implement TDM Plan Adjustments (if required).</p>	<p>The TDM Plan is considered complete upon approval by the Planning Department staff, in consultation with the SFMTA. Annual monitoring reports would be on-going during project buildout,</p>

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<p>proposed TDM Plan prepared by Nelson Nygaard, dated September 2016, and attached as Appendix 4-5 to the Draft EIR. The TDM Plan describes the scope and applicability of candidate measures in detail, and may include, for example:</p> <ul style="list-style-type: none"> • Active Transportation: Provision of streetscape improvements to encourage walking, secure bicycle parking, shower and locker facilities for cyclists, subsidized bike share memberships for project occupants, bicycle repair and maintenance services, and other bicycle-related services; • Car-Share: Provision of car-share parking spaces and subsidized memberships for project occupants; • Delivery: Provision of amenities and services to support delivery of goods to project occupants; • Family-Oriented Measures: Provision of on-site childcare and other amenities to support the use of sustainable transportation modes by families; • High-Occupancy Vehicles: Provision of carpooling/vanpooling incentives and shuttle bus service; • Information and Communications: Provision of multimodal wayfinding signage, transportation information displays, and tailored transportation marketing services; • Land Use: Provision of on-site affordable housing and healthy food retail services in underserved areas; • Parking: Provision of unbundled parking, short-term daily parking provision, parking cash out offers, and reduced off-street parking supply. <p>The TDM Plan shall describe each measure, including the degree of implementation (e.g., how long will it be in place, how many tenants or visitors it will benefit, on which locations within the site it will be placed, etc.) and the population that each measure is intended to serve (e.g., residential tenants, retail visitors, employees of tenants, visitors). The TDM Plan shall commit to monitoring vehicle trips to and from the project site to determine the TDM Plan's effectiveness, as required by TDM Plan Monitoring and Reporting outlined below.</p> <p>The TDM Plan shall have been approved by the Planning Department prior to site permit application for the first building and the TDM Plan shall be implemented as to each new building upon the issuance of the certificate of occupancy for that building.</p>				<p>or until five consecutive reporting periods show that the fully-built project has met its reduction goals, at which point reports would be submitted every three years.</p>

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<p>The TDM Plan shall remain a component of the proposed project to be implemented for the duration of the project.</p> <p><i>TDM Plan Monitoring and Reporting:</i> the Transportation Coordinator shall collect data, prepare monitoring reports and submit them to the Planning Department. To ensure the goal of reducing by 20 percent the aggregate daily one-way vehicle trips is reasonably achievable, the project sponsor shall monitor daily one-way vehicles trips for all buildings that have received a Certificate of Occupancy, and compare these vehicle trips to the aggregate daily one-way vehicle trips anticipated for the those buildings based on the trip generation rates contained within the proposed project Travel Demand Memo.</p> <ul style="list-style-type: none"> • Timing: The Transportation Coordinator shall collect monitoring data and shall begin submitting monitoring reports to the Planning Department beginning 18 months after the completion and commencement of operation of the proposed garage on Block D. Thereafter, annual monitoring reports shall be submitted (referred to as “reporting periods”) until five consecutive reporting periods show that the project has met the reduction goal, at which point monitoring data shall be submitted to the Planning Department once every 3 years. The project sponsor shall complete each trip count and survey (see below for description) 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 project sponsor shall modify the timing of monitoring reports such that a new monitoring report is submitted 12 months after adjustments are made to the TDM Plan in order to meet the reduction goal, as may be required under the “TDM Plan Adjustments” heading, below. In addition, the Planning Department may modify the timing of monitoring reports as needed to consolidate this requirement with other monitoring and/or reporting requirements for the project, such as annual reporting under the proposed project Development Agreement. • Term: The Project Sponsor shall monitor, submit monitoring reports, and make plan adjustments as provided below until the earlier of: (i) the expiration of the Development Agreement, or (ii) the reduction goal has been met for up to eight consecutive reporting periods as determined by the Planning Department. Notwithstanding the foregoing or any other provision of this mitigation measure, all obligations for monitoring, 				

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<p>reporting and for making adjustments to the TDM Plan shall terminate if the project sponsor has paid and/or made a commitment to pay the offset fee for any shortfall in the TDM Plan's meeting the reduction goal as provided below.</p> <ul style="list-style-type: none"> • Components: The monitoring and reporting, including trip counts, surveys and travel demand information, shall include the following components or comparable alternative methodology and components, as approved, accepted or provided by Planning Department staff: <ul style="list-style-type: none"> ○ Trip Count and Intercept Survey: Provide a site-wide trip count and intercept survey of persons and vehicles arriving and leaving the project site, other than on AT&T Park ballgame or other major event (e.g., concert or other event substantially occupying the capacity of AT&T Park) days or hours, for no less than two days during 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 survey consultant, and the Planning Department shall approve the methodology prior to the Project Sponsors conducting the components of the trip count and intercept survey. The Planning Department anticipates it 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 the 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 <i>Transportation Impact Analysis Guidelines for Environmental Review</i>, October 2002, or subsequent updates in effect at the time of the survey. ○ Documentation of Plan Implementation: The transportation coordinator shall work in conjunction with the Planning Department to develop a survey (online or paper) that can be reasonably completed by the transportation coordinator and/or Transportation 				

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<p>Management Association (TMA) staff members to document implementation of TDM program elements and other basic information during the reporting period. The project sponsors shall include this survey in the monitoring report submitted to the Planning Department.</p> <ul style="list-style-type: none"> Assistance and Confidentiality: The Planning Department will assist the transportation coordinator with questions regarding the components of the monitoring report and will assist the transportation coordinator in determining ways to protect the identity of individual survey responders. <p><u><i>TDM Plan Adjustments.</i></u> The project sponsors shall adjust the TDM Plan according to the monitoring results if three consecutive reporting periods demonstrate that measures within the TDM Plan are not achieving the reduction goal. The TDM Plan adjustments shall be made in consultation with the Planning Department and may require refinements to existing measures (e.g., changes to subsidies, increased bicycle parking), inclusion of new measures (e.g., a new technology or project operational changes not inconsistent with any agreements with the Port), or removal of existing measures (e.g., measures that are ineffective or induce vehicle trips).⁵ If three consecutive reporting periods' monitoring results demonstrate that measures within the TDM Plan are not achieving the reduction goal, the project sponsors shall propose TDM Plan adjustments to be incorporated in the TDM Plan within 270 days following the last reporting period. The project sponsors shall implement the TDM Plan adjustments until the results of three consecutive reporting periods demonstrate that the reduction goal is being achieved.</p> <p>If after implementing TDM Plan adjustments as described above, and the project sponsors have not met the reduction goal for up to eight consecutive reporting periods as determined by the Planning Department, the project sponsors may, at any time thereafter, elect to address the shortfall in meeting the TDM Plan reduction target by, in addition to paying the emission offset fees set forth in Mitigation Measure M-AQ-1.5, also paying an additional</p>				

⁵ No parking-related restrictive measures on the project site shall by design or effect, restrict parking on the project site for patrons of AT&T ballpark games or events.

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offset fee in accordance with Mitigation Measure M-AQ-1.5, in the amount required to address, both the shortfall in reduction during the previously monitored years and the anticipated shortfall in the remaining expected years of project operations, the latter of which shall be based on the shortfall that occurred in the most recently monitored year. Calculations of emissions to be offset shall be based on the total amount of emissions anticipated to be reduced by achieving the 20 percent TDM goal adjusted for the actual percentage of aggregate daily one-way vehicle trip reduction achieved in the most recently monitored year.				
Wind and Shadow Mitigation Measures				
M-WS-1: Assessment and Mitigation of Wind Hazards on a Building-by-Building Basis. 1. Prior to or as part of the submittal package for the schematic design of a new building (Proposed Building), the Proposed Building developer shall submit to the Planning Department, for its review and approval, a scope of work and, following approval of the scope, a report from a Qualified Wind Consultant (QWC) that reviews the Proposed Building schematic design, absent landscaping. ⁶ "QWC" means a wind consultant retained by the Proposed Building(s) developer and approved by the Planning Department for preparation of the report. The EIR wind consultant for the proposed project and any other wind consultant on the City's then approved list or otherwise approved by the City will be considered a QWC. 2. The QWC report shall evaluate whether the Proposed Building(s) would create a Significant Wind Impact. "Significant Wind Impact" means a substantial increase on a site-wide basis in the number of hours per year that the 26 mph wind hazard criterion is exceeded or, if baseline wind conditions are greater than 26 mph, a substantial increase in the area subjected to winds greater than 26 mph. This analysis shall focus on the entire project area that was studied in wind tunnel tests conducted for the EIR and not just the area immediately surrounding the Proposed Building(s).	Vertical developer(s) and qualified wind consultant. Vertical developer(s) to implement architectural or landscaping features, or a combination of such features, that have been demonstrated in wind tunnel to reduce the Proposed Building's wind hazards to a level no greater than those of either	Prior to or as part of the submittal package for the schematic design of a new building.	Vertical developer(s) to submit to the Planning Department and the Port, for their review and approval, a scope of work and, following the approval of the scope of work by Planning Department and Port staff, a report from a qualified wind consultant that determines building-specific wind conditions.	Considered complete upon approval of wind report by the Planning Department and Port.

⁶ The scope of work for this report shall use the same methodology and wind test point locations as the Wind Study prepared for this EIR.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>3. The QWC shall consider the Proposed Building(s) in the context of the "Current Project," which, at any given time during construction of the Project, shall be defined as the building masses used in the Original Model (Wind Study Configuration B),⁷ except as updated to reflect schematic design submittals for any previously approved building that has not yet commenced construction, and construction permit designs for on-site buildings that are under construction or have completed construction. This model shall be referred to as the "Current Project" and shall be updated over time as architectural design for each proposed project block/building is completed.</p> <p>4. The Proposed Building shall be tested in the wind tunnel as proposed, including any architectural features that can be shown on plans to mitigate wind effects.⁸ Testing may not include any existing or proposed onsite landscaping. A separate test shall be conducted with existing and proposed onsite landscaping included, if required per Section 5, below. The accompanying report shall compare the wind tunnel results analyzing the Proposed Building in the context of the Current Project to the following two baselines: (1) the EIR baseline conditions for the project site (Wind Study Configuration A), and (2) Existing Plus Project (i.e., with Mission Rock proposed project) conditions used in the EIR (Wind Study Configuration B).</p> <p>5. No further analysis shall be required if the QWC concludes, and the Planning Department concurs, that the Proposed Building's schematic design, absent proposed onsite landscaping, would not create a Significant Wind Impact. If the QWC concludes that the Proposed Building's schematic design, absent proposed onsite and existing offsite landscaping, would create a Significant Wind Impact, as defined above, then a second wind tunnel test shall be conducted, taking into account proposed onsite landscaping and existing offsite landscaping. The intent of landscaping is</p>	<p>Wind Study Configuration A or Wind Study Configuration B.</p>			

⁷ All references to the Wind Study refer to the Mission Rock EIR Pedestrian Wind Study Wind Tunnel Tests Report prepared by RWDI, final report, January 25, 2017, which can be found in Appendix 7-1 to this EIR.

⁸ These could include features such as setbacks, wind baffles, randomized balconies, overhands, canopies, awnings and the like, provided they are consistent with the project's Design Controls and shown on schematic architectural plans for the Proposed Building.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
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<p>to emulate the function and effect of a manmade wind screen. The following parameters have been determined to be the minimum requirements for landscaping features to be effective in controlling wind:⁹</p> <ul style="list-style-type: none"> It is the combined effect of a cluster or group of landscaping features that is most effective, rather than the maturity of one tree. Since a general rule is that vertical wind control features should be taller than the average height of a person, foliage from the ground up is most effective at a height of approximately 6 to 8 feet. Since winds can easily flow under tree crowns, underplantings (e.g., shrub plantings at the base of a tree) should be included where trunks are bare for the first 5 to 6 feet of a tree measured from the ground. Tree crowns with at least 60 percent cover (density of leafage) and even spread of branches are most effective. 				
<i>Biological Resources Mitigation Measures</i>				
M-BI-3.1: Conduct Impact Hammer Pile Driving during Periods that Avoid Special-Status Fish Species' Spawning and Migration Seasons. In-water pile installation using impact hammers shall occur within the work window of June 1 to November 30, which has been established for dredging in San Francisco Bay to reduce potential effects on special-status fish species.	Pier 48 developer.	During the construction work window of June 1 to November 30.	Pier 48 developer to submit detailed construction schedule to Port staff for review and approval.	Considered complete upon approval of construction schedule by Port staff.
M-BI-3.2: Pile-Driving Noise Reduction for the Protection of Fish. Prior to the start of pile driving in the Bay, the project sponsor shall develop an underwater noise monitoring and attenuation plan and obtain approval from NMFS. The NMFS-approved plan or any modifications shall be provided to the City Planning Department for determination of consistency with the requirements in this measure. The plan shall provide details regarding the estimated underwater sound levels expected, sound attenuation methods, methods used to monitor and verify sound levels during pile-driving activities, and management practices	Pier 48 developer.	Prior to the start of pile driving in the Bay.	Pier 48 developer to prepare an underwater noise monitoring and attenuation plan and obtain approval from NMFS. The NMFS-approved plan or any modifications to be provided to the Port staff for determination of consistency with the requirements in this	Considered complete upon review and approval of the sound attenuation and monitoring plan by NMFS and consistency determination by

⁹ RWDI, Landscaping, December 8, 2016.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>to be taken to reduce pile-driving sound in the marine environment to below NMFS thresholds for injury to fish. The plan shall incorporate, but not be limited to, the following BMPs:</p> <ul style="list-style-type: none"> • All steel pilings shall be installed with a vibratory pile driver to the deepest depth practicable. An impact pile driver may be used only where necessary, as determined by the contractor and/or project engineer, to complete installation of the steel pilings, in accordance with seismic safety or other engineering criteria. • The smallest pile driver and minimum force shall be used to complete the work necessary to meet NMFS requirements, as determined by the contractor and/or project engineer. • The hammer shall be cushioned using a 12-inch-thick wood block during all impact hammer pile-driving operations. • To reduce impacts to levels below injury thresholds, based on hydroacoustic monitoring and the amount of impact pile driving occurring on a particular day, a bubble curtain, wood block cushion, air barrier, or similar technology shall be employed during impact pile-driving activities. • A “soft start”¹⁰ technique shall be employed upon initial pile-driving activities every day to allow fish an opportunity to vacate the area. • During impact pile driving, the contractor shall limit the number of strikes per day to the minimum necessary to complete the work, as determined by the contractor and/or project engineer. • No pile driving shall occur at night. • During impact pile driving, a qualified fish biologist shall monitor the project site for fish that exhibit signs of distress. If fish are observed exhibiting signs of injury or distress, work shall be halted by the biologist, and the cumulative SEL up to that point shall be examined. If the cumulative SEL is close to the threshold or exceeds the threshold, then pile-driving activities will cease until the next day. 			measure.	Port staff.

¹⁰ Soft starts require an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period between subsequent three-strike sets. Soft starts for vibratory hammers will initiate noise at 15 seconds at reduced energy, followed by a 1-minute waiting period between subsequent starts. This process should continue for a period of no less than 20 minutes.

<p align="center">MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT</p> <p>NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.</p>				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<ul style="list-style-type: none"> All pile-driving and pile-removal activity shall be monitored by a NMFS-approved biological monitor before and during all pile driving. The biological monitor shall maintain a monitoring log of daily pile-driving activities, any field sound measurements, fish sightings, and implementation of soft-start and shut-down requirements. A monitoring report shall be prepared for submission to NMFS and the City (submitted monthly and at the completion of all pile-driving/pile-removal activities). 				
<p>M-BI-3.3: Pile-Driving Noise Reduction for Protection of Marine Mammals. Prior to the start of pile driving in the Bay, as part of the underwater noise monitoring and attenuation plan required by Mitigation Measure M-BI-3.2, the project sponsor shall provide details regarding the estimated underwater sound levels expected, not just from impact hammer pile driving that may affect fish but also from vibratory pile driving and removal because these sound levels may affect marine mammals. The plan shall also address sound attenuation methods, methods used to monitor and verify sound levels during pile-driving activities, and management practices to be taken to reduce pile-driving sound in the marine environment to below NMFS thresholds for injury to marine mammals. As part of implementation of the sound attenuation monitoring plan, the project sponsor shall take actions to reduce the effect of underwater noise transmission on marine mammals. These actions shall include, at a minimum:</p> <ul style="list-style-type: none"> The establishment of initial safety zones, based on the estimated NMFS injury threshold contours for the different marine mammals (as shown in Table 4.L-8 and Table 4.L-9). The initial size of the safety zones may be modified, based on subsequent analysis of the anticipated noise levels and the actually proposed piles, equipment, and activity prior to construction but only with the approval of NMFS. Hydroacoustic monitoring, according to the NMFS-approved sound attenuation and monitoring plan, shall be completed during initial pile driving to verify projected isopleths for pile driving and removal. The plan shall require real-time hydroacoustic monitoring for a sufficient number of piles to determine and verify modeled noise isopleths. The safety zones established prior to construction may be modified, based on field measurements of noise levels from different pile-driving activities, if the field measurements indicate that different noise threshold contours than those estimated prior to construction are appropriate but only with approval of NMFS. 	Pier 48 developer.	Prior to the start of pile driving in the Bay.	Pier 48 developer to prepare an underwater noise monitoring and attenuation plan (including estimated underwater sound levels expected) and obtain approval from NMFS. The NMFS-approved plan or any modifications to be provided to Port staff for determination of consistency with the requirements in this measure.	Considered complete upon review and approval of the sound attenuation and monitoring plan by NMFS and consistency determination by Port staff.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<ul style="list-style-type: none"> Halting of work activities when a marine mammal enters a safety zone (specific to that species) and resumed only after the animal has not been observed within the safety zone for a minimum of 15 minutes. Use of a “soft start”¹¹ technique each day upon commencement of pile-driving activity, any time after ceasing pile-driving activity for more than 1 hour, and any time after shutdown due to marine mammal entry into a safety zone. Monitoring by an NMFS-approved biological monitor of all pile-driving and pile-removal activity before and during all pile driving/removal to inspect the work zone and adjacent Bay waters for marine mammals and implement the safety zone requirements described above. The biological monitor shall maintain a monitoring log of daily pile-driving/removal activities, any field sound measurements, marine mammal sightings, and implementation of soft-start, shut-down, and safety-zone requirements. A monitoring report shall be prepared for submission to the City and NMFS (submitted monthly and at the completion of all pile-driving/pile-removal activities). 				
M-BI-5: Conduct Pre-Construction Surveys for Nesting Migratory Birds. To facilitate compliance with state and federal laws (California Fish and Game Code and the MBTA) and prevent impacts on nesting migratory birds, the project sponsor shall avoid vegetation/structure removal, ground-disturbing activities, and elevated noise levels near suitable nesting habitat during the nesting season (February 1 through August 31) or conduct pre-construction surveys, as described below. Alternatively, the project sponsor may remove vegetation or structures that may support nesting birds outside of the breeding season such that no breeding habitat would be present should construction start in the normal breeding season.	Infrastructure or vertical developer(s) (as applicable), qualified wildlife biologist (if necessary).	Infrastructure or vertical developer(s) (as applicable) to avoid vegetation and/or structure removal, ground-disturbing activities, and elevated noise levels near suitable nesting habitat	Avoid Removal during Nesting Season: contractor to provide detailed construction schedule to Port to confirm affected activities fall outside nesting season or removal of trees and/or structures occurs outside breeding season. Nesting Surveys: If necessary, wildlife biologist to complete a memorandum	Avoid Removal during Nesting Season: complete upon review and approval of construction schedule by Port staff. Nesting Surveys: Considered complete upon review and

¹¹ Soft starts require an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period between subsequent three-strike sets. Soft starts for vibratory hammers will initiate noise at 15 seconds at reduced energy, followed by a 1-minute waiting period between subsequent starts. This process should continue for a period of no less than 15 minutes.

<p align="center">MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT</p> <p>NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.</p>				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>If it is not feasible to avoid the nesting season and suitable nesting areas remain on the project site, the project sponsor shall hire a qualified wildlife biologist with demonstrated nest-searching experience to conduct surveys for nesting birds, including raptors. The following list details the nesting bird survey requirements for this project.</p> <ul style="list-style-type: none"> One nesting bird assessment is required at the beginning of each year, at the start of the nesting bird season (February), to determine if suitable nesting habitat remains or has been reinstated (e.g., the project site is revegetated). If suitable nesting habitat is present, one nesting survey shall be conducted between February and April, and one nesting survey shall be conducted between April and June. Additional nesting surveys are required when construction work stops at a portion of the site where suitable nesting habitat remains for more than 15 days or if construction is phased in such a way that no disturbance has occurred in a portion of the project site. If active nests are observed during construction when the wildlife biologist is not present, all work within 250 feet of the nest shall stop, and wildlife biologist shall be contacted immediately. All personnel shall move at least 250 feet away from the nest. To the extent feasible, after consulting with the wildlife biologist, construction equipment shall be shut down or moved 250 feet away from the nest. <p>Nesting bird surveys shall be performed no earlier than 7 days prior to the commencement of ground-disturbing activities and vegetation removal (including clearing, grubbing, and staging). The area surveyed shall include all construction areas as well as areas within 250 feet outside the boundaries of the areas to be cleared or as otherwise determined by the biologist.</p> <p>If the wildlife biologist finds any active nests (e.g., a nest with eggs, chicks, or young) during the survey, the biologist shall establish no-disturbance species-specific buffer zones for each nest, marked with high-visibility fencing, flagging, or pin flags. No construction activities shall be allowed within the buffer zones. The size of the buffer shall be based on the species' sensitivity to disturbance and planned work activities in the vicinity; typical buffer sizes are 250 feet for raptors and 50 feet for other birds. The buffer shall remain in effect until the chicks have fledged from the nest or the nest is no longer active, which will be verified by the biologist.</p>		<p>during the nesting season (February 1 through August 31), conduct pre-construction surveys (February through June), or remove vegetation and/or structures outside breeding season.</p>	<p>detailing the survey effort and results and submit the memorandum to the infrastructure developer or vertical developer (s) (as applicable) and Port staff within 7 days of survey completion. Port staff to review and approve report.</p>	<p>approval of nesting surveys by Port staff.</p>

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>If inactive nests are identified, the project sponsor or its contractor shall remove those nests from the structure/vegetation and install nest exclusion measures on structures (i.e., fine mesh netting, panels, or metal projectors) outside of the nesting season, if deemed necessary and suitable by the qualified wildlife biologist. All exclusionary devices shall be monitored and maintained throughout the breeding season to ensure that they are successful in preventing the birds from accessing the cavities or nest sites.</p> <p>After each survey and/or after nest-deterrence activities are completed, the wildlife biologist shall complete a memorandum detailing the survey effort and results and submit the memorandum to the project sponsor within 7 days of survey completion.</p>				
Geology and Soils Mitigation Measures				
<p>M-GE-5: Accidental discovery of paleontological resource.</p> <p>Given the potential for paleontological resources to be present at the project site at excavation depths within the Colma Formation, the following measures shall be undertaken to avoid any significant adverse effect from the proposed project on paleontological resources. Before the start of any drilling or pile-driving activities, the project sponsor shall retain a qualified paleontologist, as defined by the SVP, who is experienced in teaching nonspecialists. The qualified paleontologist shall train all construction personnel who are involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils that are likely to be seen during construction, and proper notification procedures should fossils be encountered. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate the significance.</p> <p>If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work near the find and notify the project sponsor and the San Francisco Planning Department.</p> <p>Construction work in the affected areas shall remain stopped or be diverted to allow recovery of fossil remains in a timely manner. The project sponsor shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with SVP guidelines. The recovery plan may include a field survey, construction monitoring, sampling and data recovery</p>	Infrastructure developer and/or vertical developer(s) (as applicable), and qualified paleontologist.	Before the start of any drilling or pile-driving activities.	Infrastructure developer or vertical developer(s) (as applicable) to retain qualified paleontologist and notify Port staff. Port staff to approve selection of paleontologist. If necessary, paleontologist to prepare and submit a recovery plan for Port review and approval.	Considered complete once training is complete, once construction is complete, or once the Planning Department approves the recovery plan and the infrastructure developer or vertical developer(s) and qualified paleontologist implements the plan.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the San Francisco Planning Department to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The San Francisco Planning Department shall be responsible for ensuring that the monitor's recommendations regarding treatment and reporting are implemented.				
IMPROVEMENT MEASURES FOR THE SEAWALL LOT 337 AND PIER 48 MIXED-USED PROJECT				
I-TR-1: Construction Management Plan. <u>Traffic Control Plan for Construction</u> – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and autos during construction activities, the project sponsor should require construction contractor(s) to prepare a traffic control plan for major phases of construction (e.g. demolition and grading, construction, or renovation of individual buildings). The project sponsor and their construction contractor(s) should meet with relevant City agencies to coordinate feasible measures to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic and transit disruption and pedestrian circulation effects during major phases of construction. This includes coordinating project construction activities with nearby City construction projects, such as the Third Street Rehabilitation Project. For any work within the public right-of-way, the contractor would be required to comply with the San Francisco's Regulations for Working in San Francisco Streets, which establishes rules and permit requirements so that construction activities can be conducted safely and with the least possible interference with pedestrians, bicyclists, transit, and vehicular traffic. Additionally, restrict truck movements and deliveries to the maximum feasible extent during peak hours (generally 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., or other times, as determined by SFMTA and the TASC). In the event that the construction timeframes of the major phases and other development projects adjacent to the project site overlap, the project sponsor should coordinate with City agencies through the TASC and the adjacent developers to minimize the severity of any disruption to adjacent land uses and transportation facilities from overlapping construction transportation	Infrastructure developer and/or developer(s) (as applicable) (s).	Construction Management Plan for Construction: Prior to the issuance of a grading, excavation, or building permit. Project Construction Updates: ongoing throughout construction activities.	Infrastructure developer and/or vertical developer(s) (as applicable) and construction contractor(s) to submit Traffic Control Plan for Construction to the Port and SFMTA for review and approval. Project construction update materials would be provided in the annual mitigation and monitoring plan.	Ongoing during project construction.

<p align="center">MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT</p> <p>NOTE: Each mitigation measure in this document applies to the proposed project and all variants, unless noted otherwise.</p>				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility (Public Agency)	Monitoring Schedule
<p>impacts. The project sponsor, in conjunction with the adjacent developer(s), should propose a construction traffic control plan that includes measures to reduce potential construction traffic conflicts, such as coordinated material drop-offs, collective worker parking and transit to job site and other measures.</p> <p><u>Reduce Single-Occupant Vehicle Mode Share for Construction Workers</u> – To minimize parking demand and vehicle trips associated with construction workers, the project sponsor should require the construction contractor to include in the Traffic Control Plan for Construction methods to encourage walking, bicycling, carpooling, and transit access to the project construction sites by construction workers in the coordinated plan.</p> <p><u>Project Construction Updates for Adjacent Residents and Businesses</u> – To minimize construction impacts on access for nearby residences, institutions, and businesses, the project sponsor should provide nearby residences and adjacent businesses with regularly updated information regarding construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures via a newsletter and/or website.</p>				
<p>I-TR-7: Garage Access – Pedestrian Design Features. During the final design process for the parking facilities and the pedestrian realm of adjacent streets, improvements should be designed for the safe interface of vehicles and pedestrians at parking facility driveways. This design shall include adequate sight distance, signing, striping, warning devices, and lighting.</p>	Garage developer.	During the final design process for the parking facilities and the pedestrian realm of adjacent streets.	Garage developer to design parking facilities and pedestrian realm for the safe interface of vehicles and pedestrians. SFMTA, in consultation with the Planning Department to review and approve plans.	Considered complete once SFMTA and Planning Department signs off on final plans.
<p>I-TR-10: Garage Access – Bicycle-Vehicle Design Features. During the final design process for Long Bridge Street, adequate sight distance should be provided through a combination of signing, striping, and lighting improvements, which should be designed for the safe interface of vehicles and cyclists at the two Block D2 parking facility driveways.</p>	Garage developer.	During final design process for Long Bridge Street.	Garage developer to design Long Bridge Street with adequate sight distance. SFMTA to review and approve plans.	Considered complete once SFMTA signs off on final plans.

MITIGATION MONITORING AND REPORTING PROGRAM FOR SEAWALL LOT 337 AND PIER 48 MIXED-USE PROJECT				
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I-TR-12: Strategies to Enhance Transportation Conditions During Large Events. The project's Transportation Coordinator should participate as a member of the Mission Bay Ballpark Transportation Coordination Committee and provide at least 1-month notification prior to the start of any large event that would overlap with an event at AT&T Park.	Project Transportation Coordinator.	Ongoing.	Transportation Coordinator to provide at least 1-month notification to Port, Planning Department, and SFMTA prior to the start of any large event that would overlap with an event at AT&T Park.	On-going during project operations.



SAN FRANCISCO PLANNING DEPARTMENT

Planning Commission Resolution No. XXXXX

HEARING DATE: OCTOBER 5, 2017

Date: September 21, 2017
Case No.: **2013.0208 ENV/PCA/MAP/DVA**
Project Name: **Mission Rock (aka Seawall Lot 337 / Pier 48)**
Existing Zoning: Mission Bay Open Space (MB-OS); M-2 (Heavy Industrial) Zoning District;
Mission Rock Height and Bulk District
Block/Lot: 8719/ 006; 9900/048
Proposed Zoning: Mission Mixed-Use Zoning District / Mission Rock Special Use District;
Mission Rock Height and Bulk District
Project Sponsor: Port of San Francisco and SWL 337 Associates, LLC
Staff Contact: Mat Snyder – (415) 575-6891
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RESOLUTION RECOMMENDING THAT THE BOARD OF SUPERVISORS APPROVE AMENDMENTS TO THE PLANNING CODE TO ESTABLISH THE MISSION ROCK MIXED-USE DISTRICT, THE MISSION ROCK SPECIAL USE DISTRICT, ALONG WITH OTHER RELATED MINOR CHANGES TO ARTICLE 2 AND ARTICLE 9 OF THE PLANNING CODE; AND BY AMENDING ZONING MAP ZN 08 BY DESIGNATING ASSESSOR'S BLOCK AND LOT: 8719/ 006 AND 9900/-48 AS PART OF THE MISSION ROCK MIXED-USE DISTRICT AND BY AMENDING SPECIAL USE DISTRICT MAP SD 08 BY DESIGNATING ASSESSOR'S BLOCK AND LOTS: 8719/ 006 AND 9900/048 AS PART OF THE MISSION ROCK SPECIAL USE DISTRICT; ADOPT FINDINGS OF CONSISTENCY WITH THE GENERAL PLAN AND PLANNING CODE SECTION 101.1 AND FINDINGS UNDER PLANNING CODE SECTION 302, AND INCORPORATING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

WHEREAS, on September 5, 2017, Mayor Edwin Lee and Supervisor Jane Kim introduced an ordinance (Board File 170940) for Planning Code Text Amendments to establish the Mission Rock Mixed-Use District and the Mission Rock Special Use District (herein "SUD"), and for Planning Code Map Amendments by amending Zoning Map ZN08 by designating Assessor's Block and Lot: 8719/006 as part of the Mission Rock Mixed-Use District and by amending Special Use District Map SD08 by designating assessor's block and lots: 8719/ 006 and 9900/048 to the Mission Rock SUD.

WHEREAS, pursuant to Planning Code Section 302(b), on September 5, 2017, the San Francisco Board of Supervisors initiated these Planning Code Text and Map Amendments.

WHEREAS, these Planning Code Text and Map Amendments would enable the Project. The Project includes new market-rate and affordable residential uses, commercial uses, retail, light industrial uses, parking, shoreline improvements, infrastructure development and street improvements, and public open space. Depending on the uses proposed, the Project would include approximately 1.1. to 1.6 million gross square feet (gsf) of residential uses (estimated as between 1,000 to 1,600 residential units) (of which 40% will be below market rate), approximately 972,000 to 1.4 million gsf of commercial-office uses, and a maximum of approximately 245,000 gsf of retail uses. The Project also includes construction of

transportation and circulation improvements, new and upgraded utilities and infrastructure, geotechnical and shoreline improvements, up to 3,000 off-street parking spaces in one or two new garages and 100 spaces elsewhere throughout the site. The Project is more comprehensively described in the Seawall Lot 337 and Pier 48 Mixed-Use Project Draft EIR.

WHEREAS, the Project would construct new buildings that would range in height from 90 to 240 feet, as is consistent with Proposition D which was passed by the voters of San Francisco in November 2015.

WHEREAS, these Planning Code Text Amendments would establish the Mission Rock Mixed Use District and Mission Rock SUD, which would outline the land use controls for the Project site.

WHEREAS, these Planning Code Map Amendments would designate the newly created Mission Rock Mixed-Use District and the Mission Rock Special Use District to the Project Site; the newly created SUD outline the land use controls for the Project site.

WHEREAS, this Resolution approving these Planning Code Text and Map Amendments is a companion to other legislative approvals relating to the Project, including approval of the Mission Rock Design Controls document, and recommendation for approval of the Development Agreement.

WHEREAS, as part of the implementation of the Project, the Office of Community Investment and Infrastructure (OCII) will consider removing certain property identified as Mission Bay Parcel P20 (a 0.3-acre, approximately 20-foot-wide strip of land adjacent to the south side of Seawall Lot 337, along the north side of Mission Rock Street) from the Mission Bay South Redevelopment Plan, and such removal would be part of the Project implementation as described in the Development Agreement. Parcel P20 is currently subject to the Mission Bay South Redevelopment Plan and is designated in that plan as a small open-space buffer. When it adopted AB 2797, the state legislature recognized the need to remove P20 from the Redevelopment Plan, on the basis that “the revitalization of Seawall Lot 337 . . . is of particular importance to the state.” As such, AB 2797 calls for the amendment of the Redevelopment Plan to remove P20 without State-level review under Health & Safety Code Sections 34163(c)-(f) and 34164(a) and (b).

WHEREAS, on October 5, 2017, the Planning Commission reviewed and considered the Final EIR for the Mission Rock Project (“FEIR”) and found the FEIR to be adequate, accurate and objective, thus reflecting the independent analysis and judgment of the Department and the Commission, and that the summary of comments and responses contained no significant revisions to the Draft EIR, and certified the FEIR for the Project in compliance with the California Environmental Quality Act (“CEQA”), the CEQA Guidelines and Chapter 31 by Motion No. XXXXX.

WHEREAS, on October 5, the Commission by Motion No. XXXXX approved CEQA Findings, including adoption of a Mitigation Monitoring and Reporting Program (MMRP), under Case No. 2013.0208ENV, for approval of the Project, which findings and MMRP are incorporated by reference as though fully set forth herein.

WHEREAS, on October 5, 2017, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the proposed Planning Code Text and Map Amendments and has considered the information included in the File for these Amendments, the staff reports and presentations, public testimony and written comments, as well as the information provided about the Project from other City departments.

WHEREAS, a draft ordinance, substantially in the form attached hereto as Exhibit A, approved as to form, would establish the Mission Rock Mixed Use District, Mission Rock SUD, and make other related Planning Code Text and Map amendments.

NOW THEREFORE BE IT RESOLVED, that the Planning Commission hereby finds that the Planning Code Text Amendments and Zoning Map Amendments promote the public welfare, convenience and necessity for the following reasons:

1. The Amendments would help implement the Mission Rock Mixed-Use Project development, thereby evolving currently under-utilized surface parking lot for needed housing, commercial space, and parks and open space.
2. The Amendments would help implement the Mission Rock Mixed-Use Project, which in turn will provide employment opportunities for local residents during construction and post-occupancy, as well as community facilities and parks for new and existing residents.
3. The Amendments would help implement the Mission Rock Mixed-Use Project by enabling the creation of a mixed-use and sustainable neighborhood, with fully rebuilt infrastructure. The new neighborhood would improve the site's multi-modal connectivity to and integration with the surrounding City fabric, and connect existing neighborhoods to the City's waterfront.
4. The Amendments would enable the construction of a new vibrant, safe, and connected neighborhood, including new parks and open spaces. The Amendments would help ensure a vibrant neighborhood with active streets and open spaces, high quality and well-designed buildings, and thoughtful relationships between buildings and the public realm, including the waterfront.
5. The Amendments would enable construction of new housing, including new on-site affordable housing, and new retail and manufacturing uses. These new uses would create a new mixed-use neighborhood that would strengthen and complement nearby neighborhoods.
6. The Amendments would facilitate the preservation and rehabilitation of Pier 48 - an important historic resource listed in the National Register of Historic Places.

AND BE IT FURTHER RESOLVED, that the Planning Commission finds the Planning Code Text and Map Amendments are in general conformity with the General Plan and Planning Code Section 101.1 as set forth below.

AND BE IT FURTHER RESOLVED, that the Planning Commission finds the Project and its approvals associated therein, including the amendment to the Mission Bay South Redevelopment Plan to remove Parcel P20 from that Plan, all as more particularly described in Exhibits B and C to the Development Agreement on file with the Planning Department in Case No. 2013.0208DVA, are on balance consistent with the Objectives and Policies of the General Plan, as described herein as follows:

HOUSING ELEMENT

OBJECTIVE 1

IDENTIFY AND MAKE AVAILABLE FOR DEVELOPMENT ADEQUATE SITES TO MEET THE CITY'S HOUSING NEEDS, ESPECIALLY PERMANENTLY AFFORDABLE HOUSING.

POLICY 1.1

Plan for the full range of housing needs in the City and County of San Francisco, especially affordable housing.

POLICY 1.8

Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.

POLICY 1.10

Support new housing projects, especially affordable housing, where households can easily rely on public transportation, walking and bicycling for the majority of daily trips.

The Project is a mixed-use development with approximately 1.1 to 1.6 million gsf of residential uses (estimated at between 1,100 and 1,600 dwelling units) at full project build-out, which will provide a wide range of housing options. As detailed in the Development Agreement, the Project substantially exceeds the inclusionary affordable housing requirements of the Planning Code, through a partnership between the developer and the City to reach a 40% affordable level.

OBJECTIVE 11

SUPPORT AND RESPECT THE DIVERSE AND DISTINCT CHARACTER OF SAN FRANCISCO'S NEIGHBORHOODS.

POLICY 11.1

Promote the construction and rehabilitation of well-designed housing that emphasizes beauty, flexibility, and innovative design, and respects existing neighborhood character.

POLICY 11.2

Ensure implementation of accepted design standards in project approvals.

POLICY 11.7

Respect San Francisco's historic fabric, by preserving landmark buildings and ensuring consistency with historic districts.

The Project, as described in the Development Agreement and controlled in the Design Controls (DC), includes a program of substantial community benefits and detailed plans designed to create a vibrant new mixed-use amenity-rich neighborhood at the location of an existing surface parking lot. The new neighborhood will feature small blocks and well-articulated buildings with a human scale modeled off of features characteristic of San Francisco neighborhoods. Through the standards and guidelines in the DC and through the Development Agreement (DA), the Project Sponsor has committed to the rehabilitation of Pier 48 pursuant to the Secretary of Interior Standards.

OBJECTIVE 12

BALANCE HOUSING GROWTH WITH ADEQUATE INFRASTRUCTURE THAT SERVES THE CITY'S GROWING POPULATION.

POLICY 12.1

Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.

POLICY 12.2

Consider the proximity of quality of life elements, such as open space, child care, and neighborhood services, when developing new housing units.

The Project appropriately balances housing with new and improved infrastructure and related public benefits.

The project site is located proximate to both major regional and local public transit, including Muni Metro and Caltrain. The Project includes incentives for the use of transit, walking and bicycling through its TDM program. In addition, the Project's streetscape design would enhance vehicular, bicycle and pedestrian access and connectivity through the site. Therefore, new residential and commercial buildings constructed as part of the Project would rely on transit use and environmentally sustainable patterns of movement.

The Project will provide over eight acres of new open space for a variety of activities, including an expanded China Basin Park, a central town square-like space, a waterfront wharf, and other small plazas and pedestrian connections throughout.

The Project includes substantial contributions related to quality of life elements such as open space, affordable housing, transportation improvements, childcare, public art, workforce development, youth development, and historic preservation.

COMMERCE AND INDUSTRY ELEMENT

OBJECTIVE 1

MANAGE ECONOMIC GROWTH AND CHANGE TO ENSURE ENHANCEMENT OF THE TOTAL CITY LIVING AND WORKING ENVIRONMENT.

POLICY 1.1

Encourage development which provides substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences that cannot be mitigated.

The Project is intended to provide a distinct mixed-use development with residential, office, retail, cultural, and open space uses. The Project would leverage the Project site's location on the waterfront and close proximity to major regional and local public transit by building a dense mixed-use development that allows people to work and live close to transit. The Project would incorporate varying heights, massing and scale, maintaining a strong human-scaled streetwall along streets, and focused attention around public open spaces. The Project would create a balanced commercial center with a continuum of floorplate sizes for a range of users, substantial new on-site open space, and sufficient density to support and activate the new active ground floor uses and open space in the Project.

The Project would help meet the job creation goals established in the City's Economic Development Strategy by generating new employment opportunities and stimulating job creation across all sectors. The Project would also construct high-quality housing with sufficient density to contribute to 24-hour activity on the Project site, while offering a mix of unit types, sizes, and levels of affordability to accommodate a range of potential residents. The Project would facilitate a vibrant, interactive ground plane for Project and neighborhood residents, commercial users, and the public, with public spaces that could accommodate a variety of events and programs, and adjacent ground floor building spaces that include elements such as transparent building frontages and large, direct access points to maximize circulation between, and cross-activation of, interior and exterior spaces.

OBJECTIVE 2

MAINTAIN AND ENHANCE A SOUND AND DIVERSE ECONOMIC BASE AND FISCAL STRUCTURE FOR THE CITY.

POLICY 2.1

Seek to retain existing commercial and industrial activity and to attract new such activity to the city.

See above (Commerce and Industry Element Objective 1 and Policy 1.1) which explain the Project's contribution to the City's overall economic vitality.

OBJECTIVE 3

PROVIDE EXPANDED EMPLOYMENT OPPORTUNITIES FOR CITY RESIDENTS, PARTICULARLY THE UNEMPLOYED AND ECONOMICALLY DISADVANTAGED.

POLICY 3.2

Promote measures designed to increase the number of San Francisco jobs held by San Francisco residents.

The Project would help meet the job creation goals established in the City's Economic Development Strategy by generating new employment opportunities and stimulating job creation across all sectors. The Project will provide expanded employment opportunities for City residents at all employment levels, both during and after construction. The Development Agreement, as part of the extensive community benefit programs, includes a Workforce Development Plan, including a local hire participation level of 30% per trade. Vertical developers will contribute \$1,000,000 to OEWD in 11 parcel-by-parcel installments. Half of the funds will support community-based organizations that provide barrier removal services and job readiness training for individuals within at-risk populations, and half will support city programs that provide job training for local residents.

OBJECTIVE 6

MAINTAIN AND STRENGTHEN VIABLE NEIGHBORHOOD COMMERCIAL AREAS EASILY ACCESSIBLE TO CITY RESIDENTS.

POLICY 6.1 *Ensure and encourage the retention and provision of neighborhood-serving goods and services in the city's neighborhood commercial districts, while recognizing and encouraging diversity among the districts.*

POLICY 6.2

Promote economically vital neighborhood commercial districts which foster small business enterprises and entrepreneurship and which are responsive to economic and technological innovation in the marketplace and society

POLICY 6.4

Encourage the location of neighborhood shopping areas throughout the city so that essential retail goods and personal services are accessible to all residents.

POLICY 6.5

Discourage the creation of major new commercial areas except in conjunction with new supportive residential development and transportation capacity.

POLICY 6.7

Promote high quality urban design on commercial streets.

The Project meets and furthers the Objectives and Policies of the Commerce and Industry Element by reinforcing the typical San Francisco pattern of including resident serving uses along with mixed-use development. The Amendments will generally permit small-scale retail and community-related uses throughout the site by requiring it at key locations along China Basin Park and along the pedestrian-oriented "Shared Public Way." The Project calls for neighborhood commercial and other retail be established in a pedestrian-oriented active environment typical of San Francisco neighborhoods and specifically called for in the Commerce and Industry Element. The provision of retail space will provide entrepreneurial opportunities for local residents and workers. As noted above, streets will be designed to Better Streets standards with the particular goal of assuring an active and engaging environment for pedestrians.

TRANSPORTATION ELEMENT

OBJECTIVE 2

USE THE TRANSPORTATION SYSTEM AS A MEANS FOR GUIDING DEVELOPMENT AND IMPROVING THE ENVIRONMENT.

POLICY 2.1

Use rapid transit and other transportation improvements in the city and region as the catalyst for desirable development, and coordinate new facilities with public and private development.

POLICY 2.5

Provide incentives for the use of transit, carpools, vanpools, walking and bicycling and reduce the need for new or expanded automobile and automobile parking facilities.

The Project is located along Third Street and the Muni T-Line, whose service will substantially expand in the near future with the opening of the Central Subway. The Project is also in close proximity to the San Francisco Caltrain station along with other major bus lines. The Project includes a detailed TDM program, including various performance measures, physical improvements and monitoring and enforcement measures designed to create incentives for

transit and other alternative to the single occupancy vehicle for both residential and commercial buildings. In addition, the Project's design, including its streetscape elements, is intended to promote and enhance walking and bicycling.

OBJECTIVE 23

IMPROVE THE CITY'S PEDESTRIAN CIRCULATION SYSTEM TO PROVIDE FOR EFFICIENT, PLEASANT, AND SAFE MOVEMENT.

POLICY 23.1

Provide sufficient pedestrian movement space with a minimum of pedestrian congestion in accordance with a pedestrian street classification system.

POLICY 23.2

Widen sidewalks where intensive commercial, recreational, or institutional activity is present, sidewalks are congested, where sidewalks are less than adequately wide to provide appropriate pedestrian amenities, or where residential densities are high.

POLICY 23.6

Ensure convenient and safe pedestrian crossings by minimizing the distance pedestrians must walk to cross a street.

The Project will establish a new tight-knit street network on the project site, and will provide pedestrian improvements and streetscape enhancement measures as described in the DC and reflected in the mitigation measures, the Transportation Plan, and in the Development Agreement. The Project would establish two new north-south rights-of-way and three new east-west rights-of-way through the site, increasing the sites connectivity and access. All streets will be constructed to Better Street standards; the transportation network will include robust bike facilities and will improve and complete a missing link in the Bay Trail and Blue Greenway.

URBAN DESIGN ELEMENT

OBJECTIVE 1

EMPHASIS OF THE CHARACTERISTIC PATTERN WHICH GIVES TO THE CITY AND ITS NEIGHBORHOODS AN IMAGE, A SENSE OF PURPOSE, AND A MEANS OF ORIENTATION.

POLICY 1.1

Recognize and protect major views in the city, with particular attention to those of open space and water.

As explained in the DC, the Project is very carefully designed with particular emphasis on assuring a vibrant and engaging pedestrian realm. Buildings are to be scaled and shaped specific to their immediate context by assuring streetwalls are well proportioned relative to adjacent streets and open spaces. The Project's proposed tallest buildings will be sited at key locations to mark important gateway locations assuring that the buildings taken together create a dynamic skyline. The overall heights of the project are harmonious with and complementary to the overall city skyline when viewed from various distances.

POLICY 1.2

Recognize, protect and reinforce the existing street pattern, especially as it is related to topography.

POLICY 1.3

Recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts.

POLICY 1.5

Emphasize the special nature of each district through distinctive landscaping and other features.

POLICY 1.6

Make centers of activity more prominent through design of street features and by other means.

POLICY 1.7

Recognize the natural boundaries of districts, and promote connections between districts.

POLICY 2.9

Review proposals for the giving up of street areas in terms of all the public values that streets afford.

POLICY 2.10

Permit release of street areas, where such release is warranted, only in the least extensive and least permanent manner appropriate to each case.

The Project will create a new fine-knit street network on the project site where it does not currently exist, increasing public access and circulation through the site. Buildings will be constructed between a maximum height range of 90 and 240 feet, with buildings stepping down to bases of 40 to 65 feet along streets. Building heights and urban design requirements in the DC assure that Pier 48, the site's existing historic Pier, will be respected and retain its predominance along the bayfront. The Project is envisioned as an extension and improvement to the Mission Bay neighborhood

OBJECTIVE 2

CONSERVATION OF RESOURCES WHICH PROVIDE A SENSE OF NATURE, CONTINUITY WITH THE PAST, AND FREEDOM FROM OVERCROWDING.

POLICY 2.4

Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

POLICY 2.5

Use care in remodeling of older buildings, in order to enhance rather than weaken the original character of such buildings.

Pier 48 will be rehabilitated to Secretary of Interior's Standards.

OBJECTIVE 3

MODERATION OF MAJOR NEW DEVELOPMENT TO COMPLEMENT THE CITY PATTERN, THE RESOURCES TO BE CONSERVED, AND THE NEIGHBORHOOD ENVIRONMENT.

POLICY 3.3

Promote efforts to achieve high quality of design for buildings to be constructed at prominent locations.

POLICY 3.4

Promote building forms that will respect and improve the integrity of open spaces and other public areas.

POLICY 3.5

Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.

POLICY 3.7

Recognize the special urban design problems posed in development of large properties.

POLICY 3.8

Discourage accumulation and development of large properties, unless such development is carefully designed with respect to its impact upon the surrounding area and upon the city.

While large in scope, the Project will be constructed in such a way to be an integral part of the San Francisco urban fabric. Blocks are being established at smaller-than-typical sizes to assure buildings are well-scaled, and that the site is permeable and accessible to all. Buildings will be shaped to assure that their fronting streetwalls are well proportioned relative to their adjacent streets and open spaces. The tallest of the site's buildings will be placed at key gateway and central locations and well-spaced to assure they work well together in adding to the City's skyline.

RECREATION AND OPEN SPACE ELEMENT

OBJECTIVE 1

ENSURE A WELL-MAINTAINED, HIGHLY UTILIZED, AND INTEGRATED OPEN SPACE SYSTEM.

POLICY 1.1

Encourage the dynamic and flexible use of existing open spaces and promote a variety of recreation and open space uses, where appropriate.

POLICY 1.7

Support public art as an essential component of open space design.

The Project would build a network of waterfront parks, playgrounds and recreational facilities on the 28-Acre Site that will greatly enhance access to and along the Bay. China Basin Park will be significantly expanded to provide a multi-use Bayfront park that provides both active and

contemplative space, while providing a space for planned community events. A central town square-like space will enable the proposed high-retail corridor to spill into open space creating an active and engaging central civic space. The Project will provide approximately eight acres of new and expanded open space for a variety of activities, including a great lawn, a small ballfield, kayak boat launches, wharf, along with small pedestrian plazas throughout. In addition, the Project would provide new private and/or common open space for the new dwelling units.

POLICY 1.12

Preserve historic and culturally significant landscapes, sites, structures, buildings and objects.

See Discussion in Urban Element Objective 2, Policy 2.4 and 2.5.

OBJECTIVE 3

IMPROVE ACCESS AND CONNECTIVITY TO OPEN SPACE.

POLICY 3.1

Creatively develop existing publicly-owned right-of-ways and streets into open space.

The Project provides approximately eight acres of new and expanded public open space and opens up new connections to the shoreline in the Mission Bay neighborhood. The Project would encourage non-automobile transportation to and from open spaces, and would ensure physical accessibility within these open spaces. The Project features robust bike facilities to both assure continuity of the Bay Trail and Blue Greenway, and improve bike access for its residents, workers, and visitors.

ENVIRONMENTAL PROTECTION ELEMENT

OBJECTIVE 1

ACHIEVE A PROPER BALANCE AMONG THE CONSERVATION, UTILIZATION, AND DEVELOPMENT OF SAN FRANCISCO'S NATURAL RESOURCES.

Policy 1.4

Assure that all new development meets strict environmental quality standards and recognizes human needs.

OBJECTIVE 15

INCREASE THE ENERGY EFFICIENCY OF TRANSPORTATION AND ENCOURAGE LAND USE PATTERNS AND METHODS OF TRANSPORTATION WHICH USE LESS ENERGY.

POLICY 15.3

Encourage an urban design pattern that will minimize travel requirements among working, shopping, recreation, school and childcare areas.

The Project is consistent with and implements the Environmental Protection Element in that it calls for mixed-use, high density, transit-friendly, sustainable development.

The Project's approvals include a Sustainability Plan, that among other things, set goals for the Project Sponsor that include sea level resilience through the year 2100, 100% operational energy from renewable sources, 100% non-potable water met with non-potable sources, and 20% single occupancy vehicle trip reduction.

PUBLIC SAFETY ELEMENT

OBJECTIVE 2 REDUCE STRUCTURAL AND NON-STRUCTURAL HAZARDS TO LIFE SAFETY, MINIMIZE PROPERTY DAMAGE AND RESULTING SOCIAL, CULTURAL AND ECONOMIC DISLOCATIONS RESULTING FROM FUTURE DISASTERS.

POLICY 2.1 *Assure that new construction meets current structural and life safety standards.*

POLICY 2.3 *Consider site soils conditions when reviewing projects in areas subject to liquefaction or slope instability.*

POLICY 2.9 *Consider information about geologic hazards whenever City decisions that will influence land use, building density, building configurations or infrastructure are made.*

POLICY 2.12 *Enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.*

The Project is consistent with and implements the Community Safety Element. All improvements, including infrastructure, buildings and open space improvements will be constructed to local seismic standards, taking into account, among other considerations, the geological condition of the soil.

AIR QUALITY ELEMENT

OBJECTIVE 3 DECREASE THE AIR QUALITY IMPACTS OF DEVELOPMENT BY COORDINATION OF LAND USE AND TRANSPORTATION DECISIONS.

POLICY 3.1 *Take advantage of the high density development in San Francisco to improve the transit infrastructure and also encourage high density and compact development where an extensive transportation infrastructure exists.*

POLICY 3.2 *Encourage mixed land use development near transit lines and provide retail and other types of service oriented uses within walking distance to minimize automobile dependent development.*

POLICY 3.6 *Link land use decision making policies to the availability of transit and consider the impacts of these policies on the local and regional transportation system.*

POLICY 3.9 *Encourage and require planting of trees in conjunction with new development to enhance pedestrian environment and select species of trees that optimize achievement of air quality goals*

OBJECTIVE 6 LINK THE POSITIVE EFFECTS OF ENERGY CONSERVATION AND WASTE MANAGEMENT TO EMISSION REDUCTIONS.

POLICY 6.2 Encourage recycling to reduce emissions from manufacturing of new materials in San Francisco and the region.

The Project is consistent with and implements the Air Quality Element in that it calls for mixed-use, high density, sustainable development that will enable efficient use of land and encourage travel by transit, bicycle and by foot, thereby reducing auto use. The Sustainability Plan and TDM Plan governing development of the Project mandate a 20% single occupancy vehicle trip reduction.

AND BE IT FURTHER RESOLVED, that the Planning Commission finds the Project and its approvals associated therein, all as more particularly described in Exhibits B and C to the Development Agreement on file with the Planning Department in Case No. 2013.0208DVA, are in general conformity with the Planning Code Section 101.1 priority policies, as follows:

1. That existing neighborhood serving retail uses be preserved and enhanced and future opportunities for resident employment in or ownership of such businesses enhanced.

The Project will preserve and enhance existing neighborhood serving retail uses. The Project includes adding roughly 245,000 square feet of new retail uses, that will be focused along a central pedestrian "Shared Public Way" and fronting the site's major parks. The project does not include the removal of any existing neighborhood serving retail.

2. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

The Project accommodates new development on land currently a surface parking lot. It would not accommodate removing or changing the character of existing residential neighborhoods. The Project includes a robust affordable housing program setting aside 40-percent of the on-site housing for below-market-rate units. The Project lays out requirements to assure the new development has characteristics of mixed-use neighborhoods throughout San Francisco, including but not limited to a fine-grained system of streets, well-modulated buildings with active frontages, and the ability to establish diverse retail and community uses where nothing exists today.

3. That the City's supply of affordable housing be preserved and enhanced.

The Project calls for development that would have a positive effect on the City's affordable housing stock. The Project would accommodate up to 1.6 million gsf of new residential units (estimated at 1,600 new units), of which 40-percent will be designated as Below-Market Rate. There is no housing on the site today; the Project would not accommodate the removal of any existing dwelling units.

4. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

The Project anticipates substantial new transit service improvements along Third Street with the opening of the Central Subway in 2019, as well as substantial improvement to nearby Caltrain service through the ongoing electrification project. Streets have been designed to emphasize travel by bicycle or by foot. On-street parking is generally not proposed thereby allowing more street space to be designated for bicyclists, pedestrians, and those arriving by transit, or taxi/TNCs, as well as for deliveries. While a large centralized parking facility (up to 3,000 spaces in one or two centralized garages) is proposed, the total number of spaces site-wide would not represent a substantial net gain of spaces for the site overall from existing conditions. At present, approximately 2,900 parking spaces are on the site between Lot A and Pier 48. Only 100 parking spaces are allowed elsewhere on the site in addition to the centralized garages.

5. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project would not adversely affect the industrial sector or service sectors. No such uses would be displaced by the Project. The Project includes the rehabilitation of Pier 48, which will provide about 250,000 gsf of new or improved space for production uses. Additional small production spaces would also be required along Terry Francois Boulevard, providing industrial space where none exists today.

6. That the City achieves the greatest possible preparedness to protect against injury and loss of life in an earthquake.

All new construction would be subject to the City's Building Code, Fire Code and other applicable safety standards. Thus, the Project would improve preparedness against injury and loss of life in an earthquake by prompting development that would comply with applicable safety standards.

7. That landmarks and historic buildings be preserved.

Pier 48 would be rehabilitated pursuant to the Secretary of Interior's Standards.

8. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project would not significantly adversely affect existing open spaces or their access to sunlight and vistas. The Project includes a robust parks and open space program including the substantial expansion of China Basin Park and the establishment of two new additional parks and

other pedestrian plazas throughout. The Project includes a fine-grained network of new streets thereby assuring the site permeability and access through it.

I hereby certify that the Planning Commission ADOPTED the foregoing Resolution on October 5, 2017.

Jonas P. Ionin
Commission Secretary

AYES:

NOES:

ABSENT:

ADOPTED: October 5, 2017

[Planning Code, Zoning Map – Mission Rock Special Use District]

Ordinance amending the Planning Code and the Zoning Map to add the Mission Rock Special Use District, generally bounded by China Basin to the north; Pier 48, the marginal wharf between Pier 48 and Pier 50, the associated shoreline area and Terry Francois Boulevard to the east; Mission Rock Street to the south; and 3rd Street to the west; and to amend other related provisions; making findings under the California Environmental Quality Act; and making findings of consistency with the General Plan, the eight priority policies of Planning Code Section 101.1, and Planning Code Section 302.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in ~~*striketrough italics Times New Roman font*~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~striketrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Findings.

(a) California Environmental Quality Act.

(1) At its hearing on _____, and prior to recommending the proposed Planning Code amendments for approval, by Motion No. _____, the Planning Commission certified a Final Environmental Impact Report (FEIR) for the Seawall Lot 337 and Pier 48 Mixed Use Project, also referred to as the Mission Rock Project (Project) pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.), the CEQA Guidelines (14 Cal. Code Reg. Section 15000 et

1 seq.), and Chapter 31 of the Administrative Code. A copy of said Motion is in Board of
2 Supervisors File No. _____, and is incorporated herein by reference. In accordance
3 with the actions contemplated herein, this Board has reviewed the FEIR, concurs with its
4 conclusions, affirms the Planning Commission's certification of the FEIR, and finds that the
5 actions contemplated herein are within the scope of the Project described and analyzed in the
6 FEIR.

7 (2) In recommending the proposed Planning Code Amendments for approval
8 by this Board at its hearing on _____, by Motion No. _____, the Planning
9 Commission also adopted findings under CEQA, including a statement of overriding
10 consideration, and a Mitigation Monitoring and Reporting Program (MMRP). A copy of said
11 Motion and MMRP are in Board of Supervisors File No. _____, and is incorporated
12 herein by reference. The Board hereby adopts and incorporates by reference as though fully
13 set forth herein the Planning Commission's CEQA approval findings, including the statement
14 of overriding considerations. The Board also adopts and incorporates by reference as though
15 fully set forth herein the Project's MMRP.

16 (b) At the same hearing on _____, the Planning Commission, in
17 Resolution No. _____, adopted findings that the actions contemplated in this ordinance
18 are consistent, on balance, with the City's General Plan and eight priority policies of Planning
19 Code Section 101.1. The Board adopts these findings as its own. A copy of said Resolution
20 is in Board of Supervisors File No. _____, and is incorporated herein by reference.

21 (c) Pursuant to Planning Code Section 302, this Board finds that this Planning Code
22 Amendment will serve the public necessity, convenience, and welfare for the reasons set forth
23 in Planning Commission Resolution No. _____, and the Board incorporates such
24 reasons herein by reference.

25 ///

1 (d) On June 30, 2014, the voters of the City and County of San Francisco approved
2 an initiative requiring voter approval for any future construction projects on the San Francisco
3 waterfront that required an increase in existing height limits ("Proposition B"). On November
4 3, 2015, in satisfaction of the requirements of Proposition B, the voters of the City and County
5 of San Francisco approved the "Mission Rock Affordable Housing, Parks, Jobs and Historic
6 Preservation Initiative" ("Proposition D") which established policies and modifications to the
7 San Francisco General Plan and Planning Code for an approximately 28 acre site located
8 between AT&T Park and the City's new Public Safety Building (the "Mission Rock Site").
9 These modifications included adding a new Section 291 to the Planning Code creating a
10 Mission Rock Height and Bulk District for the Mission Rock Site and establishing revised
11 maximum building height limits therein.

12 (e) Section 291 of the Planning Code and Section 7 (Implementing Action) of
13 Proposition D also directs the establishment of design controls that will be applicable to the
14 Mission Rock Site.

15 (f) On _____ and _____, the Port Commission and the Planning
16 Commission, respectively, conducted duly noticed public hearings on proposed Mission Rock
17 Design Controls ("Design Controls") and by Resolutions _____ and _____,
18 respectively, approved the Design Controls.

19 Section 2. The Planning Code is hereby amended by revising Section 201, adding
20 Section 249.80, and amending Sections 291, 901, and 902 to read as follows:

21 **SEC. 201. CLASSES OF DISTRICTS.**

22 In order to carry out the purposes and provisions of this Code, the City is hereby
23 divided into the following classes of use districts:

24 * * * *

25 ///

<u>Mission Rock Mixed Use District</u>	
<i>(Also see Section 249.80)</i>	
<u>MR-MU</u>	<u>Mission Rock Mixed Use District (Defined in Section 249.80(f)(1))</u>

* * * *

SEC. 249.80. MISSION ROCK SPECIAL USE DISTRICT.

(a) Purpose and Boundaries. A Special Use District entitled the Mission Rock Special Use District (SUD), the boundaries of which are shown on Sectional Map SU08 of the Zoning Maps of the City and County of San Francisco, is hereby established to facilitate the City's long-term goal of development of a new Mission Rock neighborhood. The purpose of this SUD is to implement the Mission Rock Affordable Housing, Parks, Jobs and Historic Preservation Initiative approved by City voters on November 3, 2015 (Proposition D), and give effect to the Development Agreement (DA), Disposition and Development Agreement (DDA) and related transactional documents as approved by the Board of Supervisors in ordinances in File No. _____, which will provide benefits to the City such as, among other things, development of a mixed-use, transit-oriented community on the waterfront near public transit, major new housing, including a significant amount of affordable housing, increased public access and open spaces, extensive infrastructure improvements, shops, restaurants, cafes, neighborhood-serving retail, community spaces, commercial/office and light industrial/production space, preservation and renovation of historic Pier 48, job creation, responsiveness to climate change and resulting sea level rise, and the generation of revenue to fund public improvements.

(b) Role of Port Commission. The property within the SUD is under the jurisdiction of the Port Commission. As authorized under the Burton Act and AB 2797, the Port may hold, use, conduct, operate, maintain, manage, administer, regulate, improve, sell, lease, encumber, and control non-trust lands and improvements within the SUD for any purpose on conditions specified in the Burton Act and

1 AB 2797. In the event of a conflict between this Code and the Burton Act, AB 2797, or the McAteer-
2 Petris Act (Cal. Gov't Code §§ 66600 et seq.), state law shall prevail.

3 (c) **Relationship to Design Controls.** The Mission Rock Design Controls (Design Controls
4 or DC), adopted by the Planning Commission and the Port Commission and as may be periodically
5 amended, sets forth Standards and Guidelines, applicable within the SUD. A copy of the Design
6 Controls is on file with the Clerk of the Board of Supervisors in File No. _____ and available
7 on the Board's website, and is incorporated herein by reference as though fully set forth. Any term
8 used in this Section 249.80 and not otherwise defined in the SUD or this Code shall have the meaning
9 ascribed to it in the Design Controls. The Port shall have exclusive jurisdiction and approval rights
10 over amendments to the Design Controls that affect only open space and right-of-way (including
11 streetscape) development within the SUD, which includes Chapters 2 through 4 of the Design Controls
12 and could include, depending on the context and application to the open space/streetscape areas within
13 Port jurisdiction, the following: Design Controls Section 5.1 (Designing for Environmental Change:
14 Site Grading and Differential Settlement), Section 5.3 (Active Edges), Section 5.4 (Public Passages),
15 Section 5.7 (Parkfront Zone), Section 6.6 (Environmental Comfort), Section 7.1 (Interpretative Signage,
16 Regionally Appropriate Vegetation), Section 7.4 9 (Signage), and Section 7.5 (Lighting). Other than
17 amendments to sections of the Design Controls identified in this subsection (c) as being within the
18 exclusive jurisdiction of the Port Commission as specified above, the Port Commission and the
19 Planning Commission may amend the Design Controls upon initiation by either body or upon
20 application by an Applicant, to the extent that such amendment is consistent with this Section, the
21 General Plan, and the DA. Both the Port Commission and Planning Commission must approve any
22 amendment to the Design Controls that does not exclusively affect the open space and right-of-way
23 Chapters under the exclusive jurisdiction of the Port Commission. In the event of any conflict between
24 the SUD and the Design Controls, the SUD shall prevail.

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1 (d) Relationship to Other Planning Code Provisions. The provisions of this SUD and the
2 Design Controls shall supersede the Planning Code in its entirety, with the result that the Planning
3 Code shall not apply in the SUD, except with respect to (1) Planning Code definitions as specified in
4 subsection (e) below; (2) Planning Code sections adopted or amended in connection with this Special
5 Use District as follows: Section 105 (Zoning Maps), Section 201 (Mission Rock Mixed Use District),
6 Section 249.80 (Mission Rock Special Use District), Section 291 (Mission Rock Height and Bulk
7 District;) and Section 901 (Applicability of Article 9 Provisions and Other Provisions of the Planning
8 Code); (3) Planning Code sections adopted by ballot proposition prior to the effective date of the
9 ordinance (in Board of Supervisors File No. _____) adopting this SUD as follows, and only to the
10 extent that such provisions are applicable under the ballot proposition to development within the SUD:
11 sections of the Planning Code adopted or amended by Proposition M (November, 1986) (Sections
12 101.1, 164, and 320-325); Proposition K (June, 1984) (Section 295); and Proposition G (March, 2002)
13 (Sections 602.7 (recodified at 602) and 611; and (4) any other section of the Planning Code referenced
14 herein (but only to the extent and for the purposes stated herein). Sections of the Planning Code
15 adopted by ballot proposition that are limited geographically and do not apply to the SUD are
16 Proposition G (Small Business Protection Act) (November, 2006) (Section 303.1); and Proposition X
17 (Limitation on Conversion of Production, Distribution, and Repair Use, Institutional Community Use,
18 and Arts Activities Use) (November, 2016) (Section 202.8). In the event of a conflict between any
19 provisions of the Planning Code that are incorporated herein by reference pursuant to subsection
20 (d)(4) above and the Design Controls or this Section 249.80, this Section 249.80 and the Design
21 Controls shall control. Later amendments to the code sections referenced in this subsection as
22 applicable in the SUD shall apply where not conflict with this SUD, the DC or the DA.

23 (e) Definitions. If not explicitly superseded by definitions established in this SUD or in the
24 DC, the definitions in this Code shall apply. In addition to the specific definitions set forth elsewhere in
25 this Section 249.80, the following definitions shall govern interpretation of this Section:

1 **“Active Uses”** means Active Uses as defined and described in Chapter 1 of the Design Controls.

2 **“Applicant”** means the ground lessee, owner, or authorized agent of the owner or ground lessee of a
3 development parcel on the Project Site.

4 **“Block”** is a development Block as depicted on Figure 249.80-MR-1.

5 **“Building Standards”** means the standards applicable to Buildings and any associated privately-
6 owned open spaces within the Project Site as specified in subsection (g).

7 **“Commercial Uses”** means all Institutional Uses and Non-Retail Sales and Services, but excluding
8 Hospital, Commercial Storage, Wholesale Sales, and Wholesale Storage.

9 **“DDA”** means the Disposition and Development Agreement by and between the Port and Developer
10 regarding development of Vertical Improvements and Horizontal Improvements on the Project Site.

11 **“Executive Director”** means the Executive Director of the Port of San Francisco.

12 **“Horizontal Improvement”** means public capital facilities and infrastructure built or installed at the
13 Project Site. Horizontal Improvement include Shoreline Improvements, Public Space, Public ROWs,
14 and Utility Infrastructure, and exclude Site Preparation and Vertical Improvements, all as such terms
15 are more particularly defined in the DDA.

16 **“Major Modification”** means a deviation of 10% or more from any dimensional or numerical Standard
17 in the Design Controls or Building Standard in the SUD, except as limited by subsection (j)(1) below;
18 provided, however, that any such deviation from a Standard in Chapter 5 of the Design Controls shall
19 be deemed a minor modification. Major Modification also means a change to a standard that is non-
20 numeric but is absolute, such as locations of curb cuts.

21 **“Minor Modification”** means a deviation of (1) less than 10% from any dimensional or numerical
22 Standard in the Design Controls or Building Standard in the SUD, except as limited by subsection
23 (j)(1) below; or (2) from any non-numerical (other than non-numeric, absolute) or qualitative Standard
24 in the Design Controls.

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1 **"Other Uses"** means Community Recycling Collection Center, Open Recreation Area, Passive Outdoor
2 Recreation, Public Transportation Facility, Utility Installation, and Wireless Telecommunications
3 Facility.

4 **"Parking Garage"** means either a Private Parking Garage or Public Parking Garage as further
5 described in subsection 249.80(g)(7) and the Design Controls.

6 **"Phase"** means a phase of development as defined in the DDA.

7 **"Production Uses"** means all Agricultural, Industrial, and Non-Retail Uses, but excluding Large Scale
8 Urban Agriculture; Automobile Wrecking; Food, Fiber and Beverage Processing 2; Hazardous Waste
9 Facility; Junk Yard; Power Plant; Shipyard; Storage Yard; Storage, Volatile Materials; Truck
10 Terminal; and all Non-Retail Automotive Uses.

11 **"Project Site"** means the Project Site for the Mission Rock development, as more particularly
12 described in the DDA.

13 **"Proposition D"** means the Mission Rock Affordable Housing, Parks, Jobs and Historic Preservation
14 Initiative, which San Francisco voters approved on November 3, 2015.

15 **"Residential Uses"** means Residential Uses as defined in Section 102, including Single Room
16 Occupancy and Student Housing and excluding any residential component of an Institutional Use.

17 **"Retail Uses"** means all Retail Sales and Services, and Retail Entertainment, and Arts and Recreation
18 Uses; but excluding Adult Business, Motel, Fringe Financial Services, Self-Storage, Livery Stable, and
19 Sports Stadium. Retail Automotive Uses are not permitted.

20 **"Standard"** means the category of design control described in the Chapter Summary to the Design
21 Controls.

22 **"Vertical DDA"** means a Vertical Disposition and Development Agreement between the Port and an
23 Applicant that sets forth contractual terms and conditions governing the Applicant's development of
24 Vertical Improvements at the Project Site.

1 **“Vertical Improvements” means new construction of a Building or the rehabilitation of Pier 48 at the**
2 **Project Site, and any later expansion or major alteration of or addition to a previously approved**
3 **Building at the Project Site.**

4 **(f) Uses.**

5 **(1) Mission Rock Mixed Use District Zoning Designation. The Mission Rock**
6 **Mixed Use District (MR-MU) is the zoning designation for the Mission Rock site and is co-terminus**
7 **with the boundaries of the Mission Rock Special Use District. This Special Use District Section 249.80**
8 **and other Sections referenced herein establish all zoning controls for the MR-MU district.**

9 **(2) Permitted Uses. Uses principally permitted within the SUD are set forth in**
10 **Table 249.80-MR1. Figure 249.80-MR1 and Table 249.80-MR1 identify each development block and a**
11 **primary land use designation for that development block. Additional requirements that apply to**
12 **certain primary land use designations in a block, and the clarification of permitted uses on publicly-**
13 **accessible open spaces described in the Design Controls are set forth in subsections (f)(2)(A) through**
14 **(D) below. Permitted uses at the ground floor are set forth in subsection (f)(3) below. All uses are**
15 **allowed in this SUD unless otherwise explicitly prohibited as identified in this subsection (f). The intent**
16 **of this subsection is that the Planning Director, or the Executive Director in the case of temporary and**
17 **interim uses, interpret permitted uses broadly to allow for uses that may not currently exist or be**
18 **identified in this subsection (f) but that are consistent with the classes of expressly identified permitted**
19 **uses. The major categories of permitted uses in the SUD as set forth in Table 249.80-MR1 are:**
20 **Residential, Production (which includes Industrial and Agricultural uses), Commercial, Retail, Parking**
21 **Garage and Other Uses.**

22 **(A) On Blocks primarily designated as Residential Mixed Use, at least 60%**
23 **of the gross square footage of the Buildings above the ground floor in each Block shall consist of**
24 **Residential Uses. The minimum 60% requirement shall be considered cumulatively on each subject**
25 **Block, starting with the first Vertical Improvement on the Block. No Vertical Improvement or change**

1 of use may be approved if it causes the gross square footage on the Block as a whole, considering all
2 existing and approved uses on the Block, to fall below 60% Residential Uses.

3 (B) On Blocks primarily designated as Commercial Mixed Use, at least 60%
4 of the gross square footage of the Buildings above the ground floor in each Block shall consist of Non-
5 Residential Uses. The minimum 60% requirement shall be considered cumulatively on each subject
6 Block, starting with the first Vertical Improvement on the Block. No Vertical Improvement or change
7 of use may be approved if it causes the gross square footage on the Block as a whole, considering all
8 existing and approved uses on the Block, to fall below 60% Non-Residential Uses.

9 (C) Hotel Uses are considered Retail Uses in this SUD and in the DC except
10 where otherwise specified therein, and in the DA for fee calculation purposes; provided however, that
11 for purposes of permitted land use location only, Hotels shall (i) be allowed in any location in which
12 Residential Uses are permitted; and (ii) count as Residential Uses for purposes of the 60% calculation
13 in this subsection (f)(2)(A). The Design Controls contain a more detailed description of design and
14 other controls that govern Hotel Uses.

15 (D) The principally permitted use on publicly accessible open spaces as
16 described in the Design Controls is Open Space/public access, subject to continuing maritime use on
17 the south side of the apron and consistency of public access therewith, all as set forth in the DA and the
18 Design Controls.

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Table 249.80-MR1 Land Uses(1)

<u>Mission Rock Parcels (as shown in Figure 249.80- MR2)</u>	<u>Residential Uses</u>	<u>Production Uses(2)</u>	<u>Commercial Uses</u>	<u>Retail Uses</u>	<u>Parking Garage(3)</u>	<u>Other Uses</u>
<u>A (Residential Mixed Use)(4)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>B (Commercial Mixed Use)(5)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>C (Commercial Mixed Use)(5)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>D1 (Residential Mixed Use)(4)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>D2</u>	<u>NP</u>	<u>NP</u>	<u>NP</u>	<u>NP</u>	<u>P</u>	<u>NP</u>
<u>E (Commercial Mixed Use)(5)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>F (Residential Mixed Use)(4)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>G (Commercial Mixed Use)(5)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>H (Flex Commercial or Residential Mixed Use)(6)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>I (Flex Commercial or Residential Mixed Use)(6)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>J (Flex Commercial or Residential Mixed Use)(6)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>K (Residential Mixed Use)(4)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>NP</u>	<u>P</u>
<u>Pier 48 (7)</u>	<u>NP</u>	<u>P</u>	<u>NP</u>	<u>NP</u>	<u>NP</u>	<u>P</u>

P=Permitted.

NP=Not Permitted.

Notes:

(1) See Table 249.XX-MR2 and Figure 249.XX-MR2 for Ground Floor Controls. This Table 249.XX-MR1 applies to uses above the ground floor.

(2) The following uses are permitted in areas designated for Production Uses only as accessory to Production Uses in accordance with subsection 249.80 (f)(7): Heavy Manufacturing 1 (woodworking mill only), Heavy Manufacturing 2 (rendering or reduction of fat, bones, or other animal material only), Heavy Manufacturing 3 (candles (from tallow), dye, enamel, lacquer, perfume, printing ink, refuse mash, refuse grain, or soap only), Wholesale Sales, and Wholesale Storage.

(3) See Section 249.80(g)(7) for Building Standards that apply to off-street parking. Automotive Repair and Automotive Wash are permitted as accessory to all Parking Garages.

(4) See Section 249.80(f)(2)(A) for additional requirements that apply on Residential Mixed Use Blocks. Hotel uses (up to 300 rooms) are permitted in any location in which Residential Uses are permitted. See Section 249.80(f)(2)(C) for additional requirements that apply to Hotels.

(5) See Section 249.80(f)(2)(B) for additional requirements that apply to Commercial Mixed Use Blocks.

(6) A Flex Block can be developed as either a Commercial Mixed Use or Residential Mixed Use Block.

(7) District-Serving Utility Installation as defined in the Design Controls is the only Other Use permitted; in addition, Active Uses are permitted.

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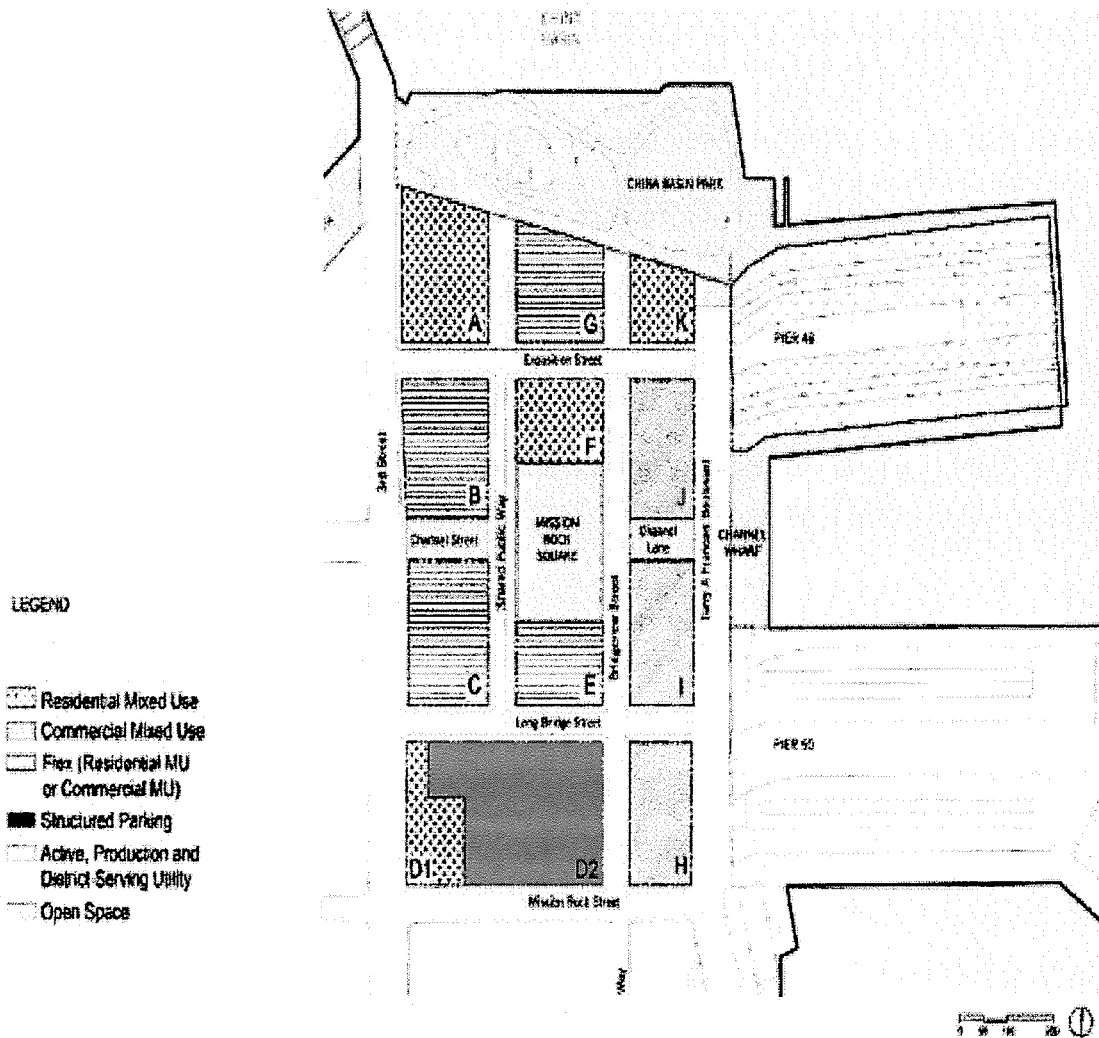
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Figure 249.80-MR1 Land Use Designation by Block



(3) Ground Floor Frontage Zones. *Ground Floor Frontage Zones are required as indicated in Table 249.80-MR2 and Figure 249.80-MR2 below and include permitted land uses and minimum frontage depths.*

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Table 249.80-MR2 – Ground Floor Frontage Zone Controls(1)

<u>Ground Floor Frontage Zone</u>	<u>Allowed Ground Floor Uses</u>	<u>Minimum Frontage Depth</u>
<u>High Retail Zone</u>	<u>Retail Use</u>	<u>40 feet</u>
<u>Parkfront Zone</u>	<u>Retail Use</u>	<u>40 feet</u>
<u>Working Waterfront Zone</u>	<u>Production Use, Retail Use</u>	<u>40 feet</u>
<u>Neighborhood Street Zone:</u> <u>Residential</u>	<u>Residential Use</u>	<u>20 feet</u>
<u>Neighborhood Street Zone: Non-</u> <u>Residential</u>	<u>Retail Use, Production Use,</u> <u>other uses that qualify as Active</u> <u>Uses</u> <u>Parking (only on Parcel D2 and</u> <u>as otherwise allowed in</u> <u>DA/DDA). Active Uses not</u> <u>required on the parking garage</u> <u>frontages.</u>	<u>20 feet</u>

Notes:

(1) See Design Controls Table 5.5 for more detailed controls that govern these zones.

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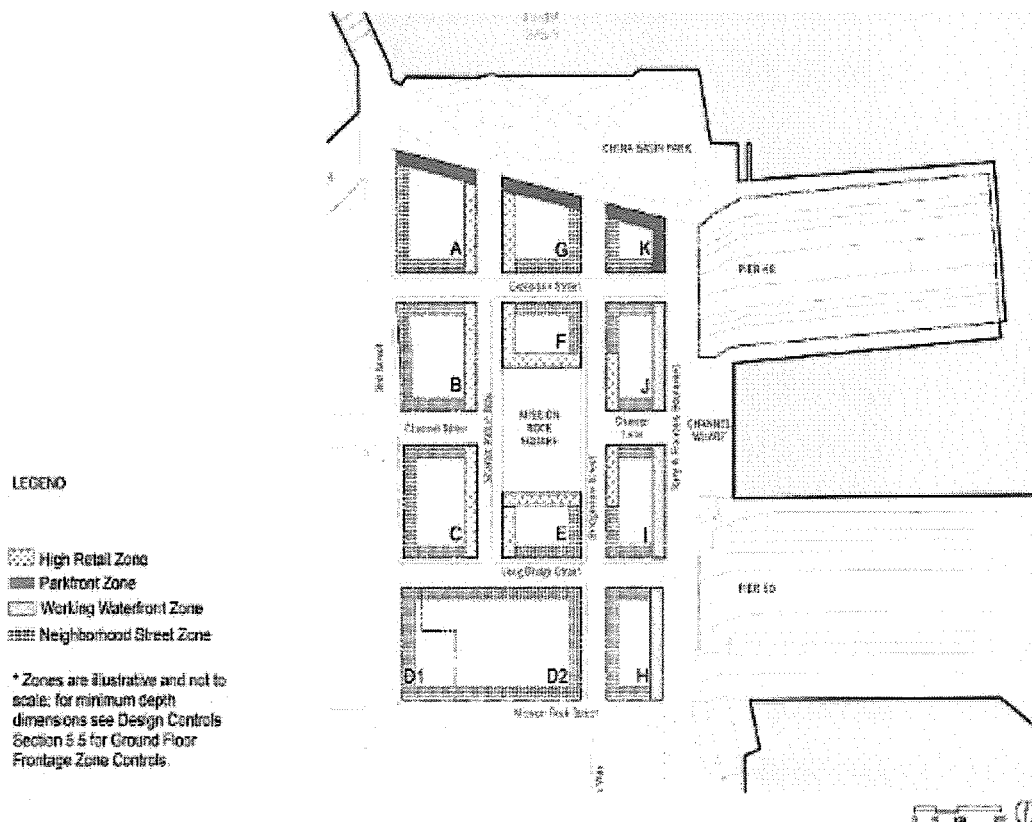
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Figure 249.80-MR2 Frontage Zones



(4) **Temporary Uses.** *The Executive Director may approve without a public hearing any of the following uses ("Temporary Uses") for a period not to exceed 90 days, or for such longer period of time as may be approved by the Executive Director under any Port lease or license: booths for charitable, patriotic or welfare purposes; markets; exhibitions, festivals, circuses, musical and theatrical performances and other forms of live entertainment including setup/load-in and demobilization/load-out; athletic events; open-air sales of agriculturally-produced seasonal decorations such as Christmas trees and Halloween pumpkins; meetings rooms and event staging; mobile food and temporary retail establishments; and automobile and truck parking and loading*

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1 associated with any authorized temporary use. The Executive Director may authorize recurring
2 Temporary Uses (such as a weekly farmers market or concert series) under a single authorization.

3 (5) **Interim Uses.** The Executive Director may approve any interim use listed in this
4 section without a public hearing for a period not to exceed five years if the Executive Director finds
5 that such use will not impede orderly development consistent with this Section 249.80, the Design
6 Controls, and the DA. Interim uses under this Section are limited to uses at Pier 48 and the existing
7 unimproved areas, open space and surface parking lots in the SUD area. Any interim use listed in this
8 section that is integral to development under the DA, DDA or Vertical DDA and permitted by the Port
9 under any Port lease or license shall not require separate authorization as an interim or temporary use
10 (for example, uses incidental to environmental clean-up, demolition and construction, storage, and
11 automobile and truck parking and loading related to construction activities.) Any authorization
12 granted pursuant to this subsection (f)(5) shall not exempt the Applicant from obtaining any other
13 permit required by law. Additional time for such uses may be authorized upon a new application.
14 Interim uses that the Executive Director may authorize include, but are not limited to the following or
15 similar activities:

16 (A) **Retail activities, which may include the on-site assembly, production or**
17 sale of food, beverages and goods, the operation of restaurants or other retail food service in
18 temporary structures, outdoor seating, food trucks, and food carts;

19 (B) **Temporary art installations, exhibits, and sales;**

20 (C) **Recreational facilities and uses (such as play and climbing structures and**
21 outdoor fitness classes);

22 (D) **Motor vehicle and bicycle parking;**

23 (E) **On-site assembly and production of goods in enclosed or unenclosed**
24 temporary structures;

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1 (F) Educational activities, including but not limited to after-school day camp
2 and associated activities;

3 (G) Site management service, administrative functions and customer
4 amenities and associated loading;

5 (H) Rental or sales offices incidental to new development; and,

6 (I) Entertainment uses, both unenclosed and enclosed, which may include
7 temporary structures to accommodate stages, seating and support facilities for patrons and operations.

8 (6) Nonconforming Uses. The Executive Director may allow the reasonable
9 continuance, modification, or expansion of existing uses and structures that do not comply with this
10 Section or the Design Controls under the terms and conditions set forth in the DDA.

11 (7) Accessory Uses. Accessory uses are governed by the provisions of Planning
12 Code Section 204 that apply to C Districts, with the following modifications:

13 (A) Table 249.80-MR1 identifies certain Production Uses and two non-Retail
14 Sales and Service Uses (Wholesale Sales and Storage, Wholesale) that are permitted in the SUD only
15 as accessory to another principally permitted Production Use. Such accessory uses must be related to
16 the underlying principal Production Use and are limited to up to 33% of the total floor area occupied
17 by such principal Production Use.

18 (B) In parking garages, car washing and minor automotive maintenance and
19 repair activities shall be permitted as accessory uses.

20 (g) **Building Standards.**

21 (1) Density of Dwelling Units. There shall be no dwelling unit density limit within
22 the SUD.

23 (2) Floor Area Ratio. There shall be no floor area ratio limit within the SUD.

24 (3) Lot Coverage and Rear Yard. There shall be no lot coverage or rear yard
25 requirements in the SUD.

1 (4) **Usable Open Space Requirements for Dwelling Units.** *In addition to any*
2 *publicly-accessible open spaces described in the Design Controls, a minimum of 36 square feet of open*
3 *space if private, or 48 square feet of open space if common, shall be provided for each dwelling unit.*
4 *Such open space may be on the ground and on decks, balconies, porches or other facilities and shall be*
5 *provided on the same development block as the unit to be served. The standards for open spaces shall*
6 *be governed by the Design Controls.*

7 (5) **Dwelling Unit Exposure.** *All dwelling units shall face onto a public or private*
8 *right-of-way, or onto an open area, defined as:*

9 (A) *A public street, publicly accessible alley, or mid-block passage (public or*
10 *private) at least 20 feet in width.*

11 (B) *An exterior courtyard or terrace that is open to a public street, public*
12 *alley, mid-block passage (public or private), or public open space and at least 25 feet in width.*

13 (C) *An interior courtyard at least 25 feet in width, with adjacent walls up to a*
14 *maximum height of 55 feet, or 40 feet in width with adjacent walls 55 feet or higher.*

15 (D) *Undeveloped airspace over rooftops of either adjacent Buildings within*
16 *the SUD or a Building on the same parcel where such Building has been built to the maximum height*
17 *allowed pursuant to Section 291.*

18 (6) **Building Height and Bulk.** *Building height and bulk limits and controls within*
19 *the SUD shall be as set forth in Planning Code Section 291.*

20 (7) **Off-Street Parking.** *Off-street automobile parking shall not be required for any*
21 *use in this SUD. At Project buildout, total parking spaces in the SUD shall not exceed 3,100. Up to*
22 *3,000 parking spaces are permitted in the Parcel D2 parking garage or a combination of Parcel D2*
23 *parking garage and a below grade parking garage beneath Mission Rock Square. A maximum of 100*
24 *additional spaces in aggregate are permitted in other Vertical Improvements in the SUD. There shall*
25 *be a minimum of 31 car share spaces at buildout of the SUD, located in any combination of the parking*

1 garage on Parcel D2, underground parking garage beneath Mission Rock Square and other Vertical
2 Improvements in the SUD area. Phasing and amounts of parking for each Vertical Improvement shall
3 be governed by the DDA.

4 (8) **Off-Street Loading.** Off-street loading spaces are not required in the SUD, and
5 loading shall be governed by Design Controls Chapters 4 and 5.

6 (9) **Bicycle Parking; Showers and Lockers.** Bicycle parking, and the provision of
7 showers and lockers shall be governed by Planning Code Sections 155.1-155.4 provided, however,
8 that:

9 (A) the number of Class I bicycle parking spaces shall be provided at the higher
10 of the ratios set forth in Planning Code Section 155.2 or the following: Residential: one space per
11 dwelling unit; Commercial and Production Uses: one space per 2,500 square feet of Commercial or
12 Production Use; and Retail: one space per 3,750 square feet of Retail Use;

13 (B) Class II bicycle parking spaces shall not be required pursuant to Section
14 155.2 but shall be provided at the ratios and based on the criteria and locations set forth in the
15 Transportation Demand Management requirements in the DDA on a Phase basis pursuant to the DDA
16 in connection with Horizontal Improvements; and,

17 (C) in lieu of the Zoning Administrator waiver process, the Minor Modification
18 and Major Modification process in subsection (m) below shall apply.

19 (10) **Signage.** Signage in the publicly accessible open spaces described in subsection
20 (f)(2) and along public realm streets and rights-of-way identified in the Design Controls Chapters 2
21 through 4, shall be subject to public realm signage standards and guidelines to be established as part
22 of the first Phase submittal, as set forth in the DA and DDA. Signage for Buildings, including parking
23 garages, in the SUD shall be governed by the provisions of Planning Code Article 6 that apply in the
24 C-3 District. In lieu of the permit process described in Planning Code Section 604, all signage in the
25 SUD shall be reviewed and approved by the Port in accordance with the DA and DDA.

1 (11) **Transportation Demand Management.** Transportation Demand Management
2 requirements shall be governed by the DA and DDA.

3 (h) **Zoning Procedures.**

4 (1) **Institutional Master Plans.** Each Post-Secondary Educational Institutional use,
5 including Group Housing affiliated with and operated by any such institution, shall comply with the
6 applicable provisions of Planning Code Section 304.5, following the requirements and procedures for
7 such uses in C-3 Districts.

8 (2) **Removal of Dwelling Units.** The removal of Dwelling Units in the SUD shall be
9 governed by Planning Code Section 317, in accordance with the procedures of Section 303 of this
10 Code.

11 (3) **Health Care Services Master Plan.** Any change of use to a Medical Use that
12 would occupy 10,000 gross sf of floor area, or any expansion of an existing Medical Use that would
13 add at least 5,000 gross square feet of floor area, is subject to Planning Code Section 342.

14 (4) **Places of Entertainment.** Planning Code Section 314 (Places of Entertainment)
15 shall not apply in the SUD. In lieu of this requirement, through the DDA the Port will address
16 disclosures to residents regarding the proximity of Places of Entertainment to the Residential Uses.

17 (5) **Good Neighbor Policies.** Planning Code Section 803.5 (Good Neighbor
18 Policies) shall not apply in the SUD. The Port will enforce substantially similar policies through the
19 DDA and Vertical DDA.

20 (6) **Retail Leasing Program.** Planning Code Section 303.1 (Formula Retail) shall
21 not apply in the SUD. In lieu of this requirement, through the DDA the Port will require a
22 Merchandising Program as part of each Phase submittal. Each Vertical Improvement will be required
23 to be consistent with the Merchandising Program, which will include standards and guidelines that,
24 among other things, provide for a range of retail types and an appropriate mix of local, regional and
25 national retail tenants.

1 (i) **Processing and Impact Fees.** Processing and impact fees, including inclusionary
2 housing requirements, for development in the SUD are governed by the DDA and DA.

3 (j) **Modification to Building Standards.** Modification of the Building Standards may be
4 approved as authorized by this subsection (j) on a project-by-project basis according to the procedures
5 of subsection (m).

6 (1) **No Modifications Permitted.** Major and Minor Modifications under subsection
7 (m) are not permitted for:

8 (A) maximum height and bulk established in Section 291;

9 (B) maximum off-street parking amounts established in subsection (g);

10 (C) minimum Class 1 bicycle parking quantities established in subsection (g); or,

11 (D) land use requirements established in subsections (f).

12 Modifications to other Building Standards and provisions of this SUD are governed by subsection (m).

13 (2) **Minor Modifications.** The Planning Director may approve a Minor
14 Modification administratively according to the procedures described in subsection (m).

15 (3) **Major Modifications.** The Planning Commission shall hear any application for
16 a Major Modification according to the procedures described in subsection (m).

17 (k) **Review and Approval of Development Phases.** The Port must approve a Phase
18 application in accordance with the DDA for the Phase that includes the applicable Vertical
19 Improvements before Planning may approve an application for design review under this Section
20 249.80.

21 (l) **Review and Approval of Open Space.** The Port has exclusive jurisdiction over the
22 review of proposed publicly-owned open space and right-of-way (including streetscape) within the
23 SUD. The Port's exclusive jurisdiction review authority includes determinations of consistency with
24 the Design Controls, including program, design, and the inclusion of any associated or ancillary
25

1 structures. Any privately-owned, publicly-accessible open space on any of the development parcels
2 shall be reviewed and approved by Planning as part of the associated Vertical Improvement.

3 (m) **Design Review and Approval of Vertical Improvements.**

4 (1) **Applications.** Applications for design review are required for all Vertical
5 Improvements prior to issuance of site or building permits. An Applicant shall file for design review at
6 the Port for the property for which the design review is sought, with a copy delivered simultaneously to
7 the Planning Department. Each application shall include the documents and materials necessary to
8 determine consistency with this Section and the Design Controls, including site plans, sections,
9 elevations, renderings, landscape plans, and exterior material samples to illustrate the overall concept
10 design of the proposed Buildings. If an Applicant requests a Major or Minor Modification, the
11 application shall contain descriptive material such as narrative or supporting imagery, if appropriate,
12 that describes how the proposed Vertical Improvement meets the intent of the SUD and Design
13 Controls and provides architectural treatment and public benefit that are equivalent or superior to
14 strict compliance with the Standards or Building Standards.

15 (2) **Completeness.** Port and Planning staff shall review the application for
16 completeness and jointly advise the Applicant in writing of any deficiencies within 30 days after receipt
17 of the application or, if applicable, within 15 days after receipt of any supplemental information
18 requested pursuant to this Section. Completeness review by Port staff will also include a review for
19 compliance with the requirements of the applicable Vertical DDA. If staff from either Department does
20 not advise the Applicant of any deficiencies within the 30 day review period, the application shall be
21 deemed complete.

22 (3) **Staff Design Review for Buildings.** Each application for Vertical Improvements
23 shall be subject to the administrative design review process set forth in this subsection (m)(3). Upon a
24 determination of completeness (or deemed completeness), staff shall conduct design review and
25 prepare a joint staff report determining compliance of the Vertical Improvement with this Section

1 249.80 and the Design Controls, including a recommendation regarding any modifications sought.
2 Such staff report shall be delivered to the Applicant and any third parties requesting notice in writing,
3 shall be kept on file, and posted on the Department's website for public review, within 60 days after the
4 determination of completeness (or deemed completeness). If staff determines that the Vertical
5 Improvement is not compliant with the Design Controls and this Section 249.80, it will notify the
6 Applicant within the applicable 60-day period, in which case the Applicant may resubmit the
7 application and the requirements under this subsection (m)(3) shall apply anew, except that the time for
8 staff review shall be 30 days.

9 (4) **Port Review for Pier 48.** Port staff shall review the schematic design for Pier 48
10 in accordance with the timeframes and procedures set forth in this subsection (m) above or as
11 otherwise set forth in the DDA, except that the Port will not refer the application to the Planning
12 Department. The application will be processed by Port staff, and actions designated for the Planning
13 Director in subsection (m) will be undertaken by the Port Director. Port staff review shall include a
14 determination of consistency with the Design Controls and applicable mitigation measures, including
15 compliance with Secretary of the Interior's Standards for the Treatment of Historic Properties.

16 (5) **Approvals and Public Hearings for New Development.**

17 (A) **New Construction.** Within 10 days after the delivery and posting of the
18 staff report in accordance with subsection (m)(3), the Planning Director shall approve or disapprove
19 the Vertical Improvement design and any Minor Modifications based on its compliance with this
20 Section 249.80 and the Design Controls and the findings and recommendations of the staff report. If
21 the Vertical Improvement is consistent with the numeric Building Standards set forth in this Section
22 249.80 and the Standards in Design Controls, then the Planning Director's discretion to approve or
23 disapprove the Vertical Improvement shall be limited to the Vertical Improvement's consistency with
24 the non-numeric elements of the Design Controls or the General Plan. Notwithstanding any other
25 provisions of this Section 249.80, the Planning Director may refer an application that proposes

1 modification to the non-numeric elements of the Design Controls to the Planning Commission, even if
2 not otherwise classified as a Major Modification, if the Planning Director determines that the proposed
3 modification does not meet the intent of the Standards in the Design Controls.

4 (B) **Vertical Improvements Seeking Major Modifications.** This subsection
5 applies to Vertical Improvements seeking one or more Major Modifications and any Vertical
6 Improvements seeking Minor Modifications that the Planning Director, in his or her sole discretion,
7 refers as a Major Modification. Upon delivery and posting of the staff report under subsection (m)(3),
8 the Planning Commission shall calendar the item for a public hearing at the next regularly scheduled
9 Planning Commission meeting (or a special meeting, at the Planning Commission's discretion), subject
10 to any required noticing. The Planning Commission shall consider all comments from the public, the
11 recommendations of the consolidated Port/Planning staff report, and the recommendations of the
12 Planning Director in making a decision to approve or disapprove the Vertical Improvement design,
13 including the granting of any Major or Minor Modifications.

14 (C) **Notice of Hearings.** Notice of hearings required by subsection (m)(5)(B)
15 above shall be provided as follows:

16 (i) by mail not less than 10 days prior to the date of the hearing to
17 the Vertical Improvement Applicant, to property owners within 300 feet of the exterior boundaries of
18 the property that is the subject of the application, using for this purpose the names and addresses as
19 shown on the citywide assessment roll in the Office of the Tax Collector, and to any person who has
20 requested such notice; and

21 (ii) by posting on the subject property at least 10 days prior to the
22 date of the hearing.

23 (n) **Building Permit Approval.** The Chief Harbor Engineer shall review each site/building
24 permit application for consistency with the authorizations granted pursuant to this Section. The Chief

1 Harbor Engineer shall not issue any site/building permit for work within the SUD that is inconsistent
2 with such authorization.

3 (o) **Change of Use.** Before issuing any building permit or other permit or license, or for a
4 permit of Occupancy that would authorize a new use, a change of use or maintenance of an existing use
5 of any land, Building or Structure, the Chief Harbor Engineer shall refer the matter to the Planning
6 Department for a consistency determination within 15 days of referral. If the determination is not
7 provided within 15 days, then the submittal shall be deemed consistent.

8 (p) **Discretionary Review.** No requests for discretionary review shall be accepted by the
9 Planning Department or heard by the Planning Commission for any Buildings or Structures in the
10 SUD.

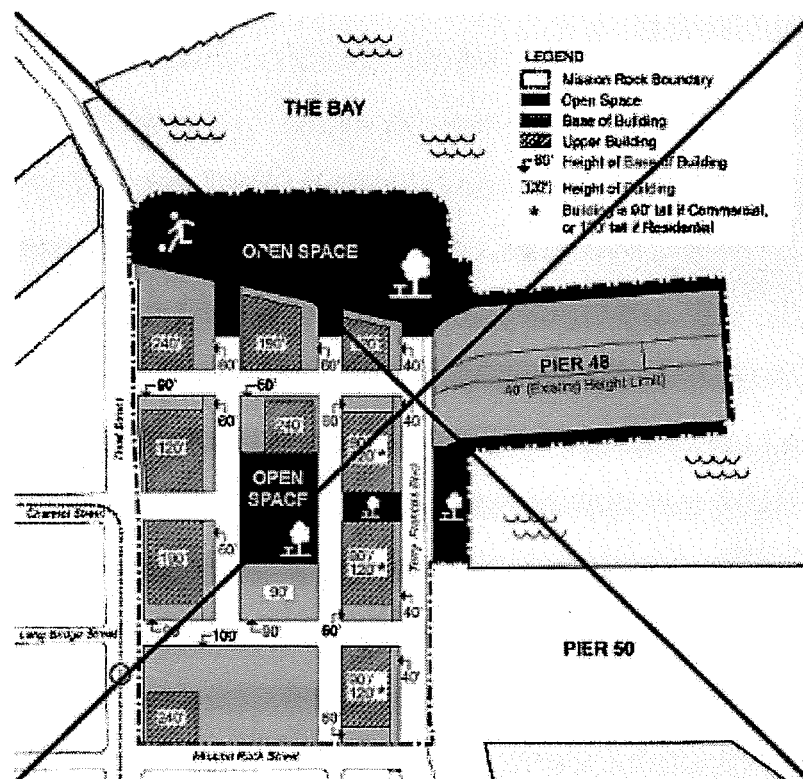
11 **SEC. 291. MISSION ROCK HEIGHT AND BULK DISTRICT.**

12 (a) **Purpose.** The purpose of the Mission Rock Height and Bulk District is to enable
13 development of Mission Rock as a mixed use, transit-oriented neighborhood, with significant
14 open space, public access and affordable housing. The property within the District is *planned*
15 ~~to be~~ divided into a number of separate blocks and varying height limits shall apply within such
16 blocks as provided below. Design controls shall be adopted for the District to guide the design
17 of improvements within the established height limits.

18 In approving the "Mission Rock Affordable Housing, Park, Jobs and Historic Preservation
19 Initiative" ("Proposition D") on November 3, 2015, the voters of the City and County of San Francisco
20 established certain limits and parameters for the height and bulk of buildings at Mission Rock. These
21 parameters are laid out in subsections (a)(1) through (5) below. The detailed height and bulk controls
22 contained in subsections (b) through (g), adopted subsequent to approval of Proposition D, as
23 described in the Mission Rock Special Use District in Section 249.80, are consistent with and
24 implement these voter-established limitations and requirements. Mission Rock Design Controls (Design
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Controls), adopted by the Planning Commission and the Port Commission subsequent to approval of Proposition D, are incorporated by reference in Section 249.80.

(b) Height Limits. The height limits applicable to the currently planned blocks within the Mission Rock Height and Bulk District shall be as shown on the graphic below.



The boundaries of the blocks and the height limits applicable within such blocks as shown in the graphic above in subsection (b) below may only be modified in a manner consistent with all of the requirements set forth below in the following subsections (a)(1) through (5), which requirements may not be amended without voter approval:

(1) **Open Space.** Approximately 8 acres of open space shall be provided within the District, and in these open space areas any buildings shall be limited in height to a

1 single story, consistent with the height and bulk designation of OS (Open Space) in effect
2 prior to the adoption of this Section 291 and the provisions of Planning Code Section 916.

3 (2) **Pier 48.** Pier 48, totaling approximately 5 acres (exclusive of the apron
4 which shall remain as open space), shall be subject to a height limit of 40 feet, ~~consistent with~~
5 ~~the prior height~~ and bulk designation of 40-X. No height limit in excess of 40 feet shall be
6 established in the District within 100 feet landward of the shoreline of San Francisco Bay,
7 measured from the mean high tide line as of the adoption of this Section 291.

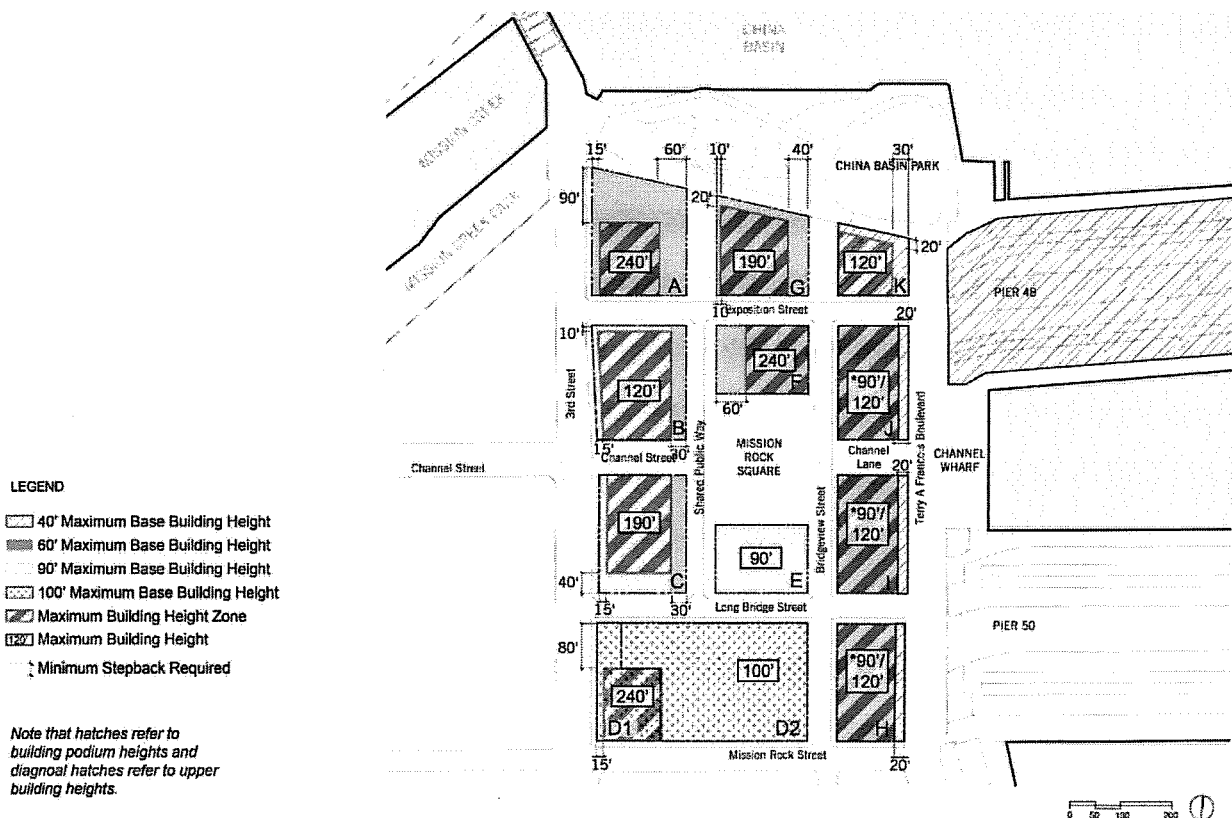
8 (3) **Lots Fronting Terry A. Francois Boulevard.** Building frontages along
9 the west side of the reconfigured Terry A. Francois Boulevard shall be no more than 40 feet in
10 height, with height in excess of 40 feet stepping back from the street in accordance with the
11 Design Controls ~~design controls to be adopted~~. The maximum height of buildings on blocks
12 fronting on the west side of reconfigured Terry A. Francois Boulevard shall be 120 feet,
13 provided that floor area above 90 feet shall be used exclusively for residential uses and uses
14 accessory thereto and/or restaurant uses.

15 (4) **Elsewhere in the District.** Three buildings within the District shall be
16 permitted to exceed a height of 190 feet; provided that (i) occupied floor area above 190 feet
17 shall be used exclusively for residential uses and uses accessory thereto and/or restaurant
18 uses, (ii) the maximum height of such buildings shall be 240 feet, and (iii) the ~~design controls~~
19 Design Controls are in effect to ensure slender towers, including a requirement that typical
20 floors above a height of 190 feet do not exceed 12,000 square feet of gross floor area, with
21 minor variation permitted for articulation. Consequently, the typical floors above 190 feet in the
22 three buildings combined shall comprise no more than about 3% of the approximately 28 acre
23 area of the Mission Rock Height and Bulk District. The height limit on all other blocks within
24 the Mission Rock Height and Bulk District shall not exceed 190 feet or such lower height limit
25 as may be required in accordance with the provisions of paragraphs (1) through (3) above.

(5) **Maximum Area Subject to Increased Height Limit.** As compared to the height limits in effect prior to the adoption of this Section 291, the height limit shall be increased on a maximum of 10 acres of the approximately 28 acre Mission Rock Height and Bulk District. The 18 acres on which the height limit is not increased shall include: (i) areas to be devoted to open space (approximately 8 acres), (ii) the circulation network for pedestrians, bicycles and vehicles (approximately 5 acres), and (iii) Pier 48 (approximately 5 acres).

(b) Height Limits. The height limits applicable to the blocks within the Mission Rock Height and Bulk District are as shown on the graphic below.

Figure 291-MR1, Maximum Height and Bulk Plan



1 (c) **Height and Bulk Measurement.** *Height and Bulk shall be measured and regulated as*
2 *provided in this Section 291 and the Design Controls and not as provided in Planning Code Article 2.5.*
3 *Maximum building heights shall be measured from the site datum, up to the highest point of the finished*
4 *roof in the case of a flat roof, and up to the average height or the rise in the case of a pitched or*
5 *stepped roof, or similarly sculptured roof form. Maximum Base Building heights shall be measured*
6 *from site datum to the highest point on the finished roof of the based building in the case of a flat roof,*
7 *and the average height of the rise in the case of a pitched or stepped roof, or similarly sculptured roof*
8 *form of the Base Building.*

9 (d) **Building Envelopes.** *Building envelopes shall consist of the Base Building and the*
10 *Upper Building, as illustrated in Figure 291-MR2, Components of the Building Envelope. Upper*
11 *building massing must be located within the hatched zones and setbacks are required above Base*
12 *Buildings, both as indicated on Figure 291-MR1, Maximum Height and Bulk Plan.*

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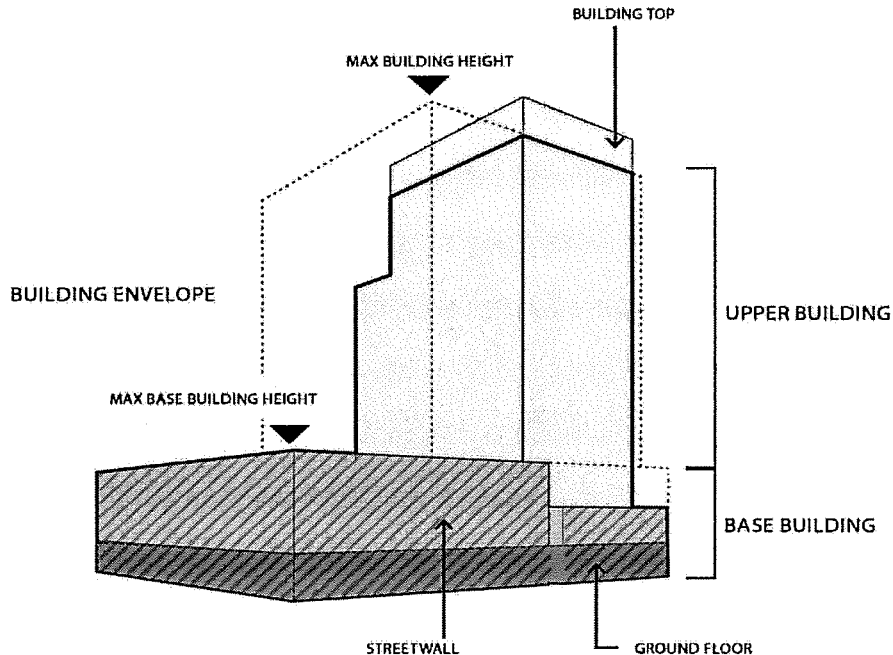
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Figure 291-MR2. Components of the Building Envelope



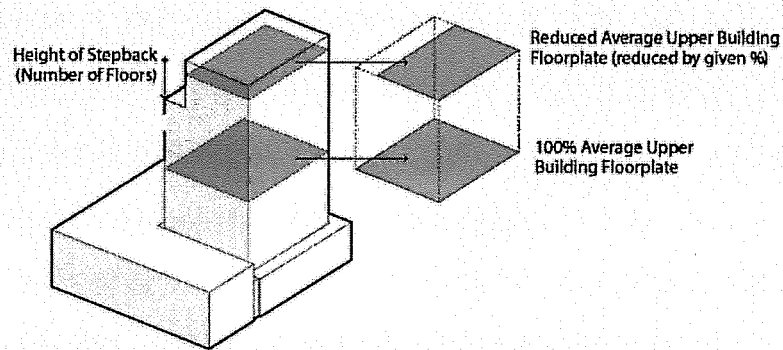
(e) Upper Building Tops. *The tops of Upper Buildings may extend up to 20 feet vertically above the maximum permitted building height, except on Block F, where the building may extend up to 40 feet vertically above the maximum permitted building height. In both cases, the extension is allowed only for non-occupied architectural features.*

(f) Rooftop Elements. *The following rooftop elements may extend beyond the maximum permitted building height as specified below, provided that in no event shall the maximum height in subsection (e) be exceeded: mechanical enclosures, and sustainable infrastructure such as photovoltaic panels, windmills, or fog catchers (up to 20 feet in height) and greenhouses (up to 12 feet in height). On the Base Building, rooftop elements must step back at a minimum ratio of 1.2 feet horizontally from the streetwall for every foot that they exceed the maximum permitted height limit. On*

the Upper Building, rooftop elements must be screened or enclosed within the building top. Railings, planters and visually permeable building elements no greater than 42 inches above the roof are exempt from step-back requirements.

(g) Upper Building Floorplate Reduction and Bulk Controls. *For buildings taller than 160 feet, bulk floorplate reduction and controls shall be required in accordance with Figure 291-MR3 and Table 291-MR1 as follows:*

Figure 291-MR3. Floorplate Reduction



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Table 291-MR1 – Upper Building Bulk Controls

<u>Block</u>	<u>Primary Land Use</u>	<u>Upper Building Max Plan Dimension</u>	<u>Upper Building Max Diagonal Dimension</u>	<u>Height of Building Top</u>	<u>Upper Building Max Average Floorplate</u>	<u>% Reduction of Max Average Floorplate</u>	<u>Height of Stepback</u>
<u>Block A</u>	<u>Residential</u>	<u>140 feet</u>	<u>160 feet</u>	<u>20 feet</u>	<u>11,001-12,000</u>	<u>25%</u>	<u>Uppermost 5 floors</u>
					<u>11,000 square feet or less</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block B</u>	<u>Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>25,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block C</u>	<u>Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>20,000 square feet</u>	<u>10%</u>	<u>Uppermost 2 floors</u>
<u>Block D</u>	<u>Residential</u>	<u>140 feet</u>	<u>160 feet</u>	<u>20 feet</u>	<u>12,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block E</u>	<u>Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>NA</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block F</u>	<u>Residential</u>	<u>140 feet</u>	<u>160 feet</u>	<u>40 feet</u>	<u>11,001 - 12,000 square feet</u>	<u>25%</u>	<u>Uppermost 5 floors</u>
					<u>11,000 square feet or less</u>	<u>None Required</u>	<u>Not Applicable</u>

<u>Block G</u>	<u>Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>20,000 square feet</u>	<u>10%</u>	<u>Uppermost 2 floors</u>
<u>Block H (flex)</u>	<u>If Residential</u>	<u>115 feet</u>	<u>150 feet</u>	<u>20 feet</u>	<u>10,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
	<u>If Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>20,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block I (flex)</u>	<u>If Residential</u>	<u>115 feet</u>	<u>150 feet</u>	<u>20 feet</u>	<u>10,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
	<u>If Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>20,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block J (flex)</u>	<u>If Residential</u>	<u>115 feet</u>	<u>150 feet</u>	<u>20 feet</u>	<u>10,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
	<u>If Commercial</u>	<u>NA</u>	<u>NA</u>	<u>20 feet</u>	<u>20,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>
<u>Block K</u>	<u>Residential</u>	<u>115 feet</u>	<u>150 feet</u>	<u>20 feet</u>	<u>10,000 square feet</u>	<u>None Required</u>	<u>Not Applicable</u>

SEC. 901. SCOPE AND PURPOSE OF ARTICLE 9.

(a) **Applicability of Article 9 Provisions and Provisions of Other Parts of the Planning Code.** This Article is adopted specifically for Mission Bay Use Districts. Notwithstanding any other provision of this Article 9, the term "Mission Bay Use Districts" is defined for purposes of this Article 9 to include only the non-shaded areas indicated on

1 Figure 1. The shaded areas on Figure 1 are now governed by the Mission Bay North and
2 Mission Bay South Redevelopment Plans, and in MB-OS and P20, Sections 249.80 and 291, and
3 are not subject to any provisions of this Article 9. The provisions set forth or referenced in this
4 Article 9 shall apply to any use, property, structure, or development, both public and private,
5 which is located in a Mission Bay Use District, unless otherwise provided for within this Article.
6 Other provisions of this Code referenced in this Article are applicable in Mission Bay Use
7 Districts shall apply only to the extent indicated in the reference. Other provisions of this Code
8 which by their general terms would apply to Mission Bay Use Districts shall apply only to the
9 extent expressly provided in this Article. The "Mission Bay Plan," formerly a part of the
10 General Plan for the City and County of San Francisco, has been rescinded and adopted, as
11 to the non-shaded areas on Figure 1, by the Planning Commission as the "Mission Bay
12 Guidelines." Any reference in this Article 9 to the Mission Bay Plan shall be deemed to refer to
13 the Mission Bay Guidelines adopted by the Planning Commission.

14 * * * *

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16 **SEC. 902. ESTABLISHMENT AND LOCATION OF MISSION BAY USE DISTRICTS.**

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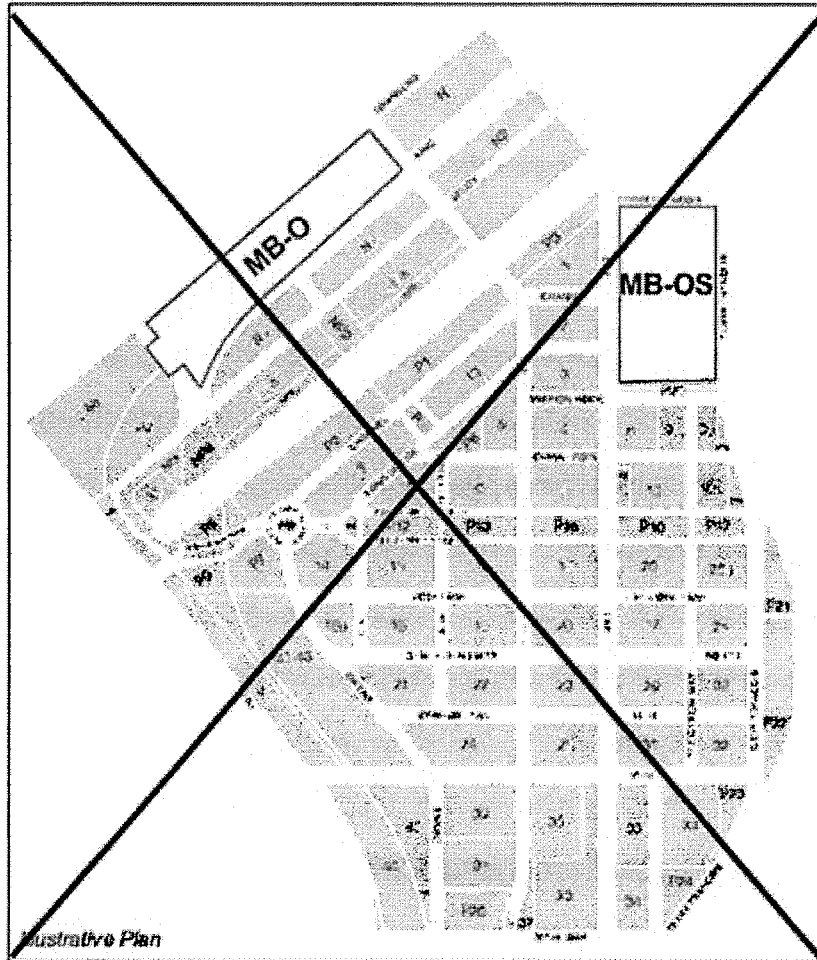
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Figure 1 – MISSION BAY USE DISTRICTS



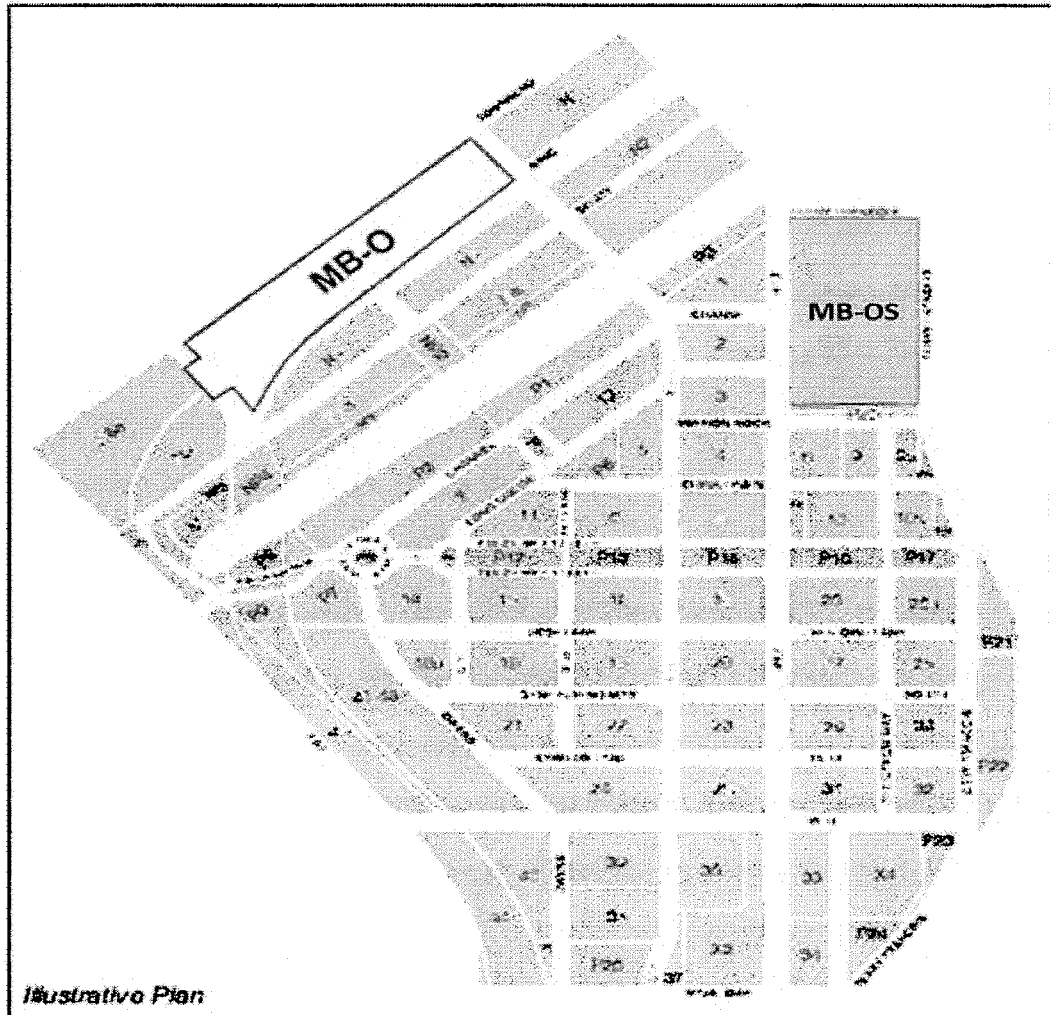
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Section 3. The Planning Code is hereby amended by revising Zoning Map ZN08 and Sectional Map SU08, as follows:

(a) To change the Zoning Map (ZN08) from MB-OS and M-2 to Mission Rock Mixed Use District:

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Assessor's Block	Lot	Current Zoning to be Superseded	Proposed Zoning to be Approved
9900	048	M-2	Mission Rock Mixed Use (MR-MU) District
8719	006	MB-OS	Mission Rock Mixed Use (MR-MU) District

(b) Sectional Map SU08 is hereby amended to create the new Mission Rock Special Use District, bounded by the following streets:

Generally bounded by China Basin to the north; Pier 48, the marginal wharf between Pier 48 and Pier 50, the associated shoreline area and Terry Francois Boulevard to the east; Mission Rock Street to the south; and 3rd Street to the west; and consisting of Assessor's Block 8719/Lot 006, and Block 9900/Lot 048. The area is also referred to as Seawall Lot 337, including the existing China Basin Park; the 0.3-acre strip of land on the south side of Seawall Lot 337; and Pier 48.

Section 4. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

Section 5. Scope of Ordinance. In enacting this ordinance, the Board of Supervisors intends to amend only those words, phrases, paragraphs, subsections, sections, articles, numbers, punctuation marks, charts, diagrams, or any other constituent parts of the Municipal Code that are explicitly shown in this ordinance as additions, deletions, Board amendment additions, and Board amendment deletions in accordance with the "Note" that appears under ///

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///

1 the official title of the ordinance.

2 APPROVED AS TO FORM:
3 DENNIS J. HERRERA, City Attorney

4
5 By:



6 Elaine C. Warren
7 Deputy City Attorney

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LEGISLATIVE DIGEST

[Planning Code, Zoning Map – Mission Rock Special Use District]

Ordinance amending the Planning Code and the Zoning Map to add the Mission Rock Special Use District and amend other related provisions; making findings under the California Environmental Quality Act; and making findings of consistency with the General Plan, the eight priority policies of Planning Code Section 101.1, and Planning Code Section 302.

Existing Law

The Mission Rock area of San Francisco is Port property directly south of the AT&T ballpark, consisting of China Basin Park, a surface parking lot leased to the Giants, and Pier 48. On November 3, 2015, in satisfaction of the requirements of Proposition B, which requires voter approval to increase height limits on certain Port property, the voters approved the “Mission Rock Affordable Housing, Parks, Jobs and Historic Preservation Initiative” (“Proposition D”). Proposition D established policies and modifications to the San Francisco General Plan to guide future development and added Section 291 to the Planning Code, establishing new height and bulk standards. Proposition D left the existing site zoning in place. Pier 48 is zoned Heavy Industrial (M-2) and the rest of the area is zoned Mission Bay Open Space (MB-OS).

Amendments to Current Law

This Ordinance adds Section 249.80 to the Planning Code, which establishes the Mission Rock Special Use District (SUD). The SUD envisions development of a mixed-use, transit-oriented community on the waterfront near public transit, new housing, increased public access and open spaces, infrastructure improvements, retail, community spaces, commercial/office and light industrial/production space, and preservation and renovation of historic Pier 48, job creation.

The SUD in conjunction with the Mission Rock Design Controls (Design Controls) establish land use controls and building standards for the area. The Design Controls document, adopted by the Planning and Port Commissions, describes standards and guidelines for development in detail.

The Ordinance defines permitted land uses, and temporary, and interim uses on the Project site. The building standards address dwelling unit density, floor area ratio, lot coverage, rear yard and open space requirements, dwelling unit exposure, off-street parking and loading, bicycle parking, signage, and transportation demand management. The Ordinance addresses various zoning procedures, processing and impact fees, and modifications to the building standards. The Ordinance establishes procedures for review and approval of development

FILE NO.

phases, open space, and vertical improvements. The Ordinance also augments height and bulk controls through amendments to Planning Code Section 291.

Finally, the Ordinance amends Sections 201, 901 and the Zoning Map to (a) change the use of the site from MB-OS (Mission Bay Open Space) and M-2 (Heavy Industrial) to the Mission Rock Mixed Use District (MR-MU), and (b) create the Mission Rock SUD in the sectional map.

Background Information

The Mission Rock project site is generally bounded by China Basin to the north; Pier 48, the marginal wharf between Pier 48 and Pier 50, the associated shoreline area and Terry Francois Boulevard to the east; Mission Rock Street to the south, and 3rd Street to the west. The Project involves construction of infrastructure, public open space and other public facilities, new building construction, and rehabilitation of historic Pier 48, resulting in a mix of market-rate and affordable residential uses, commercial use, retail/light-industrial uses, open space, and shoreline improvements. The Planning Department has prepared an environmental impact report (EIR) on the Project under the California Environmental Quality Act (CEQA). Related separate legislation that would further development of the project address establishment of a financing district and approval of a development agreement, disposition and development agreement, lease with the Port, and public trust exchange.

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SAN FRANCISCO PLANNING DEPARTMENT

Planning Commission Motion No. XXXXX

HEARING DATE: OCTOBER 5, 2017

Date: September 21, 2017
Case No.: **2013.0208 ENV/PCA/MAP/DVA/CWP**
Project Name: **Mission Rock (aka Seawall Lot 337 / Pier 48)**
Existing Zoning: Mission Bay Open Space (MB-OS); M-2 (Heavy Industrial) Zoning District;
Mission Rock Height and Bulk District
Block/Lot: 8719/006; 9900/048
Proposed Zoning: Mission Mixed-Use Zoning District / Mission Rock Special Use District;
Mission Rock Height and Bulk District
Project Sponsor: Port of San Francisco and San Francisco Giants
Staff Contact: Mat Snyder – (415) 575-6891
mathew.snyder@sfgov.org

1650 Mission St.
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San Francisco,
CA 94103-2479

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415.558.6378

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Information:
415.558.6377

APPROVING THE MISSION ROCK DESIGN CONTROLS (DC) DOCUMENT, AND INCORPORATING VARIOUS FINDINGS, INCLUDING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND FINDINGS OF CONSISTENCY WITH THE GENERAL PLAN AND PLANNING CODE SECTION 101.1.

WHEREAS, on September 5, 2017, Mayor Edwin Lee and Supervisor Jane Kim introduced an ordinance (Board File 170940) for Planning Code Text Amendments to establish the Mission Rock Mixed-Use District and the Mission Rock Special Use District (herein “SUD”).

WHEREAS, the SUD, in turn, refers to the Mission Rock Design Controls Document (herein “DC”) for further controls, standards, and guidelines specific to the site, providing development requirements for both infrastructure and community facilities as well as private development of buildings. The DC would therefore be a companion document to the Mission Rock SUD, and is incorporated by reference therein.

WHEREAS, as an extension of the Planning Code Text Amendments, the DC would enable and guide the Project. The Project includes new market-rate and affordable residential uses, commercial uses, retail, light industrial uses, parking, shoreline improvements, infrastructure development and street improvements, and public open space. Depending on the uses proposed, the Project would include between 1.1 to 1.6 million gross square feet (gsf) of residential uses (estimated at 1,000 to 1,600 residential units) (of which 40% will be below market rate), approximately 972,000 to 1.4 million gsf of commercial-office uses, and a maximum of approximately 245,000 gsf of retail uses. The Project also includes construction of transportation and circulation improvements, new and upgraded utilities and infrastructure, geotechnical and shoreline improvements, up to 3,000 off-street parking spaces in one or two new garages and 100 spaces elsewhere throughout the site. The DC includes specific controls for the Project’s new streets and open spaces and provides more detailed controls and guidelines for building design on a more detailed level than provided in the Planning Code.

WHEREAS, the Project would construct new buildings that would range in height from 90 to 240 feet, as is consistent with Proposition D which was passed by the voters of San Francisco in November 2015.

WHEREAS, this Motion approving these Design Controls is a companion to other legislative approvals relating to the Project, including recommendation of approval of Planning Code Text and Map Amendments, and recommendation for approval of the Development Agreement (DA).

WHEREAS, together with the Mission Rock SUD, the DC will be the key source for development controls and design guidelines for land use, buildings, parking, streets and public open spaces. Parks and open spaces will also follow a subsequent design review and approval process as further defined in the other project documents, including the DA and Disposition and Development Agreement (DDA). The DC addresses street layout, open space, and blocks, and establishes overarching strategies for placement of uses and buildings relative to street and open space typologies. The DC will be incorporated into the Planning Code by reference in the proposed Mission Rock SUD. Following adoption, any amendments to the DC will occur through joint approval of the Planning and Port Commissions, while any amendments to the Mission Rock SUD would require legislative approval by the Board of Supervisors.

WHEREAS, on October 5, 2017, the Planning Commission reviewed and considered the Final EIR for the Mission Rock Project ("FEIR") and found the FEIR to be adequate, accurate and objective, thus reflecting the independent analysis and judgment of the Department and the Commission, and that the summary of comments and responses contained no significant revisions to the Draft EIR, and certified the FEIR for the Project in compliance with the California Environmental Quality Act ("CEQA"), the CEQA Guidelines and Chapter 31 by Motion No. XXXXX.

WHEREAS, on October 5, the Commission by Motion No. XXXXX approved CEQA Findings, including adoption of a Mitigation Monitoring and Reporting Program (MMRP), under Case No. 2013.0208ENV, for approval of the Project, which findings and MMRP are incorporated by reference as though fully set forth herein.

WHEREAS, on October 5, 2017, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the proposed Design Controls document.

NOW THEREFORE BE IT RESOLVED, that the Planning Commission hereby finds that the Mission Rock Design Controls document promotes the public welfare, convenience and necessity for the following reasons:

1. The Mission Rock Design Controls would help implement the Mission Rock Mixed-Use Project development, thereby replacing a currently under-utilized surface parking lot with needed housing, commercial space, and parks and open space.
2. The Mission Rock Design Controls would help implement the Mission Rock Mixed-Use Project, which in turn will provide employment opportunities for local residents during construction and post-occupancy, as well as community facilities and parks for new and existing residents.
3. The Mission Rock Design Controls would help implement the Mission Rock Mixed-Use Project by enabling the creation of a mixed-use and sustainable neighborhood, with fully rebuilt infrastructure. The new neighborhood would improve the site's multi-modal connectivity to and integration with the surrounding City fabric, and connect existing neighborhoods to the City's central waterfront.

4. The Mission Rock Design Controls would enable the construction of a new vibrant, safe, and connected neighborhood, including new parks and open spaces. The DC would help ensure a vibrant neighborhood with active streets and open spaces, high quality and well-designed buildings, and thoughtful relationships between buildings and the public realm, including the waterfront.
5. The Mission Rock Design Controls would enable construction of new housing, including new on-site affordable housing, and new retail and manufacturing uses. These new uses would create a new mixed-use neighborhood that would strengthen and complement nearby neighborhoods.
6. The Mission Rock Design Controls would facilitate the preservation and rehabilitation of Pier 48 - an important historic resource listed in the National Register of Historic Places.

AND BE IT FURTHER RESOLVED, that the Commission finds the Mission Rock Design Controls are in conformity with the General Plan and Planning Code Section 101.1 as set forth in Resolution No. XXXX.

I hereby certify that the Planning Commission ADOPTED the foregoing Motion on October 5, 2017.

Jonas P. Ionin
Commission Secretary

AYES:

NOES:

ABSENT:

ADOPTED: October 5, 2017



SAN FRANCISCO PLANNING DEPARTMENT

Planning Commission Resolution No. XXXXX

HEARING DATE: OCTOBER 5, 2017

Date: September 21, 2017
Case No.: **2013.0208 ENV/PCA/MAP/DVA**
Project Name: **Mission Rock (aka Seawall Lot 337 / Pier 48)**
Existing Zoning: Mission Bay Open Space (MB-OS); M-2 (Heavy Industrial) Zoning District;
Mission Rock Height and Bulk District
Block/Lot: 8719/006; 9900/048
Proposed Zoning: Mission Mixed-Use Zoning District / Mission Rock Special Use District;
Mission Rock Height and Bulk District
Project Sponsor: Port of San Francisco and San Francisco Giants
Staff Contact: Mat Snyder – (415) 575-6891
mathew.snyder@sfgov.org

1650 Mission St.
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San Francisco,
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RESOLUTION RECOMMENDING THAT THE BOARD OF SUPERVISORS APPROVE A DEVELOPMENT AGREEMENT BETWEEN THE CITY AND COUNTY OF SAN FRANCISCO AND SEAWALL LOT 337 ASSOCIATES, LLC, FOR A CERTAIN REAL PROPERTY LOCATED ON SEAWALL LOT 337, PIER 48 AND MISSION BAY PARCEL 20, COMPRISED OF ASSESSOR'S BLOCKS AND LOTS: BLOCK 8719/ LOT 006 AND BLOCK 9900 / LOT 048, ALTOGETHER CONSISTING OF APPROXIMATELY 28 ACRES, FOR A 30-YEAR TERM AND ADOPTING VARIOUS FINDINGS, INCLUDING FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND FINDINGS OF CONSISTENCY WITH THE GENERAL PLAN AND PLANNING CODE SECTION 101.1.

WHEREAS, Chapter 56 of the San Francisco Administrative Code sets forth the procedure by which a request for a development agreement will be processed and approved in the City and County of San Francisco.

WHEREAS, the Development Agreement would enable the Mission Rock Project. The Project includes new market-rate and affordable residential uses, commercial uses, retail, light industrial uses, parking, shoreline access improvements, infrastructure development and street improvements, and public open space. Depending on the uses proposed, the Project would include between 1.1 to 1.6 million gross square feet (gsf) of residential uses (estimated at 1,000 to 1,600 residential units) (of which 40% will be below market rate), approximately 972,000 to 1.4 million gsf of commercial-office use, and a maximum of approximately 245,000 gsf of retail use. The Project also includes construction of transportation and circulation improvements, new and upgraded utilities and infrastructure, geotechnical and shoreline improvements, up to 3,000 off-street parking spaces in one or two new garages and 100 spaces elsewhere throughout the site.

WHEREAS, in 2010, the Port of San Francisco ("Port") selected through a competitive process, the Seawall Lot 337 Associates, LLC, (an affiliate of the San Francisco Giants) to serve as master developer for the Project.

WHEREAS, in 2013, the Board of Supervisors ("Board") endorsed a Term Sheet and Development Plan for the Project, which set forth the terms of the Project.

WHEREAS, the Mission Rock Height and Bulk District was approved and established by the voters in Proposition D in 2015.

WHEREAS, the Board will be taking a number of actions in furtherance of the Project, including the approval of a disposition and development agreement ("DDA") between the City and County of San Francisco acting by and through the San Francisco Port Commission and the San Francisco Giants.

WHEREAS, the DDA includes an exhibit, referenced in the DA, that sets restrictions on when the project sponsor may seek permits to construct office space, effectively metering out the office components of the project over at least five years.

WHEREAS, these actions include the adoption of the Mission Rock Special Use District ("SUD") and its associated Design Controls document ("DC"), which together outline land use controls and design guidance for both horizontal and vertical development and improvements to the site.

WHEREAS, in furtherance of the Project and the City's role in subsequent approval actions relating to the Project, the City and the San Francisco Giants negotiated a development agreement for development of the Project site, a copy of which is attached as Exhibit A (the "Development Agreement").

WHEREAS, the City has determined that as a result of the development of the Project site in accordance with the Development Agreement and the DDA, clear benefits to the public will accrue that could not be obtained through application of existing City ordinances, regulations, and policies, as more particularly described in the Development Agreement and the DDA. The Development Agreement will eliminate uncertainty in the City's land use planning for the Project site and secure orderly development of the Project site consistent with the Design Controls and the DDA.

WHEREAS, the Development Agreement shall be executed by the Director of Planning, City Administrator, Director of Public Works, City Attorney, and Port Director, subject to prior approval by those Commissions and the Board of Supervisors.

WHEREAS, on October 5, 2017, the Planning Commission reviewed and considered the Final EIR for the Mission Rock Project ("FEIR") and found the FEIR to be adequate, accurate and objective, thus reflecting the independent analysis and judgment of the Department and the Commission, and that the summary of comments and responses contained no significant revisions to the Draft EIR, and certified the FEIR for the Project in compliance with the California Environmental Quality Act ("CEQA"), the CEQA Guidelines and Chapter 31 by Motion No. XXXXX.

WHEREAS, on October 5, the Commission by Motion No. XXXXX approved CEQA Findings, including adoption of a Mitigation Monitoring and Reporting Program (MMRP), under Case No. 2013.0208ENV, for approval of the Project, which findings and MMRP are incorporated by reference as though fully set forth herein.

WHEREAS, on October 5, 2017, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the proposed Development Agreement.

WHEREAS, on October 5, 2017, by Motion No. XXXXX the Commission adopted findings in connection with its consideration of, among other things, the adoption of amendments to the Planning Code, under CEQA, the State CEQA Guidelines and Chapter 31 of the San Francisco Administrative

Code and made certain findings in connection therewith, which findings are hereby incorporated herein by this reference as if fully set forth.

WHEREAS, on October 5, 2017, by Motion XXXX, the Commission adopted findings regarding the Project's consistency with the General Plan and Planning Code Section 101.1, including all other approval actions associated with the project therein, which findings are hereby incorporated herein by this reference as if fully set forth .

NOW THEREFORE BE IT RESOLVED, that the Planning Commission hereby approves the Development Agreement, in substantially the form attached hereto as Exhibit A.

AND BE IT FURTHER RESOLVED, that the office development described in the DA and allocated over time in the DDA promotes the public welfare, convenience and necessity under Planning Code Section 321(b)(3) as follows: (1) the land use plan, phasing of infrastructure, open space and public benefits, and apportionment of office over time maintains a balance between economic growth and housing, transportation and public services; (2) the office development is consistent with and promotes the objectives and policies of the General Plan and Planning Code Section 101.1 as set forth in Motion No. ____; (3) the Design Controls and process for design review under the Mission Rock Special Use District ensure that the office development will be of high quality; (4) the office is located at an appropriate location, in close proximity to other office development in SoMa and the Downtown, near housing and major transit; and (5) the space is suitable for a broad range of uses and can accommodate a variety of tenants of various sizes.

AND BE IT FURTHER RESOLVED, that the Commission finds that the application, public notice, Planning Commission hearing, and Planning Director reporting requirements regarding the Development Agreement negotiations contained in Administrative Code Chapter 56 required of the Planning Commission and the Planning Director have been substantially satisfied in light of the regular monthly meetings held for the last two and a half years, the multiple public informational hearings provided by the Planning Department staff at the Planning Commission, the information contained in the Director's Report regarding the Mission Rock Development Agreement negotiations, and the mailed and published notice issued for the Development Agreement.

AND BE IT FURTHER RESOLVED, that the Commission authorizes the Planning Director to take such actions and make such changes as deemed necessary and appropriate to implement this Commission's recommendation of approval and to incorporate recommendations or changes from the Port Commission, San Francisco Municipal Transportation Agency (SFMTA) Board of Directors, the San Francisco Public Utilities Commission (SFPUC) and/or the Board, provided that such changes do not materially increase any obligations of the City or materially decrease any benefits to the City contained in the Development Agreement attached as Exhibit A.

I hereby certify that the Planning Commission ADOPTED the foregoing Resolution on October 5, 2017.

Jonas P. Ionin
Commission Secretary

Resolution No. XXXXX
Hearing Date: October 5, 2017

Case No. 2013.0208DVA
Mission Rock Development Agreement

AYES:

NOES:

ABSENT:

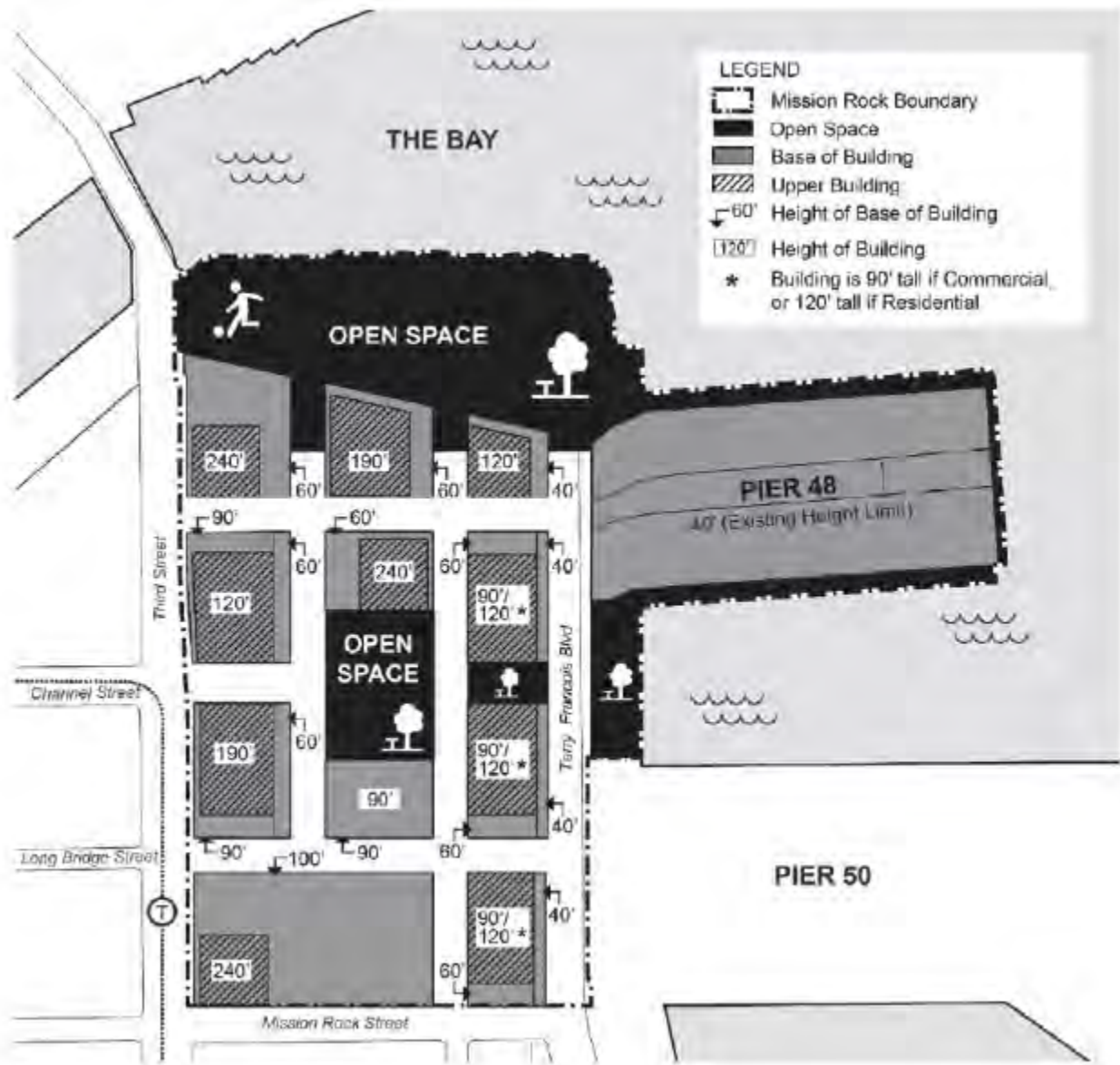
ADOPTED: October 5, 2017

Existing Zoning Map



Mission Rock Master Plan Development
Case Number 2013.0208

Existing Height and Bulk Map



Mission Rock Height and Bulk District – Planning Code Section 291



Mission Rock Master Plan Development
Case Number 2013.0208

Aerial Photo



SUBJECT PROPERTY



Mission Rock Master Plan Development
Case Number 2013.0208

Mission Rock DDA Summary

1. Housing Plan

A key aspect of the Mission Rock project is its high percentage of affordable housing. At least 40% of the residential units developed in the Project will be inclusionary units affordable to low and moderate income households (from 45% to 150% of Area Median Income, “Inclusionary Units”). Each residential building within the Project will contain Inclusionary Units.

The DDA requires the Developer to construct all horizontal infrastructure needed for the development of all vertical improvements, including residential buildings and the Inclusionary Units therein. Vertical Developers will construct the residential buildings and Inclusionary Units in accordance with each applicable Parcel Lease and Vertical DDA.

The Project will include Inclusionary Units set aside for youth transitioning out of foster care or other public systems (“TAY Units”). It is anticipated that the Vertical Developer of the TAY Units may partner with a non-profit service provider and the City’s Department of Homelessness and Supportive Housing to construct and operate the TAY Units. The affordable housing at Mission Rock will be delivered in each Phase, so that a true mixed-income community is established from the beginning of development.

The Inclusionary Units will be funded by a variety of private and tax-exempt funding sources. All Vertical Developers of commercial uses within the Project Site will be required to pay Mission Rock Inclusionary Housing Fees into an affordable housing fund administered by the Port and used to support the development of Inclusionary Units.

2. Workforce Development Plan

The Workforce Development Plan provides major opportunities during the pre-construction, construction and end use phases for local, disadvantaged individuals and companies. It requires Developer and Vertical Developers, as applicable, to include in their respective contract provisions that require contractors, subcontractors, consultants, subconsultants, commercial tenants and service providers to comply with the requirements of the Workforce Development Plan. It also provides that Developer and Vertical Developers will work with the Office of Economic and Workforce Development (“OEWD”) to assess the operational goals of the Workforce Development Plan and connect OEWD with potential employers at the Project Site to support workforce development. The key components are as follows:

Contractors and Subcontractors – except those constructing tenant improvements within leased premises comprised of less than 15,000 square feet – will be required to enter into a Local Hiring Agreement which requires that local residents perform 30% of all construction work at the Project within each trade.

Janitorial, security, landscape, operations and maintenance service providers, architectural and engineering service providers performing contracts for services over \$500,000, and commercial tenants at the Project Site that occupy greater than 5,000 gsf will enter into a First Source Hiring Agreement that requires participation in the City’s Workforce System, good faith efforts to meet the hiring goals applicable to employment associated pre-construction and operations work at the Project.

Developer and Vertical Developers are also required to make good faith efforts to achieve an overall Local Business Enterprise (LBE) participation goal of 20% of the total cost of all contracts for infrastructure and building improvements.

Finally, Vertical Developers will contribute a total of \$1 Million into a fund that will be shared equally between local community based organizations to provide barrier removal and job training and readiness training and construction and operation job training programs run by OEWD.

3. Transportation Plan and TDM Plan.

The Transportation Plan is designed to support the mobility choices of all users with a special emphasis on safe and comfortable conditions for pedestrians and cyclists. The Project will provide a network of public access areas, assembly areas and an internal grid of multi-modal and pedestrian and bicycle oriented public streets, including shared public streets. New streets will align with the existing Mission Bay street grid, establishing connections from the neighborhood to the waterfront. The proposed street improvements would connect the Blue Greenway to China Basin Park, completing an enhanced new section of the Bay Trail, thereby contributing to uninterrupted public Bay access along the City's eastern waterfront.

The Plan includes generous accessible loading areas, but no on-street parking. Parking will be actively managed to ensure it is used efficiently as part of the larger multimodal network. Parking plans will include parking management requirements for events in the neighborhood.

Vertical Developers will pay a Transportation Fee to SFMTA in lieu of the City's Transportation Sustainability Fee and the Transit Impact Fee under the Planning Code. SFMTA may apply the Transportation Fee to transit, bicycle and pedestrian safety improvements, including improvements in the vicinity of the Project.

The TDM program describes measures that will enable Mission Rock to actively manage travel demand through a variety of up front infrastructure investments and ongoing programs, including unbundled parking, pedestrian and bicycle friendly design, transportation marketing and communications, vehicle share facilities and memberships, and others. A key component of the TDM program is that the Project will reduce one-way vehicle trips by 20% compared to the total number of one-way vehicle trips identified in the Project's Transportation Impact Study at project build-out.

Other strategies included in the TDM program are creation of a transportation management association, subsidized care share membership, bike-share membership and monthly transit passes for residents, provision of carpooling/vanpooling incentives and shuttle bus service, enhanced bicycle parking, as well as additional public education, outreach, marketing and communications strategies.

4. Open Space Plan

The open space network is a fundamental part of the urban design and program for the Mission Rock project. It will transform this portion of the waterfront, and will provide important connections to and through the Project site. Six major open spaces and shoreline access areas spanning approximately 8 acres, located along the waterfront and at the core of Mission Rock, will provide a comprehensive variety of recreational opportunities.

These open spaces will include an expanded waterfront park (China Basin Park, which would be doubled in size from 2.2 to 4.4 acres), a publicly accessible pier and apron at Pier 48, a waterfront promenade, renovated open space at Channel Wharf (located between Piers 48 and 50), a central neighborhood urban square (Mission Rock Square) and neighborhood and waterfront gateways (Channel Lane and Channel Street). These areas will be connected by a network of pedestrian-oriented public streets and will be linked to the Blue Greenway.

These diverse spaces will be integrated with the ground floor and massing strategies of the blocks and buildings to create welcoming, active and unique places. Kiosks and small park structures will enliven the open spaces. They will be designed to maximize connections and enhance the experience through food, retail, performance and special programming amenities. Permanent public art pieces will be curated at strategic locations throughout the public spaces.

5. Sustainability Strategy

Mission Rock will be an international model of sustainable design and development, and environmental leadership has been a cornerstone of the Port and neighborhood goals from the beginning of planning for the site's future. As part of this dedication to sustainable design, Mission Rock is participating in the San Francisco Eco-District program. Eco-Districts are neighborhood scale public-private partnerships that strengthen the economy and reduce environmental impacts while creating a stronger sense of place and community. As a new-build development on an existing parking lot without utility infrastructure connections, the development is considered to be one of the first Type 1 Eco-districts in San Francisco. The potential environmental performance of a Type 1 Eco-district can be influenced by the delivery of new infrastructure in the ground (horizontal development), new buildings (vertical development), community engagement, and management and participation strategies.

The Project proposes a comprehensive strategy to achieve Mission Rock's goal of becoming a global model for sustainable development. The following are among the key performance goals of the Sustainability Strategy:

- Resilient and Adaptive: Design to be resilient for up to 66" of sea level rise (current high projections for the year 2100)
- Energy: Target 100% operational energy use from renewable sources
- Zero water waste: Target 100% of non-potable water to be met with non-potable sources
- Transportation: Target 20% reduction in daily one-way vehicle trips
- Healthy site: High quality outdoor environment, active design, daylight and views
- Low Impact Materials: Encourage manufacturer transparency and select low impact materials through material optimization

6. Office Allocation

In order to facilitate an orderly development of commercial office space throughout the City of San Francisco, the Project will adhere to a prescribed schedule for development of buildings with predominantly office uses.

As part of each Phase submittal, the Master Developer will notify the Port of its intention to include commercial office space in such Phase. As the disposition process for each designated development parcel progresses, the Master Developer will provide notice of the continued intent to program office uses and the approximate amount. If the amount of available allocation under Proposition M is limited, the DDA provides for the following allocation schedule:

PROP M SCHEDULE OF OFFICE DEVELOPMENT*			
Phase	Max Office GSF Allowed in Phase	Earliest Date to Enter into Vertical DDA	Earliest Date to Draw Down Prop M Allocation
Phase 1	550,000	December 31, 2017	December 21, 2018
Phase 2	330,000	July 31, 2019	December 21, 2021
Phase 3	130,000	July 31, 2019	December 21, 2021
Phase 3	390,000	July 31, 2021	December 21, 2023
Total	1,400,000 SF		

*applicable only in years where there is a Prop M constraint

If any Phase includes less office development than identified in the Schedule above, that remaining amount of development may be added to the subsequent Phase. In addition, if the Master Developer can provide satisfactory documentation of an interested commercial office tenant with a leasing requirement of 250,000 gsf or more, the Port may in its reasonable discretion determine that the maximum office gsf limitations in this Schedule do not apply.

As the Project site is entirely comprised of property owned by the Port of San Francisco, Zoning Administrator Letter of Determination No. 2017-001815ZAD outlines procedure for the development of office space. The Zoning Administrator determined that an Office Development Authorization from the Planning Commission under Planning Code Sections 321 and 322 and Planning Department approval is not required for new office development under the jurisdiction of the San Francisco Port Commission. However, as provided under Planning Code Section 321(2)(A), office space under the jurisdiction of the San Francisco Port Commission will count against the annual maximum limit.

EXHIBIT B2

DISPOSITION AND DEVELOPMENT AGREEMENT

(MISSION ROCK)

HOUSING PLAN

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ATTACHMENTS

- Exhibit A – Form of Declaration of Restrictions
- Exhibit B – Housing Data Table

MISSION ROCK HOUSING PLAN SUMMARY¹

The development plan for Mission Rock under the Transaction Documents provides for the development of approximately 1,000 to 1,950 Residential Units. This housing plan (the "Housing Plan") provides that not less than 40% of the Residential Units that may be developed at the Project Site will be below market rate units Affordable to low and moderate income households or TAY Units ("Inclusionary Units"). The parties anticipate that all Inclusionary Units will be built by Vertical Developers in concert with Market-Rate Units within private market-rate development projects. As discussed below, the Port shall convey land to Vertical Developers to develop all Residential Units on the Project Site. The Inclusionary Units will be constructed and rented in accordance with this Housing Plan.

Developer will submit Phase Applications to the Port pursuant to the Transaction Documents. Following each Phase Approval, the Port will authorize the Chief Harbor Engineer to issue Port permits necessary for Developer to begin to construct the Horizontal Improvements in accordance with the DDA and the Master Lease. Upon exercise of an Option in accordance with the Developer Option Agreement, the Port will convey each Residential Parcel through Parcel Leases to a Vertical Developer. A Vertical Developer will construct the Vertical Improvements, including Residential Parcels and Inclusionary Units therein, in accordance with the Parcel Lease and Vertical DDA. Inclusionary Units within the Vertical Improvements will be constructed in accordance with this Housing Plan. While the Developer will retain certain flexibility and discretion to respond to market conditions as to each Phase and Vertical Improvement, the Project is required by the DDA to comply with certain Inclusionary Housing Milestones by Phase Approval regarding the types, sizes, locations, level of affordability and percentage of the Inclusionary Units.

Developer and the Port will designate the general location of potential Residential Parcels, which will be distributed throughout the Project Site in accordance with a generalized Phasing Plan. The Inclusionary Units are expected to include a range of Residential Unit types, including transition age foster youth (TAY) units. Each Vertical Developer will retain the discretion to determine the type of Inclusionary Units to be constructed so long as such units are consistent with the Phase Approval and contain the same unit mix (i.e. studio, 1 bedroom, 2 bedroom, or 3 bedroom) or a larger bedroom mix as the Market-Rate Units in that particular Vertical Improvement.

A variety of private and public funding sources may be used to finance the Inclusionary Units, including, but not limited to, tax increment financing, the Mission Rock Inclusionary Housing Fees, tax-exempt housing bonds, and various other local, State and Federal sources of funding.

The foregoing summary is provided for convenience and for informational purposes only. In case of any conflict, the provisions of the DDA, the Housing Plan, and each Vertical DDA shall control.

¹ Defined terms in the Summary have the meaning set forth in this Housing Plan.

1. DEFINITIONS [Track and Confirm with final DDA]

Initially capitalized terms unless separately defined in this Housing Plan have the meanings and content set forth in the DDA. Terms defined in the DDA and also set forth in this Section are provided herein for convenience only.

1.1 Affordable, Affordability, or Affordable Housing Cost means with respect to a Rental Unit, a monthly rental charge (including the Utility Allowance applicable to the Household Size of such Rental Unit) that does not exceed thirty percent (30%) of the maximum Area Median Income percentage permitted for the applicable type of Residential Unit, based upon Household Size.

1.2 Area Median Income or AMI means for the Inclusionary Units, unadjusted median income for the San Francisco area as published from time to time by the United States Department of Housing and Urban Development (HUD) adjusted solely for household size.

1.3 Back-of-Curb Infrastructure has the meaning set forth in the DDA.

1.4 BMR Units has the meaning set forth in the Monitoring and Procedures Manual.

1.5 Declaration of Restrictions means a document or documents recorded against an Inclusionary Unit requiring that the Unit remain Affordable in accordance with the terms of this Housing Plan. The Declaration of Restrictions for the Rental Inclusionary Units shall be in the form attached hereto as Exhibit A.

1.6 Developer Option Agreement has the meaning set forth in the DDA.

1.7 Development Agreement has the meaning set forth in the DDA.

1.8 Financing Plan means the Financing Plan attached to the DDA.

1.9 Horizontal Improvements has the meaning set forth in the DDA.

1.10 Household Size means the total number of persons residing within a Residential Unit

1.11 Housing Data Table means the table attached here to as Exhibit B.

1.12 Housing Preferences and Lottery Procedures Manual means MOHCD's Housing Preferences and Lottery Procedures Manual dated March 31, 2017, as may subsequently be updated.

1.13 Implementing Manuals means the Housing Preferences and Lottery Procedures Manual and the Monitoring and Procedures Manual.

1.14 Inclusionary Milestone means the date of each Phase Application submittal.

1.15 Inclusionary Obligation has the meaning set forth in Section 3.1(a) of this Housing Plan.

1.16 Inclusionary Units means for a Rental Unit, a unit that is available to and occupied by households with incomes not exceeding One Hundred Fifty percent (150%) of Area Median Income and rented at an Affordable Housing Cost for households with incomes at or below One Hundred Fifty percent (150%) of Area Median Income, including TAY Units. The mechanism for setting the maximum Affordable Housing Cost and income level for each Inclusionary Unit is set forth in Section 3 of this Housing Plan. For clarity, Developer anticipates that Inclusionary Units will be built within private market-rate development projects, subject to Section 3.1(e).

1.17 Marketing and Operations Plan has the meaning set forth in Section 3.1(i) of this Housing Plan.

1.18 Market-Rate or Market-Rate Unit means a Residential Unit constructed on a Residential Parcel that has no restrictions under this Housing Plan or the DDA with respect to Affordable Housing Cost levels or income restrictions for occupants.

1.19 Minimum Affordable Percentage has the meaning set forth in Section 2.1 of this Housing Plan.

1.20 Mission Rock Inclusionary Housing Fees has the meaning set forth in the Development Agreement.

1.21 MOHCD shall mean the City of San Francisco's Mayor's Office of Housing and Community Development or any successor agency.

1.22 Monitoring and Procedures Manual means the City and County of San Francisco's Inclusionary Affordable Housing Program Monitoring and Procedures Manual, dated May 10, 2013, as may be subsequently updated.

1.23 Option has the meaning set forth in the DDA.

1.24 Parking Space means a parking space constructed in the Parking Garage by or on behalf of Developer.

1.25 Phase has the meaning set forth in the DDA.

1.26 Phase Application has the meaning set forth in the DDA.

1.27 Phase Approval has the meaning set forth in the DDA.

1.28 Project Site has the meaning set forth in the DDA.

1.29 Residential Parcel has the meaning set forth in the DDA.

1.30 Residential Unit means a room or suite of two or more rooms that is designed for residential occupancy for 32 consecutive days or more, including provisions for sleeping, eating and sanitation, for not more than one family, and may include senior and assisted living facilities.

1.31 Section 415 means San Francisco Planning Code Section 415 *et seq.*

1.32 Schedule of Performance has the meaning set forth in the DDA.

1.33 Vertical DDA shall have the meaning in the DDA.

1.34 Vertical Developer shall have the meaning set forth in the DDA.

1.35 Vertical Improvement is defined in the DDA.

2. HOUSING DEVELOPMENT

2.1 Development Program. Vertical Developers may develop approximately 1,000 to 1,950 Residential Units on the Project Site. At Project build-out, the number of the Inclusionary Units developed on the Project Site shall be equal to forty percent (40%) of the total number of the Residential Units that are developed on the Project Site (the “Minimum Affordable Percentage”). The Parties understand and agree that Vertical Developers’ right to construct the number of Residential Units specified in this Housing Plan is absolute and is based on the total number of Residential Units entitled under the DDA, Phase Approvals and Vertical DDAs.

2.2 Development Process.

(a) Subject to the terms of the DDA, the Project shall be developed in a series of Phases. The DDA includes a process for Developer's submittal of Phase Applications and the Port's review and approval of Phase Applications. The anticipated order of development of the Phases is set forth in the Phasing Plan and the Schedule of Performance, subject to revision in accordance with the procedures set forth in the DDA.

(b) Developer will submit Phase Applications to the Port pursuant to the Transaction Documents. Following each Phase Approval, the Port will authorize the Chief Harbor Engineer to issue Port permits necessary for Developer to begin to construct the approved Horizontal Improvements in accordance with the DDA and the Master Lease. Upon exercise of an Option in accordance with the Developer Option Agreement, the Port will convey each Residential Parcel through Parcel Leases to each Vertical Developer.

(c) Simultaneously with the Closing of each Parcel Lease, the Port, in consultation with MOHCD, and the Vertical Developer will enter into a Vertical DDA which will include a commitment by the Vertical Developer to construct its Vertical Improvements within a specific timeframe coordinated with the approved Schedule of Performance in the Phase Application. The Vertical DDA will be substantially in a form agreed upon by the Port and Developer following the execution of the DDA and shall specify, among other things (i) the maximum number of Market-Rate Units allowed to be constructed on the Residential Parcel, (ii)

the minimum number of Inclusionary Units to be constructed on the Residential Parcel (consistent with Section 3.1(c) of this Housing Plan), (iii) the Affordability level of each Inclusionary Unit (consistent with Section 3.1(a) of this Housing Plan), (iv) the location of the Inclusionary Units before recordation of the Declaration of Restrictions as set forth in Section 3.1(f) of this Housing Plan, and (v) the approximate unit type and size for each Inclusionary and Market-Rate Unit. Vertical Developers will have the flexibility to select the size and type of Residential Units, including the complete discretion to determine the unit mix for Market-Rate Units subject to the unit mix requirements of Section 3.1(c)(v), and the applicable Vertical DDA and Parcel Lease.

(d) Developer shall submit the Housing Data Table with each Phase Application and the table will preliminarily identify the maximum number and location of Residential Units, including the number and location of anticipated Inclusionary Units, for each Residential Parcel within such application. Developer or the Port may request a revision to such number before execution of a Vertical DDA and the corresponding Parcel Lease conveying a Residential Parcel to a Vertical Developer, subject to the requirements of this Housing Plan and the DDA. The final details of the plan for the Inclusionary Units for each Residential Parcel shall be specified in the Parcel Lease and corresponding Vertical DDA. Vertical Developer may revise such numbers at any time after execution of a Vertical DDA and the corresponding Parcel Lease conveying a Residential Parcel to a Vertical Developer, subject to Port approval, in consultation with MOHCD, as required by the applicable Vertical DDA and Parcel Lease, as defined pursuant to Section 2.2(c), above.

(e) Subject to the terms of the applicable Vertical DDA and Parcel Lease, following receipt of all Vertical Approvals, the Vertical Developer may construct the applicable Vertical Improvements, and upon such construction, the Vertical Developer must include the number of Inclusionary Units for such Vertical Improvements as are set forth in the Vertical DDA and Parcel Lease.

2.3 Developer Land Conveyances.

(a) Housing Plan Compliance in Phase Applications. This Housing Plan is intended to provide flexibility regarding delivery of Inclusionary Units within the Project Site, subject to the overall 40% Inclusionary Unit commitment. In order to track Developer's compliance with this Housing Plan, as part of the applicable Phase Application for a Residential Parcel, Vertical Developer shall submit a Project Housing Data Table, in the form of Exhibit B attached hereto, containing the following information:

(1) the location of each Residential Parcel subject to the Phase Application, including:

- (a) the parcel acreage;
- (b) the number of Residential Units;
- (c) the number and location of any Inclusionary Units, including the size, bedroom count, Household Size and amenities for each such Unit;

- (d) the AMI Percentage of each Inclusionary Unit;
- (e) the type and square footage of uses that are not residential uses (e.g., retail, community space, open space); and
- (f) the anticipated date for completion of the Residential Parcel.

(b) Conveyance of Residential Parcels. After exercising an Option, the Port will convey the applicable Residential Parcel to the applicable Vertical Developer through a Parcel Lease. The Port will also enter into a Vertical DDA and confirm or modify pursuant to Section 2.4, as applicable, the information provided in the Phase Approval regarding items 2.3(a)(1) above for the Vertical Improvement that is the subject of the Vertical DDA.

2.4 Changes to Phasing Approval. Developer may, from time to time, request changes, including material changes, to the Phasing Approval, including but not limited to regarding the size, location or composition of a Residential Parcel(s) within a Phase, with a brief explanation as to why Developer is requesting such change. Any material change shall be subject to the Port's review and approval, in consultation with MOHCD, provided that the Port will not withhold its approval of any such changes which are consistent with the DDA and this Housing Plan.

2.5 Maintenance of the Horizontal Infrastructure. Following completion and conveyance to the Port or other City agency, as determined by the parties, it is anticipated that a master association will maintain or cause to be maintained the Horizontal Improvements in accordance with the DDA.

3. INCLUSIONARY HOUSING REQUIREMENTS

3.1 Inclusionary Housing Requirements

(a) Development of Inclusionary Units. Forty percent (40%) of all Residential Units shall be Inclusionary Units, with an Affordable Housing Cost to households with incomes not exceeding One Hundred Fifty percent (150%) of Area Median Income (the "Inclusionary Obligation"). The Inclusionary Obligation will be satisfied by developing Inclusionary Units at the following affordability levels:

Levels of Affordability	
% of Total Units	AMI Levels
2%	45%
10%	55%

4%	90%
17%	120%
7%	150%

(b) Transition Age Youth Housing. The Housing Program includes 24 Inclusionary Units that shall be set aside to house persons transitioning out of public systems, such as the foster system, or homelessness (TAY Units). It is anticipated that the Vertical Developer developing the Residential Parcel that includes TAY Units will partner with a qualified non-profit services provider and, in consultation with such provider and the Port, in consultation with MOHCD, the City's Budget Office, and the City's Department of Homelessness and Supportive Housing ("HSH"), will establish TAY Unit requirements to govern the Vertical Developer's obligations regarding construction and operation of the TAY Units and any associated service space. TAY Units built on the Project Site shall qualify as Inclusionary Units for purposes of meeting the Minimum Affordable Housing Percentage and Inclusionary Housing Obligation. Notwithstanding anything to the contrary in this Housing Plan, TAY Units may be grouped together in a single Residential Parcel, among Market-Rate Units and other Inclusionary Units, for financing purposes and to maximize the efficient provision of on-site services to TAY Unit occupants.

(c) Developer Flexibility. Developer shall have sole discretion to determine the exact number of Inclusionary Units to be developed on each Residential Parcel and the Affordability level of each Inclusionary Unit, provided that: (i) the Housing Data Table to be submitted with each Phase Application shall identify the location of the Residential Parcels containing Inclusionary Units, the number of Inclusionary Units, and the Inclusionary Unit allocation shall be in accordance with the Phase Approval, subject to any subsequent revisions in accordance with the DDA, (ii) the cumulative number of all Inclusionary Units approved pursuant to a Phase Application shall at no time be less than thirty percent (30%) of the total Residential Units approved pursuant to such Phase Application; (iii) the number of Inclusionary Units in each Vertical Improvement approved pursuant to a Phase Application shall be between twenty percent (20%) and sixty percent (60%) of the total Residential Units within such Vertical Improvement approved pursuant to a Phase Application; (iv) Affordability levels shall be appropriately distributed throughout the Project Site and Inclusionary Units consisting of Forty-Five percent (45%) and Fifty-Five percent (55%) Area Median Incomes shall not be grouped together or constructed in only the later phases of the Project, unless approved by Port, in consultation with MOHCD; (v) the unit mix of the Inclusionary Units must either (a) match the unit mix of the Market-Rate Units within a Vertical Improvement (this can be calculated by multiplying the number of any type of Market-Rate Unit (e.g. studio) by the required inclusionary percentage under the Vertical DDA), or (b) be composed of larger units than the Market-Rate Units (for example, a Residential Parcel may contain 3 bedroom Inclusionary Units, but not 3 bedroom Market-Rate Units) and (vi) Developer shall demonstrate that the Inclusionary Obligation has been or will be satisfied at each Inclusionary Milestone as set forth in Section 3.1(d) of this Housing Plan.

(d) Inclusionary Milestones. Developer retains flexibility in the order of development of Residential Parcels within a Phase. The purpose of the Inclusionary Milestones is to advise the Port, MOHCD and the Developer, as part of any new Phase Application, regarding the overall status of Residential Parcel construction, including compliance with Inclusionary Obligations, which are consistent with the Inclusionary Housing obligations under previously approved Phase Applications. Compliance with the Inclusionary Obligation at each Inclusionary Milestone shall be demonstrated by Developer providing the Port and MOHCD with information as follows: (1) a chart summarizing by Phase all Market-Rate and Inclusionary Units (including Affordability levels) approved to date, and describing construction and occupancy status as to each; and (2) a calculation of the cumulative percentages of Residential Units and Inclusionary Units constructed to date, by Phase and overall for the Project Site. During buildout of a Phase, interim conditions may dictate that the current number of units by Phase or cumulatively within the Project Site is less than thirty percent (30%) of the completed Residential Units by Phase or within the Project Site. If this is the case, then the Developer shall submit to the Port and MOHCD a plan summarizing the status of approved but not yet constructed projects on Residential Parcels, and include the plan for modifications to the prior Phase Approvals that will help to expedite development of the remaining Residential Parcels within the previously approved Phase(s). Developer's proposed plan shall be presented to the Port and MOHCD no later than thirty (30) days after the Inclusionary Milestone in which the Inclusionary Obligation was not met.

(e) Variations. MOHCD, in consultation with the Port, may approve a Phase Application or Vertical DDA that does not comply with Section 3.1(c)(iii) or (iv) if it determines that the proposed development will otherwise comply with this Housing Plan and such variance will allow a Vertical Developer to maximize available financing for the production and/or operation of Inclusionary Housing in the Project Site, such approval shall not be unreasonably withheld or delayed. By way of example only, it is anticipated that the TAY Units will be located in a single building for purposes of service delivery, and depending on factors such as the building size and remaining unit mix, the Inclusionary Unit percentage within such building could exceed 60%. There may be other examples of similar circumstances where a special circumstance warrants a higher level of affordability in a building; however, it is generally the intent of the Parties to develop a Project composed of mixed income buildings and not create stand-alone affordable buildings.

(f) Inclusionary Restrictions. The Port, in consultation with MOHCD, shall impose the Inclusionary Obligation on each Vertical Developer of a Residential Parcel. The obligation will be imposed in the Parcel Lease for the Residential Parcel and shall include any requirements pursuant to the DDA and the Vertical DDA.

(g) Continued Affordability of Inclusionary Units. The Inclusionary Units required under this Housing Plan shall remain for rent for the term of the applicable Parcel Lease (i.e. 75 years) and such units will not be mapped for individual unit ownership, provided, however, that the Market-Rate Units may be mapped for individual unit ownership to allow such Market-Rate Units to be converted in the future. The prohibition on condominium conversion on the required Inclusionary Units shall be included in the applicable Vertical DDAs. No later than the issuance of a first construction document applicable to an Inclusionary Unit, the applicable Vertical Developer shall record against the Inclusionary Unit a Declaration of Restrictions

substantially in the form attached hereto as Exhibit A. Vertical Developer shall, upon recordation, provide to the Port and MOHCD a copy of the applicable Declaration of Restriction.

(h) Comparability. The Inclusionary Units required under this Housing Plan shall comply with the comparability requirements of Zoning Administrator Bulletin No. 10, dated December 2015, as may subsequently be updated, provided, however, that (a) the unit mix of the Inclusionary Units must not match the unit mix for the Project if the unit mix of the Inclusionary Units is composed of larger units than the Market-Rate Units (for example, a Residential Parcel may contain 3 bedroom Inclusionary Units, but not 3 bedroom Market-Rate Units), and (b) more than 50% of the units on any floor may be designated as Inclusionary Units in the case of the TAY Units, or as may be otherwise approved by the Port, in consultation with MOHCD.

(i) Marketing and Operations Guidelines for Inclusionary Units. A Vertical Developer may not market or rent Inclusionary Units until MOHCD, in consultation with the Port, has approved the following for such Inclusionary Units for consistency with this Housing Plan and the Implementing Manuals: (i) the marketing plan (which includes any preferences determined pursuant to San Francisco Administrative Code Chapter 47; such preferences may include, but shall not be limited to, preferences for educators currently employed with the San Francisco Unified School District); (ii) conformity of the rental charges for such Inclusionary Units with this Housing Plan; and (iii) eligibility and income-qualifications of renters, together with any supplemental information required under the Implementing Manuals (collectively “Marketing and Operations Plan”). Such approval shall not be unreasonably withheld or delayed. The Vertical Developer that develops the TAY Units must work with HSH to create and implement a lease-up and occupancy plan (the “TAY Unit Occupancy Plan”). Vertical Developers shall submit the HSH-approved TAY Unit Occupancy Plan to the Port not later than one hundred twenty (120) days before the date Vertical Developer expects to begin marketing the Market Rate Units. The Port, in consultation with MOHCD and HSH, shall review and consider approval of the applicable plan in accordance with the Vertical DDA and this Housing Plan, provided, however, if the Port does not respond to Vertical Developer within sixty (60) days after receipt of the applicable plan, such plan will be deemed approved.

(j) Planning Code Section 415 and Implementing Manuals. The provisions of this Housing Plan are hereby expressly deemed to satisfy the requirements of the San Francisco Inclusionary Affordable Housing Program and Section 415. The Parties agree and acknowledge that the Planning Department and MOHCD have established certain protocols for implementation of Section 415 as set forth in the Implementing Manuals. Vertical Developers of Inclusionary Units shall comply, as applicable, with the rental program for BMR Units set forth in the Implementing Manuals, provided, however, that Developer may: (i) use other development subsidies to finance the construction of Inclusionary Units beyond those described in Section V.C of the Monitoring and Procedures Manual; and (ii) establish an alternate pricing process, in consultation with the Port, including setting income levels and rents and establishing a methodology for maximum monthly rent levels consistent with the use of financing, other than the process described in Section III.C of the Monitoring and Procedures Manual, so long as the alternate pricing formula does not create affordability levels that exceed the levels set forth in Section 3.1(a) above. By complying with the provisions of this Housing Plan, Developer shall be deemed in full compliance with the Monitoring and Procedures Manual. Developer shall

comply, as applicable, with the Housing Preferences and Lottery Procedures Manual, subject to modification in consultation with the Port, to address preferences and procedures related to TAY Units or educators or other preferences contemplated in Section 3.1(i).

4. FINANCING OF INCLUSIONARY UNITS

4.1 Funding Generally. The Inclusionary Units may be funded by a variety of private and tax-exempt funding sources, including, but not limited to, Vertical Developer equity, Mission Rock Inclusionary Housing Fees, tax increment financing, tax exempt bond proceeds and land secured tax exempt financing. Due to the nature of the Project, it is not possible to ascertain the exact funding sources for each Inclusionary Unit at the time of this Housing Plan. However, it is anticipated that several funding sources will be combined to fund the development of the Inclusionary Units. Additionally, it is anticipated that TAY Units will receive a local operating subsidy through the San Francisco Local Operating Subsidy Program (LOSP), and the Developer will work with HSH and the City's Budget Department to secure a LOSP commitment.

4.2 Mission Rock Inclusionary Housing Fees. The commercial development within the Project Site will generate Mission Rock Inclusionary Housing Fees to be paid into a housing fund held by the Port in accordance with the Financing Plan. In order to construct the Inclusionary Units required under this Housing Plan, all Mission Rock Inclusionary Housing Fees payable by Vertical Developers of commercial uses within the Project Site and paid into the affordable housing fund administered by the Port shall be used solely for predevelopment, development expenses and administrative costs associated with the acquisition and construction of Inclusionary Units within Residential Parcels in accordance with this Housing Plan, under the terms and conditions set forth in the Development Agreement.

5. VERTICAL DEVELOPMENT PARKING AND TRANSIT PROGRAM

5.1 Separation. For Residential Parcels, all Parking Spaces shall be "unbundled" (i.e., rented separately from a Unit within such Residential Parcel). It is anticipated that no Parking Spaces will be provided within a Residential Parcel. If Parking Spaces are provided within a Residential Parcel and offered to occupants of Residential Units, then such Parking Spaces shall be offered to occupants of Inclusionary Units on the terms and conditions set forth in the Monitoring and Procedures Manual. It is currently anticipated that all parking at the Project Site shall be within the Parking Garage, which will be operated by a Parking Garage operator. Occupants of Residential Units may choose to contract directly with the operator of the Parking Garage for parking at the Project site, but shall not be obligated to do so.

5.2 Transit Program. The Project will contain a comprehensive Transit Demand Management Plan which will manage travel through a variety of investments and programs applicable to the Inclusionary Units. The Project transit program may include, but shall not be limited to, providing residents of Market Rate Units and Inclusionary Units with pre-loaded Clipper Card, on-site bike sharing and bike parking, real-time transit information on screens within the Project, car-share memberships, improved pedestrian walking conditions and assistance with local public transit.

6. NON-APPLICABILITY OF COSTA HAWKINS ACT

The Parties understand and agree that the Costa-Hawkins Rental Housing Act (California Civil Code sections 1954.50 et seq.; the "Costa-Hawkins Act") does not and in no way shall limit or otherwise affect the restriction of rental charges for the Inclusionary Units developed pursuant to the DDA and the Development Agreement (including this Housing Plan). The DDA falls within an express exception to the Costa-Hawkins Act because the DDA is a contract with a public entity in consideration for a direct financial contribution and other forms of assistance specified in Chapter 4.3 (commencing with section 65915) of Division 1 of Title 7 of the California Government Code. Accordingly, Developer, on behalf of itself and all of its successors and assigns, including all Vertical Developers, agrees not to challenge, and expressly waives, now and forever, any and all rights to challenge, Developer's obligations set forth in this Housing Plan related to Inclusionary Units, under the Costa-Hawkins Act, as the same may be amended or supplanted from time to time. Developer shall include the following language, in substantially the following form, in all Vertical DDAs:

"The DDA (including the Housing Plan) implements the California Infrastructure Financing District Law, Cal. Government Code §§ 53395 et seq. and City of San Francisco policies and includes regulatory concessions and significant public investment in the Project. The regulatory concessions and public investment include, without limitation, a direct financial contribution of net tax increment, the conveyance of real property without payment, and other forms of public assistance. These public contributions result in identifiable, financially sufficient and actual cost reductions for the benefit of Developer and Vertical Developers. In light of the Port's authority under Government Code Section 53395.3 and in consideration of the direct financial contribution and other forms of public assistance described above, the parties understand and agree that the Costa-Hawkins Act does not and shall not apply to the Inclusionary Units developed at the Project Site under the DDA."

The Parties understand and agree that the Authority would not be willing to enter into the DDA, without the agreement and waivers as set forth in this Section 6.

7. HOUSING PLAN IMPLEMENTATION AND ENFORCEMENT

Under the terms and conditions of the DDA, this Housing Plan is administered, monitored and enforced by the Port, in consultation with MOHCD. The Port shall consult with MOHCD regarding implementation of the Housing Plan, including but not limited to providing copies of each Phase Application including a Residential Parcel, and any applications for material amendment thereto, to MOHCD for review and comment prior to Phase Approval. In addition, the Port and MOHCD contemplate that MOHCD will provide ongoing technical assistance and advice to the Port regarding Housing Program implementation, including but not limited to compliance review regarding Section 415, the Monitoring and Procedures Manual, and the Housing Preferences and Lottery Procedures Manual.

8. MISCELLANEOUS

8.1 No Third Party Beneficiary. Except to the extent set forth in the DDA, there are no express or implied third party beneficiaries to this Housing Plan.

8.2 Severability. If any provision of this Housing Plan, or its application to any Person or circumstance, is held invalid by any court, the invalidity or inapplicability of such provision shall not affect any other provision of this Housing Plan or the application of such provision to any other Person or circumstance, and the remaining portions of this Housing Plan shall continue in full force and effect. Without limiting the foregoing, in the event that any applicable law prevents or precludes compliance with any term of this Housing Plan, the Parties shall promptly modify this Housing Plan to the extent necessary to comply with such law in a manner that preserves, to the greatest extent possible, the benefits to each of the Parties. In connection with the foregoing, the Parties shall develop an alternative of substantially equal, but not greater, cost and benefit to Developer and any applicable Vertical Developer so as to realize from the Project substantially the same (i) overall benefit (from a cost perspective) to the public and (ii) overall benefit to Developer and any applicable Vertical Developer.

Exhibit A

Free Recording Requested Pursuant to
Government Code Section 27383

Recording requested by and
when recorded mail to:

Port of San Francisco

Pier 1

San Francisco, California 94111

Attn: _____

APN#:

Address:

-----Space Above This Line for Recorder's Use-----

DECLARATION OF RESTRICTIONS

[Property Address]

THIS DECLARATION OF RESTRICTIONS ("Declaration") is made as of _____, _____, by [LESSEE'S NAME IN BOLD, CAPITAL LETTERS.], a [_____ limited liability company] ("Lessee"), in favor of the **CITY AND COUNTY OF SAN FRANCISCO**, acting by and through the San Francisco Port Commission (the "Port").

RECITALS

A. The Port entered into that certain Disposition and Development Agreement (the "DDA") with Seawall Lot 337 Associates, LLC, a Delaware limited liability company ("Developer") on _____, 2017 governing the development of an approximately 16-acre parcel located in San Francisco south of Mission Creek/China Basin Channel, bordered by Third Street on the west, Mission Rock Street on the south, and Terry Francois Boulevard on the east (the "Mission Rock Project"). As part of the DDA, the Port and the Developer agreed to implement a housing plan that sets forth the obligations with respect to the delivery of affordable housing at the Mission Rock Project (the "Housing Plan"). The Port desires to impose certain restrictions described in the Housing Plan upon the development of the leasehold interest in the real property described in **Exhibit A** attached hereto and incorporated herein by reference (the "Property") with respect to the market-rate and inclusionary low-income housing therein (the "Residential Project"). Lessee and the Port entered into that certain Parcel Lease and Vertical DDA on _____, 201_ governing the development of the Residential Project, including the development of inclusionary low-income housing, as either may be amended from time to time (the "Vertical Agreements"). The Vertical Agreements are incorporated by reference in this Declaration as though fully set forth in this Declaration. Definitions and rules of interpretation set forth in the Vertical Agreements apply to this Declaration.

B. Pursuant to the Vertical Agreements, Lessee has agreed to comply with certain affordability and other use and occupancy restrictions (collectively, the “Regulatory Obligations”), commencing on the date on which a certificate of occupancy is issued for the Residential Project, and continuing through the date that is the expiration of the Parcel Lease applicable to the Residential Project (the “Compliance Term”).

AGREEMENT

Now, therefore, in consideration of the Port's entering into the Vertical Agreements with Lessee, Lessee agrees as follows:

1. Lessee must comply with the Regulatory Obligations through the expiration of the Compliance Term. Specifically, Lessee agrees as follows, subject to additional terms as set forth in the Agreement:

[Revise to reflect specific requirements and income categories.] [Replace “Unit” if “Beds” are used in Regulatory agreement.]

(a) [Include if applicable: With the exception of one Unit reserved for the manager of the Residential Project,] Inclusionary Units in the Residential Project will at all times be rented only to tenants who qualify as Qualified Tenants at initial occupancy, specifically:

Unit Size	No. of Inclusionary Units	Maximum Income Level
		___% of Median Income
		___% of Median Income
		___% of Median Income
		___% of Median Income
		___% of Median Income
		___% of Median Income
		___% of Median Income

[Include if there is a reason to restrict to a target population] In addition:

- (i) _____ Units must be rented at all times to [TAY tenants].
- (ii) _____ Units must be rented at all times to tenants who are [educators].

(b) The total amount for rent and utilities (with the maximum allowance for utilities determined by the San Francisco Housing Authority) charged to a Qualified Tenant may not exceed:

(i) thirty percent (30%) of the applicable maximum income level, adjusted for household size; or

(ii) the tenant paid portion of the contract rent as determined by the San Francisco Housing Authority for Qualified Tenants holding Section 8 vouchers or certificates.

2. During the Compliance Term the Port may rely on the Deed of Trust and/or this Declaration, in the Port's discretion, to enforce any of the Port's rights under the Port Documents..

3. This Declaration and the Regulatory Obligations constitute covenants running with the land, including the leasehold interest and bind successors and assigns of Lessee and any owner of the Property. In the event that Lessee fails to comply with the Regulatory Obligations to the Port's satisfaction, in its sole discretion, within thirty (30) days of Lessee's receipt of notice from the Port to so comply, the Port at its option may exercise any rights available at equity or in law, including, without limitation, institute an action for specific performance. Lessee shall pay the Port's costs in connection with the Port's enforcement of the terms of this Declaration, including, without limitation, the Port's attorneys' fees and costs.

[Delete Section 4 if HUD is not providing financing. Revise as appropriate for HUD financing.]

4. The Port acknowledges that this Declaration and the other Port Documents are subject and subordinate to the HUD Documents until the later to terminate of: (a) the term of the HUD Documents; or (b) any period during which HUD holds title to [the leasehold estate in] the Property. During any applicable period:

(a) The HUD Documents may be amended, extended, renewed, assigned, or superseded without the Port's consent.

(b) The Port will not declare a default or foreclose without HUD's prior written consent.

(c) The Residential Project will be constructed and operated in conformance with the provisions of HUD's Section 202 Program and all applicable regulations and administrative requirements. In the event of any conflict between this Declaration and the provisions of any HUD regulations, related administrative requirements or capital advance documents (including the HUD Documents), the latter shall control.

(d) HUD approval of a transfer of the Residential Project as defined in Section 4 of the Capital Advance Program Use Agreement shall be deemed to constitute approval of the Port to the transfer.

(e) This Declaration may not be amended or assigned without HUD's prior written approval.

(f) Enforcement of the provisions of this Declaration shall not result in any claim against the Residential Project, the capital advance proceeds, any reserve or deposit required by HUD in connection with the capital advance, or the rents or other income from the Residential Project other than residual receipts as defined and authorized for release by HUD.

(g) In the event that any Port restrictions on occupancy, use and rents at any time exceed HUD's restrictions on occupancy or rents or otherwise affect the financial viability of the Residential Project (i.e., impair Lessee's ability to sustain a level of income sufficient to meet all financial obligations of the Residential Project, including HUD required escrows and operating expenses) HUD reserves the right to remove or void the Port restrictions for as long as HUD deems necessary. The Port recognizes HUD's authority to take appropriate action unilaterally to remove or void the Port restrictions.

Lessee has executed this Declaration as of the date first written above.

"LESSEE"

_____,
a _____

By: _____
Name: _____
Title: _____

[Delete 2nd signature if not required.]

By: _____
Name: _____
Title: _____

[ALL SIGNATURES MUST BE NOTARIZED.]

EXHIBIT A

(Legal Description of the Property)

A LEASEHOLD INTEREST IN THE FOLLOWING LAND SITUATED IN THE CITY OF
SAN FRANCISCO, COUNTY OF SAN FRANCISCO, STATE OF CALIFORNIA,
DESCRIBED AS FOLLOWS:

Street Address:

EXHIBIT B

HOUSING DATA TABLE

[Attached]

HOUSING DATA TABLE

[illegible][illegible][illegible]

Exhibit E1

Workforce Development Plan

The development plan for Mission Rock under the Transaction Documents provides for the development of a new mixed-use neighborhood composed of commercial/office, retail, garage, market rate and affordable residential uses and major new and expanded parks. This Workforce Development Plan sets forth the activities Port, Developer and Vertical Developer shall undertake, and require their Contractors, Consultants, Subcontractors, Subconsultants, Commercial Tenants, Lessees, Service Providers and Professional Service Providers, as applicable, to undertake, to support workforce development in the pre-construction, construction and end use phases of the Project, as set forth in this Exhibit E1.¹

The Port and Developer shall enter into the DDA which will provide for the development of the Project in a series of Phases. In connection with the DDA, the Port and the Developer will enter into a Master Lease providing Developer the right to construct Horizontal Improvements within the Project. Developer will enter into contracts with Contractors and Consultants to construct all Horizontal Improvements allowed under the Master Lease.

Developer will submit Phase Applications to the Port pursuant to the Transaction Documents. Following each Phase Approval, the Port will authorize the Chief Harbor Engineer to issue Port permits necessary for Developer to begin to construct Horizontal Improvements in accordance with the DDA and the Master Lease. Upon exercise of an Option in accordance with the Developer Option Agreement, the Port will convey each Development Parcel through Parcel Leases to a Vertical Developer. A Vertical Developer will enter into contracts with Contractors and Consultants to construct the Vertical Improvements, including residential and commercial improvements, in accordance with the Parcel Lease and Vertical DDA. Upon completion of the Vertical Improvements, the applicable Parcel Lease, between the Port and the Vertical Developer, shall govern the operation and use of the Vertical Improvements.

The foregoing summary is provided for convenience and for informational purposes only. In case of any conflict, the provisions of the DDA and each Vertical DDA shall control.

A. First Source Operations and Pre-Construction Hiring Agreement.

1. Developer shall, with respect to Horizontal Improvements, and the Port shall require that each Vertical Developer shall, with respect to each Vertical Improvement, comply with the operational requirements of the First Source Hiring Program pursuant to San Francisco

¹ Any capitalized term used in this Exhibit E1, including its Attachments, that is not defined herein, or in such Attachments, or in the referenced Administrative Code Sections, shall have the meaning given to such term in the DDA.

Administrative Code Chapter 83 ("**Chapter 83**") and upon entering into: (a) leases or any other occupancy contracts for commercial space at Vertical Improvements that are subject to Chapter 83 with a tenant ("**Lessee**"), provided, however, that no Lessee occupying less than 5,000 square feet in floor area within the Project Site shall have an obligation to enter into a First Source Hiring Agreement or comply with the requirements of Chapter 83; or (b) janitorial, security, landscape, operations and maintenance contracts, will include in each such lease or contract a requirement that such third party enter into a First Source Hiring Agreement in the form attached hereto as Attachment A, and provide a signed copy thereof to the Office of Economic and Workforce Development within 10 business days of execution. The Port shall cause (i) Developer to comply with the above requirements by including such requirements as a material term in the Master Lease applicable to such Contract and (ii) each Vertical Developer to comply with the above requirements by including such requirements as a material term in the Vertical DDA applicable to such Contract.

2. Further, Developer shall, with respect to Horizontal Improvements, and the Port shall require that each Vertical Developer shall, with respect to each Vertical Improvement, voluntarily include within its good faith efforts to comply with Chapter 83 a requirement to include pre-construction work within the Project's First Source Hiring Program and upon entering into professional services contracts for architectural and engineering services, provided, however, that no professional services firm performing work through a contract valued at less than \$500,000 or a contract for services relating to the construction of any tenant improvements within a leased premises comprised of less than 15,000 square feet in floor area shall have an obligation to enter into a First Source Hiring Agreement, include in each such contract a requirement that such third party enter into a First Source Hiring Agreement in the form attached hereto as Attachment A, and provide a signed copy thereof to the Office of Economic and Workforce Development within 10 business days of execution. The Port shall cause (i) Developer to comply with the above requirements by including such requirements as a material term in the Master Lease applicable to such Contract and (ii) each Vertical Developer to comply with the above requirements by including such requirements as a material term in the Vertical DDA applicable to such Contract.

3. Residential units within the Project shall not be subject to any obligations under this Section A and the tenants of such residential units shall have no obligation to enter into a First Source Hiring Agreement.

4. The Office of Economic and Workforce Development (“**OEWD**”) is the sole administrator of the First Source Hiring Program per San Francisco Administrative Code Chapter 83. OEWD’s Business Services team will manage the First Source Hiring Agreement and will be the point of contact for Lessees and Service Providers. OEWD’s Business Team will provide Referrals for the permanent Entry Level Positions located within the Project where required under Chapter 83.

5. Incorporation into contract provisions.

i. Developer or Vertical Developer shall include in its Contracts provisions that require Lessees and Service Providers to enter into a First Source Hiring Agreement and follow the good faith efforts within such agreements towards the hiring goals of Chapter 83. Developer or Vertical Developer shall also include in such Contracts provisions that require Lessees and Service Providers to identify a single point of contact and contact OEWD’s Business Services team to discuss its obligations under the First Source Hiring Agreement.

ii. Developer or Vertical Developer shall include in its Professional Service Contracts provisions that require Professional Service Providers to enter into a First Source Hiring Agreement and follow the good faith efforts within such agreement towards the hiring goals of Chapter 83. Developer or Vertical Developer shall also include in such Professional Service Contracts provisions that require Professional Service Providers to identify a single point of contact and contact OEWD’s Business Services team to discuss its obligations under the First Source Hiring Agreement.

6. Pre-start conference and access.

i. Developer or Vertical Developer shall meet with OEWD prior to initial occupancy of Vertical Improvements at the Project Site for a pre-start conference to assess the operation goals of the First Source Hiring Program, including commercial tenant operations, janitorial, security, landscape, operations and maintenance services and provide projections for Entry Level Position employment opportunities within such fields with respect to the Horizontal Improvements or Vertical Improvements. Developer or Vertical Developer shall also provide OEWD access to meet Lessees and Service Providers at the Project Site and encourage the same to meet with OEWD regarding their respective First Source Hiring Obligations.

ii. With respect to each Horizontal Improvement, Developer shall meet with OEWD upon submission of a Phase Application, and, with respect to each Vertical Improvement, Vertical Developer shall meet with OEWD upon entering into a Vertical DDA at

the Project Site for a pre-start conference to assess the pre-construction goals of the First Source Hiring Program, including architectural and engineering services and provide projections for Entry Level Position employment opportunities within such fields with respect to such Horizontal Improvement or Vertical Improvement. Developer or Vertical Developer shall also provide OEWD access to meet Professional Service Providers at the Project Site and encourage the same to meet with OEWD regarding their respective First Source Hiring Obligations.

7. Compliance with the operational goals of Chapter 83 shall be determined on an individual Contract or Professional Service Contract basis. Lessees and Service Providers shall demonstrate good faith efforts towards the hiring goals of Chapter 83. Professional Service Providers shall demonstrate good faith efforts towards the hiring goals of their First Source Hiring Agreement.

8. For the purposes of a First Source Hiring Agreement, (i) Contract shall mean: (a) any commercial lease or other commercial occupancy agreement with respect to a Vertical Improvements; and (b) any contract for janitorial, security, landscape, or operations and maintenance services performed at a Horizontal Improvement or Vertical Improvement; (ii) Professional Service Contract shall mean any contract for architectural or engineering services performed with respect to a Horizontal Improvement or Vertical Improvement, (iii) Service Provider shall mean any person(s), firm, partnership, corporation, government agency, nonprofit or combination thereof, who owns or operates a commercial business that enters into a Contract to perform janitorial, security, landscape, and operations and maintenance services with respect a Horizontal Improvement or Vertical Improvement, and (iv) Professional Service Provider shall mean any person(s), firm, partnership, corporation, government agency, nonprofit or combination thereof, who owns or operates a commercial business that enters into a Contract to perform architectural or engineering services with respect a Horizontal Improvement or Vertical Improvement.

9. OEWD shall notify any Lessees, Service Providers or Professional Service Providers in writing, with a copy to Developer or Vertical Developer, as applicable, and to the Port, of any alleged breach on the part of that entity of its obligations under the First Source Hiring Agreement, as applicable, and provide such entity a reasonable opportunity to cure its alleged breach before seeking an assessment of liquidated damages pursuant to Section 83.12 of the Administrative Code. OEWD sole remedy against a Lessees, Service Providers and

Professional Service Providers shall be as set forth in Chapter 83, including the enforcement process. Upon OEWD's request, Port, Developer or Vertical Developer, as applicable, shall reasonably cooperate with OEWD in any such enforcement action against any Lessees, Service Providers or Professional Service Providers, provided in no event shall Port, Developer or Vertical Developer, as applicable, be liable for any breach by a Lessees, Service Providers or Professional Service Providers.

10. If Port, Developer or Vertical Developer, as applicable, fulfills its obligations as set forth in this Section A, it shall not be held responsible for the failure of Lessee, Service Provider or Professional Service Provider or any other person or party to comply with the requirements of Chapter 83, their applicable First Source Hiring Agreement or this Section A. If Developer or Vertical Developer, as applicable, fails to fulfill its obligations under this Section A, the applicable provisions of Chapter 83 shall apply as to Developer or Vertical Developer, as applicable, though the Port and Developer shall have the right to invoke the dispute resolution process set forth in Article 10 of the DDA.

11. This Section A is an approved "First Source Hiring Agreement" as referenced in Sections 83.9 and 83.11 of the Administrative Code.

B. Local Hiring Agreement.

1. Developer, with respect to each Horizontal Improvement, shall, and the Port shall require that each Vertical Developer, with respect to each Vertical Improvement, shall (i) include in each Contract for construction work a provision requiring each Contractor to enter into a Local Hiring Agreement in the form attached hereto as Attachment B before beginning any construction work, and (ii) provide a signed copy thereof to the Office of Economic and Workforce Development ("OEWD") and CityBuild within 10 business days of execution, provided, however, that no person or entity entering into leases or other occupancy contracts for commercial space at a Vertical Improvement within the Project site ("**Commercial Tenant**") which occupies less than 15,000 square feet in floor area within such Vertical Improvement shall have an obligation to enter into a Local Hiring Agreement or be subject to the Local Hiring

Program pursuant to Chapter 82, as defined below.² All future tenant improvements performed subsequent to any initial tenant improvements within such Vertical Improvement shall be subject to the local hiring requirement within Attachment B on a good faith basis only. The Port shall cause (i) Developer to comply with the above requirements by including such requirements as a material term in the Master Lease applicable to such Contract and (ii) each Vertical Developer to comply with the above requirements by including such requirements as a material term in the Vertical DDA applicable to such Contract.

2. CityBuild shall represent OEWD and will provide referrals of Targeted Workers for positions on the construction work for Improvements subject to a Local Hiring Agreement in accordance with San Francisco Administrative Code Chapter 82 ("**Chapter 82**").

3. Incorporation into contract provisions. Developer and Vertical Developer, as applicable, shall include in their respective contracts provisions that require prospective Contractors and Subcontractors to comply with the requirements set forth in the Local Hiring Agreement Attachment B.

4. Tenant improvements performed within any residential units within the Project shall not be subject to any obligations under this Section B and the tenants of such residential units shall have no obligation to enter into a Local Hiring Agreement.

5. Compliance with the construction requirements of Chapter 82 for Horizontal Improvements shall be determined on a Phase by Phase basis. Compliance will be measured by dividing the number of Construction Work Hours performed by Local Residents or Apprentices, as applicable, by the total number of Construction Work Hours performed on Horizontal Improvements within a Phase. If Developer exceeds its obligations set forth in its applicable Local Hiring Agreement with respect to an individual Horizontal Improvement, Developer may, at its option, allocate such excess towards the compliance of another Horizontal Improvement within the Project Site, subject to the requirements of Attachment B. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a

² Any capitalized term used in this Section B that is defined in Attachment B will have the definition given to such term in such Attachment.

Project-wide basis by giving notice to OEWD and the Port of such election during the submission of the penultimate Phase Application.

6. Compliance with the construction requirements of Chapter 82 for Vertical Improvements shall be determined on an individual Vertical Improvement basis. Compliance will be measured by dividing the number of Construction Work Hours performed by Local Residents or Apprentices, as applicable, by the total number of Construction Work Hours performed on the Vertical Improvement. If a Vertical Developer exceeds its obligations set forth in its applicable Local Hiring Agreement with respect to an individual Vertical Improvement, the Vertical Developer of such Vertical Improvement may, at its option, allocate such excess towards the compliance of another Vertical Improvement within the Project Site, subject to the requirements of Attachment B. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a Phase-wide basis by giving notice to OEWD and the Port of such election during the submission of a Phase Application.

7. OEWD shall notify Contractor, Subcontractor and Commercial Tenant, as applicable, in writing, with a copy to the Port and Developer or Vertical Developer, as applicable, of any alleged breach on the part of that entity of its obligations under Chapter 82 or its Local Hiring Agreement, as applicable, and provide such entity an opportunity to cure its obligations before seeking an assessment of liquidated damages pursuant to Section 82.8 of the Administrative Code. OEWD's sole remedies against a Contractor, Subcontractor or Commercial Tenant shall be as set forth in Chapter 82, including the enforcement process. Upon OEWD's request, Port, Developer or Vertical Developer, as applicable, shall reasonably cooperate with OEWD in any such enforcement action against any Contractor, Subcontractor or Commercial Tenant, provided that in no event shall Port, Developer or Vertical Developer, as applicable, be liable for any breach by a Contractor, Subcontractor or Commercial Tenant.

8. If Port, Developer or Vertical Developer, as applicable, fulfills its obligations as set forth in this Section B, it shall not be held responsible for the failure of a Contractor, Subcontractor, Commercial Tenant or any other person or party to comply with the requirements of Chapter 82 or this Section B. If Developer or Vertical Developer, as applicable, fails to fulfill its obligations under this Section B, the applicable provisions of Chapter 82 shall apply, though

the Port and Developer, as applicable, shall have the right to invoke the process set forth in Article 10 of the DDA.

9. This Section B complies with the requirements of Chapter 82, including Sections 82.5 and 82.7 and the requirements of Chapter 83 related to construction work.

C. Workforce Job Readiness and Training Funds.

Vertical Developers, on behalf of the Project, shall contribute to OEWD \$1,000,000 (One Million Dollars) to support workforce job readiness and training (“Workforce Job Readiness and Training Funds”) for allocation to OEWD’s CityBuild and First Source Hiring programs and qualified local community based organizations. Such funds shall be paid to OEWD, and used as provided below, over the course of the Project on a Development Parcel by Development Parcel basis in eleven equal installments. Each equal installment shall be paid by a Vertical Developer at issuance of site permit for the development of Vertical Improvements upon a Development Parcel, except for the development of the parking garage parcel, pursuant to a Vertical DDA.

Priority for OEWD's use and allocation of Workforce Job Readiness and Training Funds shall be to organizations that have backgrounds in workforce readiness and training, an established program with a demonstrated history of performing workforce readiness and training and an existing track record of working in economically disadvantaged communities within San Francisco, including, but not limited to the Bayview/Hunters Point, Chinatown, Mission, South of Market, Tenderloin, Visitacion Valley and Western Addition neighborhoods.

1. **Community Based Organizations:** \$500,000 (Five Hundred Thousand Dollars) of the Workforce Job Readiness and Training Funds shall be dedicated to funding community-based organizations that provide services which seek to: reduce barriers to employment for individuals within at-risk populations (the “**Barrier Removal Funds**”); and/or provide job readiness and training (“**Job Readiness Training Funds**”) (together, the “**CBO Funds**”). OEWD shall allocate the CBO Funds to qualified local community based organizations based on a competitive process, and distribute the CBO Funds during the construction and operation of the Project until exhausted. The funds will be primarily targeted to support Bayview/Hunters Point, Chinatown, Mission, South of Market, Tenderloin, Visitacion Valley and Western Addition

neighborhood residents and residents of surrounding areas. OEWD shall prioritize allocating funds to organizations that have a background in workforce readiness and training, an established program with a demonstrated history of performing workforce readiness and training and an existing track record of working in economically disadvantaged communities. OEWD shall use good faith efforts to promptly initiate and complete the competitive process and begin distribution of the Barrier Removal Funds within one hundred and eighty (180) days after OEWD's initial receipt of such funds, but in a manner that ensures the resulting programs and services will correspond directly to preparing participants for the jobs created by the project.

i. CBO Funds. OEWD shall allocate a portion of the CBO Funds to support the delivery of services to assist individuals within at-risk populations, including low-income youth and adults with histories of incarceration, homelessness, substance abuse or other factors that may create barriers to employment, with reducing barriers to employment and/or providing job readiness and training. The CBO Funds shall fund programs that provide case management, supportive services (i.e. union dues, tools, uniform/boots), life skills training, basic education, barrier removal (including assistance with attaining a GED or driver's license, if applicable), wrap-around social services, job training, job placement or retention services with a goal of allowing participants to become CityBuild or First Source Hire-ready.

2. **OEWD: \$500,000 (Five Hundred Thousand Dollars)** of the Workforce Job Readiness and Training Funds shall be dedicated to OEWD's programs that train economically disadvantaged adults, workers and local residents in the fields of construction, end use operations and hospitality (the "**OEWD Funds**"). OEWD shall identify and partner with local community-based organizations to promote the programs and identify and recruit program participants. OEWD shall allocate the funds throughout the construction and operation of the Project until exhausted. The resources shall be primarily targeted to support and prepare individuals in the Bayview/Hunters Point, Chinatown, Mission, South of Market, Tenderloin, Visitacion Valley and Western Addition and surrounding areas for construction and operation jobs at the Project. OEWD shall partner with organizations that have a background in workforce readiness and training, an established program with a demonstrated history of performing workforce readiness and training and an existing track record of working in economically disadvantaged communities. OEWD shall use good faith efforts to promptly begin distribution of the OEWD Funds within one hundred eighty (180) days after OEWD's initial receipt of such funds, but in a manner that ensures the resulting programs and services will correspond directly to preparing participants for the jobs created by the project.

i. Operations Training Resources. OEWD, in its discretion, shall dedicate a portion of the OEWD Funds to support programs that provide end use operations job training programs for economically disadvantaged adults, including individuals designated as a targeted population by the San Francisco Workforce Development Board, as an individual who is, or is at risk of, relying upon, or returning to, public assistance, including unemployment benefits, formerly incarcerated, homeless, veterans, out-of-school youth, pregnant or parenting teens, youth in the juvenile justice or foster care systems, people with disabilities, limited English populations, dislocated workers, or residents of public housing (the “**Operations Training Resources Funds**”). OEWD shall allocate Operations Training Resources Funds to programs performing vocational training in the retail, food service, janitorial, landscaping, facilities/open space operations and maintenance employment sectors. The intended use of the Operations Training Resources Funds is to provide additional training tailored towards future employment opportunities at the Project. The programs may also include working with potential employers regarding any necessary accommodations or additional training, and ongoing support following job placement.

ii. Construction Training Resources. OEWD, in its discretion, shall dedicate a portion of the OEWD Funds to support programs that train disadvantaged workers and local residents in the field of construction work (the “**Construction Training Resources**”). OEWD shall allocate the Construction Training Resources Funds to programs such as the CityBuild Academy, an 18-week pre-apprenticeship training program that prepares citywide residents for entry into the trades, the Construction Administration & Professional Service Academy, an 18-week program offered at City College of San Francisco that prepares San Francisco residents for entry-level careers as professional construction office administrators, or the CityBuild Women’s Mentorship Program, a volunteer program that connects women construction leaders with experienced professional and mentors.

iii. Pile Driving Training Program. OEWD, in its discretion, shall dedicate a portion of the OEWD Funds to support the development and implementation of a pile driving training program for disadvantaged workers and local residents, including individuals that have formerly been incarcerated or are experiencing homelessness (the “**Pile Driver Training Funds**”). The Pile Driving Training Funds shall be managed and implemented by OEWD in conjunction with local unions and community-based organizations. The programs may also include working with potential employers regarding any necessary accommodations or training, and ongoing support following job placement. The Pile Driving Training Program will address the shortage of skilled pile drivers in San Francisco and will augment the pipeline of skilled workers by providing specific training in a high-demand trade. By providing training in a high-demand trade, the program will help to ensure that more local residents are equipped with the education and skills necessary to be successful in the construction industry, thereby supporting local economic empowerment and upward mobility.

3. Accounting. Developer shall have no right to challenge the appropriateness of or the amount of any expenditure, so long as it is used in accordance with the provisions of this Exhibit E1. The Workforce Job Readiness and Training Funds may be commingled with other funds of the City for purposes of investment and safekeeping, but the City shall maintain records

as part of the City's accounting system to account for all the expenditures for a period of four (4) years following the date of the expenditure, and make such records available upon Developer's request.

4. In the event individuals trained by the programs supported by the Workforce Job Readiness and Training Funds are hired to perform work at the Project, Developer may receive credit toward First Source and Local Hire obligations under San Francisco Administrative Code Chapters 82 and 83, as mutually determined with OEWD.

5. Board Authorization. Any interest earned on the Workforce Job Readiness and Training Funds shall remain in designated accounts for use by OEWD for workforce readiness and training consistent with this Exhibit E1 and shall not be transferred to the City's general fund.

City and County of San Francisco First Source Hiring Program



Edwin M. Lee, Mayor

Office of Economic and
Workforce
Development
Workforce
Development Division

Attachment A: First Source Hiring Agreement

For Operations and Preconstruction Services

This First Source Hiring Agreement (this "FSHA Agreement"), is made as of _____, by and between **[(the "Lessee"/ "Service Provider"/ "Professional Service Provider")]**, and the Office of Economic and Workforce Development, ("OEWD"), collectively the "Parties":

RECITALS

[Use for Lessee - WHEREAS, [Lessee has plans to occupy a portion of the Vertical Improvement at [Address] (the "Premises") which requires a First Source Hiring Agreement with OEWD because the Premises is subject to a property contract between [Developer/Vertical Developer] and the City acting through the San Francisco Port Commission;

WHEREAS, the [Developer/Vertical Developer] was required to provide notice in leases, subleases and other, occupancy contracts for use of the Premises; and

WHEREAS, as a material part of the consideration given by Lessee under such contract, Lessee has agreed to execute this FSHA Agreement and participate in the First Source Hiring Program managed by OEWD as established by the City and County of San Francisco pursuant to Chapter 83 of the San Francisco Administrative Code ("Chapter 83"), as modified herein;]

[Use for Service Providers contracts - WHEREAS, [Service Provider has plans to provide [_____] services to the [Horizontal Improvement/ Vertical Improvement] at [Address] (the "Premises") which requires a First Source Hiring Agreement with OEWD because the Premises is subject to a property contract between [Developer/Vertical Developer] and the City acting through the San Francisco Port Commission;

WHEREAS, the [Developer/Vertical Developer] was required to provide notice in janitorial, security, landscape, or operations and maintenance contracts that provide services to the Premises; and

WHEREAS, as a material part of the consideration given by Service Provider under such contract, Service Provider has agreed to execute this FSHA Agreement and participate in the First Source Hiring Program managed by OEWD as established by the City and County of San Francisco pursuant to Chapter 83 of the San Francisco Administrative Code ("Chapter 83");]

[Use for Professional Service Providers contracts - WHEREAS, [Professional Service Provider has plans to provide [] services to the [Horizontal Improvement/ Vertical Improvement] at [Address] (the “Premises”) which requires a First Source Hiring Agreement with OEWD because the Premises is subject to a property contract between [Developer/Vertical Developer] and the City acting through the San Francisco Port Commission;

WHEREAS, the [Developer/Vertical Developer] was required to provide notice in architectural or engineering contracts that provide services to the Premises; and

WHEREAS, as a material part of the consideration given by Professional Service Providers under such contract, Professional Service Providers has agreed to execute this FSHA Agreement and participate in the First Source Hiring Program managed by OEWD as established by the City and County of San Francisco pursuant to Chapter 83 of the San Francisco Administrative Code (“Chapter 83”);]

[Use for [Developer/Vertical Developer] operations of Vertical Improvement - WHEREAS, Lessee has plans to operate the building at [Address] (the “Premises”) which required a First Source Hiring Agreement between Lessee and FSHA because the Premises is subject to a property contract between Lessee and the City acting through the San Francisco Port Commission; and

WHEREAS, as a material part of the consideration given by Lessee under the property contract, Lessee has agreed to execute this FSHA Agreement and participate in the Workforce System managed by OEWD as established by the City and County of San Francisco pursuant to Chapter 83 of the San Francisco Administrative Code (“Chapter 83”);]

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Parties covenant and agree as follows:

1. DEFINITIONS

For purposes of this FSHA Agreement, initially capitalized terms shall be defined as follows:

- a. “Entry Level Position” shall mean any non-managerial position that requires no education above a high school diploma or certified equivalency, and less than two (2) years training or specific preparation, and shall include temporary, permanent, trainee and intern positions
- b. “Contract” shall mean: (a) any commercial lease or other commercial occupancy agreement with respect to the Vertical Improvement; and (b) any contract for janitorial, security, landscape, or operations and maintenance services performed at the Horizontal Improvement or Vertical Improvement.
- c. “DA” means that certain Development Agreement between Developer and the City and County of San Francisco, acting by and through the San Francisco Port Commission with respect to the Project Site.

- d. “DDA” means that certain Disposition and Development Agreement between Developer and the City and County of San Francisco, acting by and through the San Francisco Port Commission with respect to the Project Site.
- e. “Developer” has the meaning set forth in the DDA, including any successor during the term of this FSHA Agreement.
- f. “Horizontal Improvement” has the meaning set forth in the DDA.
- g. “Lessee” includes every commercial tenant, subtenant, or any other entity occupying a Vertical Improvement for the intent of doing business in the City and County of San Francisco and possessing a Business Registration Certificate with the Office of Treasurer required to enter into a First Source Hiring Agreement as defined in Chapter 83, provided, however, that in no event shall the meaning of Lessee include a commercial tenant, subtenant, or any other entity occupying less than 5,000 square feet in floor area within the Vertical Improvement.
- h. “OEWD Resume Database” shall mean the web portal administered by OEWD that connects Lessees, Service Providers and Professional Service Providers with qualified job seekers. The web portal is a free recruiting service to all Lessees, Service Providers and Professional Service Providers and is to be used by the Lessees, Service Providers and Professional Service Providers as part of their FSHA Agreement.
- i. “Professional Service Contract” shall mean any contract for architectural or engineering services performed with respect to a Horizontal Improvement or Vertical Improvement, except for contracts for architectural or engineering services related to the construction of any tenant improvements within a leased premises comprised of less than 15,000 square feet in floor area within a Vertical Improvement.
- j. “Professional Service Provider” shall mean any person(s), firm, partnership, corporation, government agency, nonprofit or combination thereof, who owns or operates a commercial business that enters into a Contract to perform architectural or engineering services with respect the Horizontal Improvement or Vertical Improvement, provided, however, that no professional services firm performing work through a contract valued at less than \$500,000 shall have an obligation to enter into this First Source Hiring Agreement.
- k. “Project Site” shall mean the area consisting of an approximately 16-acre parcel located south of Mission Creek/China Basin Channel, bordered by Third Street on the west, Mission Rock Street on the south, and Terry Francois Boulevard on the east, as reconfigured in accordance with AB 2797.
- l. “Service Provider” shall mean any person(s), firm, partnership, corporation, government agency, nonprofit or combination thereof, who owns or operates a commercial business that enters into a Contract to perform janitorial, security,

landscape, or operations and maintenance with respect the Horizontal Improvement or Vertical Improvement.

- m. “Referral” shall mean a qualified job seeker identified by OEWD as having the appropriate training, background and skill sets for a [Lessee/ Service Provider] specified Entry Level Position.
- n. “Vertical Developer” shall mean [*insert name of applicable Vertical Developer*], including any successor during the term of a FSHA Operations Agreement.
- o. “Vertical Improvement” has the meaning set forth in the DDA.

2. LESSEE AND SERVICE PROVIDER OEWD WORKFORCE PARTICIPATION

- a. Lessee or Service Provider, as applicable, shall contact OEWD’s Business Services team to provide headcount projections for Entry Level Positions and register with the OEWD Resume Database upon execution of its Contract.
- b. Lessee or Service Provider, as applicable, shall notify OEWD’s Business Team of every available Entry Level Position by posting job openings for Entry Level Positions on the OEWD Resume Database. Lessee or Service Provider, as applicable, shall provide OEWD a period of time to recruit and refer qualified candidates prior to advertising such position to the general public, starting on the date that the Lessee or Service Provider, as applicable, posts the job opening on the OEWD Resume Database, and ending on the earlier of: (i) 10 business days; or (ii) the date upon which such Lessee or Provider has received OEWD’s list of Referrals and has considered such Referrals for the available Entry Level Position in good faith, subject to Section 5 below. OEWD shall develop a pipeline of potential candidates and shall develop a staffing and implementation plan that is generally designed to allow OEWD to provide Lessee or Service Provider, as applicable, with its list of Referrals within 3 business days after such Lessee or Service Provider has posted a job opening. In the event the OEWD Resume Database is inaccessible, Lessee or Service Provider, as applicable, shall contact OEWD directly regarding their FSHA obligations by emailing Business.Services@sfgov.org, or other email address as may be mutually agreed upon by Professional Service Provider’s single point of contact and OEWD, and submitting Attachment A-1.
- c. Lessee or Service Provider, as applicable, shall consider and screen all Referrals that meet the minimum qualifications of a Lessee’s or Service Provider’s, as applicable, job opening and shall use the OEWD Resume Database to provide feedback regarding Referrals that were screened, interviewed and hired. Hiring decisions shall be entirely at the discretion of Lessee or Service Provider, as applicable.

3. LESSEE AND SERVICE PROVIDER GOOD FAITH EFFORT TO COMPLY WITH ITS OBLIGATIONS HEREUNDER

Lessee or Service Provider, as applicable, will make good faith efforts to comply with its obligations under this FSHA Agreement. Determination of good faith efforts shall be based on all of the following:

- a. Lessee or Service Provider, as applicable, shall execute this FSHA Agreement and Attachment A-1 upon entering into Contracts. Lessee or Service Provider will also accurately complete and submit Attachment A-1 annually to reflect employment conditions.
- b. Lessee or Service Provider, as applicable, shall register with the OEWD Resume Database. Lessee or Service Provider, as applicable, using a resume database not associated with OEWD will not be considered towards the requirements of the FSHA Agreement.
- c. Lessee or Service Provider, as applicable, shall provide OEWD a period of time to recruit and refer qualified candidates prior to advertising such position to the general public, starting on the date that the Lessee or Service Provider, as applicable, posts the job opening on the OEWD Resume Database, and ending on the earlier of: (i) 10 business days; or (ii) the date upon which such Lessee or Provider has received OEWD's list of Referrals and has considered such Referrals for the available Entry Level Position in good faith, subject to Section 5 below. Lessee or Service Provider, as applicable, must identify a single point of contact responsible for communicating Entry Level Positions and take active steps to ensure continuous communication with OEWD's Business Services Team. Lessee or Service Provider, as applicable, shall use the OEWD Resume Database to provide feedback regarding Referrals that were screened, interviewed and hired.

4. PROFESSIONAL SERVICES - ARCHITECTURAL AND ENGINEERING SERVICE PROVIDERS

- a. This section incorporates additional requirements for Professional Service Providers performing architectural or engineering services. Professional Service Providers obligations relate only to preconstruction work and shall terminate upon the completion of the Professional Service Provider's Professional Service Contract.
- b. Participation.
 - i. Professional Service Provider shall contact OEWD's Business Services team to provide headcount projections for Entry Level Positions and register with the OEWD Resume Database upon execution of its Professional Services Contract.
 - ii. Professional Service Provider shall notify OEWD's Business Team of every available Entry Level Position by posting job openings for Entry Level Positions on the

OEWD Resume Database. Professional Service Provider shall provide OEWD a period of time to recruit and refer qualified candidates prior to advertising such position to the general public, starting on the date that the Lessee or Service Provider, as applicable, posts the job opening on the OEWD Resume Database, and ending on the earlier of: (i) 10 business days; or (ii) the date upon which such Lessee or Provider has received OEWD's list of Referrals and has considered such Referrals for the available Entry Level Position in good faith, subject to Section 5 below. In the event the OEWD Resume Database is inaccessible, Professional Service Provider shall contact OEWD directly regarding their FSHA obligations and submit Attachment A-1.

iii. Professional Service Provider shall consider and screen all Referrals that meet the minimum qualifications of a Professional Service Provider's, as applicable, job opening and shall use the OEWD Resume Database to provide feedback regarding Referrals that were screened, interviewed and hired. Hiring decisions shall be entirely at the discretion of Professional Service Provider.

iv. Within 30 days of executing a Professional Services Contract, Professional Service Provider will email OEWD and schedule to meet with staff from the First Source Hiring Program. At the meeting, the Professional Service Provider will provide information on new and available Entry Level Positions, anticipated job opening projections, start dates and rate of pay.

c. Good Faith Compliance.

Compliance with the requirements of subsections i through iv below shall demonstrate Professional Service Provider's good faith compliance with its obligations under this FSHA Agreement.

i. Over the life of the Contract, Professional Service Provider shall make good faith efforts to hire Referrals from the First Source Hiring Program to fulfill new and available Entry Level Positions. Professional Service Provider may decline to hire a Referral if the Contractor considers the Referral in good faith and deems the Referral is not qualified. The final decision to hire a Referral shall be made by the Professional Service Provider.

ii. Professional Service Provider, as applicable, shall execute this FSHA Agreement and Attachment A-1 upon entering into Professional Service Contracts. Professional Service Provider will also accurately complete and submit Attachment A-1 annually to reflect employment conditions.

iii. Professional Service Provider shall register with the OEWD Resume Database. Professional Service Provider using a resume database not associated with OEWD will not be considered towards the requirements of the FSHA Agreement.

iv. Professional Service Provider shall notify OEWD's Business Services Team of all available Entry Level Positions by posting job openings for Entry Level Positions on the OEWD Resume Database. Professional Service Provider shall provide OEWD a period of time to recruit and refer qualified candidates prior to advertising such position to the general public, starting on the date that the Lessee or Service Provider, as applicable, posts the job opening on the OEWD Resume Database, and ending on the earlier of: (i) 10 business days;

or (ii) the date upon which such Lessee or Provider has received OEWD's list of Referrals and has considered such Referrals for the available Entry Level Position in good faith, subject to Section 5 below. OEWD shall develop a pipeline of potential candidates and shall develop a staffing and implementation plan that is generally designed to allow OEWD to provide Lessee or Service Provider, as applicable, with its list of Referrals within 3 business days after such Lessee or Service Provider has posted a job opening. Professional Service Provider must identify a single point of contact responsible for communicating Entry Level Positions and take active steps to ensure continuous communication with OEWD's Business Services Team. Professional Service Provider shall use the OEWD Resume Database to provide feedback regarding Referrals that were screened, interviewed and hired. In the event the OEWD Resume Database is inaccessible, Professional Service Provider shall contact OEWD directly regarding their FSHA obligations by emailing Business.Services@sfgov.org, or other email address as may be mutually agreed upon by Professional Service Provider's single point of contact and OEWD, and submitting Attachment A-1.

- d. OEWD Requirements. OEWD's Referrals to such Professional Service Provider shall be economically disadvantaged workers identified by OEWD that either: (a) graduated from OEWD's Entry Level Professional Services Training Program; or (b) have the appropriate training, employment background and skill set for any new and available Entry Level Position specified by the Professional Service Provider.

5. COMPLIANCE AND ENFORCEMENT

- a. Compliance with the operational goals of Chapter 83 shall be determined on an individual Contract basis and compliance with the voluntary professional service goals within this FSHA Agreement shall be determined on an individual Professional Service Contract basis.
- b. Lessee's, Service Provider's or Professional Service Provider's failure to meet the criteria set forth in Section 3 or 4 above, as applicable, does not impute "bad faith", but shall trigger a review of the Referral process and compliance with this FSHA Agreement. Failure and noncompliance with this FSHA Agreement may result in penalties as defined in Chapter 83, provided, however, that Lessee, Service Provider or Professional Service Provider shall be provided notice and a reasonable opportunity to cure such noncompliance prior to the assessment of any penalties. Lessee or Service Provider, as applicable, agrees to review SF Chapter 83, and execution of the FSHA Agreement denotes that Lessee or Service Provider agrees to its terms and conditions. OEWD agrees and acknowledges that Professional Service Provider's obligations hereunder are opted into voluntarily and such obligations are not based on the requirements of Chapter 83.
- c. Notwithstanding anything to the contrary herein, nothing in this FSHA Agreement precludes Lessees, Service Providers or Professional Service Providers from immediately advertising and filling an Entry Level Position that performs essential functions of its operation prior to notifying OEWD provided, however, the obligations of this FSHA Agreement to make good faith efforts to

fill such vacancies permanently with Referrals remains in effect. For these purposes, “essential functions” means those functions necessary to remain open for business. If Lessee, Service Provider or Professional Service Provider has an immediate need to fill an Entry Level Position that perform essential functions, Lessee, Service Provider or Professional Service Provider shall provide OEWD notice of such position, and the fact that there is an immediate need to fill such position, on or before the date such position is advertised to the general public.

- d. Nothing in this FSHA Agreement shall be interpreted to prohibit the continuation of existing collective bargaining agreements or existing employment policies, including, but not limited to, advertising job openings to existing employees. In the event of a conflict between this FSHA Agreement and an existing collective bargaining agreement, the terms of the existing agreement shall supersede this FSHA Agreement.

6. FSHA AGREEMENT DURATION

- a. Lessees and Service Providers: This FSHA Agreement shall be in full force and effect up to 10 years from the date of the temporary certificate of occupancy of the Vertical Improvement or the earlier termination of Lessee’s Contract with regard to Lessee and 10 years from the date of substantial completion of the Horizontal Improvement or the earlier termination of Service Provider’s Contract with regard to Services Provider. Upon termination of this FSHA Agreement, the Project will be subject to Existing City Laws, as defined in the DA, including the applicable requirements of Chapter 83.
- b. Professional Service Providers: This FSHA Agreement shall be in full force and effect up to the completion of a Professional Service Contract or the earlier termination of such Professional Service Contract.

7. NOTICE

All notices to be given under this FSHA Agreement shall be in writing and sent via mail or email as follows:

If to OEWD:

ATTN:

If to Lessee:

ATTN:

If to Service Provider:

ATTN:

If to Professional Service Provider:

ATTN:

If to Port

ATTN:

If to Developer:

ATTN:

If to Vertical Developer:

ATTN:

8. ENTIRE AGREEMENT

This FSHA Agreement and the Transaction Documents contain the entire agreement between the parties and shall not be modified in any manner except by an instrument in writing executed by the parties or their respective successors. If any term or provision of this FSHA Agreement shall be held invalid or unenforceable, the remainder of this FSHA Agreement shall not be affected. If this FSHA Agreement is executed in one or more counterparts, each shall be deemed an original and all, taken together, shall constitute one and the same instrument. This FSHA Agreement shall inure to the benefit of and be binding on the parties and their respective successors and assigns. If there is more than one party comprising Lessee, their obligations shall be joint and several.

Section titles and captions contained in this FSHA Agreement are inserted as a matter of convenience and for reference and in no way define, limit, extend or describe the scope of this Agreement or the intent of any of its provisions. This FSHA Operations Agreement shall be governed and construed by laws of the State of California.

IN WITNESS WHEREOF, the following have executed this FSHA Agreement as of the date set forth above.

Date: _____

Signature: _____

Name of Authorized Signer: _____

Company: _____

Address: _____

Phone: _____

Email: _____

Attachment A-1 Employer Services Form

The First Source Hiring Program is administered by the Office of Economic and Workforce Development (*OEWD*) and provides recruiting services at no cost to the employer. To find out how we can support your hiring needs, please visit our website at www.oewd.org/workforce.

Instructions: Please complete this form and email to Business.Services@sfgov.org

Step 1: Employer Info

Employer Name: _____

Contact Name: _____ Phone: _____

Job Title: _____ Email: _____

Step 2: Check all that apply to your business

- | | | |
|--|---|---|
| <input type="checkbox"/> Auto Repair | <input type="checkbox"/> Entertainment | <input type="checkbox"/> Personal Services |
| <input type="checkbox"/> Business Services | <input type="checkbox"/> Elder Care | <input type="checkbox"/> Professionals |
| <input type="checkbox"/> Consulting | <input type="checkbox"/> Financial Services | <input type="checkbox"/> Real Estate |
| <input type="checkbox"/> Construction | <input type="checkbox"/> Healthcare | <input type="checkbox"/> Retail |
| <input type="checkbox"/> Government Contract | <input type="checkbox"/> Insurance | <input type="checkbox"/> Security |
| <input type="checkbox"/> Education | <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Wholesale |
| <input type="checkbox"/> Food and Drink | <input type="checkbox"/> Operations & Maintenance | <input type="checkbox"/> Janitorial |
| <input type="checkbox"/> Landscape | <input type="checkbox"/> Technology | <input type="checkbox"/> I don't see my industry
(Please Describe) |

Step 3: Tell me about your Entry Level Positions

Job Title	Number of Job Openings	Projected Start Date

Done! Thank you for taking the time to complete the form.

**Please email to Business.Services@sfgov.org and
a representative will follow up on how we can best support your hiring needs.**

Office of Economic and Workforce Development
1 South Van Ness Avenue, 5th Floor, San Francisco, CA 94103
Tel: 415-701-4848 Fax: 415-701-4897
Email : Business.Services@sfgov.org Website: www.oewd.org/workforce

Attachment B:

Local Hiring Agreement

This Local Hiring Agreement ("Local Hiring Agreement") is made as of , by and between , the San Francisco Office of Economic and Workforce Development, (the "OEWD"), and the undersigned contractor ("Contractor"):

RECITALS

WHEREAS, Contractor has executed or will execute an agreement (the "Contract") to construct or oversee a portion of the Project to construct **[Horizontal Improvements, including [specify improvements]]** OR **[Vertical Improvements, including [specify improvements]]** ("Construction Work") at , Lots in Assessor's Block , San Francisco California ("Site"), and a copy of this Local Hiring Agreement is attached as an exhibit to, and incorporated in, the Contract; and

WHEREAS, as a material part of the consideration given by Contractor under the Contract, Contractor has agreed to execute this Local Hiring Agreement and comply with the local hiring requirements established by the City and County of San Francisco, pursuant to Chapter 82 of the San Francisco Administrative Code ("Chapter 82"), as further modified herein;

WHEREAS, the provisions of the San Francisco Local Hiring Policy for Construction (the "Policy") as set forth in Chapter 82, as modified herein, are hereby incorporated as a material term of the Contract. Where used in this Attachment B, "Policy" shall include the modifications herein.

WHEREAS, Contractor agrees that (i) Contractor shall comply with all applicable requirements of the Policy; (ii) the provisions of this Local Hiring Agreement are reasonable and achievable by Contractor and its Subcontractors; and (iii) they have had a full and fair opportunity to review and understand the terms of the Policy.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties covenant and agree as follows:

1.1 SUMMARY

- A. This Local Hiring Agreement incorporates applicable requirements consistent with the Policy as set forth in Chapter 82. The provisions of the Policy are hereby incorporated as a material term of the DDA. Contractor agrees that (i) Contractor shall comply with all applicable requirements of the Policy; (ii) the provisions of the Policy are reasonable and achievable by Contractor and its Subcontractors; and (iii) they have had a full and fair opportunity to review and understand the terms of the Policy.
- B. OEWD is responsible for administering the Policy and will be administering the applicable requirements for the Contract. For more information on the Policy and

its implementation, please visit the OEWD website at:
www.workforcedevelopmentsf.org.

- C. Capitalized terms not defined herein shall have the meanings ascribed to them in the DDA.

1.2 DEFINITIONS

- A. “Apprentice” means any worker who is indentured in a construction apprenticeship program that maintains current registration with the State of California's Division of Apprenticeship Standards.
- B. “Area Median Income (AMI)” means unadjusted median income levels derived from the Department of Housing and Urban Development (“HUD”) on an annual basis for the San Francisco area, adjusted solely for household size, but not high housing cost area.
- C. “Construction Work” means: (i) in the case of Horizontal Improvements, the construction of all Horizontal Improvements required or permitted to be made to the Project Site during a Phase and to be carried out by Developer under the DDA; or (ii) in the case of Vertical Improvements, the construction of a Vertical Improvement to be carried out by a Vertical Developer on a Development Parcel pursuant to an applicable Vertical DDA and Parcel Lease and all tenant improvements therein, except for the construction of any tenant improvements within a leased premises comprised of less than 15,000 square feet in floor area.
- D. “Construction Work Hours” means the total onsite work hours worked on a construction contract for a Construction Work by all apprentices and journey-level workers, whether those workers are employed by the Contractor or any Subcontractor.
- E. “Contractor” means a prime contractor, general contractor, or construction manager contracted by Developer or a Vertical Developer who performs Construction Work on the Project.
- F. “DDA” means that certain Disposition and Development Agreement between Developer and the City and County of San Francisco, acting by and through the San Francisco Port Commission.
- G. “Disadvantaged Worker” means a local resident, who (i) resides in a census tract within the City with a rate of unemployment in excess of 150% of the City unemployment rate; or (ii) at the time of commencing work on a covered project has a household income of less than 80% of the AMI, or (iii) faces or has overcome at least one of the following barriers to employment: being homeless; being a custodial single parent; receiving public assistance; lacking a GED or high school diploma; participating in a vocational English as a second language program; or having a criminal record or other involvement with the criminal justice system.

- H. “Developer” has the meaning set forth in the DDA, including any successor during the term of this Local Hiring Agreement.
- I. “Development Parcel” has the meaning set forth in the DDA.
- J. “Excess Credit Hours” shall mean the number of Construction Work Hours performed within a trade by Local Residents or Apprentices, as applicable, on a Construction Work that exceed the obligations set forth in Section 1.3.
- K. “Horizontal Improvement” has the meaning set forth in the DDA.
- L. “Job Notification” means the written notice of any Hiring Opportunities from Contractor to CityBuild. Contractor shall provide Job Notifications to CityBuild with a minimum of 3 business days' notice.
- M. “Local Resident” means an individual who is domiciled, as defined by Section 349(b) of the California Election Code, within the City at least seven (7) days prior to commencing work on a portion of the Project.
- N. “Non-Covered Construction Work” means any construction work not covered by the San Francisco Local Hiring Policy and the construction of any tenant improvements within a leased premises comprised of less than 15,000 square feet in floor area.
- O. “Parcel Lease” has the meaning set forth in the DDA.
- P. “Phase” has the meaning set forth in the DDA.
- Q. “Project Site” has the meaning set forth in the DDA.
- R. “Specialized Trades” means a list of trades designated as “Specialized Trades” published by OEWD for which the local hiring requirements of the Policy will not apply.
- S. “Targeted Worker” means any Local Resident or Disadvantaged Worker.
- T. “Vertical DDA” has the meaning set forth in the DDA.
- U. “Vertical Developer” has the meaning set forth in the DDA.
- V. “Vertical Improvement” has the meaning set forth in the DDA.

1.3 LOCAL HIRING PARTICIPATION

- A. The Contractor will work with OEWD’s CityBuild Program to achieve the following employment participation levels for all Construction Work:
 - 1. Total Construction Work Hours By Trade. For all contracts for Construction Work, the mandatory participation level in terms of

Construction Work Hours within each trade to be performed by Local Residents is 30%, with a goal, which is not mandatory under this agreement, of no less than 15% of Construction Work Hours within each trade to be performed by Disadvantaged Workers.

2. Apprentices. For all Construction Work, at least 30% of the Construction Work Hours performed by apprentices within each trade is required to be performed by local residents. OEWD has a goal of 50%, which is not mandatory under this agreement, and OEWD will work with contractors to look for feasible opportunities by trade to achieve the 50% goal. Where the candidate pool at a given time includes both apprentices referred by CityBuild and other apprentices, Contractors, shall undertake reasonable efforts to interview the apprentices referred by CityBuild first. This Local Hiring Agreement also establishes a goal, which is not mandatory under this agreement, of no less than 15% of Construction Work Hours performed by apprentices within each trade to be performed by Disadvantaged Workers.
3. Out-of-State Workers. For all Construction Works, Construction Work Hours performed by residents of states other than California will not be considered in calculation of the number of Construction Work Hours to which the local hiring requirements apply. Contractors and Subcontractors shall report to OEWD the number of Construction Work Hours performed by residents of states other than California.

- B. Pre-construction or other Local Hire Meeting. Prior to commencement of construction on Construction Works, Contractor and its Subcontractors whom have been engaged by contract and, identified in the forms required under Section 1.6 below as contributing toward the mandatory local hiring requirement, shall attend a preconstruction or other Local Hire meeting convened by OEWD staff. Representatives from Contractor and the Subcontractor(s) who attend such pre-construction or other Local Hire meeting will have hiring authority. OEWD shall approve applicable Construction Work-specific Specialized Trade exemptions, in addition to the list of trades designated by OEWD as Specialized Trades in accordance with the Section 82.5 of the Policy, during such meeting. Contractor and its Subcontractors who are engaged after the commencement of construction shall attend a future preconstruction meeting or meetings as mutually agreed by Contractor and OEWD staff.
- C. The Policy does not limit Contractor's or its Subcontractors' ability to assess qualifications of prospective workers, and to make final hiring and retention decisions. In no event shall hiring preferences required hereunder prevent Contractor's or its Subcontractors' ability to comply with applicable labor agreements or union dispatch procedures. No provision of the Policy shall be interpreted so as to require a Contractor or Subcontractor to employ a worker not qualified for the position in question, or to employ any particular worker.

- D. Tenant Improvements. All future tenant improvements performed within a Construction Work subsequent to any initial tenant improvements within such Construction Work (“Subsequent Tenant Improvements”) shall not be subject to the mandatory participation levels set forth in Subsection A above. With respect to Subsequent Tenant Improvements, Contractor or Subcontractor, as applicable, are required only to make good faith efforts to hire Local Residents and Disadvantaged Workers to perform construction work for Subsequent Tenant Improvements. Good faith efforts shall include Contractor’s or Subcontractor’s, as applicable, attendance at a pre-construction or other Local Hire meeting, requesting to connect with potential workers through Citybuild, considering Targeted Workers provided by CityBuild and submitting Local Hiring Forms 1 and 2.

1.4 COMPLIANCE WITH PARTICIPATION OBLIGATIONS CITYBUILD
WORKFORCE DEVELOPMENT PROGRAM: EMPLOYMENT NETWORKING
SERVICES

- A. OEWD administers the CityBuild Program. CityBuild shall be the primary resource for Contractor and Subcontractors to use to meet Contractor’s local hiring requirements under the Policy. CityBuild has two main goals:
1. Assist with local hiring requirements under the Policy by connecting Contractor and Subcontractors with qualified journey-level, apprentice, and pre-apprentice local residents.
 2. Promote training and employment opportunities for disadvantaged workers of all ethnic backgrounds and genders in the construction work force.
- B. Where Contractor's or its Subcontractors' preferred or preexisting hiring or staffing procedures or labor agreements for a Construction Work do not enable Contractor to satisfy the local hiring requirements of the Policy, the Contractor or Subcontractor shall use other procedures to identify and retain Targeted Workers, including the following:
1. Requesting to connect with workers through CityBuild, with qualifications described in the request limited to skills directly related to performance of job duties.
 2. Considering Targeted Workers networked through CityBuild within three business days of the request and who meet the qualifications described in the request. Such consideration may include in-person interviews. All workers networked through CityBuild will qualify as Disadvantaged Workers under the Policy. Neither Contractor nor its Subcontractors are required to make an independent determination of whether any worker is "disadvantaged" as defined in the Policy.
- C. **Basis of Compliance:**

1. With regard to Horizontal Improvements, OEWD shall determine compliance with this Agreement for each trade on a Phase by Phase basis. OEWD shall measure compliance by dividing the number of Construction Work Hours performed by Local Residents or Apprentices, as applicable, within a trade by the total number of Construction Work Hours performed within the same trade on the Horizontal Improvements within a Phase. In lieu of a Phase by Phase basis, Developer may determine that it can best achieve compliance with this Local Hire Agreement on a Project-wide basis, and may elect to comply on a Project-wide basis by delivering notice to OEWD and the Port of such election during the submission of the penultimate Phase Application. After such election, compliance shall be established upon the completion of the Project. In each case, once compliance is established, any Excess Credit Hours shall be confirmed by OEWD and shall be available for Developer, provided developer remains a Giants Affiliate, as defined in the DDA, to use to offset shortfalls in the same trade elsewhere on the Project Site, provided, however that Excess Credits may only be transferred to Horizontal Improvements that complied with the procedures set forth in Sections 1.3B, 1.4B and 1.6 and at completion are still short of attaining the participation levels set forth in Section 1.3A.
2. With regard to Vertical Improvements, OEWD shall determine compliance with this Agreement for each trade on an individual Vertical Improvement basis. OEWD shall measure compliance by dividing the number of Construction Work Hours performed by Local Residents or Apprentices, as applicable, within a trade by the total number of Construction Work Hours performed within the same on the Vertical Improvement. In lieu of an individual Vertical Improvement basis, Developer may determine that it can best achieve compliance with this Local Hire Agreement on a Phase by Phase basis, and may elect to comply on a Phase by Phase basis by delivering notice to OEWD and the Port of such election during the submission of a Phase Application. After such election, compliance shall be established upon the completion of the Phase, as applicable. In each case, once compliance is established, any Excess Credit Hours shall be confirmed by OEWD and shall be available to the Vertical Developer of the Vertical Improvement that generated such Excess Credit Hours, to transfer to another Vertical Developer, provided that such Vertical Developer is a Giants Affiliate, as defined in the DDA, to offset shortfalls in the same trade on a Vertical Improvements elsewhere on the Project Site, provided, however that Excess Credits may only be transferred to Vertical Improvements that complied with the procedures set forth in Sections 1.3B, 1.4B and 1.6 and at completion are still short of attaining the participation levels set forth in Section 1.3A.

1.5 WAIVER FROM LOCAL HIRING REQUIREMENTS

- A. Contractor or the Subcontractor may request waivers as follows: (1) Requests for waivers based on Specialized Trades or other non-availability of workers (subsection 1); and (2) other requests for waivers, which may be considered as conditional waivers by OEWD in its discretion, or based on credit for Non-Covered Construction Work or other construction work specified in subsection 3, and/or participation in the programs described in subsections 4 and 5 below or alternative programs identified by OEWD (subsection 2).

1. Specialized Trades and Other Non-Availability Waivers. Specialized Trades are exempt from local hiring requirements and established in accordance with Section 1.3(B). OEWD shall grant waivers based on a Specialized Trades exemption, provided that (a) the Specialized Trade appears on OEWD's approved list or has been approved as a Construction Work-specific Specialized Trade exemption, and (b) notwithstanding the exemption, Contractor and its Subcontractors have reported to OEWD for its records any Construction Work Hours utilized in each designated Specialized Trade and in each OEWD-approved Construction Work-specific Specialized Trade. As of the date of this Agreement, Specialized Trades include any marine diving, underwater, or marine-related pile-driving work, helicopter pilot, crane operators and oilers, boat, barge, dredge, and/or floating equipment operators, deck engineers, oilers, tunnel/underground work performed by operating engineers and laborers, lineman/cable splicer, stainless steel welders, ironworker connectors and millwrights.

In addition to Specialized Trades, Contractor or Subcontractor may from time to time seek a waiver based on non-availability of workers in one or more other trades ("Non-availability Waiver"). OEWD may apply any Excess Credit Hours (on a 1:1 basis of Excess Credit Hours to shortfall hours) to address any shortfalls identified with respect to a completed Construction Work that would otherwise be entitled to request a Non-availability Waiver under this subsection. At OEWD's discretion, Excess Credit Hours may be allocated anywhere within the Project Site, and to either the same or a different trade. Once Excess Credit Hours are allocated by OEWD such Excess Credit Hours shall no longer be available to Developer elsewhere on the Project Site. OEWD shall grant a Non-Availability Waiver pursuant to this subsection regardless of whether Excess Credit Hours are available to address any shortfall in a trade's Construction Work Hours with respect to a Construction Work, provided that Contractor or Subcontractor has submitted evidence of compliance with the procedures set forth in Sections 1.3B, 1.4B and 1.6.

2. Other Non-Compliance and Corrective Action Plan. In the event Contractor or Subcontractor fails to meet the requirements of Section 1.3 on a basis other than as set forth in subsection 1, OEWD may, in its discretion, negotiate a Corrective Action Plan with the Contractor or Subcontractor. The Corrective Action Plan may include a conditional

waiver that allows the Contractor or Subcontractor to avoid financial penalties. In determining whether to approve the waiver, OEWD may establish alternative means to achieve the participation levels set forth in Section 1.3, including, but not limited to, credit accumulated pursuant to subsection 3 or participation in the programs specified in subsections 4 and 5.

3. Credit for Hiring on Non-Covered Construction Work. Contractor and its Subcontractors may accumulate credit hours for hiring Targeted Workers on Non-Covered Construction Work or on other construction work for which for which the Contractor has exceeded project goals in the nine-county San Francisco Bay Area and apply those credit hours to contracts for Construction Work to meet the mandatory local hiring requirement. For hours performed by Targeted Workers on Non-Covered Construction Work, the hours shall be credited toward the local hiring requirement for the Contract provided that:
 - a. the Targeted Workers are paid the prevailing wages or union scale for work on the Non-Covered Construction Work; and
 - b. such credit hours shall be committed to by the Contractor on future projects to satisfy any short fall the Contractor may have on a Construction Work. Such commitment shall be in writing by the Contractor, shall extend for a period of time negotiated between the contractor and OEWD, and shall commit to satisfying any assessed penalties should Contractor fail to achieve the required credit hours.
4. Sponsoring Apprentices. Contractor or a Subcontractor may agree to sponsor new apprentices in trades in which noncompliance is likely and retain those apprentices for the period of Contractor's or a Subcontractor's work on the Construction Work, provided that OEWD verifies with the California Department of Industrial Relations that the new apprentices are registered and active apprentices. Contractor will be required to write a sponsorship letter on behalf of the identified candidate to the appropriate Local Union and will make the necessary arrangements with the Union to hire the candidate as soon as s/he is indentured.
5. Direct Entry Agreements. OEWD is authorized to negotiate and enter into direct entry agreements with apprenticeship programs that are registered with the California Department of Industrial Relations' Division of Apprenticeship Standards. Contractor may avoid assessment of penalties for non-compliance with the Policy by Contractor or Subcontractor hiring and retaining apprentices who are enrolled through such direct entry agreements. Contractor may also utilize OEWD-approved organizations with direct entry agreements with Local Unions, such as Helmets to

Hardhats, to hire and retain Targeted Workers. Such exception from assessments of penalties is subject to review and approval by OEWD.

1.6 LOCAL HIRING FORMS

- A. The Contractor shall provide CityBuild with information about the Contractor's employment needs under the Contract for each Construction Work by utilizing the City's online Project Reporting System ("PRS"). Contractor shall submit the following forms, as applicable, to OEWD:
1. Form 1: Local Hiring Workforce Projection. This Form 1 shall be initially submitted prior to the start of construction and updated quarterly by the Contractor until all subcontracting is completed.
 2. Form 2: Local Hiring Plan. For Construction Works estimated to cost more than \$1,000,000, Contractor shall prepare and submit to Contracting City Agency and OEWD for approval a Local Hiring Plan for the Construction Work using OEWD Form 2. Form 2 shall be initially submitted prior to the start of construction and updated quarterly by the Contractor until all subcontracting is completed. Upon commencement of work, Contractor and its Subcontractors may submit Job Notifications to CityBuild to connect with local trades workers.
 3. Form 3: Intentionally Omitted.
 4. Form 4: Waivers. To be completed by Contractor in the event that Contractor or a Subcontractor believes the local hiring requirements cannot be met. Refer to Articles 1.4 and 1.5 for more information regarding such waivers.

1.7 ENFORCEMENT, RECORD KEEPING, NONCOMPLIANCE AND PENALTIES

- A. Subcontractor Compliance. Each Contractor and Subcontractor shall ensure that all Subcontractors agree to comply with applicable requirements of this Local Hiring Agreement. All Subcontractors performing construction work on the Construction Work shall be responsible for complying with the recordkeeping and reporting requirements set forth in this Local Hiring Agreement.
- B. Recordkeeping. Contractor and each Subcontractor shall keep, or cause to be kept, for a period of four years from the date of Substantial Completion of the Construction Work, certified payroll and basic records, including time cards, tax forms, and superintendent and foreman daily logs, for all workers within each trade performing work on the Construction Work.
1. Such records shall include the name, address and social security number of each worker who worked on the Construction Work, his or her

classification, a general description of the work each worker performed each day, the apprentice or journey-level status of each worker, daily and weekly number of hours worked, the self-identified race, gender, and ethnicity of each worker, whether or not the worker was a local resident, and the referral source or method through which the contractor or subcontractor hired or retained that worker for work on the Construction Work (e.g., core workforce, name call, union hiring hall, CityBuild referral source, or recruitment or hiring method).

2. Contractor and Subcontractors may verify that a worker is a Local Resident by following OEWD's domicile policy.
 3. All records described in this subsection shall at all times be open to inspection and examination by the duly authorized officers and agents of the City, including representatives of the OEWD.
- C. Reporting. Contractor shall submit certified payrolls to the City electronically using the Project Reporting System. OEWD and will monitor compliance with the Policy electronically.
- D. Monitoring. From time to time and in its sole discretion, OEWD may monitor and investigate compliance of Contractor and Subcontractors working on a Construction Work with requirements of this Local Hiring Agreement and the Policy. Contractor shall allow representatives of OEWD, in the performance of its duties, to engage in random inspections of a Construction Work. Contractor and all Subcontractors shall also allow representatives of OEWD to have access to employees of Contractor and Subcontractors and the records required to be maintained under this Local Hiring Agreement.
- E. Noncompliance and Penalties. Failure of Contractor and/or its Subcontractors to comply with the requirements of this Local Hiring Agreement and the obligations set forth in the Local Hiring Plan may subject Contractor to the consequences of noncompliance, including but not limited to the assessment of penalties if a waiver is not granted. The assessment of penalties for noncompliance shall not preclude the City from exercising any other rights or remedies to which it is entitled.
- a. **Penalties Amount.** Any Contractor or Subcontractor who fails to satisfy Local Hiring Requirements of this agreement applicable to Construction Work Hours performed by Local Residents and who does not receive a waiver shall forfeit to the City, and, in the case of any Subcontractor so failing, the Contractor and Subcontractor shall jointly and severally forfeit to the City, an amount equal to the journeyman or Apprentice prevailing wage rate, as applicable, with such wage as established by the Board of Supervisors or the California Department of Industrial Relations under subsection 6.22(e)(3) of the Administrative Code, for the primary trade

used by the Contractor or Subcontractor on the Construction Work for each hour by which the Contractor or Subcontractor fell short of the Local Hiring Requirement. The assessment of penalties under this subsection shall not preclude the City from exercising any other rights or remedies to which it is entitled under this agreement.

- b. **Assessment of Penalties.** OEWD shall determine whether a Contractor and/or any Subcontractor has failed to comply with the Local Hire Requirement. If after conducting an investigation, OEWD determines that a violation has occurred, OEWD shall provide Contractor or Subcontractor, as applicable, notice of such failure and provide such entity a reasonable opportunity to cure its failure. If such entity does not cure such failure, OEWD shall issue and serve an assessment of penalties to the Contractor and/or any Subcontractor that sets forth the basis of the assessment and orders payment of penalties in the amounts equal to the journeyman or apprentice prevailing wage rates, as applicable, for the primary trade used by the Contractor or Subcontractor on the Construction Work for each hour by which the Contractor or Subcontractor fell short of the Local Hiring Requirement. Assessment of penalties under this subsection shall be made only upon an investigation by OEWD and upon written notice to the Contractor or Subcontractor identifying the grounds for the penalty and providing the Contractor or Subcontractor with the opportunity to respond pursuant to the recourse procedures prescribed in this agreement.
- c. **Recourse Procedure.** If the Contractor or Subcontractor disagrees with the assessment of penalties, then the following procedure applies:
 - i. The Contractor or Subcontractor may request a hearing in writing within 15 days of the date of the final notification of assessment. The request shall be directed to the City Controller. Failure by the Contractor or Subcontractor to submit a timely, written request for a hearing shall constitute concession to the assessment and the forfeiture shall be deemed final upon expiration of the 15-day period. The Contractor or Subcontractor must exhaust this administrative remedy prior to commencing further legal action.
 - ii. Within 15 days of receiving a proper request, the Controller shall appoint a hearing officer with knowledge and not less than five years' experience in labor law, and shall so advise the enforcing official and the Contractor or Subcontractor, and/or their respective counsel or authorized representative.
 - iii. The hearing officer shall promptly set a date for a hearing. The hearing must commence within 45 days of the notification of the appointment of the hearing officer and conclude within 75 days of such notification unless all parties agree to an extended period.

- iv. Within 30 days of the conclusion of the hearing, the hearing officer shall issue a written decision affirming, modifying, or dismissing the assessment. The decision of the hearing officer shall consist of findings and a determination. The hearing officer's findings and determination shall be final.
- v. The Contractor or Subcontractor may appeal a final determination under this by filing in the San Francisco Superior Court a petition for a writ of mandate under California Code of Civil Procedure Section 1084 *et seq.*, as applicable and as may be amended from time to time.

1.8 COLLECTIVE BARGAINING AGREEMENT

Nothing in this Local Hiring Agreement shall be interpreted to prohibit the continuation of existing workforce training agreements or to interfere with consent decrees, collective bargaining agreements, project labor agreements or existing employment contracts (Collective Bargaining Agreements"). In the event of a conflict between this Local Hiring Agreement and a Collective Bargaining Agreement, the terms of the Collective Bargaining Agreement shall supersede this Local Hiring Agreement.

1.9 DURATION OF THIS AGREEMENT

This Local Hiring Agreement shall be in full force and effect throughout the term of the Contract. Upon expiration of the Contract, or its earlier termination, this Local Hiring Agreement shall terminate and it shall be of no further force and effect on the parties hereto.

1.10 NOTICE

All notices to be given under this Local Hiring Agreement shall be in writing and sent by: certified mail, return receipt requested, in which case notice shall be deemed delivered three (3) business days after deposit, postage prepaid in the United States Mail, a nationally recognized overnight courier, in which case notice shall be deemed delivered one (1) business day after deposit with that courier, or hand delivery, in which case notice shall be deemed delivered on the date received, all as follows:

If to OEWD: OEWD
1 South Van Ness 5th Fl. San Francisco, CA 94103
Attn: Ken Nim, Compliance Manager,
ken.nim@sfgov.org

If to CityBuild: CityBuild Compliance Manager
OEWD, 1 South Van Ness 5th Fl.
San Francisco, CA 94103
Attn: Ken Nim, Compliance Manager,
ken.nim@sfgov.org

If to Port:

Attn:

If to Developer:

Attn:

If to Vertical Developer:

Attn:

If to Contractor:

Attn:

If to Subcontractor:

Attn:

Any party may change its address for notice purposes by giving the other parties notice of its new address as provided herein. A "business day" is any day other than a Saturday, Sunday or a day in which banks in San Francisco, California are authorized to close.

Notwithstanding the forgoing, any Job Notification or any other reports required of Contractor under this Agreement (collectively, "Contractor Reports") shall be delivered to the address of OEWD pursuant to this Section via first class mail, postage paid, and such Contractor Reports shall be deemed delivered two (2) business days after deposit in the mail in accordance with this Subsection.

1.11 ENTIRE AGREEMENT

This Local Hiring Agreement and the Transaction Documents contain the entire agreement between the parties to this Local Hiring Agreement and shall not be modified in any manner except by an instrument in writing executed by the parties or their respective successors in interest. This Local Hiring Agreement shall inure to the benefit of and be binding on the parties and their respective successors and assigns. If there is more than one party comprising Contractor, their obligations shall be joint and several.

1.12 SEVERABILITY

If any term or provision of this Local Hiring Agreement shall, to any extent, be held invalid or unenforceable, the remainder of this Local Hiring Agreement shall not be affected.

1.13 COUNTERPARTS

This Local Hiring Agreement may be executed in one or more counterparts. Each shall be deemed an original and all, taken together, shall constitute one and the same instrument.

1.14 HEADINGS

Section titles and captions contained in this Local Hiring Agreement are inserted as a matter of convenience and for reference and in no way define, limit, extend or describe the scope of this Local Hiring Agreement or the intent of any of its provisions

1.15 GOVERNING LAW

This Local Hiring Agreement shall be governed and construed by the laws of the State of California, and interpreted consistent with the requirements of Chapter 82.

IN WITNESS WHEREOF, the following have executed this Local Hiring Agreement as of the date set forth above.

CONTRACTOR:

Date: _____

Signature: _____

Name of Authorized Signer: _____

Company: _____

Address: _____

Phone: _____

Email: _____



FORM 1: LOCAL HIRING WORKFORCE PROJECTION

Contractor: _____ **Project Name:** _____

The Contractor must complete and submit this *Local Hiring Workforce Projection* (Form 1) prior to the start of construction and quarterly until all subcontracting is complete. The Contractor must include information regarding all of its Subcontractors who will perform construction work on the project regardless of Tier and Value Amount.

Will you be able to meet the mandatory Local Hiring Requirements?

- ☐ **YES** (Please provide information for all contractors performing construction work in Table 1 below.)
- ☐ **NO** (Please complete Table 1 below and Form 4: Conditional Waivers.)

INSTRUCTIONS FOR COMPLETING TABLE 1:

1. Please organize the contractors' information based on their Trade Craft work.
2. For contractors performing work in various Trade Craft, please list contractor name in each Trade Craft (i.e. if Contractor X will perform two trades, list Contractor X under two Trade categories.)
3. If you anticipate utilizing apprentices on this project, please note the requirement that 30% of apprentice hours must be performed by San Francisco residents.
4. Additional blank form is available at our Website: www.workforcedevelopsf.org. For assistance or questions in completing this form, contact (415) 701-4894 or Email @ Local.hire.ordinance@sfgov.org.

TABLE 1: WORKFORCE PROJECTION

Trade Craft	Contractor <i>List contractors by Trade Craft</i>		Est. Total Work Hours	Est. Total Local Work Hours	Est. Total Local Work Hours %
<i>Example:</i> Laborer	Contractor X	Journey	800	250	31%
		Apprentice	200	100	50%
<i>Example:</i> Laborer	Contractor Y	Journey	500	100	20%
		Apprentice	0	0	0
<i>Example:</i>	TOTAL LABORER	Journey	1300	350	27%
		Apprentice	200	100	50%
<i>Example:</i>	TOTAL		1500	450	30%
		Journey			
		Apprentice			
		Journey			
		Apprentice			
		Journey			
		Apprentice			

DISCLAIMER: If the Total Work Hours for a Trade Craft are less than 5% of the Total Construction Work Hours, the Trade Craft is exempt from the Mandatory Requirement. Subsequently, if the Trade Craft exceeds 5% of the Total Construction Work Hours at any time during the project, the Trade Craft is subject to the Mandatory Requirement.

 Name of Authorized Representative Signature Date Phone Email



FORM 2: LOCAL HIRING PLAN

Contractor: _____ **Project Name:** _____

If the Estimate for this Project exceeds **\$1 million**, then Contractor must submit a Local Hiring Plan using this Form 2 through the City's Project Reporting System. Form 2 shall be initially submitted prior to the start of construction and include all known subcontractors. Contractor shall update this Form 2 quarterly as subcontractors are identified and shall continue with updates until all subcontracting is complete. The OEWD-approved Local Hiring Plan will be a Contract Document and will be the basis for determining Contractor's and its Subcontractors' compliance with the local hiring requirements. Any OEWD-approved Conditional Waivers (Form 4) will be incorporated into the OEWD-approved Local Hiring Plan.

COMPLETE AND SUBMIT A SEPARATE FORM 2 FOR EACH TRADE THAT WILL BE UTILIZED ON THIS PROJECT.

INSTRUCTIONS:

1. Please complete tables below for Contractor and all Subcontractors that will be contributing Construction Work Hours to meet the Local Hiring Requirement.
2. Please note that a Form 2 will need to be developed and approved separately for each trade craft that will be utilized on this project.
3. If you anticipate utilizing apprentices on this project, please note the requirement that 30% of apprentice hours must be performed by San Francisco residents.
4. The Contractor and each Subcontractor identified in the Local Hiring Plan must sign this form before it will be considered for approval by OEWD.
5. If applicable, please attach all OEWD-approved Form 4 Conditional Waivers.
6. Additional blank form is available at our Website: www.workforcedevelopsf.org. For assistance or questions in completing this form, contact (415) 701-4894 or Email @ Local.hire.ordinance@sfgov.org.

List Trade Craft. Add numerical values from Form 1: Local Hiring Workforce Projection and input in the table below.

Trade Craft	Total Work Hours	Total Local Work Hours	Local Work Hours%	Total Apprentice Work Hours	Total Local Apprentice Work Hours	Local Apprentice Work Hours %
<i>Example: Laborer</i>	1500	450	30%	200	100	50%

List all contractors contributing to the Construction Work Hours to meet the Local Hiring Requirements for the above Trade Craft

Contractor and Authorized Representative	Local Journey Hours	Local Apprentice Hours	Total Local Work Hours	Start Date	Number of Working Days	*Contractor Signature
Contractor X Joe Smith	250	100	350	3/25/13	60	Joe Smith
Contractor Y Michael Lee	100	0	100	5/25/13	30	Michael Lee

**We the undersigned, have reviewed Form 2 and agree to deliver the hours set forth in this document.*

City Use Only	
OEWD Approval	<input type="checkbox"/> Yes <input type="checkbox"/> No
Signature and Date:	


FORM 4: WAIVERS
Contractor: _____ **Project Name:** _____

Upon approval from OEWD, Contractors and Subcontractors may use one or more of the following pipeline and retention compliance mechanisms to receive a Conditional Waiver from the Local Hiring Requirements on a project-specific basis. Conditional Waivers must be approved by OEWD. If applicable, each subcontractor must submit their individual Waiver request to OEWD and copy their Prime Contractor.

TRADE WAIVER INFORMATION: Please provide information on the Trades you are requesting Waivers for:

Laborer Trade Craft	Est. Total Work Hours	Projected Deficient Local Work Hours	Laborer Trade Craft	Est. Total Work Hours	Projected Deficient Local Work Hours
1.			3.		
2.			4.		

Please check any of the following Waivers and complete the appropriate boxes for approval:

☐ 1. SPECIALIZED TRADES ☐ 2. SPONSORING APPRENTICES ☐ 3. CREDIT FOR NON-COVERED PROJECTS

1. SPECIALIZED TRADES: Will your firm be requesting Waivers for "Specialized Trades" designated by OEWD and listed on OEWD's website or project-specific Specialized Trades approved by OEWD during the bid period?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<p style="text-align: center;"><i>Please CHECK off the following Specialized Trades you are claiming for Condition Waiver:</i></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> MARINE PILE DRIVER</div> <div style="width: 33%;"><input type="checkbox"/> HELICOPTER, CRANE, OR DERRICK BARGE OPERATOR</div> <div style="width: 33%;"><input type="checkbox"/> IRONWORKER CONNECTOR</div> <div style="width: 33%;"><input type="checkbox"/> STAINLESS STEEL WELDER</div> <div style="width: 33%;"><input type="checkbox"/> TUNNEL OPERATING ENGINEER</div> <div style="width: 33%;"><input type="checkbox"/> ELECTRICAL UTILITY LINEMAN</div> <div style="width: 33%;"><input type="checkbox"/> MILLWRIGHT</div> <div style="width: 33%;"><input type="checkbox"/> TRADE CRAFT IS LESS THAN 5% OF TOTAL WORK HOURS. <i>LIST:</i></div> </div>		
a. List OEWD-approved project-specific Specialized Trades approved during the bid period:		
OEWD APPROVAL: <input type="checkbox"/> Yes <input type="checkbox"/> No		OEWD Signature:

2. SPONSORING APPRENTICES: Will you be able to work with OEWD to sponsor an OEWD-specified number of new apprentices in the agreeable trades into California Department of Industrial Relations' Division of Apprenticeship Standards approved apprenticeship programs?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
PLEASE PROVIDE DETAILS:						
Construction Trade	Est. # of Sponsor Positions	Union (Yes / No) Y <input type="checkbox"/> N <input type="checkbox"/>	If Yes, Local #	Est. Start Date	Est Duration of Working Days	Est Total Work Hours Performed
		Y <input type="checkbox"/> N <input type="checkbox"/>				
		Y <input type="checkbox"/> N <input type="checkbox"/>				
OEWD APPROVAL: <input type="checkbox"/> Yes <input type="checkbox"/> No		OEWD Signature:				

3. CREDIT for HIRING on NON-COVERED PROJECTS: If your firm cannot meet the mandatory local hiring requirement, will you be requesting credit for hiring Targeted Workers on Non-covered Projects?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
PLEASE PROVIDE DETAILS:				
Labor Trade, Position, or Title	Est. # of Off-site Hires	Est Total Work Hours Performed	Offsite Project Name	Project Address
Journey				
Apprentice				
OEWD APPROVAL: <input type="checkbox"/> Yes <input type="checkbox"/> No		OEWD Signature:		

Exhibit E2**Local Business Enterprise (LBE) Utilization Program.**

The development plan for Mission Rock under the Transaction Documents provides for the development of a new mixed-use neighborhood composed of commercial/office, retail, garage, market rate and affordable residential uses and major new and expanded parks. This Workforce Development Plan sets forth the activities Developer and Vertical Developer shall undertake, and require their Contractors, Consultants, Subcontractors, Subconsultants, and Commercial Tenants, as applicable, to undertake, to support local business enterprises in both the construction and operations phases of the Project, as set forth in this Exhibit E2.¹

The Port and Developer shall enter into the DDA which will provide for the development of the Project in a series of Phases. In connection with the DDA, the Port and the Developer will enter into a Master Lease providing Developer the right to construct Horizontal Improvements within the Project. Developer will enter into contracts with Contractors and Consultants to construct all Horizontal Improvements allowed under the Master Lease.

Developer will submit Phase Applications to the Port pursuant to the Transaction Documents. Following each Phase Approval, the Port will authorize the Chief Harbor Engineer to issue Port permits necessary for Developer to begin to construct Horizontal Improvements in accordance with the DDA and the Master Lease. Upon exercise of an Option in accordance with the Developer Option Agreement, the Port will convey each Development Parcel through Parcel Leases to a Vertical Developer. A Vertical Developer will enter into contracts with Contractors and Consultants to construct the Vertical Improvements, including residential and commercial improvements, in accordance with the Parcel Lease and Vertical DDA. Upon completion of the Vertical Improvements, the applicable Parcel Lease, between the Port and the Vertical Developer, shall govern the operation and use of the Vertical Improvements.

The foregoing summary is provided for convenience and for informational purposes only. In case of any conflict, the provisions of the DDA and each Vertical DDA shall control.

¹ Any capitalized term used in this Exhibit E2, including its Attachments, that is not defined herein, or in such Attachments, or in the referenced Administrative Code Sections, shall have the meaning given to such term in the DDA.

LBE Utilization Plan.

Developer, with respect to Horizontal Improvements, shall, and the Vertical Developer, with respect to each Vertical Improvement, shall comply and require their respective Contractors and Consultants to comply with the Local Business Enterprise Utilization Plan (the “LBE Utilization Plan”) set forth in Attachment E2 hereto. The Port shall cause (i) Developer, pursuant to the DDA and Master Lease, to comply with the Plan by including such requirements as a material term in the DDA and Master Lease applicable to all phases of Horizontal Improvements and (ii) each Vertical Developer to comply with the Plan by including such requirements as a material term in the VDDA and Parcel Lease applicable to each Vertical Improvement. The Port and Developer will seek to, whenever practicable, engage contracting teams to reflect the diversity of the City and include participation of both businesses and residents from the City’s most disadvantaged communities.

Compliance with the construction requirements of the LBE Utilization Plan for Horizontal Improvements shall be determined on a Phase by Phase basis. Compliance will be measured by dividing the cost of all Contracts for a Phase of Horizontal Improvement awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants divided by the total cost of all Contracts awarded to Prime Contractors, Subcontractors, Prime Consultants or Subconsultants for such Phase of Horizontal Improvement. If Developer exceeds the goals set forth in the LBE Utilization Plan with respect to an individual Horizontal Improvement, Developer may, at its option, allocate such excess, subject to terms outlined below, towards the compliance of another Horizontal Improvement within the Project Site, subject to the requirements of Attachment E2. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a Project-wide basis by giving notice to CMD and the Port of such election during the submission of the penultimate Phase Application.

Compliance with the construction requirements of the LBE Utilization Plan for Vertical Improvements shall be determined on an individual Vertical Improvement basis. Compliance will be measured by dividing the cost of all Contracts for a Vertical Improvement awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants divided by the total cost of all Contracts awarded to Prime Contractors, Subcontractors, Prime Consultants or Subconsultants for such Vertical Improvement. If a Vertical Improvement exceeds goals set forth in the LBE Utilization Plan, the Vertical Developer of such Construction Work may, at its option, allocate such excess towards the compliance of another Vertical Improvement within the Project Site or transfer such excess to another Vertical Developer within the Project Site, subject to the requirements of Attachment E2. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a Phase-wide basis by giving notice to CMD and the Port of such election, pursuant to Attachment E2, during the submission of a Phase Application.

The Developer, Vertical Developer(s) and CMD seek to reduce barriers to LBE participation, cost, and time. As such, the Developer and Vertical Developer(s) shall work in good faith with CMD to design and implement for each Horizontal and Vertical

Improvement insurance programs which provides to LBE participating subcontractors access to the required coverage through either the owner, Owner-Controlled Insurance Policy (OCIP), general contractor, Contractor-Controlled Insurance Policy (CCIP), or such other insurance program as may become reasonably commercially available.

CMD shall notify Contractors, Consultants, Subcontractors and Subconsultants, as applicable, in writing, with a copy to the Port and Developer or Vertical Developer, as applicable, of any alleged breach on the part of that entity of its obligations under San Francisco Administrative Code Chapter 14B ("Chapter 14B") or its LBE Utilization Plan, as applicable, and provide such entity an opportunity to cure its failure before seeking an assessment of liquidated damages. CMD's sole remedies against a Contractor, Consultant, Subcontractor and Subconsultant shall be as set forth in the applicable LBE Utilization Plan, including the enforcement process. Upon CMD's request, Port, Developer or Vertical Developer, as applicable, shall reasonably cooperate with CMD in any such enforcement action against any Contractors, Consultants, Subcontractors and Subconsultants, provided that in no event shall Port, Developer or Vertical Developer, as applicable, be liable for any breach by a Contractor, Consultant, Subcontractor or Subconsultant.

If the Port, Developer or Vertical Developer, as applicable, fulfills its obligations as set forth in this Exhibit B2, it shall not be held responsible for the failure of a Contractor, Consultant, Subcontractor and Subconsultant or any other person or party to comply with the requirements of San Francisco Administrative Code Chapter 14B ("Chapter 14B") or this Exhibit B2. If Developer or Vertical Developer, as applicable, fails to fulfill its obligations under this Section B, the applicable provisions of Chapter 82 shall apply, though the Port and Developer, as applicable, shall have the right to invoke the process set forth in Article 10 of the DDA.

This Exhibit E2 complies with the requirements of Chapter 14B, including Sections 14B.20.

Attachment E2

Local Business Enterprise Utilization Plan

1. Purpose and Scope. This Local Business Enterprise Utilization Plan (this “LBE Utilization Plan”) governs the Local Business Enterprise obligations of the Workforce Improvement or the Construction Work pursuant to San Francisco Administrative Code Section 14B.20 and satisfies the obligations of Developer, Vertical Developer and their Contractors and Consultants for a LBE Utilization Plan as set forth herein. In the event of any conflict between San Francisco Administrative Code Chapter 14B (“Chapter 14B”) and this attachment, this LBE Utilization Plan shall govern.
2. Roles of Parties. In connection with the design and construction phases of each Construction Work (as defined below) and the operations of each Workforce Improvement, the Project will provide community benefits designed to foster employment opportunities for disadvantaged individuals by offering contracting and consulting opportunities to local business enterprises (“LBEs”). Developer and Vertical shall participate in a local business enterprise program, and the City’s Contract Monitoring Division (“CMD”) will serve the roles as set forth below.
3. Definitions. For purposes of this Attachment, the definitions shall be as follows:
 - a. “CMD” shall mean the Contract Monitoring Division of the City Administrator's Office.
 - b. “Commercially Useful Function” shall mean that the business is directly responsible for providing the materials, equipment, supplies or services to Developer, Vertical Developer, Contractor or professional services firm retained to work on a Construction Work or Workforce Improvement, as the case may be (each, a “Contracting Party”) as required by the solicitation or request for quotes, bids or proposals. Businesses that engage in the business of providing brokerage, referral or temporary employment services shall not be deemed to perform a “commercially useful function” unless the brokerage, referral or temporary employment services are those required and sought by Developer or Vertical Developer or a Contractor or professional services firm. When Developer or Vertical Developer or a Contractor or professional services firm requires and seeks products from an LBE supplier or distributor, no more than sixty percent of the cost of the product shall be credited towards LBE participation goals. If the listed supplier or distributor does not regularly stock or is a specially manufactured item(s), the required product, no more than five percent of the cost of the product shall be credited towards LBE participation goals.
 - c. “Consultant” shall mean a person or company that has entered into a professional services contract for monetary consideration with Developer or Vertical Developer to provide advice or services to Developer directly related to the architectural or landscape design, physical planning, and/or civil, structural or environmental engineering of a Construction Work or Workforce Improvement.

- d. "Construction Work" shall mean: (i) in the case of Horizontal Improvements, construction of all Horizontal Improvements required or permitted to be made to the Project Site during a Phase and to be carried out by Developer under the DDA subject to Chapter 14B; or (ii) in the case of Vertical Improvements, a Vertical Improvement and all tenant improvements therein, except for the construction of any tenant improvements within a leased premises comprised of less than 15,000 square feet in floor area, to be constructed by a Vertical Developer on a Development Parcel pursuant to an applicable Vertical DDA and Parcel Lease.
- e. "Contract(s)" shall mean an agreement, whether a direct contract or subcontract, for Consultant or Contractor services for all or a portion of a Construction Work or Workforce Improvement.
- f. "Contractor" shall mean a person or entity that enters into a direct Contract with Developer or Vertical Developer to build or construct all or a portion of a Construction Work or operate a Workforce Improvement.
- g. "DDA" means the Disposition and Development Agreement between Developer and the City and County of San Francisco, acting by and through the San Francisco Port Commission.
- h. "Developer" has the meaning set forth in the DDA, including any successor during the term of this LBE Utilization Plan.
- i. "Development Parcel" has the meaning set forth in the DDA.
- j. "Excess Credit" shall mean the total cost of all Contracts for a Construction Work awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants that are Small and Micro-LBEs that exceeds the goals set forth in Section 4.
- k. "Horizontal Improvement" has the meaning set forth in the DDA.
- l. "Good Faith Efforts" shall mean procedural steps taken by Developer, Vertical Developer, Contractor or Consultant with respect to the attainment of the LBE participation goals, as set forth in Section 6 below.
- m. "Local Business Enterprise" or "LBE" means a business that is certified as an LBE under Chapter 14B.3.
- n. "LBE Liaison" shall mean Developer's and Vertical Developer's primary point of contact with CMD regarding the obligations of this LBE Utilization Plan. Each prime Contractor(s) shall likewise have a LBE Liaison.

- o. "Parcel Lease" has the meaning set forth in the DDA.
- p. "Phase" has the meaning set forth in the DDA.
- q. "Port" has the meaning set forth in the DDA.
- r. "Project" has the meaning set forth in the DDA.
- s. "Project Site" has the meaning set forth in the DDA.
- t. "Subconsultant" shall mean a person or entity that has a direct Contract with a Consultant to perform a portion of the work under a Contract for a Construction Work or Workforce Improvement.
- u. "Subcontractor" shall mean a person or entity that has a direct Contract with a Contractor to perform a portion of the work under a Contract for a Construction Work or Workforce Improvement.
- v. "Vertical DDA" has the meaning set forth in the DDA.
- w. "Vertical Developer" has the meaning set forth in the DDA.
- x. "Workforce Improvement" shall mean all completed Vertical Improvements, but excluding within: (a) any commercial premises occupying less than 15,000 square feet in floor area, and (b) any residential units therein, subject to Chapter 14B.

4. LBE Participation Goal. Developer and Vertical Developer agree to participate in this LBE Utilization Plan and CMD agrees to work with Developer and Vertical Developer in this effort, as set forth in this LBE Utilization Plan. As long as this LBE Utilization Plan remains in full force and effect, Developer, with respect to the construction of Horizontal Improvements, and Vertical Developer, with respect to the construction of Vertical Improvements, shall make good faith efforts as defined below to achieve an overall LBE participation goal of 20% of the total cost of all Contracts for a Construction Work awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants that are Small and Micro-LBEs, as set forth in Administrative Code Section 14B.8(A) and a participation goal of 10% during the pre-construction phase of the Project.

5. Developer/Vertical Developer Obligations. Developer, with respect to the construction of Horizontal Improvements, and Vertical Developer, with respect to the construction of Vertical Improvements, shall comply with the requirements of this Exhibit E2 as follows: Upon entering into a Contract with a Contractor or Consultant, Developer or Vertical Developer, as applicable, will include each such Contract a provision requiring the Contractor or Consultant to comply with the terms of this Exhibit E2, and setting forth the applicable percentage goal for such Contract, and provide a signed copy thereof to CMD and the Port within 10 business days of execution. Such Contract shall specify the notice information for the Contractor or Consultant to receive notice pursuant to Section 16. Developer and each Vertical Developer shall identify a "LBE Liaison" as its main point of contact for outreach/compliance concerns and shall be available to meet with CMD staff on a regular basis or as necessary regarding the

implementation of this Exhibit E2. If Developer, with respect to Horizontal Improvements, or a Vertical Developer, with respect to construction of the Vertical Improvements, fulfills its obligations as set forth in this Section 5 and otherwise cooperates in good faith at CMD's request with respect to any meet and confer process or enforcement action against a non-compliant Contractor, Consultant, Subcontractor or Subconsultant, then Developer or Vertical Developer, as applicable, shall not be held responsible for the failure of a Contractor, Consultant, Subcontractor or Subconsultant or any other person or party to comply with the requirements of this Exhibit E2.

6. Good Faith Efforts. City acknowledges and agrees that Developer, Vertical Developer, Contractor, Subcontractor, Consultant and Subconsultant shall have the sole discretion to qualify, hire or not hire LBEs. If a Contractor or Consultant does not meet the LBE hiring goal set forth above in Section 5, it will nonetheless be deemed to satisfy the good faith effort obligation of this Section 6 and thereby satisfy the requirements and obligations of this Exhibit E2 if the Contractor, Consultants and their Subcontractors and Subconsultants, as applicable, perform the good faith efforts set forth in this Section 6 as follows:

- a. Advance Notice. Notify CMD and the Port in writing of all upcoming solicitations of proposals for work under a Contract at 15 business days before issuing such solicitations to allow opportunity for CMD to identify and outreach to any LBEs that it reasonably deems may be qualified for the Contract scope of work.
- b. Contract Size. Where practicable, Developer, Vertical Developer, Contractor, Consultant, Subcontractor or Subconsultant will divide the work in order to encourage maximum LBE participation or, encourage joint venturing. The Contracting Party will identify specific items of each Contract that may be performed by Subcontractors.
- c. Advertise. Developer, Vertical Developer, Contractor, Consultant, Subcontractor or Subconsultant will advertise for at least 30 days prior to the opening of bids or proposals, for professional services and contracting opportunities in media focused on small businesses including the Bid and Contract Opportunities website through the City's Office of Contract Administration (<http://mission.sfgov.org/OCABidPublication>) and other local and trade publications, and allowing subcontractors to attend outreach events, pre-bid meetings, and inviting LBEs to submit bids to Developer or Vertical Developer or their respective Prime Contractor or Consultant, as applicable. As practicable, convene pre-bid or pre-solicitation meetings no less than 15 days prior to the opening of bids and proposals to all for LBEs to ask questions about the selection process and technical specifications/requirements. Developer or Vertical Developer may request CMD's permission to award a contract without advertising if the work consists of specialty services or otherwise does not provide opportunities for LBE participation.
- d. CMD Invitation. If a pre-bid meeting or other similar meeting is held with proposed Contractors, Subcontractors, Consultants or Subconsultants, invite

CMD to the meeting to allow CMD to explain proper LBE utilization.

- e. **Public Solicitation.** Developer or Vertical Developer or their respective Prime Contractor(s) and/or Consultants, as applicable, will work with CMD to follow up on initial solicitations of interest by contacting LBEs to determine with certainty whether they are interested in performing specific items in a project.
- f. **Outreach and Other Assistance.** Developer or Vertical Developer or their respective Prime Contractor (s) and/or Consultants, as applicable, will a) provide LBEs with plans, specifications and requirements for all or part of the project; b) notify LBE trade associations that disseminate bid and contract information and provide technical assistance to LBEs. The designated LBE Liaison(s) will work with CMD to conduct outreach to LBEs for all consulting/contracting opportunities in the applicable trades and services in order to encourage them to participate on the project.
- g. **Contacts.** Make contacts with LBEs, associations or development centers, or any agencies, which disseminate bid and contract information to LBEs and document any other efforts undertaken to encourage participation by LBEs.
- h. **Good Faith/Nondiscrimination.** Make good faith efforts to enter into Contracts with LBEs and give good faith consideration to bids and proposals submitted by LBEs. Use nondiscriminatory selection criteria (for the purpose of clarity, exercise of subjective aesthetic taste in selection decisions for architect and other design professionals shall not be deemed discriminatory and the exercise of its commercially reasonable judgment in all hiring decisions shall not be deemed discriminatory).
- i. **Incorporation into contract provisions.** Developer or Vertical Developer shall include in its Contracts provisions that require prospective Contractors and Consultants that will be utilizing Subcontractors or Subconsultants to follow the above good faith efforts to subcontract to LBEs, including overall LBE participation goal and any LBE percentage that may be required under such Contract.
- j. **Monitoring.** Allow CMD Contract Compliance unit to monitor Consultant/Contractor selection processes and, when necessary give suggestions as to how best to maximize LBEs ability to complete and win procurement opportunities.
- k. **Insurance and Bonding.** Recognizing that lines of credit, insurance and bonding are problems common to local businesses, staff will be available to explain the applicable insurance and bonding requirements, answer questions about them, and, if possible, suggest governmental or third party avenues of assistance. Contractor, Subcontractor, Consultant and Subconsultant will work with the Developer, Vertical Developer and CMD in good faith to design and implement for each Horizontal and Vertical Improvement insurance programs

which provides to LBE participating subcontractors access to the required coverage through either the owner, Owner-Controlled Insurance Policy (OCIP), general contractor, Contractor-Controlled Insurance Policy (CCIP), or such other insurance program as may become reasonably commercially available.

- l. **Maintain Records and Cooperation.** Maintain records of LBEs that are awarded Contracts, not discriminate against any LBEs, and, if requested, meet and confer with CMD as reasonably required in addition to the meet and confer sessions described in Section 9 below to identify a strategy to meet the LBE goal;
- m. **Quarterly Reports.** During design and construction, the LBE Liaison(s) shall prepare a quarterly report of LBE participation goal attainment and submit to CMD as required by Section 9 herein; and
- n. **Meet and Confer.** Attend the meet and confer process described in Section 9.

7. **Good Faith Outreach.** Good faith efforts shall be deemed satisfied solely by compliance with Section 6. Contractors and Consultants, and Subcontractors and Subconsultants as applicable shall also work with CMD to identify from CMD's database of LBEs those LBEs who are most likely to be qualified for each identified opportunity under Section 6.b, and following CMD's notice under Section 8.a, shall undertake reasonable efforts at CMD's request to support CMD's outreach identified LBEs as mutually agreed upon by CMD and each Contractor or Consultant and its Subcontractors and Subconsultants, as applicable.

8. **CMD Obligations.** The following are obligations of CMD to implement this LBE Utilization Plan:

- a. During the fifteen (15) business day notification period for upcoming Contracts required by Section 6.b, CMD will work with Developer or its prime Contractor and/or Consultant as applicable to send such notification to qualified LBEs to alert them to upcoming Contracts.
- b. Provide assistance to Contractors, Subcontractors, Consultants and Subconsultants on good faith outreach to LBEs.
- c. Review quarterly reports of LBE participation goals; when necessary give suggestions as to how best to maximize LBEs ability to compete and win procurement opportunities.
- d. Perform other tasks as reasonably required to assist Developer or Vertical Developer or their Contractors, Subcontractors, Consultants and Subconsultants in meeting LBE participation goals and/or satisfying good faith efforts requirements.

9. **Meet and Confer Process.** Commencing with the first Contract that is executed for a Construction Work, and every six (6) months thereafter, or more frequently if requested by either CMD, Developer or a Contractor or Consultant each Contractor and Consultant and the CMD shall engage in an informal meet and confer to assess compliance of such Contractor and Consultants and its Subcontractors and Subconsultants as applicable with this Exhibit E2. When

deficiencies are noted, meet and confer with CMD to ascertain and execute plans to increase LBE participation.

10. Prohibition on Discrimination. Developer and Vertical Developer shall not discriminate in its selection of Contractors and Consultants, and such Contractors and Consultants shall not discriminate in their selection of Subcontractors and Subconsultants against any person on the basis of race, gender, or any other basis prohibited by law. As part of its efforts to avoid unlawful discrimination in the selection of Subconsultants and Subcontractors, Contractors and Consultants will undertake the Good Faith Efforts and participate in the meet and confer processes as set forth in Sections 6 and 9 above.

11. Collective Bargaining Agreements. Nothing in this Exhibit E2 shall be interpreted to prohibit the continuation of existing workforce training agreements or to interfere with consent decrees, collective bargaining agreements, project labor agreement, project stabilization agreement, existing employment contract or other labor agreement or labor contract ("Collective Bargaining Agreements"). In the event of a conflict between this Exhibit E2 and a Collective Bargaining Agreement, the terms of the Collective Bargaining Agreement shall supersede this Exhibit E2.

12. Reporting and Monitoring. Each Contractor, Consultant, and its Subcontractors and Subconsultants as applicable shall maintain accurate records demonstrating compliance with the LBE participation goals, including keeping track of the date that each response, proposal or bid that was received from LBEs, including the amount bid by and the amount to be paid (if different) to the non-LBE contractor that was selected, documentation of any efforts regarding good faith efforts as set forth in Section 6. Developer and Vertical Developer shall create a reporting method for tracking LBE participation. Data tracked shall include the following (at a minimum):

- a. Name/Type of Contract(s) let (e.g. Civil Engineering contract, Environmental Consulting, etc.)
- b. Name of prime Contractors (including identifying which are LBEs and non-LBEs)
- c. Name of Subcontractors (including identifying which are LBEs and non-LBEs)
- d. Scope of work performed by LBEs (e.g. under an Architect, an LBE could be procured to provide renderings)
- e. Dollar amounts associated with both LBE and non-LBE Contractors at both prime and Subcontractor levels.
- f. Total LBE participation is defined as a percentage of total Contract dollars.

13. Basis of Compliance:

- a. With regard to Horizontal Improvements, CMD shall determine compliance with this Agreement on a Phase-wide basis and measure compliance by dividing the cost of all Contracts for a Construction Work awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants divided by the total cost of all Contracts awarded to Prime Contractors, Subcontractors, Prime Consultants or Subconsultants for such Construction Work. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a Project-wide basis by giving notice to CMD and the Port of such election not later than the

submission of the penultimate Phase Application. After such election, compliance shall be measured upon the completion of the Project. In each case, once compliance is established, any Excess Credit shall be confirmed by CMD and shall be available for Developer, provided Developer remains a Giants Affiliate, as defined in the DDA, to offset shortfalls elsewhere on the Project Site, provided, however that Excess Credits may only be transferred to Horizontal Improvements that complied with the procedures set forth in Section 6 and at completion are short of attaining the participation levels set forth in Section 4.

- b. With regard to Vertical Improvements, CMD shall determine compliance with this Agreement on an individual Vertical Improvement basis and measure compliance by dividing the cost of all Contracts for a Construction Work awarded to LBE Prime Contractors, Subcontractors, Prime Consultants or Subconsultants divided by the total cost of all Contracts awarded to Prime Contractors, Subcontractors, Prime Consultants or Subconsultants for such Vertical Improvement. Notwithstanding anything to the contrary, Developer may, at its election, require that compliance be determined on a Phase-wide basis, as Developer plans to develop each Vertical Improvement in such Phase, by giving notice to CMD and the Port of such election during the submission of a Phase Application. After such election, compliance shall be measured upon the completion of the Phase, as applicable. In each case, once compliance is established, any Excess Credits shall be confirmed by CMD and shall be available to the Vertical Developer of the Vertical Improvement that generated such Excess Credits to transfer to another Vertical Developer, provided that such Vertical Developer is a Giants Affiliate, as defined in the DDA, to offset shortfalls in the same trade on Vertical Improvements elsewhere on the Project Site, provided, however that Excess Credits may only be transferred to Vertical Improvements that complied with the procedures set forth in Section 6 and at completion are still short of attaining the participation levels set forth in Section 4.

14. Workforce Improvement Operations. Each Vertical Developer will use good faith efforts to hire LBEs for ongoing service contracts within Workforce Improvements and advertise such contracting opportunities with CMD except to the extent impractical or infeasible. If a master association is responsible for the operation and maintenance of publicly owned improvements within the Project Site, CMD shall refer LBEs to such association for consideration with regard to contracting opportunities for such improvements. Such association will consider in good faith such LBE referrals, but hiring decisions shall be entirely at the discretion of such association.

15. Monitoring and Enforcement. CMD shall both monitor and enforce the standards and requirements, including the good faith efforts, of this Program. CMD Compliance Officers shall schedule meetings with the LBE Liaison(s) through the term of this Program to promote consistent communication and practice.

16. Written Notice of Deficiencies. If based on complaint, failure to report, or other cause, the CMD has reason to question the good faith efforts of a Developer, Vertical Developer, Contractor, Subcontractor, Consultant or Subconsultant, then CMD shall provide written notice

to Developer or Vertical Developer, as applicable, each affected prime Contractor or Consultant and, if applicable, also to its Subcontractor or Subconsultant. The prime Contractor or Consultant and, if applicable, the Subcontractor or Subconsultant, shall have a reasonable period, based on the facts and circumstances of each case, to demonstrate to the reasonable satisfaction of the CMD that it has exercised good faith to satisfy its obligations under this Exhibit E2. When deficiencies are noted CMD staff will work with the appropriate LBE Liaison(s) to remedy such deficiencies.

17. Remedies. Notwithstanding anything to the contrary in the DDA, the following process and remedies shall apply with respect to any alleged violation of this Exhibit E2:

Mediation and conciliation shall be the administrative procedure of first resort for any and all compliance disputes arising under this Exhibit E2. The Director of CMD shall have power to oversee and to conduct the mediation and conciliation.

Non-binding arbitration shall be the administrative procedure of second resort utilized by CMD for resolving the issue of whether a Developer, Contractor, Consultant, Subcontractor or Subconsultant discriminated in the award of one or more LBE Contracts to the extent that such issue is not resolved through the mediation and conciliation procedure described above. Obtaining a final judgment through arbitration on LBE contract related disputes shall be a condition precedent to the ability of the City or Developer, Contractor, Consultant, Subcontractor or Subconsultant to file a request for judicial relief.

If a Developer, Vertical Developer, Contractor, Consultant, Subcontractor or Subconsultant is found to be in willful breach of the obligations set forth in this Exhibit E2, assess against the noncompliant Developer, Vertical Developer, Contractor, Consultant, Subcontractor or Subconsultant liquidated damages not to exceed \$25,000 or 5% of the Contract, whichever is less, for each such willful breach. In determining the amount of any liquidated damages to be assessed within the limits described above, the arbitrator or court of competent jurisdiction shall consider the financial capacity of Developer, Vertical Developer, Contractor, Consultant, Subcontractor or Subconsultant. For purposes of this paragraph, "willful breach" means a knowing and intentional breach. For all other violations of this Exhibit E2, the sole remedy for violation shall be specific performance.

18. Duration of this Agreement. This Exhibit E2 shall terminate (i) at the expiration of the Development Agreement, as defined in the DDA, and; (ii) for any Construction Work that has commenced before the termination of the Development Agreement, but is not yet complete upon the termination of the Development Agreement, upon the completion of such Construction Work. Upon such termination, this Exhibit E2 shall be of no further force and effect.

19. Notice. All notices to be given under this Exhibit E2 shall be in writing and sent by: certified mail, return receipt requested, in which case notice shall be deemed delivered three (3) business days after deposit, postage prepaid in the United States Mail, a nationally recognized overnight courier, in which case notice shall be deemed delivered one (1) business day after

deposit with that courier, or hand delivery, in which case notice shall be deemed delivered on the date received, all as follows:

If to CMD:

Attn: _____

If to the Port:

Attn: _____

If to Developer:

Attn: _____

If to Vertical Developer:

Attn: _____

If to Contractor:

Attn: _____

If to Consultant:

Attn: _____

Any party may change its address for notice purposes by giving the other parties notice of its new address as provided herein. A "business day" is any day other than a Saturday, Sunday or a day in which banks in San Francisco, California are authorized to close.

**RECORDING REQUESTED BY
AND WHEN RECORDED MAIL TO:**

Angela Calvillo
Clerk of the Board of Supervisors
City Hall, Room 244
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Exempt from recording fees under
Government Code § 27383.

Recorder's Stamp

**DEVELOPMENT AGREEMENT
BETWEEN
THE CITY AND COUNTY OF SAN FRANCISCO
AND
SEAWALL LOT 337 ASSOCIATES, LLC
RELATING TO DEVELOPMENT OF CITY LAND
UNDER THE JURISDICTION OF
THE PORT COMMISSION OF SAN FRANCISCO
FOR THE MISSION ROCK PROJECT
(SWL 337 AND PIER 48)**

[Insert Reference Date]

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APPENDIX

Consent To Development Agreement (Port Commission)

Consent To Development Agreement (SFMTA) (with Transportation Plan and TDM Program attachments)

Consent To Development Agreement (SFPUC)

EXHIBITS

DA Exhibit A:	Project Site (legal description and diagram)
DA Exhibit B:	Site Plan
DA Exhibit C:	Project Approvals
DA Exhibit D:	Chapter 56 as of the Reference Date
DA Exhibit E:	Infrastructure Plan

DEVELOPMENT AGREEMENT
(Mission Rock Project at
Seawall Lot 337 and Pier 48)

This **DEVELOPMENT AGREEMENT** (“**Development Agreement**”) is between the City and County of San Francisco, a political subdivision and municipal corporation of the State of California (including its agencies and departments, the “**City**”), and Seawall Lot 337 Associates, a Delaware limited liability company (“**Developer**”) (each, a “**Party**”), and is dated as of the Reference Date in relation to the proposed Mission Rock Project (the “**Project**” or “**Mission Rock**”) at Seawall Lot 337 (“**SWL 337**”) and Pier 48 (collectively, the “**Project Site**”). This Development Agreement is entered into in conjunction with that certain Disposition and Development Agreement (the “**DDA**”) between the City’s acting by and through the San Francisco Port (the “**Port Commission**” or “**Port**”) and Developer. The DDA, establishes financial and other rights and obligations of the Port and Developer for the Project, some of which will be implemented as described in other Transaction Documents.

RECITALS

A. The Port owns about 7 miles of tidelands and submerged lands along San Francisco Bay, including approximately 28 acres that include the Project Site, under Port jurisdiction in the central waterfront area of San Francisco. The Project Site is bounded generally by China Basin to the north, San Francisco Bay to the east, Mission Rock Street to the south, and Third Street to the west, and is more particularly described in **DA Exhibit A (Project Site)**.

B. The City and Developer have negotiated this Development Agreement to vest in Developer and its successors certain entitlement rights to develop the Project at the Project Site.

C. Seawall lots are tidelands that were filled and cut off from the waterfront by the construction of the great seawall in the late 19th and early 20th centuries, and by the construction of the Embarcadero roadway which lies, in part, over a portion of the great seawall. Seawall Lot 337, the largest of the designated seawall lots, is located just south of China Basin and for years has been used as a surface parking lot.

D. Through legislation, commonly known as SB 815, as amended by AB 2797, the California Legislature found that the revitalization of Seawall Lot 337 and Pier 48 is of particular importance to the State of California. Under SB 815, the Port is authorized to ground lease portions of the Project Site to permit development of improvements that may be used for non-trust uses to enable higher economic development and revenues. Some of the revenues from these leases will be advanced initially to pay for infrastructure serving the Project Site, then repaid with project-generated special taxes and property taxes. The Port will use revenues from leases permitting non-trust uses, as well as its return on funds advanced for infrastructure investment, to preserve its historic resources and for other public trust consistent uses permitted under the state legislation.

E. Following a public solicitation process to implement goals and objectives developed through a multi-year community process, the Port Commission awarded Developer the opportunity to negotiate exclusively for the lease, construction, and operation of the Project

Site in 2010. Negotiations resulted in a Term Sheet that the Port Commission and the Board of Supervisors endorsed in 2013.

F. The Project will be a new mixed-use neighborhood created on a site now used principally to provide parking for AT&T Park. The Project will complement and link Mission Bay to the urban fabric of the City. At build-out, the Project, including Pier 48, would include approximately 3,600,000 gsf of above-grade development and create approximately 8 acres of new and expanded parks and shoreline access.

G. The SWL 337 portion of the Project will be divided into 12 Development Parcels identified as Parcels A through C, D1, D2, and E through K (each, a “**Development Parcel**”), as shown on the Site Plan (**DA Exhibit B**). The Project will be developed in Phases, consisting of one to four Development Parcels each, as more particularly described in the DDA. Eleven of the parcels will provide a mix of commercial/office, retail, and market rate and affordable residential uses. The precise combination of uses will be determined by market demands as the Project progresses. A parking facility will be built on the twelfth Development Parcel, Parcel D2, and an additional underground parking garage may be built (as a thirteenth parcel), under the New Mission Rock Square. The parking garage will serve the new development and other nearby uses, including San Francisco Giants baseball games and other events at AT&T Park. Most new buildings will have ground floor retail or neighborhood-serving uses.

H. Developer is the master developer for the Project Site and is responsible for subdividing and improving the Project Site with Horizontal Improvements needed or desired to serve vertical development. In accordance the DDA, the Port and Developer will enter into the Master Lease for the Project Site (except Pier 48). Under the DDA, Developer has an Option to develop Vertical Improvements on developable parcels known as Option Parcels. Each Development Parcel that the Port conveys to a Vertical Developer, pursuant to a Parcel Lease, will be released from the Master Lease. Horizontal and Vertical development of the Project will, as applicable, conform to the provisions of the Parcel Lease and SUD, which refers to the Design Controls, and other applicable DA Requirements, including the Infrastructure Plan and other Regulatory Requirements.

I. The Pier 48 part of the Project will be conveyed by the Port under a separately negotiated ground lease with its own development schedule. The Port and Developer will work cooperatively to identify a development plan and tenant at Pier 48 that will include a mix of uses to meet public trust requirements, including continued maritime operations on the south apron and public access. Prior to rehabilitation and renovation of Pier 48 for new uses, Developer will enter into an interim lease of Pier 48 for continued use for parking, events, and other compatible miscellaneous uses.

J. On November 3, 2015, San Francisco voters approved the *Mission Rock Affordable Housing, Parks, Jobs and Historic Preservation Initiative* (Proposition D), which authorized increased height limits on SWL 337 and established a City policy to encourage development of the Project Site with the major features listed below. Proposition D specifically provides that it is intended to encourage and implement the lease and development of the Project Site as described in SB 815 to support the purposes of the Burton Act, especially the preservation of historic piers and historic structures and construction of waterfront plazas and open space.

K. The Project is the culmination of many years of community-based planning and coordination with State Regulatory Agencies. The Project will create a vibrant mixed-use community, woven into the fabric of the surrounding Mission Bay and South Beach neighborhoods, without displacing any current residents or businesses. The Project will include between 1,000 and 1,950 new housing units, nearly all of which are expected to be rental and 40% of which will be affordable to low and middle income households.

L. The Project will create approximately 8 acres of major new and expanded parks, pedestrian plazas and rehabilitated public piers and wharves, and will also provide a dynamic range of space for shops, restaurants, cafés, neighborhood-serving retail uses, such as a grocery store, and community spaces as well as commercial/office and light industrial space.

M. The Project will implement a Sustainability Strategy that provides leadership in long-term sustainability planning and design. Resilient design strategies will be implemented to respond to climate change and resulting sea level rise. The development of the under-utilized Project Site will generate significant revenues to the City and its Port, estimated at more than \$1 billion over the life of Mission Rock, including increased rent payable to the Port of San Francisco, increased property, parking and sales taxes, and development fees, as described below.

N. The Project will create an estimated 13,500 temporary construction jobs and 11,000 permanent jobs on and off-site. Planning, design, and construction work for the Project will provide substantial contracting opportunities for local contractors and professional service firms as well as many businesses, employers, and organizations.

O. To strengthen the public planning process, encourage private participation in comprehensive planning, and reduce the economic risk of development, the Legislature of the State of California adopted the Development Agreement Statute, which authorizes the City to enter into a development agreement with any person having a legal or equitable interest in real property regarding the development of such property. Pursuant to the Development Agreement Statute, the City adopted Administrative Code Chapter 56 establishing procedures and requirements for entering into a development agreement pursuant to the Development Agreement Statute. The Parties are entering into this Development Agreement in accordance with the Development Agreement Statute and Chapter 56. This Development Agreement is consistent with the requirements of Section 65865.2 of the Development Agreement Statute, which requires a development agreement to state its duration, permitted uses of the property, the density and intensity of use, the maximum height and size of proposed buildings, and provisions for reservation or dedication of land for public purposes.

P. The City has determined that the development of the Project in accordance with this Development Agreement will provide additional benefits to the public that could not be obtained through application of existing City ordinances, regulations, and policies. In addition to the significant housing, jobs, urban revitalization, and economic benefits to the City and Port from the Project. Major additional public benefits to the City from the Project include:

(1) an increase in affordable housing that exceeds that otherwise required and is anticipated to equal 40% of the total market-rate housing for the Project;

- (2) a robust workforce commitment;
- (3) a commitment for opportunities for local businesses to participate in the economic opportunities of the Project;
- (4) a Project sustainability strategy to enhance livability, health and wellness, mobility and connectivity, climate protection, resource efficiency and ecosystem stewardship;
- (5) implementing strategies for protection from sea level rise, and
- (6) eight acres of new and expanded parks and other public spaces, including expanded waterfront access and extension of the blue greenways.

Q. It is the intent of the Parties that all acts referred to in this Development Agreement be accomplished in a way as to fully comply with the California Environmental Quality Act (“**CEQA**”), the CEQA Guidelines, and chapter 31 of the Administrative Code (collectively the “**CEQA Laws**”), and the Existing City Laws, including Planning Code section 291 (Mission Rock Height and Bulk District) and the Mission Rock SUD Amendments. This Development Agreement does not limit the City’s obligation to comply with applicable environmental law, including CEQA, before taking any discretionary action regarding the Project, or the Developer’s obligation to comply with all applicable Regulatory Requirements in connection with the development of the Project.

R. On October 5, 2017, the Planning Commission reviewed and considered the proposed final environmental impact report (the “**Final EIR**”) for the Project in Planning Department File No. **XXXX**, consisting of the draft environmental impact report and the “comments and responses” document on **XXXX**. By Motion **XXXX**, the Planning Commission certified the completion of the Final EIR in compliance with CEQA based on its findings that: (1) the contents of the report and the procedures through which the report were prepared, publicized, and reviewed comply with the CEQA Laws; (2) the proposed report reflects the City’s independent judgment and analysis, is adequate, accurate, and objective; and (3) the Comments and Responses document contains no significant revisions to the draft report.

S. On October 5, 2017, the Planning Commission held a public hearing on this Development Agreement and the Project, duly noticed and conducted under the Development Agreement Statute and Chapter 56. Following the public hearing, the Planning Commission adopted findings under CEQA, determining among other things that the Final EIR thoroughly analyzes the Project, and the Mitigation Measures are designed to mitigate significant impacts to the extent they are susceptible to feasible mitigation (collectively, the “**CEQA Findings**”), adopted the mitigation monitoring and reporting program (the “**MMRP**”), and further determined in General Plan Consistency Findings that the Project and this Development Agreement will, as a whole, and taken in their entirety, be consistent with the objectives, policies, general land uses, and programs specified in the General Plan, and the Planning Principles set forth in section 101.1 of the Planning Code. The information in the Final EIR and the CEQA Findings has been considered by the City in connection with this Development Agreement.

T. The Planning Commission also approved the Design Controls and recommended that the Board of Supervisors adopt the Planning Code amendments establishing the Mission Rock SUD Amendments.

U. The Port Commission also adopted CEQA Findings, including a Statement of Overriding Considerations, adopted the MMRP, and approved: (1) the Project; (2) the DDA; (3) the form of Master Lease by which Developer will hold the Project Site (except Pier 48) over the course of development and form of Parcel Lease by which the Port will convey Option Parcels to Vertical Developers (as defined in the DDA); (4) amendments to the Waterfront Plan; (5) the Design Controls; and (6) related actions to implement the Project by Resolution Nos. **XXXX** on **XXXX**, with recommendations to the Board of Supervisors for appropriate approvals.

V. On _____ the Board of Supervisors, having received the Planning Commission's recommendations, held a public hearing on this Development Agreement pursuant to the Development Agreement Statute and Chapter 56. Following the public hearing, the Board [affirmed the decision of the Planning Commission to certify the EIR and rejected the appeal of the EIR certification], made CEQA Findings as required by CEQA, including adoption of a Statement of Overriding Considerations, and approved this Development Agreement, incorporating by reference the General Plan Consistency Findings.

W. The Board of Supervisors considered the information in the Final EIR and adopted the CEQA Findings as its own in connection with approval of this Development Agreement and related actions to implement the Project by Ordinance Nos. **XXXX** and _____, and Resolution Nos. **XXXX** on **XXXX** conditioned on any additional approvals to the extent required from other Regulatory Agency.

X. The Project Approvals listed on **DA Exhibit B**, [which will be final on the DA Reference Date], authorize Developer to proceed with the Project in accordance with the Project Requirements under the DDA, which include this Development Agreement.

AGREEMENT

1. APPENDIX; DEFINITIONS

The attached Appendix is an integral part of this Development Agreement. The Appendix includes Standard Provisions and Rules of Interpretation (App. Part A), and relevant terms defined in other Transaction Documents (App. Part B). Terms not defined in this Development Agreement have the meanings ascribed to them in the primary Transaction Documents as specified Appendix Part B.

In addition to the definitions in the preamble and Recitals above, the following terms specific to this Development Agreement have the meanings given to them below or elsewhere in this Development Agreement or in the Appendix as indicated. In the event of any conflict between any definition in App. Part B and the definitions in this Section, the Appendix will prevail.

“**Acquiring Agencies**” is defined in Appendix.

“**Acquisition Agreement**” means the Acquisition and Reimbursement Agreement between the Developer and Port in the form attached to the Financing Plan.

“Adequate Security” is defined in the Appendix.

“Administrative Fee” (as defined in the Appendix) means: (i) a City fee imposed citywide (or portwide, for Port fees) in effect and payable when a developer submits an application for any permit or approval intended to cover only the estimated actual costs to the City or the Port of processing an application, addressing any related hearings or other actions, and inspecting work under the permit or approval (and based on a published fee schedule); and (ii) amounts that Developer or a Vertical Developer is required to pay to the City or the Port under any Transaction Document to reimburse the City or the Port for its administrative costs in processing applications for any permits or approvals required under the DA Requirements.

“Administrative Fee” **excludes** any Impact Fee or Exaction and Other City Costs subject to reimbursement under the DDA.

“Aggrieved Party” as defined in the Appendix means the Party alleging that a Breaching Party has committed a DA Default or is in Material Breach under the terms of this Development Agreement.

“Annual Review” is defined in **Subsection 8.1(a)** (Statutory Provision).

“Annual Review Date” is defined in **Subsection 8.1(c)** (Planning Director’s Discretion).

“Applicable Lender Protections” means the provisions under DDA Art. 19 (Lender Rights), [VDDA Art. ____ (Financing Rights of Lenders)], or [Ground Lease Art. ____ (Mortgage)] that protect the rights of Lenders making loans to Borrowers to finance improvements at the Project Site.

“Applicable Law” means, individually or collectively, any law that applies to development, use, or occupancy of or conditions at the Project Site.

“Applicable Port Laws” means the Burton Act as amended by Senate Bill 815 and Assembly Bill 2979, the statutory trust imposed by the Burton Act, Charter Appendix B, and the common law public trust for navigation, commerce, and fisheries.

“Assessor” is defined in the Appendix.

“Borrower” is defined in the Applicable Lender Protections.

“Burton Act” means Chapter 1333 of the Statutes of California, 1968, as amended.

“CEQA” is an acronym for the California Environmental Quality Act (Cal. Pub. Res. Code §§ 21000-21189.3).

“CEQA Findings” means findings that the Planning Commission, the Port Commission, the Board of Supervisors, and Other City Agencies adopt for the Project under CEQA Laws.

“CEQA Guidelines” means the California Guidelines for Implementation of CEQA (Cal. Admin. Code §§ 15000-15387).

“CEQA Laws” is defined in Recital F.

“CEQA Procedures” means Administrative Code chapter 31.

“CFD” is defined in the Appendix.

“Chapter 56” means Administrative Code chapter 56, which the Board of Supervisors adopted under the DA Statute, as amended by the DA Ordinance.

“Chief Harbor Engineer” is defined in the Appendix.

“City” is defined in the Appendix, subject to Section 2.5(c) (Port Obligations) for the purposes of this Agreement.

“City Charter” is defined in the Appendix.

“City Law” means any City ordinance or Port code provision and implementing regulations and policies governing zoning, subdivisions and subdivision design, land use, rate of development, density, building size, public improvements and dedications, construction standards, new construction and use, design standards, permit restrictions, development impacts, terms and conditions of occupancy, and environmental guidelines or review at the Project Site, including, as applicable: (i) the Waterfront Plan and the Design Controls; (ii) the Construction Codes, applicable provisions of the Planning Code, including section 249.XXXX and the Zoning Maps, the Subdivision Code, the Administrative Code, and the General Plan; (iii) local Environmental Laws and the Health Code; and (iv) the Other City Requirements.

“City Party” is defined in the Appendix.

“citywide” means all real property within the territorial limits of San Francisco, not including any property owned or controlled by the United States or the State that is exempt from Existing City Laws.

“Commencement of Construction” is defined in **Subsection 4.2(a)** (Obligation to Provide).

“Community Benefits” is defined in **Subsection 4.1(c)** (Community Benefits).

“conflict” means any circumstance described in **Subsection 5.3(b)** (Circumstances Causing Conflict).

“Consent” is defined in the Appendix.

“Construction Codes” means the Port Building Code and all Municipal Codes regulating construction of new Improvements and alteration or rehabilitation of existing Improvements, including the International Building Code, the California Building Code,

and other uniform construction codes to the extent incorporated and as modified by the Port Commission or the Board of Supervisors.

“**Construction Permit**” is defined in the Appendix.

“**DA Assignment**” is defined in **Section 12.1** (DA Successors’ Rights).

“**DA Default**” is defined in **Subsection 9.2(a)** (DA Defaults).

“**DA Effective Date**” is defined in **Section 2.1** (Effective Date).

“**DA Ordinance**” means Ordinance No. **XXXX** adopting this Development Agreement, incorporating by reference the General Plan Consistency Findings, and authorizing the Planning Director to execute this Development Agreement on behalf of the City.

“**DA Requirements**” is defined in **Subsection 5.2(a)** (Agreement to Follow).

“**DA Statute**” means California Government Code sections 65864-65869.5.

“**DA Successor**” is defined in **Section 12.1** (DA Successors’ Rights).

“**DA Term**” is defined in **Section 2.2** (DA Term).

“**Design Controls**” means the Mission Rock Design Controls adopted by the Planning Commission and the Port Commission, as may be amended periodically, and incorporated in the SUD Amendments.

“**Development Agreement**” means this Development Agreement.

“**Development Agreement Statute**” means California Government Code sections 65864-65869.5

“**Director of Public Works**” is defined in the Appendix.

“**Director of Transportation**” is defined in the Appendix.

“**Environmental Laws**” is defined in the Appendix.

“**Environmental Regulatory Agency**” is defined in the Appendix.

“**Exaction**” is defined in the Appendix and means any requirement to provide services or dedicate land or Improvements that the City imposes as a condition of approval to mitigate the impacts of increased demand for public services, facilities, or housing caused by a development project, which may or may not be an impact fee governed by the Mitigation Fee Act, including a fee paid in lieu of complying with a City requirement. “*Exaction*” *excludes Mitigation Measures* and federal, state or regional impositions.

“**Excusable Delay**” is defined in the Appendix.

“Existing City Laws” means any City Laws in effect on the DA Effective Date.

“Federal or State Law Exception” is defined in **Subsection 5.6(a)** (City’s Exceptions).

“final” is defined in the Appendix.

“Financing Documents” is defined in the Appendix.

“Foreclosure Purchaser” is defined in **Section 10.4**.

“Future Approval” means any Regulatory Approval required after the Reference Date to implement the Project or to begin Site Preparation or construction of Improvements.

“General Plan Consistency Findings” means findings made in Motion No. **XXXX** by the Planning Commission **[Add specifics if necessary to conform to motion]** that the Project as a whole and in its entirety is consistent with the objectives, policies, general land uses, and programs specified in the General Plan and the planning principles in Planning Code section 101.1.

“horizontal development” is defined in the Appendix.

“horizontal improvements” means public capital facilities and infrastructure built or installed in or to serve the Project Site, as described in the Infrastructure Plan, including Site Preparation, Public Spaces, Public ROWs and Utility Infrastructure, but excluding Vertical Improvements.

“Housing Plan” means **DDA Exhibit B2**.

“Impact Fee” means any fee that the City imposes as a condition of approval to mitigate the impacts of increased demand for public services, facilities, or housing caused by the development project that may or may not be an impact fee governed by the Mitigation Fee Act, including any in-lieu fee. *“Impact Fee” excludes any Administrative Fee, school district fee, or federal, state, or regional fee, tax, special tax, or assessment.*

“Improvement” is defined in the Appendix.

“Improvement Plan” is defined in the Appendix.

“Inclusionary Unit” is defined in the Housing Plan.

“Infrastructure Plan” is defined in the Appendix and means the Mission Rock Infrastructure Plan attached to this Development Agreement as Exhibit E, including each master utility plan when approved by the applicable City Agency.

“in-lieu fee” is defined in the Appendix and means a fee a developer may pay instead of an existing Impact Fee or satisfying an Exaction.

“Insolvency” is defined in the Appendix.

“Interested Person” means a person that acquires a property interest or security interest in any portion of the Project Site by Vertical DDA, Ground Lease, Assignment and Assumption Agreement, or Permitted Lien.

“Jobs/Housing Linkage Fee” is defined in **Subsection 5.4(b)** (Impact Fees and Exactions).

“Lender” is defined in the Appendix and used in the Applicable Lender Protections.

“Litigation Extension” is defined in **Subsection 11.5.1**. (Litigation and Referendum Extensions).

“Map Act” is defined in the Appendix.

“Master Lease” is defined in Recital X.

“Material Change” is defined in **Subsection 5.3(b)** (Circumstances Causing Conflict).

“Material Cost Increase” means a material increase in the hard costs or soft costs of any Horizontal Improvements or Vertical Improvements as applicable.

“Mission Rock Inclusionary Housing Fee” is defined in **Subsection 5.4(b)** (Impact Fees and Exactions).

“Mitigation Measure” is defined in the Appendix.

“MMRP” is an acronym for Mitigation Monitoring and Reporting Program, a document that contains EIR Mitigation Measures intended to eliminate or reduce to an acceptable level certain adverse environmental impacts of the Project.

“New City Law” means any change to Existing City Laws and Standards or other laws, plans, or policies adopted by the City or the Port or by any voter initiative after the Reference Date that would conflict with the Project Approvals, the Transaction Documents, or Applicable Port Laws as specified in **Subsection 5.3(b)** (Circumstances Causing Conflict). *“New City Law” excludes a regulation, plan, or policy that changes only procedural requirements (but does not change submittal requirements or delay or extend processing times for permits or approvals) of a City Law.*

“Option” means a right of Developer to obtain a Development Parcel under the DDA.

“Option Parcel” means a Development Parcel for which Developer has an Option under the DDA.

“Other City Requirements” is defined in the Appendix.

“Other Regulator” is defined in the Appendix and means a federal, state, or regional body, administrative agency, commission, court, or other governmental or quasi-governmental organization with regulatory authority over Port land, including any Environmental Regulatory Agency. *“Other Regulator” excludes all City Agencies.*

“Parcel Lease” means a lease between the Port and a Vertical Developer of a Development Parcel.

“Phase” means one of the integrated stages of horizontal and vertical development for the Project as shown in the Phasing Plan, as may be revised from time to time in accordance with *DDA art. 3 (Phase Approval)*.

“Phase Approval” means approval by the Port of a Phase Submittal under *DDA art. 3 (Phase Approval)*.

“Phase Improvements” means Horizontal Improvements that are to be constructed in a Phase.

“Phase Submittal” is defined in the Appendix.

“Planning” means the San Francisco Planning Commission, acting by motion or resolution or by delegation of its authority to the Planning Department and the Planning Director.

“Planning Director” is defined in the Appendix.

“Port” or **“Port Commission”** is defined in the Appendix.

“Port Consent” means the Consent of the Port Commission of the City and County of San Francisco that is attached to and incorporated in this Development Agreement.

“Port Director” is defined in the Appendix.

“portwide” means any matter relating to all real property under the jurisdiction of the Port Commission.

“Prior Phase” is defined in the Appendix and means the Phase or Phases for which Developer obtained Phase Approval before any Current Phase.

“Project” is described in the Recitals and more specifically in the Appendix.

“Project Approval” means a Regulatory Approval by a City Agency, including those listed in **DA Exhibit C**, that is necessary to entitle the Project and grant Developer a vested right to begin Site Preparation and construction of Horizontal Improvements, and is expressly intended to include any Transaction Document approved to implement the Project.

“Project Site” is defined in the Appendix.

“Public Health and Safety Exception” is defined in **Subsection 5.6(a)** (City’s Exceptions).

“Public ROWs” is defined in the Appendix and means Horizontal Improvements consisting of public streets, sidewalks, bicycle lanes, and other paths of travel, associated landscaping and furnishings, and related amenities.

“Public Spaces” is defined in the Appendix.

“public trust” is defined in the Appendix.

“Reference Date” means the date stated on the title page, which is the date that the Board of Supervisors last took actions to approve and entitle the Project on the Project Site.

“Regulatory Agency” means a City Agency or Other Regulator with jurisdiction over any aspect of land in the SUD.

“Regulatory Approval” means any motion, resolution, ordinance, permit, approval, license, registration, permit, utility services agreement, Final Map, or other action, agreement, or entitlement required or issued by any Regulatory Agency, as finally approved.

“Regulatory Requirements” is defined in the Appendix.

“RMA” is defined in the Appendix.

“Section 169” means Planning Code sections 169-169.6 describing the City’s TDM Program.

“Section 409” means Planning Code section 409, which establishes citywide reporting requirements, timing, and mechanisms for annual adjustments to Impact Fees.

“Services CFD” is defined in the Appendix.

“Services Special Taxes” is defined in the Appendix.

“SFMTA Consent” means the Consent of the Municipal Transportation Agency of the City and County of San Francisco that is attached to and incorporated in this Development Agreement.

“SFPUC” is an acronym for the San Francisco Public Utilities Commission.

“SFPUC Consent” means the Consent of the Public Utilities Commission of the City and County of San Francisco that is attached to and incorporated in this Development Agreement.

“SFPUC General Manager” is defined in the Appendix.

“State” is defined in the Appendix.

“Subdivision Map” is defined in the Appendix.

“Substantial Completion” is defined in the Appendix.

“successors” means heirs, successors (by merger, consolidation, or otherwise), assigns, and all persons or entities acquiring any portion of or any interest in the Project Site by sale, operation of law, or in any other manner.

“Successor Default” is defined in **Subsection 12.3(d)** (No Cross-Default).

“SUD Amendments” is an acronym used to refer to the Mission Rock Special Use District created by Planning Code section 249.80 and related zoning maps setting forth zoning and other land use limitations for the Project Site.

“Sustainability Plan” refers to DDA Exhibit [B4].

“Tax Increment” is defined in the Appendix.

“TDM Plan” means Developer’s Transportation Demand Management Plan, prepared in accordance with Mitigation Measure M-AQ-2.3 and included in Developer’s Transportation Program.

“TDM Program” means the City’s Transportation Demand Management Program, which is described in Section 169.

“Tentative Map” is defined in the Appendix.

“Transaction Documents” [solely for the purpose of this Development Agreement, means any of the following, individually or collectively:

- (i) the DDA, including the Financing Plan and implementing agreements and plans referred to in **Subsection 4.1c** (Community Benefits);
- (ii) each Assignment and Assumption Agreement governing a Transferee’s rights and obligations for the Project;
- (iii) the ICA; and
- (iv) this Development Agreement.] [is defined in the Appendix]

“Transaction Documents” exclude forms attached to DDA and approved by the Project Approvals.

“Transfer” is defined in the Appendix.

“Transferee” is defined in the Appendix.

“Transportation Fee” is defined in **Subsection 5.4(b)** (Impact Fees and Exactions).

“Transportation Plan” refers to *DDA Exh B5*.

“Utility Infrastructure” means Horizontal Improvements for utilities serving the Project Site that will be under SFPUC or Port jurisdiction when accepted.

“Utility Infrastructure” excludes telecommunications infrastructure and any privately-owned utility improvements.

“Utility Related Mitigation Measure” is defined in the Appendix.

“**Vertical DDA**” is defined in the Appendix.

“**vertical developer**” is defined in the Appendix and means a person that acquires a Development Parcel from the Port under a Vertical DDA for the development of Vertical Improvements.

“**Vertical Development**” is defined in the Appendix.

“**Vertical Improvement**” is defined in the Appendix and means a new building that is built or a Historic Building that is rehabilitated at the Project Site.

“**Vested Elements**” is defined in **Subsection 5.1(b)** (Vested Elements).

2. CERTAIN TERMS

2.1. Effective Date. Pursuant to Administrative Code section 56.14(f), this Development Agreement will be effective on the later of the date that: (a) the Parties fully execute and deliver their respective counterparts to each other; and (b) the DA Ordinance is effective and operative (“**Reference Date**”). When the Reference Date is determined, the City will provide or substitute title page that specifies the date.

2.2. DA Term.

2.2.1 Generally. The term of this Development Agreement will begin on the DA Reference Date and continue through the DDA Term, including any extensions of the DDA Term including for any Litigation Extension, and any periods of Excusable Delay under this Development Agreement or under the DDA, unless earlier terminated (the “**DA Term**”).

(a) Horizontal Development.

(i) If the DDA Term is extended, expires, or terminates as to any portion of a Phase, the Project or Project Site, the DA Term will extend, expire or terminate as to the same portion of the Phase or the Project Site automatically, without any action of the Parties.

(ii) When the DDA Term expires or is terminated as to the entire Project and the Project Site, the DA Term will expire or terminate automatically, without any action of the parties.

(b) Vertical Development. When a Vertical DDA is extended, expires or is terminated as to a Vertical Development Parcel and a Vertical DDA executed for a Development Parcel, the DA Term will expire, extend or terminate as to the Vertical Development Parcel automatically without any action of the Parties.

2.2.2 Subdivision Maps. The term of any tentative Subdivision Map and any subsequent subdivision map shall be for the longer of: (i) the DA Term (as described above and as it relates to the applicable parcel); or (ii) the term otherwise allowed under the Subdivision Map Act. The term of a subsequent tentative map that is approved less than five years before the DA Term ends will be extended for the maximum period permitted under Subdivision Code section 1333.3(b).

2.3. Relationship to DDA.

(a) DDA Parameters. The City has approved this Development Agreement and granted other Project Approvals described in **DA Exhibit C** to entitle the Project. This Development Agreement is a Transaction Document under the DDA, and the Development Agreement and the DDA are included in all references to the Transaction Documents. This Development Agreement incorporates by reference the DDA, including all exhibits, some of which describe certain public benefits that Developer is required to provide and obligations that Developer is required to perform as more fully described in the DDA, and as more particularly described in **Article 4** (Developer Obligations) below.

(b) Port Obligations. References in this Development Agreement to obligations of the “City” include the Port and Other City Agencies, unless specifically and unambiguously stated otherwise. References to both City and the Port are intended to emphasize the Port’s jurisdiction under Applicable Port Laws.

2.4. Recordation and Effect.

(a) Recordation. The Clerk of the Board of Supervisors will have this Development Agreement and any amendment to this Development Agreement recorded in the Official Records within 10 days after receiving fully executed and acknowledged original documents in compliance with section 65868.5 of the DA Statute and Administrative Code section 56.16.

(b) Binding Covenants. In accordance with section 65868.5 of the DA Statute, subject to **Section 12.3** (Effect of Transfer or Assignment), upon recordation of this Development Agreement: (i) it will be binding on the Parties and their respective successors and inure to the benefit of the Parties and their respective successors; and (ii) its provisions will be enforceable as equitable servitudes and will be covenants and benefits running with the land under Applicable Law, including California Civil Code section 1468.

(c) Constructive Notice. This Development Agreement, when recorded: (i) gives constructive notice to every person; and (ii) will be binding on, and burden and benefit, any Interested Person to the extent of its interest in the Project Site.

(d) Nondischargeable Obligations. Obligations under this Development Agreement are not dischargeable in Insolvency.

2.5. Relationship to Project.

(a) Planning as Regulator. Planning is the City Agency primarily responsible for monitoring and enforcing compliance with this Development Agreement. Under the Development Agreement, Planning will act in its regulatory capacity with respect to the development of the Project at the Project Site.

(b) Port as Regulator. Under the DDA, the Port will act in its regulatory capacity to:

(i) issue Construction Permits, certificates of occupancy, and certificates of completion for the Project;

(ii) coordinate Other City Agency review of Vertical Improvements, in accordance with the SUD Amendments and Design Controls, and associated facilities and improvements, and review of Horizontal Improvements and Improvement Plans and Subdivision Maps for the Project Site in accordance with the Infrastructure Plan and the ICA; and

(iii) monitor, in coordination with Other City Agencies, Developer's compliance with Applicable Laws.

(c) Port Obligations. References in this Development Agreement to "City" or City obligations include the Port unless explicitly and unambiguously stated otherwise. References to both the City and the Port are intended to emphasize the Port's jurisdiction under Applicable Port Laws.

(d) Port as Fiduciary. The City has appointed the Port to act in a fiduciary capacity as the IFD Agent responsible for implementing the Acquisition Agreement and the Financing Plan, respectively, and has agreed to appoint the Port to act in a fiduciary capacity as the CFD Agent responsible for implementing the RMA in the formation proceedings for the CFD. In the doing so, City agrees to take actions at the Port request to comply with the Financing Plan attached to the DDA as *DDA Exh. _____*.

(e) Other City Agencies. The Board of Supervisors has contemporaneously approved interagency Transaction Documents for the Project that describe the respective roles of the Port and Other City Agencies.

(i) The ICA between the Port and the City describes the process for City Agency review and approval of Improvement Plans, Subdivision Maps, and other documents and Future Approvals primarily in relation to Horizontal Development for the Project.

(ii) In the Tax Allocation MOU, the City, through the Assessor-Recorder, the Treasurer and Tax Collector, and the Controller, agrees to assist the Port in implementing the public financing for the Project.

3. GENERAL RIGHTS AND OBLIGATIONS

3.1. Project.

(a) Vested Right to Develop. Developer will have the vested right to develop the Project in accordance with and subject to this Development Agreement and the DDA.

(b) Future Approvals. The City, excluding the Port, will consider and process all Future Approvals for the development of the Project in accordance with and

subject to this Development Agreement and the ICA. This Development Agreement, the ICA, and the DDA govern the Port's obligations with respect to Future Approvals.

(c) Project Approvals. The Parties acknowledge that, subject to any required Future Approvals in accordance with this Development Agreement and the DDA, Developer:

(i) has obtained all Project Approvals from the City required to begin construction of the Project; and

(ii) may proceed with the construction and, upon completion, use and occupy the Project Site as a matter of right.

3.2. Timing of Development. The DDA permits the development of the Project Site in Phases. The Phasing Plan and Schedule of Performance, respectively, each as may be modified from time to time in accordance with the DDA, will govern the construction phasing and timing of the Project. The time for performance of obligations under this Development Agreement will be coordinated with the DDA and the Vertical DDAs, and may be extended to the extent permitted under those respective Agreements, including any amendments thereto.

3.3. Horizontal Improvements Dedicated for Public Use. Development of the Project Site requires Horizontal Improvements to support the development and operation of all Development Parcels. Under the DDA, Developer will take all steps necessary to construct and dedicate Horizontal Improvements to public use in accordance with the Subdivision Code as modified by the Development Agreement Ordinance, and as provided in the ICA.

3.4. Private Undertaking. Developer's proposed development of the Project Site is a private undertaking. Under the DDA, the Master Lease, and the Pier 48 Lease, Developer will have possession and control of the Master Lease Premises and Pier 48, subject only to obligations and limitations imposed by the Master Lease, the Pier 48 Lease, the DDA and the DA Requirements, including any amendments thereto.

4. DEVELOPER OBLIGATIONS

4.1. Public Benefits.

(a) Benefits Exceed Legal Requirements. The Parties acknowledge that development of the Project in accordance with the DDA and this Development Agreement will provide public benefits to the City beyond those achievable through existing laws.

(b) Consideration for Benefits.

(i) The City acknowledges that a number of the public benefits would not be achievable without Developer's express agreements under the DDA and this Development Agreement.

(ii) Developer acknowledges that: (1) the benefits it will receive provide adequate consideration for its obligation to deliver the public benefits under the DDA and this Development Agreement; and (2) the Port would not be willing to enter into the DDA, and the City would not be willing to enter into this Development Agreement, without Developer's agreement to provide the public benefits.

(c) **Community Benefits.** Developer will deliver the following public benefits under the DDA and other Transaction Documents in connection with the development of the Project ("**Community Benefits**").

(i) The Project will, at full development, include a total of approximately eight (8) area of new or expanded parks, open spaces, streets, plazas, shoreline area improvements and associated publicly accessible facilities and improvements, as described in **DA Exhibit B** (Project Description), and as more particularly described in the Infrastructure Plan and the Design Controls.

(ii) At least 40% of the Residential Units developed at the Project Site will be Inclusionary Units affordable to low- and moderate-income households in compliance with the Housing Plan.

(iii) Vertical Developer will pay a fee specific to the Project Site in lieu of the City's Transportation Sustainability Fee, which SFMTA will apply towards transit, bicycle, and pedestrian improvements consistent with Planning Code section 411A.7, including improvements that will improve transportation access and mobility in the surrounding neighborhoods. Developer and vertical developer will also implement the Transportation Demand Management Plan (the "**TDM Plan**"), in accordance with the MMRP, to reduce estimated one-way vehicle trips by at least 20%.

(iv) As described in the Sustainability Strategy, Developer may develop the Project Site with sustainable measures as described in the Sustainability Strategy, and in accordance with the Design Controls, Infrastructure Plan and TDM Plan, to enhance livability, health and wellness, mobility and connectivity, ecosystem stewardship, climate protection, and resource efficiency.

(v) Developer will comply with training and hiring goals for San Francisco residents and formerly homeless and economically disadvantaged individuals for temporary construction and permanent jobs under the Workforce Development Plan, which includes a Local Hire mandatory participation level of 30% per trade consistent with the policy in Administrative Code section 6.22(g)(3)(B).

(vi) Vertical Developers will be required to provide opportunities for local business enterprises to participate in the economic opportunities created by the vertical development of the Project Site in compliance with the LBE Policy.

(vii) A community facilities services district will be established that will provide private funding for long-term management and maintenance of Public Spaces and certain portions of the Public ROW through Services Special Taxes levied on Taxable Parcels.

(viii) Each Vertical Developer of a Commercial Project will pay a Mission Rock jobs/housing equivalency fee that will be used to subsidize development of Inclusionary Units in accordance with the Housing Plan.

(ix) The Project design reflects strategies to respond to anticipated sea level rise.

4.2. Delivery; Failure to Deliver.

(a) Obligation to Provide. Payment or delivery of each of the Community Benefits will be completed with a specific Vertical Improvement or Phase with which it is associated, or as separately described in the DDA, or other Project Approvals, subject to Excusable Delay. Developer's Community Benefits obligations associated with that Vertical Improvement or Phase, and all other rights and obligations of the parties under this Development Agreement, will survive the expiration or termination of this Development Agreement to the date of completion of the applicable Community Benefit. Time is of the essence with respect to the completion of the Community Benefits.

4.3. Conditions to Delivery. Developer's obligation to perform Community Benefits associated with a Phase or Vertical Improvement is expressly conditioned upon each and all of the following conditions precedent:

(a) All Project Approvals will be Finally Granted;

(b) The City, applicable City Agencies and any applicable Other Regulatory Agencies have performed or granted any and all of their respective Future Approvals, actions, approvals or authorizations or issued such permits or licenses required to permit Developer to Commence Construction of the Vertical Improvement to which the Community Benefit applies, and will be final except to the extent that such actions, approvals or authorizations, or permits or licenses have not been performed or granted due to the failure of Developer to timely initiate and then diligently and in good faith pursue such actions, approvals, authorizations or issuances; and

(c) Developer's and the applicable Vertical Developer's respective obligations to deliver required Community Benefits will be excused for the period that an Administrative Delay frustrates their ability to obtain Future Approvals required to begin construction of the Improvements giving rise to the obligation.

4.4. Payment of Planning Costs. Under the DDA, Developer will reimburse the City for Port Costs and Other City Costs, including costs that Planning incurs to implement this Development Agreement, without duplication of Administrative Fees. Planning will comply with DDA § 20.2 (*Port Accounting and Budget*) and ICA § 3.6 (*Cost Recovery*) as a condition to obtaining reimbursement of Planning's costs. More specifically, Planning will provide quarterly

statements for payment to Developer through the Port, which will be responsible for disbursing reimbursement payments from Developer.

4.5. Indemnification of City. Subject to the indemnities provided under the DDA, Developer agrees to indemnify the City Parties from Losses arising directly or indirectly from: (a) any third party claim arising from a default by Developer under this Development Agreement, (b) Developer's failure to comply with any Project Approval, Future Approval or Non-City Regulatory Approval, (c) the failure of any improvements constructed pursuant to the Project Approvals or Future Approvals to comply with any Federal and State Laws, Existing City Laws, or any permitted New City Laws; (d) any accident, bodily injury, death, personal injury or loss or damage to property occurring on the Project Site (or offsite with regard to Horizontal Improvements) in connection with the construction by Developer or its agents or contractors of any improvements pursuant to the Project Approvals or Future Approvals, (e) any dispute between Developer, its contractors or subcontractors relating to construction of any part of the Project, and (f) any dispute between Developer and any Transferee or Vertical Developer relating to any assignment of this Development Agreement or the obligations that run with the land, or any dispute between Developer and any Transferee, Vertical Developer, or other person relating to which Party is responsible for performing certain obligations under this Development Agreement, except to the extent that such indemnity is void or otherwise unenforceable under applicable Law, and except to the extent such Loss is the result of the gross negligence or willful misconduct of City Parties or the breach by any City Party of any Transaction Document. Developer's indemnification obligation under this Section includes an indemnified City Party's reasonable attorneys' fees and related costs, including the cost of investigating any Claims against the City, and will survive the DA Term.

4.6. Costa-Hawkins Waiver.

(a) State Policies. California directs local agencies regulating land use to grant density bonuses and incentives to private developers for the production of affordable and senior housing in the Costa-Hawkins Act (Cal. Gov't Code §§ 65915-65918). The Costa-Hawkins Act prohibits limitations on rental rates for dwelling units certified for occupancy after February 1, 1995, with certain exceptions. Section 1954.52(b) of the Costa-Hawkins Act creates an exception for dwelling units built under an agreement between the owner of the rental units and a public entity in consideration for a direct financial contribution and other incentives specified in section 65915 of the California Government Code.

(b) Waiver. Developer, on behalf of itself and its successors, agrees not to challenge and expressly waives any right to challenge Developer's obligations under the Housing Plan as unenforceable under the Costa-Hawkins Act. Developer acknowledges that the City would not be willing to enter into this Development Agreement without Developer's agreement and waiver under this Section. Developer agrees to include language in substantially the following form in all Assignment and Assumption Agreements and consents to its inclusion in all Parcel Leases and in recorded restrictions for any Development Parcel on which residential use is permitted.

The Development Agreement and the DDA, which includes the Housing Plan, provide regulatory concessions and significant public investment to the Project Site that directly reduce development costs at the Project Site. The regulatory concessions and public investment include a direct financial contribution of net tax increment and other forms of public assistance specified in California Government Code section 65915. These public contributions result in identifiable, financially sufficient, and actual cost reductions for the benefit of Developer and Vertical Developers under California Government Code section 65915. In consideration of the City's direct financial contribution and other forms of public assistance, the parties understand and agree that the Costa-Hawkins Act does not apply to any Inclusionary Unit developed at the Project Site.

4.7. Developer Mitigation Measures. Under the DDA, Developer is obligated to implement Developer Mitigation Measures identified in the MMRP. At Port's request, Planning may agree to undertake monitoring Developer's compliance with specified Developer Mitigation Measures on behalf of Port.

5. VESTING AND CITY OBLIGATIONS

5.1. Vested Rights.

(a) Policy Decisions. By the Project Approvals, the Board of Supervisors and the Port Commission each made an independent policy decision that development of the Project, as described in and as may be modified by the Project Approvals, is in the City's best interests and promotes public health, safety, general welfare, and Applicable Port Laws.

(b) Vested Elements. Developer will have the vested right to develop the Project, including, without limitation, the following elements (collectively, the "**Vested Elements**"):

- (i) proposed land use plan and parcelization;
- (ii) locations and numbers of Vertical Improvements proposed;
- (iii) proposed height and bulk limits, including maximum density, intensity, and gross square footages;
- (iv) permitted uses; and
- (v) provisions for open space, vehicular access, and parking.

(c) Applicable Laws. The Vested Elements are subject to and will be governed as specified in **Subsection 5.2(a)** (Agreement to follow Existing Policy). The expiration of a construction permit or other Project Approval will not limit the Vested

Elements. Developer will have the right to seek and obtain Future Approvals at any time during the DA Term, any of which shall be governed by DA Requirements.

(d) Future Approvals.

(i) Each Future Approval, once granted and final, will be deemed to be a Project Approval that is automatically incorporated in, governed by and vested under this Development Agreement.

(ii) The terms of this Development Agreement on the DA Reference Date will prevail over any conflict with a Future Approval or amendment to a Project Approval, other than this Development Agreement, unless the Parties agree otherwise.

5.2. Existing City Laws.

(a) Agreement to Follow Existing Policy.

(i) The City will process, consider and review all Future Approvals in accordance with the following (collectively the “**DA Requirements**”) (i) the Project Approvals; (ii) the Transaction Documents; (iii) all applicable Existing City Laws, subject to **Section 5.3** (New City Laws).

(ii) The City agrees not to exercise its discretionary authority as to any application for a Future Approval in a manner that would change the policy decisions reflected in the DA Requirements or otherwise prevent or delay development of the Project as approved, subject to **Subsection 5.9(d)** (Effect of Final EIR).

(b) Chapter 56. The text of Chapter 56 on the Effective Date is attached as **DA Exhibit D**. The DA Ordinance contains express waivers and amendments to Chapter 56 consistent with this Development Agreement. Chapter 56, as amended by the DA Ordinance for the Project, is an Existing City Law under this Development Agreement that will prevail over any conflicting amendments to Chapter 56 unless Developer elects otherwise under **Subsection 5.3(c)** (Developer Election).

(c) Mission Rock TDM Program.

(i) Section 169 is excluded from Existing City Laws in accordance with the Board of Supervisors’ strong preference that Development Agreements should include similar provisions that meet the goals of the TDM Program. (Planning Code § 169(h))

(ii) Mitigation Measure M-AQ-2.3 requires “a Transportation Demand Management (TDM) Plan (“**TDM Plan**”) with a goal of reducing estimated one-way vehicle trips by twenty percent (20%) compared to the total number of one-way vehicle trips identified in the project’s Transportation Impact Study at project build-out.”

(iii) The TDM Plan, is a Developer Construction Obligation under the DDA. Developer's TDM Plan, is generally consistent with and incorporates many of the TDM Program strategies described in Section 169. It will be finally approved by the Planning Department as part of Developer's implementation of the Transportation Program and will meet the requirements of Mitigation Measure M-AQ-2.3.

(iv) The City has determined that the TDM Plan will exceed the goals under Section 169. Accordingly, as stated in the DA Ordinance, the Project and Project Site will be exempt from Section 169.

(d) Construction Codes.

(i) Nothing in this Development Agreement will preclude the City or the Port from applying the then-current Construction Codes (as amended citywide or portwide) applicable to all Horizontal Improvements and all Vertical Improvements, as applicable to the Project Site.

(ii) Nothing in this Development Agreement will preclude the Port from applying to the Project Site then-current provisions of the California Building Code, as amended and adopted in the Port Building Code.

(e) Utility Infrastructure Improvements Code.

(i) Nothing in this Development Agreement will preclude the City or the Port from applying to the Project Site then current standards and City Laws for Utility Infrastructure for each Phase, so long as:

(1) the standards for Utility Infrastructure are in place and applicable citywide, and imposed on the Project concurrently with the applicable Phase Approval;

(2) the standards for Utility Infrastructure as applied to the applicable Phase are compatible with and would not require the retrofit, removal, supplementation or reconstruction of Horizontal Improvements approved or constructed in prior Phases; and

(3) if the standard for Utility Infrastructure deviate from those applied in Prior Phases, the deviations would not cause a Material Cost Increase.

(ii) If Developer claims a Material Cost Increase has or would occur, it will submit to the City reasonable documentation of its claim, such as bids, cost estimates or other supporting documentation reasonable acceptable to the City, comparing costs (or estimates if not yet constructed) for any applicable Components of Utility Infrastructure in a Prior Phase, Indexed to the date of submittal, to cost estimates to construct the applicable Components in the current Phase, if the then-current standards for Utility Infrastructure in the Phase for the Utility Infrastructure were to be applied.

(iii) If the Parties are unable to agree on whether the application of then-current standards for Horizontal Improvements cause Developer to incur a Material Cost Increase the Parties will submit the matter to dispute resolution procedures as described in *DDA art. ____ [Resolution of Certain Disputes]*.

(f) Subdivision Code and Map Act.

(i) The DDA authorizes Developer to file Subdivision Map applications to subdivide, reconfigure, or merge parcels in the Project Site as necessary or desirable to develop the Project. Developer will map the specific boundaries of parcels, subject to Port consent and City approval which will be exercised with respect to any proposed parcel modifications consistent with the requirements and criteria in Planning Code section 291.

(ii) Nothing in this Development Agreement: (1) authorizes Developer to subdivide or use any part of the Project Site for any sale, lease, or financing in conflict with the Subdivision Map Act, the Subdivision Code, or the DDA; or (2) prevents the City from adopting procedural changes for processing Subdivision Maps that do not conflict with the ICA and other DA Requirements.

(iii) The Parties acknowledge that the Port, in its proprietary capacity as land owner of the Project Site, will: (1) approve any modifications from the Project Description to the specific boundaries that Developer proposes for Development Parcels (subject to Planning Code section 291); and (2) execute all Final Maps for the Project Site. The Port will expeditiously provide such approvals and execute such maps consistent with the ICA and other DA Requirements.

5.3. New City Laws.

(a) Applicability. All future changes to Existing City Laws and New City Laws will apply to the Project and the Project Site except to the extent that they conflict with the Development Agreement, Transaction Documents, other Project Approvals, or Applicable Port Laws. In the event of any such conflict, terms of the Development Agreement, Transaction Documents, other Project Approvals and Applicable Port Laws will prevail, subject to **Section 5.5** (Public Health and Safety and Federal Exceptions).

(b) Circumstances Causing Conflict. Any New City Law will be deemed to conflict with the Project Approvals and the Transaction Documents (including the Development Agreement), and be a Material Change if change would:

(i) extend or reduce the DA Term;

(ii) impede or delay the timely implementation of the Project in accordance with the DA Requirements, including: (1) Developer's rights and obligations under the Financing Plan and the Acquisition Agreement; and (2) the rate, timing, phasing, or sequencing of Site Preparation or construction on any part of the Project Site in any manner;

(iii) limit or reduce: (1) the density or intensity of uses of the Project or permitted under the DA Requirements on any part of the Project Site; (2) the square footage, number, or change the location of proposed Vertical Improvements; or (3) limit, reduce or change Horizontal or Vertical Improvements from that permitted for the Project under the DA Requirements;

(iv) limit or change the height or bulk of any part of the Project, or otherwise require any reduction in the height or bulk of individual proposed Vertical Improvements from that permitted under the DA Requirements;

(v) limit, reduce, or change the location of vehicular access or parking or the number and location of parking or loading spaces at the Project Site from that permitted under the DA Requirements;

(vi) limit, reduce or change any land uses for the Project from that permitted under the DA Requirements;

(vii) limit or change the Project Approvals or Transaction Documents;

(viii) decrease the Community Benefits required under this Development Agreement, reduce the Impact Fees and Exactions or otherwise materially alter the rights, benefits or obligations of the City under this Development Agreement;

(ix) require the City or the Port to issue Future Approvals other than those required under DA Requirements, except as otherwise provided in **Section 5.4** (Fees and Exactions);

(x) limit, reduce, restrict or control the availability of public utilities, services, or facilities or any privileges or rights to public utilities, services, or facilities for the Project as contemplated by the DA Requirements;

(xi) materially and adversely limit the processing of applications for or procuring of Future Approvals that are consistent with the Project Approvals;

(xii) increase or impose any new Impact Fees or Exactions for the Project, except as permitted under **Section 5.4** (Fees and Exactions);

(xiii) preclude Developer's or any Vertical Developer's compliance with DA Requirements or result in a Material Cost Increase to the Project;

(xiv) increase the obligations of Developer, any Vertical Developer, or their contractors or subtenants under any provisions of the DDA or any Vertical DDA or ground lease addressing contracting and employment above those in the Workforce Development Plan; or

(xv) require amendments or revisions to the forms of Vertical DDA or Parcel Lease, or to Other City Requirements) applicable to either, whenever they are later executed, unless the change:

(1) is related to the building or reconstruction of the seawall, protection from or adaptation to sea level rise, or environmental protection measures that are directly related to the waterfront location of the Project; and

(2) would not impose City remedies and penalties that could result in the termination, loss or impairment of the Vertical Developer's rights under any Vertical DDA or Parcel Lease, or debarment from future contract opportunities with the City due to a Vertical Developer's or its subtenant's noncompliance.

(c) Developer Election.

(i) Developer may elect to have a New City Law that conflicts with the DA Requirements (except those described in **clauses (viii) and (ix) of Subsection 5.3(b)** (Circumstances Causing Conflict)), applied to the Project by giving the City notice of Developer's election. Developer's election notice will cause the New City Law to be deemed to be an Existing City Law. But if the application of the New City Law would cause a Material Change to the City's rights or obligations under this Development Agreement, the application of such New City Laws will require the concurrence of the affected City Agencies.

(ii) Nothing in this Development Agreement will preclude: (1) the City from applying any New City Law to any development that is not a part of the Project; or (2) Developer from challenging the application of any New City Laws to all or any part of the Project.

(d) When entering into any Vertical DDA or Parcel Lease, the Port will only be entitled to amend the forms approved at Project Approval and update the Other City Requirements if necessary to incorporate any Change to Existing City Laws and Standards under circumstances described in **clause (xv) of Subsection 5.3(b)** (Circumstances Causing Conflict) with the applicable Vertical Developer's consent, which it may grant or withhold in its sole discretion.

(e) Port Role. The Port does not have the authority to approve a New City Law that is solely an exercise of the City's police powers, with or without Developer's consent under this Section. The City will obtain the Port's concurrence before applying any New City Law to the Project Site or other land under Port jurisdiction that does not have citywide application.

5.4. Fees and Exactions.

(a) Generally.

(i) The Project will be subject only to the Impact Fees and Exactions and Administrative Fees listed in this Section. The City will not impose any new Administrative Fees or Impact Fees or Exactions on the Project or impose new conditions or requirements for the right to develop the Project Site except as set forth in the Transaction Documents.

(ii) The Parties acknowledge that the provisions contained in this Section are intended to implement the intent that (1) Developer will have the right to develop the Project in accordance with specified and known criteria and rules; and (2) the City will receive benefits from the Project Site's development without abridging the City's right to exercise its powers, duties, and obligations, except as specifically provided in this Development Agreement.

(iii) Developer acknowledges that: (1) this Section does not limit the City's discretion if Developer requests changes under *DDA § 3.5 (Changes to Project after Phase 1)*; and (2) the Chief Harbor Engineer may require proof of payment of applicable Impact Fees then due and payable as a condition to issuing certain Construction Permits.

(b) Impact Fees and Exactions. Developer (or Vertical Developers as applicable) will satisfy the following Exactions and pay the following Impact Fees for the Project.

(i) Transportation Fees. Each VDDA for a nonresidential use will require the Vertical Developer to pay a site-specific "**Mission Rock Transportation Fee**" as described in this section, which SFMTA will administer, use, and allocate towards transit, bicycle and pedestrian improvements, consistent with the requirements of Planning Code sections 411A.6 and 411A.7, including improvements that will improve transportation access and mobility in the surrounding neighborhoods. In light of this requirement, the City has waived the Transit Impact Fee under Planning Code sections 411.1-411.9 and the Transportation Sustainability Fee under Planning Code sections 411A.1-411A.8 for the Project.

(1) The Mission Rock Transportation Fee will be equal to the Transportation Sustainability Fee listed on the current San Francisco Citywide Development Impact Fee Register for the same land use category with annual escalation in accordance with the methodology currently provided in Section 409 to the date that the Port issues the first construction permit for each Vertical Improvement. For example, the Transportation Sustainability Fee in 2017 for residential buildings with up to 99 units is \$8.13/gsf, and \$9.18/gsf of residential use in all dwelling units at and above the 100th unit in the building.

(ii) Mission Rock Inclusionary Housing Fee. Each VDDA for a nonresidential use will require the Vertical Developer to pay to the Port the "**Mission Rock Inclusionary Housing Fee**" described in this Section. In consideration of these payments, the City has waived the Jobs/Housing Linkage Program fee under Planning Code sections 413.1-413.11 for the Project. Port will administer and use the Mission Rock Inclusionary Housing Fee, in consultation with MOHCD, in accordance with the Housing Plan.

(1) The Mission Rock Inclusionary Housing Fee for net additional gsf of office use is \$25.49/gsf for calendar year 2017, with annual escalation in accordance with the methodology currently provided in Section 409 to the date that the Port issues the first construction permit for each Vertical Improvement.

(2) The Mission Rock Inclusionary Housing Fee listed on the current San Francisco Citywide Development Impact Fee Register for the same land use category, with annual escalation in accordance with the methodology currently provided in Section 409 to the date that the Port issues the first construction permit for each Vertical Improvement.

(iii) Affordable Housing. Residential development on the Project Site will comply with the Housing Plan. In light of these requirements, Planning Code sections 415.1–415.11 will not apply to the Project.

(iv) Child Care. Each VDDA for a non-residential use will require the Vertical Developer to pay to the Port the “Childcare Equivalency Fee” described in this Section. In light of this requirement, the City has waived the Child Care Fee under Planning Code sections 414.1 – 414.15 and sections 414 A.1 – 414 A.8 for the Project.

(1) The Child Care Equivalency Fee will be \$1.57 per gsf, with annual escalation in accordance with the methodology currently provided in Section 409 to the date that the Port issues the first construction permit for each Vertical Improvement.

(2) The Child Care Equivalency Fee will be used to assist one or more Vertical Developers or their tenants to provide childcare facilities within the Project generally consistent with the purposes and intent of on-site options for commercial buildings set forth in Planning Code section 414. Any fees collected by the Port and not used within the Project upon completion of the Project will be paid by the Port to the City’s Child Care Capital Fund.

(v) Public Art. Under the DDA, Public Art will be provided as part of the Horizontal Improvements as described in the Design Controls, so no Exaction or Impact Fee related to Public Art is required.

(vi) School Facilities Fees. Each Vertical Developer will pay the school facilities impact fees imposed under state law (Educ. Code §§ 17620-17626, Gov’t Code §§ 65970-65981, & Gov’t Code §§ 65995-65998) at the rates in effect at the time of assessment.

(vii) Community Facilities. Developer may offer through a Phase Submittal, or during a Phase Submittal review process City may request Developer include in a Phase or Phases, up to a Project-wide total of 15,000 gsf of space for community facilities consistent with the requirements of DDA § ____

(*Community Facilities*). Developer, in its sole discretion, may designate the location of community facility space, which may be distributed among two or more buildings.

(c) Utility Fees.

(i) SFPUC Wastewater Capacity Charge. Each Vertical Developer will pay the SFPUC Wastewater Capacity Charge in effect on the connection or other applicable date specified by SFPUC, subject to appropriate adjustment if the Project includes a District System.

(ii) SFPUC Water Capacity Charge. Each Vertical Developer will pay the SFPUC Water Capacity Charge in effect on the connection or other applicable date specified by SFPUC.

(iii) AWSS. Developer will make a fair share contribution to the City's auxiliary water supply system (AWSS) consistent with the Infrastructure Plan. The City will determine the timing, and procedures for payment consistent with the AWSS requirements of the Infrastructure Plan as a condition of approval to the Master Tentative Map for the Project.

(d) Administrative Fees. Developer will timely pay the City all Administrative Fees when due. Administrative Fees for the Project will be limited to the Administrative Fees in effect, on a citywide basis, at the time that Developer applies for the Future Approval for which such Administrative Fee is payable in connection with the applicable portion of the Project.

(e) Administrative Fees for Environmental Review. If further environmental review is required for a Future Approval, Developer will reimburse the City or pay directly all reasonable and actual costs to hire consultants and perform studies necessary for the review. Before engaging any consultant or authorizing related expenditures under this provision, the City will consult with Developer in an effort to agree to: (i) the scope of work to be performed; (ii) the projected costs associated with the work; and (iii) the particular consultant that would be engaged to perform the work, provided that City retains the discretion to make the final decisions regarding such matters.

5.5. Limitations on City's Future Discretion.

(a) Expeditious Processing. The City will process any Future Approval requiring City action expeditiously and in accordance with the ICA and **Section 5.8** (Criteria for Future Approvals).

(b) Extent of Limitation. In accordance with **Section 5.3** (New City Laws), the City in granting the Project Approvals and, as applicable, vesting the Project through this Development Agreement is limiting its future discretion with respect to the Project and Future Approvals to the extent that they are consistent with DA Requirements. For elements included in a request for a Future Approval that have not been reviewed or

considered by the applicable City Agency previously (including additional details or plans for Horizontal Improvements or Vertical Improvements), the reviewing City Agency will exercise its discretion consistent with the DA Requirements and otherwise in accordance with customary practice.

(c) Consistency with Prior Approvals. In no event will a City Agency deny issuance of a Future Approval based upon items that are consistent with the DA Requirements and matters previously approved. Consequently, the City will not use its discretionary authority to change the policy decisions reflected by the DA Requirements, to otherwise to prevent or to delay development of the DA Requirements, or to deny a Future Approval based on items that are consistent with the Project Approvals and previously approved Future Approvals. Nothing in the foregoing will affect or limit the City's discretion with respect to: (i) proposed Future Approvals that seek a Material Change to the Project Approvals provided that proposed changes in parcel boundaries and height limitations that are consistent with the criteria in Planning Code section 291 will not be considered a Material Change and such changes to the Project's parcel boundaries and height limitations will be approved if consistent with the criteria described in Planning Code section 291, or (ii) Board of Supervisor approvals of Subdivision Maps, as required by law, not contemplated by the Project Approvals.

(d) Matters Not Limited. Nothing in this Section limits the City's discretion with respect to review of Developer's proposed Future Approvals that seek a Material Change to the Project Approvals or Transaction Documents.

(e) ICA. Although the Planning Department is not a signatory or consenting party to the ICA, the Planning Commission is familiar with its contents and agrees that Planning will comply with the ICA to the extent applicable to Planning.

5.6. Public Health and Safety and Federal or State Exceptions.

(a) City's Exceptions.

(i) Each City Agency having jurisdiction over the Project has police power authority to: (1) exercise its discretion with respect to Future Approvals in a manner that is consistent with the public health, safety, and welfare; and (2) take any action that is necessary to protect the physical health and safety of the public (the "**Public Health and Safety Exception**") or reasonably calculated and narrowly drawn to comply with applicable changes in federal or state law affecting the physical environment (the "**Federal or State Law Exception**").

(ii) Accordingly, a City Agency will have the authority to condition or deny a Future Approval or to adopt a New City Law applicable to the Project so long as the condition, denial, or New City Law is: (1) limited solely to addressing a specific and identifiable issue in each case required to protect the physical health and safety of the public or required to comply with a federal or state law and in each case not for independent discretionary policy reasons that are inconsistent with the DA Requirements; and (2) in either case applicable citywide

or portwide, as applicable, to the same or similarly situated uses and applied in an equitable and nondiscriminatory manner.

(iii) If a change in federal or state law that becomes effective (including issued, enabled, promulgated, adopted, passed, approved, made, implemented, amended or interpreted) after the Effective Date materially and adversely affects either Party's rights, benefits, or obligations under this Development Agreement, or would preclude or prevent either Party's compliance with one or more provisions of the DA Requirements such provisions of this Development Agreement shall be modified or suspended as may be necessary to comply with such Federal or State Law. Any amendment will be limited to the extent necessary to comply with the law, subject to this Subsection and **Subsection 5.7(b)** (Adverse Effect on Project) and Section 11.1 (Amendment).

(b) Meet and Confer; Right to Dispute.

(i) City retains sole discretion with regard to the adoption of any New City Laws that fall within the Public Health and Safety Exception. Except for emergency measures, however, the City will meet and confer with Developer before taking action under such exception to the extent feasible.

(ii) Developer retains the right to dispute any City reliance on the Public Health and Safety Exception or the Federal or State Law Exception. If the Parties are not able to reach agreement on the dispute following a reasonable meet and confer period, then Developer or the City can seek a judicial relief with respect to the matter.

5.7. Other Exceptions

(a) Changes to DA Statute. The Parties have entered into this Development Agreement in reliance on the DA Statute in effect on the Reference Date, a copy of which is attached as **DA Exhibit D**. Any amendment to the DA Statute that would affect the interpretation or enforceability of this Development Agreement or increase either Party's obligations, diminish Developer's development rights, or diminish the City's benefits will not apply to this Development Agreement unless such amendment or addition is specifically required by Law or a final judgment of a Court of competent jurisdiction.

(b) Approval of Rules and Regulations for Public Parks: The Port Commission will approve reasonable rules and regulations for the conduct of activities and operations within the Park Parcels, including limits on restricted access events, before or at the first hearing at which it accepts a Finally Complete Park Parcel. At the time of Final Completion of each Park Parcel, the Port Commission will accept the improvements for park and open space purposes and make these regulations applicable to the Park Parcel upon acceptance by resolution.

(c) Adverse Effect on Project. If adoption of any New City Law that falls within the Public Health and Safety Exception or the Federal or State Law Exception would cause a Material Change that would cause a Material Cost Increase or would cause a material and adverse effects on construction, development, use, operation, or

occupancy, or impede the delivery of or decrease the public benefits, of the Project as currently contemplated by the DA Requirements, or any material portion thereof, such that the Project becomes economically infeasible, then the following will apply.

(i) Either Developer or the Port may deliver a Requested Change Notice to the other (with a copy to the City) in accordance with *DDA § 3.5 (Changes to Project after Phase 1)* and *App ¶ 5 (Notices)*. The notice will initiate a 90-day meet-and-confer period, subject to extension by agreement, during which Developer's obligations under this Development Agreement will be tolled except to the extent that the City, the Port, and Developer expressly agree otherwise.

(ii) If the Port and Developer agree on amendments to the Transaction Documents (or other solutions) that would maintain the benefit of the bargain during the negotiation period under *DDA § 3.5 (Changes to Project after Phase 1)*, the City will reasonably consider conforming changes to this Development Agreement and other Project Approvals if required. If the Port and Developer cannot resolve the issue during the 90-day period, then they will engage in nonbinding arbitration under *DDA § 10.5 (Nonbinding Arbitration)*.

(iii) If the matter remains unresolved, then either Developer or the City may terminate this Development Agreement on 30 days' prior notice to the other Party. If the Port exercises its termination right under *DDA § 3.5(e) (Failure to Agree or Approve)* or *DDA § 12.4(b) (Port Election to Terminate)* as to any portion of the Project Site, then this Development Agreement will terminate to the same extent, as specified in **Section 2.2 (DA Term)**.

(iv) The obligation to provide public benefits tied to any Development Parcel for which the Port has issued a construction permit and Developer has Commenced Construction of the Vertical Improvement will survive termination under this Subsection.

5.8. Future City Approvals.

(a) No Actions to Impede. Except to the extent required under **Section 5.6** (Public Health and Supply and Federal or State Exceptions), the City will not take any action under this Development Agreement or impose any condition on the Project that would conflict with the DA Requirements. An action taken or condition imposed will be deemed to conflict with the DA Requirements if the action or condition results in the occurrence of one or more of the circumstances identified in **Subsection 5.3(b)** (Circumstances Causing Conflict).

(b) Expeditious Processing. City Agencies will process all Future Approvals for the Project requiring City action: (i) with due diligence; and (ii) in accordance with **Section 5.9** (Criteria for Fixture Approvals) and (iii) in accordance with the ICA (for Horizontal Improvements) and the SUD Amendments (for Vertical Improvements).

(c) Interagency Cooperation Agreement. Concurrently herewith, City and Port have entered into the Interagency Cooperation Agreement (“ICA”) to which Developer is an express third party beneficiary. City will comply with the ICA to issue such approvals, permits, entitlements, agreements, permits to enter, and Subdivision Maps, and to perform such other acts as may be required by the City or Port under the ICA to permit the development and timely performance under the Development Agreement and DDA.

(d) Office Development.

(i) The Project Site is under the jurisdiction of the Port Commission. As provided in Planning Code Section 321(2)(a), new office development on land under the jurisdiction of the Port Commission will count against the annual maximum limit under Planning Code section 321. The Port of San Francisco will notify the Planning Department when new office development is authorized.

(ii) For the purposes of the Project, the amount of office development located on the Project Site to be applied against the annual maximum set in Planning Code section 321(a)(1) will be based on the approved building drawings for each office development. But to provide for the orderly development of new office space citywide, office development for the Project will be subject to the schedule and criteria described in *DDA Exh _____ (Office Development on Port Land)*.

(e) PUC Power. Developer understands and agrees that all electricity for the Project Site (the “**applicable service**”) will be provided by Hetch Hetchy Water and Power, so long as an updated feasibility analysis establishes that: (i) the applicable service will be available as and when required for the Project’s needs, (ii) the level of reliability and customer service responsiveness will be equivalent or better than that otherwise available, (iii) upon application for the applicable service, the applicable service can be separately metered and implemented at comparable business terms and schedule, including delivery of service to construction sites, (iv) the projected price for the applicable service is comparable to or less than the prevailing market rates in San Francisco for comparable types of loads, and (v) the capital refund structure for the applicable service (including allowances, cost of ownership, special facilities, and income tax component of construction) is at comparable business terms, and (vi) the PUC/Hetch Hetchy Water and Power is committed and able (including available financing, plans and access), at its sole cost and expense, to actually construct, install, and connect all off-site electrical service infrastructure and associated facilities needed to provide City electrical service to the Project on a schedule so as not to impede or delay the planning, design, or construction of the Project and Project Horizontal Improvements.

5.9. Criteria for Future Approvals.

(a) Standard of Review Generally. The City and Other City Agencies:

(i) will not disapprove any application for a Future Approval based on any item or element that is consistent with the DA Requirements;

(ii) will consider each application for a Future Approval in accordance with its customary practices, subject to the requirements of the DA Requirements and the ICA;

(iii) may subject a Future Approval to any condition that is necessary to bring the Future Approval into compliance with the Regulatory Requirements; and

(iv) in no event will be obligated to approve an application for a Future Approval that would effect a Material Change.

(b) Denial. If the City denies any application for a Future Approval, it will specify in writing the reasons for denial and suggest modifications required for approval will be consistent with the DA Requirements. The City will approve a revised or re-submitted application if: (i) it corrects or mitigates the stated reasons for the earlier denial in a manner that is consistent and compliant with the DA Requirements; and (ii) it does not include new or additional information that does not meet the DA Requirements.

(c) Public ROWs. The Parties agree that the Project Approvals include the City's and the Port's approvals of Public Rights-Of-Way ("**Public ROWs**") widths in the Infrastructure Plan and the Design Controls as consistent with the City's policies and policy objectives to ensure street safety for all users while maintaining adequate clearances for vehicles, including fire apparatus vehicles.

(d) Effect of Final EIR. The Parties agree as follows.

(i) The Final EIR prepared for development of the Project Site contains a thorough analysis of the Project and possible alternatives in compliance with CEQA.

(ii) The Project Approvals include resolutions by the Port Commission and the Board of Supervisors adopting CEQA Findings, including a statement of overriding considerations in accordance with CEQA Guidelines section 15093 for those significant impacts that could not be mitigated to a less than significant level.

(iii) The Port Commission and the Board of Supervisors also adopted the MMRP.

(iv) For the reasons listed above, the City: (1) does not intend to conduct any further environmental review or require additional mitigation under CEQA for any aspect of the Project vested under this Development Agreement; and (2) will rely on the Final EIR to the greatest extent possible in accordance with Applicable Laws for all future discretionary actions related to the Project.

(v) Developer acknowledges that: (1) nothing in this Development Agreement prevents or limits the City's discretion to conduct additional environmental review in connection with any Future Approvals if required by

Applicable Laws; and (2) New City Laws or changes to the Project may require additional environmental review and additional Mitigation Measures.

(vi) Developer will comply with all Mitigation Measures imposed as applicable to each Project component, except for any Mitigation Measures that are expressly identified as the responsibility of a different party or entity. Without limiting the foregoing, Developer shall be responsible for the completion of all Mitigation Measures identified in the MMRP as the responsibility of the “owner” or the “project sponsor”. The Parties expressly acknowledge that the Final EIR and the associated MMRP are intended to be used in connection with each of the Project Approvals and any Future Approvals to the extent appropriate and permitted under applicable law. Nothing in this Development Agreement limits the ability of the City to impose conditions on any new, discretionary permit resulting from Material Changes as such conditions are determined by the City to be necessary to mitigate adverse environmental impacts identified through the CEQA process and associated with the Material Changes or otherwise to address significant environmental impacts as defined by CEQA created by an approval or permit; provided, however, any such conditions will be in accordance with applicable law.

(e) Effect of General Plan Consistency Findings.

(i) In Motion No. **XXXX** adopting General Plan Consistency Findings for the Project, the Planning Commission specified that the findings also would support all Future Approvals that are consistent with the Project Approvals. To the maximum extent practicable, Planning will rely exclusively on Motion No. **XXXX** when processing and reviewing all Future Approvals, including schematic design reviews under the SUD Amendments or ICA, proposed Subdivision Maps, and any other actions related to the Project requiring General Plan determinations.

(ii) Developer acknowledges that the General Plan Consistency Findings do not limit the City’s discretion in connection with any Future Approval that requires new or revised General Plan consistency findings because of amendments to any Project Approval or any Material Change.

5.10. Public Financing.

(a) Financing Districts. The Project Approvals include formation of Sub-Project Areas I-1 through I-___ and, the Future Approval of the formation of the CFDs as described in the Financing Plan. The City agrees not to: (i) initiate proceedings for any new or increased special tax or special assessment that is targeted or directed at the Project Site except as provided in the Financing Plan; or (ii) take any other action that is inconsistent with the Financing Plan or the Tax Allocation MOU without Developer’s consent.

(b) Limitation on New Districts. The City will not form any new financing or assessment district over any portion of the Project Site unless the new district applies to similarly-situated property citywide or Developer consents to or requests the proceedings.

(c) Permitted Assessments. Nothing in this Development Agreement limits the City's ability to impose new or increased taxes or special assessments, any equivalent or substitute tax or assessment, or assessments for the benefit of districts formed by a vote of the affected property owners.

5.11. Existing, Continuing Uses and Interim Uses. The Parties acknowledge that the existing uses are lawfully authorized uses and may continue subject to Developer entering into an interim master lease for such uses and that the uses may be subsequently modified by the Project, provided that any modification thereof not a component of or contemplated by the DA Requirements is subject to City review and the applicable provisions of this Article. Developer may install interim or temporary uses on the Project Site, which uses will be consistent with those uses allowed under the Project's zoning and the SUD Amendments.

6. NO DEVELOPMENT OBLIGATION

This Development Agreement does not obligate Developer to begin or complete development of any portion of the Project or impose a schedule or a phasing plan for Developer to start or complete development. But the Parties have entered into this Development Agreement as one of the Transaction Documents that implements the DDA, which includes a Phasing Plan and a Schedule of Performance for the Project, and other requirements and conditions to development, and reflect numerous factors that are not within the control of Developer (the Port) or the City, such as availability of financing, interest rates, access to capital, and similar factors. Except as expressly required by the DDA and the other Transaction Documents, the City acknowledges that Developer may develop the Project in such order and at such rate and times as Developer deems appropriate within the exercise of its sole and subjective business judgment.

The Parties have entered into this Development Agreement, and the Port and Developer have agreed to the schedule and phasing as described in the DDA with the express intent of avoiding a result similar to that in *Pardee Construction Co. v. City of Camarillo* (1984) 37 Cal. 3d 465.

7. MUTUAL OBLIGATIONS; COOPERATION

(a) Generally. The Parties agree to cooperate with one another to expeditiously implement the Project in accordance with the Project Approvals, including the ICA, Future Approvals and this Development Agreement, and to undertake and complete all actions or proceedings reasonably necessary or appropriate to ensure that the objectives of the Project Approvals, Future Approvals and this Development Agreement are implemented. Nothing in this Development Agreement obligates the City to incur any costs except costs that Developer will reimburse through the payment of Administrative Fees, Other City Costs, or otherwise.

(b) City.

(i) Under this Development Agreement, and through the procedures in Planning Code Section 291, the SUD Amendments, the DDA and the ICA, the Port and the City have agreed to process Developer's submittals and applications for vertical and horizontal development diligently and to facilitate an orderly, efficient approval process that avoids delay and redundancies.

(ii) The Port and the City, acting through the Assessor, the Treasurer-Tax Collector, and the Controller, have entered into the Tax Allocation MOU (as to which Developer is an express third-party beneficiary), which establishes procedures to implement provisions of the Financing Documents that apply to future levy, collection, and allocation of Mello-Roos Taxes and Tax Increment and to the issuance of Bonds for use at the Project Site.

(c) Developer. Developer agrees to provide all documents, applications, plans, and other information that the City reasonably requests in connection with any Developer submittal or application, consistent with the design review process for vertical development in the SUD Amendments and for horizontal development in the ICA.

7.2. Other Regulators. The Port's obligations with respect to Regulatory Approvals that Developer and Vertical Developers will obtain from Other Regulators for Horizontal Improvements and Vertical Improvements are addressed in *VDDA § 15.3 (Regulatory Approvals)* and *VDDA § 16.4 (Regulatory Approvals)*, respectively.

7.3. Third-Party Challenge. [Coordinate with DDA]

(a) Effect. The filing of any Third Party Challenge will not delay or stop the development, processing or construction of the Project or the issuance of Future Approvals unless the third party obtains a court order preventing the activity.

(b) Cooperation in Defense. The Parties agree to cooperate in defending any Third-Party Challenge to the validity or performance of any provision of this Development Agreement, the Project, the Project Approvals or Future Approvals, the adoption or certification of the Final EIR or other actions taken pursuant to CEQA, or other approvals under laws relating to the Project, any action taken by the City or Developer in furtherance of the Project or this Development Agreement, or any combination thereof relating to the Project or any portion thereof. The City will notify Developer promptly after being served with any Third-Party Challenge filed against the City.

(c) Developer Cooperation. Developer at its own expense will assist and cooperate with the City in connection with any Third-Party Challenge. The City Attorney may use legal staff of the Office of the City Attorney with or without the assistance of outside counsel in connection with defense of the Third-Party Challenge.

(d) Cost Recovery. Developer will reimburse the City for its actual defense costs, including the fees and costs of legal staff and any consultants. Subject to further

agreement, the City will provide Developer with monthly invoices for all of the City's defense costs.

(e) Developer's Termination Option. Instead of bearing the defense costs of any Third-Party Challenge, or to the extent that any such action or proceeding, challenges or a judgment is entered limiting Developer's right to proceed with the Project or any material portion thereof under this Development Agreement (whether the Project commenced or not), including the City's actions taken pursuant to CEQA, Developer may elect to terminate this Development Agreement (and the DDA under *DDA § 12.6(a) (Mutual Termination Right)*) by delivering a notice to the City, with a copy to the Port, specifying a termination date at least 10 days after the notice is delivered. If Developer elects this option, the Parties will promptly cooperate to file a request for dismissal of any pending action or proceeding. Developer's and the City's obligations to cooperate in defending the Third-Party Challenge, and Developer's responsibility to reimburse the City's defense costs, will end on the Termination Date, but Developer will indemnify the City from any other liability caused by the Third-Party Challenge, including any award of attorneys' fees or costs. Upon any such termination (or, upon the entry of a judgment terminating this Development Agreement, if earlier), the City and Developer will jointly seek to have any pending Third-Party Challenge dismissed and Developer will have no obligation to reimburse City defense costs that are incurred after the dismissal.

(f) Survival. The indemnification, reimbursement, and cooperation obligations under this Section will survive termination under **Subsection 7.3(e)** (Developer's Termination Option) or any judgment invalidating any part of this Development Agreement.

7.4. Estoppel Certificates.

(a) Contents. Either Party may ask the other Party to sign an estoppel certificate to the best of its actual knowledge after reasonable inquiry as to the following matters:

(i) This Development Agreement is in full force and effect as a binding obligation of the Parties.

(ii) This Development Agreement has not been amended, or if amended, identifying the amendments or modifications and stating their date and nature.

(iii) The requesting Party is not in default in the performance of its obligations under this Development Agreement, or is in default in the manner specified.

(iv) The City's findings in the most recent Annual Review under **Article 8** (Periodic Compliance Review).

(b) Response Period. A Party receiving a request under this Section will execute and return the completed estoppel certificate within 30 days after receiving the

request. A Party's failure to either execute and return the completed estoppel certificate or provide a detailed written explanation for its failure to do so will be a DA Default following notice and opportunity to cure under **Section 9.1** (Meet and Confer).

(c) **Reliance.** Each Party acknowledges that Interested Persons may rely on an estoppel certificate provided under this Section. At an Interested Person's request, the City will provide an estoppel certificate in recordable form, which the Interested Person may record in the Official Records at its own expense.

7.5. Commercial Reasonableness. Unless specifically provided otherwise in this Development Agreement, whenever a Party is permitted to make a judgment, form an opinion, judge the sufficiency of the other Party's performance, or exercise discretion in taking or refraining from taking any action or making any determination, that Party will proceed with due diligence and employ commercially reasonable standards in doing so. In general, the Parties' ministerial acts in implementing this Development Agreement, including construction of Improvements, approvals, disapprovals, demands for performance, requests for additional information, and any exercise of an election or option, must be commercially reasonable. The requirements for approvals under this Development Agreement extend to and bind any Agents of Developer, City or of the City Agencies that act on behalf of their principals.

7.6. Disapproval. A Party that declines to grant approval or grants conditional approval shall state its reasons in reasonable detail in writing at the time such approval is withheld or conditionally granted. This requirement does not apply to actions of the Board of Supervisors as to matters that are subject to the approval of the Board in its sole discretion, as to which, the Board of Supervisors, in its sole discretion, will grant or deny approval in open session at a noticed public meeting held under applicable public meeting laws.

7.7. Specificity of Approval. A Party's approval to or of any act or request by the other Party will not be deemed to waive or render unnecessary approval to or of any similar or subsequent acts or requests. In determining whether to give an approval, no Party is allowed to require changes from or to impose conditions inconsistent with applicable DA Requirements or Regulatory Requirements or its prior approvals.

7.8. Good Faith and Fair Dealing.

7.8.1 Implementing Development Agreement. The Parties each covenants, on behalf of itself and its successors and assigns to cooperate with each other and act in good faith in complying with the provisions of this Development Agreement and implementing the Project Approvals, including the ICA, and any Future Approvals. In their course of performance under this Development Agreement, the Parties shall cooperate and shall undertake such actions as may be reasonably necessary to implement the Project as contemplated by this Development Agreement, including such actions as may be necessary to satisfy or effectuate any applicable conditions precedent to the performance of the Community Benefits.

7.8.2 Housing. Upon Developer's request, the City agrees to use reasonable good faith efforts to assist Developer in applying for and obtaining authorization to utilize: (i) multi-family tax-exempt or taxable bond financing; (ii) housing tax credits; (iii) grants,

subsidies, and residual receipt loans from public entities other than the City; and (iv) any other method of low-cost financing that may be available or become available, as contemplated in the Project Approvals and as set forth in the Housing Program. All costs incurred by the City in such efforts shall be City Costs.

7.9. City Actions. The City and affected City Agencies, actions and proceedings subject to this Development Agreement (and when required by applicable law, the Board of Supervisors), include instituting and completing proceedings for temporary or permanent closing or occupancy, widening, modifying (including changes from vehicular to pedestrian use) or changing the grades of streets, alleys, sidewalks, and other rights-of-way, and other necessary modifications of the streets, the street layout, and other public or private rights-of-way in or near the Project Site, including streetscape improvements, encroachment permits, improvement permits, and any requirement to abandon, remove, and relocate existing utilities and facilities (and, when applicable, City utilities) within the public rights-of-way as identified in the Project Approvals and Future Approvals, and described in or consistent with the Design Controls, Infrastructure Plan or other Project Approvals. Except as set forth in Section ____, [suspension of processing when payment delinquent] City Agencies shall process with due diligence all submissions and applications by Developer on all permits, approvals, construction or occupancy permits for the Project subject to the acceptance of the same as complete.

7.10. Notice of Completion, Revocation or Termination. Upon any early revocation or termination of this Development Agreement (as to all or any part of the Project Site), the Parties agree to execute a written statement acknowledging such revocation or termination, signed by the appropriate agents of the City and Developer, and record such instrument in the Official Records. In addition, upon Developer's request, when one or more Vertical Improvements have been completed, and all of the Community Benefits tied to those specific Vertical Improvements have also been completed, the City and Developer shall execute and record a notice of completion in the form attached as DDA Exhibit ____ [Notice to Completion] for the applicable property on which the Vertical Improvements or other facilities or improvements are located.

7.11. Non-City Approvals Cooperation to Obtain Permits. The Parties acknowledge that certain portions of the Project may require the approval of Other Regulators that are independent of the City and not a Party to this Development Agreement. The City will reasonably cooperate with requests by Developer in connection with Developer's efforts to obtain permits, agreements, or entitlements from Other Regulators as may be necessary or desirable for the development, operation and use of the Project, and will sign any application that the City is required to sign as co-applicant or co-permittee. The City's commitment to Developer under this Development Agreement is subject to the following conditions:

(a) Consultation and Cooperation. Throughout the permit process by Other Regulators, Developer will consult and coordinate with each affected City Agency in Developer's efforts to obtain the permits, agreements, or entitlements, and each such City Agency will cooperate reasonably with Developer in Developer's efforts to obtain the same.

(b) Conditions. Developer may not agree to conditions or restrictions from any Other Regulators that could create: (1) any obligations on the part of any City Agency, not expressly stated under the DA Requirements, unless the City Agency agrees in writing, following the receipt of any necessary governmental approvals, to assume such obligations; or (2) any restrictions on City property, unless in each instance the City, including each affected City Agency, has previously approved the conditions or restrictions in writing following the receipt of any necessary governmental approvals, provided that notwithstanding the foregoing, the City will not unreasonably withhold its consent to any conditions, or restrictions that are otherwise consistent with the provisions of the DA Requirements.

(c) Administrative Costs. Developer will bear all costs associated with applying for and obtaining any necessary approval, permit, license, or consent from any Other Regulators. Developer, at no cost to the City, will be solely responsible for complying with any Other Regulator requirement and any and all conditions or restrictions imposed by any Other Regulator. Developer will pay or otherwise discharge any fines, penalties, or corrective actions imposed as a result of Developer's failure to comply with any Other Regulator. The City's obligations under this subsection does not apply to any application to any Other Regulator that would require the City to incur any material costs unless Developer agrees to reimburse the City.

8. PERIODIC COMPLIANCE REVIEW

8.1. Initiation or Waiver of Review.

(a) Statutory Provision. Under section 65865.1 of the DA Statute, the Planning Director will conduct annually a review of developers' good faith compliance with approved development agreements (each, an "**Annual Review**"). The Planning Director will follow the process set forth in this Article for each Annual Review.

(b) No Waiver. The City's failure to timely complete an Annual Review in any year during the DA Term will not waive the City's right to do so at a later date.

(c) Planning Director's Discretion. The DA Ordinance waives certain provisions of compliance review procedures specified in Chapter 56 and amends Chapter 56 to grant discretion to the Planning Director with respect to Annual Reviews as follows.

(i) For administrative convenience, the Planning Director may designate the annual date when each Annual Review will begin (the "**Annual Review Date**").

(ii) The Planning Director may elect to forego an Annual Review for any of the following reasons: (1) before the designated Annual Review Date, Developer reports that no significant construction work occurred on the Project Site during the reporting period; (2) either Developer or the Port has initiated procedures to terminate the DDA; or (3) the Planning Director otherwise decides an Annual Review is unnecessary.

8.2. Required Information from Developer.

(a) Contents of Report. At the time specified under **Subsection 8.1(c)** (Planning Director's Discretion), Developer will submit a letter to the Planning Director setting forth in reasonable detail the status of Developer's compliance with its obligations under **Article 4** (Developer's Obligations) with respect to delivery of Community Benefits described in Section 4.1. Developer will provide the requested letter within 60 days after each Annual Review Date during the DA Term, unless the Planning Director specifies otherwise. The letter to the Planning Director will attach appropriate supporting documentation, which may include an estoppel certificate from the Port in a form acceptable to the Port, the Planning Director, and Developer.

(b) Standard of Proof. An estoppel certificate from the Port, if submitted with Developer's letter, will be conclusive proof of Developer's compliance with specified obligations under the DDA and be binding on the City with respect to Developer's Obligations and Mutual Obligations described therein. Developer has the burden of proof to demonstrate by substantial evidence that it has complied with matters not covered in the Port's estoppel certificate or any Other City Agency's letter or report.

8.3. City Review. The Annual Review will be limited to determining Developer's compliance with **Article 4** (Developer Obligations) and **Article 7** (Mutual Obligations) and whether an uncured Event of Default, Material Breach has occurred and is continuing.

8.4. Certificate of Compliance. Within 60 days after Developer submits its letter, the Planning Director will complete the review of the information submitted by Developer and all other available evidence of Developer's compliance with **Article 4** (Developer Obligations) and **Article 7** (Mutual Obligations), including a statement or report from each Other City Agency responsible for monitoring and enforcing any part of Developer's compliance with the Vested Elements and its obligations under **Article 4** (Developer Obligations) and **Article 7** (Mutual Obligations). The failure of any City Agency to timely provide a statement specifying non-compliance shall be deemed a waiver and evidence Developer compliance. The Planning Director will provide promptly to Developer copies of any evidence provided by sources other than Developer. The Planning Director will summarize his determination as to each compliance item in a letter to Developer. If the Planning Director finds Developer in compliance, then the Planning Director will follow the procedures in Administrative Code section 56.17(b).

8.5. Public Hearings. Planning will hold a public hearing under Administrative Code section 56.17(c) if: (a) the Planning Director finds that Developer is not in compliance or a public hearing is in the public interest; or (b) a member of the Planning Commission or the Board of Supervisors requests a public hearing on Developer's compliance.

8.6. Effect on Transferees. If Developer has Transferred its rights and obligations under the DDA and this Development Agreement: (a) each Transferee will provide a separate letter reporting compliance with its obligations; and (b) the procedures, rights, and remedies under this Article and Chapter 56 will apply separately to Developer and any Transferee, each only to the extent of and to obligations attaching to each Phase for which it is obligated. This requirement does not apply to Vertical Developers.

8.7. Notice and Cure Rights.

(a) Amended Rights. This Section reflects an amendment to Chapter 56 in the DA Ordinance that is binding on the Parties and all other persons affected by this Development Agreement regarding cure rights after a finding of noncompliance.

(b) Required Findings. If the Planning Commission makes a finding of noncompliance, or if the Board of Supervisors overrules a Planning Commission finding of compliance, in a public hearing under Administrative Code section 56.17(c), then the Planning Commission or the Board of Supervisors, as applicable, will specify in reasonable detail how Developer failed to comply and a reasonable time to cure its noncompliance.

(c) Cure Period. The Breaching Party will have a reasonable opportunity to cure its noncompliance. The cure period will not be less than 30 days and will in any case provide a reasonable amount of time for Developer to effect a cure. If Developer fails to effect a cure within the cure period under **Subsection 8.7(b)** (Required Findings) the City may begin proceedings to modify or terminate this Development Agreement under Administrative Code section 56.17(f) or section 56.18.

8.8. No Limitation on City's Rights After Event of Default. The City's rights and powers under this Article are in addition to, and do not limit, the City's rights to terminate or take other action under this Development Agreement after a DA Default by Developer.

9. DEFAULTS AND REMEDIES

9.1. Meet and Confer. Before sending a notice of default under **Section 9.2** (DA Defaults), the Aggrieved Party will follow the process in this Section.

(a) Good Faith Effort. The Aggrieved Party will make a written request that the Breaching Party meet and confer to discuss the alleged breach within three business days after the request is delivered. If, despite the Aggrieved Party's good faith efforts, the Parties have not met to confer within seven business days after the Aggrieved Party's request, the Aggrieved Party will be deemed to have satisfied the meet and confer requirement.

(b) Opportunity to Cure. If the Parties meet in response to the Aggrieved Party's request, the Aggrieved Party will allow a reasonable period of not less than 10 days for the Breaching Party to respond to or cure the alleged breach.

(c) Exclusions. The meet and confer requirement does not apply to a Breaching Party's failure to pay amounts when due under this Development Agreement or in circumstances where delaying the Aggrieved Party's right to send a notice of default under **Section 9.2** (DA Defaults) would impair prejudice or otherwise adversely affect the Aggrieved Party's rights under this Development Agreement.

9.2. DA Defaults.

(a) Specific Events. The occurrence of any of the following will be a “**DA Default**” under this Development Agreement.

(i) A Breaching Party fails to make any payment when due if not cured within 60 days after the Aggrieved Party delivers notice of nonpayment.

(ii) A Breaching Party fails to satisfy any other material obligation under this Development Agreement when required if not cured within 60 days after the Aggrieved Party delivers notice of noncompliance or if the breach cannot be cured within 60 days, the Breaching Party fails to take steps to cure the breach within the 60-day period and diligently complete the cure within a reasonable time.

(b) Notice. Any notice of default given by a Party will specify the nature of the alleged failure and, where appropriate, the manner in which said failure satisfactorily may be cured, if at all.

(c) No Cross Default. Notwithstanding any other provision in this Development Agreement to the contrary, if Developer conveys or transfers some but not all of the Project and there is more than one Party that assumes obligations of “Developer” under this Development Agreement, there will be no cross-default between the separate Parties that assumed Developer obligations. Accordingly, if a Transferee Defaults, it will not be a Default by any other Transferee or Party that owns a different portion of the Project Site.

(d) Certain Payment Defaults. Developer or the applicable Transferee will have a complete defense if the City alleges a DA Default in Developer’s obligation to pay City Costs in the following circumstances.

(i) If Developer or the applicable Transferee made a payment to the Port that included the allegedly unpaid City Costs, but the Port failed to disburse the portion payable to the aggrieved City Agency.

(ii) If a City Agency claiming nonpayment did not submit a timely statement for reimbursement of the claimed City Costs under *ICA § 3.6 (Cost Recovery)*.

9.3. Remedies for DA Defaults.

(a) Specific Performance. After a DA Default under this Development Agreement, the Aggrieved Party may file an action and seek injunctive relief against or specific performance by the Breaching Party. Nothing in this Section requires an Aggrieved Party to delay seeking injunctive relief if it believes in good faith that postponement would cause it to suffer irreparable harm.

(b) Limited Damages. The Parties agree as follows.

(i) Monetary damages are an inappropriate remedy for any DA Default other than nonpayment under this Development Agreement.

(ii) The actual damages suffered by an Aggrieved Party under this Development Agreement for any DA Default other than nonpayment would be extremely difficult and impractical to fix or determine.

(iii) Remedies at law other than monetary damages and equitable remedies are particularly appropriate for any DA Default other than nonpayment under this Development Agreement. Except to the extent of actual damages, neither Party would have entered into this Development Agreement if it could be liable for consequential, punitive, or special damages under this Development Agreement.

(c) Material Breach under DDA. For any Material Breach that results in the termination of the DDA in whole or in part, the City's exclusive remedy under this Development Agreement will be automatic and concurrent termination under **Section 2.2** (DA Term).

(d) City Processing. The City may suspend action on any Developer requests for approval or take other actions under this Development Agreement during any period in which payments from Developer are past due.

(e) Community Benefits. If Community Benefits are not delivered when required, the City's remedies will be enforced through the Port's rights under the DDA, outlined below.

(i) Under *DDA § 15.4 (Substantial Completion)* and *DDA § 15.5 (Final Completion)*, the Port may withhold a determination that Developer has Substantially Completed or Finally Completed Phase Improvements that include Community Benefits to be provided in a Phase.

(ii) The Port may declare Developer to be in Material Breach under *DDA [§ 12.2(c)] (Material Breaches by Developer)* if Developer fails to meet the Outside Date for required delivery of Community Benefits in a Phase after notice and an opportunity to cure.

(iii) Under *DDA [§ 16.5] (Substantial Completion)* and *DDA [§ 16.6] (Final Completion)*, the Port may withhold a determination that a Vertical Developer has Substantially Completed or Finally Completed Vertical Improvements that require delivery of a specific Community Benefit.

(iv) The Port may declare an event of default by a Vertical Developer under its Vertical DDA or Parcel Lease, as applicable, if it fails to meet the schedule for required delivery of the public benefit after notice and an opportunity to cure.

(f) Time Limits; Waiver; Remedies Cumulative. Failure by a Party to insist upon the strict or timely performance of any of the provisions of this Development Agreement by the other Party, irrespective of the length of time for which such failure continues, will not constitute a waiver of such Party's right to demand strict compliance by such other Party in the future. No waiver by a Party of any condition or failure of performance, including a DA Default, will be effective or binding upon such Party unless made in writing by such Party, and no such waiver will be implied from any omission by a Party to take any action with respect to such failure. No express written waiver will affect any other condition, action or inaction, or cover any other period of time, other than any condition, action or inaction or period of time specified in such express waiver. One or more written waivers under any provision of this Development Agreement will not be deemed to be a waiver of any subsequent condition, action or inaction, and the performance of the same or any other term or provision contained in this Development Agreement. Nothing in this Development Agreement will limit or waive any other right or remedy available to a Party to seek injunctive relief or other expedited judicial or administrative relief to prevent irreparable harm.

(g) Attorneys' Fees. Should legal action be brought by either Party against the other for a DA Default under this Development Agreement or to enforce any provision herein, the prevailing Party in such action shall be entitled to recover its reasonable attorneys' fees and costs. For purposes of this Development Agreement, **"reasonable attorneys' fees and costs"** means the reasonable fees and expenses of counsel to the Party, which may include printing, duplicating and other expenses, air freight charges, hiring of experts and consultants, and fees billed for law clerks, paralegals, librarians and others not admitted to the bar but performing services under the supervision of an attorney. The term **"reasonable attorneys' fees and costs"** will also include all such reasonable fees and expenses incurred with respect to appeals, mediation, arbitrations, and bankruptcy proceedings, and whether or not any action is brought with respect to the matter for which such fees and costs were incurred.

9.4. New City Laws. Under section 65865.4 of the DA Statute, either Party may enforce this Development Agreement regardless of any New City Laws unless this Development Agreement has been terminated by agreement under **Article 11** (Amendment or Termination), by termination proceedings under Chapter 56, or by termination under **Section 2.2** (DA Term) or **Subsection 9.3(c)** (Material Breach under DDA).

10. LENDER RIGHTS

10.1. Transaction Documents Control Lender Rights.

(a) Rights to Encumber. Nothing in this Development Agreement limits the right of Developer, Vertical Developer and DA Successors to encumber all or any portion of their respective interests in the Project Site for the benefit of any Permitted Lender as security for one or more loans in accordance with the Applicable Lender Protections, which are incorporated herein by reference.

(b) Lender Rights and Obligations. The rights and obligations of a Lender under this Development Agreement will be identical to its rights and obligations under the Applicable Lender Protections.

10.2. Lender and City Requests .

(a) Request for Notice. If the City receives a written notice from a Lender or from Developer or a DA Successor requesting on a Lender's behalf a copy of any notice of default that the City delivers under this Development Agreement, specifying the Lender's address for service, then the City will deliver a copy to the Lender concurrently with delivery to the Breaching Party. The City will have the right to recover its costs to provide notice from the Breaching Party or the applicable Lender. A delay or failure by the City to provide such notice required by this Section will extend for the number of days until notice is given, the time allowed to the Permitted Lender for cure.

(b) Further Assurances. The City will reasonably cooperate with a request of a Lender or Lender Successor to provide further assurances to assure the Lender or Lender Successor of its rights under this Development Agreement, which may include execution, acknowledgement and delivery of additional documents reasonably requested by a Lender confirming the applicable rights and obligations of the City and Lender with respect to a Mortgage or encumbrance.

(c) City Request. This provision is the City's request under California Civil Code section 2924 for a copy of any notice of default or notice of sale under any Deed of Trust to be delivered to City at the address shown on the cover page of this Development Agreement.

10.3. Permitted Lender's Option to Cure Defaults. After receiving any notice of failure to cure referred to in this Section, each Permitted Lender will have the right, at its option, to commence within the same period as the Developer to remedy or cause to be remedied any DA Default, plus an Extended Cure Period as described in *DDA* § 19.5. If an DA Default is not cured within the applicable cure period, the City nonetheless will refrain from exercising any of its remedies with respect to the DA Default if, within the Permitted Lender's applicable cure period, the Permitted Lender takes all the actions described in *DDA* § 19.5. Any such Permitted Lender or Transferee of a Permitted Lender that properly completes the Improvements relating to any applicable portion of Project Site will be entitled, upon written request made to the City, to a Certificate of Completion.

10.4. Permitted Lender's Obligations with Respect to the Property. Notwithstanding anything to the contrary in this Development Agreement, no Permitted Lender will have any obligations or other liabilities under this Development Agreement unless and until it acquires title by any method to the Encumbered Property (a "**Foreclosure Purchaser**"). A Foreclosure Purchaser will take title subject to all of the terms and conditions of this Development Agreement, to the extent applicable to the Encumbered Property, including any claims for payment or performance of obligations which are due as a condition to enjoying the benefits of this Development Agreement. Upon the occurrence and continuation of an uncured default by a Permitted Lender or Transferee in the performance of any of the obligations to be

performed by such Permitted Lender or Transferee pursuant to this Development Agreement, the City will be afforded all its remedies for such uncured default as provided in this Development Agreement. Foreclosure Purchaser will succeed to all of the rights and obligations under and will be deemed a Party to this Development Agreement to the extent of the defaulting Borrower's rights and obligations.

10.5. No Impairment of Deed of Trust. No default by the Developer under this Development Agreement will invalidate or defeat the lien of any Permitted Lender. Neither a breach of any obligation secured by any Deed of Trust or other lien against the mortgaged interest nor a foreclosure under any Deed of Trust or other lien, will defeat, diminish, render invalid or unenforceable or otherwise impair the Developer's rights or obligations or constitute a DA Default under this Development Agreement.

10.6. Cured Defaults. Upon the curing of any DA Default by Permitted Lender within the time provided in this Article the City's right to pursue any remedies with respect to the cured DA Default will terminate.

11. AMENDMENT OR TERMINATION

11.1. Amendment. This Development Agreement may be amended only by the Parties' agreement or as specifically provided otherwise in this Development Agreement, the DA Statute, or Chapter 56. Following an assignment, the City and Developer or any DA Successor may amend this Development Agreement as it affects Developer or the portion of the Project Site to which the rights and obligations were transferred to a DA Successor without affecting other portions of the Project Site or other Transferees. Any amendment to this Development Agreement that does not constitute a Material Change may be agreed to by the Planning Director (and, to the extent it affects any rights or obligations of a City Agency, with the approval of that City Agency). The Port Commission, the Planning Commission, and the Board of Supervisors will all approve any amendment that would be a Material Change.

11.2. Amendment Exemptions. No issuance of a Future Approval, or amendment of a Project Approval or Future Approval, will by itself require an amendment to this Development Agreement. No change to the Project that is permitted under Planning Code section 291, the SUD Amendments or other Project Approvals shall by itself require an amendment to this Development Agreement. Upon issuance or approval, any such matter shall be deemed to be incorporated automatically into the Project and vested under this Development Agreement (subject to any conditions set forth in the amendment or Future Approval). Notwithstanding the foregoing, if there is any direct conflict between the terms of this Development Agreement and a Future Approval, or between this Development Agreement and any amendment to a Project Approval or Future Approval, then the Parties shall concurrently amend this Development Agreement (subject to all necessary approvals in accordance with this Development Agreement) in order to ensure the terms of this Development Agreement are consistent with the proposed Future Approval or the proposed amendment to a Project Approval or Future Approval. The Planning Department and the Planning Commission, as applicable, shall have the right to approve changes to the Project in keeping with its customary practices, Planning Code section 291, the SUD Amendments and other Project Approvals, and any such changes shall not be deemed to conflict with or require an amendment to this Development Agreement or the

Project Approvals so long as they do not constitute a Material Change. If the Parties fail to amend this Development Agreement as set forth above when required, however, then the terms of this Development Agreement shall prevail over any Future Approval or any amendment to a Project Approval or Future Approval that conflicts with this Development Agreement.

11.3. Termination. This Development Agreement may be terminated in whole or in part by: (a) the Parties' agreement or as specifically provided otherwise in this Development Agreement, the DA Statute, or Chapter 56; or (b) by termination under **Section 2.2** (DA Term) or **Subsection 9.3(c)** (Material Breach under DDA).

11.4. Termination and Vesting. Any termination under this Development Agreement shall concurrently effect a termination of the Project Approvals with respect to the terminated portion of the Project Site, except as to any Project Approval pertaining to a Vertical Improvement or associated Horizontal Improvements that have Commenced Construction in reliance thereon. In the event of any termination of this Development Agreement by Developer resulting from a Default by the City and except to the extent prevented by such City Default, Developer's obligation to complete the applicable Community Benefits shall continue as to the Vertical Improvement which has Commenced Construction and all relevant and applicable provisions of this Development Agreement shall be deemed to be in effect as such provisions are reasonably necessary in the construction, interpretation or enforcement to this Development Agreement as to any such surviving obligations. The City's and Developer's rights and obligations under this Section shall survive the termination of this Development Agreement.

11.5. Extension Due to Legal Action or Referendum; Excusable Delay.

11.5.1 Litigation and Referendum Extension. If any litigation is filed challenging this Development Agreement or Project Approval having the direct or indirect effect of delaying this Development Agreement or any Project Approval (including but not limited to any CEQA determinations), including any challenge to the validity of this Development Agreement or any of its provisions, or if this Development Agreement or a Project Approval is suspended pending the outcome of an electoral vote on a referendum, then the Term of this Development Agreement and all Project Approvals shall be extended for the number of days equal to the period starting from the commencement of the litigation or the suspension (or as to Project Approvals, the date of the initial grant of such Project Approval) to the end of such litigation or suspension (a "**Litigation Extension**"). The Parties shall document the start and end of a Litigation Extension in writing within 30 days from the applicable dates.

11.5.2 Excusable Delay. In the event of Excusable Delay, the Parties agree that (i) the time periods for performance of the delayed Party's obligations impacted by the Excusable Delay shall be strictly limited to the period of such delay, interruption or prevention and the delayed Party shall, to the extent commercially reasonable, act diligently and in good faith to remove the cause of the Excusable Delay or otherwise complete the delayed obligation, and (ii) following the Excusable Delay, a Party will have all rights and remedies available under this Development Agreement, if the obligation is not completed within the time period as extended by the Excusable Delay. If an event which may lead to an Excusable Delay occurs, the delayed Party shall notify the other Party in writing of such occurrence as soon as possible after becoming aware that such event may result in an Excusable Delay, and the manner in which such

occurrence is likely to substantially interfere with the ability of the delayed Party to perform under this Development Agreement.

12. TRANSFERS AND CONVEYANCES

12.1. DA Successors' Rights. Applicable provision of this Development Agreement will apply to Developer's and a Vertical Developer's Transferees in accordance with the procedures under *DDA art. 6 (Transfers) [and VDDA §183 (Transfers)]*. Under [*DDA art. 7 (Parcel Conveyances)*], Port conveyances to Vertical Developers will in the Vertical DDA, Vertical Lease and/or Option Agreement require the Vertical Developer to comply with applicable DA Requirements, including obligations under this Development Agreement, and may include rights with respect to Vested Elements. Each agreement between Developer and a Transferee or Optionee or between the Port and a Vertical Developer by which rights and obligations under this Development Agreement are assigned to a successor of Developer or a Vertical Developer (each, a "**DA Successor**") will be by an Assignment and Assumption Agreement substantially in the form of DDA Exh. ____, or VDDA Exh. ____, respectively (each, a "**DA Assignment**"). Each DA Assignment will be recorded in accordance with the DDA or VDDA as applicable. Each DA Assignment will provide for Developer or the pertinent Vertical Developer to be released from obligations under the Development Agreement to the extent assumed by the DA Successor.

12.2. Notices of Transfer. Developer shall provide such notices of any proposed transfer and an assignment and assumption agreement as provided in Articles 6 and 7 of the DDA.

12.3. Effect of Transfer or Assignment. After the effective date of a DA Assignment, the following will apply.

(a) Direct Enforcement Against Successor. The City will have the right to enforce directly against the DA Successor every obligation under this Development Agreement that the DA Successor assumed under the DA Assignment.

(b) Partial Developer Release. Developer will remain liable for obligations under this Development Agreement only to the extent that Developer retains liability under the applicable DA Assignment. Developer will be released from any prospective liability or obligation, and its DA Successor will be deemed to be subject to all future rights and obligations of Developer under this Development Agreement, to the extent set forth in the DA Assignment.

(c) Partial Vertical Developer Release. A Vertical Developer will be liable for obligations under this Development Agreement to the extent set forth in the applicable DA Assignment. A Vertical Developer will be released from any prospective liability or obligation, and its DA Successor will be deemed to be subject to all future rights and obligations of the Vertical Developer under this Development Agreement to the extent set forth in the applicable DA Assignment.

(d) No Cross-Default. A DA Default under this Development Agreement any Vertical DDA or any Parcel Lease or Ground Lease, as applicable, by any DA

Successor (in each case, a “**Successor Default**”) with respect to any part of the Project or Project Site will not be a DA Default by Developer with respect to any other part of the Project or Project Site. The occurrence of a Successor Default will not entitle the City to terminate or modify this Development Agreement with respect to any part of the Project or Project Site that is not the subject of the Successor Default.

12.4. No Third-Party Beneficiaries. Except for DA Successors with vested rights and obligations at the Project Site and to the extent of any Interested Person’s rights under the DDA, any Vertical DDA, Parcel Lease, or this Development Agreement, the City and Developer do not intend for this Development Agreement to benefit or be enforceable by any other persons.

12.5. Constructive Notice. Every person or entity who now or later owns or acquires any right, title or interest in or to any portion of the Project Site is, and will be, constructively deemed to have consented to every provision contained herein, whether or not any reference to this Development Agreement is contained in the instrument by which such person acquired an interest in the Project Site. Every person or entity who now or hereafter owns or acquires any right, title or interest in or to any portion of the Project Site and undertakes any development activities at the Project Site, is, and will be, constructively deemed to have consented and agreed to, and is obligated by all of the terms and conditions of this Development Agreement, whether or not any reference to this Development Agreement is contained in the instrument by which such person acquired an interest in the Project Site.

12.6. Rights of Developer. The provisions in this Section 12 shall not be deemed to prohibit or otherwise restrict Developer from (i) granting easements or licenses to facilitate development of the Project Site, (ii) encumbering the Project Site or any portion of the improvements thereon by any Deed of Trust, (iii) granting an occupancy leasehold interest in portions of the Project Site, (iv) entering into a joint venture agreement or similar partnership agreement to fulfill its obligations under this Development Agreement, or (v) transferring all or a portion of the Project Site pursuant to a foreclosure, conveyance in lieu of foreclosure, or other remedial action in connection with a Deed of Trust.

13. DEVELOPER REPRESENTATIONS AND WARRANTIES

13.1. Due Organization and Standing. Developer represents that it has the authority to enter into this Development Agreement. Developer is a Delaware limited liability company duly organized and validly existing and in good standing under laws of the State of Delaware. Developer has all requisite power to own its property and authority to conduct its business as presently conducted.

13.2. No Inability to Perform; Valid Execution. Developer represents and warrants that it is not a party to any other agreement that would conflict with Developer’s obligations under this Development Agreement and it has no knowledge of any inability to perform its obligations under this Development Agreement. Developer’s execution and delivery of this Development Agreement have been duly and validly authorized by all necessary action. This Development Agreement will be a legal, valid, and binding obligation of Developer, enforceable against Developer on its terms.

13.3. Other Documents. To the current, actual knowledge of Jack Bair, after reasonable inquiry, no document that Developer furnished to the City in relation to this Development Agreement, nor this Development Agreement, contains any untrue statement of material fact or omits any material fact that makes the statement misleading under the circumstances under which the statement was made.

13.4. No Bankruptcy. Developer represents and warrants to the City that Developer has neither filed nor is the subject of any Insolvency petition or and, to the best of Developer's knowledge, no action is threatened.

14. CITY REQUIREMENTS

14.1. Nondiscrimination in Contracts and Property Contracts (Admin. Code ch. 12B, ch. 12C).

In the performance of the Development Agreement, Developer covenants and agrees not to discriminate against or segregate any person or group of persons on any basis listed in section 12955 of the California Fair Employment and Housing Act (Calif. Gov't Code §§ 12900-12996), or on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, domestic partner status, marital status, disability, AIDS/HIV status, weight, height, association with members of protected classes, or in retaliation for opposition to any forbidden practices against any employee of, any City employee working with, or applicant for employment with Developer, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in the business, social, or other establishment or organization operated by Developer.

14.2. Prevailing Wages and Working Conditions in Construction Contracts (Calif. Labor Code §§ 1720 et seq.; Admin. Code § 6.22(e)).

(a) Labor Code Provisions. Certain contracts for work at the Project Site may be public works contracts if paid for in whole or part out of public funds, as the terms "public work" and "paid for in whole or part out of public funds" are defined in and subject to exclusions and further conditions under California Labor Code sections 1720-1720.6.

(b) Requirement. Developer agrees that all workers performing labor in the construction of public works or Improvements for the City under the DDA will be: (i) paid the Prevailing Rate of Wages as defined in Administrative Code section 6.22 and established under Administrative Code section 6.22(e); and (ii) subject to the hours and days of labor provisions in Administrative Code section 6.22(f). All contracts or subcontracts for public works or Improvements for the City must require that all persons performing labor under the contract be paid the Prevailing Rate of Wages for the labor so performed, as provided by Administrative Code section 6.22(e). Any contractor or subcontractor performing a public work or constructing Improvements must make certified payroll records and other records required under Administrative Code section 6.22(e)(6) available for inspection and examination by the City with respect to all workers performing covered labor. For current Prevailing Wage Rates, see the OLSE website or call the OLSE at 415-554-6235.

14.3. Tropical Hardwood and Virgin Redwood Ban (Env. Code ch. 8).

The City urges companies not to import, purchase, obtain or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood, or virgin redwood wood product, except as expressly permitted by the application of Environment Code sections 802(b) and 803(b). Developer agrees that, except as permitted by the application of Environment Code sections 802(b) and 803(b), Developer will not use or incorporate any tropical hardwood or virgin redwood in the construction of the Improvements or provide any items to the construction of the Project, or otherwise in the performance of the DDA that are tropical hardwoods, tropical hardwood wood products, virgin redwood, or virgin redwood wood products. If Developer fails to comply in good faith with any of Environment Code chapter 8, Developer will be liable for liquidated damages for each violation in any amount equal to the contractor's net profit on the contract, or 5% of the total amount of the contract dollars, whichever is greater.

14.4. Conflicts of Interest (Calif. Gov't Code §§ 87100 et seq. & §§ 1090 et seq.; Charter § 15.103; Campaign and Gov't Conduct Code art. III, ch. 2).

Through its execution of this DA, Developer acknowledges that it is familiar with Charter section 15.103, Campaign and Governmental Conduct Code article III, chapter 2, and California Government Code sections 87100 et seq. and sections 1090 et seq., certifies that it does not know of any facts that would violate these provisions and agrees to notify the City if Developer becomes aware of any such fact during the DA Term.

14.5. Sunshine (Calif. Gov't Code §§ 6250 et seq.; Admin. Code ch. 67).

Developer understands and agrees that under the California Public Records Act (Calif. Gov't Code §§ 6250 et seq.) and the City's Sunshine Ordinance (Admin. Code ch. 67), the Transaction Documents and all records, information, and materials that Developer submits to the City may be public records subject to public disclosure upon request. Developer may mark materials it submits to the City that Developer in good faith believes are or contain trade secrets or confidential proprietary information protected from disclosure under public disclosure laws, and the City will attempt to maintain the confidentiality of these materials to the extent provided by law. Developer acknowledges that this provision does not require the City to incur legal costs in any action by a person seeking disclosure of materials that the City received from Developer.

14.6. Contribution Limits-Contractors Doing Business with the City (Campaign and Gov't Conduct Code § 1.126).

(a) Application. Campaign and Governmental Conduct Code section 1.126 ("Section 1.126") applies only to agreements subject to approval by the Board of Supervisors, the Mayor, any other elected officer, or any board on which an elected officer serves. Section 1.126 prohibits a person who contracts with the City for the sale or lease of any land or building to or from the City from making any campaign contribution to: (i) any City elective officer if the officer or the board on which that individual serves or a state agency on whose board an appointee of that individual serves must approve the contract; (ii) a candidate for the office held by the individual; or (iii) a committee controlled by the individual or candidate, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for the contract or six months after the date the contract is approved.

(b) Acknowledgment. Through its execution of this DA, Developer acknowledges the following.

(i) Developer is familiar with Section 1.126.

(ii) Section 1.126 applies only if the contract or a combination or series of contracts approved by the same individual or board in a fiscal year have a total anticipated or actual value of \$50,000 or more.

(iii) If applicable, the prohibition on contributions applies to:
(1) Developer; (2) each member of Developer's governing body; (3) Developer's chairperson, chief executive officer, chief financial officer, and chief operating officer; (4) any person with an ownership interest of more than 20% in Developer; (5) any subcontractor listed in the contract; and (6) any committee, as defined in Campaign and Governmental Conduct Code section 1.104, that is sponsored or controlled by Developer.

14.7. Implementing the MacBride Principles - Northern Ireland (Admin. Code ch. 12F).

The City urges companies doing business in Northern Ireland to move towards resolving employment inequities and encourage them to abide by the MacBride Principles. The City urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

15. MISCELLANEOUS

The following provisions apply to this Development Agreement in addition to those in **Appendix Part A** (Standard Provisions and Rules of Interpretation).

15.1. Notices. Notices given under this Development Agreement are governed by App ¶ A.5 (*Notices*). Notice addresses are listed below.

To the City:

John Rahaim
Director of Planning
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94102

With a copy to:

Dennis J. Herrera, Esq.
City Attorney
City Hall, Room 234
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102
Attn:

To Developer:

Seawall Lot 337 Associates, LLC
c/o San Francisco Giants
24 Willie Mays Plaza
San Francisco, CA 94107
Att'n: Jack Bair, General Counsel

Telephone: (415) 972-1755
Facsimile: (415) 972-2317
Email: jbair@sfgiants.com

With a copy to: _____

15.2. Limitations on Actions. Administrative Code section 56.19 establishes certain limitations on actions to challenge final decisions made under Chapter 56, as follows:

(a) Board of Supervisors. Any action challenging a Board of Supervisors decision under Chapter 56 will be filed within 90 days after the decision is finally approved.

(b) Planning. Any action challenging any of the following Planning decisions under Chapter 56 will be filed within 90 days after any of the following becomes final: (i) a Planning Director decision under Administrative Code section 56.15(d)(3); or (ii) a Planning Commission resolution under section 56.17(e).

15.3. Binding Covenants; Run With the Land. Pursuant to section 65868 of the Development Agreement Statute, from and after recordation of this Development Agreement, all of the provisions, agreements, rights, powers, standards, terms, covenants and obligations contained in this Development Agreement shall be binding upon the Parties and, subject to Article 12, their respective heirs, successors (by merger, consolidation, or otherwise) and assigns, and all persons or entities acquiring the Project Site, any lot, parcel or any portion thereof, or any interest therein, whether by sale, operation of law, or in any manner whatsoever, and shall inure to the benefit of the Parties and their respective heirs, successors (by merger, consolidation or otherwise) and assigns. Subject to the provisions on Transfers set forth in Article 12, all provisions of this Development Agreement shall be enforceable during the Term as equitable servitudes and constitute covenants and benefits running with the land pursuant to applicable Law, including California Civil Code section 1468.

15.4. Construction of Agreement. In the event of a conflict between the provisions of this Development Agreement and Chapter 56, the provisions of this Development Agreement will govern and control.

15.5. Recordation. Pursuant to the Development Agreement Statute and Chapter 56, the Clerk of the Board of Supervisors shall have a copy of this Development Agreement recorded in the Official Records within 10 days after the Effective Date of this Development Agreement or any amendment thereto, with any costs to be borne by Developer.

15.6. Obligations Not Dischargeable in Bankruptcy. Developer's obligations under this Development Agreement are not dischargeable in bankruptcy.

15.7. Limitations on Actions. Pursuant to sSection 56.19 of the Administrative Code, any decision of the Board of Supervisors made pursuant to Chapter 56 shall be final. Any court

action or proceeding to attack, review, set aside, void, or annul any final decision or determination by the Board of Supervisors will be commenced within 90 days after such decision or determination is final and effective. Any court action or proceeding to attack, review, set aside, void or annul any final decision by (i) the Planning Director made pursuant to Administrative Code section 56.15(d)(3) or (ii) the Planning Commission pursuant to Administrative Code section 6.17(e) must be commenced within 90 days after the decision is final.

15.8. Attachments. The attached Appendix, Port Consent, SFMTA Consent, SFPUC Consent and Exhibits listed below are incorporated into and are a part of this Development Agreement.

APPENDIX

Consent To Development Agreement (Port Commission)

Consent To Development Agreement (SFMTA) (with Transportation Plan and TDM Program attachments)

Consent To Development Agreement (SFPUC)

EXHIBITS

DA Exhibit A:	Project Site (legal description and diagram)
DA Exhibit B:	Site Plan
DA Exhibit C:	Project Approvals
DA Exhibit D:	Chapter 56 as of the Reference Date
DA Exhibit E:	Infrastructure Plan

IN WITNESS WHEREOF, Developer and the City have executed this Development Agreement [as of the last date written below.]

MASTER DEVELOPER:

CITY:

SEAWALL LOT 337 ASSOCIATES, LLC,
a Delaware limited liability company

CITY AND COUNTY OF SAN FRANCISCO, a municipal corporation

By: _____
Name: _____
Its: _____
Date: _____,

By: _____
John Rahaim
Director of Planning
Date: _____

Authorized by Ordinance No. _____
on **[effective date]**.

APPROVED AND AGREED:

By: _____
Naomi Kelly
City Administrator

By: _____
Mohammad Nuru,
Director of Public Works

APPROVED AS TO FORM:

Dennis J. Herrera, City Attorney

By: _____
Joanne Sakai
Deputy City Attorney

END OF MAIN BODY OF TEXT. UPDATE X-REFS AND TOC; ADD APPENDIX.

APPENDIX

CONSENT TO DEVELOPMENT AGREEMENT

Port Commission

The Port Commission of the City and County of San Francisco has reviewed the Development Agreement between the City and Developer relating to the proposed development project at Seawall Lot 337 Project which this Consent to Development Agreement (“**Port Consent**”) is attached and incorporated. Capitalized terms used in this Port Consent have the meanings given to them in the Development Agreement or the Appendix.

By executing this Port Consent, the undersigned confirms the following:

1. The Port Commission, at a duly noticed public hearing adopted the CEQA Findings, including the Statement of Overriding Considerations, and the MMRP, including Mitigation Measures for which the Port is the responsible agency.
2. At the meeting, the Port Commission considered and consented to the Development Agreement as it relates to matters under Port jurisdiction; and (2) delegates to the Port Director or her designee any future Port approvals under the Development Agreement, subject to Applicable Laws, including the City Charter.
3. The Port Commission directed the Chief Harbor Engineer to: (a) require evidence that Developer has paid any required Impact Fees as a condition to issuing any Construction Permit for horizontal development; (b) require evidence that Vertical Developers have paid required Impact Fees as a condition to issuing and as a condition any Construction Permit for vertical development; and (c) report promptly to the Planning Director the location, date, and amount of office space approved for construction in any Construction Permit as described in DDA Exhibit ____ (Office Development and Port Land).
4. The Port Commission also authorized Port staff to take any measures reasonably necessary to assist the City in implementing the Development Agreement in accordance with Port Resolution No. ____.

By authorizing the Port Director to execute this Port Consent, the Port Commission affirms that it does not intend to limit, waive, or delegate in any way its exclusive authority or rights under Applicable Port Law.

PORT:

CITY AND COUNTY OF SAN FRANCISCO,
a municipal corporation, operating by and through
the San Francisco Port Commission

By: _____
Elaine Forbes,
Executive Director

Date: _____

Authorized by Port Resolution No. _____
and Board of Supervisors Ordinance No. _____.

APPROVED AS TO FORM:
Dennis J. Herrera, City Attorney

By: _____
Eileen Malley
Port General Counsel

CONSENT TO DEVELOPMENT AGREEMENT

San Francisco Municipal Transportation Agency

The Municipal Transportation Agency of the City and County of San Francisco has reviewed the Development Agreement between the City and Developer relating to the proposed Project, to which this Consent to Development Agreement (“**SFMTA Consent**”) is attached and incorporated. Capitalized terms used in this SFMTA Consent have the meanings given to them in the Development Agreement or the Appendix.

By extending this SFMTA Consent, the undersigned confirms the following:

1. The SFMTA Board of Directors, after considering at a duly noticed public hearing the CEQA Findings for the Project, including the Statement of Overriding Considerations and the MMRP contained or referenced therein, consented to and agreed to be bound by the Development Agreement as it relates to matters under SFMTA jurisdiction, and delegated to the Director of Transportation or his designee any future SFMTA approvals under the Development Agreement, subject to Applicable Laws, including the City Charter.

2. The SFMTA Board of Directors also:

a. approved Mitigation Measure M-AQ-___ which requires “a Transportation Demand Management (TDM) Plan with a goal of reducing estimated daily one-way vehicle trips by 20% compared to the total number of one-way vehicle trips identified in the project’s Transportation Impact Study at project build-out,” which is a Developer Mitigation Measure under the MMRP and a Developer Construction Obligation under the DDA;

b. approved Developer’s TDM Plan for the Transportation Program (attached to this SFMTA Consent) and found that the Mission Rock Project TDM Plan meets the requirements of Mitigation Measure M-MQ-___ and incorporates many of the TDM Program strategies described in Section 169; and

c. directed the Director of Transportation to administer and direct the allocation and use of TSF In-Lieu Fees in an amount no less than the Total Fee Amount as provided in the Transportation Plan.

d. **[ref. other SFMTA related Mitigation Measures]**

3. The SFMTA Board of Directors also authorized SFMTA staff to take any measures reasonably necessary to assist the City in implementing the Development Agreement in accordance with SFMTA Resolution No. ___, including the Transportation Program and the transportation-related Mitigation Measures.

By authorizing the Director of Transportation to execute this SFMTA Consent, the SFMTA does not intend to in any way limit, waive or delegate the exclusive authority of the SFMTA as set forth in Article VIIIA of the City Charter.

CITY AND COUNTY OF SAN FRANCISCO,
a municipal corporation, acting by and through the
SAN FRANCISCO MUNICIPAL TRANSPORTATION
AGENCY

By: _____
EDWARD D. REISKIN,
Director of Transportation

APPROVED AS TO FORM:
DENNIS J. HERRERA, City Attorney

By: _____
Susan Cleveland-Knowles
SFMTA General Counsel

SFMTA
Resolution No. _____
Adopted: _____, 201_

Attachment: Mission Rock Transportation Plan and TDM Plan

Attachment To SFMTA Consent Transportation Plan and TDM Plan

CONSENT TO DEVELOPMENT AGREEMENT
San Francisco Public Utilities Commission SFPUC

The San Francisco Public Utilities Commission of the City and County of San Francisco has reviewed the Development Agreement between the City and Developer relating to the proposed Project to which this Consent to Development Agreement is attached and incorporated. Capitalized terms used in this SFPUC Consent have the meanings given to them in the Development Agreement or the Appendix.

By executing this SFPUC Consent, the undersigned confirms the following:

1. that the SFPUC, after considering at a duly noticed public hearing the CEQA Findings for the Project, including the Statement of Overriding Considerations and the MMRP approved the Utility Related Mitigation Measures, and consented to and agreed to be bound by the Development Agreement as it relates to matters under SFPUC jurisdiction.

2. The SFPUC affirmed that Vertical Developers will be required to pay the SFPUC Wastewater Capacity Charge and the SFPUC Water Capacity Charge, each at rates in effect on the applicable connection dates.

3. The SFPUC approved Developer's payment of no more than \$1.5 million as a fair share contribution to the City's offsite AWSS system consistent with the Infrastructure Plan, the terms and timing of payment to be established as a condition of approval to the Master Tentative Map for the Project Site.

4. Developer and SFPUC agree that electricity for the Project will be provided by Hetch Hetchy Water use power [or other City sources] provided that an updated feasibility analysis establishes that: (i) the applicable service will be available as and when required for the Project's needs, (ii) the level of reliability and customer service responsiveness will be equivalent or better than that otherwise available, (iii) upon application for the applicable service, the applicable service can be separately metered and implemented at comparable business terms and schedule (including delivery of service to construction sites), (iv) the projected price for the applicable service is comparable to or less than the prevailing market rates in San Francisco for comparable types of loads, and (v) the capital refund structure for the applicable service, (including allowances, cost of ownership, special facilities, and income tax component of construction) is at comparable business terms, and (vi) the PUC/Hetch Hetchy Water and Power, is committed and able (including available financing, plans and access), at its sole cost and expense, to actually construct, install and connect all off-site electrical service infrastructure and associated facilities needed to provide City electrical service to the Project on a schedule so as not to impede or delay the planning, design, or construction of the Project and Project Horizontal Improvements.

By authorizing the General Manager to execute this SFPUC Consent, the SFPUC does not intend to in any way limit, waive or delegate the exclusive authority of the SFPUC as set forth in Article VIIIA of the City Charter.

CITY AND COUNTY OF SAN FRANCISCO,
a municipal corporation, acting by and through the
SAN FRANCISCO PUBLIC UTILITIES COMMISSION

By: _____
HARLAN KELLY,
General Manager

APPROVED AS TO FORM:
DENNIS J. HERRERA, City Attorney

By: _____
Francesca Gessner
Public Utilities Commission

San Francisco Public Utilities Commission
Resolution No. _____
Adopted: _____, 201_

DA EXHIBIT A
Legal Description and Plat

S-9229
8-28-17

LEGAL DESCRIPTION

"MISSION ROCK PROJECT BOUNDARY"

ALL THAT REAL PROPERTY SITUATED IN THE CITY AND COUNTY OF SAN FRANCISCO,
STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

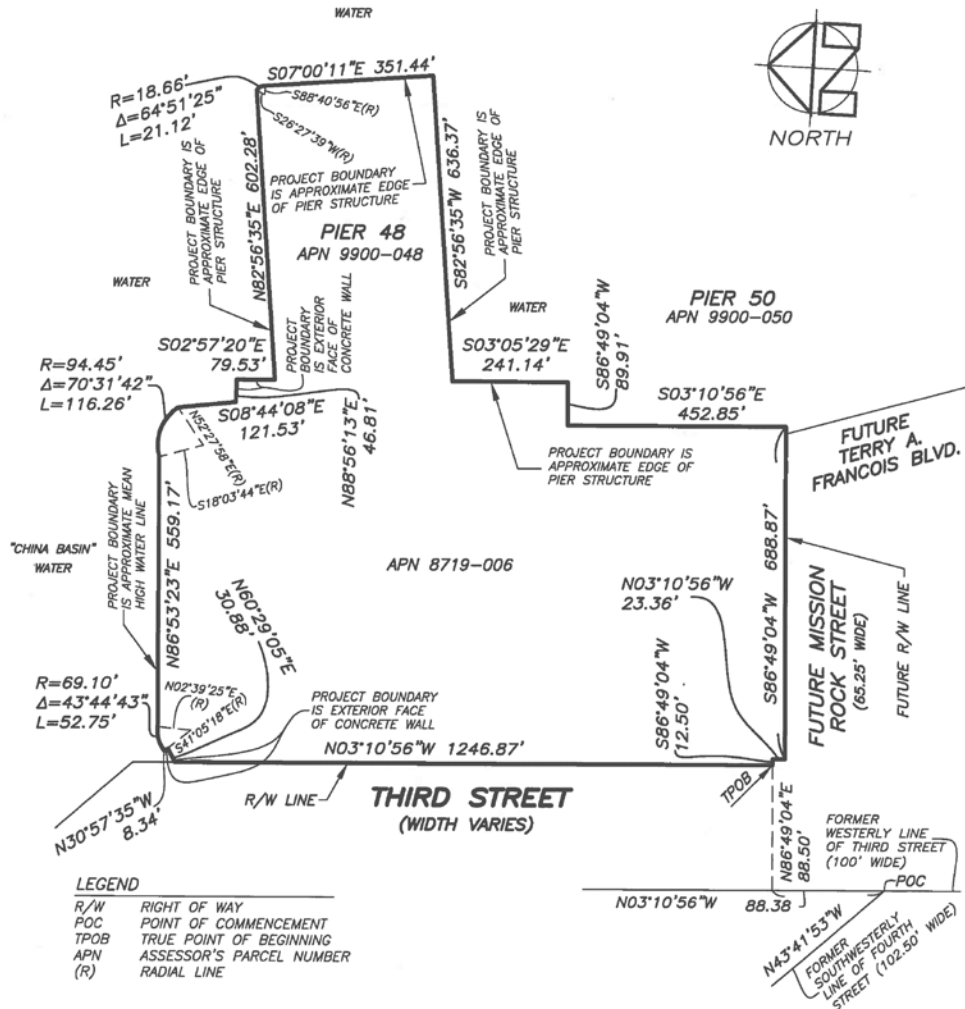
COMMENCING AT THE POINT OF INTERSECTION OF THE FORMER WESTERLY LINE OF
THIRD STREET (100.00 FEET WIDE) WITH THE FORMER SOUTHWESTERLY LINE OF
FOURTH STREET (102.50 FEET WIDE), AS SAID STREET LINES ARE SHOWN ON THAT
CERTAIN MAP ENTITLED "AMENDED RECORD OF SURVEY MAP OF MISSION BAY"
RECORDED JUNE 3, 1999, IN BOOK "Z" OF MAPS AT PAGES 74-94 INCLUSIVE, IN
THE OFFICE OF THE RECORDER OF THE CITY AND COUNTY OF SAN FRANCISCO;
THENCE ALONG THE PROLONGATION OF SAID LINE OF THIRD STREET N03°10'56"W
88.38 FEET; THENCE N86°49'04"E 88.50 FEET TO AN ANGLE POINT IN THE
CURRENT EASTERLY LINE OF THIRD STREET, SAID ANGLE POINT BEING THE TRUE
POINT OF BEGINNING; THENCE ALONG SAID EASTERLY LINE OF THIRD STREET
N03°10'56"W 1246.87 FEET; THENCE N60°29'05"E 30.88 FEET; THENCE
N30°57'35"W 8.34 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO
THE SOUTHEAST WHOSE RADIUS POINT BEARS S41°05'18"E 69.10 FEET; THENCE
NORTHEASTERLY ALONG SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF
43°44'43", AN ARC LENGTH OF 52.75 FEET; THENCE N86°53'23"E 559.17 FEET TO
THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE SOUTHWEST WHOSE
RADIUS POINT BEARS S18°03'44"E 94.45 FEET; THENCE EASTERLY AND
SOUTHEASTERLY ALONG SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF
70°31'42", AN ARC LENGTH OF 116.26 FEET; THENCE S08°44'08"E 121.53 FEET;
THENCE N88°56'13"E 46.81 FEET; THENCE S02°57'20"E 79.53 FEET; THENCE
N82°56'35"E 602.28 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE
TO THE SOUTHWEST WHOSE RADIUS POINT BEARS S26°27'39"W 18.66 FEET; THENCE
ALONG SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 64°51'25", AN
ARC LENGTH OF 21.12 FEET; THENCE S07°00'11"E 351.44 FEET; THENCE
S82°56'35"W 636.37 FEET; THENCE S03°05'29"E 241.14 FEET; THENCE
S86°49'04"W 89.91 FEET; THENCE S03°10'56"E 452.85 FEET TO THE EASTERLY
PROLONGATION OF THE NORTHERLY LINE OF FUTURE MISSION ROCK STREET (65.25
FEET WIDE); THENCE ALONG SAID EASTERLY PROLONGATION AND ALONG SAID
NORTHERLY LINE OF FUTURE MISSION ROCK STREET S86°49'04"W 688.87 FEET TO
THE EASTERLY LINE OF THIRD STREET; THENCE ALONG SAID EASTERLY LINE OF
THIRD STREET N03°10'56"W 23.36 FEET TO AN ANGLE POINT THEREIN; THENCE
ALONG SAID EASTERLY LINE OF THIRD STREET S86°49'04"W 12.50 FEET TO THE
TRUE POINT OF BEGINNING.

CONTAINING 27.843 ACRES, MORE OR LESS.

THE BASIS OF BEARINGS FOR THE ABOVE DESCRIPTION IS THE THIRD STREET
MONUMENT LINE TAKEN TO BE N03°10'56"W AS SHOWN ON THAT CERTAIN "FINAL
MAP" FILED FOR RECORD ON MAY 31, 2005, IN BOOK BB OF MAPS, AT PAGES 6-10
INCLUSIVE, IN THE OFFICE OF THE RECORDER OF THE CITY AND COUNTY OF SAN
FRANCISCO.



PLAT TO ACCOMPANY LEGAL DESCRIPTION



S-9229-BNDY PLAT.DWG

DA EXHIBIT B

Land Use Site Plan

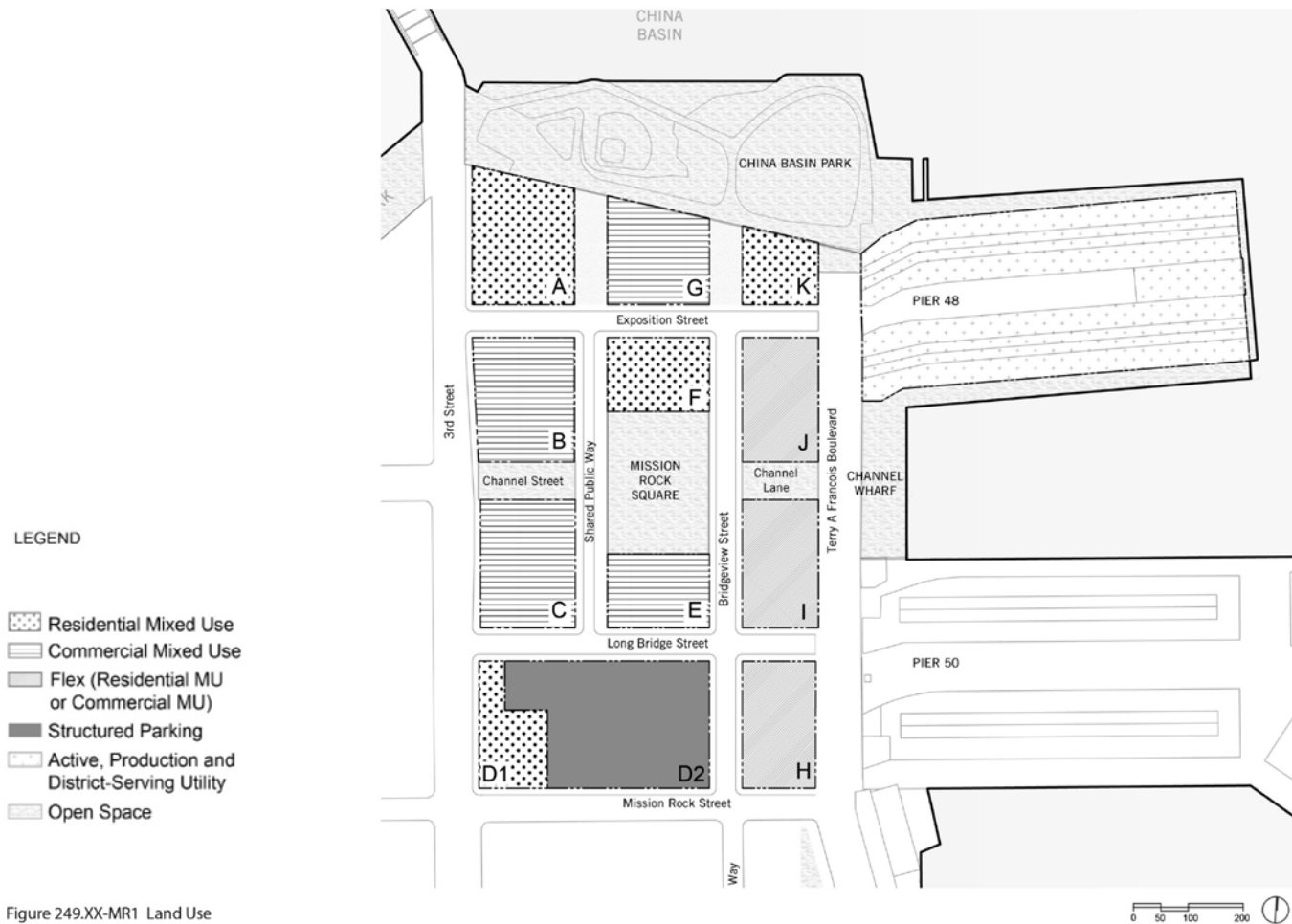


Figure 249.XX-MR1 Land Use

DA EXHIBIT C

Project Approvals

1. **Final Environmental Impact Report**, State Clearinghouse No. 2013122024
 - Certify FEIR: Planning Commission Motion No. _____
 - Adopt: CEQA Findings and MMRP: Planning Commission Motion No. _____
2. **General Plan, Planning Code and Zoning Maps**
 - a. amend Planning Code sections 201, 291 and 901 and add section 249.80 to reflect the Mission Rock SUD (SUD), Mission Rock Mixed Use (MR-MU) District and Mission Rock Height and Bulk District
 - b. amend Zoning Map ZN08 and Sectional Map SU08 to reflect the SUD and MR-MU District
 - Recommend: Planning Commission Motion No. _____
 - Consent: Port Resolution No. _____ [If required]
 - Approve: Board of Supervisors Ordinance No. _____
 - c. Measure D, the Mission Rock Affordable Housing Parks, Jobs and Historic Preservation Initiative, approved by the voters on November 3, 2015
 - i. amended Map 4 (Urban Design Guidelines for Height of Buildings), and Map 5 (Urban Design Guidelines for Bulk of Buildings) of the General Plan Urban Design Element; and
 - ii. Added Section 291 (Mission Rock Height and Bulk District) to the Planning Code.
3. **Mission Rock Design Controls**
 - Approve: Planning Commission Motion No. _____
 - Approve: Port Resolution No. _____
4. **Development Agreement**
 - Recommend: Planning Commission Motion No. _____
 - Consent: Port Resolution No. _____
 - Consent: SFMTA Resolution No. _____
 - Consent: SFPUC Resolution No. _____
 - Approve: Board of Supervisors Ordinance No. _____
5. **Master Lease**
 - Approve and recommend: Port Resolution No. _____
 - Approve under Charter § 9.118: Board of Supervisors Resolution No. _____
6. **Pier 48 Lease**
 - Approve: Port Resolution No. _____
 - Approve under Charter § 9.118: Board of Supervisors Resolution No. _____
7. **Disposition and Development Agreement**
 - Approve and recommend: Port Resolution No. _____

- Approve under Charter § 9.118: Board of Supervisors Resolution No. _____
- 8. Waterfront Land Use Plan / Waterfront Design and Access Element amendments**
- Approve: Port Resolution No. _____
- 9. Mission Rock South Redevelopment Plan Amendment, OPA Amendment and Design for Development Plan Amendment**
- a. Approve: OCII Commission
 - b. Approve: Board of Supervisors Ordinance No. _____
- 10. San Francisco Administrative Code**
- a. Amend authorized uses of special taxes under Article X of Chapter 3 [unless previously amended]
 - b. Approve: Board of Supervisors Ordinance No. _____
- 11. Financing Districts**
- a. formation proceedings for IFD Project Area I (Facilities)
 - b. formation proceedings for Mission Rock CFD (Facilities and Services)
 - Recommend: Port Resolution No. _____
 - Approve: Board of Supervisors Resolutions Nos. _____ (IFD Issue Bonds, CFD Formation, Bond necessity, election and CFD Issue bonds)
 - Approve: Board of Supervisors Ordinance Nos. _____ (CFD Levy, Tax)
- 12. Memorandum of Understanding re Interagency Cooperation**
- Approve: Port Resolution No. _____
 - Consent: SFMTA Board Resolution No. _____
 - Consent: SFPUC Resolution No. _____
 - Consent: SF Fire Commission Resolution No. _____
 - Approve: Board of Supervisors Resolution No. _____
- 13. Memorandum of Understanding re Assessment, Collection, and Allocation of Taxes**
- Approve: Port Resolution No. _____
 - Approve: Board of Supervisors Resolution No. _____

EXHIBIT D

Chapter 56

EXHIBIT E
Infrastructure Plan

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Francisco)

On _____, before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Francisco)

On _____, before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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Signature _____

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County of San Francisco)

On _____, before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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Signature _____

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State of California)
County of San Francisco)

On _____, before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____



**CITY AND COUNTY OF SAN FRANCISCO
EDWIN LEE, MAYOR**

APPENDIX TO DEVELOPMENT AGREEMENT

FOR THE

**MISSION ROCK PROJECT
(SEAWALL LOT 337 & PIER 48)**

[REFERENCE DATE]

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APPENDIX

This Appendix is an integral part of the Development Agreement, a Transaction Document for the Mission Rock project at Seawall Lot 337 and Pier 48 and consists of:

- Part A: standard provisions and rules of interpretation.
- Part B: relevant terms defined in Other Transaction Documents.

PART A: STANDARD PROVISIONS AND RULES OF INTERPRETATION

1. TRANSACTION DOCUMENTS.

1.1. Entire Agreement. The Development Agreement and the other Transaction Documents (including this Appendix and the preamble paragraphs, recitals, all exhibits, schedules, and Consents) contain all of the representations and warranties and the entire agreement, and supersede all prior correspondence, memoranda, agreements, warranties, and representations, between the Parties with respect to the subject matter it addresses. No prior drafts of any Transaction Document or changes from those drafts to the executed versions may be introduced as evidence in any litigation or other dispute resolution proceeding by any person, and no court or other body may consider those drafts in interpreting any Transaction Document.

1.2. Counterparts. The Transaction Documents may be executed in multiple counterparts, each of which will be deemed to be an original and that together will be one instrument. Parties may deliver their counterparts by electronic mail or other electronic means of transmission.

1.3. Exhibits and Schedules. This Appendix and each attached exhibit are incorporated into and made a part of the Transaction Document to which they are attached. Each schedule attached to a Transaction Document is provided for reference when implementing the Project. The Parties agree that this Appendix and all attached exhibits and schedules may be revised from time to time by agreement based on changed circumstances and experience in the course of the Project. Each Party (including any applicable affected Transferee) will confirm its agreement by signing the revised document in counterparts, which will be deemed to be attached to each counterpart of the revised document and will supersede the document being revised.

1.4. Advance Writings Required.

(a) Amendments and Waivers. Any amendment or waiver of any provision of any Transaction Document must be in writing and signed on behalf of each Party by a person authorized to do so. Material modifications to Transaction Documents may require the approval of either or both the Port Commission and the Board of Supervisors, each of which may give or withhold approval in its sole discretion unless explicitly stated otherwise.

(b) Approvals and Waivers. Whenever a Party's approval or waiver is required: (i) the approval or waiver must be obtained in advance and in writing; and (ii) except as specified otherwise, the Party whose approval or waiver is sought must not unreasonably withhold, condition, or delay its approval or waiver, as applicable.

(c) Specific Application. A Party's waiver or consent in reference to another Party's performance of or any condition to its obligations under a Transaction Document will not be a waiver of or consent to any other performance or condition.

1.5. Technical Changes. The applicable Parties may correct any inadvertent error in any Transaction Document that is contrary to their mutual intention in the identification or characterization of or any reference to any title exception, legal description, boundaries of any parcel, map or drawing, or the text, or otherwise agree to minor changes that do not affect the delivery of Associated Public Benefits. Any agreed change will be effected by a signed memorandum or initialed replacement pages, neither of which will be deemed an amendment of a Transaction Document as long as any adjustments are relatively minor and do not result in a material change as determined by the Port in consultation with

counsel. A change memorandum or replacement pages will become a part of the affected Transaction Document when fully executed or initialed.

1.6. Other Necessary Acts. Each Party will execute, acknowledge, and deliver to the other all other documents and take other actions that are reasonably necessary to implement, and provide each Party with all of its rights under, any Transaction Document.

1.7. Enforceability. Developer, the City and the Port each represents and warrants to the other that its execution and delivery of, and the performance of its obligations under the Transaction Documents have been duly authorized by all necessary action, and will not conflict with, result in any violation of, or be a default under, any provision of any agreement or other instrument binding on or applicable to it, or any present law or court decree. If Developer signs as a corporation, limited liability company, or a partnership, each of the persons executing the Transaction Documents on behalf of Developer represents and warrants that Developer is a duly authorized and existing entity, that Developer has and is qualified to do business in California, that Developer has full right and authority to enter into the Transaction Documents, and that each of the persons signing on Developer's behalf is authorized to do so. At the City or Port's request, Developer must provide evidence satisfactory to the requesting party confirming these representations and warranties.

1.8. No Gift or Dedication. Unless explicitly stated otherwise, no Transaction Document will be deemed to be a gift or dedication of any portion of the Project Site to the general public, for the general public, or for any public use or purpose. Developer has the right to prevent or prohibit the use of any portion of the Project Site it owns or controls, including common areas and buildings and improvements, by any persons for any purpose inimical to the operation of a private, integrated mixed-use project as contemplated by the Transaction Documents.

2. PARTIES AND PERFORMANCE.

2.1. Joint and Several Liability. If Developer consists of more than one person, then the obligations of each under any Transaction Document to which it is a Party will be joint and several, but in no event will any Developer be jointly and severally liable with any other Developer under any Transaction Document.

2.2. Performance Generally.

(a) Time.

(i) Time is of the essence in the performance of all of the terms and conditions of each Transaction Document.

(ii) Subject to this Paragraph, all required performance dates including cure deadlines, expire at 5:00 p.m. Pacific Standard or Daylight Savings Time, as applicable, on the stated date, unless extended under the Transaction Document under which performance is due. Any reference to a week, quarter, or month without reference to a specific day will mean the last day in the period.

(iii) If a Party must give notice or take any other action within a specified minimum number of days that would not fall on a business day, then the Party must take the action on the preceding business day. For example, if a Party is required to give at least five days' prior notice of an action and the fifth day before the desired action falls on a Sunday, the Party must give notice by the preceding business day.

(iv) In all other cases, if the last day of any period to take an action occurs on a day that is not a business day, then the last day for undertaking the action is extended to the next business day. For example, if a Party has 30 days to cure an Event of Default, and the 30th day is a Saturday, the Party would have until the next business day to effect the cure.

(b) Extensions of Time.

(i) Each Party to a Transaction Document, acting in its sole discretion, may agree to extend the date for the other Party's performance of any term, covenant, or condition, or the other Party's exercise of any rights under the Transaction Document, without executing an amendment. A Party may impose reasonable conditions on an extension of the other Party's time to cure a default. No extension of time will release any of the obligations subject to the extension or waive the granting Party's rights in relation to any other term, covenant, or condition of or any other default in the performance or breach of the Transaction Document under which the extension is granted.

(ii) Any extension of time requiring Port Commission approval must be made by a resolution adopted at a noticed public meeting. All other extensions will be made by a countersigned writing.

(c) Waivers. Unless otherwise specified in a Transaction Document, none of the following circumstances will waive an Aggrieved Party's rights or remedies with respect to an Event of Default or Material Breach, including its right to prosecute any actions it deems necessary to enforce its rights or remedies.

(i) Party's failure to give notice or delay in giving notice or asserting any of its rights or remedies as to an Event of Default or Material Breach will not waive or delay the date on which the Event of Default or Material Breach occurs.

(ii) A Party's waiver as to a specific Event of Default, Material Breach, right, or remedy will not be a waiver of any other Event of Default, Material Breach, right, or remedy.

(d) Responsibility for Costs. The Party on which any obligation is imposed in any Transaction Document will be solely responsible for paying all costs incurred in performing the obligation, unless specifically provided otherwise.

2.3. Successors. The Parties are entering into the Transaction Documents only for the protection and benefit of the Parties and their successors, subject to **DA art. 10** (Lender Rights) and **DA art. 12** (Transfers and Conveyances), and **DDA art. 6** (Transfers) and **DDA art. 19** (Lender Rights).

2.4. Third Party Beneficiaries. Developer is an explicitly recognized third-party beneficiary under the ICA. Transferees and Vertical Developers are third-party beneficiaries to the extent that they acquire development rights under the Development Agreement. Interested Parties have rights as specified in the Development Agreement. No other persons have third-party rights under any Transaction Document.

2.5. No Limitation on Unrelated Rights. The rights and remedies under the Transaction Documents do not supersede or preclude any Party's exercise of its rights and remedies under other agreements and documents, or of the City, the Port, or any other Regulatory Agency to require compliance with any Regulatory Approval or other entitlement granted for the Project.

2.6. No Joint Venture or Partnership. Nothing in any Transaction Document to which Developer is a Party, or in any document Developer executes in connection with the Transaction Documents, will create a joint venture or partnership between the City and Developer or between the Port and Developer. Developer is not acting as the agent of the City or the Port, nor is the City or the Port acting as the agent of Developer in any respect under any Transaction Document. Developer is not a state or governmental actor with respect to any of its activities under the Transaction Documents.

2.7. Survival. Except as provided otherwise, termination or expiration of the Development Agreement or any other Transaction Document will not affect: (a) any obligation to indemnify under any Transaction Document; (b) any provision of any Transaction Document that expressly survives expiration or termination; (c) rights and obligations as to Adequate Security for an obligation arising before

termination or expiration; or (d) rights and obligations under the Financing Plan or the Acquisition Agreement to the extent related to an obligation arising before termination or expiration of the Development Agreement.

3. GOVERNING LAW.

3.1. Construction of Transaction Documents. The Transaction Documents are governed by and must be construed under the laws of the State of California and the Charter. All references in the Transaction Documents to local, regional, state, or federal laws means those laws as amended from time to time, except to the extent explicitly stated otherwise.

3.2. Countervailing Law. If any applicable state or federal law prevents or precludes compliance with any material provision of a Transaction Document, **App ¶ A4.3 (Severability)** will apply. Alternatively, the Parties may agree to modify, amend, or suspend the affected Transaction Document to the extent necessary to comply with law in a manner that preserves to the greatest extent possible the intended benefits to the City, the Port, and Developer.

3.3. Good Faith and Fair Dealing. In all situations arising under the Transaction Documents, each Party must attempt to avoid and minimize the damages resulting from the other's conduct and take all reasonably necessary measures to implement the Transaction Documents. The Transaction Documents are subject to the covenant of good faith and fair dealing applicable to contracts under California law. Accordingly, Developer, City and the Port each covenants, on behalf of itself and its successors, to take all actions and to execute, with acknowledgment or affidavit if required, all documents necessary to achieve the objectives of the Transaction Documents to the extent consistent with applicable law.

4. ACTIONS.

4.1. Attorneys' Fees.

(a) Prevailing Party.

(i) Should any Party file an action permitted or required under any Transaction Document, the prevailing Party will be entitled to recover its reasonable costs, including attorneys' fees, plus interest at the maximum amount allowed under law, from the losing Party.

(ii) The ICA is specifically excepted from this prevailing party provision.

(b) Fee Schedules. For attorneys in the Office of the City Attorney, attorney fee rates will be based on the fees regularly charged by private attorneys with an equivalent number of years of professional experience (calculated by reference to earliest year of admission to the bar of any state) who practice in San Francisco in law firms with approximately the same number of attorneys as employed by the Office of the City Attorney. For in-house counsel, attorney fee rates will be based on the same criteria, with amounts based on law firm rates where the office of in-house counsel is located.

4.2. Jurisdiction and Venue. All obligations under each Transaction Agreement are to be performed in the City and County of San Francisco. Each Party, by executing a Transaction Document, agrees that venue is proper in and consents to the jurisdiction of the Superior Court for the City and County of San Francisco.

4.3. Severability. Unless specifically provided otherwise, a final judgment invalidating any provision of any Transaction Document, or its application to any person, will not affect any other provision of the Transaction Document or its application to any other person or circumstance. All other provisions of the Transaction Document will continue in full force and effect, except to the extent that enforcement of the Transaction Document as affected by the final judgment would be unreasonable or grossly inequitable under all the circumstances or would frustrate a fundamental purpose of the Transaction Documents.

4.4. Limitations on Liability of the Parties.

(a) No Personal Liability of City Parties. Under no circumstances will any individual board member, director, commissioner, officer, employee, official, or agent of the City or the Port be personally liable to Developer for any Event of Default by a City Party or for any amount payable to a Developer Party under any Transaction Document.

(b) No Personal Liability of Developer Parties. Under no circumstances will any individual board member, director, officer, employee, official, partner, employee, or agent of Developer or any Affiliate of Developer be personally liable to any City Party for any Event of Default by a Developer Party or for any amount payable to a City Party under any Transaction Document.

(c) No Consequential, Punitive, or Special Damages. Developer, the Port, and the City would not have entered into the Transaction Documents to which they are Parties if they could be liable for indirect or consequential, punitive, or special damages. Accordingly, Developer, the Port, and the City each waives any Claims against, and covenants not to sue, the other Party to any Transaction Document for indirect, consequential, punitive, or special damages, including loss of profit, loss of business opportunity, or damage to goodwill.

(d) No Effect on Other Rights. This Paragraph will not affect any Party's right to recover actual damages that arise from a Breaching Party's failure to: (i) pay any sum when due under any Transaction Document; (ii) satisfy an indemnity under any Transaction Document; or (iii) pay attorneys' fees when due under an Arbitrator's decision or a court's final judgment.

(e) Project Payment Sources. Except as otherwise provided in any Transaction Document, Developer agrees as follows.

(i) All obligations of the Port or the City arising out of or related to each Transaction Document are special and limited obligations of the Port and the City, as applicable. The Port's and the City's respective obligations to make payments to implement any Transaction Document are restricted strictly to Project Payment Sources described in the Financing Plan, and only to the extent those sources are available.

(ii) More specifically, in no event may Developer compel: (1) the City to use funds in or obligate the City's General Fund; or (2) the Port to use funds in or obligate the Port Harbor Fund except as described in the Financing Plan, in either case to reimburse Developer's Horizontal Development Costs, pay any other costs associated with the Project, or satisfy any Developer Claim under any Transaction Document.

(f) Liability of Others. Unless specifically provided otherwise, the Parties agree that no Agents of the Port or of the City or of their successors or assigns will be personally liable to Developer or any Vertical Developer, and no Agents of Developer or any Vertical Developer or of their successors or assigns will be personally liable to the Port or the City, for any default or breach or for any payment or performance that becomes due under any Transaction Document. This Subsection does not release or waive the obligations of any person with a direct legal obligation under applicable law, such as the general partner of a limited partnership or any Obligor providing Adequate Security for a specified obligation.

5. NOTICES.

5.1. Manner of Delivery. Unless otherwise specified in a Transaction Document, any notices (including notice of approval or disapproval, demands, waivers, and responses to any of them) required or permitted under any Transaction Document must be delivered by: (a) hand delivery; (b) first class United States mail, postage prepaid, return receipt requested; or (c) overnight delivery by a nationally recognized delivery service or the United States Postal Service, delivery charges prepaid.

5.2. Required Information. To be effective, a notice must be in writing or be accompanied by a cover letter that, to the extent applicable:

- (a) cites the section of the Transaction Document under which the notice is given;
- (b) indicates whether a response or other action is required and, if so, the period of time within which the recipient must respond or otherwise act;
- (c) for an alleged default or breach, is prominently marked "*Notice of Default*" or "*Notice of Material Breach*" and specifies the cure period;
- (d) is clearly marked "*Request for Approval*" if approval is being requested;
- (e) if denying or objecting to a request for approval, states with particularity the reasons for the disapproval or objection; and
- (f) if explicitly permitted under the Transaction Document, states that failure to respond to the notice within the stated time period will be deemed to be the recipient's approval of the subject matter of the notice.

5.3. Effective Date. A notice will be deemed to be delivered and effective:

- (a) on the date personal delivery actually occurs;
 - (b) on the business day after the business day it is deposited for overnight delivery;
- or
- (c) on the date of actual delivery or on which delivery is refused as shown on the return receipt if mailed.

5.4. Interested Persons. Interested Persons may request copies of notices that the Port or the City delivers to Developer by providing notice to the Port or the City. Developer will have the sole responsibility for providing information to any Interested Person desiring notice. Neither the Port nor the City will incur liability for failure to provide notice to any Interested Person.

5.5. Change of Address. Notices must be delivered to the addresses for notice as specified in the Transaction Documents, unless superseded by a notice of a change in address for notices that is delivered in accordance with **App ¶ A5.1** (Manner of Delivery).

5.6. Convenience Copies. Except as explicitly permitted under specific circumstances, a Party must not give notice by facsimile or electronic mail, but any Party may deliver a copy of a notice by facsimile or electronic mail as a courtesy or for convenience. The effective date of a notice will not be affected by delivery of a convenience copy by facsimile or electronic mail.

6. PAYMENT DEMANDS.

6.1. Application. The following procedures will apply to any demand from one Party to the other Party for payment whenever payment procedures are not specified in the Transaction Document under which demand is made.

6.2. Demand. The Party seeking payment must deliver its demand for payment to the other Party together with proof of payment. The Party obligated to pay will have the right to engage a CPA to review the other Party's claimed costs, and the Party seeking payment must cooperate in providing information necessary for the review. The Party conducting the review will bear its own costs unless the review reveals that the other Party's costs are overstated by 5% or more, in which case, the amount of the reimbursement will be reduced by the amount of the review costs. Provided that the Party receiving payment cooperates in providing information necessary for review, no such review shall extend the time period by which payment must be made.

6.3. Time for Payment. Except when other procedures are specified in a Transaction Document, or during any period of review or dispute resolution, the Party obligated to make payment must satisfy the payment demand within 30 days after receipt of the demand for payment.

7. USAGE GUIDELINES FOR DEFINED TERMS.

7.1. Definitions in Appendix Part B. Appendix Part B contains the definitions for terms defined in other Transaction Documents.

7.2. Capitalization. Defined terms that are not capitalized in this Appendix are not capitalized when used in the Transaction Documents.

7.3. Correlating Terms Included. Each defined term must be interpreted to encompass all correlating plural and singular nouns, verb tenses and forms, adjectives, adverbs, and other forms of the term. The following examples of the application of definitions to correlating terms are illustrative only and are not intended to limit the application of the examples used or the meaning of this Paragraph.

- “Assign” applies to “Assignment,” “Assignee,” “Assignor,” and “Assigned.”
- “Begin construction” applies to “began to construct,” “beginning construction,” and “has begun to construct.”
- “Indemnify” applies to “indemnity,” “indemnification,” and “indemnitor.”
- “Substantial Completion” applies to “Substantially Complete.”
- “Third party” applies to “third-party” and “third parties.”
- “Waive” applies to “waiver,” “waivers,” “waived,” and “waiving.”

7.4. Definitional Context. In some instances, defined terms apply only to certain circumstances or may have different meanings in different contexts. In those instances, the definition will be identified as specific to a situation. The following examples are illustrative only and are not intended to limit the application of the examples used or the meaning of this Paragraph.

- “Final Completion” and “Substantial Completion” as used in reference to Horizontal Improvements and Vertical Improvements incorporate conditions specific to each type of Improvement.
- The “Parties” to one Transaction Document may be different from the “Parties” to another Transaction Document.

8. INCONSISTENT PROVISIONS.

8.1. General Rule. Developer and the City Parties intend for any Transaction Document addressing specific rights and obligations to prevail over any inconsistent provisions in any other any Transaction Document for the Project. This general rule will apply to the primary Transaction Document as amended from time to time, whether or not the amendment is reflected in the Appendix.

8.2. Examples. The following examples are illustrative only and are not intended to limit the application of the examples used or the meaning of this Paragraph.

- Financing provisions in the Financing Plan will prevail over conflicting provisions regarding Project Payment Sources in any other Transaction Document that is not specific to a Project Payment Source.
- The RMA will prevail over conflicting provisions in any other Transaction Document, including the Financing Plan, with respect to rates and methods of assessing Mello-Roos Taxes.
- An RMA amendment revising the definition of “Tax-Exempt Parcel” will prevail over an inconsistent definition in this Appendix as applied to the levy of Mello-Roos Taxes.
- Review periods for Construction Documents in the ICA will prevail over conflicting review periods in any other Transaction Document.

9. REFERENCES WITHIN TRANSACTION DOCUMENTS.

Unless otherwise specified, whenever a Transaction Document, including all exhibits, schedules, and attachments, refers to the table of contents or any article, section, exhibit, attachment, or defined term, the reference is deemed to refer to the article, section, exhibit, attachment, or defined term of the Transaction Document or the referenced exhibit or attachment and all of the subsections, subparagraphs, clauses, exhibits, and attachments. Unless specified otherwise, each document attached to a Transaction Document is incorporated by reference.

10. REFERENCES TO DOCUMENTS.

Unless otherwise specified, all references to a Transaction Document or a specific exhibit, attachment, schedule, supplement, Consent, addendum, or other document attached or deemed attached to a Transaction Document means the entire document as amended, replaced, supplemented, clarified, corrected, or superseded at any time while any obligations under the Transaction Document are outstanding.

11. ATTRIBUTED AND DELEGATED ACTS AND OBLIGATIONS.

11.1. Delegated Actions. References in any Transaction Document to a Party's acts or omissions mean acts or omissions by the Party and its Agents unless the context requires or specifically stated otherwise.

11.2. Transferred Obligations. References in any Transaction Document to a Party's obligations also mean the Party's obligation to ensure that its successors, Agents, and Transferees comply with all applicable obligations.

11.3. Successor Public Bodies. References to any public body acting in its regulatory or proprietary capacity also mean the named body or any successor public body designated by or under law to act in the same capacity.

11.4. Successor Public Officials. References to elected and appointed officials of public bodies also mean their duly appointed or elected, as applicable, successors to the extent authorized to act in the same capacity, and designees to the extent authorized to take specific actions on behalf of the named officials.

12. TRANSFERRED RIGHTS.

All references to Developer in a Transaction Document pertaining to any right under that Transaction Document also mean a Transferee to the extent set forth in an Assignment and Assumption Agreement in form and content consistent with **DA art. 12** (Transfers and Conveyances).

13. HEADINGS AND REFERENCES.

13.1. Headings. The headings preceding the articles, sections, and other parts of each Transaction Document and in the applicable table of contents have been inserted for convenience of reference only and must be disregarded in the construction and interpretation of the Transaction Documents.

13.2. References Generally. Any reference to a provision "in the [Transaction Document]," "herein," "hereof," or similar terms will be deemed to refer to any reasonably related provisions of the Transaction Document in which the reference appears in the context of the reference, unless the reference refers solely to a specific provision of the Transaction Document.

14. RECITALS.

Recitals are included to provide context for the Parties' agreement as set forth in the Transaction Document in which they appear and are not binding with respect to the Parties' rights and obligations. If the recitals conflict other provisions of the Transaction Document, the other provisions will prevail.

15. WORDS OF INCLUSION.

The words “including,” “such as,” or similar terms when following any general term must not be construed to limit the term to the specific terms that follow, whether or not followed by language of non-limitation, such as “without limitation,” “including, but not limited to,” or similar words, but will be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of the term and to be followed by the phrase “without limitation” or “but not limited to.”

16. GENDER AND NUMBER.

Wherever the context requires, gender-specific and gender-neutral references are deemed to include the masculine, feminine, and gender-neutral, and references to the singular are deemed to include the plural and vice versa.

17. NUMERALS.

For purposes of calculations under any Transaction Document, fractions will not be rounded up or down. A numeral will prevail over any conflicting spelled out number.

18. TIME PERIODS.

18.1. Calendar Periods. References to days, months, quarters, and years mean calendar days, months, quarters, and years unless otherwise specified.

18.2. Business Days. References to a business day means a day other than a Saturday, Sunday, or a holiday recognized by the City. A business day begins at 8 a.m. and ends at 5 p.m., Pacific Standard Time or Pacific Daylight Savings Time, whichever is in effect on the date in question.

19. STATUTORY REFERENCES.

References to specific code sections mean San Francisco Municipal Ordinances unless otherwise specified or required by context. References to any law mean the law as in effect on the Reference Date and as amended at the time in question, unless specifically stated otherwise.

20. NO PARTY DRAFTER.

The Transaction Documents have been negotiated at arm’s length between persons sophisticated and knowledgeable in the matters addressed. In addition, each Party has been represented by experienced and knowledgeable legal counsel, or has had the opportunity to consult with counsel. Accordingly, the provisions of the Transaction Documents must be construed as a whole according to their common meaning to achieve the Parties’ intent and purpose, without any presumption (under Cal. Civ. Code §§ 1649, 1654, or otherwise) against the Party responsible for drafting any part of any Transaction Document.

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PART B: TERMS DEFINED IN OTHER TRANSACTION DOCUMENTS

The following terms have the meanings given to them below. Defined terms that are not capitalized in Appendix Part B are not capitalized when used in the Transaction Documents.

“Acquiring Agency” means the City Agency (the Port, SFPUC, or Public Works) that will acquire Developer Improvements under the Acquisition Agreement.

“AB 2797” means Assembly Bill 2797 (stats. 2016, ch. 529), which amended and added Project-specific provisions to SB 815.

“Acquisition Agreement” means the Acquisition and Reimbursement Agreement between Developer and the Port in the form of **FP Exh A** that lists Developer Improvements that Acquiring Parties will purchase from Developer, establishes the Acquisition Prices of Developer Improvements, and provides forms and procedures for Developer to request inspection of and payment for Developer Improvements.

“action” when used in reference to any Claim or Loss means any administrative, judicial, quasi-judicial, or nonjudicial proceeding, including any alternative dispute resolution proceeding, and includes any complaint, cross-complaint, counterclaim, bankruptcy case, adversary proceeding, and appeal.

“actual damages” means the exact amount of any sum due and owing, together with interest until paid and all costs of collection.

“Adequate Security” means all Phase Security and Loss Security that Developer provides to the Port under the DDA:

- (i) to secure the faithful performance or payment, or both, of Developer Construction Obligations and Developer Reimbursement Obligations under **DDA art. 18** (Security for Project Activities);
- (ii) issued by a person that meets the Obligor Net Worth Requirement and is approved by the Port Director;
- (iii) that includes the Port’s costs of enforcement in the Obligor’s liability; and
- (iv) that is in form and substance proposed by Developer and approved by the Port Director, such as bonds, letters of credit, certificates of deposit.

“Adequate Security” excludes security required by the Subdivision Code.

“Administrative Delay” means an Excusable Delay caused when:

- (i) a Regulatory Agency fails to act on a Developer request or application within the time specified in the ICA, the Development Agreement, or the DDA, or, in no such time is specified, within a reasonable time under its standard practices;
- (ii) an appeal body or court determines that a Regulatory Agency’s act or failure to act on an application was improper following a challenge by Developer or a Vertical Developer Affiliate; or
- (iii) for any matter that requires the execution and delivery of a Vertical DDA or Parcel Lease, Developer has shown a good faith willingness to enter into the applicable agreement substantially in the forms attached to this DDA and in accordance with all other terms and conditions, but Port has delayed or failed to proceed with the execution and delivery of the applicable Vertical DDA or Parcel Lease.

“Administrative Delay” excludes any delay caused by Developer’s failure to meet any Outside Date or to submit timely all required and requested information supporting a request or application.

“affordable housing” is defined in the Housing Plan.

“Agent” means any officer, director, employee, legal or other authorized representative, attorney, or contractor of any person and any of their respective Agents.

“agree” an accord, mutual consent, or binding decision reached by two or more persons.

“agree” excludes any unilateral decision.

“Aggrieved Party” means the Party alleging that a Breaching Party has committed an Event of Default or is in Material Breach under the DDA, the Development Agreement, or other Transaction Document.

“Assessor” means the Assessor-Recorder of the City and County of San Francisco.

“attorneys’ fees” means reasonable attorneys’ fees and related costs incurred in an action or as otherwise indicated in the DDA, including all costs of litigation, such as fees and related costs of attorneys, consultants, testing, and experts, litigation costs of the action, and costs for document copying, exhibit preparation, carriers, postage, and communications.

“begin construction” means to start the physical improvement of a site as part of a sustained and continuous building plan.

“Board of Supervisors” means the legislative branch of the City and County of San Francisco with all powers and authority granted under the Charter and state law.

“Breaching Party” means a Party alleged to have committed an Event of Default or to be in Material Breach under the DDA, the Development Agreement, or other Transaction Document.

“Bond” means any form of indebtedness secured by Mello-Roos Taxes or Tax Increment or both issued on behalf of the Mission Rock CFD or the Mission Rock Project Area to implement the Financing Documents.

“CFD” is an acronym for City and County of San Francisco Community Facilities District No. XXXX (Mission Rock), consisting of the Facilities CFD and the Services CFD, established by the CFD Formation Proceedings.

“CFD Agent” means the Port, acting on behalf of the Mission Rock CFD as authorized in the CFD Formation Proceedings.

“Chief Harbor Engineer” means the Port’s Deputy Director, Engineering.

“City Agency” means any public body or an individual authorized to act on behalf of the City in its municipal capacity, including the Board of Supervisors or any City commission, department, bureau, division, office, or other subdivision, and officials and staff to whom authority is delegated, on matters within the City Agency’s jurisdiction.

“City Charter” means the Charter of the City and County of San Francisco.

“City Party” means the Port and the City and their respective Agents, including commissioners, supervisors, and other elected and appointed officials.

“Claim” means a demand made in an action or in anticipation of an action for money, mandamus, or any other relief available at law or in equity for a Loss arising directly or indirectly from acts or omissions occurring in relation to the Project or at the Project Site during the Development Agreement Term or DDA Term.

“Claim” excludes any demand made to an insurer under an insurance policy or to an Obligor of Adequate Security.

“Component” means a discrete portion or phase of a Horizontal Improvement with a value of up to \$1 million.

“Consent” means Developer’s or a City Agency’s executed approval of its agreement with the Transaction Document to which the Consent is attached.

“Construction Permit” means any permit that Developer and each Vertical Developer must obtain from the Port before beginning any physical work at the Project Site, including demolition, excavation, grading, site, and building permits.

“convey” means to transfer an interest in real property by ground lease, deed, or other instrument.

“conveyance” in reference to a Development Parcel means a Port transfer of a leasehold interest in the parcel to a Vertical Developer for vertical development.

“costs” means actual and reasonable expenses, fees, and other charges directly arising from or relating to the matter giving rise to a right to payment.

“DA” is an acronym for the Development Agreement between the City and Developer specifying the entitlement rights that the City agreed to vest in Developer for development of the Project Site by adoption of the DA Ordinance.

“Deed of Trust” means a mortgage, deed of trust, or other security instrument encumbering a Development Parcel or a leasehold interest in a Development Parcel to secure a Borrower’s repayment obligation to a Lender.

“Development Parcel” means a buildable parcel at the Project Site and includes each Option Parcel, Parcel D, and Pier 48.

“Director of Public Works” means the Director of San Francisco Public Works.

“Director of Transportation” [INSERT DEFINITION].

“Encumbered Property” means the specific real property interest in a Development Parcel that is the collateral under a permitted Deed of Trust.

“Environmental Law” means any law pertaining to handling, release, or remediation of Hazardous Materials, conditions in the environment, including structures, soil, air, bay water, and groundwater, the protection of the environment, natural resources, wildlife, and human health and safety, industrial hygiene and employee safety, and community right-to-know requirements, including CEQA, the Mitigation Measures, and the Environmental Covenants, applicable to the Project Site or related to the work being performed under the DDA or any Parcel Lease.

“Environmental Regulatory Agency” means the United States Environmental Protection Agency, the United States Occupational Safety and Health Administration, the United States Department of Labor, any California Environmental Protection Agency board, department, or office, including DTSC and the Water Board, the California Division of Occupational Safety & Health, Department of Industrial Relations, the Bay Area Air Quality Management District, the San Francisco Department of Public Health, SFFD, SFPUC, the Port, and any other Regulatory Agency now or later authorized to regulate Hazardous Materials.

“Event of Default” means a Breaching Party’s failure to cure a noticed breach within any cure period specified in **DDA § 11.2** (Specific Defaults), **DA § 9.2** (Events of Default), or as otherwise specified in any Transaction Document, including all incorporated implementation plans and documents.

“Exaction” means any requirement to provide services or Improvements that the City imposes as a condition of approval to mitigate the impacts of increased demand for public services, facilities, or housing caused by a development project, which may or may not be an impact fee governed by the Mitigation Fee Act, including a fee paid in lieu of complying with a City requirement.

“Exaction” excludes *Mitigation Measures and any federal, state, or regional impositions.*

“Excusable Delay” means an allowed delay in performance, or an extension of an Outside Date, as a result of the occurrence of an event of Force Majeure.

“Excusable Delay” excludes:

(1) *Developer’s lack of Developer Capital needed for a Phase;*

- (2) *Developer's Insolvency; and*
- (3) *an Administrative Delay or Environmental Delay if the Party claiming delay fails to take required actions or attempt to resolve the issues causing delay in a timely and diligent manner.*

"final" when used to refer to any Project Approval or Later Approval means that:

- (i) no administrative or judicial appeal has been filed by the applicable deadline;
- (i) if an administrative or judicial appeal has been timely filed, the Project Approval or Later Approval has been upheld by a final decision; or
- (ii) the Board of Supervisors has certified the results of an election under the Elections Code at which a referendum petition regarding a Project Approval is rejected.

"Final EIR" means the environmental impact report for the Project that the Planning Department published on [date], together with the Comments and Responses document, [add specifics of approval].

"final judgment" means an order, judgment, award, settlement, consent decree, stipulated judgment, or other partial or complete termination of an action with respect to a Claim or a Loss issued by an administrative, judicial, quasi-judicial, or nonjudicial body that is effective and binding after any appeal is finally adjudicated and all rights to appeal have been exhausted, or the time to appeal has expired.

"Final Map" means a final Subdivision Map meeting the requirements of the Subdivision Code and the Map Act.

"Financing Documents" means one or more of the Financing Plan, Appendix I, the RMA, the Tax Allocation MOU, the CFD Formation Proceedings, the IFD Formation Proceedings, and all related ordinances and resolutions that the Board of Supervisors adopted in connection with the formation of Project Area I, and the CFD Project Area.

"Financing Plan" means **DDA Exh C1**, the part of the DDA that will govern the application of Project Payment Sources to meet the Project Payment Obligation and other matters relating to financing the Project and revenue-sharing.

"General Plan" means goals, policies, and programs for the future physical development of the City, as adopted by the Planning Commission and approved by the Board of Supervisors, taking into consideration social, economic, and environmental factors.

"gsf" is an acronym for gross square feet in any structure, as measured under applicable provisions of the Planning Code.

"horizontal development" means the preparation of unimproved or predominantly unimproved land for vertical development.

"IFD Agent" means the Port, acting on behalf of the IFD with respect to Project Area I, as authorized by Ordinance No. XXXX.

"Improvements" means all physical changes required or permitted to be made to the Project Site under the DDA, including Horizontal Improvements and Vertical Improvements.

"Improvement Plan" [INSERT DEFINITION].

"Inclusionary Unit" means a Residential Unit that is subject to the affordability requirements under the Housing Plan.

"indemnify" means reimburse, indemnify, defend, and hold harmless.

“Infrastructure Plan” means **DDA Exh B1**, which contains descriptions and [XXXX%] plans for Horizontal Improvements proposed to be built or installed at the Project Site as of the Reference Date, and each Master Utility Plan when approved by the applicable City Agency.

“in-lieu fee” [INSERT DEFINITION].

“Insolvency” means a person’s financial condition that results in any of the following:

- (i) a receiver is appointed for some or all of the person’s assets;
- (ii) the person files a petition for bankruptcy or makes a general assignment for the benefit of its creditors;
- (iii) a court issues a writ of execution or attachment or any similar process is issued or levied against any of the person’s property or assets; or
- (iv) any other action is taken by or against the person under any bankruptcy, reorganization, moratorium or other debtor relief law.

“Lender” means a financial institution that makes a loan secured by a real property interest in the Project Site to a Borrower to finance Project-related costs.

“Loss” when used in reference to a Claim means any personal injury, property damage, or other loss, liability, actual damages, compensation, contribution, cost recovery, lien, obligation, interest, injury, penalty, fine, action, judgment, award, or costs (including reasonable attorneys’ fees), or reasonable costs to satisfy a final judgment of any kind, known or unknown, contingent or otherwise, except to the extent specified in the DDA.

“Map Act” means the Subdivision Map Act of California (Calif. Gov’t Code §§ 66410-66499.37).

“Master Lease” means an interim lease for the Project Site in the form of **DDA Exh D1** that allows Developer to take possession of the premises and construct Horizontal Improvements approved under the DDA.

“Material Breach” means the occurrence of any of the events described in **DDA art. 12** (Material Breaches and Termination).

“Mello-Roos Taxes” means special taxes that the City levies in a City Fiscal Year on Taxable Parcels in the CFD Project Area in accordance with the RMA, including delinquent special taxes collected at any time by payment or through foreclosure.

“Mitigation Measure” means any measure identified in the MMRP required to minimize or eliminate material adverse environmental impacts of the Project and any additional measures necessary to mitigate adverse environmental impacts that are identified through the CEQA process for any Later Approval.

“Official Records” means official real estate records that the Assessor records and maintains.

“Option Agreement” means the contract between Developer or a Vertical Developer and the Port specifying the conditions to Close Escrow on the Port’s conveyance of an Option Parcel by Parcel Lease.

“Other City Requirements” means ordinances and policies described in **DDA Exh A11** and **DA Exh E** and approved plans to implement City and Port ordinances and policies, including those attached to the DDA at **DDA Exh Tab E**.

“Other Regulator” [INSERT DEFINITION].

“Outside Date” means the last date by which Developer must perform identified obligations for the Project, as specified in the Schedule of Performance, or for a Phase, as specified in the Phase Schedule of Performance.

"Parcel Lease" means a contract in the form of **DDA Exh D2** by which the Port will convey a leasehold interest in an Option Parcel to a Vertical Developer.

"Permitted Lender" means [INSERT DEFINITION.

"Permitted Lien" means [INSERT DEFINITION.

"person" means any individual, corporation (including any business trust), limited liability entity, partnership, trust, joint venture, or any other entity or association, or governmental or other political subdivision or agency.

"Phase Submittal" or **"Phase Application"** means Developer's application for Port Commission approval of a Proposed Phase under DDA art. 3 (Phase Approval).

"Phasing Plan" means **DDA Exh A4**, which shows the order of development of the Phases and the Development Parcels in each Phase Area, subject to revision under **DDA art. 3** (Phase Approval).

"Pier 48" means a 212,500 square-foot facility located in the Embarcadero Historic District with two main pier sheds, Shed A and Shed B, connected by a connector shed, Shed C, at the east end of the pier, containing collectively 181,200 square feet of enclosed warehouse space and a 31,300 square-foot valley between the Shed A and Shed B.

"Planning" means the San Francisco Planning Commission, acting by motion or resolution or by delegation of its authority to the Planning Department and the Planning Director.

"Planning Director" means the City's Director of Planning.

"Port" or **"Port Commission"** means the San Francisco Port Commission.

"Port Director" means the Executive Director of the Port.

"Prior Phase" means the Phase for which Developer obtained Phase Approval before any Current Phase.

"Project" means the rehabilitation of Pier 48 for reuse in accordance with the Secretary's Standards and the horizontal and vertical development of the Project Site, all in accordance with the Regulatory Requirements and the Project Requirements.

"Project Site" means the area consisting of SWL 337, Pier 48, 3.53 acres of Terry A. Francois Boulevard from Third Street to Mission Rock Street, and ½ acre to the east of Terry A. Francois Boulevard between Pier 48 and Pier 50.

"Public ROWs" means Horizontal Improvements consisting of public streets, sidewalks, shared public ways, bicycle lanes, and other paths of travel, associated landscaping and furnishings, and related amenities.

"Public Space" means Horizontal Improvements for public enjoyment, such as public parks, public recreational facilities, public access, open space, and other public amenities, some of which may be rooftop facilities.

"public trust" means, collectively, the common law public trust for commerce, navigation, and fisheries and the statutory trust created by the Burton Act.

"Regulatory Requirement" means an obligation imposed by law or policy on development, occupancy, and use of the Project Site, subject to the Port's authority as trustee under the Burton Act as amended by SB 815, including:

- (i) the conditions of Project Approvals and other Regulatory Approvals;
- (ii) Existing City Laws applied to the Project by the Development Agreement and Project Approvals;

- (iii) Changes in Law to the extent permitted under the DDA and the Development Agreement;
- (iv) current Impact Fees and Exactions and any new or changed Impact Fees and Exactions to the extent permitted under the Development Agreement; and
- (v) Environmental Laws, the SUD, the Design Controls, the Waterfront Plan, and the Other City Requirements.

“Residential Unit” means a dwelling on a developed Residential Parcel and includes any apartment unit, condominium or cooperative unit, hotel or motel room, or other structure containing toilet facilities that is designed and available under applicable law for use and occupancy as a residence by one or more individuals.

“RMA” is an acronym for the Rate and Method of Apportionment.

“Services CFD” means the part of the Mission Rock CFD formed to finance Ongoing Maintenance.

“Services Special Taxes” means Mello-Roos Taxes that the City levies in a City Fiscal Year on Taxable Parcels in the CFD Project Area to fund Ongoing Maintenance Costs.

“SFMTA” is an acronym for the San Francisco Municipal Transportation Agency.

“SFPUC General Manager” means the General Manager of the San Francisco Public Utilities Commission.

“Site Preparation” means physical work to prepare and secure the Project Site for installation and construction of Horizontal Improvements, such as demolition or relocation of existing structures, excavation and removal of contaminated soils, fill, grading, deep dynamic compaction, and construction fencing and other security measures, and temporary Improvements for interim uses before vertical development begins.

“State” means the State of California.

“Subdivision Map” means any map that Developer submits for the Project Site under the Map Act and the Subdivision Code.

“Substantial Completion” means:

- (i) when used in reference to Horizontal Improvements, that the Chief Harbor Engineer has determined that the Horizontal Improvements meet the conditions in **DDA § 15.4** (Substantial Completion); and
- (ii) when used in reference to Vertical Improvements, that the Chief Harbor Engineer has determined that the Vertical Improvements meet the conditions in **DDA § 16.5** (Substantial Completion).

“Tax Allocation MOU” is a term used to refer to the Memorandum of Understanding (Assessment, Levy, and Allocation of Taxes).

“Tax Increment” refers Allocated Tax Increment or Gross Tax Increment, as appropriate in the context.

“Taxable Parcels” means [INSERT DEFINITION].

“Tentative Map” means a Tentative Transfer Map, Vesting Tentative Transfer Map, Tentative Map, or Vesting Tentative Map as defined in the Subdivision Code.

“Third-Party Challenge” means an action challenging the validity of any provision of the DDA or the Development Agreement, the Project, any Project Approval or Later Approval, the adoption or certification of the Final EIR, other actions taken under CEQA, or any other Project Approval.

“Transfer” means an assignment of any portion of Developer's horizontal development rights and obligations under the DDA under an Assignment and Assumption Agreement or through a Significant Ownership Change.

“Transfer” excludes any Deed of Trust given to a Lender or any agreement under which a Vertical Developer is required to build Back-of-Curb Infrastructure.

“Transferee” means any person to which Developer or any Transferee Transfers its rights and corresponding obligations relating to a Phase, Horizontal Improvements, or horizontal development as permitted under **DDA art. 6** (Transfers).

“Transferee” excludes any Vertical Developer, Lender, or successor to either except to the extent of assumed horizontal development rights or obligations (not including Back-of-Curb Infrastructure) as permitted under the DDA.

“Treasurer-Tax Collector” means the Treasurer and Tax Collector of the City and County of San Francisco.

“Vertical DDA” means a disposition and development agreement that the Port will enter into with each Vertical Developer after its exercise of the Option under its Option Agreement.

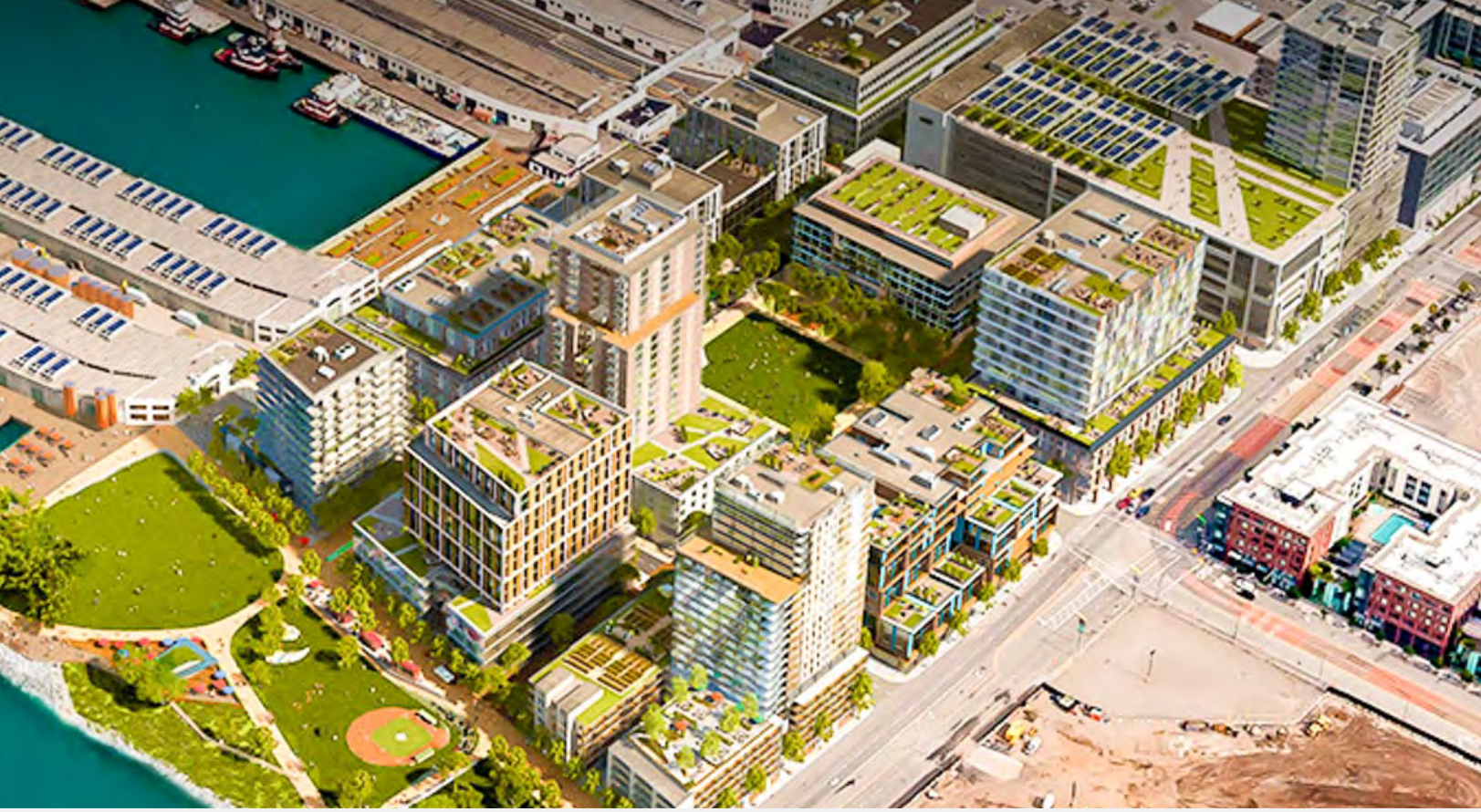
“Vertical Developer” means a party to a Parcel Lease and a Vertical DDA providing for construction of Vertical Improvements on a Development Parcel.

“Vertical Development” means planning, design, and construction or rehabilitation of buildings and other structures on legal parcels.

“Vertical Improvement” means a new building that is built at the Project Site and the rehabilitation of Pier 48.

“Waterfront Plan” means the Port's Waterfront Land Use Plan, including the Waterfront Design and Access Element, which **[has been amended to incorporate the Design Controls and]** is the basis for the Port's regulation of land uses on Port property.

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MISSION ROCK TRANSPORTATION DEMAND MANAGEMENT PLAN

August 2017



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1 OVERVIEW

The development context and overall design profile of Mission Rock make it a prime candidate for robust and effective transportation demand management (TDM). Travel demand generated by Mission Rock will be affected by locational and land use factors, such as proximity to high quality transit, the presence of transit-supportive land use densities, and mixed land use patterns.

This TDM Plan describes measures that will enable Mission Rock to actively manage travel demand through a variety of up-front infrastructure investments and ongoing programs, including unbundled parking, pedestrian- and bicycle-friendly design, transportation marketing, vehicle share facilities and memberships, and others. Ultimately, implementing a robust TDM program will reinforce the forward-thinking vision and brand of Mission Rock as an active and vibrant district that is inclusive and safe for all users.

DEVELOPMENT CONTEXT AND DESIGN PROFILE

Establishing new and enhanced links to and along San Francisco's waterfront, Mission Rock's mixed-used, multi-phase development will be a dynamic addition to the Mission Bay neighborhood. Encompassing approximately 27 acres, Mission Rock is slated to include 11 parcels of residential, office, and retail development as well as a refurbished and reactivated Pier 48, an expanded China Basin Park, and a variety of smaller open space areas. Including Pier 48, Mission Rock will include approximately 1,000 to 1,500 dwelling units, 1.4 to 1.8 million square feet of commercial development, and more than five acres of new open space, for a total of approximately 3.9 million gross square feet of development and eight acres of open space. The site plan calls for a tight and highly walkable urban street grid, with more than half a mile of complete streets. In addition, between 2,400 and 3,000 parking spaces could be provided in off-street facilities.

Mission Rock is located near a busy, increasingly congested part of San Francisco and is readily accessible via car, transit, walking, and bicycling. The site is accessible to I-280 and US-101/I-80 through SoMa's urban street grid, with bicycle connections to the north via the Embarcadero bike route as well as to the south via the Blue Greenway. More importantly, the project is well served by transit, both local and regional. Multiple lines of Muni bus and light rail are within a quarter-mile of the site, with moderate to high frequency of service for most of the day and late into the evening.

Although narrow sidewalks, missing crosswalks, long blocks, and the amount of on-going construction in the surrounding area all currently challenges for pedestrians and bicyclists, the Mission Rock development includes multiple street design improvements to create a safe and inviting environment, such as:

- A highly connective grid of internal streets
- Sidewalks that are to be between 12 and 15 feet wide throughout the project site

- High visibility sidewalks, bulb-outs, and raised pedestrian crossings
- Completion of the portion of the Blue Greenway that runs through the site, with a 16-foot-wide shared bike and pedestrian right-of-way running along Terry Francois Boulevard and the northern edge of China Basin Park
- Designated bicycle lanes or bicycle-friendly low-traffic blocks on all internal roadways
- Bicycle treatments at internal intersections

Mission Rock will also provide important neighborhood amenities – groceries, childcare, personal services – establishing destinations that are easily accessible by all modes of transportation. The existing and future transportation infrastructure in the area (see Figure 1) will further promote the use of all modes of active transportation.

Figure 1 Mission Rock Context Map

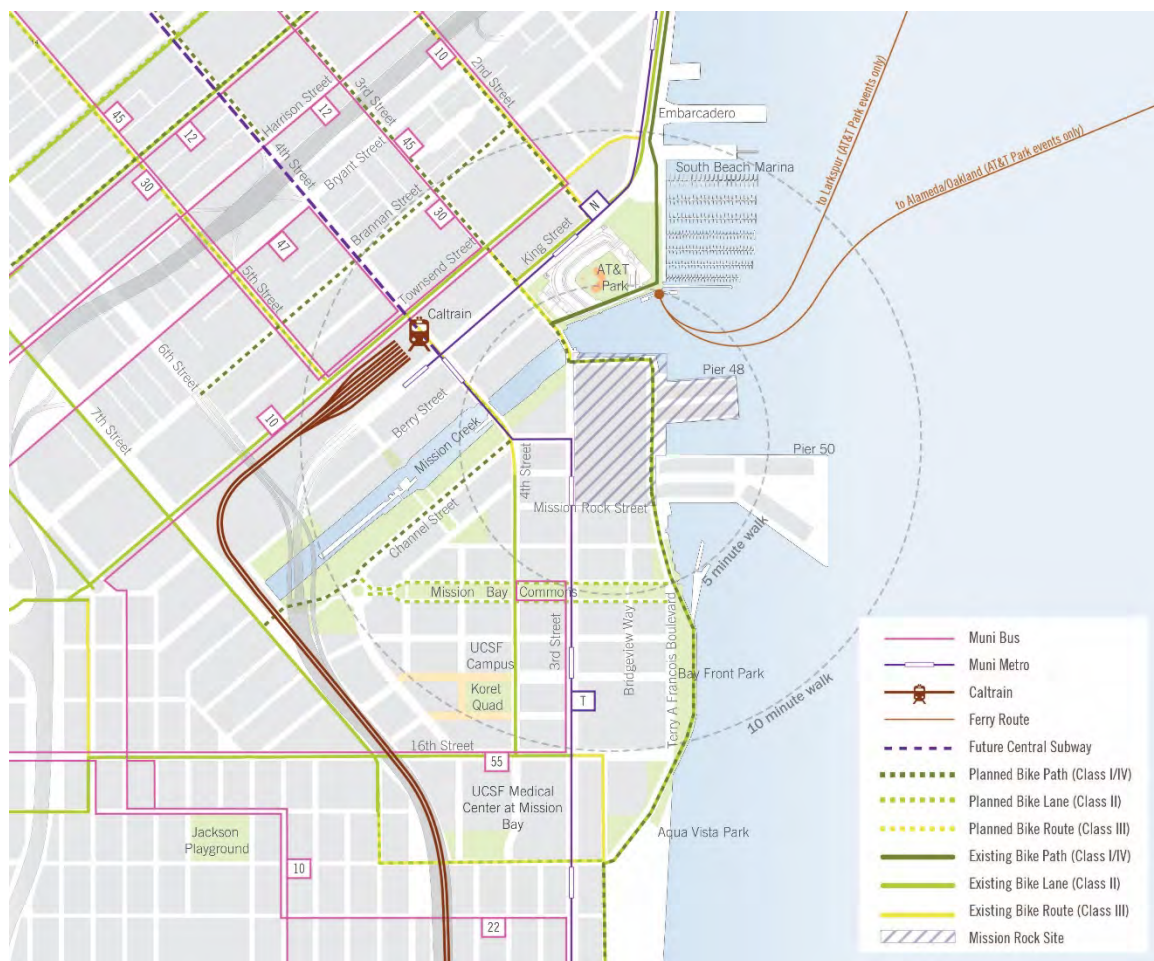


Figure 2 summarizes Mission Rock's development components, associated vehicle trip estimates, and the anticipated trip reduction goal, per commitments made in the project's Environmental Impact Report (EIR).

Figure 2 **Estimated Vehicle Trip Generation and Trip Reduction Goal¹**

Scenario	Proposed Development Components (approximate)	Aggregate Daily One-Way Vehicle Trips (a)	Number of Trips to be Reduced (b = a * 20%)	Target Threshold (c = a – b)
High Commercial, Low Residential	<ul style="list-style-type: none"> ▪ 1,048 dwelling units ▪ 1.4 million square feet (sf) office ▪ 130,000 sf retail ▪ 86,000 sf sit-down restaurant ▪ 37,000 sf quick service restaurant ▪ 5 acres park ▪ 190,000 sf brewery ▪ 11,000 sf brewery retail ▪ 11,000 sf brewery restaurant 	7,615	1,523	6,092
Low Commercial, High Residential	<ul style="list-style-type: none"> ▪ 1,579 dwelling units ▪ 980,000 square feet (sf) office ▪ 130,000 sf retail ▪ 84,000 sf sit-down restaurant ▪ 36,000 sf quick service restaurant ▪ 5 acres park ▪ 190,000 sf brewery ▪ 11,000 sf brewery retail ▪ 11,000 sf brewery restaurant 	7,242	1,448	5,794

WHY TRANSPORTATION DEMAND MANAGEMENT

This TDM Plan reaffirms Mission Rock’s commitment to sustainability and inclusivity. It encourages the site’s residents, employees, and visitors to use the most environmentally friendly and spatially efficient mode possible for each trip, with an emphasis on cycling, walking, and shared rides.

The measures outlined below are designed to work together to affect site users’ travel habits. Targeted programs strengthen the benefits of investments in bicycle and pedestrian infrastructure and the site’s proximity to major transit nodes by reinforcing awareness of these options, breaking down barriers to incorporating them in travel routines, and incentivizing habitual use.

The site plan and TDM program are consistent with several decades of City of San Francisco climate and sustainability policies that aim to encourage the use of transit and other non-auto modes of transportation. It is also consistent with the City’s efforts to manage the transportation impacts of new development. The Plan was developed with San Francisco’s new TDM Ordinance in mind, and the Mission Rock team used the Ordinance’s framework to scale the site’s programs appropriately.

Many campuses have implemented similar TDM programs to reduce single-occupancy vehicle (SOV) travel and find the optimal balance of transportation modes to accommodate growth.

¹ Seawall Lot 337 and Pier 48 Mixed-Use Project Environmental Impact Report, Appendix 4-1 – Transportation Impact Analysis, April 2017. Pg. 486.

Genentech implemented an aggressive TDM strategy in 2006 that included programs such as shuttle service and parking cash-out accompanied by comprehensive marketing and communications through an online employee portal. Since implementation, drive-alone mode share has decreased by almost 30%, decreasing carbon emissions from 4.5 tons per employee to 1.9. Similarly, Stanford University's extensive TDM program, which has for years included meaningfully priced parking, transit subsidies, and incentive programs, has effected a substantial decrease in SOV commuting, from 72% in 2002 to 46% in 2011. Moreover, these programs serve campuses that grew rapidly during the periods noted, but this growth was not accompanied by substantial increases in parking.

In a similarly urban environment, the City of Cambridge implemented a parking and TDM ordinance in 1998, made permanent in 2006. In the Kendall Square area, which predominantly houses large biotechnology firms and research and academic institutions, such as the Massachusetts Institute of Technology, the ordinance has been particularly effective. Although the neighborhood has added 4.6 million square feet of commercial and institutional development over the past 10 years, automobile traffic has *decreased* on major streets, with vehicle counts decreasing as much as 14 percent.² In this way, citywide TDM measures in Cambridge have not deterred the development market while still having a positive impact on quality of life and the environment.

Given these successes, robust TDM programs are becoming expected aspects of new developments, in central cities and suburbs alike. San Francisco is no exception. The City has established a TDM ordinance that would require developers to establish TDM programs scaled to the amount of parking they plan to build on-site. This ordinance reinforces existing multimodal policies, such as the city's Transit First Policy, which was established in 1973 and amended to include pedestrians and bicyclists in 1999. New residents and office tenants increasingly demand convenient access to quality multimodal infrastructure, and in urban areas like San Francisco, they assume that parking will be treated as a limited commodity that will be priced based on occupancy levels and market rates. The Mission Rock TDM Plan reflects the values outlined in City policies by striving to maximize user satisfaction and foster travel choices that are sustainable in all senses of the word.

PLAN OVERVIEW

This Plan is comprised of the following chapters:

- Chapter 2 presents a slate of recommended TDM measures for Mission Rock to reduce SOV trip and parking demand for the development.
- Chapter 3 presents the marketing and communications strategy for Mission Rock's TDM program, discussing the interplay between the primary communication mechanisms, the TDM measures, and the various user groups of Mission Rock.
- Chapter 4 presents Mission Rock's approach to monitoring the TDM Plan's implementation to ensure that it achieves the 20% vehicle-trip reduction target.

This TDM Plan will be incorporated into the Transportation Plan for Mission Rock, which will coordinate daily circulation of people, bicycles, and vehicles to, from, and around the site.

² Moskowitz, Eric. "Car-free commuting push pays off in Kendall Square." *The Boston Globe*. July 25, 2012. <https://www.bostonglobe.com/metro/2012/07/24/kendall-square-car-traffic-falls-even-workforce-soars/C4Fio7iKZnwEMAw7y4cJgN/story.html>

2 PLANNED MEASURES

The Mission Rock TDM Plan consists of a package of measures that will work together to effect behavioral change in a way that is both cost effective and highly marketable. Measures include incentives, programs, and infrastructure improvements, and they include many that have been successfully implemented in other mixed-use and urban environments; those case studies are cited as possible below each measure.

The measures balance the desire to provide innovative transportation amenities with the need to maintain a cost-effective program and an acknowledgement that Seawall Lot 337 Associates, LLC will not hold a primary relationship with site tenants over the long term – vertical developers or the management companies that take ownership of individual buildings once they are developed will ultimately play this role, and will be required to be responsible for any relevant ongoing programs. As such, programs that necessitate ongoing operational expenditures are included but deemphasized in favor of one-time, up-front investments that give new tenants and visitors immediate experiences with and exposure to the array of non-auto transportation options available to them. These will form lifelong patterns of choosing sustainable transportation options. Figure 2 gives an overview of the measures included in the Plan, and identifies the likely responsible party for implementing the measure, the target audience for the measure, the communication channels used and associated level of impact. The remaining chapter provides further detail. As in the table's column headings, colors are used to differentiate infrastructural (❖) and operational (❖) measures in the text below. A few of these recommendations have been directly integrated into the design of Mission Rock, as codified in the Design Controls and other design documents.

Figure 3 Summary of Planned TDM Measures by Mode

● = High Impact ● = Medium Impact ○ = Low Impact Infrastructure = ♦ Operational = ♦

Mode	Measure Type	TDM Program Measures	Responsible Party	Target Audience for Measure			Communication Channels Used			Page Reference
				Residents	Employees	Visitors	Mobile-Friendly, Site-Wide Website	Signage and Wayfinding	Site-Wide Transportation Staff	
Transit	♦♦	Real-time transit information and marketing screens	Vertical Developer	x	x	x	●	●	-	10
Transit	♦	One-time transit subsidies	Vertical Developer	x			●	-	●	11
Bicycle	♦	Bike share memberships	Vertical Developer	x			●	-	●	12
Bicycle	♦	Space for on-site bike share	Horizontal Developer	x	x	x	●	●	-	13
Bicycle	♦	Bicycle valet	Horizontal Developer			x	●	●	-	13
Bicycle	♦	Bike community programming with periodic giveaways	Vertical and Horizontal Developers	x	x		●	●	●	13
Bicycle	♦	Bicycle resource center, including vending machine with parts and tools and fix-it station	Horizontal Developer	x	x		●	●	○	14
Bicycle	♦	Secure bike parking in buildings and along desire lines	Vertical and Horizontal Developers	x	x	x	●	●	-	14
Bicycle	♦	Showers and clothes lockers for employees	Vertical Developer		x		○	●	○	16

MISSION ROCK TRANSPORTATION DEMAND MANAGEMENT PLAN
Seawall Lot 337 Associates, LLC

Mode	Measure Type	TDM Program Measures	Responsible Party	Target Audience for Measure			Communication Channels Used			Page Reference
				Residents	Employees	Visitors	Mobile-Friendly, Site-Wide Website	Signage and Wayfinding	Site-Wide Transportation Staff	
Personal Motorized Transport	❖	On-site shared scooters	Horizontal Developer	X	X	X	●	●	○	16
Personal Motorized Transport	❖	Electric scooter share memberships	Vertical and Horizontal Developers	X			○	-	○	17
Personal Motorized Transport	❖	On-site car share parking spaces	Horizontal Developer	X	X	X	●	●	○	18
Personal Motorized Transport	❖	Car share memberships	Vertical Developer	X			○	-	●	18
Parking	❖	Market-based off-street parking pricing	Garage Developer	X	X	X	○	○	○	19
Parking	❖	Unbundled parking	Vertical and Horizontal Developers	X	X		○	-	●	19
Parking	❖	Reduced parking supply	Horizontal Developer	X	X	X	○	●	-	20
Parking	❖	Real-time information on parking pricing and availability	Vertical and Garage Developers	X	X	X	●	●	-	20
Buildings	❖	In-building concierge services	Vertical Developer	X	X		-	-	○	22
Buildings	❖	Delivery coordination for online personal services	Horizontal Developer	X	X		●	-	○	22

MISSION ROCK TRANSPORTATION DEMAND MANAGEMENT PLAN
Seawall Lot 337 Associates, LLC

Mode	Measure Type	TDM Program Measures	Responsible Party	Target Audience for Measure			Communication Channels Used			Page Reference
				Residents	Employees	Visitors	Mobile-Friendly, Site-Wide Website	Signage and Wayfinding	Site-Wide Transportation Staff	
Buildings	❖	Partnerships with CSAs	Horizontal Developer	X	X		●	○	○	23
Buildings	❖	Cold, dry storage space for grocery and package delivery	Vertical Developer	X			-	●	-	23
Buildings	❖	Family supportive amenities	Vertical Developer	X			-	●	-	23
Buildings	❖	Convenient loading zones	Horizontal Developer	X	X	X	-	●	-	24
Buildings	❖❖	Childcare services and facilities	Vertical Developer	X	X		●	○	-	24
Buildings	❖	Collaborative work space with business services	Vertical Developer	X			●	○	-	24
Buildings	❖	Convenient elevator design for bicycles, strollers, wheelchairs, etc.	Vertical Developer	X	X	X	-	○	-	25
Buildings	❖	On-site affordable housing	Vertical Developer	X			●	-	○	26
All Areas	❖	Site-wide transportation staff	Vertical Developer	X	X	X	○	-	●	26
All Areas	❖	Mobile-friendly Mission Rock transportation website	Horizontal Developer	X	X	X	●	-	-	27

MISSION ROCK TRANSPORTATION DEMAND MANAGEMENT PLAN
Seawall Lot 337 Associates, LLC

Mode	Measure Type	TDM Program Measures	Responsible Party	Target Audience for Measure			Communication Channels Used			Page Reference
				Residents	Employees	Visitors	Mobile-Friendly, Site-Wide Website	Signage and Wayfinding	Site-Wide Transportation Staff	
All Areas	❖	Intuitive signage and wayfinding for trip planning across all modes	Horizontal Developer	X	X	X	-	●	-	27
All Areas	❖	Improved walking conditions to, from, and within Mission Rock	Horizontal Developer	X	X	X	-	●	-	27

Some TDM measures like parking pricing have a more direct effect on travel behavior, while others like facilitating delivery services play a more supportive role. For another example, providing car share membership leverages the potential impact of providing easily accessible car share spaces. In other words, the effectiveness of these combined measures is more than the sum of the parts.

The importance of monitoring cannot be overstated; regular monitoring enables management to effectively address and adjust these measures over time in response to changing residential and employee needs.

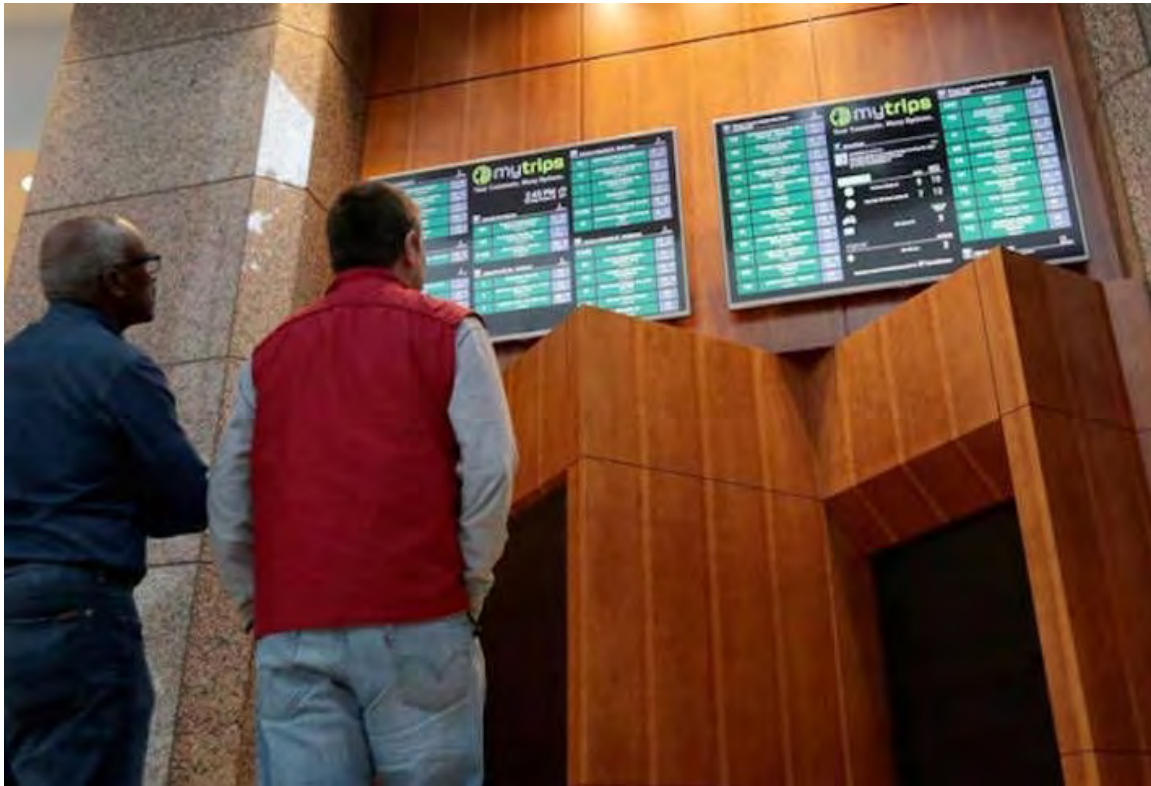
TRANSIT MEASURES

❖❖ Real-time Transit Information and Marketing Screens

This programmatic measure consists of providing real-time transit information to Mission Rock residents, employees, and visitors. Information will be displayed on screens in lobbies (see Figure 3) and other high traffic areas, such as the collaborative work space or the childcare facilities. Making such information readily available increases residents' awareness of local transit options and facilitates efficient trip planning and use of other modes.

Mission Rock will display dynamic transit information and transportation marketing in building lobbies or use a similar approach based on state-of-the-practice technology at the time of occupancy.

Figure 4 TransitScreen Display in an Office Lobby



Implementation Examples

Parkmerced, the largest apartment community in San Francisco, began a partnership in 2014 with TransitScreen, a company that provides this service. TransitScreen is working with the Metropolitan Transportation Commission to modernize transit displays in over 46 locations throughout the San Francisco Bay Area. Another residential development, NEMA, provides real-time transit information on their resident app and website.

❖ One-Time Transit Subsidies

The Clipper card is the Bay Area's transit fare payment card and can be used on more than 20 of the region's transit agencies, including BART, Muni, and the ferries. Providing a one-time transit subsidy in the form of Clipper cards upon move-in can increase residents' awareness of nearby transit options and increases the ease with which they can start using it. Clipper cards through a bulk purchase through the Metropolitan Transportation Commission, the regional public agency that manages Clipper. A custom-designed Clipper card can help tie the Mission Rock brand more closely to lifestyles that incorporate frequent transit use.

Providing Clipper cards increases the ease of using transit for employees and residents who currently do not have Clipper. For individuals who already have cards, the one-time financial subsidy could help lower one barrier to increased transit use.

Mission Rock will provide a one-time transit subsidy in the form of a Clipper card pre-loaded with \$50 cash value to all residents over the age of 18 upon move-in, and will require that business tenants offer employees the same.

Implementation Examples

The City TDM Ordinance lists one-time financial incentives paired with outreach to employees and residents as a possible measure. Although other residential developments in the Bay Area have provided free/discounted monthly transit passes to residents, providing a Clipper Card with a set value pre-loaded would be a new measure.

BICYCLE MEASURES

Figure 5 Ford GoBike Bike Share Dock



❖ Bike Share Memberships

Members of Ford GoBike can take free, unlimited 30-minute one-way bike rides between bike share stations. Once the system's expansion is complete (planned for November 2016 through 2018), annual memberships will cost \$149 per year. Providing residents and employees with bike share memberships could help tenants with minimal experience bicycling in San Francisco a low-cost and low-obligation opportunity to try cycling, and it would provide residents with a quick and easy way to get to the Transbay Transit Center and Market Street, for BART connections and a variety of other transit options and recreational activities.

Mission Rock will offer bike share memberships for all residents 18 years and older for one year upon move-in.

Implementation Examples

While many property owners partner with bike share services to locate bike share docks nearby, offering a bike share membership to residents would be a new measure. Multiple tech companies in the Bay Area, such as Microsoft and Facebook, partner with Bikes Make Life Better, a company that specializes in bicycle program management, to develop and administer their bike programs.

❖ Space for On-Site Bike Share

This measure would involve partnering with Ford GoBike to locate one or more bike share docks in Mission Rock. The system is primarily concentrated in downtown San Francisco, but has recently expanded to Oakland and Berkeley. In May 2017, they announced their plans to establish 7,000 GoBikes across San Francisco, San Jose, Oakland, Berkeley, and Emeryville by 2018. As bike share placement is most effective every 1,000 feet, Mission Rock should examine where Ford GoBike is already planning to establish bike docks near the development and consider sponsoring at least one dock within the site itself. Currently, there is one bike station planned at Terry Francois Boulevard and 3rd Street. Prominently located bike share docks can increase awareness of bike share as a viable transportation option while also facilitating convenient use. Each bicycle dock would be provided and maintained by Ford GoBike, but sponsoring a bicycle dock would allow control over the specific siting and design of the dock, including incorporation of developer-specific branding on the bikes, docks, and other materials.

Mission Rock will establish a high visibility space for a Ford GoBike (or similar provider) dock, with the possibility of additional docks depending on the bike share provider's intended Mission Bay expansion. If sponsorship is necessary, Mission Rock will take it into consideration.

❖ Bike Valet

Complementing the bike parking available on a daily basis, bike valet services during special events can encourage people to travel to and from events by bicycle by eliminating the challenge of finding safe and convenient bike parking in an area crowded with event attendees. These services also raise public acceptance and support for non-motorized transportation by building connections with visitors.

Mission Rock will provide free bike valet services for all on-site events, as required by code.

Implementation Examples

San Francisco Administrative Code Section 2.76 requires that events that require a street closure and anticipate over 2,000 attendees provide monitored bicycle parking. Currently, the San Francisco Bicycle Coalition provides these services for many events, including those at AT&T Park.

❖ Bike Community Programming

Bike-oriented programs and events encourage bicycling by raising public acceptance and support for non-motorized transportation and building connections between residents who regularly bike, making biking a fun, social activity. These events could include evening bike parties, bike-oriented happy hours, periodic bike gear giveaways, and bicycle campaigns that involve contests

and prizes. Integrating bicycling into the social fabric of the Mission Rock community will raise the profile of bicycling as a viable mode of transportation and encourage people to try biking for a portion of trips.

Through the site transportation staff, Mission Rock will host regular bike parties or happy hours for the bicycling community, potentially paired with gear giveaways.

Implementation Examples

Although private and non-profit organizations such as the San Francisco Bike Coalition often host these types of events, bike event programming led by a mixed-use development would be a new measure. Some Bay Area employers, such as LinkedIn and Google, sponsor special events around Bike to Work Day paired with regular giveaways and bike valet.

❖ Bicycle Resource Center

A bicycle resource center can provide a dedicated space for residents and employees to get information about bicycling as well as tools and parts for bike repairs and maintenance. A dedicated space contributes to social acceptance of bicycling and reduces one key barrier associated with owning a bike – concern about complications related to ongoing maintenance – by providing tools and parts through a vending machine at low prices. This measure will also include working to incorporate a bicycle store in the site retail plan and establishing a resource center containing a vending machine for bicycle parts, a “fix-it” work station with basic tools, and bicycle pumps somewhere else within the site at an easily accessible location.

Mission Rock will establish bicycle maintenance space near a major secure bike parking area within each building with resources like a bike stand, a workbench, tools, and a basic repair kit. This space will be available over the life of the project. The team will work to include a bike store as part of the site retail plan.

Implementation Examples

In Seattle, Via6 is a 654-unit mixed-use apartment complex that provides a bike wash station for residents, as well as a bike shop on the ground floor that is owned and operated separately from the development. The Velo Room at Solera (Denver) provides tools, bike stands, work benches, air pumps, tubes, and other supplies, as well as gel packs, energy bars, and bike trail maps. Several university campuses, including Ponce Health Science University in Portland and the University of California-Davis, have bicycle repair stations in key facilities.

Figure 6 Bike Center, Millenium Park, Chicago



Source: Flickr, Brian Kusler

❖ Bike Parking

Following San Francisco Zoning Code Section 155, Table 155.2, the Mission Rock project is required to provide at least 710 secure bike parking spaces (Class I), in addition to at least 371 spaces for bikes in publicly-accessible locations (Class II), under the Maximum Commercial Scenario. Under the Maximum Residential Scenario, the Mission Rock project is required to provide at least 765 Class I spaces, and 388 Class II spaces.

Given the importance of non-motorized transportation to the site's overall design concept, this measure goes above that requirement to provide one Class I space per dwelling unit, one Class I space per 2,500 square feet of commercial development, one Class I space per 3,750 square feet of retail, and one Class I space per 5,000 square feet of open space, in addition to around 700 Class II spaces. Class I parking consists of secure long-term bicycle parking, including bicycle lockers, bike cages, and bike rooms. Class II bike parking refers to more short-term bicycle parking, including on-street bike racks. The site's location on a Class I north-south bicycle facility and in a flat part of San Francisco implies a strong potential for very high rates of bicycle usage, and this should be encouraged through easy access to ample, convenient bicycle parking. Bike parking facilities will also accommodate various types of bicycles including those with cargo and trailer attachments.

There are several methods of providing secure (Class I) bicycle parking spaces for residents and employees. Bike cages can be placed at convenient locations within buildings or on sidewalks in the area, and bike owners who qualify can receive a key or access card to use the cages. This space

will serve as a common, secure bike room, where residents or employees can use a key or access card (often the same card used to access an elevator or parking garage). Moreover, public bike parking is often considered secure when it is situated in well-lit, highly visible areas.

Exceeding the bike parking required by City code, Mission Rock will construct 1 Class I bike parking space per dwelling unit, an additional 511 (under the High Residential Scenario) or 667 (under the High Commercial Scenario) Class I spaces for commercial development, and 675 (under the High Commercial Scenario) or 692 (under the High Residential Scenario) Class II bike parking spaces and will work with vertical developers to set aside necessary square footage for secure bike parking in the ground floor or another convenient area of each building.

Implementation Examples

As it is required by San Francisco zoning code, any new construction, including the addition of new units or an increase of off-street vehicle parking capacity, must include bicycle parking spaces. For residential development, one Class I (secure) space per unit is required; for buildings with more than 100 units, 100 spaces plus one space per every four units over 100 are required. The requirements for commercial development vary; retail development must provide one Class I (secure) space for every 7,500 square feet of occupied floor area, and office developments must provide one space for every 5,000 square feet.

❖ Showers and Lockers for Employees

Following San Francisco Zoning Code Section 155.4, specific land uses exceeding a certain square footage threshold are required to provide shower and clothes locker facilities for tenants and employees. Offices (including childcare, business services, and light manufacturing) that exceed 10,000 square feet must provide at least one shower and six clothes lockers; for facilities between 20,000 and 50,000 square feet, the building must provide two shower and 12 lockers. Those exceeding 50,000 square feet must provide four showers and 24 lockers. Retail sales and restaurants exceeding 25,000 square feet must provide one shower and six clothes lockers; those exceeding 50,000 square feet must provide at least two showers and 12 lockers.

Mission Rock will work with the vertical developers to meet this requirement.

Implementation Examples

San Francisco first implemented this requirement in 1998, and amended it to include office land uses in 2013.

PERSONAL MOTORIZED VEHICLE MEASURES

❖ On-site Shared Scooters

Electric scooters are highly convenient in a dense urban environment and may have additional marketing value, given the cache scooters carry among certain population segments. The main company providing scooter share services is called Scoot, providing access to both single-rider scooters and quad vehicles, which have four wheels and can carry up to two people. One of the benefits of Scoot's network is the ability to travel point-to-point, instead of needing to return scooters to their point of origin. Scoot already has pods within about a half-mile of Mission Rock.

Providing scooter share access to residents on-site will magnify the effectiveness of offering Scoot memberships. The parking garage would accommodate space for a scooter dock, which the scooter share vendor would provide and maintain.

Mission Rock will reserve off-street parking space for 20 scooters (approximately six car parking spaces), and will pursue a potential marketing partnership opportunity with a provider of scooter share (e.g. Scoot) or a similar service.

Implementation Examples

This would be a new measure.

Figure 7 Scoot Networks



Source: Flickr, Marcin Wichary

❖ Electric Scooter Share Memberships

Like a bike share membership, a scooter share membership for Mission Rock residents can help establish new travel behavior patterns upon move-in. This measure would entail partnering with Scoot or another electric scooter share vendor to provide free memberships in exchange to reserving space for electric scooter parking on-site.

Mission Rock will offer a one-year membership for Scoot or a similar service to all new residents aged 21 and over who meet the scooter share provider's membership requirements, and will offer on-site scooter orientation (provided by Scoot Networks or a similar provider).

Implementation Examples

Offering scooter share memberships would be a new measure.

❖ On-site Car Share Parking Spaces

According to San Francisco Zoning Code³, Mission Rock is required to provide 31 to 38 car share spaces. Research indicates that a single car-share vehicle can remove as many as 20 private cars from the transportation network. Spaces will be located in high-visibility parking spots within the publicly-accessible parking garage, with clear exterior signage to increase visibility and emphasize the convenience of car share. City Car Share offers electric vehicles which appear to be equally popular, though others have found barriers to adoption as people are still becoming comfortable with using the technology; this may not be the case in five years. Depending on the car share vendor provided, additional partnerships with ChargePoint may be required to provide infrastructure for electric vehicle charging.

Exceeding this code requirement, Mission Rock will negotiate an agreement with one or more local car share vendors to provide 50 designated car share spaces in initial design with flexibility to increase over time in response to demand. Mission Rock will also consider partnering with ChargePoint to provide electrical hookups adjacent to spaces to allow for the potential for electric shared vehicles, with the ability to increase over time in response to demand.

Case Studies

Fox Plaza (San Francisco) has 443 units with a 0.77 parking ratio and provides 14 car share vehicles on site, with 12 additional spaces located within 1/4 mile. Madera Apartments (Mountain View) has 203 units with a 1.37 parking ratio and provides two car share vehicles on site, with two additional Zipcar locations within ¼ mile. The Uptown (Oakland) has 665 units with a 0.80 parking ratio and provides one car share vehicle on site, with an additional four car share locations within a 1/4 mile.

❖ Car Share Memberships

New residents will receive a car share membership for their first year of residency to help establish new behavioral patterns upon moving in (opt-out allowed, but default to providing for all). Pairing access to car sharing vehicles with car sharing memberships is also shown to be more effective than implementing one or the other on its own.

Mission Rock will offer memberships to all households for their first year of residency. Depending on the agreement with the on-site car share vendor, membership fees will likely be reduced or waived and some rental credit may be provided.

Implementation Examples

Several Bay Area residential projects cover the full price of car share memberships for residents (New Californian - Berkeley; Madera Apartments - Mountain View; Fruitvale Transit Village - Oakland; Fox Plaza - San Francisco; The Uptown - Oakland). Many of these developments have parking ratios of less than one per unit, and all of them have seen parking utilization rates of well below capacity.

³ San Francisco Planning Code Section 166, Table 166.

PARKING MEASURES

❖ Parking Pricing

The price of parking has been shown to be a highly effective mechanism in changing parking and travel behavior. Demand-responsive pricing involves altering the cost of parking according to the level of demand. During times of higher demand, parking has a higher price and thus encourages both a higher rate of turnover and the use of other modes; during times of lower demand, parking has a lower price. Prices generally do not change in real time based on current occupancy, but instead might automatically increase by a pre-set amount during peak periods, based on typical demand patterns, or for scheduled events. Prices might be adjusted overall a few times a year based on recent occupancy data. By refining the price of parking periodically, it is possible to keep parking occupancy rates relatively close to the optimal level, typically around 90% for off-street parking. Researchers have found that parking facilities function efficiently (i.e. without requiring excessive parking-search time) up to roughly this level of occupancy.⁴

At the time when the site is fully built out, Mission Rock's parking facilities will be priced to keep demand below a threshold occupancy rate and to encourage site users to avoid parking during AT&T Park events. Non-event rates will be comparable to off-street parking prices at other facilities in SoMa and Northern Mission Bay.

Implementation Examples

Demand-based parking pricing has been implemented to various degrees in multiple cities. The *SFPark* program in San Francisco regulates parking prices for off-street as well as on-street parking facilities, adjusting hourly parking rates every three months based on the parking demand at each garage during five different time bands throughout the day. When occupancy exceeds 80%, hourly rates for the following three-month period are increased by 50 cents. Unlike approach planned for Mission Rock, *SFPark* also decreases prices when occupancy falls below a low-end threshold of 40%. When it was first implemented, the program also adjusted early bird parker time requirements and added off-peak discounts to discourage commuting at peak hours, reducing congestion around the garages. Since implementation, San Francisco has seen higher garage occupancy at lower prices overall, resulting in a marginal increase in revenue.

❖ Unbundled Parking

"Unbundling" parking means that the cost for parking is separate from the cost of residential and commercial units. It is an increasingly common practice in urban areas; the City of San Francisco requires residential developments to unbundle parking. Thirty percent of San Francisco households do not own a vehicle⁵ and unbundled parking makes housing more affordable those who do not need a parking space. This approach provides a cost savings to households who decide to dispense with one of their cars, and it can help attract households who wish to live in a transit-

⁴ See: Levy, Nadav, Karel Martens, and Itzhak Benenson. Exploring Cruising Using Agent-Based and Analytical Models of Parking. *Transportmetrica*, DOI: 10.1080/18128602.2012.664575, 2012. AND Millard-Ball, Adam, Rachel Weinberger, and Robert Hampshire. Is the curb 80% full or 20% empty? Assessing the impacts of San Francisco's parking pricing experiment. *Transportation Research Part A: Policy and Practice*, No 63, 2014, pp. 76-92.

⁵ U.S. Census, American Community Survey 2013, 5-year estimates

oriented neighborhood where it is possible to live well with only one car, or even no car, per household. Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households can freely choose how many spaces they wish to lease.

Unbundling parking tends to reduce demand for parking by specifically calling out and making optional the previously hidden cost of “free” parking. This in turn allows developers to provide less parking, which increases the developable area for more lucrative land uses such as additional housing units. For this measure to work optimally for office users, the users of parking – not their employers – must be the ones who ultimately pay daily or monthly costs.

Mission Rock will unbundle parking costs from all residential, commercial, and retail leases and ensure that the users of parking are the ones who ultimately pay for it.

❖ Reduced Parking Supply

Overbuilding parking supply leads to increased automobile use, contributing to more vehicle trips, traffic congestion, higher housing costs, and greenhouse gas emissions. Providing parking at a rate below the surrounding neighborhood reduces the parking supply from what would be typically provided for this kind of development, which in turn reduces the number of trips the development may generate. Given the large number of households with no vehicle and the demand for housing in San Francisco, a limited supply of parking could be expected to attract a high proportion of residents without vehicles, which in turn would result in fewer vehicle trips from the development. Mission Rock is within a few blocks of frequent high-quality transit to downtown and is in a neighborhood that is already facing vehicular congestion, which further discourages driving and parking.

Mission Rock will establish maximum parking ratios that are lower than the neighborhood average; if anticipated needs related to AT&T Park require providing parking at a rate higher than the neighborhood average, Mission Rock will still price parking at or above market rates for northern Mission Bay or SoMa, rather than reducing prices to fill the facility.

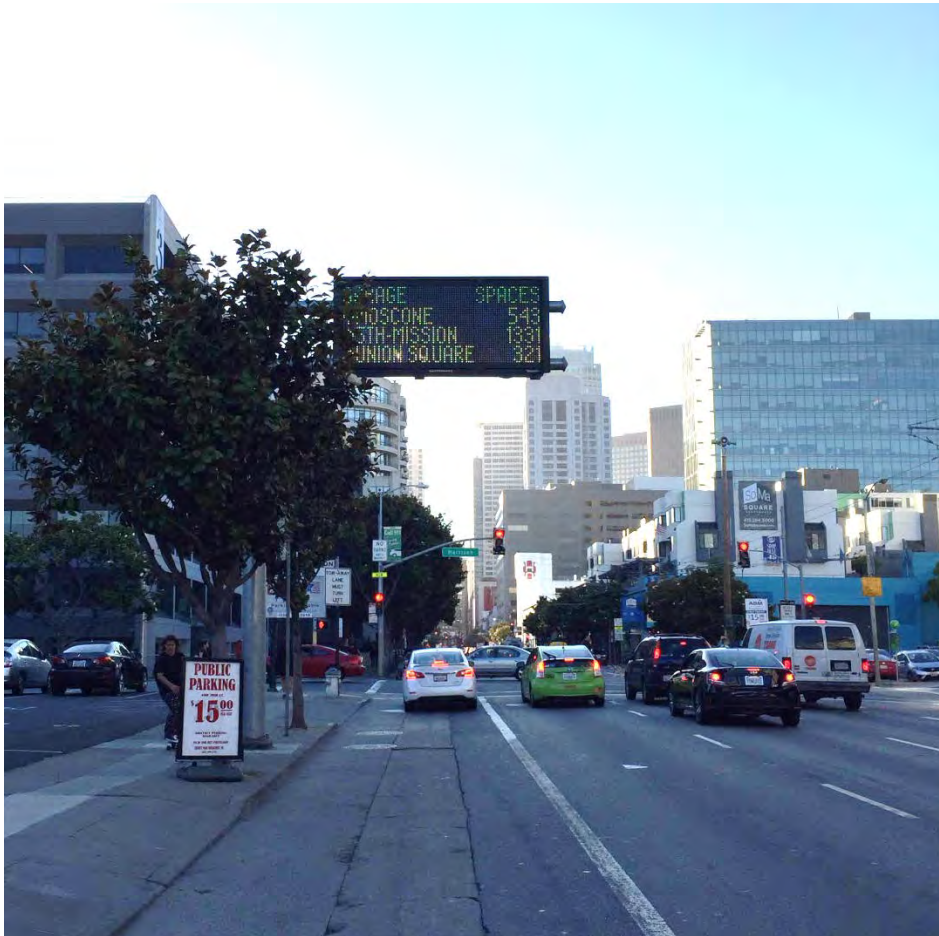
❖ Real-time Parking Pricing and Availability Information

This programmatic measure consists of providing real-time parking pricing and availability information to Mission Rock residents, employees, and visitors who utilize the off-street parking facilities on-site. Information could be displayed on signs outside of the parking garage, and could also be accessible on the mobile-friendly Mission Rock website. For market-based parking pricing to be truly effective, the dynamic between price and availability must be clearly communicated to drivers. Making such information readily available to potential drivers, particularly at parking garage entrances, decreases the likelihood of drivers’ circling for parking or potentially increases the possibility of choosing other modes.

Real-time availability information for an overall facility can be derived from the access control of the parking garage, calculated based on the number of entries and exits at any given time. To provide garage floor-specific information on where spaces are available, each parking space needs a sensor (typically embedded in the floor) that communicates wirelessly with a central system to sense when the space is occupied.

Mission Rock will install dynamic displays (or use another state-of-the-practice price-information sharing measure) to show real-time parking price and availability information, and will endeavor to make this information available through other channels like a Mission Rock transportation website; this will require installing technology and associated information systems to automatically monitor parking usage.

Figure 8 Dynamic Parking Signage, SoMa



Implementation Examples

All City-owned garages that participate in the demand-based parking pricing program, *SFpark*, provide real-time pricing and availability information on the *SFpark* website; there are several dynamic message signs at key intersections in SoMa that indicate the number of parking spaces available and general wayfinding to those garages.

BUILDING MEASURES

❖ In-Building Concierge Services

In-building concierge services and/or multi-purpose front-desk staff can facilitate valet parking, farm-to-table produce delivery, cold and dry storage for grocery or produce delivery, and secure package delivery. Concierge staff could also provide information about the nearest stores and services like dry cleaning and laundry service, as well as pickup/delivery services from local merchants. Residents would pay for all services.

This concierge will be supported by the site-wide transportation staff who would provide centralized transportation support to the in-building concierges (see section on the site-wide transportation staff below). The combination of these services will consolidate or eliminate the need for additional trips and could be a resource for residents, providing targeted travel information. In buildings where a concierge service isn't feasible, the site-wide transportation staff will provide this service to the building tenants.

Mission Rock will encourage vertical developers to appoint an in-building concierge to provide information about local merchants and coordinate/facilitate delivery services for residents.

Implementation Examples

Though many residential buildings provide a concierge, explicitly pairing in-building concierge staff with a transportation specialist would be a new measure for reducing trips and demand for parking. Crafting and marketing the concierge's role as such may increase the program's effectiveness.

❖ Coordinated Delivery Services

Mission Rock will aim to partner with online personal service providers (i.e. Instacart, Postmates, Taskrabbit) or facilitate other ways of making ordering in, instead of making separate trips off the property for daily needs, more appealing and reduce vehicle trips in the process. One potential way to do this would be to offer direct ordering through the Mission Rock website. Each building would manage these services individually as needed.

Mission Rock will aim to establish site-wide partnerships with internet delivery services companies.

Implementation Examples

NEMA on Market Street facilitates local organic produce and wine delivery, which is part of its overall suite of concierge services. This type of amenity could be coupled with an app-based ordering system, such as Instacart or Postmates, or Mission Rock may want to develop one specific to its services.

❖ CSA Partnerships

Partnering with local community-supported agriculture (CSA) organizations has the potential to reduce greenhouse gas emission and vehicle-trips by providing project residents convenient access to locally sourced food, reducing the number of trips and vehicle miles traveled by both

vendors and consumers. This measure could also have marketing benefits and reinforce the site's overall message about sustainability. Initial conversations about bringing a farmers' market to Mission Rock have yielded a cost estimate of approximately \$75,000 to \$100,000 annually for Mission Rock to manage it in-house. Alternatively, hiring a farmers market management company could reduce costs to as low as \$15,000. However, providing a farmers market may result in generating more trips rather than it offsets; as such, a partnership with a local CSA might be more cost-effective.

Mission Rock will coordinate with local CSAs to provide group deliveries, and continue exploring the possibility of hosting regular farmers' markets on the premises.

Implementation Examples

This would be a new measure; although there are multiple farmers' markets throughout San Francisco, they are not specific to a certain development or community, nor were they started with a specific development's needs in mind.

❖ Cold and Dry Delivery Storage Space

Providing storage space for groceries, laundry, and other packages can have a direct effect on reducing trips by encouraging and facilitating online ordering. A centralized storage facility within each building can also consolidate delivery trips by enabling delivery vehicles to only make one stop for multiple recipients instead of several. Where this type of measure has been implemented without direct staff monitoring at all times, building residents typically access deliveries through a locker system with unique pick-up codes that include the locker number and access times for the delivery recipient.

Mission Rock will work with the vertical developers to provide storage space near the concierge and elevators to store packages, perishables, laundry, and other deliveries.

Implementation Examples

Presidio Landmark has a wine cellar with climate controlled lockers; separate storage lockers are also provided.

❖ Family Supportive Amenities

Providing secure storage space for personal car seats, strollers, athletic or other extracurricular gear, and other large equipment can address challenges families face while traveling. Locating this space near car share parking spaces make it easier for families to travel without feeling a personal vehicle is necessary. If this measure is implemented without direct staff monitoring at all times, building residents can access the space with an access code or key card.

Mission Rock will provide storage space for family-related equipment near car share parking spaces.

❖ Convenient Loading Zones

While the site does not contain on-street parking, Mission Rock is planning to dedicate a portion of the site's curb space for loading and deliveries of goods and people to reduce the need to make personal vehicle trips. Curb designations will be consistent with City of San Francisco regulations. Under those regulations, taxis, transportation network companies, and private vehicles may drop off along any curb space not designated by a red curb or marked otherwise. Vehicles may not idle in these locations as per San Francisco Transportation Code Section 7.2.86. As noted earlier, the project team will work with the City to develop a loading management plan during a future phase of project development.

Drop-off locations for seniors and people with disabilities will be located near building entrances, elevators, and at corners with curb ramps. The location of loading zones will also take into consideration the moving needs of residents and businesses. See the Mission Rock Transportation Plan and the Design Controls for more detail on the planned location of loading and delivery zones and for more information on Americans with Disabilities Act (ADA) accessibility on the site.

Mission Rock is integrating loading zones into the site's overall street design.

❖ ❖ Childcare Facilities and Services

Providing childcare services on site at Mission Rock would break down a key barrier for parents to taking non-auto modes to work by bringing such services within walking distance and near the many commute options around the Mission Rock site. Mission Rock will aim to attract a childcare provider, likely on the ground floor of a northern parcel, near China Basin Park.

Mission Rock will aim to attract a provider of on-site childcare services and facilities to ensure easy access for Mission Rock residents and employees.

Implementation Examples

Many residential developments in major cities provide childcare services as part of their amenities; NEMA on Market Street provides childcare, and North Beach Place provides day care and children's play areas. A housing development at 8th and Market instituted unbundled parking to free up space for an on-site childcare center. Parkmerced includes a Montessori School on its premises, with full daycare and after-school care.

❖ Collaborative Work Space

A business services room can help encourage and facilitate working from home, which can have a direct impact on reducing trips to and from the site. Such an amenity is a typical part of large rental buildings, though the size and specific services included vary.

At Mission Rock, work spaces could include rentable work rooms that can be reserved in advance, equipped with video conferencing equipment, high-speed internet connections, projectors, white boards, basic office supplies, and printing, scanning, and faxing services. For residents interested in using this work space long term, dedicated mailboxes for businesses could be set aside and located nearby. Vertical developers will ultimately be responsible for developing and maintaining these business services rooms and ensuring that they are equipped with appropriate equipment.

Mission Rock will work with vertical developers to implement this measure.

Implementation Examples

NEMA (Market Street, San Francisco) has a business lounge with Apple computers, printers, fax machines, and scanners, and a board room with phone, touch screen monitor, and computer hook-ups. Many newer residences also offer Wi-Fi throughout all common areas.

Figure 9 Co-Working Space



Source: Wikimedia, Chris Gallegos

❖ Convenient Elevator Design

By designing elevators that easily accommodate bicycles, strollers, and wheelchairs, Mission Rock will be able to increase the visibility and communicate the importance of bicycling and improve the family friendliness and accessibility of the project. Building codes already require elevators to be large enough to accommodate a variety of users, but the project will also aim to provide appropriate wayfinding and signage for elevators to educate residents about using the appropriate elevators to transport bicycles and other wheeled conveyances.

Mission Rock will work with vertical developers to implement this measure and meet building code requirements.

Implementation Examples

Many residential developments have gone to great lengths to design their facilities as bicycle friendly, but none have specifically called out adaptations to their elevations as an accommodation or amenity.

❖ On-Site Affordable Housing

Residents living in affordable housing typically own fewer cars per household than residents of market-priced units. They are more likely to use transit and are less likely to require parking, reducing overall vehicle trip generation.

Mission Rock will restrict 40% of on-site units to inclusionary affordable housing, to be provided in a balanced manner throughout the phasing of the development.

ALL-REALM MEASURES

❖ On-Site Transportation Staff

The Mission Rock team aims to hire at least one on-site transportation staff person proficient in the planning and implementation of a TDM program, with an annual budget for TDM staffing, communications, and programs. The site-wide transportation staff will provide customized travel guidance to residents and employees, helping raise awareness and understanding of transportation options and ensuring that site users can find non-auto transportation options that meet their unique travel needs. They may also provide resources to support employers, such as helping them enrolled in pre-tax benefits and/or San Francisco's Emergency Ride Home program, setting up flexible work schedules, developing employee mobility management programs and organizing sitewide marketing and incentive campaigns. Other staff, such as the in-building concierge or those tasked with organizing bike events and maintaining the bike resource room, could also provide similar targeted information and facilitate discussions around using different modes. This dedicated transportation staff would act as a centralized transportation resource to the in-building concierges, providing up-to-date transportation information and expert support to front-line staff that are less likely to have the same depth of knowledge of the transportation system.

The on-site transportation staff will also support efforts to collect data to evaluate the effectiveness of the overall TDM program and to understand opportunities to adjust the program to meet changing needs of Mission Rock residents, employees, and visitors. Chapter 3 provides additional detail about how the other TDM measures will leverage the transportation staff for marketing and communications.

Mission Rock will hire and task dedicated transportation staff with providing individualized advice and information on transportation options to residents and employees.

Implementation Examples

This would likely be a new measure, as other developments have not explicitly instituted and integrated transportation information with residential or employee services. Several cities have used something similar to this measure at a neighborhood level. Portland, Ore. has seen notable mode shifts from its Smart Trips program, which provides targeted marketing and information on non-auto transportation options in particular neighborhoods.

❖ Mobile-Friendly Mission Rock Transportation Website

A mobile-friendly website oriented toward all residents, employees, and visitors providing online access to concierge services and transportation programs can help raise awareness and visibility of transportation options and facilitates connections among transportation modes. The transportation information on the Mission Rock site will likely include but not be limited to real-time transit information and a transportation tab with all nearby options (e.g. Muni, car share, scooter share, ride-sourcing apps) showing locations and availability. Chapter 3 provides

additional detail about how the other TDM measures will leverage the website for marketing and communications.

Mission Rock will create a site-wide website with a dynamic and engaging section dedicated to transportation information and services, with specific portals for each user type (or the state-of-the-practice equivalent to this measure, per changes in technology by the time of first occupancy).

Implementation Examples

NEMA (Market Street, San Francisco) has a "resident portal" where residents can submit work orders, track packages, pay rent, alert the valet, and communicate with management regarding car charging, car share, bike share, and bike repair.

❖ Signage and Wayfinding across Modes

Signage and wayfinding to indicate points of connection between different modes, as well as estimated travel times and directions by mode, can help increase people's understanding of travel options. Clear signage is also important for ensuring safety for all types of users, differentiating spaces for different users within shared public spaces. Signage will also indicate the nature and location of nearby bicycle routes. Mission Rock will coordinate with the City on the project's overall signage and wayfinding program to ensure the project conforms to City standards. Chapter 3 provides additional detail about how the other TDM measures will leverage signage and wayfinding for marketing and communications.

Mission Rock will design and install signage and wayfinding at key points throughout the development, including signage for safety along the shared streets.

Implementation Examples

Interactive signage and wayfinding has been instituted in a variety of cities, academic institutions, and transportation hubs.

❖ Improved Walking Conditions

As described in the Mission Rock Design Controls, the development will add over half a mile of complete streets, including new and improved sidewalks and pedestrian crossings. Complete streets are streets designed and operated to enable safe access for users of all ages, abilities, and transportation modes with the ultimate goal of fostering more livable communities. Today, many sidewalks in Mission Bay are narrow or missing in areas. The new streets within Mission Rock will greatly improve the overall walking conditions of the neighborhood and facilitate safer and more convenient pedestrian connections. A pedestrian-oriented urban design is essential for residents, employees, and visitors to fully take advantage of the other TDM measures, supporting access to all of the available transportation options and programs throughout the site and nearby. These improvements help shape the environment for the other TDM measures to succeed.

Mission Rock has integrated high-quality pedestrian design features (high connectivity, wide sidewalks, highly visible crossings, and others) into its design.

3 MARKETING AND COMMUNICATIONS

A strong communication measure is critical to the success of any TDM program, ensuring that residents, employees, and visitors receive information about relevant resources and incentives at appropriate times and through channels that are easily accessible. Incorporating consistent branding into all communications can help create a sense of place and establish a cohesive identity for the transportation program. Branding can be used to support marketing and communication efforts, particularly on signage and wayfinding, to emphasize that residents, employees, and visitors can travel seamlessly through the area.

The Plan anticipates that Mission Rock will likely have three main channels for transportation-related communications: Its site-wide transportation staff, a mobile-friendly web portal for site users, and physical signage and other wayfinding mechanisms on site. This section includes examples of communication tactics and channels to illustrate how specific channels can help reach target audiences. Given the diverse mix of ways different people process information, any good communications plan relies on a mix of measures and channels. The Communications Timeline section matches the mix of channels outlined in this section to the key audiences for the information: residents, employees, and visitors.

Communications technology and norms are changing rapidly, and as such, this portion of the Plan will necessarily be updated as the projects approaches first occupancy. As such, the details for each of these measures are presented as a set of recommendations. Regardless of how they are implemented, these measures remain part of the TDM Plan.

SITE-WIDE TRANSPORTATION STAFF

Mission Rock transportation staff would be responsible for maintaining information about TDM programs and acting as a point of contact to assist residents, employees, and visitors with transportation-related questions, concerns, or general assistance. The Mission Rock team envisions that a transportation coordinator would have the authority to implement TDM measures, oversee the management and marketing of all measures, and monitor success of the TDM program. Whether the coordinator would need support from additional staff and how large the team would be will be figured out as the communications measure is solidified closer to occupancy.

Transportation staff might also be responsible for compiling a print and/or electronic transportation handbook to be distributed to residents on move-in and employees on hiring. This handbook could include information on transportation programs, policies, and service options, in addition to the following information:

- Transportation staff contact information, including information for the in-building concierges (if relevant)

- Commute trip planning information, including links to the regional 511 Rideshare program
- Clipper card and vehicle (including car, bike, and scooter) share membership subsidies and parking policies
- Information on accessing other TDM program details and amenities, such as the in-building storage facilities
- Walking and biking routes within the area, estimated walk and bike times to key locations, including transit hubs, and a link to the San Francisco bike map
- Local transit options and schedules, including links to Muni, BART, and Caltrain schedules, route maps, and existing trip planner mobile applications

It is envisioned that this handbook would be distributed to all prospective residential tenants and all prospective employees who receive an offer to work within the development. It might also be included as a component of resident and employee welcome packets or employee orientation. The information provided in the handbook, as well as relevant website addresses, may also be posted in prominent locations for all residents and employees, such as apartment lobbies or lunchrooms. Print materials with information on various programs, maps, and amenities could also be provided to the in-building concierge staff for easy distribution when questions arise.

The transportation coordinator will also be responsible for supporting employers by providing information and guidance regarding tools and programs for flex work or telecommuting.

To make sure information stays useful to residents and employees over time, it is important that Mission Rock transportation staff keep all information and materials up to date and relevant.

MOBILE-FRIENDLY MISSION ROCK WEBSITE

Mobile-friendly websites are an easy way to create a dynamic and engaging repository for transportation information, point-to-point navigation tools, travel suggestions, user engagement campaigns, and other efforts to raise awareness of alternatives to drive-alone travel options and residents, employees, and visitors to use them. In addition to supporting the information already provided in the resident and employee handbook, this website could include the following:

- Real-time transit information
- Real-time parking pricing and availability information
- Notifications of upcoming transportation-related events, such as bike parties and farmers' markets, and alerts
- Integration with internet delivery services for ordering
- Registration for car share, bike share, and/or scooter share memberships
- Room reservations for the collaborative workspace
- On-site childcare services enrollment
- Specific pages or portals for residents, employees, and visitors so that each of these audiences has access to the appropriate and relevant travel information
- Functionality which allows for tracking travel behavior and enables gamification for incentives

Establishing specific portals for each audience can allow for the delivery of targeted, individualized TDM information for each of the audience groups. For example, the resident and employee portals could have features to receive notifications for coordinated delivery services,

should Mission Rock choose to develop a centralized delivery facility. Each of the portals could also provide specific information on costs and multimodal options available for traveling to and from Mission Rock, as well as information on nearby attractions and services and links to citywide or regional information. Figure 9 shows an example of a landing page for this type of website. Advantages of a webpage similar to that shown in the figure include prominent links to a trip planning service, alerts for riders, and individual operator websites for more information.

Figure 10 Sample Site-Wide Transportation Website, Mountain View Transportation Management Association (TMA)



SIGNAGE AND WAYFINDING

Clear, consistent, and predictable signage and wayfinding can help residents, employees, and visitors navigate the site easily. Signage can also bring awareness to important information such as parking prices and availability, bike parking locations, estimates of bike and pedestrian travel times, and other information on Mission Rock programs or services. Simply providing information on non-motorized travel prominently can increase the likelihood that people will select biking or walking as their mode of transportation.

The efficacy of signage and wayfinding is dependent of the design and placement of signs. Signage should be clear and provide relevant information at key decision points in people's journeys, in areas that are highly visible, and in clear lines of sight. For instance, when entering the site, cyclists should be able to clearly understand the route options along Terry Francois Boulevard, Exposition Street, and Bridgeview Street. This signage will be especially important for safety along the shared public ways, to ensure that users understand the encouraged forms of travel and

appropriate behavior on each mode. Temporary signage may be used in areas more highly trafficked by residents or employees, to provide information on specific events or programs, such as CSA pick up locations.

Figure 10 and Figure 11 are examples of wayfinding signage used in vibrant, mixed-use areas. The wayfinding signage in Figure 10 offers clear guidance for the nearby area at two different scales while providing clear directional guidance to nearby transportation hubs and popular destinations. Figure 11 offers examples of bike directional signage, as well as digital, dynamic parking availability signage.

Figure 11 Area Wayfinding Signage – London, UK



Source: Andrew Nash, Flickr Creative Commons

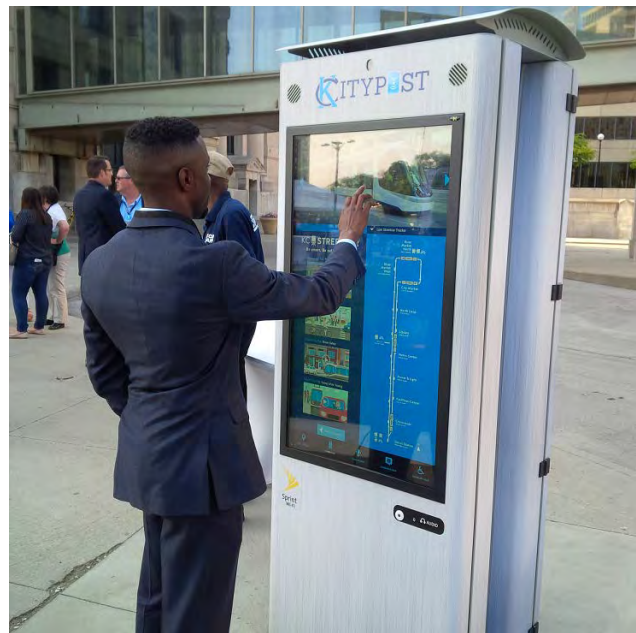
Figure 12 Bike Route and Parking Signage



Source: Nelson\Nygaard, signal-tech.com

Transportation Information Kiosks

Transportation information kiosks can provide centralized locations for relevant transportation information for trips within Mission Rock and to nearby services and attractions. These kiosks could be placed throughout the site, at strategic decision-making locations where residents, employees, and visitors might need the information. For instance, kiosks located at the primary entrances to Mission Rock such as the intersection of Terry Francois Boulevard and Mission Rock Street could include all information necessary to navigate to specific places throughout the site. Similarly, kiosks could be placed in and around primary points of congregation on the site, including China Basin Park and Mission Rock Square. The kiosks could include transit schedules and fare information, walking and cycling routes, real-time transit information, and Ford GoBike dock locations and bike availability.



Source: Kansas City example from transit.dot.gov

It is recommended that these kiosks be digital, interactive displays (as shown in the accompanying image) to allow information to be updated easily and regularly. These boards would be maintained and updated as needed by the transportation staff.

Real-time transit information signage, such as the technology provided by TransitScreen, would be a similar dynamic information-distribution mechanism aimed mostly at residents, employees, and their visitors, located in the site's residential and office building lobbies (see more information on this measure in Chapter 2). While the information kiosks can provide detailed information on transportation options to visitors and others new or unfamiliar with Mission Rock

and the surrounding area, real-time transit screen technology is designed to offer an opportunity to understand transportation options at a quick glance. This would be particularly useful for employees and residents, those who make recurring trips frequently and don't need detailed guidance.

COMMUNICATION TIMELINE

Each of the communication-based TDM measures are pertinent to residents, employees, and visitors at different times during their lifecycle at Mission Rock. As such, it is critical to think strategically about when to share what with each of these key segments.

The mobile-friendly Mission Rock website will be an important avenue for sharing information about programs, policies, and services. It is reasonable to assume that the website will act as a front-line communications vehicle to reach all of those who have or may be interested in having a connection with the site. Signage and wayfinding will be seen on a daily basis and is an important element for users of the development to efficiently navigate Mission Rock. The site-wide transportation staff will provide key information for residents and employees at the time of move-in or hire, and will provide as needed services over time. See Figure 12 through Figure 14 for more detail on the progression of anticipated touch points for transportation-related communication for residents, employees, and visitors of Mission Rock.

Figure 13 Residential Communications Touch Points

	Pre-Move In & Lease Signing Period	Move-in Period	Establishing Transportation Patterns	Ongoing	Life Change: New Job	Life Change: Family
Website	Promote website and all web-based transportation tools through pages or portal aimed at prospective tenants	Receipt of access to special "residents-only" website pages/portals	Visit website to plan frequent trips and learn about transportation options, sign up for any available subsidies or complimentary memberships, as applicable	Ongoing use of website for trip planning tools, information on events, and program memberships	Return to trip planning tools and information on website	Return of trip planning tools and information on website
Wayfinding & Signage	View wayfinding and signage when touring site	Gain deeper familiarity with the site and surroundings through signage and wayfinding	Use of dynamic wayfinding (kiosks and transit screens) to deepen understanding of nearby transportation options and develop time/schedule patterns	Ongoing use of wayfinding and signage	Renewed use of dynamic wayfinding to deepen understanding of new transportation options given new destination	Renewed use of dynamic wayfinding to deepen understanding of new transportation options given new destination; use of signage pointing to family transportation resources
Site-wide Transportation Staff	Discussion of transportation handbook, nearby transportation options, amenities or subsidies as applicable, promotion of trip-planning assistance	Distribution of transportation handbook, one-on-one assistance in planning commute or other trip options, or signing up for transportation programs/memberships	One-on-one assistance in planning commute or other trip options	Available for questions as they arise	Additional one-on-one support to plan new routes, etc. as needed	Additional one-on-one support to plan new routes, understand family-friendly resources on site, as needed

MISSION ROCK TRANSPORTATION DEMAND MANAGEMENT PLAN

Seawall Lot 337 Associates, LLC

Figure 14 Employee Communications Touch Points

	Employer Signs Lease at Mission Rock	Employer Move-In Period	Employee Move-In Period	Ongoing: With Employer	Ongoing: With Employees	Ongoing: New Hires
Website	Promote website and all web-based transportation tools through pages or portal aimed at prospective tenants	Receipt of access to special "employer-only" website pages/portals	Employees receive access to special "employees-only" website pages/portal Plan frequent trips and learn about transportation options, sign up for available subsidies or complimentary memberships, as applicable	Ongoing references of website for trip planning tools, information on events and program memberships	Ongoing use of trip planner on website and other website tools	Receipt of access to special "employees-only" website pages/portals Ongoing use of trip planner on website and other website tools
Wayfinding & Signage	View wayfinding and signage when touring site	Presentation regarding available wayfinding	Use of wayfinding and signage to learn about nearby transportation options	Ongoing use of wayfinding and signage	Ongoing use of wayfinding and signage	Presentation regarding available wayfinding
Site-wide Transportation Staff	Discussion of transportation handbook, nearby transportation options, amenities or subsidies as applicable, promotion of trip-planning assistance	Distribution of transportation handbook, one-on-one assistance in planning commute or other trip options, or signing up for transportation programs/memberships	Distribution of transportation handbook One-on-one assistance in planning commute options is made available to new employees	Presentations to share new web or wayfinding functionality, employee-focused TDM programs, and ongoing support structures	Available for questions as they arise	Distribution of transportation handbook Additional one-on-one support is available to plan new routes, etc.

Figure 15 Visitor Communications Touch Points

	Planning Trip to Site	(For Event Attendees) Purchase Tickets	Arrive on Site	Ongoing Time Spent on Site	Planning to Leave Site
Website	Use of public-facing website, including embedded trip-planning tools and parking pricing and availability information	Opportunity to receive tailored point-to-point trip suggestions and information emphasizing parking pricing and limited parking availability at time of ticket purchase	Use mobile-friendly website to understand transportation options, parking pricing and availability information, and maps of site		Use mobile-friendly website to plan onward journey from site
Wayfinding & Signage			Use of dynamic parking pricing and availability signage; use of wayfinding and signage, including kiosks, to navigate to specific destination	Use of wayfinding and signage to navigate to additional destinations	Use of wayfinding and signage, including kiosks, to understand options for onward journey from site and navigate to nearby transit options, as applicable
Site-wide Transportation Staff	Coordinate with retailers and restaurants to post latest transportation information on their websites; maintain site website to ensure any updates to transportation information are readily available				

4 MONITORING AND COMPLIANCE WITH SF TDM ORDINANCE

A robust monitoring program that allows the site's transportation team to adjust offerings over time is key to the success of the Mission Rock TDM Plan. Monitoring will allow the Mission Rock team to better understand the effects of different measures on travel behavior and determine how programs are meeting the needs of residents, employees, and visitors.

The objectives of an annual monitoring program are:

1. To measure progress toward achieving, or retaining, compliance with the TDM's goal of reducing estimated aggregate daily one-way vehicle trips by 20%⁶; and
2. To identify the most and least effective TDM measures, so that the former can be strengthened and the later can be replaced or significantly improved.

This chapter describes the tools the transportation team will use to effectively monitor the program and ensure that the program complies with City of San Francisco monitoring requirements. It starts with a look at how the TDM Plan compares to the San Francisco TDM Ordinance.

USING THE SAN FRANCISCO TDM ORDINANCE AS GUIDANCE

San Francisco adopted a citywide TDM Ordinance that created a TDM Program for new development in 2017. The goal of the Program is to reduce driving trips associated with new development. The Ordinance calls for development projects negotiated through Development Agreements, such as Mission Rock, to comply with the spirit of the Program, allowing that there may be unique opportunities because of project scale and mixes of use to meet the goals of the Program. Mission Rock's TDM Plan aims to reduce anticipated driving trips by 20% compared with what is estimated without TDM.

At the heart of the Ordinance is a menu of potential TDM measures, with points or credits assigned to different measures based on their documented effectiveness. Developers are required to implement measures that get them to a point total established based on the number of net new parking spaces planned as part of a given project. For example, residential and office projects with 20 or fewer parking spaces (including zero) need to implement measures with point values adding up to 13 points; each additional 10 spaces require projects to generate an additional point through additional TDM efforts. Retail projects with four or fewer spaces (including zero) need to

⁶ This goal is a 20% reduction compared to the aggregate daily one-way vehicle trips identified in Mission Rock's travel demand memo prepared by Adavant Consulting, dated June 30, 2015.

implement measures worth a total of nine points, and each additional two spaces will require another point.

Figure 16 estimates how the Mission Rock TDM Plan rates against the City's TDM Menu of Options and the range of associated point values. As the table shows, the measures included in this Plan are expected to garner 21 points for the residential component of the project, 20 points for the office component, and 12 points for the retail/restaurant component.

Figure 16 Comparing Mission Rock TDM Measures to Ordinance Measures, with Estimated Point Values

Program	Ordinance Category	Estimated Point Values by Use		
		Res	Office	Retail
Real-time transit information and marketing screens	INFO-2	1	1	1
One-time transit subsidies				
Bike share memberships	ACTIVE-4			
Space for on-site bike share				
Bicycle valet beyond code requirements	ACTIVE-7			1
Bike community programming with periodic giveaways				
Bicycle resource center, including vending machine with parts and tools and fix-it station	ACTIVE-5a	2	2	
Secure bike parking in buildings and along desire lines beyond code requirements	ACTIVE-2	2	2	2
Showers and clothes lockers for employees	ACTIVE-3		1	
On-site shared scooters	CSHARE-1	Covered	Covered	Covered
Electric scooter share memberships				
On-site car share parking spaces beyond code requirements	CSHARE-1	2	2	2
Car share memberships				
Market-based off-street parking pricing				
Unbundled parking	PKG-1	2	3	3

Program	Ordinance Category	Estimated Point Values by Use		
		Res	Office	Retail
Reduced parking supply				
Real-time information on parking pricing and availability				
In-building concierge services	DELIVERY-1	1	1	
Delivery coordination for online personal services	DELIVERY-1	Covered	Covered	
Partnerships with CSAs				
Cold, dry storage space for grocery and package delivery	DELIVERY-1	Covered		
Family supportive amenities	FAM-1	1		
Convenient loading zones				
Childcare services and facilities	FAM-2	2	2	
Collaborative work space with business services				
Convenient elevator design for bicycles, strollers, wheelchairs, etc.				
On-site affordable housing	LU-2	2		
Site-wide transportation staff	INFO-3	4	4	1
Mobile-friendly Mission Rock transportation website				
Intuitive signage and wayfinding for trip planning across all modes	INFO-1	1	1	1
Improved walking conditions to, from, and within Mission Rock	ACTIVE-1	1	1	1
		21	20	12

There are several measures recommended in this Plan that do not clearly align with any of those specified in documents related to the Ordinance. As noted earlier, many of these measures play important roles in supporting programs that might more directly affect travel behavior. Others may deserve recognition in the City's framework. Regardless, the specifics of Mission Rock's TDM monitoring will be worked out through discussions with the City.

TDM PLAN MONITORING AND REPORTING

With the 20% trip reduction goal in mind, Mission Rock will monitor vehicle trips to and from the site for all buildings that have received a Certificate of Occupancy, and compare these vehicle trips to the aggregate daily one-way vehicle trips anticipated for the those buildings based on the trip generation rates specified in the EIR supporting documents.

Monitoring will include the following elements:

- **Trip counts and intercept surveys.** This will consist of site-wide counts of persons and vehicles arriving and leaving the project site on a non-ballgame or major event day. Counts will take place over at least two days between 6 a.m. and 8 p.m.
- **Travel demand information.** The trip count and intercept survey data will provide the key inputs to calculating travel demand for the site in line with the San Francisco Planning Department's transportation impact analysis guidelines.
- **Documentation of Plan implementation.** Mission Rock transportation staff will document the implementation of the TDM Plan's elements.

Timeframe for Monitoring

Per commitments made under the EIR, Mission Rock transportation staff will monitor and adjust the TDM Plan accordingly until 1) the Development Agreement expires, or 2) the site meets the reduction goal for up to eight consecutive years, whichever comes first. This monitoring will begin 18 months after the completion and commencement of operation of the proposed parking garage. After that point, the site transportation staff will submit annual monitoring reports until five consecutive reporting periods show that the reduction goal has been reached. After this point, staff will submit monitoring reports every three years.

If the TDM Plan's measures are not achieving the reduction goal after three years, Mission Rock will work with the Planning Department to adjust the program as necessary, which may include refining or removing existing measures, or adding new measures. If Mission Rock has adjusted the TDM program and has not met the reduction goal for up to eight years, the project may pay an additional emissions offset fee to address any shortfall in meeting the TDM Plan reduction target. At that point, monitoring and reporting requirements will be lifted.



MISSION ROCK

DESIGN
CONTROLS
DRAFT 09/12/17





MISSION ROCK

DESIGN CONTROLS

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MISSION ROCK DESIGN DOCUMENTS

The Design Controls (DC) comprise the second document in a set of five documents which together describe the requirements for the development of Mission Rock.



MISSION ROCK VISION AND DESIGN INTENT

This document contains the big picture thinking and aspirations that will guide the process for the design and implementation of Mission Rock.

CHAPTERS:

1. Vision
2. Context
3. Design Intent
4. Frameworks



MISSION ROCK DESIGN CONTROLS (DC)

This document guides the development of the open spaces, streets, and buildings at Mission Rock. The DC ensures that the site will be developed in a way that is consistent with the project vision.

CHAPTERS:

1. Land Use
2. Public Realm
3. Streets
4. Open Spaces
5. Ground Floor
6. Building Form
7. Building Design



MISSION ROCK

SUSTAINABILITY
STRATEGY

MISSION ROCK SUSTAINABILITY STRATEGY

This document outlines targets for site-wide performance and explains how the infrastructure, buildings, and community will work together to achieve these targets, in a way that is consistent with the DC.

CHAPTERS:

1. Adaptability & Resilience
2. Water
3. Energy
4. Transportation
5. Waste Reduction
6. Health & Wellness
7. Sustainable Materials
8. Habitat & Ecosystem Function
9. Community Identity
10. GHG Emission Assessment



MISSION ROCK

INFRASTRUCTURE
PLAN

MISSION ROCK INFRASTRUCTURE PLAN

This document regulates the complex coordination of streets, utilities, and services at Mission Rock. It ensures a holistic and integrated approach with the design of the landscape, buildings, and sustainability strategies.

CHAPTERS:

- | | |
|---|---|
| 1. Introduction | 10. Utility Layout And Separations |
| 2. Sustainability | 11. Low Pressure Water System |
| 3. Environmental Remediation | 12. Sanitary Sewer System |
| 4. Site Demolition | 13. Storm Drain System |
| 5. Site Resiliency | 14. Auxiliary Water Supply System |
| 6. Geotechnical Condition | 15. Central Utility District Infrastructure |
| 7. Site Grading | 16. Stormwater Management System |
| 8. Street And Transportation Infrastructure | 17. Dry Utility Systems |
| 9. Open Space & Parks | |



MISSION ROCK

TRANSPORTATION
PLAN

MISSION ROCK TRANSPORTATION PLAN

This document describes the ways in which the site will be designed to support the mobility choices of all users, with a special emphasis on safe and comfortable conditions for pedestrians and cyclists.

CHAPTERS:

1. Introduction
2. Project Context
3. Getting Around at Mission Rock
4. Transportation Demand Management
5. Event Management

CHAPTER SUMMARY

LAND USE

01 LAND USE

The first chapter of these Design Controls (DC) explains the permitted land uses at Mission Rock, and how the district will achieve a diverse, balanced mix of uses that activate the site around the clock.

PUBLIC REALM

02 PUBLIC REALM

This chapter identifies key site-wide concepts and requirements that will govern the interconnected network of open spaces and streets at Mission Rock. Founded on the Mission Rock Vision, these controls frequently reference the Mission Rock Infrastructure and Transportation Plans and the Sustainability Strategy. All open spaces, shared streets, and streetscapes must satisfy the requirements of this chapter in addition to the specific requirements described in Chapters 3 and 4.

03 OPEN SPACE

This chapter describes the open space relationships, qualities, and functions that are essential to creating a unique, vibrant, urban open space network. The parks, plazas, and paths at Mission Rock will provide a comprehensive variety of recreational opportunities to the district, city, and region. This chapter also governs kiosks and park structures. Each open space in this chapter must satisfy its specific requirements, as well as the Public Realm requirements described in Chapter 2.

04 STREETS

This chapter describes the requirements for streets that will prioritize pedestrians and cyclists. This chapter, together with the ground-floor controls, describe the character and design of the urban experience at Mission Rock's unique shared streets, paseos, and lively, walkable neighborhood streets. Each street in this chapter must satisfy its specific requirements, as well as the Public Realm requirements described in Chapter 2.

BUILDINGS

05 GROUND FLOOR

This chapter contains the set of standards and guidelines which control the design of the ground floor of all blocks. The ground floor of each building will be designed in coordination with the design development of the streets, open spaces and adjacencies, so as to describe the way that each ground floor engages with the street or open space within Mission Rock. It also describes the controls for the day-to-day servicing and loading functions of buildings at Mission Rock.

06 BUILDING DESIGN

Chapter 8 describes the design requirements for buildings above the ground floor. This chapter is rich with reference images to illustrate and support the standards and guidelines, and convey the level of quality and attention for both residential and commercial buildings which Mission Rock aims to achieve.

07 BUILDING FORM

This chapter controls the look of each building which is defined as having two parts: the Base Building and the Upper Building. It describes the requirements for maintaining the streetwall at the base building, and for shaping the upper building. It also describes height requirements for both the base and the upper building.

APPENDIX

A APPENDIX: BLOCK CONTROLS

This appendix has been provided as a summary of controls for each block. While this summary is meant to be a helpful tool, satisfying only the controls described in the Block Standards alone does not constitute compliance with this DC.

DESIGN CONTROLS (DC) USER GUIDE

This Design Controls (DC) document describes the comprehensive set of design criteria of Mission Rock for developers, designers, and permitting agencies.

CONTROL NUMBER

CONTROL TITLE

INDICATES IF CONTROL IS A STANDARD, A GUIDELINE, OR A DEFINITION

GUIDELINES	
5.2.5 PERMEABILITY	In order to maximize the interaction between the building and the street at ground level...

ABOVE: A sample guideline. Throughout the document, each control item is listed under a subheading which indicates that it is a Standard or a Guideline. All of the controls are numbered by Chapter number first, and have a title which explains the subject of the control.

All of the design controls contained in this document are made up of two levels of regulation: Standards and Guidelines.

Standards are typically quantifiable so that compliance can be measured and easily demonstrated. In some cases Standards are not quantifiable but are nonetheless mandatory. Any deviation from Standards requires discretionary approval from the appropriate public agency, as detailed in the Special Use District and transactional approval documents.

Guidelines are also mandatory, but are generally more qualitative or performance-based, and can be more difficult to measure. As applied to a specific development proposal, one Guideline might potentially be in conflict with another or there may be a circumstance or compliance strategy that was not contemplated when the Guidelines were drafted. Alternatively, the sponsor may find an appropriate, alternative approach that meets the intent of the Design Controls, or, for example, may establish that deviation results on a better design or more sustainable development. Each development submittal is expected to comply with Guidelines unless the project sponsor can establish that there is a justification for a deviation based on the application of the Guidelines to a specific project, and that with the deviation, the project will continue to meet the intent of the Design Controls and Vision Document.

Embedded in every set of controls is an explanation of the purpose or intent, so that a developer, designer, or reviewing agency will be able to understand the goal behind each standard or guideline.

In addition to standards and guidelines, there are also definitions included in some chapters. These definitions are specific to Mission Rock, and give further clarification to the standards and guidelines to which they apply.

In every case, the Mission Rock Vision and Design Intent acts as the foundation for all design decisions at Mission Rock. The development of any space or building designed for this site should hold the pursuit of Mission Rock's vision as it's central objective.

01

LAND USE

The Land Use chapter explains the permitted land uses at Mission Rock, and how the district will achieve a diverse, balanced mix of uses that activate the site around the clock.

Land Use controls for the Mission Rock neighborhood are intended to allow for an intense mix of uses on individual blocks and throughout the site.

Office buildings will bring people who occupy the site's streets and parks during the daytime, while residences will bring a vital population who continually inhabit the site into the evenings and on weekends. Space for production will allow for the past uses of the working waterfront to continue on in place.

Each street shall be lined with uses specifically chosen to bring interest, activity and variety to the pedestrian realm, including shops, cafes, entertainment venues,

community spaces, and working waterfront uses. The result will be an urban neighborhood that is rich with the diversity of people that it serves and variety of experiences it creates.

The requirements for creating an active ground floor are explained in their own chapter of this DC - Chapter 5: Ground Floor, which outlines controls for use, size, and design of the Ground Floor of each block and how it fits into a site-wide pedestrian experience.

1.1	Land Use Plan	10
1.2	Land Use Categories	12
1.3	Land Use Controls	14

RELATED CHAPTERS: This chapter is frequently referenced in chapter 5: ground Floor.

1.1 LAND USE PLAN

Primary Uses

Distributing a mix of uses across the site is a key strategy in creating a vibrant, round the clock neighborhood. The land use plan ensures that each open space will be fronted by a mix of uses to create activity from diverse users throughout the day and into the evening.

Figure 1.1 - Land Use Plan indicates the required minimum amount of a primary use for each block. Within each of these blocks, a mix of uses at the ground level is required - incorporating retail, active uses, and production. For guidance on uses specific to ground floor frontages see *Chapter 5: Ground Floor*.

PRIMARY USES

- Residential Mixed Use
- Commercial Mixed Use
- Flex (Residential MU or Commercial MU)
- Active, Production and District-Serving Utility
- Structured Parking
- Open Space

Also see Figure 5.5 - Ground Floor Frontage Zones for land uses required for the ground floor frontage of each block.



FIGURE 1.1 - Land Use Plan

Ground Floor Frontages

The intersection between the public realm and the ground floor of a building defines the street-level experience of the site. Each building frontage at Mission Rock has a role to play in the activation of the streets and open spaces. *Figure 5.5 - Ground Floor Frontages* shows the way that the frontage of each building will participate in the creation of a variety of ground floor experiences throughout Mission Rock, which are directly related to the character of the streets or open spaces they face.

Chapter 5 describes each of these zones in detail, as well as the design elements that support this relationship between the building and the public realm. *Table 5.5 - Ground Floor Frontage Zone Controls* provides a compiled summary of the controls for each zone.

GROUND FLOOR FRONTAGES

- High Retail Zone
- Parkfront Zone
- Working Waterfront Zone
- Neighborhood Street Zone

Zones are illustrative and not to scale; for minimum depth dimensions see Table 5.5 - Ground Floor Frontage Zone Controls.



FIGURE 5.5 - Ground Floor Frontages

1.2 LAND USE CATEGORIES

The categories here describe the intent for the various land uses that are permitted at Mission Rock. These land uses and the ways they can combine within the different blocks at Mission Rock are controlled by the Land Use Controls listed in Section 1.3.

The Special Use District for Mission Rock includes additional details regarding Mission Rock Land Uses. In the event of any conflict between the SUD and the Design Controls, the SUD governs, and should be consulted for additional detail. The list of uses described here is for summary purposes only; please see the SUD and the Land Use Chart in Appendix C for a full use of permitted uses.

DEFINITIONS

1.2.1 RESIDENTIAL

All types of residential uses falling under the Residential Use category shall be permitted. This includes dwelling units, group housing, residential hotels, homeless shelters, live/work units, senior housing, single room occupancy units, and student housing.

1.2.2 COMMERCIAL

Commercial Uses include all commercial, non-retail uses (Office, Non-Retail Sales and Services, and Institutional Uses) that are permitted in Mission Rock, except as otherwise excluded in Appendix C and the SUD.

1.2.3 HOTEL

Hotel is considered a subset of Retail Uses within Mission Rock, except as otherwise provided below. It refers to a use which provides tourist accommodations including guest rooms or suites, which are intended or designed to be used, rented, or hired out to guests (transient visitors) intending to occupy the room for less than 32 consecutive days. Hotels shall be designed to include all lobbies, offices and internal circulation to guest rooms and suites within and integral to the same enclosed building or buildings as the guest rooms or suites.

Hotel uses are considered a subset of the Residential use category for purposes of location, building form, building design and design controls, with the exception of the following:

- ▶ Hotels shall be exempt from dwelling unit exposure, and usable open space requirements.
- ▶ For the purposes of signage, hotels shall be considered a business or commercial use.
- ▶ For the purposes of bike parking ratios and showers and lockers requirements, hotels shall be considered a retail use.

Up to 300 keys may be developed at Mission Rock on Blocks where Residential Uses are permitted, and Hotels shall be considered a Residential Use for purposes of calculating the 60%/40% ratios described in Section 1.3.

1.2.4 RETAIL

Retail Uses shall generally include the uses that fall under Retail Sales and Services, and Entertainment, Arts, and Recreation categories, except as otherwise excluded in Appendix C and the SUD.

Retail generally means uses that provide goods and/or services to the general public such as , services, restaurants, bars, and entertainment venues, florists, book stores, car rental, etc. Neighborhood-serving uses which enhance the livability of the neighborhood, such as grocery stores, and self-service laundromats are also strongly encouraged.

Any use that is not generally open to the public, such as a company cafe which is only for employees is not considered a retail use.

Within areas designated for retail use, the following non-retail active uses are allowed:

- ▶ Building lobbies are allowed, so long as they do not exceed the maximum dimensions given in Table 5.5 - Ground Floor Frontage Zone Controls.
- ▶ Because childcare centers desire adjacency to open space, and spaces at Mission Rock that front directly onto open space are required to be retail uses, child care centers may also be located within retail use zones.

While retail may be required at the ground floor in certain locations, it is also allowed in the floors above.

DEFINITIONS

1.2.5 ACTIVE USES

An "active use" shall mean any use that by its nature does not require non-transparent walls facing a public street or involves the storage of goods or vehicles.

Spaces accessory to residential uses, such as fitness or community rooms, are considered active uses only if they meet the intent of this section and have access directly to the public sidewalk or street.

Building lobbies for other uses are allowed, so long as they do not exceed the maximum dimensions given in *Table 5.5 - Ground Floor Frontage Zone Controls*.

While active uses may be required at the ground floor at certain locations, they are also allowed in the floors above.

1.2.6 PRODUCTION

Production includes Industrial and Agricultural uses, except as otherwise excluded in Appendix C and the SUD. Production shall mean those spaces where goods are produced or fabricated. This can include the creation of handicrafts, art, consumable goods, clothing, furniture, equipment, and so on.

This use zone can also include uses that are accessory to production such as: retail, restaurant, office, and educational uses. Up to 33% of a single user area can be allocated to such accessory uses, subject to meeting the additional accessory use requirements of the SUD and the Planning Code.

The allowance of accessory uses is intended to create an environment where production uses can be public-facing, but are not to be the primary use of the production space. For example, a "winery" which only sells wine and does not produce wine on site is not considered a production use.

Catering, butchery, breweries, and other types of preparation of consumable goods for off-site sale, or limited on-site sale is consistent with the intent of the definition of production.

1.2.7 OPEN SPACE

Open Space blocks at Mission Rock shall be developed as public and publicly accessible open space. This land use can also contain programmatic elements that support recreation and leisure activities. Refer to Chapter 3: Open Space for detailed controls on programming.

A limited number of small structures may be built within Open Space zones, such as food or equipment rental kiosks, for the purpose of activating these spaces. The controls regulating the development locations and design of these kiosks and lightweight structures are outlined in *Section 3.8 - Kiosks and Lightweight Structures*.

Open Space zones may also include temporary uses which directly support public recreation and leisure activities and serve to activate the open space.

See the SUD, DDA and DA for more details on permitted uses, including temporary and interim uses, within areas designated for Open Space use within Mission Rock.

1.2.8 PARKING

Surface parking lots are not permitted at Mission Rock except on a temporary or interim basis, or as an existing use, as described in the SUD, DA and DDA documents.

There are two types of parking structures allowed at Mission Rock:

- Off-street parking spaces are permitted at the Parcel D2 parking garage or a combination of the Parcel D2

parking garage and a below grade parking garage beneath Mission Rock Square (controls are described in *Section 7.7 - Parking Structure*)

- Off-street parking in individual buildings (controls are described in *Section 7.6 Off-Street Parking*)

Stand-alone, above grade structured parking is not a permitted use except on Block D2, where the Parking Structure is located.

1.2.9 OTHER USES

Other uses include Community Recycling Center, Open Recreation Area, Passive Outdoor Recreation, Public Transportation Facility, Utility Installation (District-Serving Utility Installation only) and Wireless Telecommunications Services Facility.

District-Serving Utility Installations

A district-serving utility and infrastructure use that includes, but is not limited to a central utility plant or graywater treatment and distribution plant. These uses are described under the category of "Other" permitted uses in Mission Rock in the SUD.

This use must be contained within the envelope of a building, with the exception of cooling or venting structures, which must be properly screened (for screening requirements, see *Section 7.2.4 - Mechanical Equipment* and *Section 7.2.6 - Mechanical Screening*).

Those elements of the system which are located on the roof must comply with the height, screening, and general design requirements for sustainable infrastructure described in *Section 7.2.5 - Roofscapes*.

1.3 LAND USE CONTROLS

Land use at Mission Rock is controlled at the block scale to ensure a minimum mix of uses throughout the site and facing each open space. Residential and commercial buildings take on different forms, and the mix of uses at the site has taken into consideration the form of these different buildings and their ability to add variety to the public realm, the way they combine to frame views to and through the site, and the way they will allow sunlight and views to open space.

While each block is given a primary use (residential or commercial) with a minimum amount of that use required, any number of other uses can combine within the building to create an intensely mixed use district. For example, a Residential Mixed Use building that provides the minimum amount of residential required can also include commercial uses, a central utility plant, retail, and other active uses at the ground floor.

STANDARDS

1.3.1 PERMITTED USES

All use categories listed within these Design Controls are permitted unless expressly excluded.

The intent is that these permitted uses be interpreted broadly, with the intent to allow for uses that might not yet exist but that are consistent with the general classes of uses permitted under each category.

Primary permitted uses are: Residential, Commercial, Retail, Production, and Other Uses as defined in Section 1.2 Land Use Categories and further elaborated in the Land use Chart in Appendix C. Hotel, Active Uses, Open Space, Parking and District-Serving Utility Installation are uses that are described in more detail in Section 1.2 as either (1) subsets of permitted uses within another land use category with unique characteristics, or (2) uses that are permitted within certain Blocks.

1.3.2 GROUND FLOOR USES

The ground floor of every building shall contain a mix of Retail, Production, and/or Active Uses as described in Chapter 5: Ground Floor.

1.3.3 RESIDENTIAL MIXED USE

On Blocks primarily designated as Residential Mixed Use, at least 60% of the gross square footage of the Buildings above the ground floor in each Block shall consist of Residential Uses. The minimum 60% requirement shall be considered cumulatively on each subject Block, starting with the first Vertical Improvement on the Block. No Vertical Improvement or change of use may be approved if it causes the gross square footage on the Block as a whole, considering all existing and approved uses on

the Block, to fall below 60% Residential Uses. Once the minimum for this primary use is satisfied, any number of additional permitted uses are allowed.

1.3.4 COMMERCIAL MIXED USE

On Blocks primarily designated as Commercial Mixed Use, at least 60% of the gross square footage of the Buildings above the ground floor in each Block shall consist of Non-Residential Uses. The minimum 60% requirement shall be considered cumulatively on each subject Block, starting with the first Vertical Improvement on the Block. No Vertical Improvement or change of use may be approved if it causes the gross square footage on the Block as a whole, considering all existing and approved uses on the Block, to fall below 60% Non-Residential Uses. Once the minimum for this primary use is satisfied, any number of additional permitted uses are allowed.

1.3.5 FLEX USES

Blocks H, I, and J are indicated as “Flex” blocks, which means they can be developed as either Residential Mixed Use or Commercial Mixed Use. Development on these Blocks must follow the appropriate set of Building Design guidelines and standards for whichever land use is applicable, as set out in Chapter 7: Building Design.

1.3.6 TEMPORARY, INTERIM, NON-CONFORMING AND ACCESSORY USES

Temporary, interim, non-conforming and accessory uses are described in the SUD.

PUBLIC REALM

CHAPTER 2: PUBLIC REALM	CHAPTER 3: OPEN SPACE	CHAPTER 4: STREETS
2.1 An Inclusive Public Realm 18	3.1 Open Space Network 44	4.1 Street Controls 78
2.2 Street Typologies 20	3.2 China Basin Park 46	4.2 Shared Public Way 80
2.3 Pedestrian Circulation + Accessibility 22	3.3 Mission Rock Square 48	4.3 Terry A Francois Boulevard 90
2.4 Vehicular + Bicycle Circulation 24	3.4 Channel Lane 66	4.4 Bridgeview Street 98
2.5 Loading, Servicing, + Parking 26	3.5 Channel Wharf 68	4.5 Exposition Street 104
2.6 Materials: Paving + Site Elements 28	3.6 Pier 48 Apron 70	4.6 Long Bridge Street 108
2.7 Urban Forest 30	3.7 Channel Street 72	4.7 3rd Street 112
2.8 Sustainable Water Systems 34	3.8 Kiosks + Small Park Structures 74	4.8 Mission Rock Street 116
2.9 Lighting + Nighttime Identity 36		
2.10 Wayfinding 38		
2.11 Public Art 40		



The public realm of Mission Rock will be a vital link in San Francisco’s waterfront open space, a dynamic addition to the Mission Bay neighborhood, and a foundational aspect of the new district. The public realm, land use, and building strategies will work in concert to create a safe, inviting, and sustainable landscape, providing a diversity of experiences that will enrich the city at multiple scales.

The public realm will be a network of special, distinct open spaces and lively, pedestrian-oriented streets. A unique component of the plan will be the introduction of more intimate spaces across the site to support active and vital streetlife. The integrated combination of public realm experiences and active ground-floor building design and uses will create an inviting and memorable urban district.

The key public realm features of Mission Rock will be China Basin Park, situated on China Basin at the mouth of Mission Creek as it enters the Bay; Mission Rock Square, the heart of the neighborhood; the Shared

Public Way, an active retail spine that will connect through the neighborhood to the waterfront; Channel Lane, an intimate open space that will link Mission Rock Square to the Bay edge; Channel Wharf, which will serve active maritime use and public access to the bay; and the Working Waterfront (Terry A Francois Boulevard), a unique urban waterfront experience that will encompass the actively used piers and provide pedestrian and bicycle waterfront access via the Blue Greenway. These features will be connected by generous pedestrian and bicycle circulation. Chapter 2 describes how these places and experiences will be unified at Mission Rock.

02

PUBLIC REALM

2.1	An Inclusive Public Realm	18
2.2	Street Typologies	20
2.3	Pedestrian Circulation + Accessibility	22
2.4	Vehicular + Bicycle Circulation	24
2.5	Loading, Servicing, + Parking	26
2.6	Materials: Paving + Site Elements	28
2.7	Urban Forest	30
2.8	Sustainable Water Systems	34
2.9	Lighting + Nighttime Identity	36
2.10	Wayfinding	38
2.11	Public Art	40

RELATED CHAPTERS: The design of each open space and street described in Chapters 3 and 4 must satisfy the requirements of this chapter. This chapter should be read with Chapter 5: Ground Floor to describe intended integration of the public realm and vertical development. These controls occasionally refer to Chapter 7: Building Design.

2.1 AN INCLUSIVE PUBLIC REALM

Together, Mission Rock's open spaces and streets will create a unique neighborhood comprised of varied places and landscape types -- an inclusive, urban, and active district that welcomes and facilitates a variety of uses and activities.

The Chapter 2 Public Realm controls prescribe and characterize elements that must be coordinated across the entire network of streets and open spaces. These elements include the various aspects of a vibrant public realm — paving and site elements, the urban forest, stormwater management, wayfinding, lighting, and public art — that will characterize Mission Rock's public spaces.

Each open space, shared street, and neighborhood street must satisfy the controls in Chapter 2 to comply with the Mission Rock DC document and with the project's goals for the public realm.

The public realm will function socially, programmatically, and ecologically, with consideration for climate responsiveness, resiliency, and resource conservation. Suitable plant species will be selected and sustainable maintenance regimes devised to maintain the ecological health and aesthetic integrity of the public realm network.

Please note: illustrative material in this document does not represent a design proposal. All illustrative material is included to demonstrate one potential application of the controls herein.



KEY PUBLIC REALM LOCATIONS AND CORRESPONDING DC CHAPTERS:

- Chapter 3: Open Space
- Chapter 4: Shared Streets
- Chapter 4: Streets
- Chapter 4: Paseos



FIGURE 2.1.1 Location Plan of Public Realm streets and open spaces and their chapter locations in this DC document.

*NIC = Not In Contract. Please refer to Glossary.

2.2 STREET TYPOLOGIES

While anchored by its open spaces, the public realm at Mission Rock will be activated by social life that will occur as much in its streets as in its parks.

Mission Rock will include several complementary street typologies that create a variety of different experiences for different visitors, from residents and workers to families visiting on a weekend afternoon to ballpark event crowds. These varied street types facilitate different speeds of moving, from an afternoon stroll to a morning bicycle ride to work.

Streets at Mission Rock will be pedestrian- and bicycle-friendly, with generous sidewalks, narrow vehicular travel lanes, and no on-street parking, to discourage unnecessary vehicular traffic and to create a feeling of pedestrian priority. Street types and designs will conform to the intent of the Better Streets Plan.

Every opportunity will be taken in the public realm to create moments that support varied social interactions, especially in each street's Streetlife Zone. This area will add to Mission Rock's civic vitality and retail activity. "Street Rooms" - intimate social spaces within streetscapes that are characterized by their small scale and special materials - as well as stormwater gardens that have both aesthetic value as small urban gardens and ecological value as stormwater treatment facilities, will provide a fine grain to the street network as places for people.

STANDARDS

2.2.1 STREET TYPOLOGIES

Several unique street types with distinctive character, planting, traffic speed, and streetlife elements shall comprise the Mission Rock street network. See Figure 2.2.1 for the distribution of these typologies across the site.

A) Definitions

- ▶ **Shared Public Way:** Pedestrian-oriented, shared street with one-way traffic, curbless.
- ▶ **Working Waterfront:** Shared street with two-way traffic that integrates industrial and maritime uses with the Bay Trail/Blue Greenway; flush curbs.
- ▶ **Neighborhood Street:** Streets with generous sidewalks, stormwater treatment gardens, and slow traffic; vehicular travelway curb-separated from sidewalk; must include sharrows or standard bicycle lanes.
- ▶ **Paseo:** Paseos, or open spaces within the ROW that accommodate emergency vehicles, will be non-vehicular street extensions of the Shared Public Way, Bridgeview Street, and Terry Francois Boulevard adjacent to China Basin Park. See Section 2.4.
- ▶ **District Street:** Streets referencing OCII Mission Bay design standards on edge of plan area.

2.2.2 STREETLIFE ZONE: REQUIREMENTS + ELEMENTS

A) Streetlife Elements: Definition

Streetlife Elements, including street rooms, kiosks, stormwater treatment gardens, and social furniture, shall be distributed throughout the public realm and concentrated in streets with the highest pedestrian traffic. Also see Chapter 4 and refer to the Glossary.

B) Streetlife Elements: Consistency

Streetlife elements shall have related character, scale, and intention along the length of a single street or within an Open Space, but are not required to be identical unless noted within the controls for that particular place.

C) Stormwater Garden Activation

Stormwater Gardens on the Shared Public Way, Bridgeview Street, Exposition Street, and Long Bridge Street shall contain or be adjacent to seating.

D) Temporary Kiosks

Kiosks located within Streets or Open Spaces, except in the locations noted in Section 3.8, shall be temporary. Refer to Standard 1.1.6 for allowed Open Space Uses.

D) Bicycle Parking

Bicycle parking shall be located within or adjacent to all open spaces. On streets, bicycle parking shall be located within the Streetlife Zone per 4.1.6, with consideration given to maximizing permeability and facilitating pedestrian movement.

2.2.3 PEDESTRIAN-PRIVILEGED ENVIRONMENT

Creating a safe, accessible, and comfortable pedestrian experience will be a priority on all streets at Mission Rock.

A) Open Space Connections

Safe pedestrian street crossings and connections to Open Spaces shall be provided per Section 2.4.

B) Microclimate Comfort

Spaces that provide opportunities for gathering and lingering, especially those associated with Streetlife Elements, shall be protected from wind. See Section 2.7.

GUIDELINES

2.2.4 PRIORITY PEDESTRIAN ROUTES

The Shared Public Way, Terry A Francois Boulevard, Channel Street, and Channel Lane should be considered priority pedestrian routes connecting significant site anchors.

2.2.5 SPECIAL LIGHTING

Special lighting for streets, and at specific streetlife elements such as street rooms, should be considered as a vital part of Mission Rock's nighttime identity. See Section 2.9 and Chapter 4.

LEGEND: STREET TYPOLOGIES

-  Shared Public Way (one-way traffic)
-  Working Waterfront (two-way traffic)
-  Neighborhood Streets (two-way traffic)
-  Paseos (Pedestrian-only street extension)
-  District Street
-  Open Space



FIGURE 2.2.1 Street Typologies diagram illustrating how the five street typologies defined in 2.2.1 are distributed across the site. These typologies are described in Chapter 4 in the controls for each street.



2.3 PEDESTRIAN CIRCULATION + ACCESSIBILITY

As a pedestrian-priority development, Mission Rock's street network will provide safe and easy access to open spaces, building entrances, and retail, with unique street types designed to the scale and speed of the pedestrian experience. A combination of traffic calming strategies will discourage accessing the site by vehicle. The public realm will be tightly integrated with the design and scale of the ground floor of Mission Rock's buildings.

Mission Rock's three north-south streets will have either reduced-height or flush curbs separating the pedestrian realm from the vehicular travelway. In addition to privileging pedestrian access, this strategy will facilitate paratransit vehicle access that can serve all of Mission Rock's blocks and open spaces.

Passenger loading and building servicing strategies, described in Sections 2.5 and 5.3 and in the Transportation Plan, will be designed to minimize conflicts between pedestrians and vehicles, and to maximize the special streetlife elements that create a rich public experience.



Concept Rendering of Waterfront Promenade in China Basin Park

STANDARDS

2.3.1 PEDESTRIAN THROUGHWAY

On all sidewalks and major pedestrian routes to and within Open Spaces, a pedestrian throughway that is 6'-0"-minimum width shall be identified and maintained. This throughway shall be a universally accessible path of travel that does not exceed 5% maximum longitudinal slope. See Chapters 3 and 4 for mandated minimum widths of pedestrian throughway and circulation routes in specific open spaces and streets.

2.3.2 UNIVERSAL ACCESS TO OPEN SPACES

Universal access to open spaces shall be provided from the significant pedestrian connections that are identified on Figure 2.3.1.

2.3.3 ACCESSIBLE LOADING AND UNLOADING

Loading zones for vehicular and paratransit loading and unloading shall be provided.

A) Location of Loading Zones

These shall be located along frontages indicated in Figure 2.3.1, distributed to enable access to all blocks and open spaces.

B) Curb Conditions

Refer to Infrastructure Plan for loading stall configurations at standard and non-standard curb conditions.

2.3.4 RAISED INTERSECTIONS

Raised or flush intersections shall be provided along the Shared Public Way, Terry A Francois Boulevard, and Bridgeview Street. Refer to Chapter 4 and to the Infrastructure Plan for more information.

A) Intersection Markings at Pedestrian Throughway

At raised intersections, pedestrian throughway across the intersection shall be indicated with crosswalks.

2.3.5 DECORATIVE CROSSWALK TREATMENTS

Where proposed, decorative crosswalk treatments shall comply with City and MUTCD standards and required review. Proposed decorative treatments shall meet ADA standards for slip-resistance.



An example of a raised intersection with decorative treatment and delineated crosswalks.

SOURCE: GOOGLE STREET VIEW

LEGEND: PEDESTRIAN CIRCULATION + ACCESSIBILITY








-  Sidewalks + Major Pedestrian Routes
-  Accessible Loading Locations
-  Significant Pedestrian Connection: Shared Street with Flush Curbs
-  Significant Pedestrian Connection: Neighborhood Street with Reduced-Height Curb
-  Crosswalks (off-site)
-  Interior Accessible Drop-Off/Parking Stalls
-  MUNI Metro stop



FIGURE 2.3.1 Pedestrian Circulation + Accessibility diagram illustrating pedestrian routes and access, significant connections, and accessible loading zone locations in the public realm. See Chapters 3 and 4 for open space and street details.

2.4 VEHICULAR + BICYCLE CIRCULATION

Mission Rock’s street network will be comprised of short, walkable blocks that connect directly to existing Mission Bay streets adjacent to the project.

Through careful consideration of the pedestrian and bicyclist experience, transit connections, traffic calming measures, and a centralized site parking facility instead of on-street parking, the project will discourage accessing the buildings, streets, and open spaces at Mission Rock by vehicle.

The bicycle network at Mission Rock will provide an important link for the district and the Bay Trail, connecting the Blue Greenway to the Embarcadero. Within the site, a variety of bike facilities will provide choices for cyclists of all ages and skill levels to access Mission Rock’s open spaces and buildings. These facilities will be integral to the unique character of Mission Rock’s streets.

STANDARDS

2.4.1 VEHICULAR CIRCULATION

All streets at Mission Rock shall have two-way, low-speed, low-volume traffic circulation, with the exception of the Shared Public Way, which shall have one-way traffic in the northbound direction only. Refer to Figure 2.4.1.

2.4.2 PASEOS

Paseos are proposed at the terminus of the Shared Public Way, Bridgeview Street, and Terry A Francois Boulevard at China Basin Park. Refer to Chapter 4 for additional specific street controls.

A) Emergency Vehicle Access

Paseos shall accommodate Emergency Vehicle Access for a maximum distance of 150’ from the Exposition Street ROW. The terminus of this access shall be clearly marked by permanent site furnishings, including bollards or equivalent, or street trees.

B) Prohibiting Vehicular Access

At Exposition Street, paseos shall include signage and design cues that prohibit access for unauthorized vehicular traffic.

2.4.3 BICYCLE CIRCULATION

Bicycle facilities or sharrows shall be provided on all streets at Mission Rock. Figure 2.4.2 indicates the Conceptual Strategy for these facilities at a network scale. See Chapter 4 for controls defining specific facilities on each street.







2.4.4 INTERSECTIONS

All stop-controlled and signalized intersections shall adhere to City standards for signage and street markings. Refer to Figure 2.4.1 and to the Infrastructure Plan.

A) Uncontrolled Intersections

Where crosswalks at uncontrolled intersections are proposed at Open Space connections, an appropriate combination of traffic control strategies, including crosswalk markings, shall be employed to maximize visibility and safe pedestrian crossing. See Standard 2.3.3.

LEGEND: VEHICULAR CIRCULATION NETWORK (L)

-  Open Space
-  Shared Street (No Street Parking)
-  2-Way Street (No Street Parking)
-  Paseo
-  Direction of 1-Way Traffic
-  Direction of Through Traffic
-  Shared Site Parking Location
-  Access to Below-Grade Parking (if provided)
-  Stop Sign: All-Way Stop
-  Stop Sign at Through Streets
-  Existing Signalized Intersection
-  Proposed Signalized Intersection

LEGEND: BICYCLE CIRCULATION NETWORK (R)







-  Bay Trail/Blue Greenway: China Basin Park (Primary N-S Bicycle Connection; Multi-Use Trail)
-  Protected Cycle Track: Bridgeview + Mission Rock Streets (Primary N-S Bicycle Connection)
-  Bay Trail/Blue Greenway: Terry A Francois Blvd and China Basin Park (Multi-Use Trail)
-  Class II Bike Lane
-  Sharrows / Shared Travelway
-  Open Space



FIGURE 2.4.1 Vehicular Circulation Network Diagram illustrating vehicular movements, paseos, traffic signals, and stop control across the site. Refer to Chapter 4 for specific street controls, and to the Infrastructure Plan and Transportation Plan for details.



FIGURE 2.4.2 Bicycle Circulation Network Diagram illustrating hierarchy and connections among the different types of bicycle facilities across the site. These facilities are described in Chapters 3 and 4 for each open space and street.

2.5 LOADING, SERVICING, + PARKING

Loading, servicing, and parking at Mission Rock will be distributed to minimize impact on the public realm pedestrian experience. While no permanent street parking will be provided, passenger loading across the site will be accommodated in dedicated spaces - this strategy is described in the Transportation Plan.

Servicing needs for all of Mission Rock’s blocks will be accommodated on Exposition Street and Long Bridge Street in dedicated zones. Additional commercial vehicle access will be provided on Terry A Francois Boulevard, to serve the Piers and Working Waterfront tenants. See also Section 5.3: Building Access.

STANDARDS

2.5.1 DEFINITIONS: LOADING AND SERVICING

A) Loading

Loading in this document refers specifically to passenger loading. Figure 2.5.1 defines where loading zones are distributed in dedicated areas for the public realm; refer to the Transportation Plan for more detailed information. Accessible loading zones are described in Section 2.3.

B) Servicing and Commercial Loading

Servicing refers to dedicated zones for commercial deliveries, freight loading, and building servicing. Figure 2.5.1 defines where servicing may occur within the public realm; refer to the Transportation Plan and Infrastructure Plan for more information on how these zones are dedicated to specific block and land use needs.

2.5.2 STREET PARKING

No street parking will be provided at Mission Rock.

2.5.3 PASSENGER LOADING + SERVICING ZONES

Dedicated zones to accommodate spaces for passenger loading and building servicing for all Blocks shall be provided on Exposition and Long Bridge Streets. Refer to Section 2.3 for accessible loading stall controls, Chapter 4 for street controls, and see Infrastructure Plan for more details.

2.5.4 LARGE VEHICLE ACCESS TO PIER 48 AND PIER 50

Access for large trucks that are a maximum size of WB-67 shall be maintained to the valley of Pier 48. Access for large trucks that are a maximum size of WB-50 shall be maintained at Pier 50. Refer to Infrastructure Plan for access studies.

2.5.5 COMMERCIAL VEHICLE ACCESS: STREETS

A) Internal Circulation

Exposition and Long Bridge Streets and Terry A Francois Boulevard shall accommodate commercial vehicle circulation in dedicated loading zones. Refer to Infrastructure Plan and Transportation Plan.











B) Loading Zones: Working Waterfront

Commercial vehicle loading zones for trucks that are a maximum size of SU-30 shall be accommodated on Terry A Francois Boulevard at Blocks H, I, and J for Working Waterfront uses. Refer to Infrastructure Plan for design vehicle access studies and to Chapter 5 for Working Waterfront uses.

2.5.6 DRIVEWAYS

If provided, driveways to access off street parking on all blocks except D are only permitted on Exposition Street and Long Bridge Street in accordance with Section 7.7. Driveways for the shared parking facility at Block D shall be provided on Bridgeview Street and Mission Rock Street. Potential locations are noted in Figure 2.5.1. Refer to Sections 5.3 and 7.7 for block driveway controls, and see Infrastructure Plan for information regarding placement of driveways relative to streetscape elements.

LEGEND: LOADING, SERVICING, + PARKING

-  Service Street
-  Shared Street (Flush Curb)
-  Commercial Loading + Servicing Zones
-  Accessible Loading (See Section 2.3)
-  Time-Limited Commercial Delivery Zone (Accessible Loading All Other Times)
-  Open Space
-  Large Truck/Vehicle Access Points
-  Potential Driveway Location (if provided)
-  Shared Parking Facility
-  Access to Below-Grade Parking (if provided)

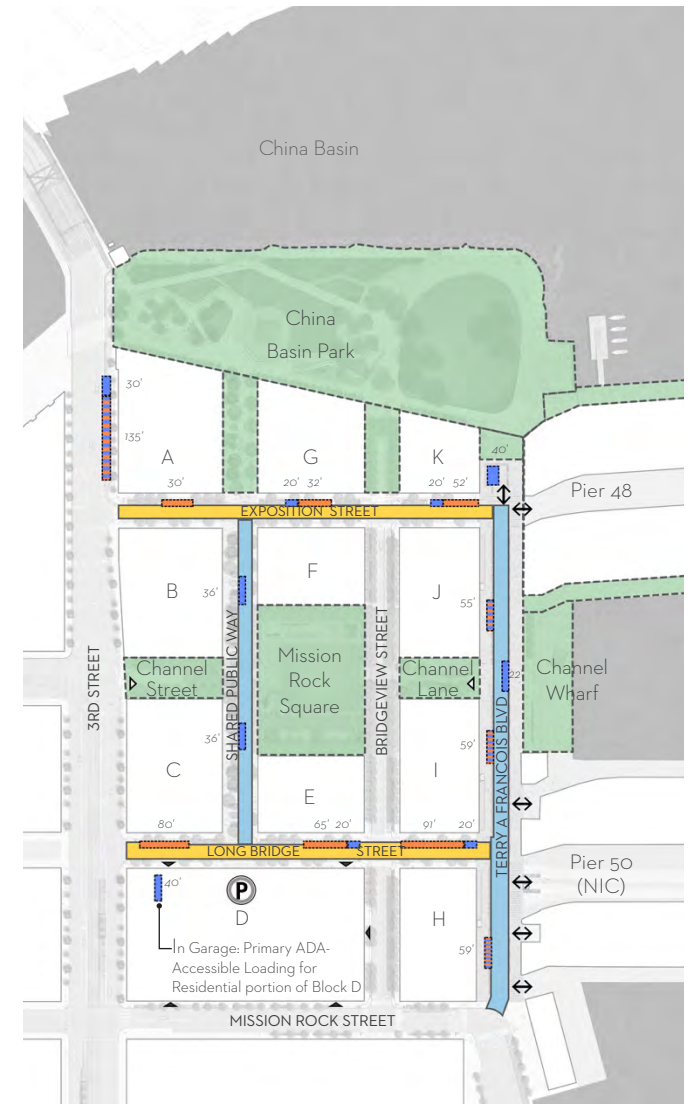


FIGURE 2.5.1 Loading, Servicing, + Parking Diagram illustrating passenger and commercial loading locations and dimensions, shared streets, and large vehicle access points in the public realm. Loading dimensions are noted in italics next to each zone. Refer to Infrastructure Plan and Transportation Plan for more information.

2.6 MATERIALS: PAVING + SITE ELEMENTS

Paving will be a key component that defines the character, connectivity, and identity of Mission Rock's varied streets and open spaces. Paving strategies should be considered as an interconnected site-wide system that activates the public realm and contributes to the overall pedestrian, bicycle, and vehicular circulation on the site. All paving in areas with high pedestrian traffic will facilitate universal accessibility. Paving connections to surrounding streets should be carefully considered for their impact on the larger Mission Bay neighborhood.

STANDARDS

2.6.1 PEDESTRIAN THROUGHWAY MATERIALS

The Pedestrian Throughway, defined in Standard 2.3.1, shall be an accessible path of travel that is unobstructed by non-ADA-compliant paving or material treatments.

2.6.1 MATERIAL QUALITY AND CONSISTENCY

Paving and built-in site elements shall be comprised of high-quality materials and finishes. All materials shall be durable to withstand high-intensity use in the Bay environment. All material textures in designated clear path of travel and accessible use areas shall be ADA-compliant.

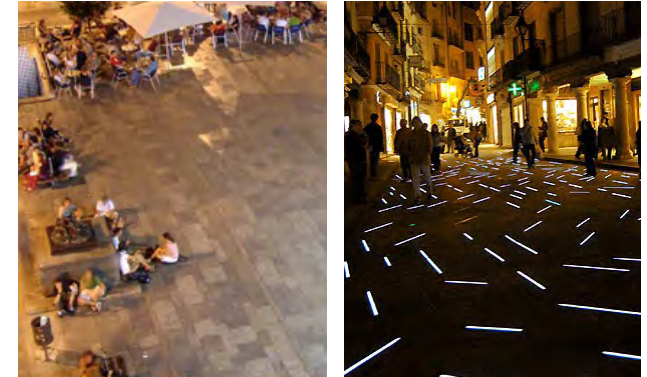
2.6.2 SURFACING AT TREE PLANTING

A) Trees in Paving

Where trees are planted in paving, surfacing material shall allow air and water to reach tree roots. Tree grates or stabilized crushed stone are permitted in the Streetlife Zone and in Open Spaces outside of dedicated Pedestrian Throughways per 2.3.1.

B) Trees in Planting

Where trees are planted in planting areas on streets, finish grade shall be within 2" of adjacent pedestrian paving.



Varied paving textures and integral lighting create nighttime identity and an intimate character

(L) © LAMENTABLE.ORG / (R) LOS-80S-Y-ALGO-MAS.BLOGSPOT.COM



Light-hued paving reduces heat island effect. SOURCE: CMG

GUIDELINES

2.6.4 PAVING ZONES

Paving should be a key component that defines the character, connectivity, and extent of Mission Rock's varied public realm. The following Paving Zones suggest relationships and common paving identities among different streets and open spaces; also see Figure 2.6.1.

- **Street Room + Special Paving:**
Contrasting, high-quality paving that distinguishes street rooms and kiosk areas as places to linger; refer to Sections 3.2, 3.3, and 4.2 and to Glossary.
- **Mission Rock Square + Channel St Paving:**
Paving material with rich texture and urban character; may have integral lighting
- **Open Spaces - Waterfront Paving:**
Paving material that is commonly recognizable on waterfronts; should be comfortable to walk and run on; must be durable to withstand coastal conditions
- **Pedestrian-Scale Paving:**
Detailed paving, consistent across the entire right-of-way, that is a maximum of 12 inches in at least one horizontal dimension and visually interesting at the speed of walking.
- **Working Waterfront Paving:**
Utilitarian paving, consistent across the entire right-of-way, with a large module or pattern that is visually interesting at the speed of walking; must be durable for truck traffic.
- **Sidewalks:**
Cast-in-place concrete with pedestrian unit pavers at Streetlife Zones.

2.6.5 PAVING: URBAN HEAT ISLAND EFFECT

Where possible, reduce urban heat island effect by using pavement with a Solar Reflectance Index (SRI) of 29 or higher in areas that are predominantly un-shaded by tree canopy or buildings.

2.6.6 PAVING: CHARACTER AND VARIATION

Paving contrast may be introduced through color or geometric variation, textural variation within a single paving module, integral lights, or juxtaposition of scale or material.



Paving variation within a single paving module provides color and texture contrast. SOURCE: CMG

LEGEND: CONCEPTUAL PAVING ZONES

- Street Room + Special Paving
- Open Space: Mission Rock Square
- Open Space: Waterfront Paving
- Pedestrian-Scale Paving
- Working Waterfront Paving
- Sidewalks
- Right-of-Way/Boundary

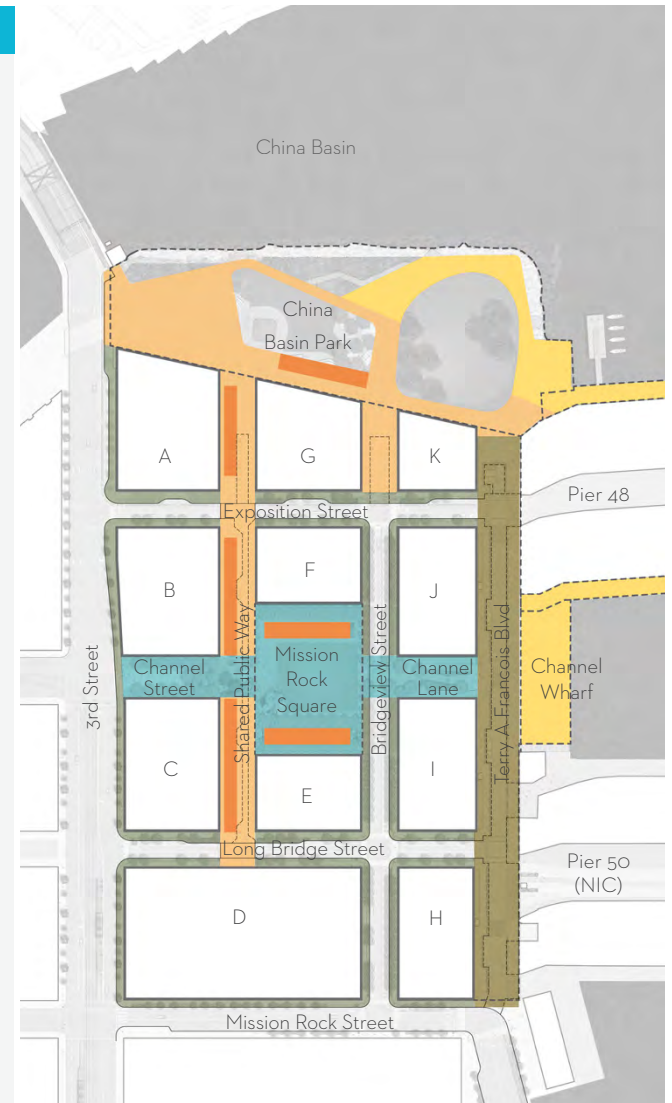


FIGURE 2.6.1 Conceptual Paving Zones diagram illustrating the relationships among paving zones defined in Guideline 2.6.4. Paving details and conformance with City standards are defined in the Infrastructure Plan.

2.7 URBAN FOREST

Planting at Mission Rock will function ecologically to help achieve the project's goals for sustainability and contribute to a healthy environment. Composition and distribution of a diverse, adapted urban forest, stormwater gardens, and planted areas will create a resilient ecological framework to shape varied sensory experiences across the site and provide waterfront and urban habitat.

Trees will be used to block and mitigate wind, provide shade and reduce urban heat island effect, and to provide shelter for birds. Native or climate appropriate grasses, shrubs, and ground cover will provide as much species diversity as feasible in Mission Rock's planting areas, as well as function in stormwater treatment gardens.

Upon construction, maintenance and management of tree and understory planting, soils, and irrigation will be essential to the successful function of the site's urban ecological systems.

STANDARDS

2.7.1 URBAN FOREST COMPOSITION

Suggested species diversity in Figure 2.7.1 is a baseline; species selected for specific areas shall conform to this general distribution and diversity for the Mission Rock urban forest.

2.7.2 TREE SPECIES AND ALTERNATIVE SPECIES SELECTION

Tree species shall be considered for their aesthetic and ecological benefits. Tree species suggested for each component of the Public Realm network have been selected in consultation with a certified arborist. If alternative species are chosen, they shall conform to the aesthetic and performance requirements outlined in Figure 2.7.2 and to the irrigation requirements described in Section 2.8.

2.7.3 WIND MITIGATION

Tree selection and maintenance will be vital to maintaining a comfortable public realm experience in both streets and open spaces. Trees shall be sited with consideration given to wind conditions at the neighborhood and local scale. Mandatory wind tolerances have been noted under the design criteria for tree species selection; see Figure 2.7.2.

A) Wind Mitigation in Open Spaces

Trees in all open spaces shall be wind-tolerant and shall function as a windbreak for significant program areas in each open space. See Chapter 3 for Open Space design controls.

2.7.4 TREE SPECIES INSTALLATION AND ESTABLISHMENT

A) Soil Volume

Trees shall receive adequate soil volume to sustain long-term health; see Guideline 2.7.7 for volume ranges.

B) Minimum Installation Size

Large and medium-size trees shall be installed at a minimum size of 48"-box; small trees shall be installed at a minimum size of 36" box. Refer to Figure 2.7.2 for tree size and corresponding minimum size at installation.

C) Clear Trunk Requirements

To meet functional requirements in both streets and open spaces, clear trunk requirements shall be achieved within five years of installation. Branches shall not interfere with pedestrian thoroughway (minimum 84" clearance measured from ground surface) or mandated fire truck vertical clearance of 13'-6" minimum (measured from roadway surface) at any time.

D) Establishment Period

Trees shall receive adequate irrigation and monitoring during a three-year establishment period. See Section 2.8 for irrigation controls.

2.7.5 OCII MISSION BAY STANDARD TREE SPECIES

Tree species on 3rd Street and Mission Rock Street shall adhere to OCII Mission Bay streetscape standards.

GUIDELINES

2.7.6 TREE MAINTENANCE AND MANAGEMENT

A) Pruning

Trees in the Public Realm should be pruned yearly to sustain long-term health and to maintain desired growth habit.

B) Water Application

Determine appropriate water application after establishment (three years) in consultation with a certified arborist's comprehensive review of tree health on the site. Monitor water application per Standard 2.8.3.

2.7.7 RECOMMENDED SOIL VOLUME FOR TREES

Trees in the public realm should have adequate soil volume and infiltration, particularly trees planted in paving. Large tree species require 1500-2000 cubic feet of soil volume per tree; Medium tree species require 1000-1500 cubic feet of soil per tree; Small tree species require 800-1000 cubic feet of soil per tree. Tree species sizes are noted in Figure 2.7.2.










A) Minimum clearance at On-Structure Conditions

Where trees are planted in on-structure conditions, at least four feet of soil depth, and a continuous 6-12" depth gravel drainage layer, should be maintained.

2.7.8 CHANNEL LANE AND CHANNEL STREET TREE SELECTION

Tree species selected for Channel Lane and Channel Street should be selected from any of the following spaces' species criteria and suggested palettes: Mission Rock Square, Neighborhood Street: Upright, or Neighborhood Street: Arching, or alternative species per 2.7.2. Selected species may differ for Channel Lane and Channel Street. See Figure 2.7.2.

LEGEND: URBAN FOREST DIVERSITY

	China Basin Park
	China Basin Park Promenade Tree
	Mission Rock Square
	Shared Public Way
	Neighborhood Street: Arching
	Neighborhood Street: Upright
	Channel Street + Channel Lane
	3rd Street & Mission Rock Street
	Right-of-Way/Boundary

(See OCII Mission Bay standards)

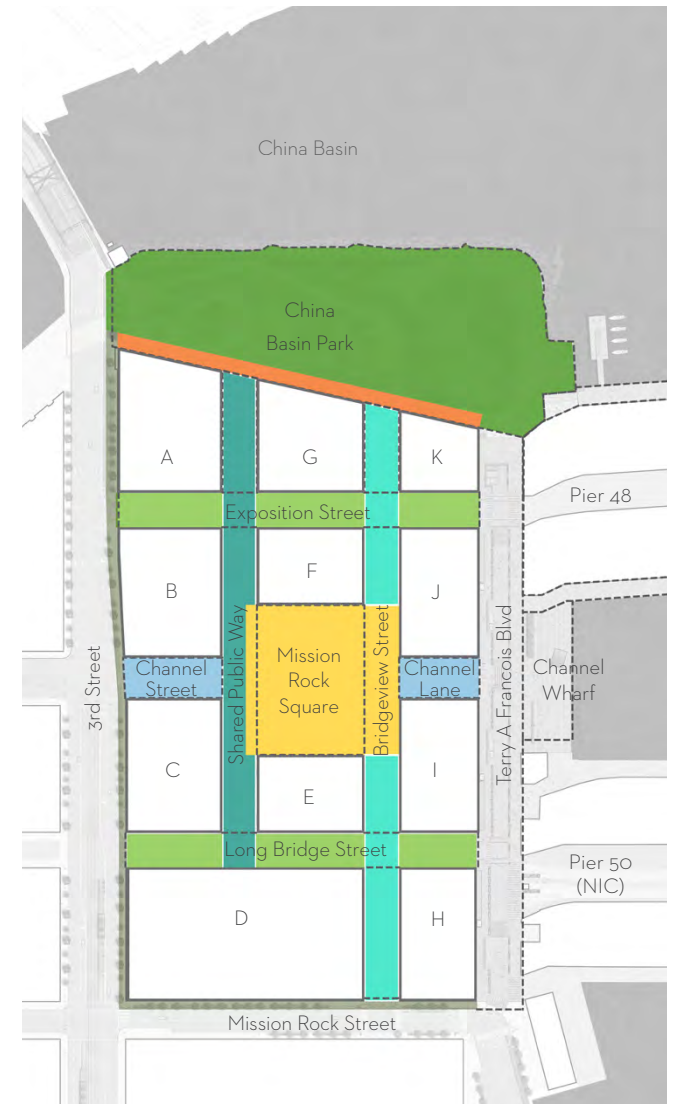
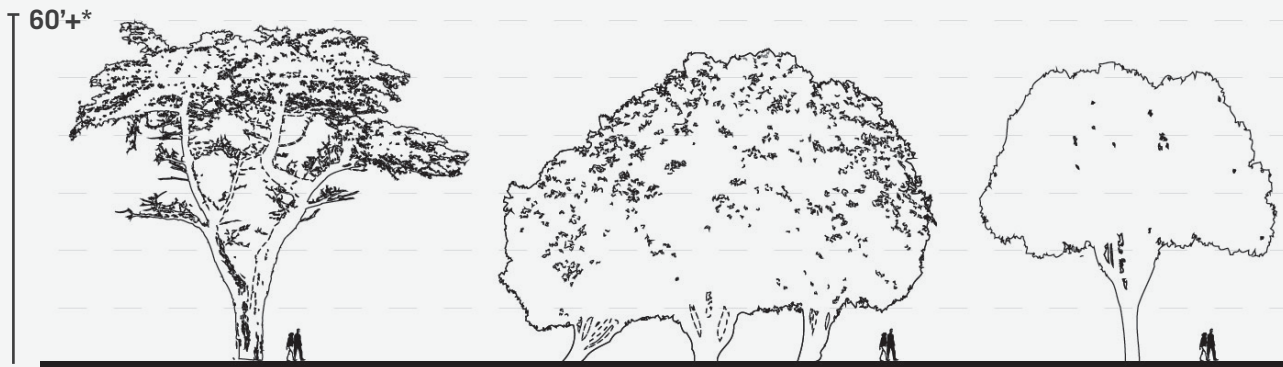


FIGURE 2.7.1 Urban Forest Diversity Diagram illustrating the general distribution of tree species across the public realm. See Figure 2.7.2 for performance & aesthetic requirements and suggested palettes.

GUIDELINES

CHINA BASIN PARK



- › Large-canopy evergreen tree (to 60'+ at maturity)
- › Minimum 48"-box at installation
- › Iconic character; picturesque, sculptural form
- › Windbreak and specimen tree
- › Tolerances: High wind tolerance; tolerant of coastal environment; healthy in paving and/or lawn (select as appropriate for design concept); tolerant of high pedestrian traffic
- › Low water use
- › Minimal root disruption when planted in paving
- › **Recommended species:**
Monterey Cypress [*Cupressus macrocarpa*];
New Zealand Christmas Tree [*Metrosiderous excelsa*];
Red-Flowering Gum [*Corymbia ficifolia*]

*Expected size at maturity.

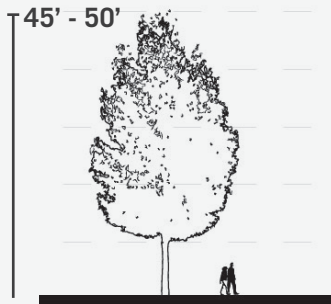
CHINA BASIN PARK: PARK PROMENADE



- › Small to Medium Evergreen or Deciduous tree (30-35' tall at maturity)
- › Minimum 36"-box at installation
- › Scaled to intimate walking/seating experience, with notable ornamental leaf or flower; showy bark
- › Native or naturalized species
- › Tolerances: high wind tolerance; tolerant of deep shade; tolerant of coastal environment; healthy in paving
- › Low water use
- › **Recommended species:**
Red Oak cultivar [*Quercus rubra* 'Crimson Spire'];
Melaleuca [*Melaleuca quinquenervia*]

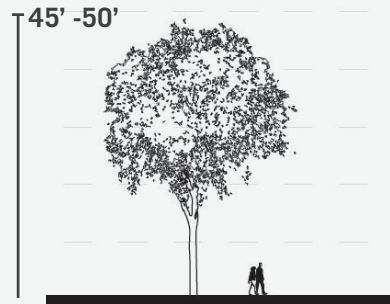
FIGURE 2.7.2 Urban Forest Guidelines

MISSION ROCK SQUARE



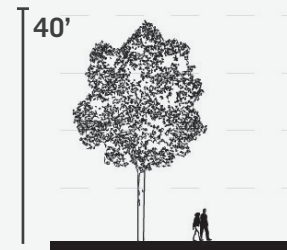
- ▶ Large Deciduous or Evergreen tree (45-50' tall at maturity)
- ▶ Minimum 48"-box at installation
- ▶ Upright form with winter and summer interest; Iconic seasonal ornamental character in leaf or flower
- ▶ Delicate leaf; medium-fine textured canopy
- ▶ As uniform as possible; close spacing
- ▶ Tolerances: medium wind tolerance; tolerant of part-shade conditions; healthy in paving, with minimal root disruption at plaza paving
- ▶ Low water use
- ▶ **Recommended species:** Freeman Maple [*Acer x. freemanii*]; Ginkgo [*Ginkgo biloba sterile cultivar*]

SHARED PUBLIC WAY



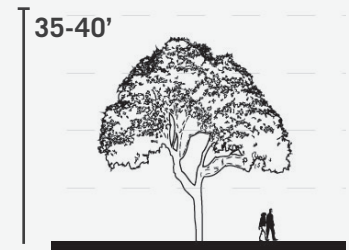
- ▶ Large, Semi-Deciduous or Evergreen tree; Deciduous acceptable if other requirements are satisfied (40-50' tall at maturity)
- ▶ Minimum 48"-box at installation
- ▶ Arching form, but more vertical than spreading; fine-textured canopy; textured, showy bark
- ▶ Close spacing
- ▶ Tolerances: medium wind tolerance; tolerant of part-shade conditions; healthy in paving, with minimal root disruption of paving
- ▶ Low water use
- ▶ **Recommended species:** Chinese Elm [*Ulmus parvifolia*]; Strawberry Tree [*Arbutus 'Marina'*]; Southern Live Oak [*Quercus virginiana*]

NEIGHBORHOOD STREET: UPRIGHT



- ▶ Medium to large Evergreen or Deciduous tree (to 40' tall at maturity)
- ▶ Minimum 48"-box at installation
- ▶ Upright/Narrow Form
- ▶ Tolerances: high wind tolerance; tolerant of part- to full-shade; healthy in paving, with minimal root disruption at sidewalk
- ▶ Low water use
- ▶ **Recommended species:** Brisbane Box [*Lophostemon confertus*], Red Oak cultivar [*Quercus rubra 'Crimson Spire'*]

NEIGHBORHOOD STREET: ARCHING



- ▶ Medium to large Evergreen tree (35-40' tall at maturity)
- ▶ Minimum 48"-box at installation
- ▶ Arching, graceful form, with special ornamental character if possible
- ▶ Tolerances: medium wind tolerance; tolerant of part- to full-shade; healthy in paving, with minimal root disruption at sidewalk
- ▶ Low water use
- ▶ **Recommended species:** Victorian Box [*Pittosporum undulatum*], California Pepper [*Schinus molle*], Cork Oak [*Quercus suber*]

2.8 SUSTAINABLE WATER SYSTEMS

Mission Rock’s landscapes and building systems will work together and be designed to conserve, re-use, and filter water.

Site hydrology will be intertwined with daily life at Mission Rock in a unique and systematic way, with stormwater treatment gardens that are a part of the public realm experience in every streetscape and open space, building-integrated recycled water systems, and advanced greywater reuse strategies.

Irrigation is an essential element of plant health and should be considered as part of the site hydrology strategy.



An example of a Stormwater Treatment Garden with integral seating. SOURCE: CMG

STANDARDS

2.8.1 STORMWATER MANAGEMENT

A) Requirements

The Public Realm at Mission Rock shall include Stormwater Quality Treatment for impervious areas within the Public ROW and Open Space Networks. Refer to Infrastructure Plan for technical requirements and applicable regulatory standards.

B) Conceptual Treatment Strategy

Stormwater treatment shall be handled through a combination of treatment within specific streets, and in large feature stormwater gardens in China Basin Park, along the Shared Public Way, and in Mission Rock Square to which runoff is conveyed by gravity or force main for treatment. See specific spaces in Chapters 3-4 for design controls for stormwater treatment gardens.

2.8.2 SITE IRRIGATION

A) Irrigation During Plant Establishment Period

All plant species shall receive establishment irrigation for a minimum of two years. Tree species shall receive establishment irrigation for three years or as deemed necessary for long-term health by a certified arborist. Refer to Mission Rock Sustainability Strategy for guidance about water usage.

B) Plant Species Hydrozones

Planting design shall optimize irrigation efficacy by grouping plants with similar water needs into efficient irrigation hydrozones. Permanent irrigation infrastructure shall be provided for all trees, understory planting, stormwater treatment gardens, and lawn areas.

C) Irrigation Efficiency

Use efficient irrigation systems; utilize drip irrigation except in lawn areas, where spray irrigation is acceptable. Refer to Local Model Water Efficient Landscape Ordinance for regulatory guidance.

D) Alternative Irrigation Water Sources

Recycled water shall be used for irrigation to minimize potable water use. This use shall conform to applicable public health standards; edible plants and play areas shall not be irrigated with non-potable water. Minimum water quality thresholds are to be coordinated with the on-site provider for the centralized water treatment system at each phase of development. See Sustainability Strategy for information on the district's recycled water resources

E) Monitoring

Install irrigation flow meters for all irrigation hydrozones to record and monitor water use across the site.

2.8.3 SITE TREE WATER RECORDS AND AUDITS

Watering records for all site trees shall be kept, and a yearly water audit performed to track the amount of water applied.

2.8.4 STORMWATER TREATMENT AREA REQUIREMENTS

Mission Rock's stormwater treatment strategy combines localized treatment within street right-of-ways and large feature stormwater gardens.





A) Localized Treatment

If treatment of stormwater is not possible as indicated in Figure 2.8.1, required treatment volume for each street and open space shall still be accommodated and shall be located as close to the source as possible.

B) Minimum Treatment Footprint Area and Performance Requirements

Minimum stormwater treatment footprint areas noted in the Infrastructure Plan shall be provided for treatment of impervious surfaces in each street and open space, as well as watershed-scale treatment in large feature gardens in China Basin Park and Mission Rock Square. Stormwater facilities shall conform to applicable performance and area requirements per the Infrastructure Plan.

LEGEND: SITE STORMWATER TREATMENT CONCEPT

-  Localized Treatment within ROW
-  Centralized Treatment: China Basin Park
-  Centralized Treatment: Mission Rock Square
-  Large Feature Stormwater Gardens

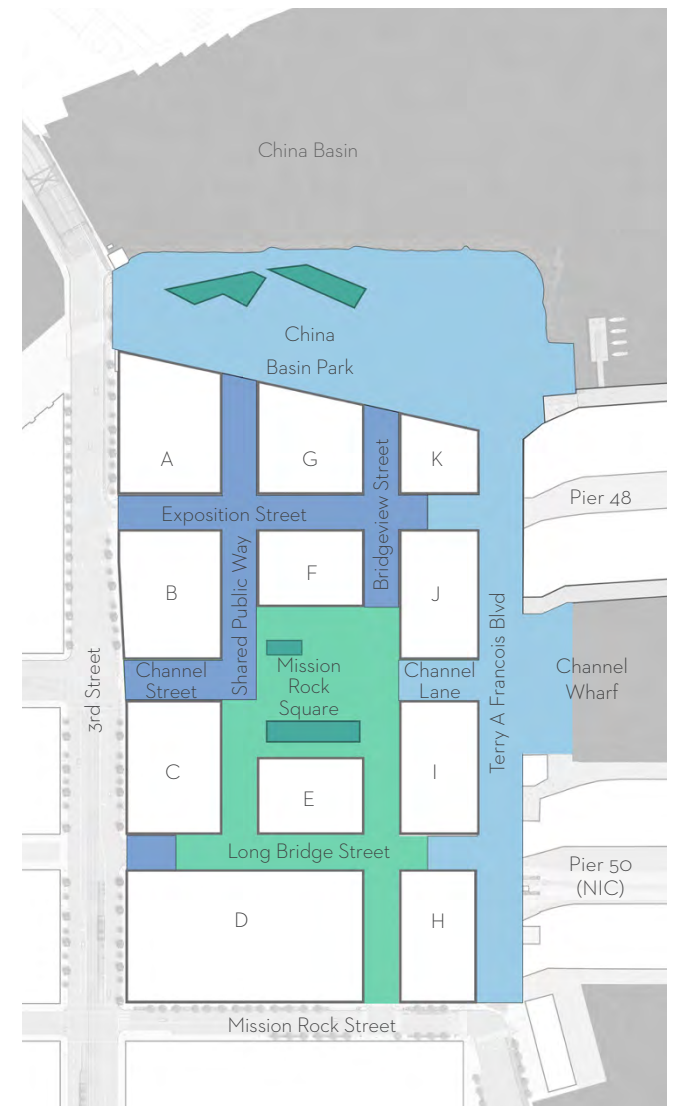


FIGURE 2.8.1 Site Stormwater Treatment Concept Diagram illustrating watersheds, localized treatment areas, and feature stormwater treatment gardens in the public realm. Refer to Infrastructure Plan for technical requirements.

2.9 LIGHTING + NIGHTTIME IDENTITY

Read in conjunction with Section 7.6: Building Lighting.

Lighting will be an important component of nighttime identity, experience, and safety at Mission Rock. Lighting of special, unique character should reinforce key pedestrian routes in open spaces and along the Shared Public Way and Channel Lane and Channel Street. Where possible, a variety of lighting types should work together to create a warm, inviting, and safe nighttime environment.

Lighting across the site will be scaled to the pedestrian and bicycle experience. Lighting strategies will also take care to protect site residents by minimizing light pollution. Lighting along the waterfront will operate on a gradient of intensity, from a well-lit Promenade at the buildings and piers to a more uniformly diffused, minimal character along the water that will not disrupt the ecology of the Bay edge.



Feature overhead lighting activates a small plaza. SOURCE: CMG

STANDARDS

2.9.1 LIGHT POLLUTION, TRESPASS, AND GLARE

Lighting strategies shall minimize glare, light trespass outside the development, and light pollution in areas adjacent to residential buildings and along the waterfront. Also see Standard 7.6.5: Minimizing Light Trespass. Reference applicable regulatory standards.

2.9.2 ENERGY-EFFICIENT LIGHTING FIXTURES

Lighting fixtures and bulbs shall meet or exceed applicable energy-efficiency standards; reference applicable regulatory standards and refer to the Sustainability Strategy.

2.9.3 VISUAL ACUITY AND SAFETY

Lighting shall be designed to allow facial recognition along paths of travel. Lighting shall not create glare or “hot spots” that would inhibit visual acuity, and shall facilitate sight lines and perception of safety across the public realm.

2.9.4 LIGHTING INTENTION

Lighting uniformity ranges in open spaces shall allow for variation in light levels to create hierarchy and a range of experiences. Lighting shall reinforce key pedestrian circulation routes and connections. See Figures 2.9.1-2.9.2.

2.9.5 PEDESTRIAN-SCALE LIGHTING

Lighting shall be scaled to the pedestrian and bicycle experience across the public realm; glare shall not be created at eye level. Prevent unnecessary vertical transmittance of light.

GUIDELINES

2.9.6 VARIETY OF LIGHT TYPES

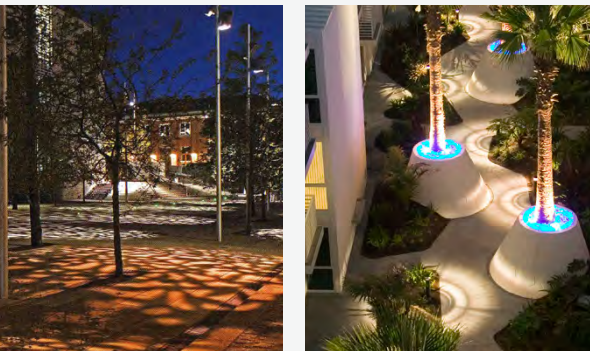
Lighting strategies should incorporate varied fixture types and ambient light from buildings, particularly in high-active retail zones where retail spaces will provide ample ambient light for pedestrian paths. Consider a variety of lighting types, scaled to reinforce active streetlife and open space experiences.

2.9.7 PROJECTED LIGHT

Projected light through a tree canopy (“moonlighting”) and through special filters on light fixtures may be used to highlight special places or experiences.

2.9.8 SUGGESTED LIGHT ZONES, LEVELS, AND UNIFORMITY RATIOS

The following light levels and uniformity levels for the public realm, described in Figure 2.9.1, are grouped in six zones that suggest relationships of different light levels and lighting identities among places and uses; also see Figure 2.9.2:



Two examples of utilizing projected and feature lighting to activate spaces at night. (R) SOURCE: CMG

PROJECT LIGHTING ZONE	PEDESTRIAN LIGHT LEVEL (FOOTCANDLES)*	ROADWAY MINIMUM MAINTAINED AVERAGE LIGHT LEVEL (FC)*	UNIFORMITY RATIO, AVERAGE/ MINIMUM*
<i>Zone 1: Waterfront Open Space. Light levels should be brightest at the buildings, and less bright at the water's edge to minimize impact on that sensitive ecosystem.</i>			
China Basin Park: Non-Waterfront Paths	1 fc average	n/a	10:1
China Basin Park: Planting/Lawn Areas	0.5-0.8 fc average	n/a	40:1
China Basin Park & Channel Wharf: Plaza/Wharf Areas	0.8-1 fc average	n/a	20:1
China Basin Park & Pier 48 Apron: Waterfront Paths	0.5-0.8 fc average	n/a	5:1
<i>Zone 2: High Retail Zone. Opportunity for feature lighting; variety of light types encouraged; contributing ambient light from ground-floor uses.</i>			
Mission Rock Square	0.5-0.8 fc average	n/a	40:1
Shared Public Way	1 fc average	0.4 to 1 fc	4 to 6
<i>Zone 3: Working Waterfront. Iconic lighting with highly visible intersections.</i>			
Terry A Francois Boulevard	1 fc average	0.4 to 1.7 fc 1.8 fc at intersections	3 to 6
<i>Zone 4: Neighborhood Streets. Some contributing light from ground-floor uses, especially on Bridgeview Street; intersections should be highly visible.</i>			
Bridgeview and Exposition Streets	0.5-0.8 fc average	0.4 to 1.2 fc intersections: 1.4-1.8 fc	4 to 6
Long Bridge Street	1 fc average	0.4 to 1.7 fc intersections: 1.4-1.8 fc	3 to 6
<i>Zone 5: Gateways. Opportunity for overhead lighting.</i>			
Channel Street	1-1.2 fc average	n/a	10:1
Channel Lane	1-1.2 fc average	n/a	10:1
<i>Zone 6: Mission Bay District Streets: 3rd & Mission Rock Streets. Refer to OCII Mission Bay controls.</i>			

FIGURE 2.9.1 Lighting Zones Chart

*Source: Better Streets Plan
[www.sfbetterstreets.org/
 find-project-types/streetscape
 -elements/street-lighting/](http://www.sfbetterstreets.org/find-project-types/streetscape-elements/street-lighting/)

LEGEND: LIGHTING ZONES DIAGRAM

Zone 1: Waterfront

Zone 2: High Retail Zone

Zone 3: Working Waterfront

----- Right-of-Way/Boundary

Zone 4: Neighborhood Streets

Zone 5: Gateways

Zone 6: District Streets

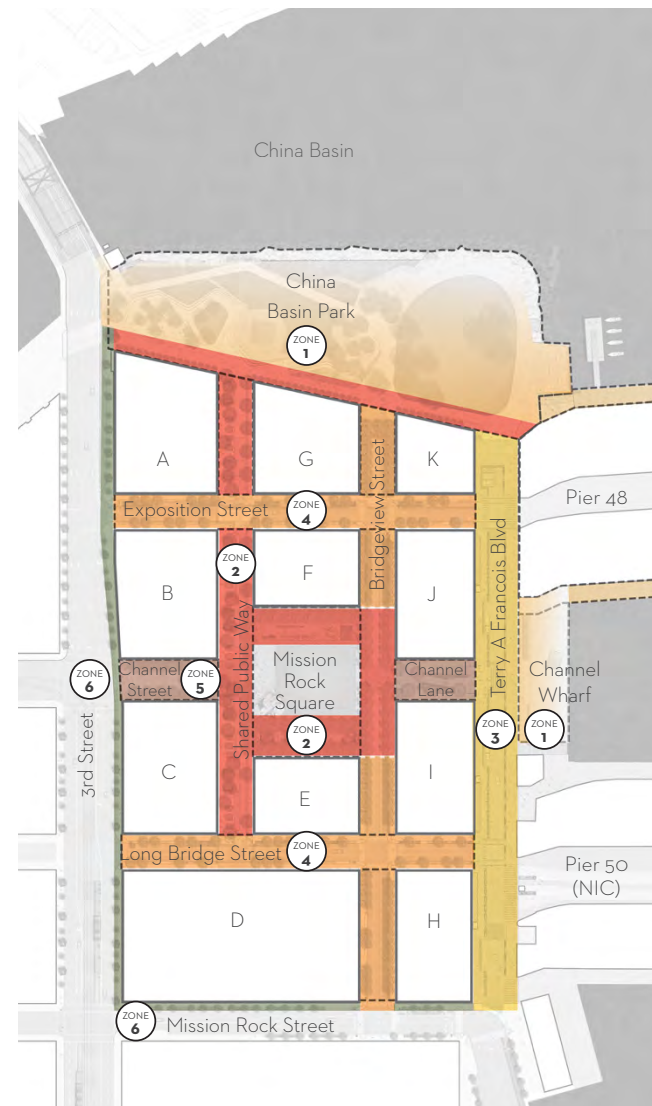


FIGURE 2.9.2 Lighting Zones Diagram illustrating the distribution of lighting zones described in Figure 2.9.1. These zones suggest relationships of different light levels and lighting identities among places and uses in the public realm.

2.10 WAYFINDING AND SIGNAGE

Wayfinding and signage at Mission Rock will reinforce the varied and special character of Mission Rock's public realm, while connecting to broader initiatives such as the Blue Greenway. All wayfinding will facilitate intuitive navigation to key site anchors and safe circulation in shared zones. Signage will be secondary to the design cues within unified open spaces or streetscapes.

Wayfinding and signage will have multiple components related to the variety of uses in the public realm. Pedestrian, bicycle-oriented, and vehicular wayfinding and signage will be integrated, especially along multi-modal routes such as the Shared Public Way, and Multi-Use Trail areas in China Basin Park and Terry A Francois Boulevard. Along the Bay Trail/Blue Greenway, China Basin Park and Terry A Francois Boulevard will integrate Port signage standards, while signage and wayfinding for the interior of the site could have a unique character.

Wayfinding elements may be considered an opportunity for Public Art (see Section 2.11). A future signage master plan will further develop these controls and concepts.

STANDARDS

2.10.1 WAYFINDING COMPONENTS

Wayfinding strategies shall include a combination of design cues, signage, maps, and public art. Design cues are also incorporated into the Open Spaces and Streetscape controls described in this document.

2.10.2 PORT SIGNAGE STANDARDS: BLUE GREENWAY

Proposed wayfinding along Bay Trail / Blue Greenway multi-use trail connections shall integrate Port standards.

2.10.3 ICONIC CHARACTER

Signage shall be simple, clear, and evocative of Mission Rock's character.

2.10.4 MAJOR SITE ENTRANCES

Major site entrances at Lefty O'Doul Bridge, Channel Street, and Mission Rock Street/Terry A Francois Boulevard shall have unique signs that provide basic wayfinding to key site anchors.



This destination wayfinding/signage feature marks a major site entrance. SOURCE: CMG

2.10.5 SHARED USE ZONE SIGNAGE: MULTI-USE TRAILS

In addition to fulfilling Standard 2.10.2, Multi-Use Trails in China Basin Park and Terry A Francois Boulevard shall include signage indicating this is a shared-use area and shall be readable at pedestrian and bicycle eye level and speed.

2.10.6 SHARED USE ZONE SIGNAGE: SHARED STREETS

The Shared Public Way and Terry A Francois Boulevard shall have signage indicating that shared zones are multi-modal pedestrian, vehicular, and bicycle circulation areas where the pedestrian has the right-of-way.



Two examples of signage for Multi-Use Trails. SOURCE: (L-R); DANNYSULLIVAN / FLICKR; CMG

GUIDELINES

2.10.7 PLACE-BASED WAYFINDING AND GRAPHICS

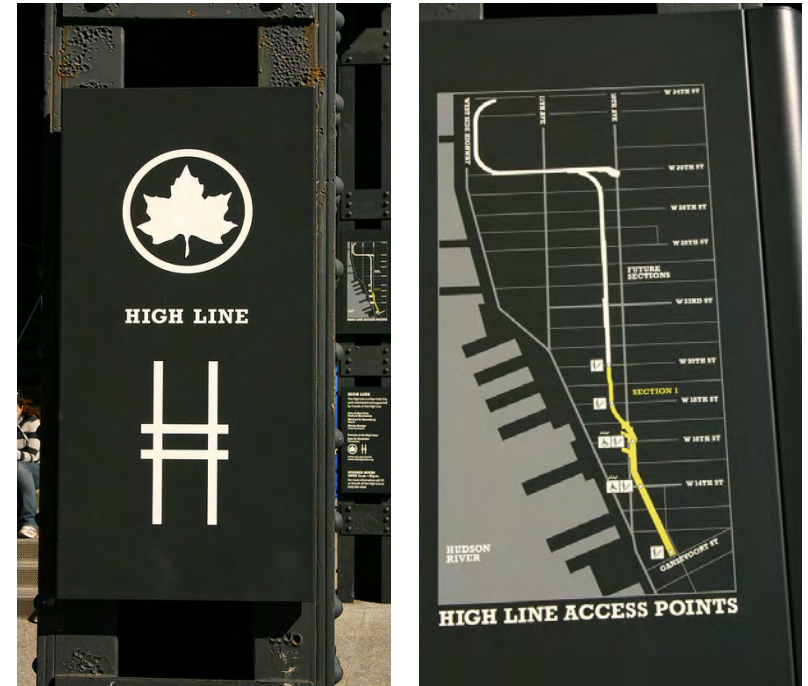
Maps and signs should graphically represent the unique character of Mission Rock's open spaces and identify key landscape and public art elements in the public realm.

2.10.8 GRAPHIC CONSISTENCY

Signage and wayfinding at Mission Rock that is not required to adhere to City or Port standards should be comprehensively designed for the site and should include a range of signage types that correlate graphically.

2.10.9 MATERIAL PALETTE

Signage and wayfinding at Mission Rock should utilize a durable, consistent material and color palette.



SOURCE: M_KE / FLICKR



An example of an iconic family of signage and place-based wayfinding types ,at the High Line. SOURCE: MARCIN WICHARY / FLICKR

2.11 PUBLIC ART

The Public Art program at Mission Rock will identify key locations for interactive art and recreational amenities that act as interpretive elements for Mission Rock’s unique history and pioneering sustainability goals.

Public art of scale can contribute significantly to the urban design of Mission Rock when placed at key locations, such as the terminus of a view corridor, to draw visitors through the public realm to a point of destination. Public art can also contribute to wayfinding by acting as a landmark and memorable feature within the public realm network.

STANDARDS

2.11.1 PUBLIC ART SITES

Permanent Public Art pieces shall be located in China Basin Park, Mission Rock Square, and Channel Wharf. Locations within these open spaces are suggested in Figure 2.11.1. Temporary public art may be located in any open space or in Streetlife Zones defined in Chapter 4, and shall comply with all controls for those spaces.



Permanent Art: Rock Outcropping at Sugar Beach in Toronto is an example of public art with a programmatic function, as an amphitheater and vantage point. SOURCE: CHRISTYLERTO / FLICKR

GUIDELINES

2.11.3 PUBLIC ART INTERPRETIVE ELEMENTS

Public art installations may relate to, describe, or otherwise engage the layered history of the site. Public art installations may also engage or make visible the unique climatic conditions and water flows of the site.

2.11.4 PUBLIC ART: SUGGESTED SITES

Key site locations for permanent public art installations are suggested in Figure 2.11.1. Temporary installations may be located in Streetlife Zones, especially along the Shared Public Way.



Permanent Art: Cloud Gate [“The Bean”] is an iconic sculpture and significant attractor for Millennium Park in Chicago. SOURCE: BTAROLI / FLICKR



"Floating Umbrellas" is a temporary overhead installation that activates an alley in Agueda, Portugal. SOURCE: IFINDKARMA / FLICKR



Temporary Art: Ecstasy in Hayes Valley, SF and The Gates in Central Park, NYC are examples of temporary public art of scale. SOURCE: PHOENIXLILY / FLICKR



SOURCE: ROB BOUDON / FLICKR

LEGEND: SUGGESTED PUBLIC ART SITES



Permanent Public Art:

- Mission Rock Square
- Channel Wharf
- Channel Street
- Channel Lane
- China Basin Park at 3rd Street
- China Basin Park Waterfront



Temporary Public Art:

- Streetlife Zones

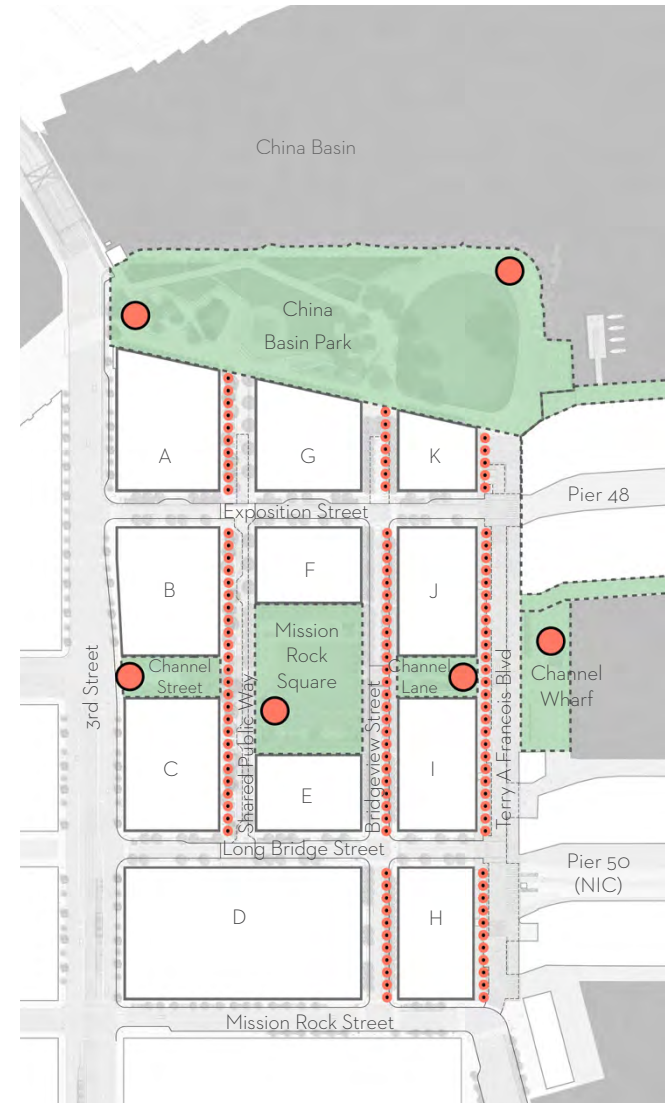


FIGURE 2.11.1 Suggested Public Art Sites Diagram illustrating potential locations of permanent and temporary public art within open spaces and streetlife zones in the public realm. See Chapters 3-4 for related circulation and program controls.



Mission Rock's open spaces will be integrated with larger open space networks that operate at the scale of the neighborhood, district, city, and regional San Francisco Bay Area. At the largest scale, Mission Rock will contribute to the Bay Trail System, a waterfront network of trails and access ways with the goal of reconnecting communities with the Bay.

03

OPEN SPACE

At the district scale, open spaces will provide public space and recreational amenities for the Mission Bay neighborhood. At the local neighborhood scale, Mission Rock’s public open spaces will provide a comprehensive variety of recreational opportunities in parks, plazas, and promenades for the community.

The arrangement of these open spaces will also establish destinations within the neighborhood that anchor the public realm. These destinations will maximize the variety of landscape-based experiences and create landmarks within Mission Rock’s pedestrian network.

Mission Rock will include waterfront open spaces - China Basin Park, the Pier 48 Apron, and Channel Wharf - and urban open spaces - Mission Rock Square, Channel Street, and Channel Lane. These parks and plazas will be designed to take advantage of views, sunshine, and adjacent active ground-floor uses.

Chapter 3 controls prescribe key features, values, and relationships that will define the qualities and functions of each open space that are essential to creating a unique, vibrant, urban open space network.

3.1	Open Space Network	44
3.2	China Basin Park	46
3.3	Mission Rock Square	58
3.4	Channel Lane	66
3.5	Channel Wharf	68
3.6	Pier 48 Apron	70
3.7	Channel Street	72
3.8	Kiosks + Small Park Structures	74

RELATED CHAPTERS: Each open space in this chapter must satisfy its specific requirements as well as the Public Realm requirements described in Chapter 2: Public Realm Network. This chapter should be read with Chapter 5: Ground Floor, to understand the intended integration of the public realm and vertical development.

3.1 OPEN SPACE NETWORK

The open space network will be a fundamental part of the urban design and definition of Mission Rock. Six open spaces, located along the waterfront and at the core of Mission Rock, will provide a comprehensive variety of recreational opportunities.

These open spaces will include a waterfront park, a working wharf, a publicly accessible pier and apron; a neighborhood square, a waterfront gateway, and a neighborhood gateway. These diverse places will be carefully integrated with the ground-floor and massing strategies of the blocks and buildings to create delightful, welcoming, active, and unique places.

Open Space at Mission Rock will be consistent with Public Trust Uses, and will conform to State Lands Commission and BCDC requirements where applicable. All open spaces will provide active, unique program to attract visitors and create a lively network of well-loved public spaces for San Francisco's waterfront.

STANDARDS

3.1.1 DEDICATED OPEN SPACE

Only certain uses are permitted as-of-right in the dedicated Open Spaces noted in Figure 3.1.1. Public restrooms, small park structures, retail and food kiosks, and open-air structures in support of public recreation shall be permitted in accordance with Section 3.8: Kiosks and Small Park Structures. Public Art shall be permitted in accordance with Section 2.11: Public Art. No other permanent structures shall be permitted in areas designated as Open Space.

3.1.2 COMFORT AND WIND MITIGATION

Open space designs shall employ trees to block wind and shall consider wind conditions relative to pedestrian and recreational program. Appropriate tree species shall be used at densities that maximize comfort while maintaining important visual connections among uses as noted for specific spaces. See Section 2.7 for urban forest performance criteria.

3.1.3 CLIMATE-RESPONSIVE DESIGN

Open space designs shall be responsive to site and Mission Bay microclimates, particularly wind conditions. This is especially important for the selection of plant species, paving, and furnishing materials.

3.1.4 CLASS II BICYCLE PARKING

Class II bicycle parking shall be provided for open spaces. Bicycle parking shall be concentrated at or proximate to park entries, with priority given to key bicycle circulation routes noted in Section 2.4. Refer to Standard 4.1.6 for locations.

GUIDELINES

3.1.5 ECOLOGY AND HABITAT: LEARNING OPPORTUNITIES

Open Space Designs should maximize opportunities for visible ecological systems that are both beautiful and integral to Mission Rock's ecology.

A) Species Diversity

Selected tree and understory species should have demonstrated habitat value and should be appropriate for their specific open space environment, with consideration given to creating successful plant communities within each open space and around the site.

B) Management Plan

Create a long-term management and maintenance plan, with plant palettes and associated maintenance strategies, that addresses plant health, habitat creation, and climate change resiliency.

C) Learning Opportunities

Find opportunities for incorporating ecological systems with programmatic uses. For example, integrate stormwater treatment gardens with active programmatic uses; incorporate ecological interpretation into open space designs.

OPEN SPACES: KEY PLAN AND CHAPTER LOCATIONS

Section 3.2 China Basin Park

Section 3.3 Mission Rock Square

Section 3.4 Channel Lane

Section 3.5 Channel Wharf

Section 3.6 Pier 48 Apron

Section 3.7 Channel Street

Additional Related Sections :

Section 3.8 Kiosks + Small Park Structures

Section 4.2 Paseo: Shared Public Way

Section 4.3 Paseo: Terry Francois Boulevard

Section 4.4 Paseo: Bridgeview Street



FIGURE 3.1.1 Location Map of Open Spaces at Mission Rock and their chapter locations in this DC document.

3.2 CHINA BASIN PARK

Read in conjunction with Section 3.6: Pier 48 Apron, Section 4.3: Terry A Francois Boulevard, Section 5.1: Active Edges, and Section 5.7: Parkfront Zone. China Basin Park must also satisfy the requirements described in Chapter 2: Public Realm.

China Basin Park will be a vibrant, active waterfront park, and a year-round amenity for the greater San Francisco and regional San Francisco Bay Area community. A waterfront promenade will link a diverse range of activities, creating a dynamic, unique place that will establish a paradigm for resilient 21st-century waterfront parks.

This park will be coupled with the rehabilitated Pier 48 to create a synergistic public open space that integrates industrial, maritime, and recreational uses.

Controls are organized topically in several sub-sections:

- Circulation
- Program and Use Areas
- Resiliency and Sea Level Rise
- Ecology, Habitat, and Management



Conceptual Rendering of the Waterfront Promenade

STANDARDS

3.2.1 PUBLIC TRUST CONSISTENT USES

China Basin Park shall be a regional waterfront destination consistent with the Public Trust that provides increased access to the waterfront, active and unique program to attract visitors, and waterfront ecological amenities.

3.2.2 REQUIRED STRUCTURES

Public Restrooms, Retail, and Food Kiosks are required in China Basin Park. Permanent structures may be located as described in Section 3.8; permanent structures outside this zone will not be permitted as-of-right. See Section 3.8 for location and functional controls.

3.2.3 STORMWATER TREATMENT AREAS

China Basin Park shall include large, feature stormwater treatment gardens. These areas must be functionally and aesthetically integral to the experience of the park. See Guideline 3.2.18 for suggested palette and Section 2.8 for more information about stormwater treatment strategies. Refer to Infrastructure Plan for specific technical requirements.

3.2.4 PROGRAM AREAS: 3 ROOMS + WATERFRONT PROMENADE

China Basin Park shall have three programmatic “rooms” – Plaza, Play Area, and Great Lawn – connected by a Waterfront Promenade as described in Standard 3.2.7 and illustrated in Figure 3.2.1. See Guideline 3.2.10 for functional and spatial relationships within these program areas, and Figure 3.2.6 for the elevation relationships of these program areas.

3.2.5 VISUAL ACCESS

Visual access to the Bay is paramount and views to the water shall be afforded from the Park Promenade across the park. First branching height and spacing of trees shall facilitate these views while complying with Standard 3.1.2.

3.2.6 PARK UTILITIES

Electrical service, potable water, and sewer supply shall be provided at the waterfront side of the Great Lawn, to accommodate varied large-scale events such as movie nights, festivals, concerts, etc.; to serve small park structures; and along the Park Promenade and the Waterfront Promenade, including the Picnic Area. Refer to the Infrastructure Plan for additional information regarding utilities.

SUGGESTED LOCATIONS FOR PARK STRUCTURES:




-  Small Park Structures
-  Kiosks
-  Recreational Structures



FIGURE 3.2.1 Primary Program Elements: This diagram illustrates required program uses in China Basin Park: the 3 “Rooms” required by standard 3.2.4, kiosks and structures required by standard 3.2.2, stormwater gardens required by standard 3.2.3, and visual access to the Bay required by standard 3.2.5.

CIRCULATION

STANDARDS

3.2.7 WATERFRONT CIRCULATION: BAY TRAIL / BLUE GREENWAY

The Waterfront Promenade shall engage the park's Three Rooms, provide varied experiences along its length, and offer Bay access and views.

A) Clear Width of Bay Trail / Blue Greenway

The Waterfront Promenade shall integrate the Bay Trail/Blue Greenway as a multi-use trail that is a minimum of 16 feet clear width. The Waterfront Promenade is an important segment of the Bay Trail/Blue Greenway.

B) Universal Access: Waterfront Promenade

The Waterfront Promenade shall not exceed a maximum of 5% longitudinal slope or a maximum cross-slope of 2%.

C) Bicycle Connections

The Waterfront Promenade shall clearly connect to bicycle facilities on Bridgeview Street and to the multi-use trail extension of the Bay Trail/Blue Greenway on the east side of the Terry A Francois Boulevard right-of-way. Effective warning cues and controls shall be included in the park to minimize pedestrian and bicycle conflict. See Section 3.6, Section 4.3, and Section 4.4. Figure 3.2.2 illustrates a potential connection to future City bicycle facilities at Lefty O'Doul Bridge.

3.2.8 PARK PROMENADE

There shall be a pedestrian-only promenade located along the south edge of the park in front of buildings on Blocks A, G, and K that is a minimum of 24 feet wide. This area shall include a 12'-wide active edge and a minimum 12'-clear pedestrian throughway. This promenade shall not exceed a maximum of 5% slope in the direction of travel at grade change locations. Width of the promenade shall be coordinated with underground utilities; refer to Infrastructure Plan. Also see 5.7: Parkfront Zone.

3.2.9 CONNECTIONS AMONG KEY PLACES

Circulation shall reinforce important pedestrian and bicycle connections to the Shared Public Way, Mission Rock Square, and Pier 48 per Figure 3.2.3.



An active waterfront promenade that provides seating, bicycle, and pedestrian access. SOURCE: KMF164 / FLICKR

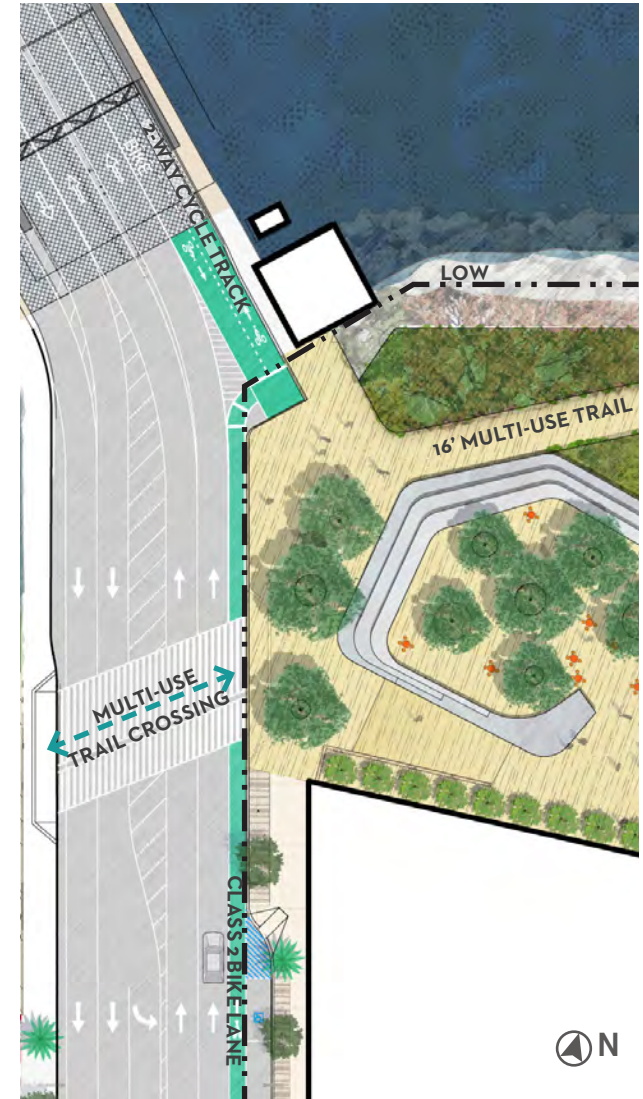


FIGURE 3.2.2 Conceptual diagram of future bicycle connections at Lefty O'Doul Bridge that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.

LEGEND: CIRCULATION + CONNECTIONS

- Major Pedestrian Connections (Shared Public Way + Park Promenade)
- Primary Bicycle Route: Multi-Use Trail
- - - Waterfront Multi-Use Trail Connection
- Bike Lane
- - - Secondary Path
- Warning Cues: Key Locations

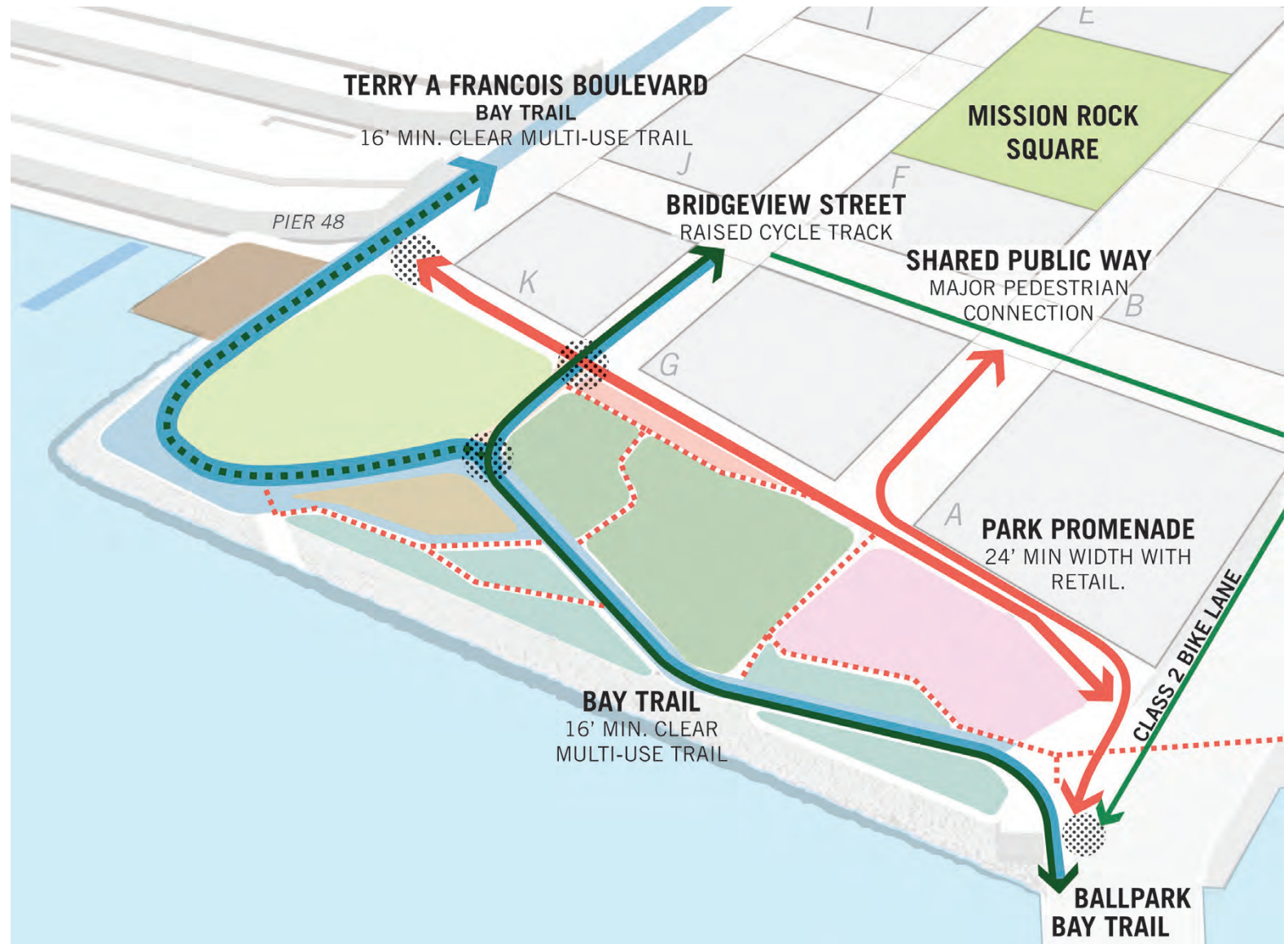


FIGURE 3.2.3 Circulation + Connections: This diagram illustrates the circulation connections described in Standards 3.2.7-3.2.9, including the Bay Trail/Blue Greenway, a major pedestrian and bicycle route; the Park Promenade, a pedestrian-only connection; and secondary, smaller-scale paths. These will connect important site anchors such as Pier 48, the Shared Public Way and Mission Rock Square, and the Ballpark.

PROGRAM

GUIDELINES

3.2.10 PROGRAM AND SPATIAL RELATIONSHIPS

The following relationships are suggested within the Program Areas described in Standard 3.2.4; also see Figure 3.2.4:

A) Entry Plaza

Associated with 3rd Street and Lefty O'Doul Bridge. This gateway to the site is a potential public art location.

B) Upper Plaza

Adjacent to the Entry Plaza, but elevated to create a perch on grade with the Shared Public Way and the Park Promenade. It should be visually connected to a Stormwater Garden, the Play "Room," the Multi-Use Trail, and China Basin.

C) Stormwater Treatment Gardens and Planting Areas

Associated with the Upper Plaza, the Multi-Use Trail, and the Waterfront Promenade. Planting within the rip-rap surrounding treatment areas is encouraged, but should not displace and/or require disposal of existing rip-rap. See Standard 3.2.4 and refer to Infrastructure Plan.

D) Active Recreation

Adjacent to the Upper Plaza and the Multi-Use Trail; should contain recreational lawn areas and a junior-sized baseball field or other organized play field. This area should have visual connectivity to the Park Promenade, the Park Café, the Waterfront Promenade and the Bay, the Great Lawn, and Stormwater Treatment Garden.

E) Family Play

A regional-serving family play zone that is unique in design and regional in nature; should include paved and/or accessible areas that seamlessly incorporate fall zone requirements for play areas. This area should connect visually to the Park Café, the Park Promenade, and the Great Lawn.

F) Food Kiosks

Located along the Park Promenade adjacent to the Family Play Zone. This area should have special paving, unique trees, and distinctive movable furnishings and should be visually connected to the Play "Room", the Park Promenade, the Great Lawn, and the water.

G) Great Lawn

Adjacent to the Waterfront Promenade, the Park Café, the Picnic Area, and the Park Promenade. This area should be visually connected to the water, to Pier 48, and to the Family Play Zone, and should accommodate large events.

H) Park Café

Adjacent to the Play "Room", the Great Lawn, and Stormwater Treatment Gardens. This structure should be visually connected to the Great Lawn, the Family Play Zone, and the Food Kiosks. See Section 3.8: Kiosks and Small Park Structures.

I) Picnic Area

Adjacent to Pier 48, the Waterfront Promenade, and the Great Lawn. This program should not impede access to the Pier 48 Apron; unobstructed Public Access at least 8' wide must be maintained at the perimeter of this area. See Section 3.6.

J) Watercraft Launch + Rental Kiosk

Non-motorized watercraft launch with rental kiosk located at the Pier 48 Apron. See Section 3.6.

PROGRAM PRECEDENT IMAGES



Terraces direct views and provide an informal gathering space. SOURCE: AERIC / FLICKR



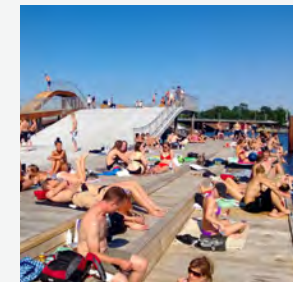
A youth ballfield is an example of Active Recreation. SOURCE: SFGIANTS



A unique play environment provides space for family play. SOURCE: WILLIAM LANGDON/BLOGSPOT



An example intimate retail kiosks for the Park Promenade. SOURCE: THERESE SWAN



An example of active waterfront space for sunning. SOURCE: HENNING-STUBEN_KALVBOD WAVES



A precedent for outdoor dining at the picnic area. SOURCE: GROUNDSWELL LLC



FIGURE 3.2.4 Program and Spatial Relationships: This diagram illustrates the key relationships, adjacencies, and approximate scale among the program areas described in Guideline 3.2.18.



GUIDELINES

3.2.11 SIGNATURE AMENITY

One park cafe, or a group of up to three associated kiosks located in the 'park cafe' zone, should be located adjacent to the waterfront promenade, Great Lawn, and Family Play Zone. This area should accommodate a signature amenity that will be a significant attractor to China Basin Park. See (H) in Figure 3.2.4, and refer to Section 3.8: Kiosks and Small Park Structures.

3.2.12 OVERLOOKS

Two overlooks may be provided in China Basin Park. These shall be associated with the Waterfront Promenade and key views across the Bay. See Section 3.6: Pier 48 Apron and (10) on Figure 3.2.5. Overlooks must be constructed in a way that does not disturb existing riprap.

A) Industrial Remnants

One of the two overlooks may align with the industrial rail spur remnants at the northeast corner of the site; this is also an opportunity for interpretive signage describing the history of the site and the Bay edge. See (14) on Figure 3.2.5.



A small park cafe with generous outdoor seating is an example of a signature amenity. SOURCE: CMG



The Great Lawn should accommodate large events such as a movie night on the Lawn. SOURCE: CMG



A waterfront outlook incorporates shoreline riprap as a design element. SOURCE: AERIIC / FLICKR



An example of an overlook at the water's edge. SOURCE: (C) VEGAR MOEN



CONCEPTUAL PLAN

1 Entry Plaza
2 Upper Plaza

3 Stormwater Treatment Garden
4 Waterfront Promenade

5 Park Promenade
6 Active Recreation

7 Family Play Zone
8 Great Lawn
9 Park Cafe

10 Overlook
11 Picnic Area
12 Watercraft Launch

13 Rental Kiosk
14 Industrial Remnants
15 Retail Kiosks

FIGURE 3.2.5 Conceptual Plan of China Basin Park that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.

DESIGNING A RESILIENT + ADAPTIVE PARK

Sea level rise and climate change are increasingly important issues for San Francisco's waterfront. The Mission Bay neighborhood, sited on filled saltwater marsh, may be vulnerable in future flood events.

China Basin Park will balance maximizing public access to the waterfront with 'living with the Bay' in the face of future sea level rise. Key public access areas will be elevated for protection from future flood events based on current sea level rise projections, while other program areas will accommodate these flood events.

This balance, achieved through grade changes within the park, will create opportunities for unique spatial relationships among program uses and will be an integral aspect of designing a functional, resilient park with ecological and social vitality.

Finish grade elevations in the park will be based on 2100 sea level rise projections, to maintain public access and to help ensure that accessible paths of travel remain free of flood water except in extreme storm events.

GRADE CHANGE TACTICS AND OPPORTUNITIES



Natural or sculptural elements soften grade changes and provide informal steps.

SOURCE: SAMANTHA CHAPNICK/FICKR



Incorporating stepped play elements or slides into grade change locations takes advantage of different elevations in the park to provide signature play opportunities.

SOURCE: CMG SOURCE: NO ORIGINAL FOUND



Terraces or bleachers provide an active social space that frames program areas and directs views.

SOURCE: ALLISON MEIER/FICKR



A sloped lawn enhances views to the water and provides space for large and small gatherings.

SOURCE: THE GOLDEN ETERNITY/FICKR

STANDARDS

3.2.13 GRADING: DESIGN CRITERIA

The park shall be graded to maximize public access to the waterfront with sea level rise. Park grades shall transition between the design elevation of the development blocks, the Bay Trail/Waterfront Promenade, and existing grade at 3rd Street, Pier 48, and the shoreline. Refer to Infrastructure Plan Chapter 5.

3.2.14 GRADE CHANGE

A) Universal Access

Provide universal access to all spaces as practicable. The Park Promenade and Waterfront Promenade shall not exceed 5% maximum slope in the direction of travel. Comply with applicable accessibility guidance.

B) Design Tactics

Utilize varied tactics for grade changes. These tactics shall provide seating, direct views, and connect spaces and uses in a meaningful way that is integral to the overall programmatic relationships of the park. Tactics may include terraces, bleachers, and sloped lawn areas.

3.2.15 FINISH FLOOR ELEVATION OF OPEN SPACE STRUCTURES

Structures and kiosks permanently located in China Basin Park shall be sited in areas of higher elevation and shall open directly out onto adjacent public space at grade. See 3.2.2: Required Structures and Section 3.8: Kiosks and Small Park Structures.

3.2.16 RELATIONSHIP TO ACTIVE EDGES ON PARK PROMENADE

The Park Promenade described in standard 3.2.8 includes Active Edges along Blocks A, G, and K. To maximize connections between the park, active edges, and ground floor program, ramps are not permitted in this area. Grade change, where required along the Park Promenade, shall be 5% maximum slope in the direction of travel. Also see Section 5.7: Parkfront Zone.

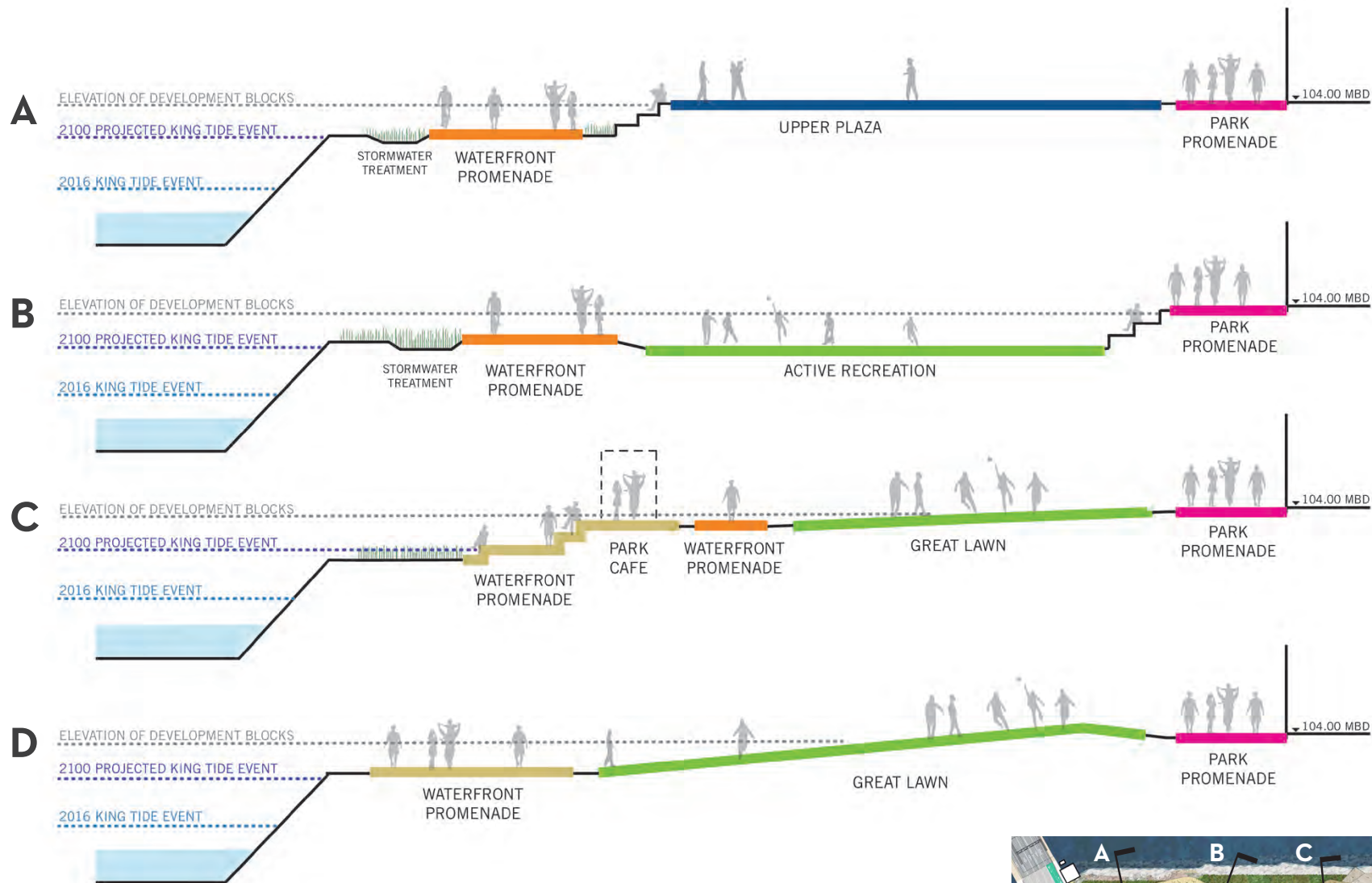
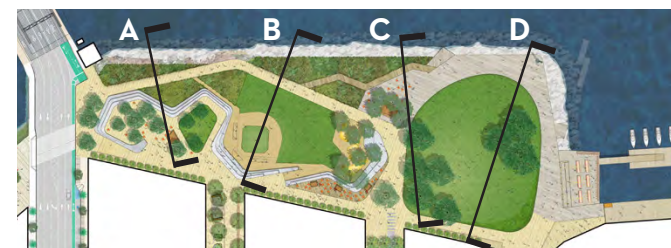


FIGURE 3.2.6 Programmatic Relationships: This diagram illustrates the sectional relationship of program areas described in Guideline 3.2.18, to each other and to key sea level rise elevation benchmarks. While the entire footprint of the park is not elevated, future design concepts will maximize public access by elevating key circulation elements of the park such as the Bay Trail and Park Promenade. (Note: elevations shown in Mission Bay Datum/MBD.)



ECOLOGY, HABITAT, + MANAGEMENT

As a regional waterfront park, China Basin Park will be a paradigm for sustainable ecological systems and management over time. Its active programming and location on the Bay will make it a learning environment where visitors will engage not only with each other, but with the plants and animals that thrive in this unique habitat.

China Basin Park’s stormwater treatment areas will be integrated with active use of the park, and will be planted with resilient native and naturalized species that perform ecologically and aesthetically; trees will act as windbreaks and provide sheltered gathering spaces. Management over time will ensure that China Basin Park adapts to a changing climate and an evolving city.

STANDARDS

3.2.17 STORMWATER TREATMENT AREA MANAGEMENT

A) Inundation

Stormwater treatment gardens shall be designed with backflow prevention and shall be taken offline in the event of a storm that would inundate them with saline bay water. Plant species should be considered carefully to provide salt-tolerant planting to maintain function in the case of an extreme Bay flood event. See Guideline 3.2.18 and refer to Infrastructure Plan.

B) Plant Species Adaptation

Saline-tolerant plant species shall be included in the maintenance and management strategy of the stormwater gardens to increase resilience of treatment gardens in the case of inundation in a Bay flood event. These species shall meet the functional and aesthetic requirements described in Guidelines 3.2.18 and 3.2.19.



Boardwalk access through a native marsh creates an immersive experience. SOURCE: CMG



Native planting in public spaces, such as the marsh at Crissy Field, can both connect people to their environment and create a landscape that is resilient in flood events. SOURCE: CMG

GUIDELINES

3.2.18 RESILIENT PLANTS

Tree, understory, and stormwater garden plants should contribute functionally and aesthetically to the park's overall design concept and experience. Also see Section 3.1.

A) Site + Program Specificity

Species should be adapted to particular site conditions, microclimate, and programmatic needs of each space, including foot traffic and active and passive recreational uses.

B) Water Use

Specify low-water use plants wherever feasible. Use native or naturalized species.

C) Tree Palette

See Section 2.7 for performance and design criteria.

D) Understory Palette

The stormwater garden palette should be selected to meet the following criteria:

- ▶ Select for maximum seasonal and ornamental impact.
- ▶ All species should be native, naturalized, or climate-appropriate if non-native.
- ▶ All species should thrive in full sun.
- ▶ Select species with habitat value.
- ▶ Select saline-tolerant species where appropriate.

- ▶ Suggested understory palette*:
 - Artemisia californica* (Coastal Sagebrush)
 - Erigonum fasciculatum* (California Buckwheat)
 - Lupinus albifrons* (Silver Bush Lupine)
 - Mimulus aurantiacus* (Sticky Monkeyflower)
 - Mimulus guttatus* (Creek Monkeyflower)
 - Salvia clevelandii* (Cleveland Sage)
 - Salvia mellifera* (Black Sage)
 - Salvia spathacea* (Hummingbird Sage)
 - Sisyrinchium bellum* (Blue-Eyed Grass)
 - Tradescantia virginiana* (Virginia Spiderwort)
 - Vaccinium ovatum* (California Huckleberry)

*Source: SFPUC Stormwater Design Guidelines, Appendix D.

3.2.19 ADAPTATION FOR RESILIENCE

Stormwater Treatment Areas should be gradually inter-planted with saline-tolerant species to maintain performance and species richness, based on a Management Plan responsive to sea level rise. See Section 3.1.

A) Evaluation of Species Health

Evaluate the health of trees and understory plants at least once each year.

3.2.20 NON-ALLERGY CAUSING SPECIES

Plant species known to cause common allergies should be avoided.



SOURCE: ED323_WIKIPEDIA

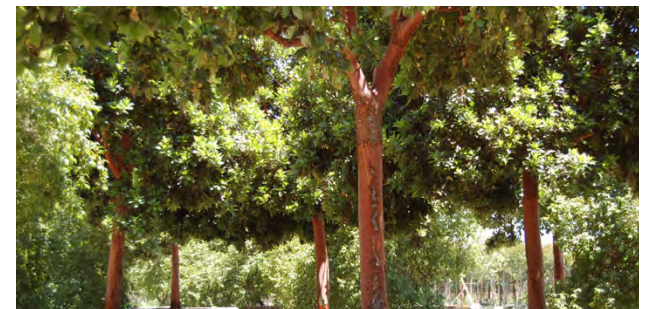


SOURCE: WIKIPEDIA



SOURCE: CMG

Large-canopy, evergreen trees with spreading character are appropriate for the Great Lawn and Upper Plaza.



Small trees with arching character and distinctive bark are appropriate for the Park Promenade. SOURCE: NONE FOUND

3.3 MISSION ROCK SQUARE

Read in conjunction with Section 3.4: Channel Lane, Section 3.7: Channel Street, Section 4.3: Shared Public Way, Section 4.4: Bridgeview Street, and Chapter 5: Ground Floor. Mission Rock Square must also satisfy the requirements described in Chapter 2: Public Realm.

The centrally located Mission Rock Square will be the heart of the Mission Rock project. The civic character of this sunny square, wind-protected and surrounded on all sides by activity, will provide an intimate, welcoming urban moment within the fabric of the developing Mission Bay neighborhood.

This neighborhood square will balance spatial enclosure with connections to the Shared Public Way and the Working Waterfront. Mission Rock Square will be a public “living room” where cafés and outdoor seating will frame an open area large and flexible enough to accommodate temporary uses and events. Public art and a pavilion will be destinations that create identity and attract people and activity to the Square.



An example of a public ‘living room’ - a movie event at Bryant Park, a large flexible lawn enclosed by trees. SOURCE: ACNATTA/FICKR

STANDARDS

3.3.1 WIND PROTECTION

Mission Rock Square shall be protected from wind and down-drafts through tree planting. See Sections 2.7 and 3.1.

3.3.2 REQUIRED STRUCTURES

One permanent retail and food structure that includes Public Restrooms is required in Mission Rock Square. The permanent structure may be located as described in Section 3.8; permanent structures outside this zone will not be permitted. Additional temporary kiosks may be permitted.

3.3.3 STORMWATER TREATMENT AREA

Mission Rock Square shall include at least one feature stormwater treatment garden that is functionally and aesthetically integral to the experience of the Square. See Guideline 3.3.13 for parameters and refer to Infrastructure Plan for specific technical requirements.

3.3.4 CIRCULATION: SITE-WIDE ROUTES

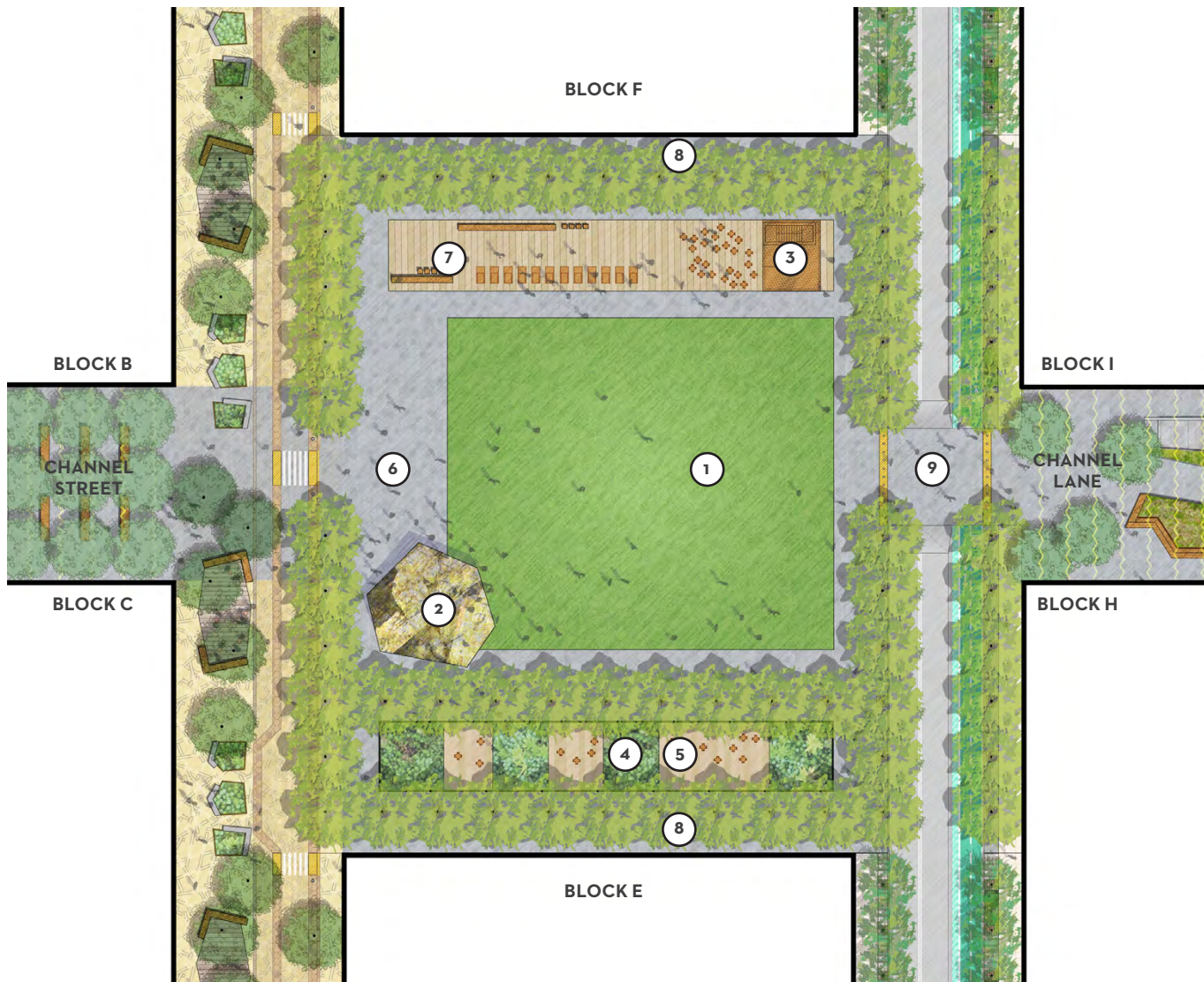
Design concepts for Mission Rock Square shall engage priority site circulation routes, including the Shared Public Way; Channel Street and Channel Lane, which connect 3rd Street and Mission Bay to the waterfront; and the dedicated bicycle facilities on Bridgeview Street.

3.3.5 CIRCULATION AND VIEWS WITHIN MISSION ROCK SQUARE

Views and circulation access shall be maintained between the Active Edges at Blocks E and F and the multi-use area at the center of the Square. Universally accessible circulation to the required small park structure shall be provided. See Standard 3.3.2 and Section 3.8.

3.3.6 VISUAL ACCESS

Visual access to the Bay is a significant design consideration in Mission Rock Square. Views to the water shall be maintained through Mission Rock Square from Channel Street; see Figure 3.3.3.



CONCEPTUAL PLAN

- 1 Central Event Space
- 2 Iconic Feature
- 3 Food/Retail Structure with Public Restrooms
- 4 Stormwater Treatment Garden
- 5 Boardwalk Crossings/Decks
- 6 Forecourt at Shared Public Way
- 7 Large-Scale Feature Furniture
- 8 Active Edge (see Chapter 5)
- 9 Raised Pedestrian Crossing

FIGURE 3.3.1 A Conceptual Plan of Mission Rock Square that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.

STANDARDS

3.3.7 PROGRAM AREAS

To create a diverse range of active and passive gathering spaces that take advantage of sunny zones and connect to building uses, the following program areas shall be accommodated in Mission Rock Square as described in Figure 3.3.2:

A) Multi-Use Area

A multi-use area at the center of the square shall accommodate large events. See 3.3.14.

B) Tree Grove

The Square shall be enclosed by a grove of trees that is in accordance with Standard 3.3.6. See Standards 3.3.9-12 and Figure 3.3.3.

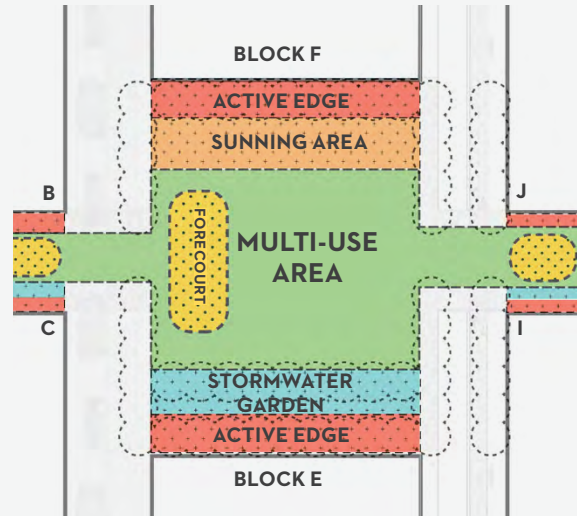


FIGURE 3.3.2 Program Areas. This diagram illustrates the key relationships and adjacencies among the program areas described in Standard 3.3.7.

C) Active Edges

To support the connection between ground-floor Active Edges and the Square, building frontages on Mission Rock Square adjacent to blocks E and F may utilize up to 15 feet horizontal from the block boundaries for outdoor spill-out space, inclusive of a 6'-minimum clear path of travel. See Section 5.6: High-Retail Zone.

D) Thresholds: Stormwater Gardens and Sunning Area

Threshold spaces between program areas A) and B) shall provide intimate, memorable social spaces that connect Active Edges to the center of the Square. Concepts for these program areas shall take advantage of specific microclimate conditions of sun and shade and provide feature seating opportunities. See Figure 3.3.4 and Guidelines 3.3.13 and 3.3.17.

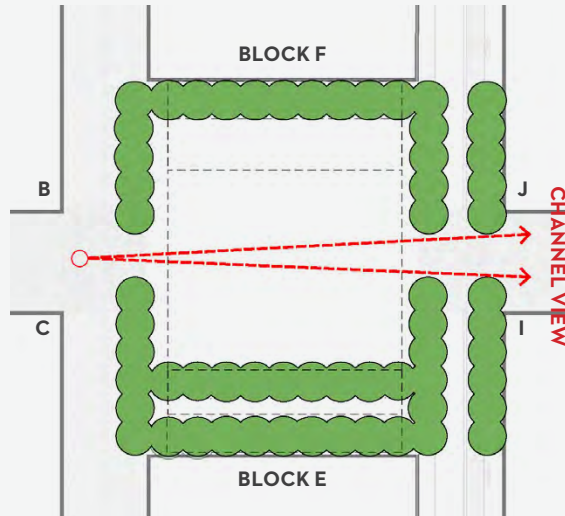


FIGURE 3.3.3 Tree Grove. This diagram illustrates the required degree of enclosure for the Square and the visual access that must be maintained per Standard 3.3.6.

3.3.8 ICONIC FEATURE

An iconic feature, such as a sculpture or small structure, shall create a nexus and meeting spot in Mission Rock Square and reflect a fundamental aspect of Mission Rock's identity. See Guideline 3.3.16 for suggestions.

This iconic feature may be distinct from the permanent structure described in Standard 3.3.2, or may be considered integral to this structure. Weight and placement shall be coordinated with geotechnical considerations; refer to Infrastructure Plan.

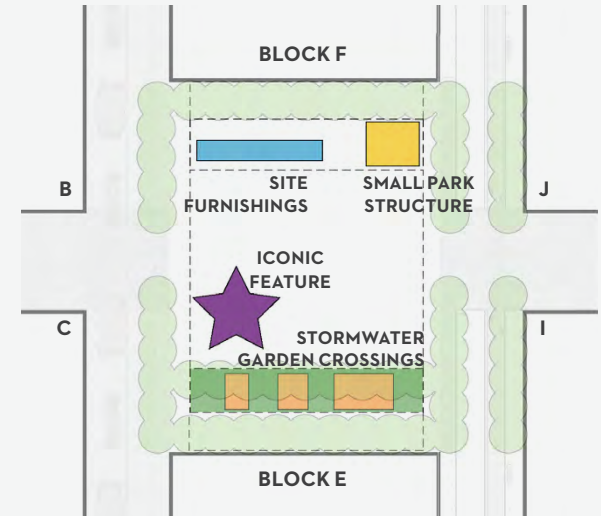


FIGURE 3.3.4 Elements. This diagram illustrates potential locations of program elements: iconic feature, park structure, stormwater gardens with occupiable crossings, and site furnishings.

STANDARDS

3.3.9 TREES: ENCLOSURE AND VIEWS

Design concepts for Mission Rock Square shall create a strong sense of enclosure with trees, but maintain views into and out of the square, most significantly to the Bay through Channel Lane. See Figure 3.3.3, and see Section 2.7 for aesthetic and performance requirements and recommended species.

3.3.10 TREES: SEASONAL DISPLAY

Tree species selected for Mission Rock Square shall have a singular seasonal display that creates a special, highly unique seasonal identity and programmatic opportunity; for example, festivals that coincide with a fall foliage or spring flower display. See Section 2.7.

3.3.11 MINIMUM SOIL DEPTH AT TREE AND UNDERSTORY PLANTING

If lightweight fill is utilized to accommodate geotechnical considerations, the following controls shall apply. Refer to Infrastructure Plan for geotechnical information.

A) Tree Planting

Four feet minimum soil depth and a continuous and contiguous 6-12"-depth drainage layer under tree planting areas shall be provided. See Section 2.7 for recommended soil volume ranges for trees,

B) Understory Planting

A minimum of 18 inches of soil depth and adequate drainage at understory planting areas that do not include trees shall be provided. See Section 2.8 and refer to Infrastructure Plan for technical requirements for stormwater treatment gardens.

GUIDELINES

3.3.12 TREE PLANTING: OUTER AND INNER GROVE

To create a strong sense of enclosure, use a single uniform species for the outer grove illustrated in Figure 3.3.6. This grove should extend across Bridgeview Street. See Section 2.7 and Figure 3.3.6.

A) Spacing

Spacing of trees in the outer grove should be a minimum of 12 feet on center to a maximum of 22 feet on center, as approved in consultation with a certified arborist.

B) Clear Trunk at Maturity

At maturity, first branching height of the outer grove in Mission Rock Square should be 8 feet minimum and should create a consistent ceiling.

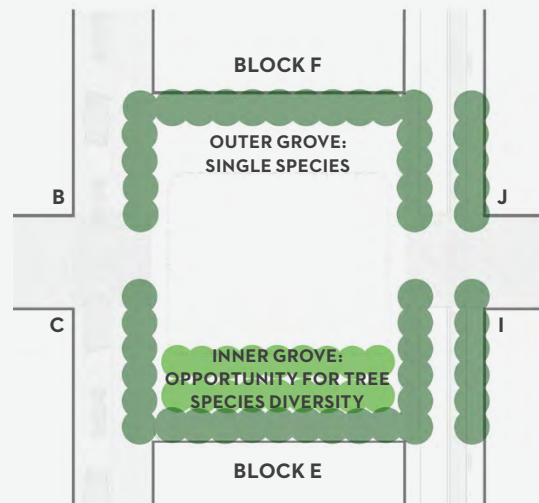


FIGURE 3.3.6 Tree Planting in Mission Rock Square should include an outer grove comprised of a single species in accordance with Guideline 3.3.12; additional tree species may be varied.



FIGURE 3.3.5 Artist's rendering of Mission Rock Square from the Shared Public Way.

GUIDELINES

3.3.13 FEATURE STORMWATER TREATMENT GARDENS

Stormwater treatment gardens will provide an opportunity to integrate lush understory planting and habitat with program, use, and engagement.

A) Crossings for Active Edges

Crossings should be included in stormwater treatment gardens to allow Ground Floor Uses in Block E to spill out into this area. These should not compromise the functionality of this treatment facility. See Figure 3.3.4.

B) Food Service at Crossings

Facilities for outdoor seating, such as a wait service station and/or ABC rails, are permitted and should be accommodated.

C) Program and Use

Maximize opportunities to interact with, cross, and occupy the garden, and maximize connection and views to the central multi-use area and the adjacent Active Edge. Include temporary or permanent seating in this area.

D) Suggested Understory Palette

Plant palette selection criteria should include:

- Maximum seasonal and ornamental impact
- Species should be native, naturalized, or climate-appropriate if non-native
- Species should tolerate shade
- Select species with habitat value
- Suggested species that meet this criteria*:
 - Adiantum jordanii* (CA Maidenhair Fern)
 - Dicentra formosa* (Pacific Bleeding Heart)
 - Dryopteris expansa* (Spreading Wood Fern)
 - Ribes sanguineum* (Red-Flowering Currant)
 - Rosa californica* (California Wild Rose)
 - Rubus ursinus* (California Blackberry)
 - Solanum umbelliferum* (Nightshade)
 - Vaccinium ovatum* (California Huckleberry)
 - Woodwardia fimbriata* (Giant Chain Fern)

**From SFPUC Stormwater Design Guidelines, Appendix D*



A precedent 3.3.13-B), for food service within an intimate grove of trees. SOURCE: CMG



An example of seating integral to a stormwater treatment garden that promotes engagement with this key infrastructural element. SOURCE: CMG

GUIDELINES

3.3.14 CENTRAL MULTI-USE AREA

The central multi-use area should be designed with circulation, crowds, and maintenance in mind. If the best programmatic and experiential choice for this multi-use area is determined to be lawn, consider a paved forecourt at the Shared Public Way to accommodate heavy foot traffic. See Figure 3.3.2.

3.3.15 FLEXIBLE USE AND PROGRAMMING

Events in Mission Rock Square will be a mix of active, retail, and passive recreational and social uses.

A) Large-Scale Events

The Square should be designed to accommodate large-scale events, including a large event tent (100'x100', up to 100'x200'); outdoor movie nights; and active program such as tai chi, dancing, and yoga in a central multi-use space. (Image A)

B) Medium-Scale Events

The Square should comfortably accommodate small concerts and festivals, game-day parties and gatherings, and active program such as roller skating and pick-up games. (Image B)

C) Small-Scale Events

The Square should be designed to accommodate intimate, small activities ranging from game tables (fixed or temporary), picnicking, and frisbee; outdoor dining and happy hours; and sunning/lounging areas in sunny zones. (Image C)



(A) This event tent, at Mint Plaza, is an example of a large-scale event that should be accommodated in the Square. SOURCE: CMG



(B) This small concert at Mint Plaza, facilitated by flexible seating on a multi-use plaza, is an example how a medium-scale event could be accommodated in the Square. SOURCE: CMG



(C) The Square should comfortably facilitate small-scale events or activities, such as this permanent game table. SOURCE: BOBBY WILLIAMS / EVGRIEVE.COM

GUIDELINES

3.3.16 SOCIAL OBJECTS

Mission Rock Square will have a highly unique character as Mission Rock's public living room. One aspect of this character is the inclusion of "social objects", distinctive and fun elements that are particular to Mission Rock Square. These social objects should be iconic and recognizable, facilitating different scales of gathering and use. See Figure 3.3.4.

A) Iconic Feature: Meet Me at Mission Rock

The iconic feature in Mission Rock Square could be, but is not limited to, a sculpture or small structure. It should be considered as a central activator for Mission Rock Square. See Standard 3.3.8 and Section 2.11.

B) Feature/Destination Lighting

Fun, unique feature destination lighting should create a special nighttime identity for Mission Rock Square. See Section 2.9 for suggested footcandle ranges and uniformity ratios.



An rock outcropping is an example of an iconic feature that is integral to the design and social function of an open space in Toronto. SOURCE: KATHLEEN COREY / FLICKR



Iconic lights create a special nighttime identity. SOURCE: INDIANADINOS / FLICKR



These sculptural rock outcroppings are precedents for the iconic feature in the Square: for example, Meet Me at Mission Rock! (L) © PWP LANDSCAPE ARCHITECTURE / (R) SOURCE: CHRIS TYLERTO / FLICKR



GUIDELINES

3.3.17 SITE FURNISHINGS

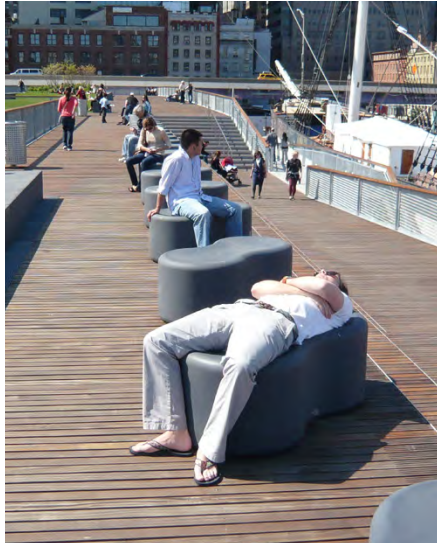
Site furnishings should be a mix of small-scale permanent seating, movable seating, and large-scale permanent seating. Also see Figure 3.3.4, Standard 3.3.7, Section 5.1: Active Edges, and Section 5.6: High Retail Zone.

A) Small Scale Permanent and Movable Seating

Small-scale permanent and movable seating should have a highly unique, identifiable character and should comfortably accommodate individuals and small groups.

B) Large-Scale Feature Furniture

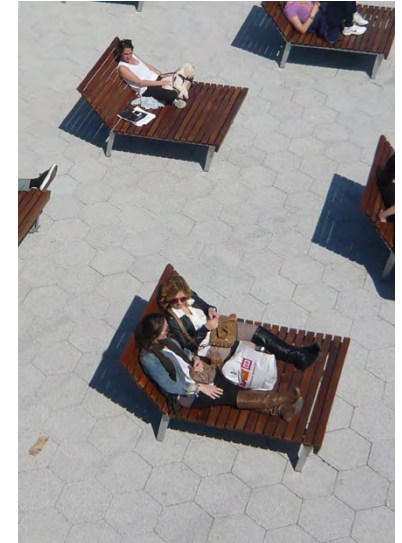
Use large-scale feature furniture to create opportunities for larger social gatherings; for example, a large communal table is a singular experience that could engage the active retail/dining edges of the Square.



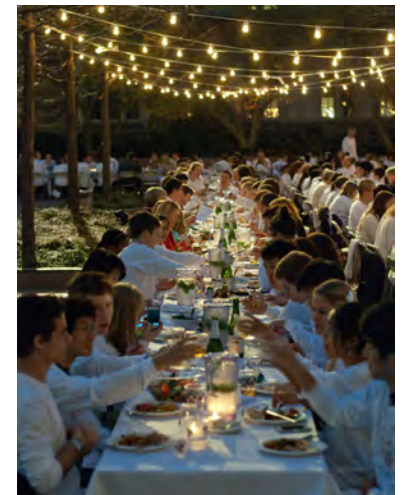
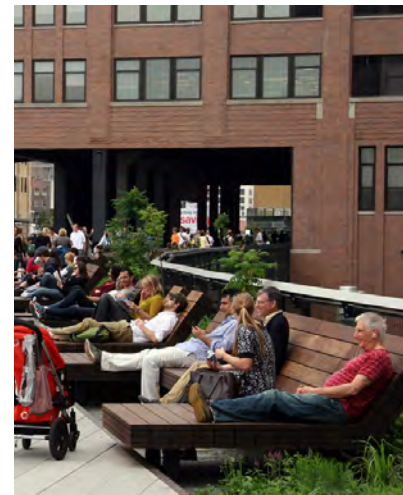
This example of special small-scale permanent seating accommodates a range of small gatherings. SOURCE: CMG



These examples of unique flexible seating can be re-configured and occupied in a variety of ways, by individuals or small groups. (L) SOURCE: YOUNG SOK KUN / FLICKR / (R) SOURCE: C MG



These examples of large-scale permanent feature furniture provide a vantage point and respite in busy public spaces, and facilitate larger social gatherings. (L) SOURCE: LAURENSAALJ / (R) SOURCE: JOEVARA/FLICKR

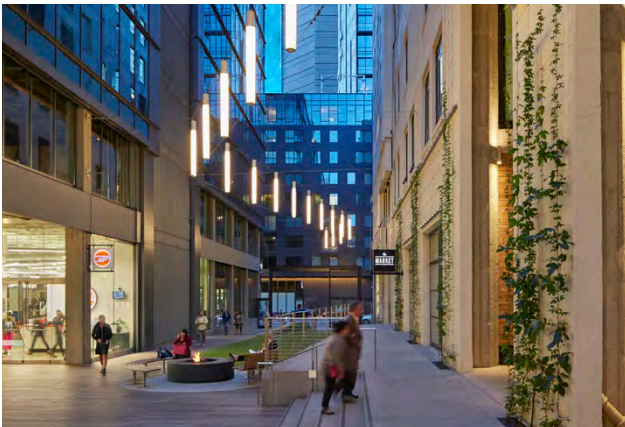


A large-scale communal table could be a signature program element; see Figure 3.3.4. © JOHN O'NEILL/PRINCETON PAW

3.4 CHANNEL LANE

Read in conjunction with Section 3.3: Mission Rock Square, Section 4.3: Terry A Francois Boulevard, Section 4.4: Bridgeview Street, and Section 5.1: Active Edges.

Channel Lane will be an important view corridor and connection between Mission Rock Square and the waterfront; a place to linger and a place to move through, connected to Mission Rock Square and across Terry A Francois Boulevard to Channel Wharf. Because it will be protected, shaded, and not accessible by vehicle, Channel Lane will be a potential site for unique features such as overhead lighting, special paving, and shade-tolerant plant species. The site-wide strategy to elevate the center of the Mission Rock site for sea level rise resiliency offers a programmatic opportunity for Channel Lane, which accommodates this grade transition.



An example of a small plaza activated by ground floor program, grade change, and overhead feature lighting. SOURCE: CMG

STANDARDS

3.4.1 PROGRAM AREAS

A) Active Edges

10' Active Edges along Blocks I and J shall be provided. If Elevated Walkways are provided on block frontages along Terry A Francois Boulevard, this area is an opportunity to directly connect to those public walkways.

B) Plaza with Pedestrian Throughway

A 50'-maximum width plaza at grade with Bridgeview Street shall be provided, measured east-west, with 12'-minimum pedestrian throughway shall be provided. Tree Planting that meets the design criteria noted in 3.4.4 and 3.4.5 shall be included in this area.

C) Waterfront Passage

A generous connection to Terry A Francois Boulevard with 12'-minimum pedestrian throughway shall be provided, with grade changes in compliance with 3.4.2.

D) Planting Areas

Understory planting shall be provided adjacent to the Waterfront Passage at grade changes.

E) Below-Grade Parking Garage Access (if provided)

If provided, ramp access to a below-grade parking garage shall be a maximum of 23' wide, located adjacent to the Active Edge at Block I, and screened by shade-tolerant planting.

3.4.2 WATERFRONT PASSAGE: GRADE CHANGE RESTRICTIONS

The Waterfront Passage described in 3.4.1 shall include a 6'-minimum width sloped walk with 5%-maximum longitudinal slope, and a 6'-minimum width stair. Exceeding this minimum requirement is encouraged to create a generous pedestrian connection.

3.4.3 PROTECTED PEDESTRIAN AREA

Vehicular traffic shall not be permitted on Channel Lane. Bollards or equivalent vehicular barrier shall be located along Terry A Francois Boulevard to indicate that Channel Lane is a pedestrian-only open space.

GUIDELINES

3.4.4 ENCLOSURE AND VIEWS

A view corridor from the Pedestrian Throughway should be maintained through Channel Lane from Mission Rock Square to the water; this should not be obstructed by permanent furnishings, trees, or landscape structures.

3.4.5 TREE PLANTING

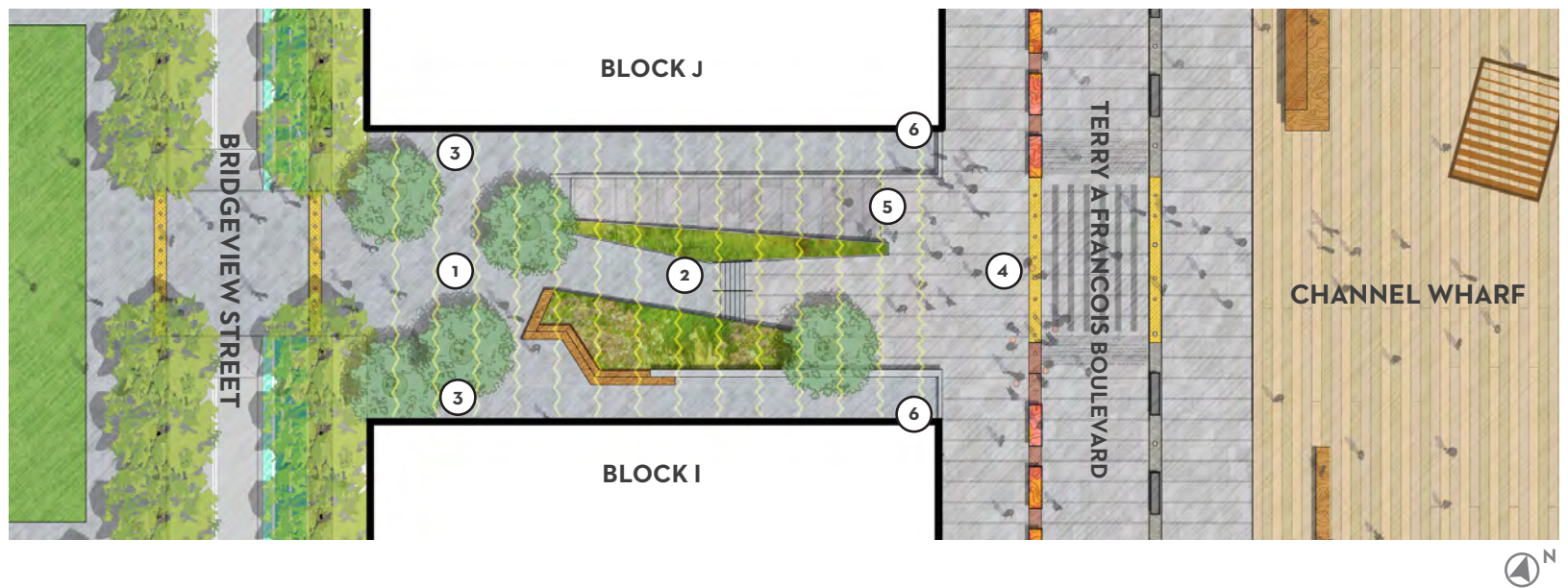
If trees are included in the design concept for Channel Lane, first branching height should maintain views between Mission Rock Square and Channel Wharf, out to the Bay. See Guideline 3.4.4.

3.4.6 SITE FURNISHINGS

Flexible seating should be substantial enough to withstand wind load. Fixed seating may be included at the waterfront passage grade change.

3.4.7 GATEWAY FEATURE: OVERHEAD LIGHTING

Channel Lane is a unique opportunity to integrate an overhead feature, ideally one that incorporates special lighting. This feature should be an attractor for passage to the waterfront from Mission Rock Square, but should not obstruct nor detract from the Bay view per Guideline 3.4.4.



CHANNEL LANE CONCEPTUAL PLAN

- | | | |
|------------------------------------|---------------------|--------------------------------------|
| 1 Plaza with Pedestrian Throughway | 3 Active Edges | 5 Gateway Feature: Overhead Lighting |
| 2 Waterfront Passage | 4 Vehicular Barrier | 6 Connection to Elevated Walkway |

FIGURE 3.4.1 Conceptual Plan of Channel Lane that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.

3.5 CHANNEL WHARF

Read in conjunction with Section 3.6: Pier 48 Apron, Section 4.3: Terry A Francois Boulevard, and Section 5.8: Working Waterfront Zone. Channel Wharf must also satisfy the requirements described in Chapter 2: Public Realm.

Situated between Piers 48 and 50, Channel Wharf will celebrate San Francisco's working industrial waterfront. It will continue to serve as a functioning wharf while providing public access and views of active maritime vessels, marine uses at the Pier 50, the Bay, and shipping cranes in the distance as well as public art and seating. This plaza will be a unique destination for local residents and office workers, and a waypoint for explorers of the Bay Trail/Blue Greenway.

This waterfront plaza should be designed with special consideration for Terry A Francois Boulevard, which will border its entire west extent, and should also be considered as a grand waterfront terminus of Channel Street—a key connection to the Mission Bay neighborhood.



This public space at the Marseilles Waterfront, with utilitarian character and materials that are compatible with maritime uses, is a precedent for Channel Wharf. . © NICKCREW66 / FLICKR

STANDARDS

3.5.1 FUNCTIONALITY AND WORKING NATURE

Channel Wharf shall accommodate maritime use as a laydown area for temporary storage of off-loaded materials. This use shall not compromise public access to Channel Wharf or to the Pier 48 Apron. Channel Wharf shall be predominantly coplanar with the Pier 48 Apron and Terry A Francois Boulevard. See Standard 3.6.5.

3.5.2 MARITIME + INDUSTRIAL CHARACTER

Site furnishings, lighting, and paving shall reinforce and support the maritime and industrial character of Piers 48 and 50 and Terry A Francois Boulevard. Materials shall be durable and appropriate for maritime and industrial use.

3.5.3 PUBLIC ART

One piece of Public Art, defined as a “Large-Scale Feature” per Guideline 3.5.5, shall be permitted on Channel Wharf.

3.5.4 TREES

Tree planting is not technically or functionally feasible on Channel Wharf and shall not be permitted.

GUIDELINES

3.5.5 LARGE-SCALE FEATURE

Per Standard 3.5.3, Channel Wharf should include a large-scale industrial object or other feature that serves as a destination point. This object could be a viewing tower located to provide a public privileged view of the water and to further evoke the industrial and maritime character of the site. This is a public art opportunity. See Section 2.11.

3.5.6 PLANTING

Channel Wharf is envisioned as a paved Open Space and should be considered a wharf landscape. If planting is proposed, it should conform to the character and functional standards of this space and its maritime and industrial environs. Any proposed excavation for planting should be coordinated with the existing seawall. If necessary, a stormwater treatment garden can be utilized to address localized stormwater runoff. Refer to Infrastructure Plan.

3.5.7 PAVING

To support maritime operations per Standard 3.5.1, paving should have a utilitarian character that is suitable for the maritime context and Bay environment, at a scale that engages pedestrians.

3.5.8 SITE FURNISHINGS

Permanent seating should be provided in Channel Wharf and should support the maritime and industrial character of the open space. Low seating or a bull rail at the water's edge is encouraged. Furniture locations should not impede the functionality described in Standard 3.5.1.



The crane in this public waterfront space is an example of a large-scale feature that marks a destination point.
SOURCE: FLICKR / ISLAND HOME



Utilitarian paving at a waterfront open space in Barcelona that is suitable for a marine environment. © LANDEZINE



These seating examples at the water's edge have unique maritime character and are sturdy enough to withstand the industrial and environmental context of Channel Wharf. (L) © SIMON DEVITT / (R) © OCULUS LANDSCAPE ARCHITECTURE

CONCEPT PLAN

- 1 Pedestrian Crossing
- 2 Utilitarian Paving
- 3 Large-Scale Feature
- 4 Bull Rail at Water's Edge
- 5 Seating

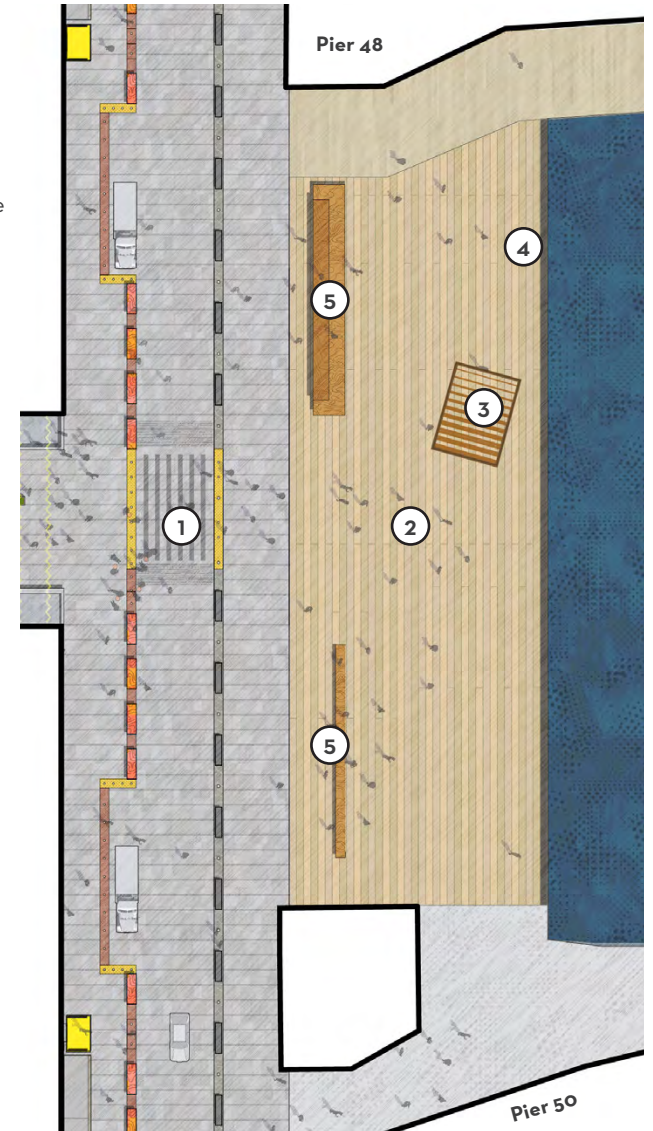


FIGURE 3.5.1 Conceptual Plan of Channel Wharf that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.



3.6 PIER 48 APRON

Read in conjunction with Section 3.2: China Basin Park, Section 3.5: Channel Wharf, Section 4.3: Terry A Francois Boulevard, Section 5.7: Parkfront Zone, and Section 5.8: Working Waterfront Zone. The Pier 48 Apron must also satisfy the relevant requirements described in Chapter 2: Public Realm.

The Pier 48 Apron will be rehabilitated to provide public access and berthing capabilities. This maritime and industrial activity will bring new life to Mission Rock and Mission Bay and provide a waterside approach to the site, anchoring this historic pier as a key element in the transformation of the central waterfront.

An adjacent paseo at the terminus of Terry A Francois Boulevard will facilitate park and water-oriented pier access, and a publicly accessible picnic area will connect Pier 48 to China Basin Park. A non-motorized watercraft launch located close to this picnicking area will take advantage of calm waters for the launch of small watercraft.

STANDARDS

3.6.1 PIER 48 APRON: USES

The Pier 48 Apron shall accommodate maritime berthing and public access on the pier aprons, and other viable uses consistent with the public trust.

3.6.2 APRON FUNCTIONALITY

When redeveloped, the Pier 48 Apron shall be a functional component of operations on Pier 48. It may be closed to the public at times to support these operations, but will be open as much as practicable.

3.6.3 DESIGN STANDARDS

Pier 48 is identified as a contributory resource to the Embarcadero Waterfront National Register Historic District. Modifications to the Pier 48 Apron shall meet Port of San Francisco criteria for Design and Access and for the National Register of Historic Places (NHRP) per the following documents:

- ▶ Waterfront Design and Access Element:
Chapter 3 Historic Resources
Chapter 4 Pier 48 – 54 Design Criteria
[http://www.sfport.com/ftp/uploadedfiles/about_us/divisions/planning_development/WDesAcc.pdf]
- ▶ Embarcadero Historic District National Register Nomination, May 2006. [<http://sfport.com/embarcadero-historic-district>]
- ▶ Port of San Francisco Historic Preservation Review Guidelines for Pier and Bulkhead Wharf Substructures
[<http://sfport.com/embarcadero-historic-district>]

- ▶ The Secretary of the Interior's Standards for Rehabilitation: [<http://www.nps.gov/tps/standards/rehabilitation/rehab/index.htm>]

3.6.4 PUBLIC ACCESS TO NORTH APRON AT CHINA BASIN PARK

Public Access with a minimum 8'-0"-width pedestrian thoroughway shall be maintained from China Basin Park to the north apron at the Pier 48 pier shed. See Figures 3.6.1-3.6.2 and refer to Section 3.2.

3.6.5 PUBLIC ACCESS TO SOUTH APRON AT CHANNEL WHARF

Public Access with a minimum 6'-0"-width pedestrian thoroughway shall be maintained on the south apron at the Pier 48 pier shed. This access shall not be impeded adjacent to Channel Wharf. See Figure 3.6.2.

3.6.6 WATER ACCESS

A non-motorized watercraft launch and kiosk shall be provided between China Basin Park and Pier 48.

3.6.7 INTERFACE WITH ADJACENT OPEN SPACES

Refer to Section 4.3 for applicable controls at the intersection of the Pier 48 Apron with Terry A Francois Boulevard, Section 3.2 for China Basin Park, and Section 3.5 for Channel Wharf.



FIGURE 3.6.1 Diagram of the interface of Pier 48, China Basin Park, and Terry A Francois Boulevard. Also see Section 4.3 and 3.2.

CONCEPT PLAN

- 1 Pier 48 Apron: North Apron
- 2 Publicly accessible picnic area (See 3.2)
- 3 Kiosk and non-motorized watercraft launch
- 4 Paseo (See 4.3)
- 5 Pier 48 Apron: South Apron

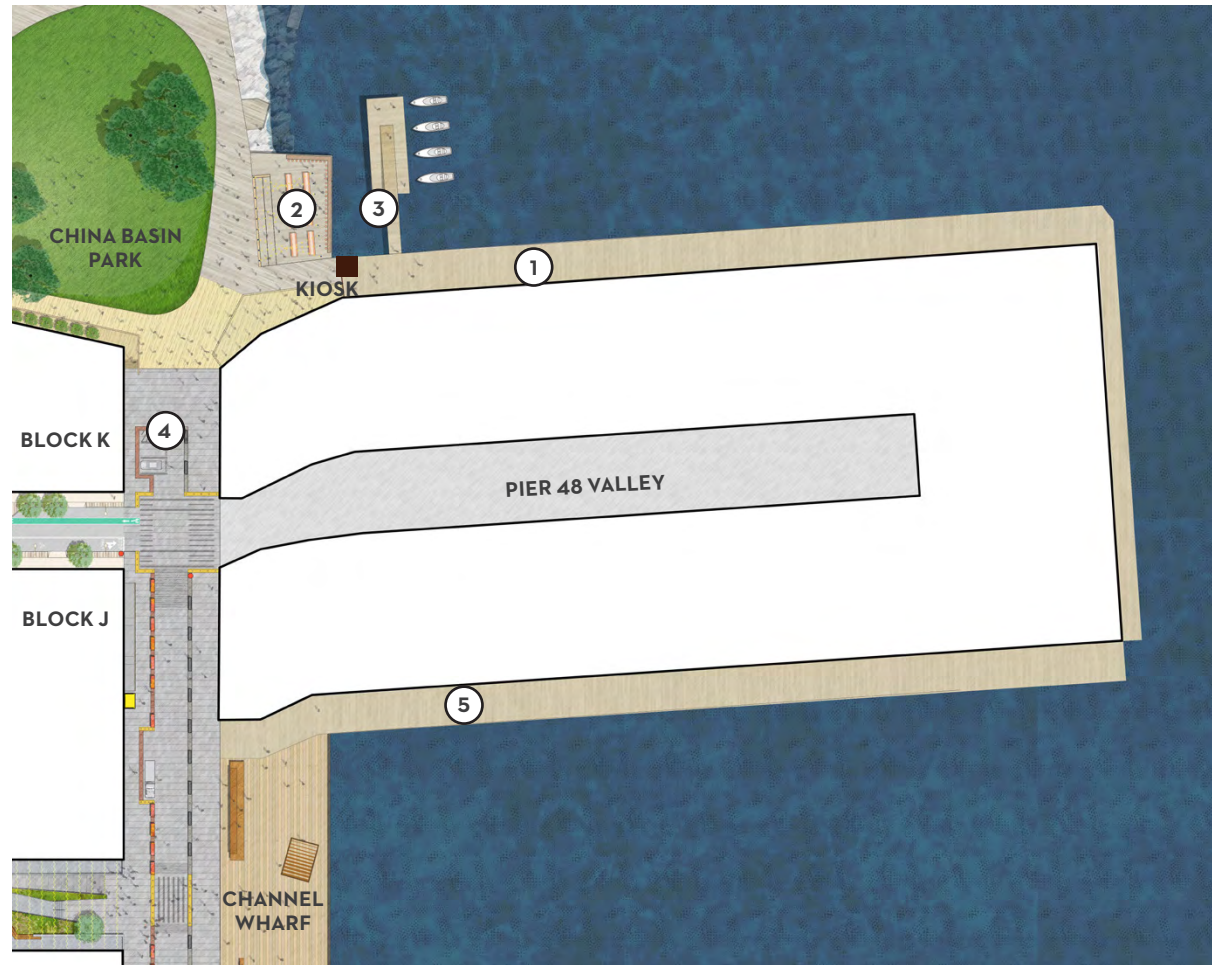


FIGURE 3.6.2 Conceptual Plan of the Pier 48 Apron that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.

3.7 CHANNEL STREET

Read in conjunction with Section 3.3: Mission Rock Square, Section 4.2: Shared Public Way, Section 5.3: Active Edges, and Section 5.10: Neighborhood Street Zone: Non-Residential.

Channel Street will be an important pedestrian gateway to Mission Rock, a key connection from the Mission Bay district through to the waterfront at Channel Wharf.

In addition to its role as a gateway to Mission Rock, Channel Street is an important location for mitigating the impact of strong east-west winds on the Shared Public Way and Mission Rock Square.

STANDARDS

3.7.1 PROGRAM AREAS

A) Active Edges

10' Active Edges along Blocks B and C shall be provided.

B) Plaza with Pedestrian Throughway

12'-minimum pedestrian throughway shall be provided within a 50'-maximum width plaza. Tree Planting and stormwater treatment facilities shall be included in this area.

C) Tree Grove with Pedestrian Throughway

Between the plaza and the Shared Public Way, a grove of trees shall be provided and shall accommodate a 12'-minimum pedestrian throughway.

D) Below-Grade Parking Garage Access (if provided)

If provided, ramp access to a below-grade parking garage shall be accommodated within the Plaza program area described in B) and screened with shade-tolerant planting. Ramp access and ingress/egress lanes shall have a maximum overall width of 38'.

3.7.2 GRADE CHANGE RESTRICTIONS

Slopes shall not exceed 5% longitudinal slope or maximum 2% cross-slope. Grading at Active Edges shall be coordinated with adjacent ground-floor uses.

3.7.3 TREE PLANTING: REQUIREMENTS

First branching height shall be 10' clear, to facilitate views from 3rd Street toward Mission Rock Square while providing enclosure and wind protection. At least 50% of the total area of Channel Street shall have canopy cover at tree maturity.

3.7.4 PROTECTED PEDESTRIAN AREA

Vehicular traffic shall not be permitted on Channel Street. Bollards or equivalent vehicular barrier shall be located along 3rd Street to indicate that Channel Street is a pedestrian-only open space.

GUIDELINES

3.7.5 WIND LOAD ON MOVABLE FURNITURE

Movable furniture, if deployed, should be sturdy enough to withstand wind loads on Channel Street.

3.7.6 SITE FURNISHINGS

Built-in seating should be included in the Tree Grove.

3.7.7 GATEWAY FEATURE: LIGHTING OR ART

Channel Street is an opportunity for facade-mounted or overhead feature lighting or art, to enliven the space and provide identity at night for this key entrance to Mission Rock. See Section 2.9.



An dense tree grove creates an intimate, wind-protected social space and provides wind mitigation for the larger public realm. SOURCE: FLICKR / NOVARTIS AG



This grove of trees with high first branching height facilitates views while providing enclosure for a small public space. SOURCE: ARD HESSELINK / FLICKR



Overhead lights at Larimer Square in Denver create a unique nighttime identity and destination. SOURCE: FLICKR/ AMY ALETHEIA CAHILL

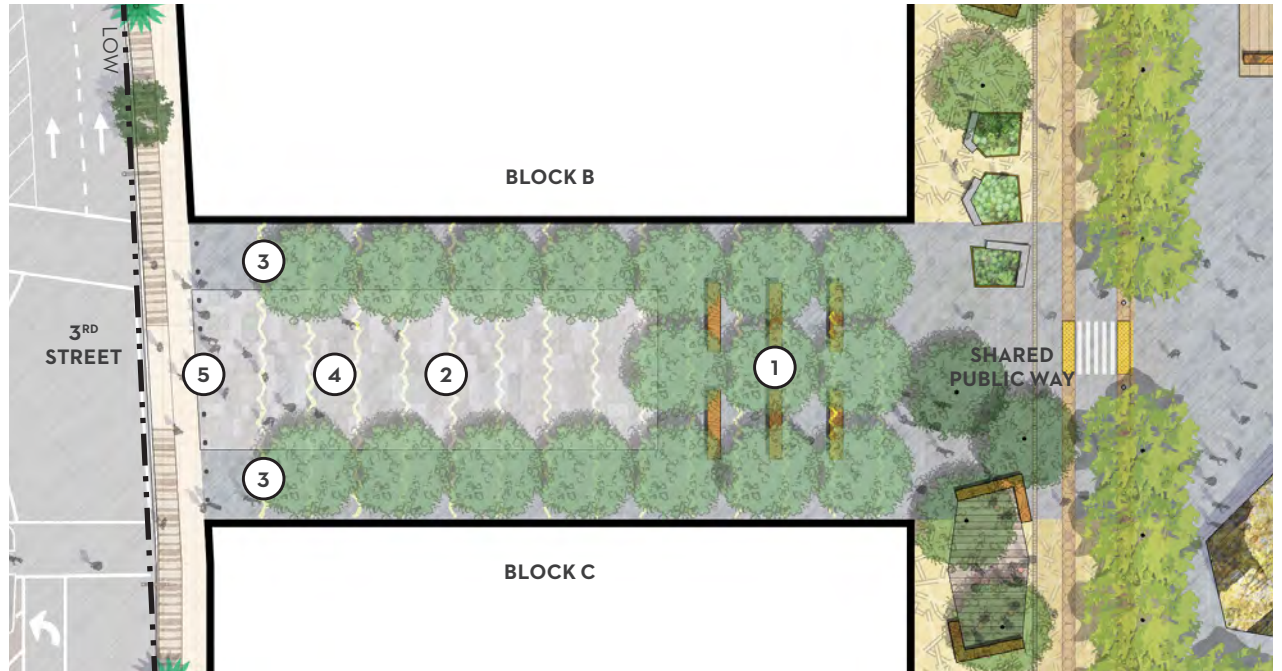


FIGURE 3.7.1 Conceptual Plan of Channel Street that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal.



CHANNEL STREET CONCEPTUAL PLAN

- 1 Tree Grove with Seating
- 2 Plaza with Pedestrian Throughway
- 3 Active Edge
- 4 Gateway Feature: Lighting or Art
- 5 Vehicular Barrier

3.8 KIOSKS + SMALL PARK STRUCTURES

Read in conjunction with Section 3.2: China Basin Park, Section 3.3: Mission Rock Square, and Section 3.6: Pier 48 Apron.

Kiosks and small park structures will be important programming elements of Open Spaces at Mission Rock. These structures should be designed to maximize indoor-outdoor connections and enhance the experience of the public realm through food or retail uses, performance capabilities, and special programming.



This small pavilion, open to a plaza and transparent on several sides, is a precedent for small park structures. © CLEMENT GUILLAUME

STANDARDS

3.8.1 DEFINITIONS

A) Small Park Structures

The Park Cafe and Upper Plaza Structure in China Basin Park and the Neighborhood Square Structure in Mission Rock Square shall be lightweight structures. These may include food service facilities. Total footprint area shall not exceed 1,500 square feet. Where public restrooms per 3.8.1 D) are provided, total footprint area shall not exceed 3,000 square feet. See Figure 3.8.1 for locations.

B) Kiosks

Kiosks shall be small structures with footprint area not to exceed 200 square feet. Public restrooms are not required in kiosks.

C) Recreational Structures

Open-air structures in support of public recreation shall be permitted in Open Spaces.

D) Public Restrooms

Public Restrooms shall be provided within small park structures. In China Basin Park, where there are multiple permitted structures, only one location for public restroom facilities is required.

3.8.2 UTILITIES

All Kiosks and Small Park Structures shall have necessary utilities. Locations indicated in Figure 3.8.1 have been coordinated with site-wide utilities and fire access requirements. Also see Section 3.2.

3.8.3 GROUND-FLOOR RELATIONSHIP TO OPEN SPACES

All Kiosks + Small Park Structures shall have public entrances or large openings at grade on at least two sides, to provide visual connections and access between interior spaces and Open Spaces.

3.8.4 SERVICING

Truck access shall be accommodated to service Kiosks and Small Park Structures.

3.8.5 OUTDOOR SEATING

Each Kiosk and Small Park Structure shall have associated seating areas that are open to the public.



This example of outdoor seating for adjacent retail is publicly accessible and welcoming. SOURCE: FLICKR / R DE JEU

GUIDELINES

3.8.7 FOOD SERVICE

Small Park Structures should be sized to accommodate food service if programmatically desired.

3.8.8 SIGNATURE USES

The Park Cafe and Neighborhood Square Structures should accommodate unique and high-quality uses that will be significant attractions in those open spaces. See China Basin Park and Mission Rock Square controls regarding visual access and Active Edges.

3.8.9 RECREATIONAL STRUCTURES: USES

Recreational structures are encouraged in Mission Rock Square and China Basin Park. These may include, but are not limited to, performance-oriented structures for small or large shows, or structures that support active recreation.



This small performance structure is an example of a recreational structure encouraged in Mission Rock Square and China Basin Park. SOURCE: CMG



LEGEND: LOCATIONS

Kiosks or Small Park Structures should be located in these areas:

SMALL PARK STRUCTURES:

-  Park Cafe Structure
 - Signature Tenant
 - Food Service
-  Neighborhood Square Structure
 - Signature Tenant
 - Food Service or Performance Venue
-  Upper Plaza Structure
 - Food Service or Performance Venue

KIOSKS:

-  Kayak Equipment Rental Kiosk
-  Small Food/Retail Kiosks

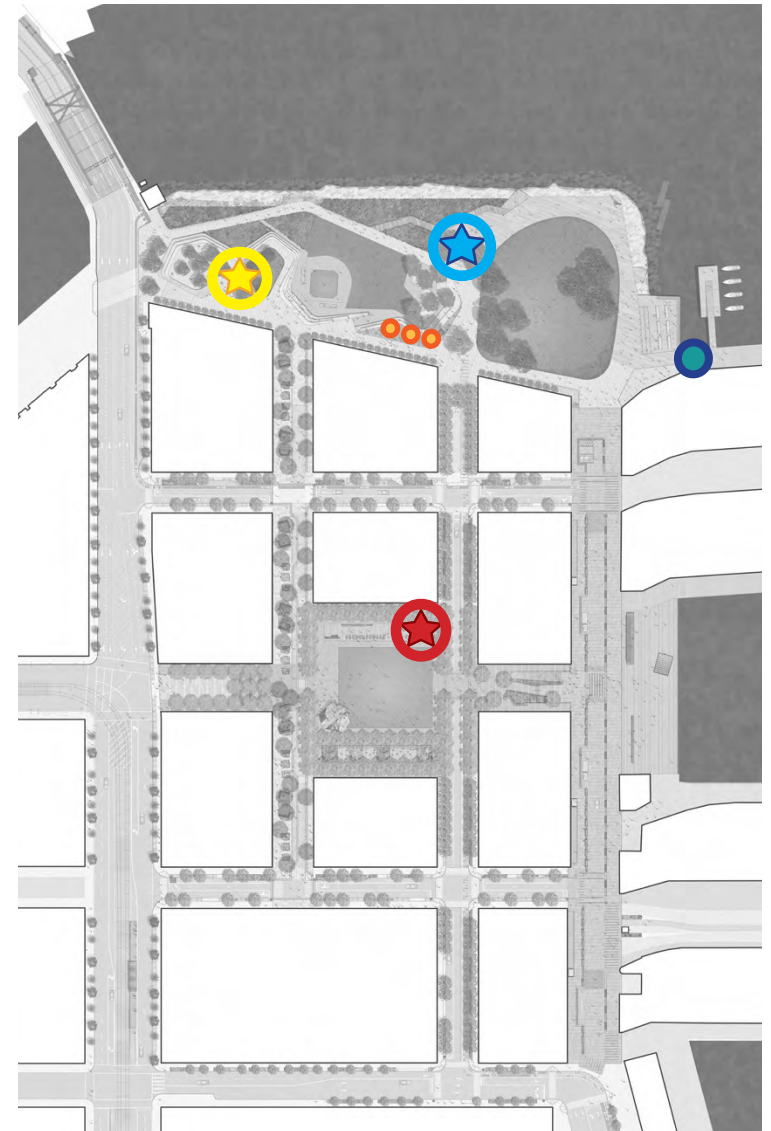


FIGURE 3.8.1 This figure indicates permitted location zones of Kiosks and Small Park Structures in the public realm and corresponds to standard 3.8.1. Also refer to Sections 3.2 and 3.3.



Vibrant, pedestrian-oriented and visually interesting streets will be the setting for a lively, urban, social public life at Mission Rock. With generous and active pedestrian areas, traffic calming, and bicycle connections, the street network will be a walkable grid of small blocks that provide a framework for safe and enjoyable movement through the site for Mission Rock residents, tenants, and visitors.

Because an active and inclusive pedestrian and bicycle experience will be prioritized, the incentive to access the site by vehicle will be diminished.

Shared streets—the Shared Public Way and Terry A Francois Boulevard—will comprise the major north-south pedestrian connections on the site. These streets will be flush across the entire right-of-way, with a shared zone where vehicles will be permitted at very low speeds. Designed to create a vibrant pedestrian experience, retail edges along the two shared streets will activate the public realm, blurring the line between outdoor and indoor life at Mission Rock. Streetlife zones, characterized by Street Rooms—social areas that include planting, fixed and movable furnishings, and kiosks—will complement and support retail spaces of varying sizes.

Neighborhood streets at Mission Rock will be socially and ecologically sustainable; conceived as Complete Streets, they will prioritize safety, multi-modal mobility, and community vitality. These streets will be pedestrian- and bicycle oriented and also accommodate loading and servicing. They will provide a vehicular loop internal to the Mission Rock, as well as primary vehicular connections to and from neighboring streets in Mission Bay. 3rd Street and Mission Rock Street, designed to OCII Mission Bay standards, will be important site gateways for pedestrian, bicycle, and vehicular circulation.

Designed with generous sidewalks, stormwater gardens, and a consistent tree canopy, each street will be integrated with active ground-floor uses across the site. The streets will be urban ecological corridors that filter and convey stormwater and contribute to the city’s urban forest.

04

STREETS

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RELATED CHAPTERS: This chapter is integral to Chapter 5: Ground Floor; together, these chapters describe the character and quality of urban experience at Mission Rock. Each streetscape in this chapter must satisfy its specific requirements as well as the Public Realm requirements described in Chapter 2: Public Realm Network.

4.1 STREET CONTROLS

The streets will contribute to a varied public realm while satisfying above- and under-ground infrastructure needs at Mission Rock. The controls in this chapter establish street zones based on the designations in the Better Streets Plan and the 2015 Subdivision Regulations. Mission Rock's streets will synthesize several aspects of streetlife and street safety:

Pedestrian Experience:

Ground-floor activation will be a key aspect of the pedestrian experience. To ensure interconnection between buildings and the public realm, frontage zone and pedestrian throughway dimensions are coordinated with the Active Edge controls defined in Chapter 5. All streets will include generous pedestrian throughways and high-visibility crosswalks. Street furnishings, planting, and lighting will shape opportunities for public space in the Streetlife Zone, and passenger loading and building servicing will be aggregated to minimize curb cuts and driveways.

Bicycle Safety:

Facilities for cyclists of all ages and skill levels will be provided: protected bicycle facilities, painted bicycle lanes, sharrows, and multi-use trails. Bicycle parking will be located on all streets at building and park entries. Typical conflict points at driveways will be restricted, and street parking is not permitted.

Traffic Calming:

Narrow vehicular lanes will slow traffic, and raised intersections at the Shared Public Way and Bridgeview Street are proposed to prioritize pedestrian and bicycle visibility. Bulb-outs on Exposition Street will create designated loading and servicing areas.

STANDARDS

4.1.1 PUBLIC RIGHT-OF-WAY (ROW)

The public right-of-way must be open to the sky, with the exception of permitted landscape and street-wall encroachments per Sections 3.8 and 6.3.5, and publicly accessible at all times unless subject to maintenance, operations, security and safety rights, or closure by Master Developer for events.

4.1.2 DEFINITIONS: SIDEWALK ZONES

These definitions apply to all streets.

▸ Frontage Zone:
A zone along building frontages for Active Edge uses such as seating, signage, and merchandizing, as defined in Chapter 5. Refer to Chapter 5 and Glossary of Terms.

▸ Pedestrian Throughway:
An unobstructed accessible path of travel for pedestrians as defined in Standard 2.3.1.

▸ Streetlife Zone:
A zone within the sidewalk, equivalent to a Furnishing Zone, that houses elements such as trees, lighting, furnishings, and stormwater treatment gardens.

4.1.3 SHARED STREETS: UNIFIED RIGHT-OF-WAY

The entire length and width of a Shared Street right-of-way (ROW) shall read as a single, unified space, with a comprehensive paving strategy that encourages safe pedestrian movement across the entire right-of-way. Shared Streets shall be designed in accordance with applicable accessibility codes and guidance, incorporating design and spatial cues as well as material and visual/tactile detection strategies to ensure pedestrian safety.

4.1.4 STREET MARKINGS AND SIGNAGE

Street markings and signage shall be in accordance with City and Port standards for street and intersection markings. See Sections 2.3, 2.4, and 2.10 and refer to Infrastructure and Transportation Plans.

4.1.5 ABOVE-GRADE UTILITY COORDINATION

Whenever possible, utilities shall not be visible above-ground in the public realm, and their location shall be coordinated with tree and streetscape element spacing. Refer to Infrastructure Plan.

4.1.6 BICYCLE PARKING: LOCATIONS

Class II bicycle parking shall be distributed across the site, provided in publicly accessible interior locations and throughout the public realm. In the public realm, bicycle parking shall be provided at building and park entries within the Streetlife Zone, in Paseos, and in Open Spaces as delineated in Figure 4.1.1, with priority given to key bicycle circulation routes noted in Section 2.4. Bicycle parking locations in the public realm shall be highly visible and well-lit.

Block

SIDEWALK

Frontage Zone

Pedestrian Throughway

Streetlife Zone

ROAD

Travel, Loading Lanes

Bicycle Facility

Streetlife Zone

SIDEWALK

Pedestrian Throughway

Frontage Zone

Block

FIGURE 4.1.1 Neighborhood Streets: Standard Zones

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MISSION ROCK

DESIGN CONTROLS

CONFIDENTIAL REVIEW DRAFT 9/11/17

GUIDELINES

4.1.7 TREE PLANTING: WIND MITIGATION

Trees should be adapted to the particular microclimate and shade conditions of each street, and sited with consideration of localized wind effects. See Section 2.7 for urban forest controls and species criteria.

4.1.8 VISUAL PERMEABILITY ON SHARED STREETS

Streetscape design on curbless shared streets should allow visual permeability and regular east-west pedestrian connections across the entire right-of-way.

4.1.9 STREET FURNISHINGS: PERFORMANCE CRITERIA

Street furnishings, located in the Streetlife Zone, should be a mix of fixed and movable elements in accordance with specific standards and guidelines for each street. These elements should contribute to wayfinding and identity. The performance criteria below are provided in lieu of a specific palette; also see Section 2.6.

A) Seating

Seating should be an inviting element allowing visual permeability and social use. Special street furnishings are encouraged to emphasize each street's unique character.

B) Accessibility

Street furnishings should be universally accessible, or modifiable to meet or exceed minimum accessibility requirements.

C) Trash Receptacles

Trash receptacles should be standardized across the site. Location of selected receptacles should not impede visual access or mobility.

D) Bicycle Racks

Bicycle racks should be standardized on all internal site streets, with the exception of Bridgeview Street per Section 4.4.



This oversize bench is an example of inviting seating that allows for social use and visual permeability.

SOURCE: CMG

LEGEND: STREETS LOCATION MAP

-  Shared Streets
-  Neighborhood Streets
-  Paseos
-  Open Spaces
-  Chapter 4 Section

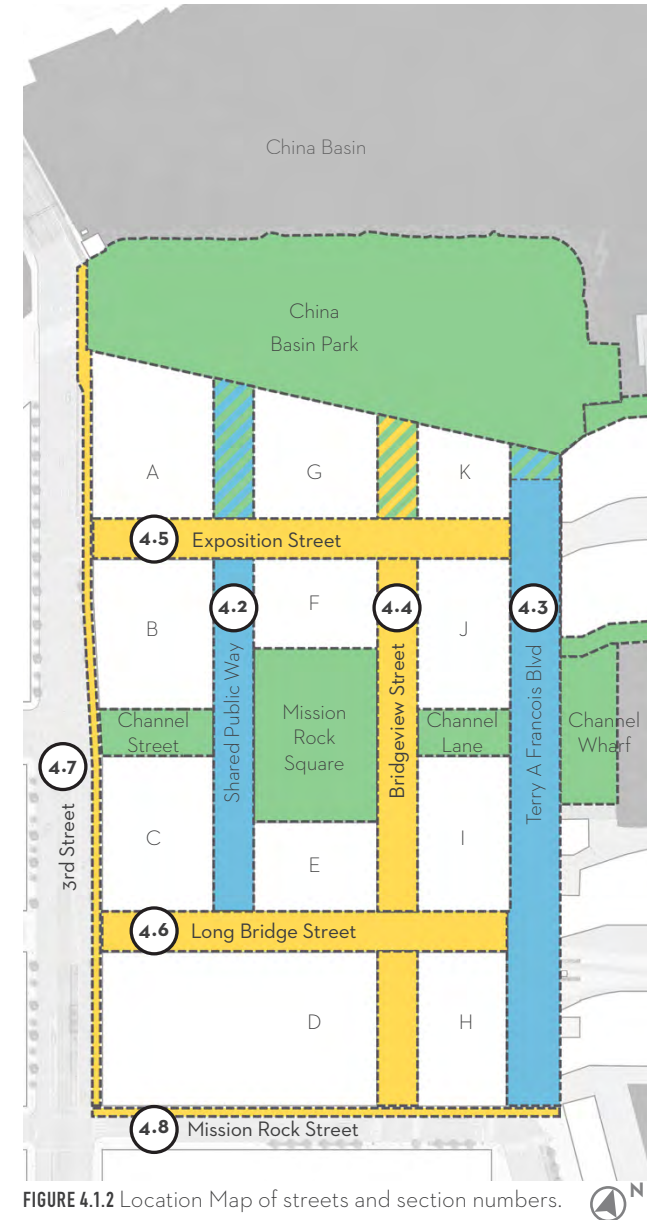


FIGURE 4.1.2 Location Map of streets and section numbers.

4.2 SHARED PUBLIC WAY

Read in conjunction with Section 5.1: Active Edges and Section 5.6: High Retail Zone. The Shared Public Way must also satisfy the requirements described in Chapter 2: Public Realm.

The Shared Public Way will be a promenade linking important site anchors such as Mission Rock Square and China Basin Park to site arrival points for MUNI, vehicles, and bicycles, as well as the main site parking garage on Block D.

Shared public ways are curbless streets that privilege pedestrian movement, following traditional street planning approaches in Europe and other pedestrian-friendly urban centers. The Shared Public Way at Mission Rock will be a dynamic space with active ground-floor retail, street rooms, stormwater gardens, and tree groves that will create a lively and unique environment. These design elements will also serve as cues to differentiate pedestrian-dedicated areas from the shared pedestrian/vehicular zone.

Ground-floor retail along the Shared Public Way will be diverse in design and program, enlivening the street with storefronts, restaurants, and cafes that will spill out onto the street in generous dedicated Active Edges. Vehicles on the Shared Public Way will be limited to northbound travel for drop-off, pickup, and deliveries.

STANDARDS

4.2.1 ACTIVE EDGES

Active Edges shall be located along the retail frontages on both sides of the Shared Public Way. Uses are defined in Sections 5.1 and 5.6. Active Edges shall include the following zones:

A) Pedestrian Throughway

An unobstructed, 6'-minimum clear width path of travel for pedestrians shall be maintained within the Active Edges on both sides of the right-of-way as noted.

B) Furnishing Zone

A 6'-0" maximum zone for furniture, signage, and merchandizing with tree planting shall be included in the 12' active edge on the east side of the ROW.

C) Frontage Zone

On the west side of the street, a 2'-0" zone shall be maintained along building frontages for Active Edges uses described in Chapter 5. .

4.2.2 STREETLIFE ZONE

The Streetlife Zone will be a 20'-maximum width zone located along the Shared Zone for its entire length. This zone will provide for safe east-west connections across the ROW. This zone shall include:

A) Street Rooms

Special landscape areas with unique paving, built-in furniture, and ample space for flexible seating, small newsstands, and kiosks.

B) Tree Groves

Finely textured tree groves that provide dappled shade and enclosure along the entire Shared Public Way. See 4.2.12 and 4.2.14, as well as Section 2.7 for tree performance and design criteria.

C) Stormwater Treatment Gardens

Stormwater treatment infrastructure that functions ecologically, aesthetically, and programmatically, designed to maximize permeability of movement and view and to encourage lingering. Integrated seating intimate enough for quiet contemplation shall be included.

4.2.3 SHARED ZONE

The Shared Zone shall be a 20'-minimum clear zone shared by pedestrians and vehicles. It shall include a non-meandering 12' travel lane and will be separated from dedicated pedestrian-only areas with visual and tactile detection cues per 4.2.5. Crosswalks shall be marked at regular intervals. This zone shall include:

A) One-way Traffic

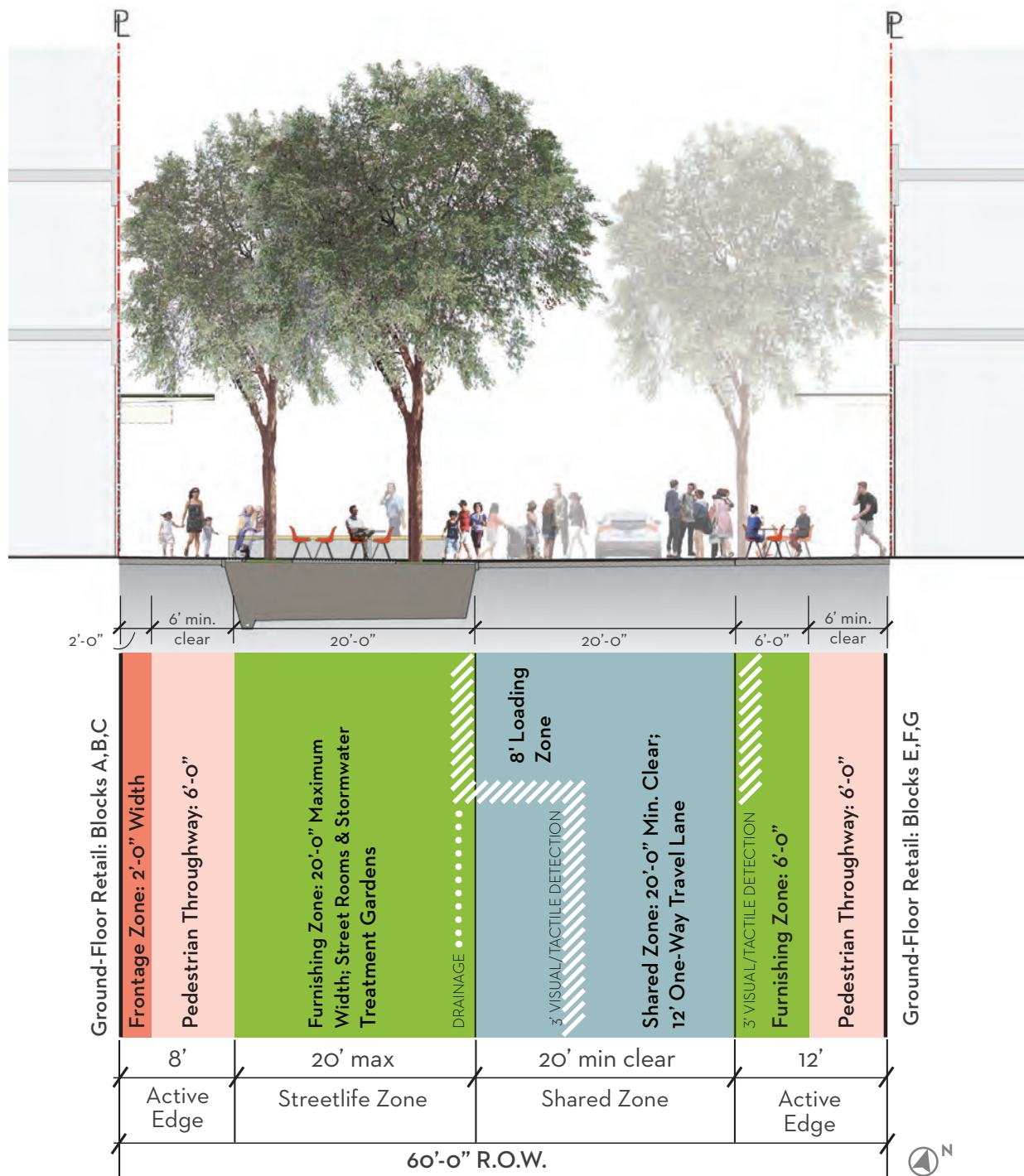
Vehicular traffic for drop-off and loading only shall be permitted one-way northbound, from Long Bridge Street to Exposition Street. North of Exposition Street, the street becomes a paseo; emergency vehicle access shall be permitted on the paseo between Blocks A and G. No vehicular access is permitted to or from Channel Street. The Shared Public Way may be closed to vehicular traffic during special events.

B) Delineated Loading Areas

Paving and demarcation of 8'-wide loading zones shall be distinct from the 12'-wide vehicular travel lane.

4.2.4 VEHICULAR INTERSECTIONS

Raised intersections with visual/tactile detection marking the pedestrian route shall be provided at Exposition and Long Bridge Streets and will comply with applicable accessibility guidance.



STANDARDS

4.2.5 VISUAL/TACTILE DETECTION CUES

Visual/tactile detection cues shall differentiate the Shared Zone travel lane and loading zones from dedicated pedestrian areas; these shall be coordinated in consultation with applicable codes and accessibility guidance and include the following:

A) Paving Strategies

Material tactics, including contrasting paving color, texture, or material type, shall ensure safe pedestrian connections across the Shared Zone. These cues shall delineate the shared zone for its entire length. See (C) in Figure 4.2.2. Also see Guidelines 4.2.10 and 4.2.11 and Section 2.6.

B) Spatial Cues

Incorporate design and spatial cues such as a 'gateway' to the Shared Zone from Long Bridge Street—a constricted vehicular entry point with physical elements that will provide a visual/physical cue for drivers to slow down.

4.2.6 STREETLIFE ZONE PERMEABILITY

Maintain a minimum distance of 16' between street rooms and stormwater gardens, and 20' minimum spacing between tree trunks, within the Streetlife Zone. See Figure 4.2.2.

4.2.7 QUALITY OF MATERIALS

The Shared Public Way shall be constructed with high-quality paving, lighting, and built-in street furnishings.

GUIDELINES

4.2.8 STREET ROOMS

A) Permanent/Built-In Furnishings

Street rooms should contain high-quality built-in furnishings that encourage lingering; these elements should not be a barrier to movement across the right-of-way.

B) Allowable Uses

Encouraged uses include but are not limited to flexible seating, small newsstands and kiosks, outdoor dining areas, and small events or performances.

4.2.9 VARIETY OF STREET FURNISHINGS

The Shared Public Way should have a variety of seating types and scales across zones. Active Edges at building frontages should provide opportunities for outdoor seating curated by individual businesses along the Shared Public Way. A minimum of 6' pedestrian clearance must be maintained at all times at Active Edges. Also see Sections 5.1 and 5.6.

4.2.10 PAVING : A SINGLE FIELD

The Shared Public Way design concept should include a single, coplanar field of paving between building facades. Tactics to differentiate shared zones from dedicated pedestrian zones could include, but are not limited to, shifts in color, texture, or paver size within the same language of the overall field. See Figure 4.2.2 for one example of differentiation within a single field.

4.2.11 PAVING : DELINEATION DETAILS

Highly detailed paving should scale the Shared Public Way and create an urbane character without interrupting the feeling of a unified space.

A) Separation of Shared Zone from Streetlife Zone

The Streetlife Zone should be delineated from the Shared Zone by a trench drain or similar linear drainage element. See (A) in Figure 4.2.2.

B) Street Room Paving

Street rooms should have special materials and paving, such as wood or decomposed granite, to delineate their unique use. See Figure 4.2.7 Diagrammatic View at Block E and (B) in Figure 4.2.2.

C) Separation of Shared Zone from Active Edge

A 3'-minimum width buffer should be defined within the Active Edge on the east side of the street. This buffer should include contrasting paving, lights, and trees to delineate the Active Edge from the Shared Zone. See 4.2.5-A.



This publicly accessible flexible seating at retail is a precedent for the Shared Public Way's generous Active Edges and Street Rooms. SOURCE: CMG



A single field of paving across the right-of-way creates a unified space. SOURCE: ONITSUKAMAN / COMMONS.WIKIMEDIA.ORG



A special trench drain delineates uses or zones within a single field of paving. SOURCE: NEWTOWN GRAFFITI / FLICKR

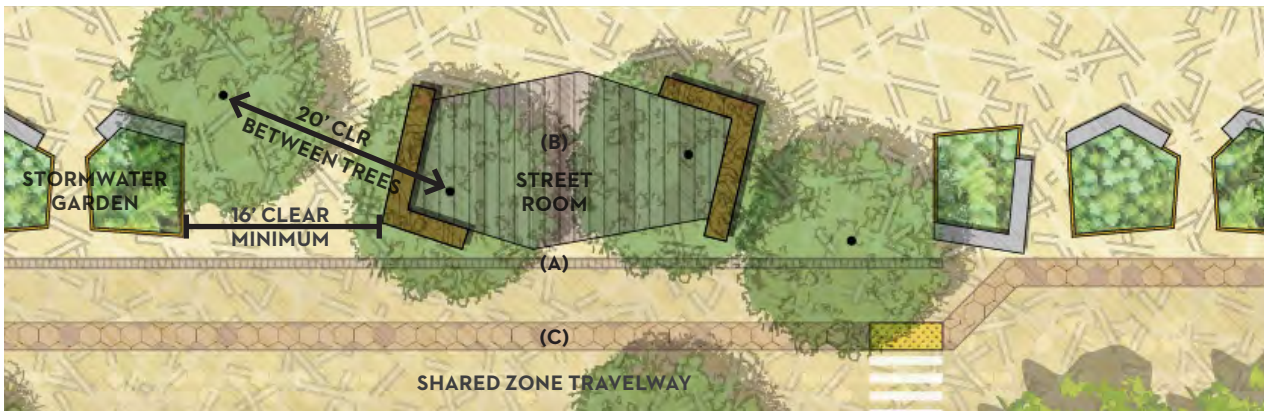


FIGURE 4.2.2 Enlargement plan showing minimum clearances for Streetlife Elements as defined in Standard 4.2.6, and paving relationships and delineation details as described in Guideline 4.2.11.



An example of a street room with high-quality permanent furnishings. © TONY CARO ARCHITECTURE

STANDARDS

4.2.12 SHARED PUBLIC WAY TREE PLANTING

A) Minimum Tree Size

Trees shall be minimum 48" box size at installation.

B) Minimum Tree Quantity

There shall be a minimum of 35 trees planted on the Shared Public Way.

C) Minimum Clear Trunk Height at Shared Zone

Trees adjacent to the Shared Zone shall have a minimum of 13'-6" clearance, measured from the finished grade of the travelway, where branches overhang the Shared Zone.

D) Minimum Spacing

Trees shall have 20'-minimum clear between trunks. See Figure 4.2.2.

GUIDELINES

4.2.13 LIGHTING

Lighting is a key component for safety and the character of a space at night. The Shared Public Way should have a range of lighting strategies that work together to create an intimate and dynamic nighttime identity. These strategies may include Facade-Mounted Feature Lighting, Integral Lighting in Furniture or Paving, Ground-Level Ambient Lighting, and 'Moonlighting' through the tree canopy. See Section 2.9 for suggested footcandle ranges and uniformity guidelines.

4.2.14 TREE PLANTING DESIGN CRITERIA

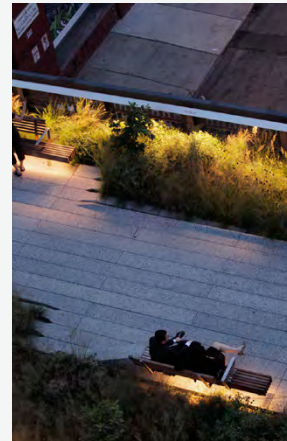
Trees on the Shared Public Way should be a single species of finely textured tree with minimum clear trunk of 10 feet, or 13'-6" where branches overhang the Shared Zone. Trees should be arrayed in a staggered layout that creates a grove within the Street Room Use Zone and within the buffer separating the east side Active Edge and the Shared Zone. See 4.2.12 and Section 2.7 for further performance, design, and species selection criteria.

A range of lighting types should be used on the Shared Public Way.



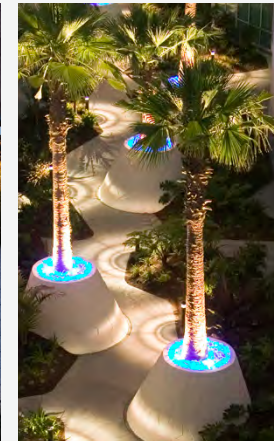
Facade-Mounted Lighting

SOURCE: CMG



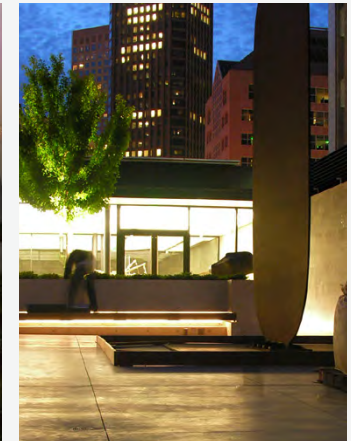
Integral Lighting: Furniture

SOURCE: WIKIPEDIA / EMILE DUBUISSON



Moonlighting

SOURCE: CMG



Ground-Level Ambient Lighting

SOURCE: CMG

GUIDELINES

4.2.15 STORMWATER GARDEN CRITERIA AND SUGGESTED PALETTE

Each garden should be considered for its aesthetic and ecological function. Stormwater gardens should not include trees.

A) Species Performance Criteria

Plant species should meet the following performance criteria:

- Tolerant of drought and periodic inundation
- Seasonal and ornamental impact
- Native, or climate-appropriate if non-native
- Partial shade-tolerant
- High habitat value

B) Visual and Spatial Permeability

Species should be less than 30" in height to maximize visual and spatial permeability.

C) Suggested Palette

The suggested palette in Figure 4.2.9 satisfies these criteria. Species with (*) indicate plants with high habitat value.

Source: SFPUC Stormwater Design Guidelines, Appendix D

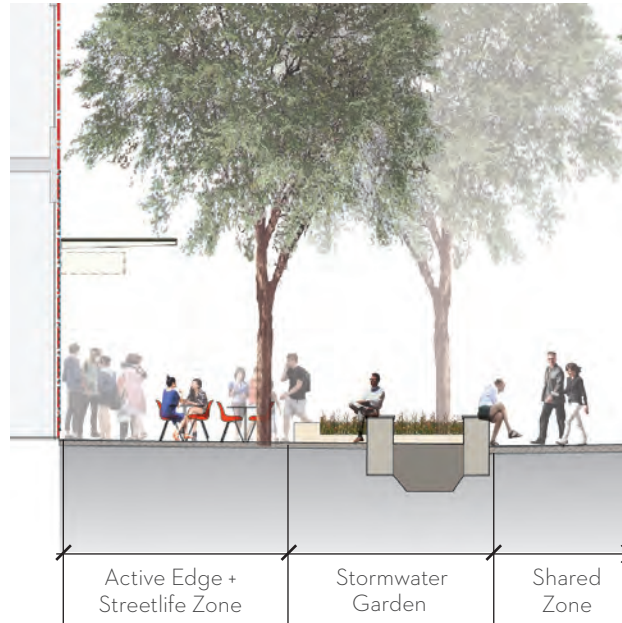


FIGURE 4.2.3 Section at Stormwater Garden

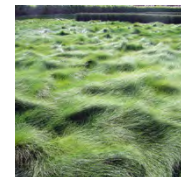
Suggested Stormwater Garden Palette



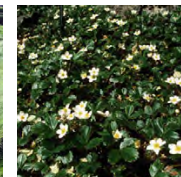
*Carex praegracilis**
Clustered Field Sedge



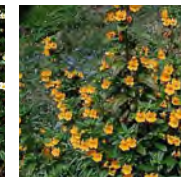
*Carex tumulicola**
Berkeley Sedge



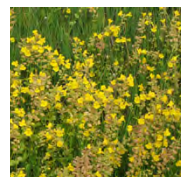
*Festuca rubra**
Creeping Red Fescue



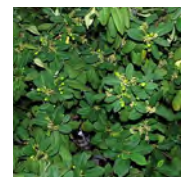
Fragaria chiloensis
Coastal Strawberry



*Mimulus aurantiacus**
Sticky Monkeyflower



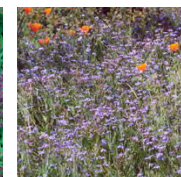
*Mimulus guttatus**
Creek Monkeyflower



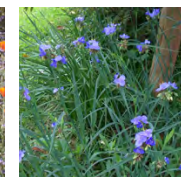
Rhamnus californica
(prostrate cultivar)*
Dwarf Coffeeberry



*Salvia spathacea**
Hummingbird Sage



Sisyrinchium bellum
Blue-Eyed Grass



Tradescantia virginiana
Virginia Spiderwort

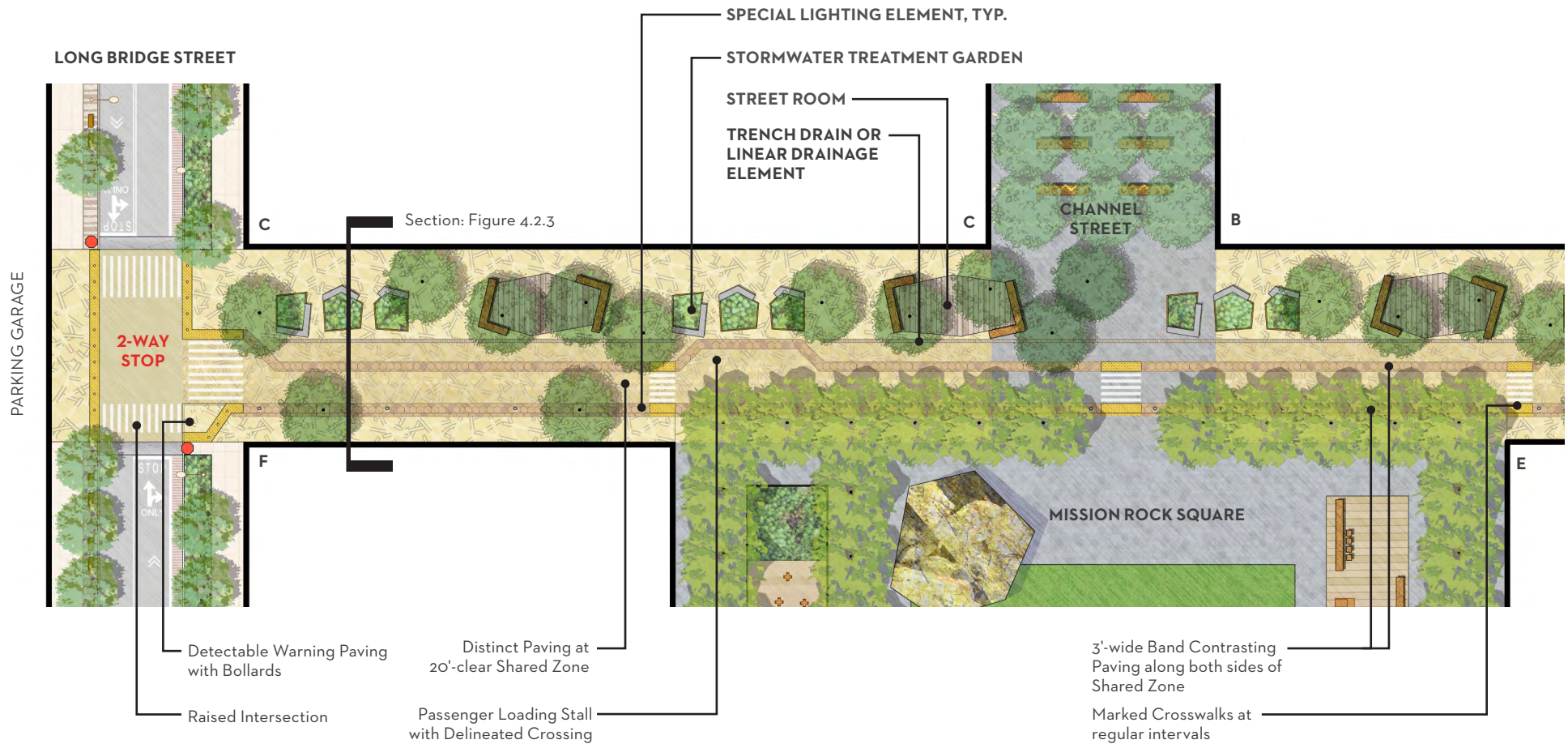
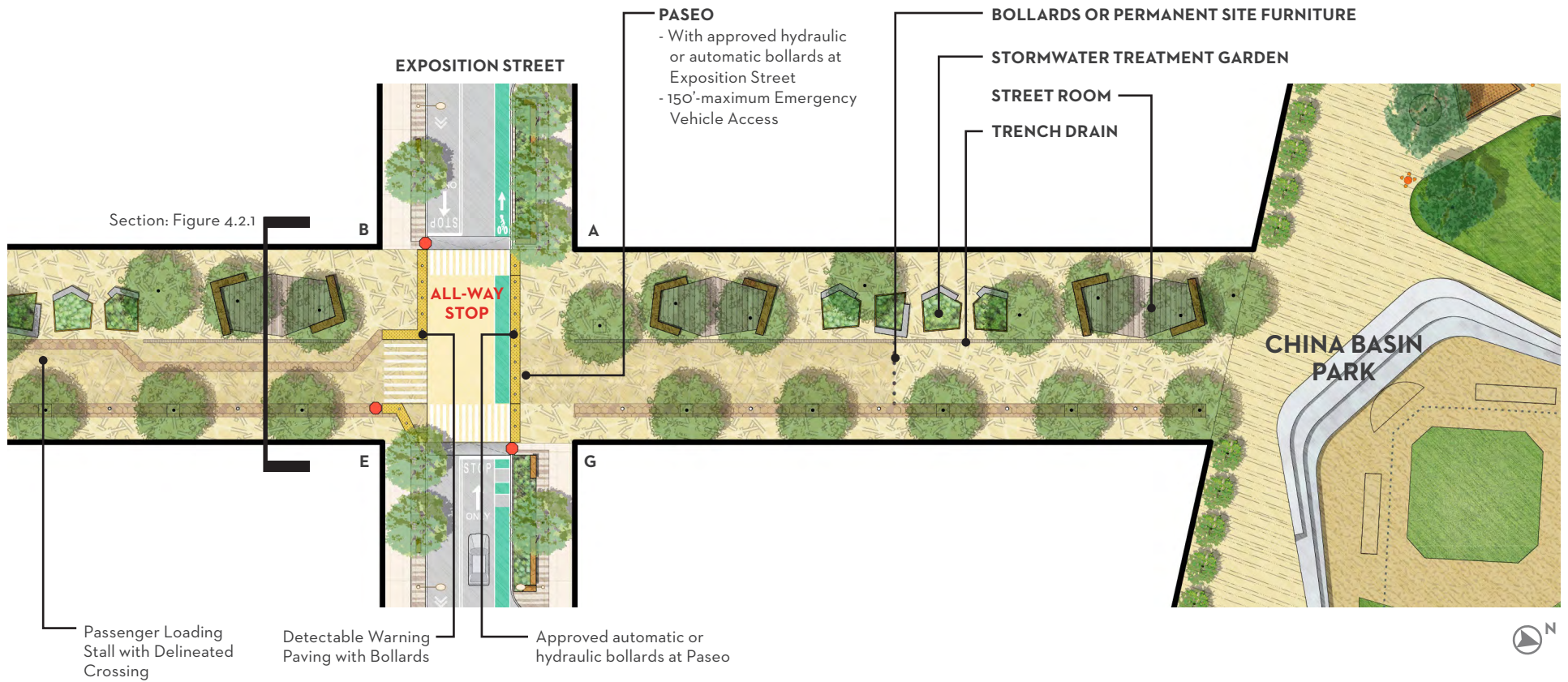


FIGURE 4.2.4 Shared Public Way Conceptual Plan that satisfies the controls herein. This is provided for illustrative purposes only and does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.



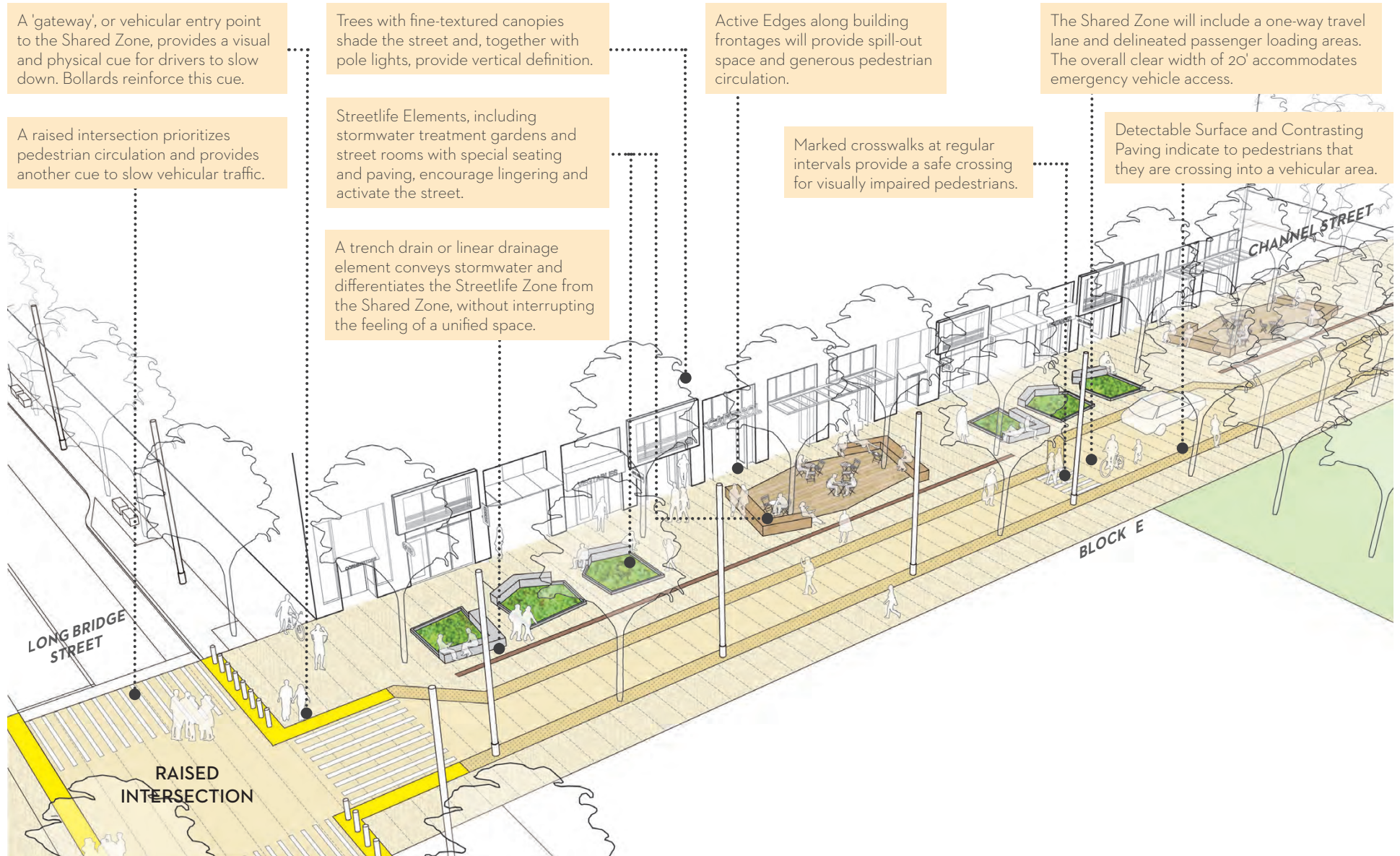


FIGURE 4.2.5 Conceptual diagram of Shared Public Way at Block C.



STREETLIFE ZONE

- Street rooms contain both built-in and movable seating
- Temporary newsstands + kiosks permitted within street rooms
- Special, high-quality paving and details create an urbane character and pedestrian scale

SHARED ZONE

- Single field of paving between building facades privileges pedestrian experience and unifies the right-of-way
- Vehicular area defined by slot drain and slight tonal shift in paving color
- Trees and special streetlights provide vertical definition and identity

ACTIVE EDGES

- Movable seating, signage, and other temporary uses curated by individual businesses
- Refer to Chapter 5 for specific Active Edge controls

FIGURE 4.2.6 Diagrammatic rendering of conceptual plan at Blocks C/E looking north to China Basin Park. This is provided for illustrative purposes only and does not represent a design proposal.

4.3 TERRY A FRANCOIS BOULEVARD

Read in conjunction with Section 3.5: Channel Wharf, Section 3.6: Pier 48 Apron, & Section 5.8: Working Waterfront Zone. Terry A Francois Boulevard must also satisfy the requirements described in Chapter 2: Public Realm.

Terry A Francois Boulevard will be a unique Working Waterfront that celebrates and supports active maritime, industrial, and production uses on the waterfront. Terry A Francois Boulevard will also connect the Bay Trail and Blue Greenway to China Basin Park and the Embarcadero to contribute to uninterrupted public access along San Francisco's eastern waterfront.

Connecting the Mission Rock development to its active and historical maritime context, the expression of craft and industrial character along Terry A Francois Boulevard will be central to the personality and experience of this working waterfront.

The public realm and ground floor controls along Terry A Francois Boulevard are tightly coordinated to maximize access and to strengthen the relationship among waterfront public use and working waterfront activities.



This promenade, with zones delineated by contrasting paving color and texture and generous benches, is a precedent for the Buffer/Furnishing Zones. © SIMON DEVITT

STANDARDS

4.3.1 WATERFRONT ZONE

Located adjacent to Pier 48, Pier 50, and Channel Wharf, the Waterfront Zone shall include the following zones within a minimum cumulative width of 22 feet, measured from Pier 50:

A) Bay Trail / Blue Greenway

A shared trail located along the east side of the entire Terry A Francois Boulevard ROW, with a 16'-minimum clear path of travel for bikes and pedestrians.

B) Buffer/Furnishing Zone

A 3'-minimum width buffer comprised of furnishings and iconic lighting, located along the entire length of the Shared Zone. This zone will have contrasting paving and other cues to be coordinated with applicable accessibility codes and guidance.

4.3.2 SHARED ZONE

The Shared Zone will be a 26'-minimum width zone shared by pedestrians and vehicles from Mission Rock Street to Exposition Street. The Shared Zone will be separated from the Waterfront Zone and the Building-Front Zone with flush curbs, and with buffers per 4.3.1-B and 4.3.3-B.

4.3.3 BUILDING-FRONT ZONE

The Building-Front Zone shall be contained within a maximum width of 24' adjacent to Blocks H, I, and J. See 4.3.4 for controls adjacent to Block K. The Building-Front Zone will include:

A) Pedestrian Throughway

12'-minimum width pedestrian circulation with 6' minimum pedestrian throughway at street grade along Blocks H, I, and J. Where Elevated Walkways are provided as

described in Chapter 5, accessible circulation and a dock lift or similar apparatus at the building face shall be provided within this zone as encroachments in the ROW.

B) Buffer/Furnishing Zone

A 3'-minimum width buffer comprised of furnishings, located along the entire length of the Shared Zone. This zone will have contrasting paving and other visual/tactile detection cues for pedestrians, to be coordinated with applicable accessibility codes and guidance.

C) Loading Area

A 9'-wide loading area that accommodates a maximum truck size of SU-30, located adjacent to the Shared Zone at Blocks H, I, and J.

D) Streetlife Zone

A 9'-wide spill-out space, located adjacent to the Pedestrian Throughway.

4.3.4 PASEO NORTH OF EXPOSITION STREET

Between Block K and Pier 48, Terry A Francois Boulevard will become a paseo that will accommodate emergency vehicle access for up to 150' of its length and include the following zones:

A) Waterfront Zone at Pier 48

A 28'-wide zone, located adjacent to the Pier 48 bulkhead, shall accommodate the Bay Trail / Blue Greenway per 4.3.1-A and additional public space for Pier 48.

B) Vehicular Turnaround + Loading Spaces

A vehicular turnaround with one loading space, accessed from the Shared Zone.

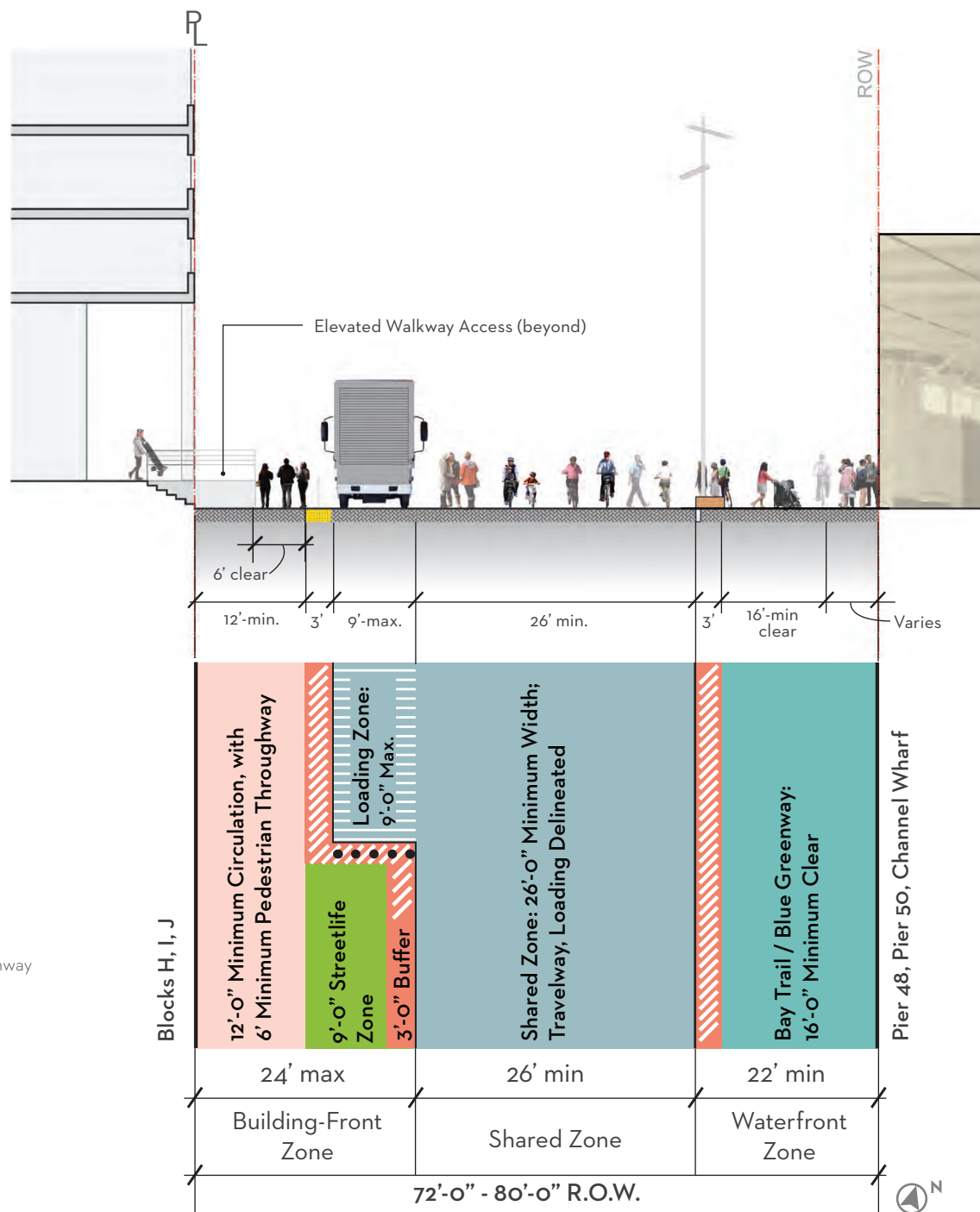
C) Pedestrian Throughway

A 6'-minimum clear path of travel for pedestrians, located at Block K.

TERRY A FRANCOIS BOULEVARD

- Buffer
- Streetlife Zone
- Circulation + Pedestrian Throughway
- Blue Greenway
- Shared Zone

FIGURE 4.3.1 Terry A Francois Boulevard
Section and Zones Diagram



STANDARDS

4.3.5 STREETScape ELEMENTS: REFERENCE STANDARDS

Streetscape elements are an important aspect of experience and character of Terry A Francois Boulevard. In addition to these standards, refer to Port standards per Standard 2.10.2, and 4.3.8.

A) Placement

Streetscape elements shall be placed within the Buffer Zones described in Standards 4.3.1 and 4.3.3 at regular intervals as determined by applicable accessibility guidance. Additional permanent streetscape elements in the Waterfront or Building-Front Zones, if desired, shall not block throughway areas or impede circulation along Terry A Francois Boulevard.

B) Expression of Production Character

Street furnishings, especially benches, along Terry A Francois Boulevard shall express the industrial character of the Working Waterfront Typology. Industrial and salvaged materials are strongly encouraged for these elements. Also see 4.3.6.

C) Consistency of Elements

Trash receptacles and bicycle racks shall be consistent for the length of this streetscape. Benches may be varied.

4.3.6 FACILITATING A PRODUCTION ENVIRONMENT

Design concepts shall facilitate and celebrate the production aspects of the Working Waterfront Typology. This includes functional requirements, including durable paving materials per 4.3.7 and Section 2.2, truck turning operations, and aspects of character expressed through the design of streetscape elements per 4.3.5 and 4.3.8.

4.3.7 PAVING

Terry A Francois Boulevard paving shall be predominantly a consistent field that emphasizes the coplanar condition of the right-of-way and unites the three zones identified in Figure 4.3.1.

A) Shared Zone Differentiation

Tactics to differentiate the shared zone could include shifts in color, texture, or paving module within the same language of the overall field. Paving shall be durable for truck traffic and enhance the industrial character of the street.

B) Intersection and Crosswalk Detectable Surface Paving

Intersection and crosswalk treatments, including aural warning pavement and special treatments, shall be incorporated to increase pedestrian visibility and provide warning cues for approaching traffic. These shall comply with Sections 2.3 and 2.4 and shall be ADA-compliant if proposed within the pedestrian throughway.



This example of a consistent field of paving is a precedent for the wharf character of the Working Waterfront. SOURCE: BUREAU LUBBERS



Special intersection treatments increase visibility and provide an opportunity for additional wayfinding. SOURCE: SOUTHOFSOUTH.ORG/BEN ELLIOTT



Aural/'noise' paving: integrated 'rumble strips' provide an aural warning cue for approaching traffic at intersections and turns. NO SOURCE FOUND

GUIDELINES

4.3.8 STREET FURNISHINGS

A) Permanent Street Furnishings

Permanent street furnishings should be unique to Terry A Francois Boulevard, designed specifically for this space as an artists' competition or by the designer. Legibility and continuity of street furnishings along the entire length of Terry A Francois Boulevard is strongly encouraged, but these elements may be sited to create variety and rhythm among blocks. Industrial and/or salvaged materials are strongly encouraged for street furnishing elements. See 4.3.5.

B) Temporary Street Furnishings

Temporary Furnishings may be located anywhere within the Waterfront or Building-Front Zones as long as minimum clearances are maintained and truck turning operations are not impeded. Refer to Infrastructure Plan.

4.3.9 PUBLIC SPACE AT BUILDING FRONTAGES

An elevated walkway, where it occurs, should create a unique interface with the public realm. Design concepts should consider integrating seating at this grade change.

4.3.10 LIGHTING

Lighting should be a mast light or distinctive pole that is unique to Terry A Francois Boulevard. This fixture should not contribute to light pollution. See Section 2.9 for suggested footcandle ranges and uniformity.

4.3.11 OVERHEAD ENCLOSURE

Canopies shading the public realm are allowed along Terry A Francois Boulevard within the Building-Front Zone. Trellises, if provided, should not interfere with functional requirements and clearances in the Building-Front Zone. Trees are not permitted on Terry A Francois Boulevard.



This loading dock provides public seating along a building frontage. SOURCE: CMG



This outdoor workshop is an example of a permitted use in the Streetlife Zone or Elevated Walkway. © MICHAEL VAN VALKENBURG ASSOCIATES, INC.



A cast-iron bench expresses industrial character. SOURCE: CMG



An example of Permanent street furniture with industrial character and scale. © SIMON DEVITT



An example of distinctive feature pole lights along a waterfront promenade. © WWW.SELUX.COM



A theatrical overhead enclosure provides shade and spectacle. © NIGEL YOUNG

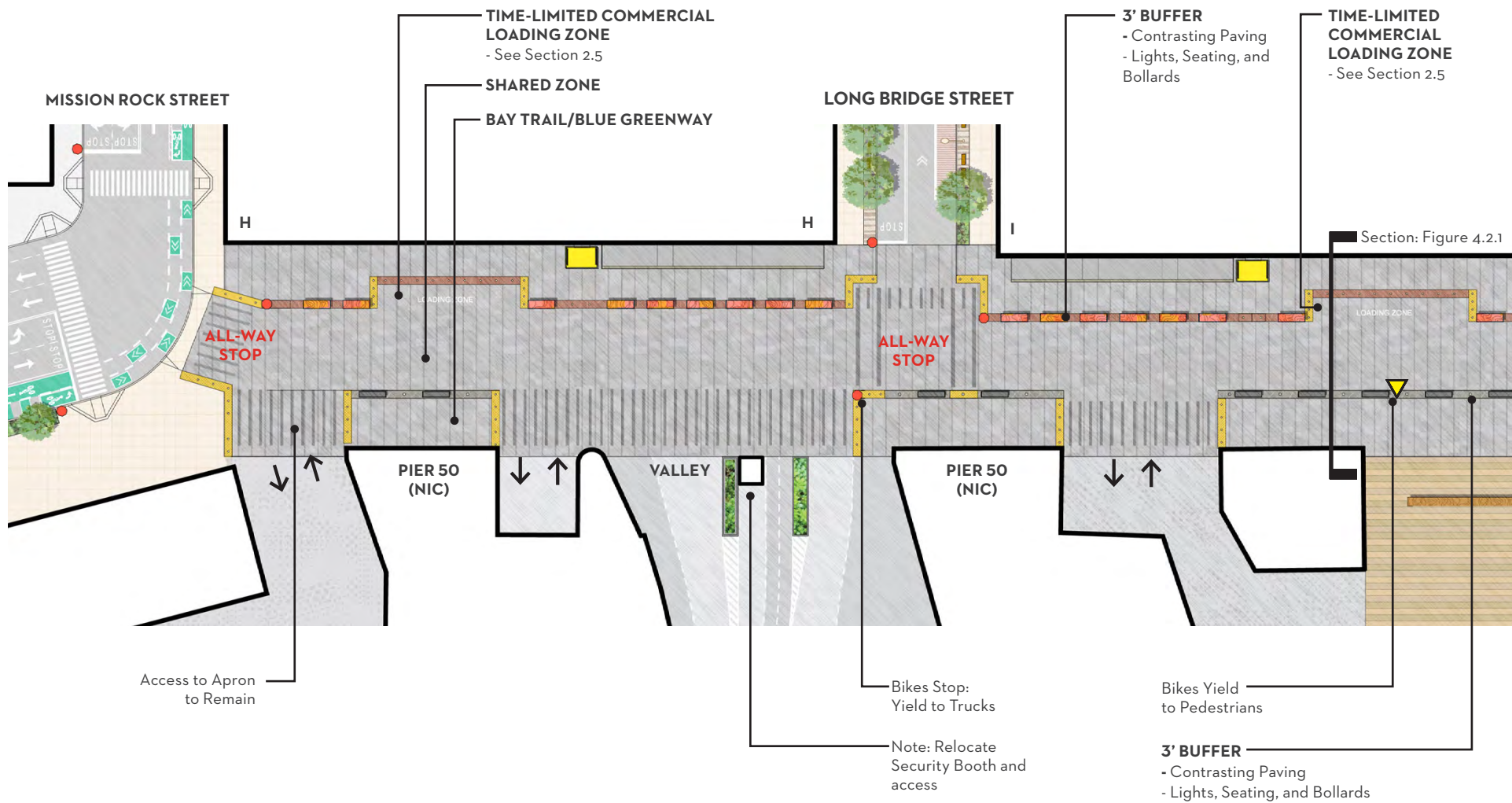
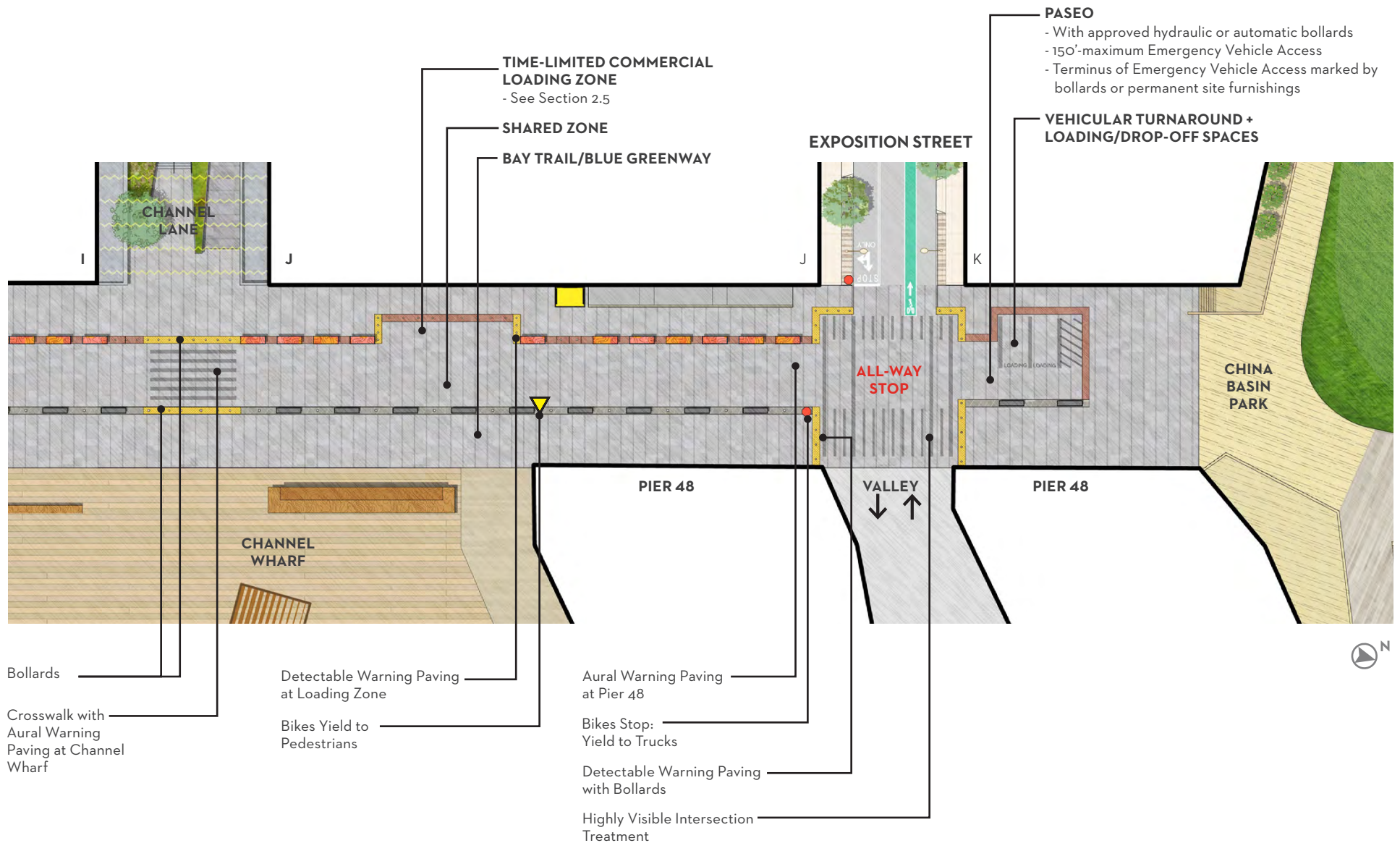


FIGURE 4.3.2 Conceptual Plan of Terry A Francois Boulevard. This is provided for illustrative purposes only & does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.



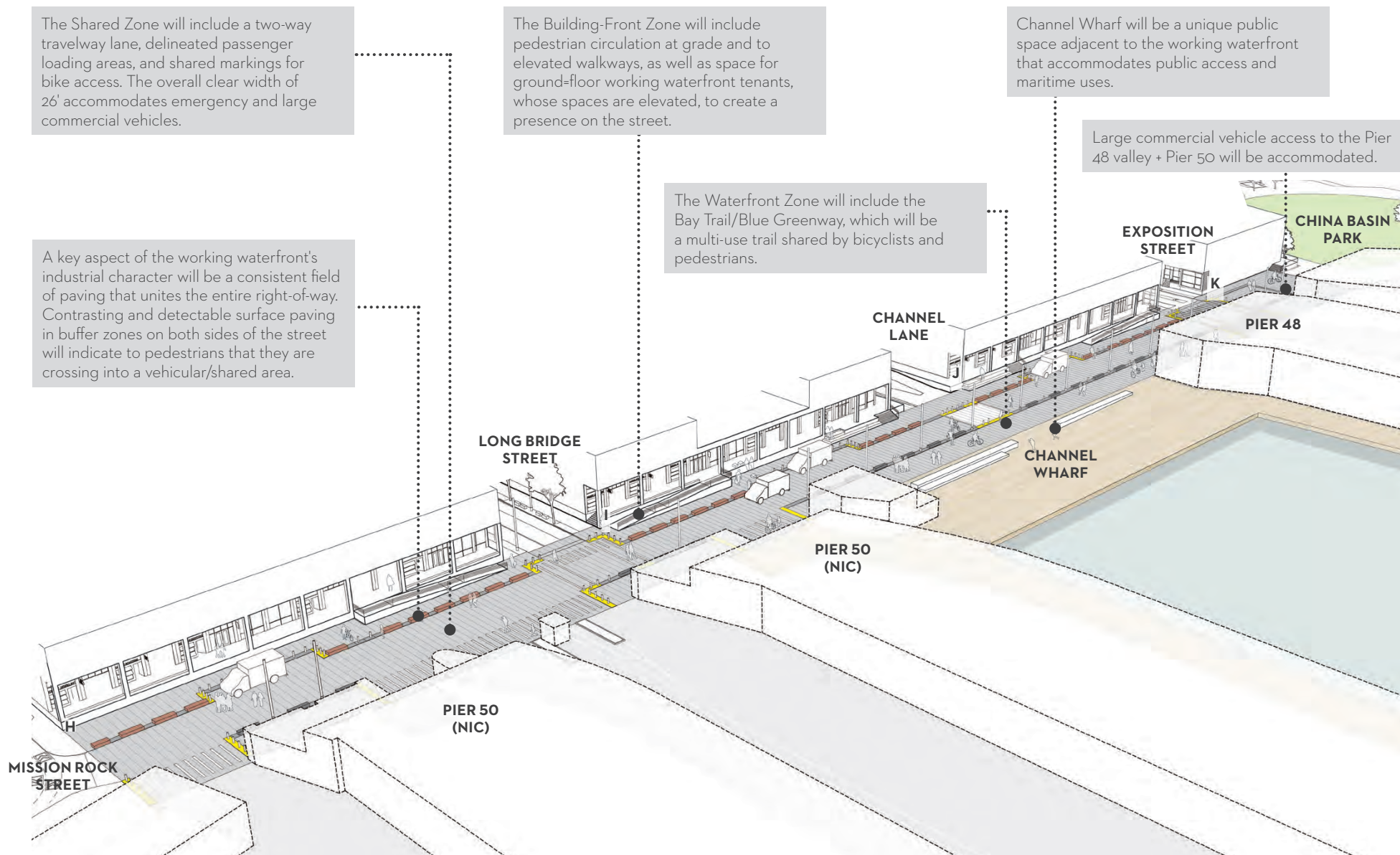


FIGURE 4.3.3 Conceptual axonometric diagram of the Terry A Francois Boulevard, the Working Waterfront.

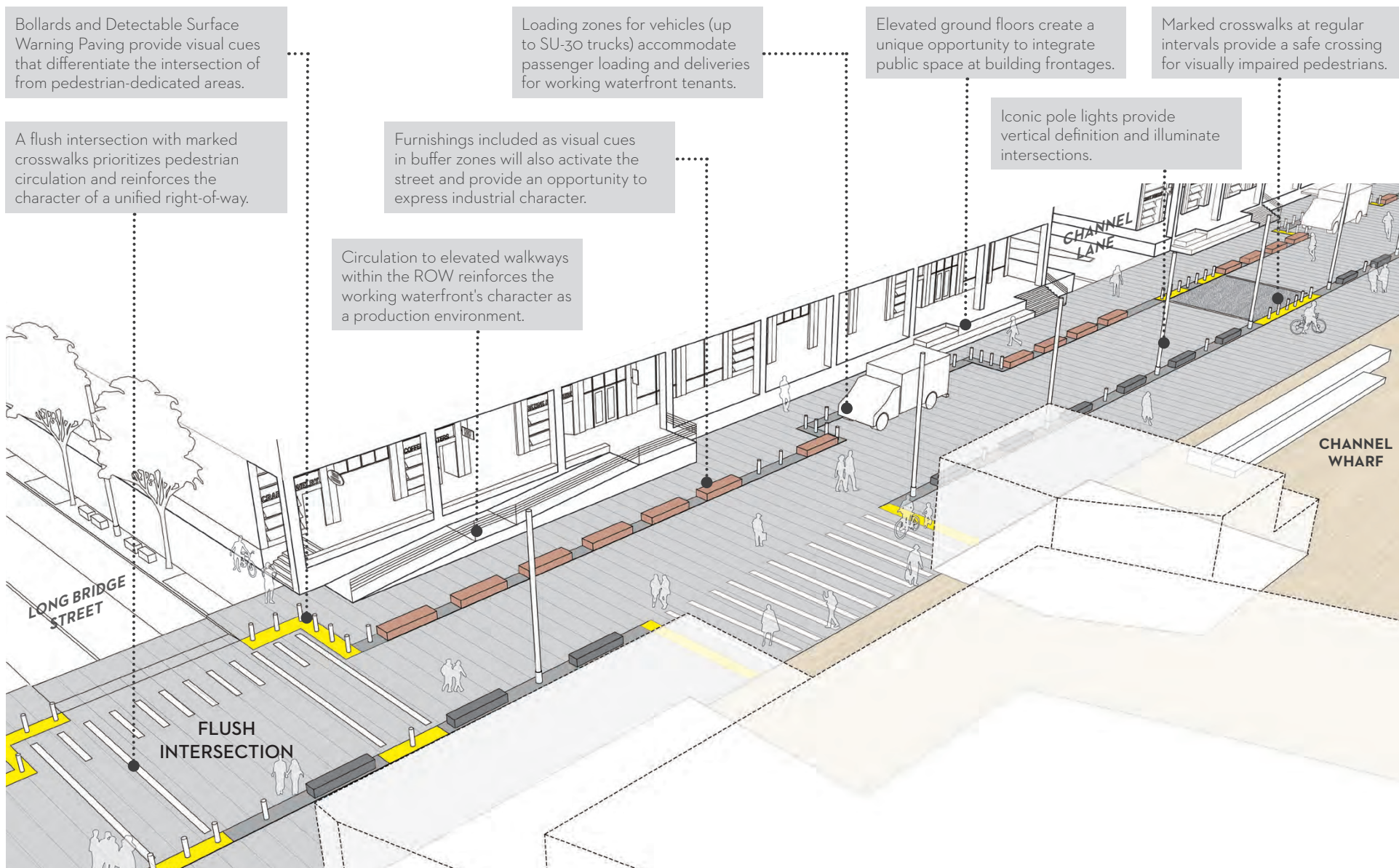


FIGURE 4.3.4 Conceptual diagram of Terry A Francois Boulevard at Block I.

4.4 BRIDGEVIEW STREET

Read in conjunction with Section 3.3: Mission Rock Square, Section 5.2: Ground Floor, and Sections 5.9-10: Neighborhood Street Zone. Bridgeview Street must also satisfy the requirements described in Chapter 2: Public Realm.

Bridgeview Street will be a Complete Street with world-class bicycle infrastructure, active sidewalks, stormwater treatment gardens, and slow vehicular traffic. A north-south bicycle connection from China Basin Park to Mission Bay, Bridgeview Street will provide an important link for bicycle facilities within and connecting to Mission Rock and the Bay Trail.

STANDARDS

4.4.1 SIDEWALK ZONES

Sidewalks on Bridgeview Street shall be 14'-wide along the east side of the street, and 12' along the west side. The sidewalk shall include:

A) Frontage Zone

A 2'-maximum width zone shall be maintained along building frontages for Active Edges as described in Chapter 5.

B) Pedestrian Throughway

An unobstructed, 6'-minimum clear width path of travel for pedestrians with width as noted in Figure 4.4.1 shall be maintained between the Frontage Zone and the Streetlife Zone.

C) Streetlife Zone

A zone between the curb and pedestrian throughway with width as noted on Figure 4.4.1. This zone shall include trees, lighting, and furnishings that shall be consistent for the entire length of the street. Stormwater treatment gardens shall be included in the Streetlife Zone. Refer to Infrastructure Plan for technical requirements.

D) Driveway Restrictions

Driveways shall not be permitted, except at the Block D parking garage.

4.4.2 ROADWAY ZONES

The 34'-wide roadway will accommodate two-way vehicular traffic from Exposition Street to Mission Rock Street and shall include:

A) Bicycle Facility

A two-way Class 1 cycle track on the east side of the right-of-way with total width of 13'-0" inclusive of a 3'-wide horizontal buffer, flush with the cycle track surface, that will separate and protect the facility from vehicular traffic.

B) Raised Cycle Track

A raised facility shall be provided that is grade-separated from adjacent travel lanes with a mountable curb located within the 3' buffer described in 4.4.2 A). All material transitions shall be completely flush with the cycle track.

C) Travel Lanes

Two 10'-6"-wide travel lanes shall be provided to accommodate two-way traffic.

4.4.3 TRAFFIC CONTROL AND CALMING MEASURES

A) Intersections

The intersections of Bridgeview Street with Mission Rock and Exposition Streets shall have full stop control. The intersection at Long Bridge Street shall be a raised intersection at cycle track grade with no stop control for Bridgeview Street bicycle or vehicular traffic. See Section 2.4 and refer to Infrastructure Plan.

B) Pedestrian Crossing at Channel Lane

A mid-block crossing at the intersection of Bridgeview Street, Mission Rock Square, and Channel Lane shall be included at this major pedestrian crossing. Bicycle facility treatment shall continue across the intersection, with signage to yield to pedestrians.

C) Cycle Track Warning Cues

Before all intersections and at the northern paseo portion of Bridgeview Street, the cycle track shall include paved and signed warning cues for pedestrian crossings.

D) Cycle Track Intersections

Cycle track demarcation shall continue across intersections at Exposition and Long Bridge Streets to indicate that cyclists have the right-of-way. Signs should indicate that vehicles must yield to cyclists. See Section 2.4 and refer to Infrastructure and Transportation Plans.

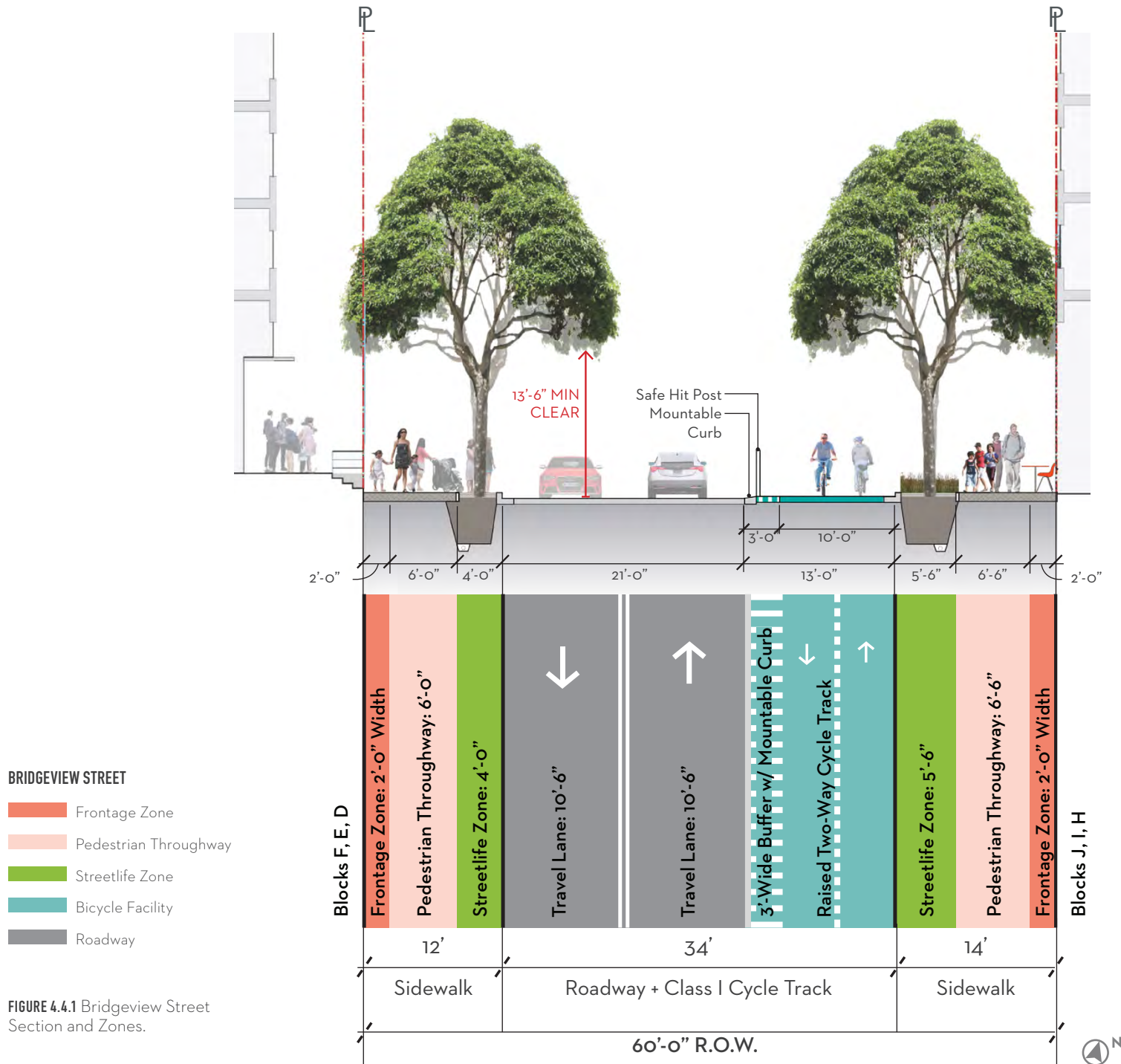


FIGURE 4.4.1 Bridgeview Street Section and Zones.

STANDARDS

4.4.4 PASEO NORTH OF EXPOSITION STREET

Between Block G and Block K, Bridgeview Street will become a paseo that will accommodate emergency vehicle access and include the following zones:

A) Multi-Use Trail Connection

A 16'-minimum clear multi-use trail shall connect China Basin Park to the bicycle facility described in 4.4.2. This connection shall include paving and signage delineating this shared use path on the east side of the right-of-way, and warning cues for pedestrians and cyclists at crossings. Refer to Section 2.10.

B) Emergency Vehicle Clear Access Width

A 20'-minimum clear zone shall accommodate emergency vehicle access for up to 150', measured from the Exposition Street ROW. See Standard 2.4.2.

C) Pedestrian Throughway

A 6'-minimum clear path of travel for pedestrians on each side of the right-of-way.

GUIDELINES

4.4.5 BICYCLE FACILITY SIGNAGE AND WAYFINDING

Bicycle Signage and Wayfinding should refer to City, Port, and NACTO (National Association of City Transportation Officials) Urban Bikeway Standards. Signage should be mounted at the curb edge of the Streetlife Zone, or inset in bicycle facility paving.

4.4.6 BICYCLE PARKING CHARACTER

Bicycle parking should be a playful streetscape element that contributes to the unique identity of Bridgeview Street.

4.4.7 SEATING

Seating elements, including fixed benches, tables and chairs, should be social and two-sided, designed to activate the Streetlife Zone and engage the street's bicycle facilities.

4.4.8 STREET TREE ALIGNMENT

Street trees should align across the street and be planted at a consistent on-center spacing on both sides of Bridgeview Street. Trees should not be planted within stormwater treatment gardens.

4.4.9 STORMWATER TREATMENT GARDENS

Placement of stormwater treatment gardens should allow for seating under trees and between gardens. Each garden should not exceed 18' continuous linear feet in length and should be spaced to leave a minimum of 4' clear between gardens.

4.4.10 LIGHTING

Lighting fixtures should be pole lights scaled to the pedestrian experience. See Section 2.9.



A fun bicycle parking rack doubles as a play element.
SOURCE: [HTTP://LOVEASPOTOFTEA.BLOGSPOT.COM/](http://loveaspotoftea.blogspot.com/)



Utilizing pedestrian-scaled lighting to illuminate sidewalks creates a special, intimate character. © [HTTP://WWW.SELUX.FR/](http://www.selux.fr/)



FIGURE 4.4.2 Diagrammatic View of Bridgeview St at Blocks J and F, looking north. This is provided for illustrative purposes only.

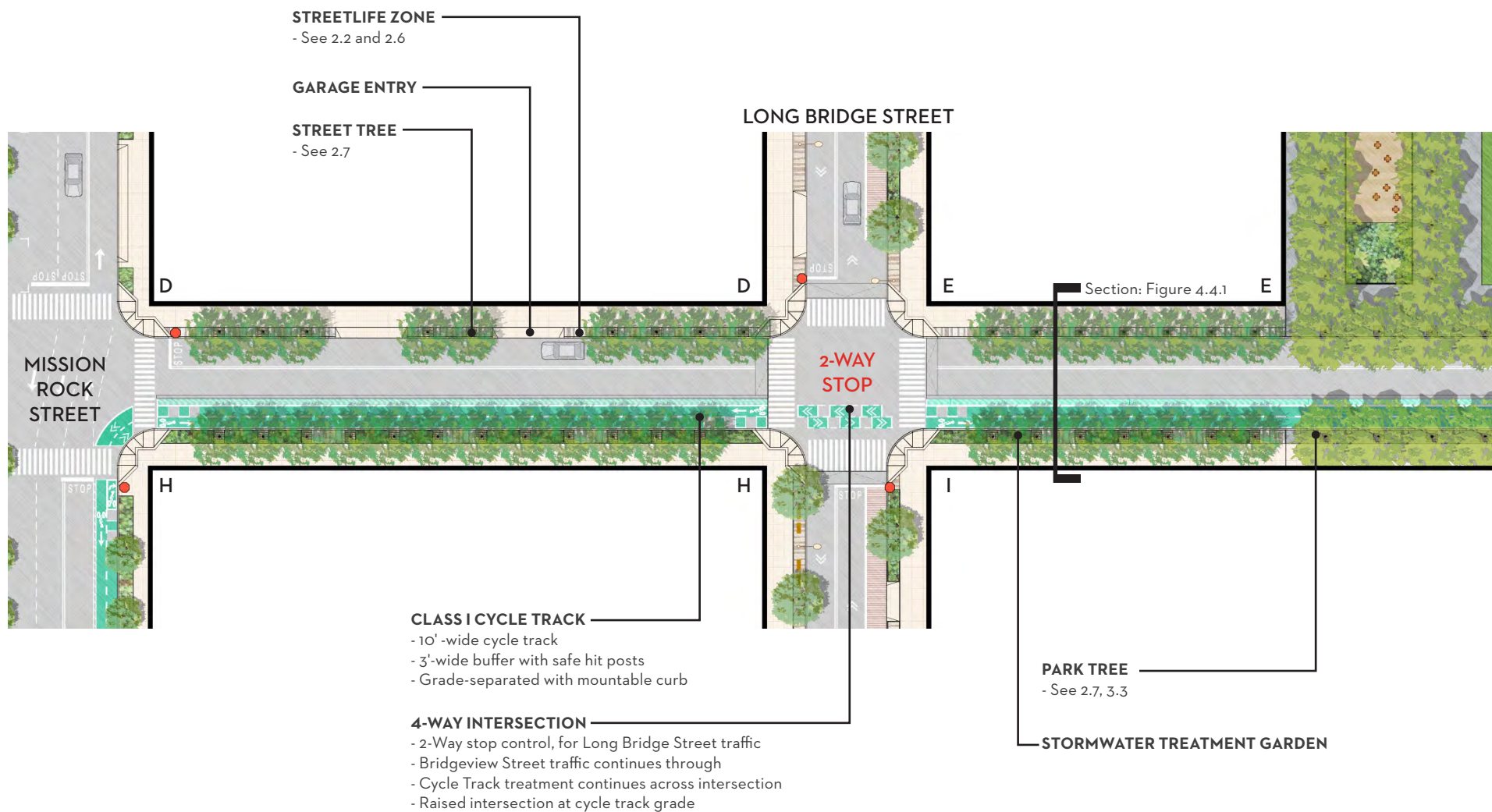
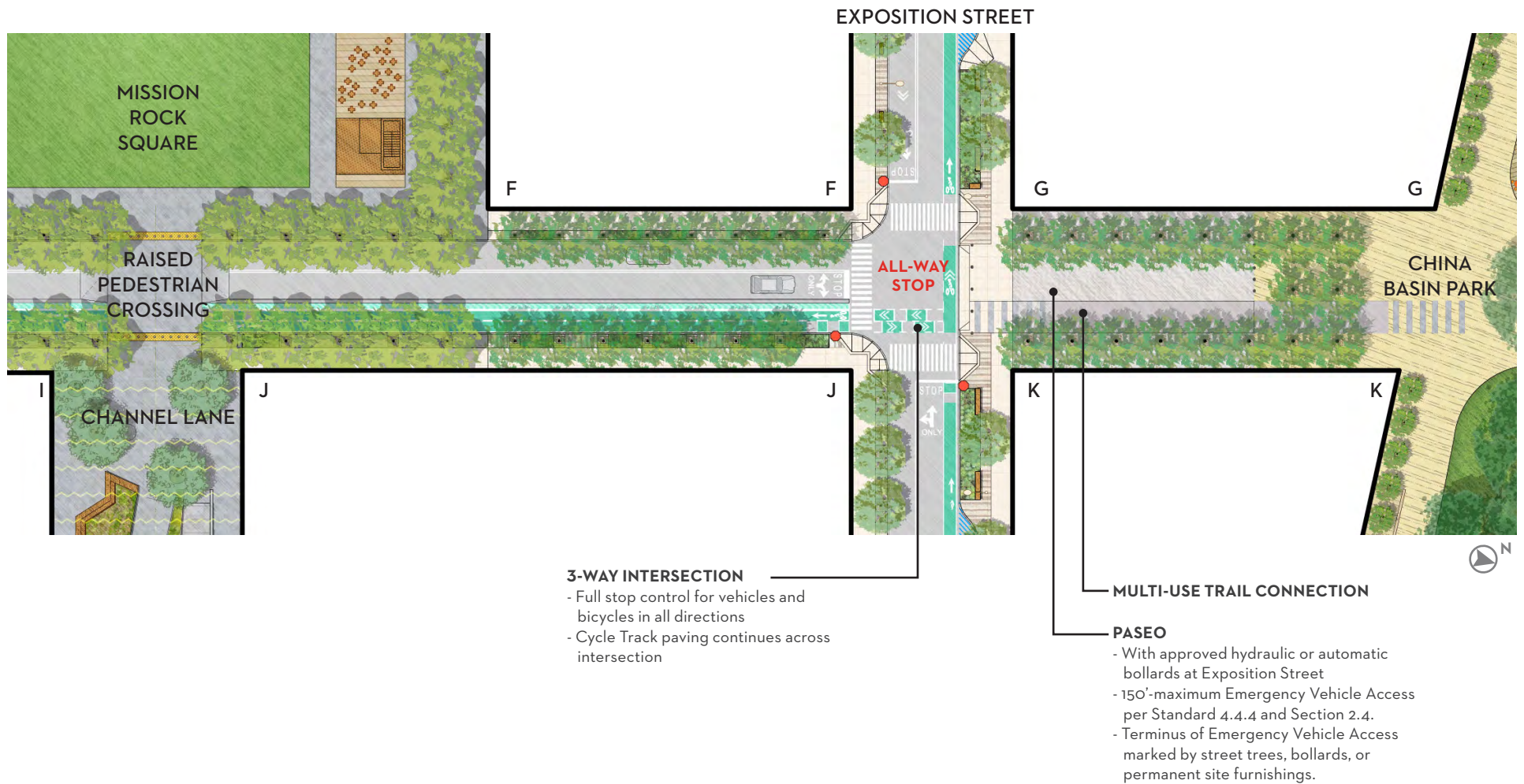


FIGURE 4.4.3 Bridgeview Street Conceptual Plan. This is provided for illustrative purposes only & does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.



4.5 EXPOSITION STREET

Read in conjunction with Section 4.2: Shared Public Way, Section 4.3: Terry A Francois Boulevard, Section 5.2: Ground Floor, and Sections 5.9-10: Neighborhood Street Zone. Exposition Street must also satisfy the requirements described in Chapter 2: Public Realm.

Exposition Street is designed to calm traffic and create a lush pedestrian connection with bulb-out gardens that will treat stormwater and provide seating. It will also accommodate service and loading demands for Blocks A, B, F, G, J, and K.



A large stormwater treatment garden on Folsom Street provides generous public seating and activates the sidewalk. SOURCE: CMG

STANDARDS

4.5.1 SIDEWALK ZONES

Sidewalks on Exposition Street shall be 14'-wide along the south side of the street, and 20' along the north side, with inset loading zones for passenger loading and servicing access. The sidewalk shall include:

A) Frontage Zone

A 2'-maximum width zone shall be maintained along building frontages for Active Edges as described in Chapter 5.

B) Pedestrian Throughway

An unobstructed, 6'-minimum clear width path of travel for pedestrians shall be maintained between the Frontage Zone and the Streetlife Zone.

C) Streetlife Zone

A zone between the curb and pedestrian throughway with width as noted on Figure 4.5.1. This zone shall include trees, lighting, stormwater treatment gardens, and furnishings that shall be consistent for the entire length of the street.

D) Stormwater Zone

An 8'-wide zone between the Streetlife Zone and Roadway on the north side of the right-of-way, at grade with the sidewalk, shall include large stormwater treatment gardens with unique integral seating located at the southeast and southwest corners of Blocks A, G, and K.

4.5.2 ROADWAY ZONES

The 26'-wide roadway will accommodate two-way vehicular traffic from 3rd Street to Terry A Francois Boulevard, and shall include:

A) Bicycle Facilities

A 5'-wide painted Class II bike lane in the west-bound

direction, separated from vehicular traffic with a 6"-wide solid white line. Minimize utility covers and material transitions in this area. East-bound sharrow shall be provided.

B) Loading Zone

An 8'-wide zone shall be provided at grade with the roadway, located between stormwater treatment gardens described in 4.5.1, to provide passenger loading and servicing access per Section 2.5.

C) Travel Lanes

Two 10'-0"-wide travel lanes shall be provided to accommodate two-way traffic.

4.5.3 TRAFFIC CONTROL AND CALMING MEASURES

A) Intersection Control

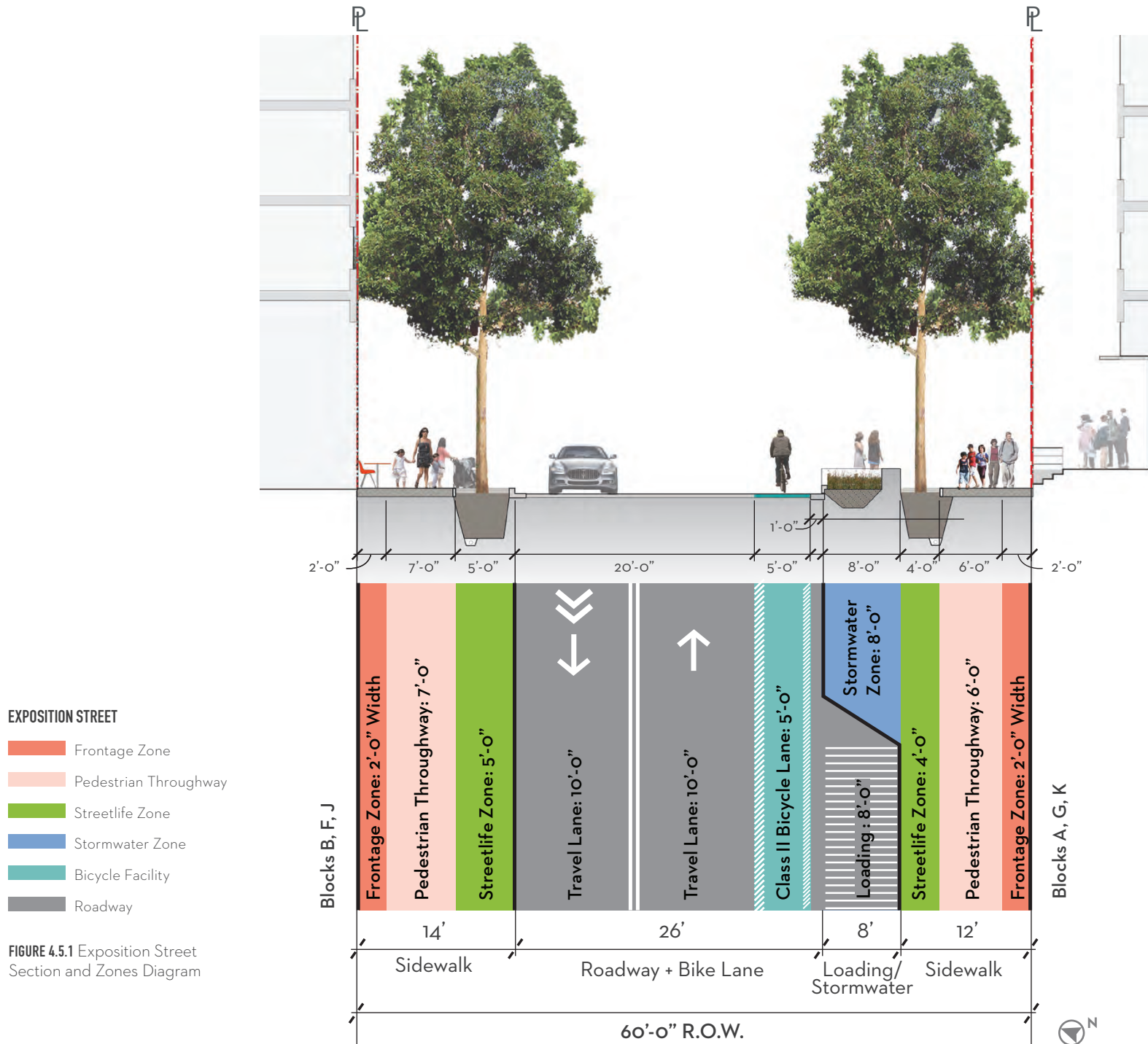
The intersection of Exposition Street with Bridgeview Street shall have full stop control for bicyclists and vehicles. At the Shared Public Way and Terry A Francois Boulevard, there shall be stop-controlled raised intersections with pedestrian throughway clearly delineated. See Sections 2.3, 2.4, 4.2, 4.3, and 4.4 and refer to Infrastructure Plan.

B) Bicycle Treatment at Intersections

Bike lane demarcation shall continue across intersections at Bridgeview Street and the Shared Public Way. See Section 2.4 and Infrastructure Plan.

4.5.4 LARGE VEHICLE CIRCULATION

Large vehicle circulation to and from Terry A Francois Boulevard and Pier 48 shall be accommodated on the roadway between Blocks K and J. See Section 2.4 and refer to Infrastructure and Transportation Plans.



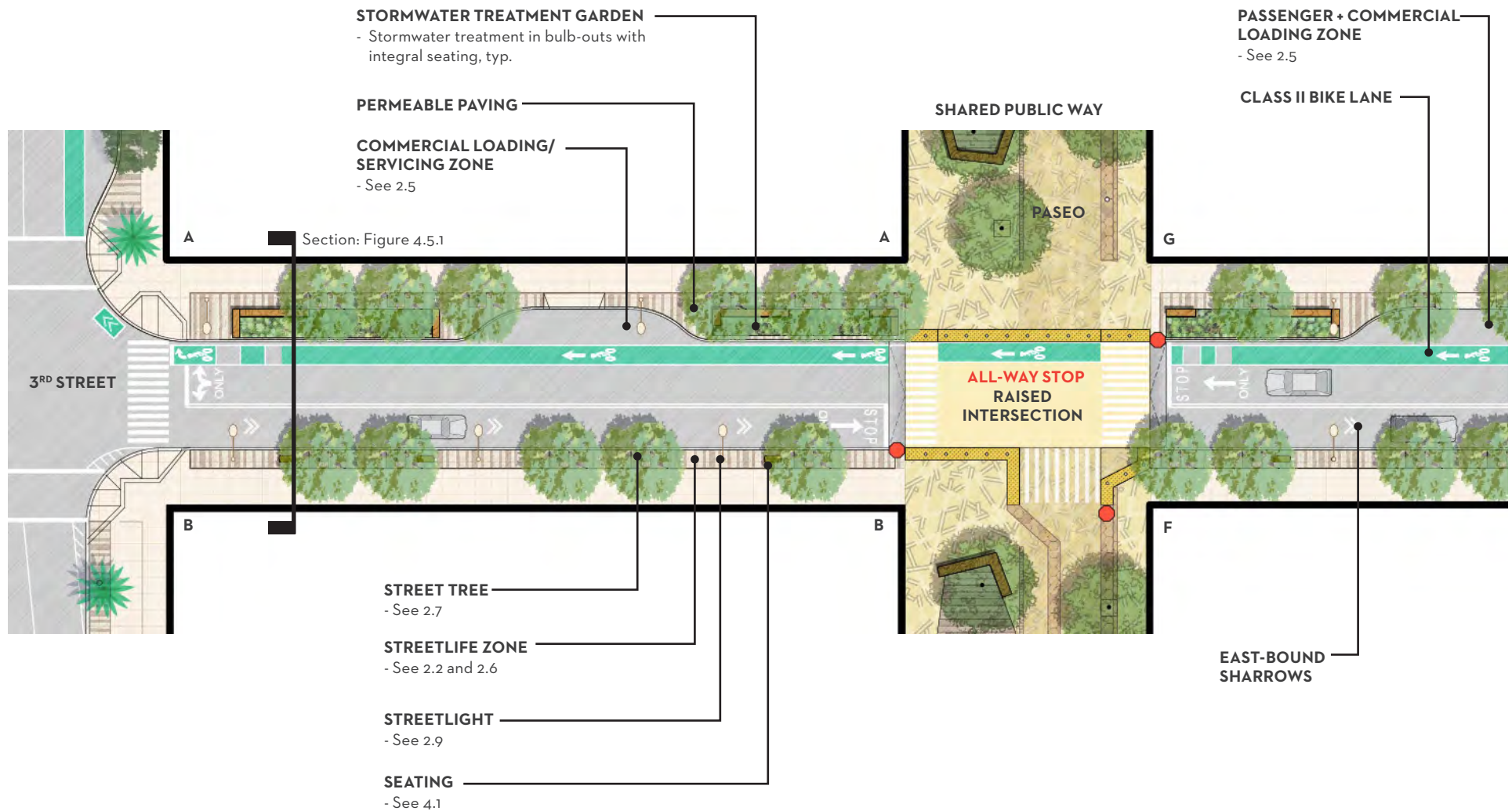


FIGURE 4.5.2 Exposition Street Conceptual Plan. This is provided for illustrative purposes only & does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.

4.6 LONG BRIDGE STREET

Read in conjunction with Section 4.2: Shared Public Way, Section 4.3: Terry A Francois Boulevard, Section 4.7: 3rd Street, Section 5.2: Ground Floor, Sections 5.9-10: Neighborhood Street Zone, and Section 7.8: Parking Structure (Block D2). Long Bridge Street must also satisfy the requirements described in Chapter 2: Public Realm.

Long Bridge Street will be an important pedestrian entry point to the site from MUNI. It is designed with wide throughways, shade trees, ample street furniture opportunities, and compact linear stormwater gardens.

Long Bridge Street will accommodate service and loading demands for Blocks D, C, E, H, and I and will be the vehicular entry point for the Shared Public Way.

STANDARDS

4.6.1 SIDEWALK ZONES

Sidewalks on Long Bridge Street shall be 15'-wide on both sides of the right-of-way. The sidewalk shall include:

A) Frontage Zone

A 2'-maximum width zone shall be maintained along building frontages for Active Edges as described in Chapter 5.

B) Pedestrian Throughway

An unobstructed, 6'-minimum clear width path of travel for pedestrians with width as noted on Figure 4.6.1 shall be maintained between the Frontage Zone and the Streetlife Zone.

C) Streetlife Zone

A zone between the curb and pedestrian throughway with width as noted on Figure 4.6.1. This zone shall include trees, lighting, stormwater treatment gardens, and furnishings that shall be consistent for the entire length of the street.

D) Bulb-Out with Stormwater Treatment

A 4'-maximum width bulb-out that includes stormwater treatment gardens shall be provided on the north side of Long Bridge Street, on either side of the Shared Public Way intersection. Refer to Infrastructure Plan.

4.6.2 ROADWAY ZONES

The 30'-wide roadway will accommodate two-way vehicular traffic from 3rd Street to Terry A Francois Boulevard, and shall include:

A) Loading Zone

An 8'-wide loading zone shall be provided at grade with the roadway on the north side of the right-of-way, to provide passenger loading and servicing access per Section 2.5. This zone shall be painted with a unique surface treatment that differentiates it from the travel lanes. This zone shall not interfere with fire truck access or turning movements at intersections. Refer to Transportation Plan.

B) Travel Lanes

Two 11'-wide travel lanes shall be provided to accommodate two-way traffic.

C) Bicycle Markings

East- and west-bound sharrows shall be provided.

4.6.3 TRAFFIC CONTROL AND CALMING MEASURES

A) Intersection Control

The intersection of Long Bridge Street with Bridgeview Street shall have stop control for all Long Bridge Street traffic only. At the Shared Public Way and Terry A Francois Boulevard, there shall be stop-controlled raised intersections with pedestrian throughway clearly delineated. See Sections 2.3, 2.4, 4.2, 4.3, and 4.4 and refer to Infrastructure Plan.

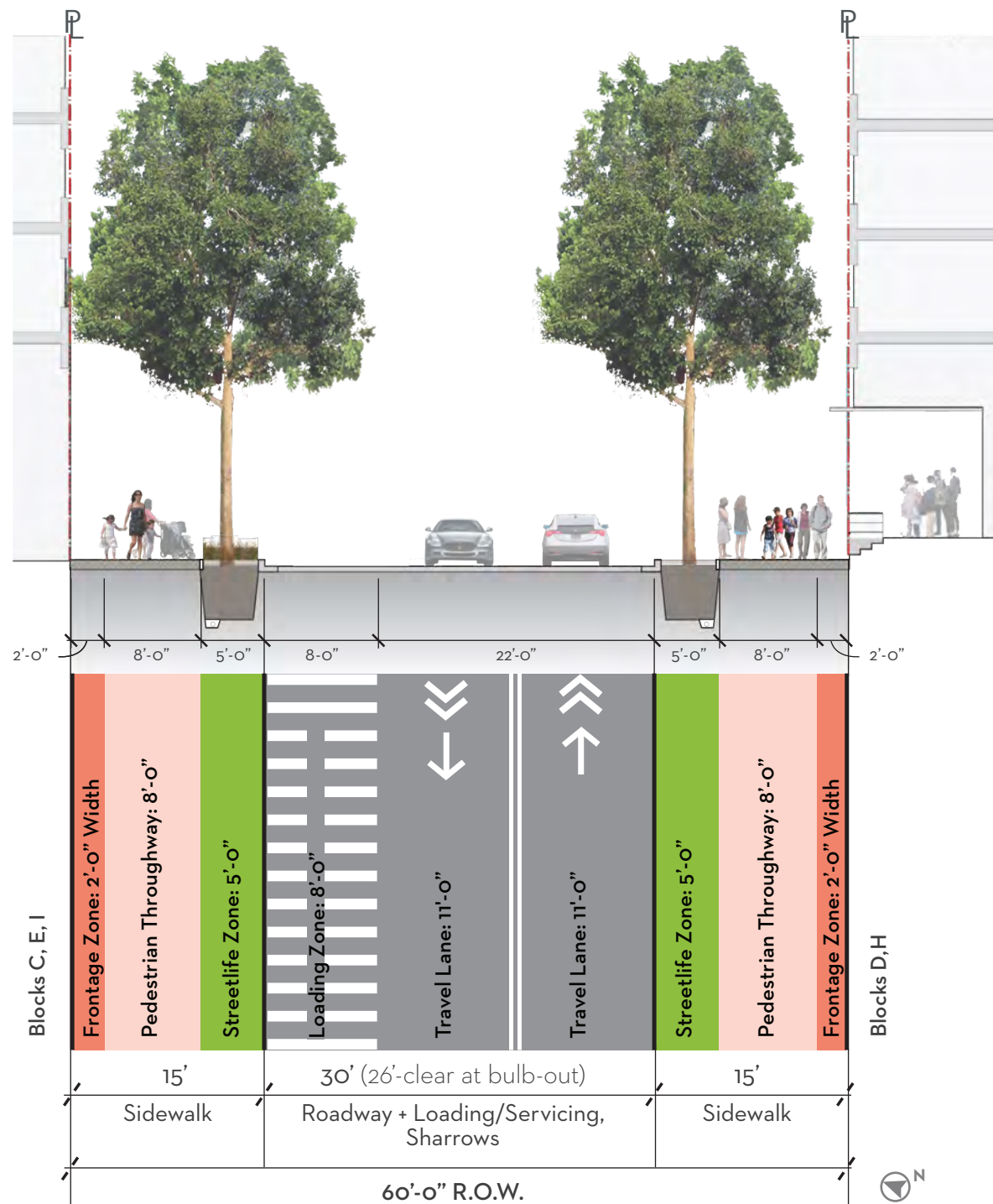
4.6.4 DRIVEWAYS AT BLOCK D PARKING FACILITY

Driveways shall be provided at Block D to accommodate parking facility ingress and egress. Refer to Section 2.4, Transportation Plan, and Infrastructure Plan.

LONG BRIDGE STREET

- Frontage Zone
- Pedestrian Throughway
- Streetlife Zone
- Roadway

FIGURE 4.6.1 Long Bridge Street
Section and Street Zones Diagram



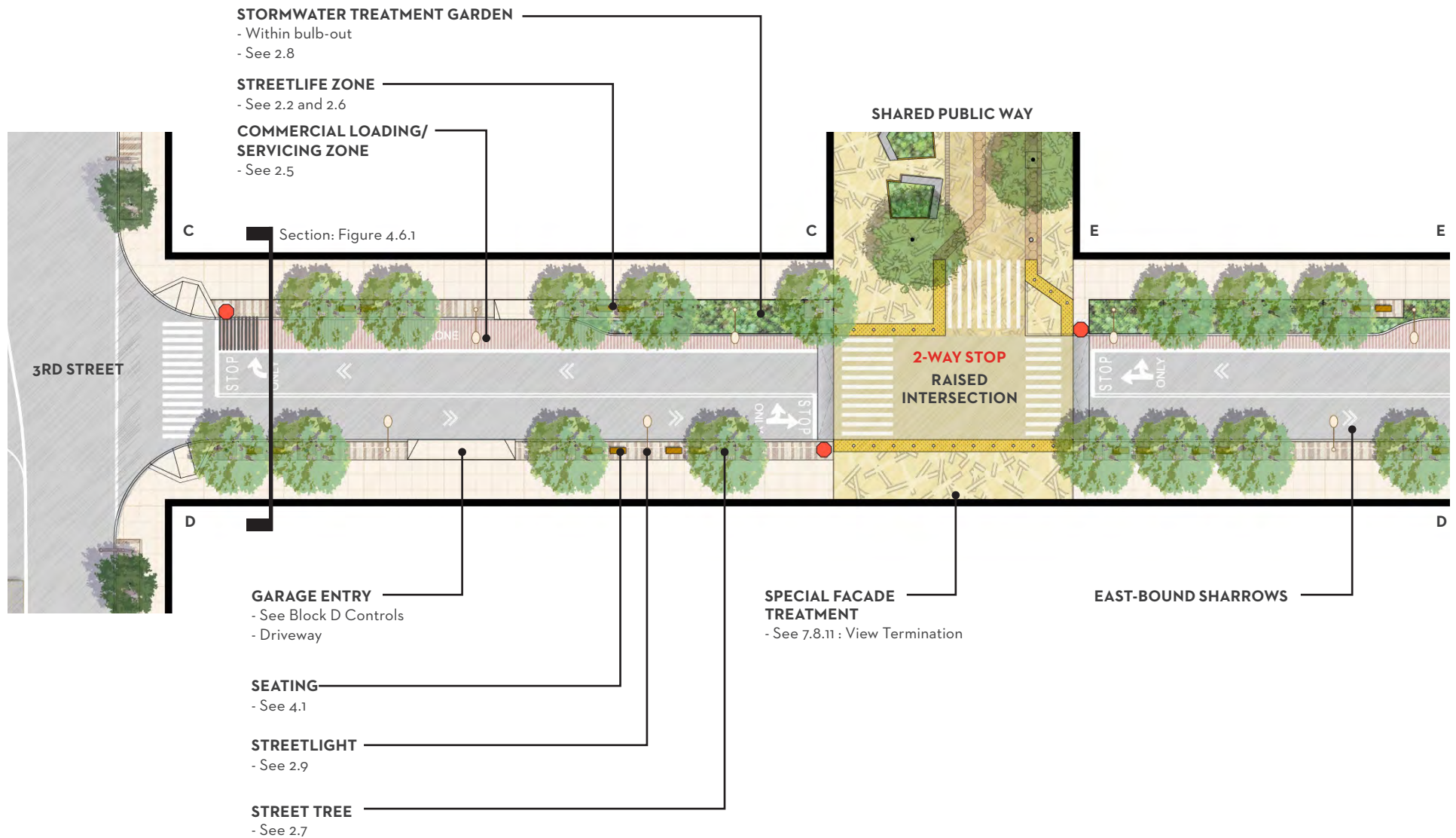


FIGURE 4.6.2 Long Bridge Street Conceptual Plan. This is provided for illustrative purposes only & does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.

4.7 3RD STREET

Read in conjunction with Section 4.5: Exposition Street, Section 4.6: Long Bridge Street, Section 5.2: Ground Floor, and Sections 5.9-10: Neighborhood Street Zone. 3rd Street must also satisfy the requirements described in Chapter 2: Public Realm.

3rd Street is Mission Rock’s primary face to Mission Bay. A wide multi-modal street, its character is fundamentally different from the interior streets of Mission Rock. South of Long Bridge Street, the sidewalk is a key threshold into Mission Rock from the MUNI station at Mission Rock Street. 3rd Street will primarily adhere to approved San Francisco Office of Community Investment and Infrastructure (OCII) Mission Bay standards for materials, trees, and lighting.



Conceptual rendering of 3rd Street MUNI stop

STANDARDS

4.7.1 SIDEWALK ZONES

Sidewalk improvements on 3rd Street shall be 12'-wide, on the east side of the right-of-way. The sidewalk shall include:

A) Pedestrian Throughway

An unobstructed, 6'-minimum clear width path of travel for pedestrians shall be maintained between the building frontage and the Streetlife Zone.

B) Streetlife Zone

A zone between the curb and pedestrian throughway with width as noted on Figure 4.7.1. This zone shall include trees, lighting, and furnishings that are consistent for the entire length of the street. Refer to OCII Mission Bay Standards.

4.7.2 ROADWAY ZONES

At Block A only, the following shall be provided per Figure 4.7.3:

A) Loading Zone

An 8'-wide zone shall be provided at grade with the roadway to provide passenger and commercial loading per Section 2.5.

B) Bicycle Facility

A 5'-wide painted Class II bike lane in the north-bound direction, separated from vehicular traffic with a 6"-wide solid white line. See Section 2.4 and 3.2.

4.7.3 EMERGENCY VEHICLE ACCESS RADII

Vehicular turning radii from Long Bridge Street and Exposition Street onto 3rd St have minimum requirements for emergency vehicle access. Refer to Infrastructure Plan.

GUIDELINES

4.7.4 PAVING IN STREETLIFE ZONE

Refer to OCII Mission Bay and 3rd Street Standards.

4.7.5 LIGHTING

Refer to OCII Mission Bay and 3rd Street Standards. Lighting should be coordinated with improvements across 3rd Street.

4.7.6 TREE PLANTING

Refer to Mission Bay and 3rd Street Standards for Tree Palette. Species selection should be coordinated with improvements across 3rd Street.

3RD STREET

- Pedestrian Throughway
- Streetlife Zone
- Roadway
- (E) Sidewalk

FIGURE 4.7.1 3rd Street Section and Zones Diagram



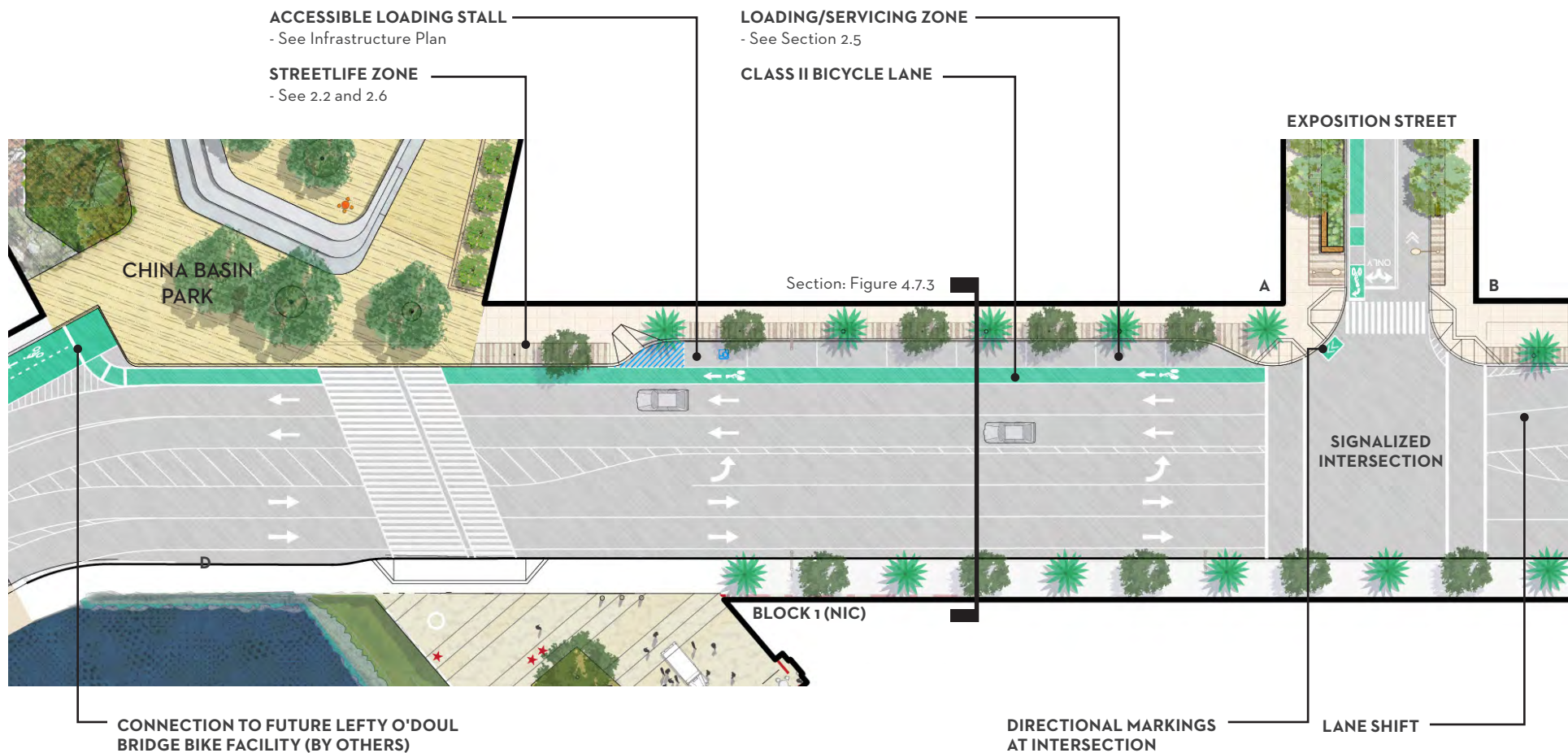
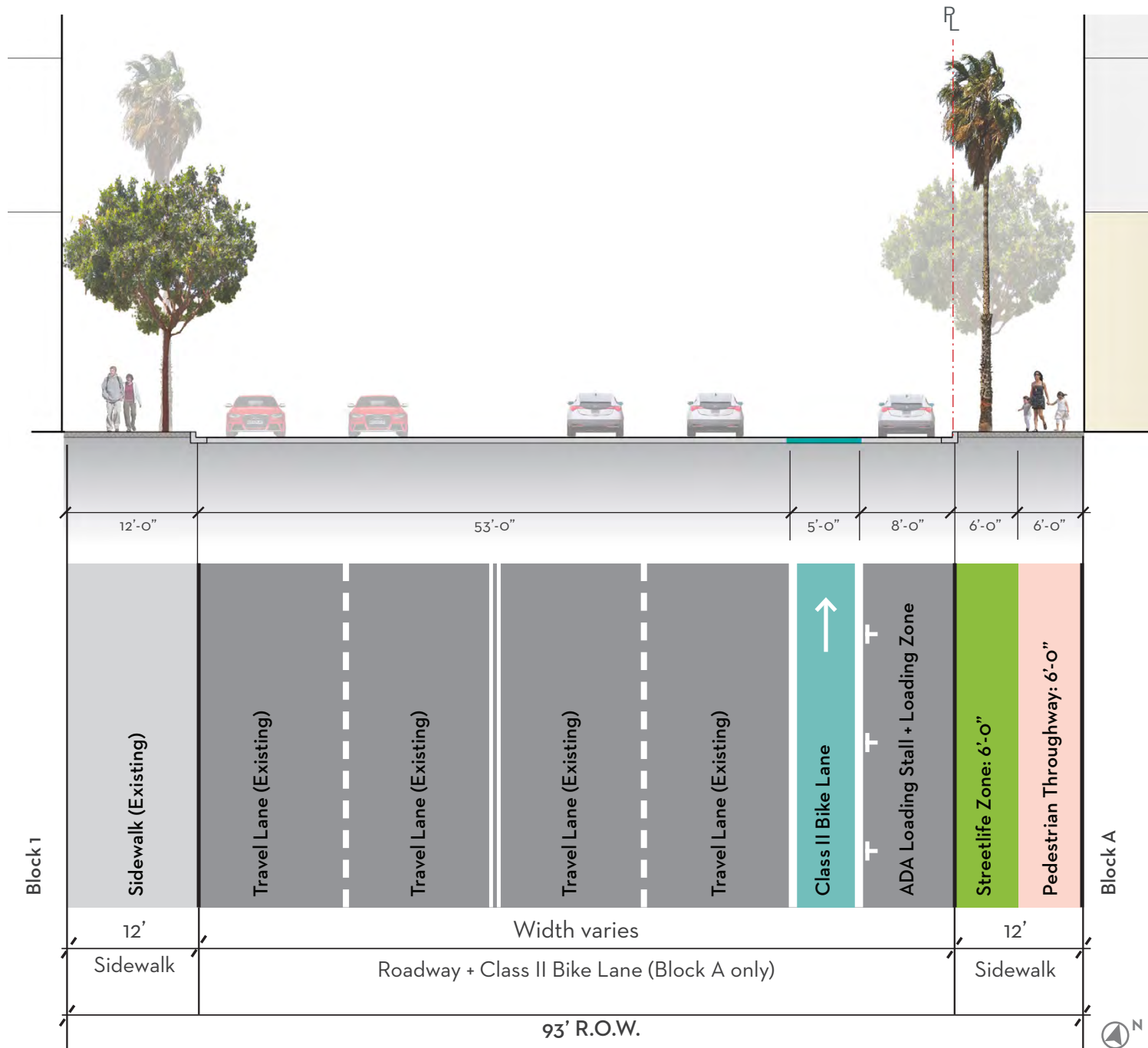


FIGURE 4.7.2 3rd Street Conceptual Plan at Block A. This is provided for illustrative purposes only & does not represent a design proposal. Refer to Chapter 8 of the Infrastructure Plan for key dimensions, intersection analysis, and fire access information.

3RD STREET

- Pedestrian Throughway
- Streetlife Zone
- Bicycle Facility
- Roadway
- (E) Sidewalk

FIGURE 4.7.3 3rd Street Section and Zones Diagram at Block A



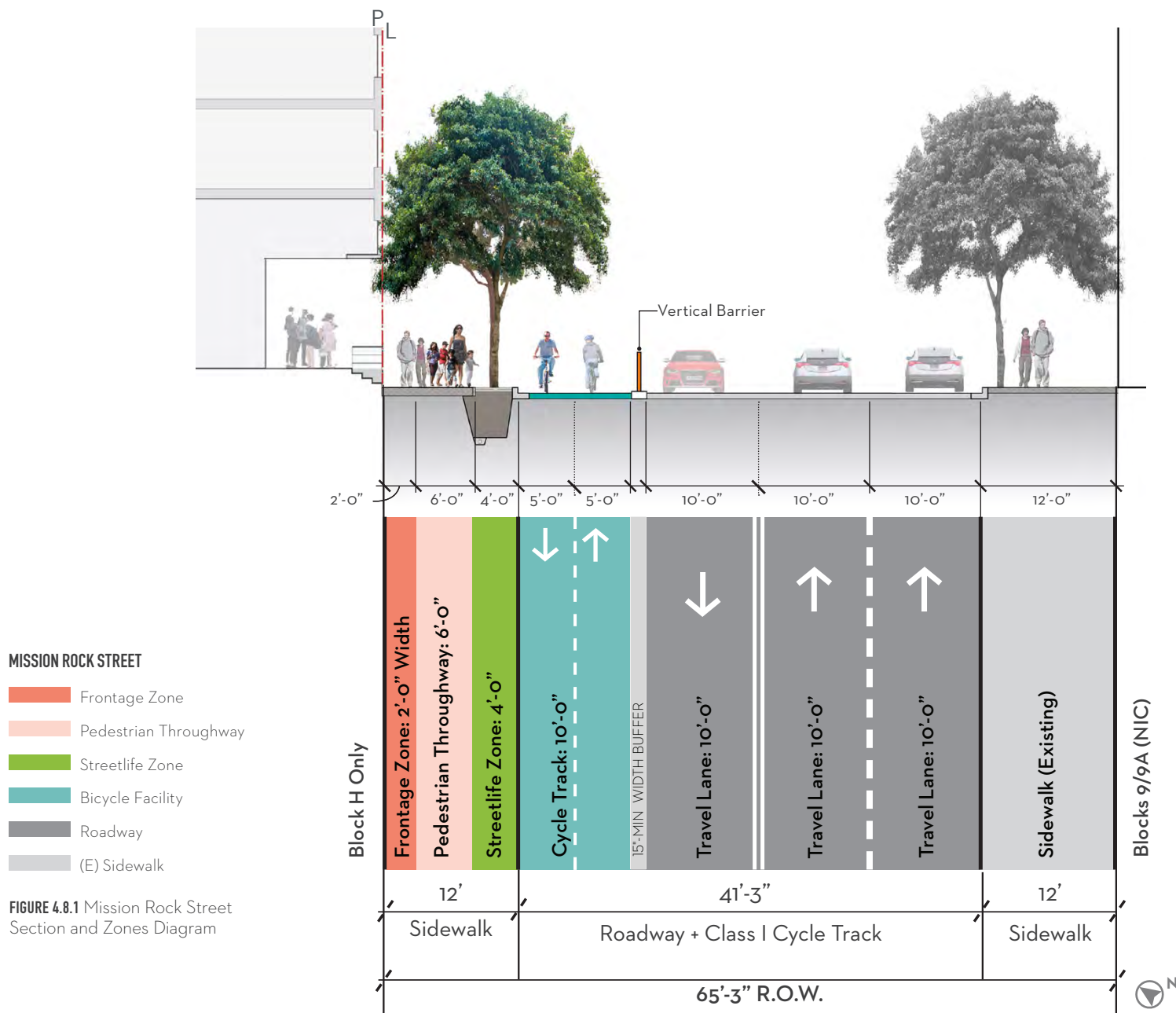
4.8 MISSION ROCK STREET

Read in conjunction with Section 4.3: Terry A Francois Boulevard, Section 4.4: Bridgeview Street, Section 5.2: Ground Floor, and Sections 5.9-10: Neighborhood Street Zone. Mission Rock Street must also satisfy the requirements described in Chapter 2: Public Realm.

Mission Rock Street will provide an important link to the Bay Trail/Blue Greenway at the terminus of Bridgeview Street. South of Block H, a contraflow Class 1 cycle track will connect cyclists from Bridgeview Street to Terry A Francois Boulevard's Blue Greenway infrastructure.

Mission Rock Street will primarily adhere to approved San Francisco Office of Community Investment and Infrastructure (OCII) Mission Bay standards for materials, trees, and lighting.

STANDARDS	
<p>4.7.1 SIDEWALK ZONES</p> <p>Sidewalk improvements on Mission Rock Street shall be 12'-wide, on the north side of the right-of-way. The sidewalk shall include:</p> <p>A) Frontage Zone</p> <p>A 2'-maximum width zone shall be maintained along building frontages for Active Edges as described in Chapter 5.</p> <p>B) Pedestrian Throughway</p> <p>An unobstructed, 6'-minimum clear width path of travel for pedestrians shall be maintained between the building frontage and the Streetlife Zone.</p> <p>C) Streetlife Zone</p> <p>A zone between the curb and pedestrian throughway with width as noted on Figure 4.8.1. This zone shall include trees, lighting, and furnishings that are consistent for the entire length of the street. Refer to OCII Mission Bay Standards.</p> <p>D) Driveways</p> <p>Driveways shall be permitted at the Block D parking garage.</p>	<p>4.8.3 BICYCLE CONNECTION</p> <p>A) Bicycle Facility</p> <p>A two-way Class 1 cycle track that is 10'-0" wide, measured from the face of curb, shall be provided on the north side of the right-of-way from Bridgeview Street to Terry A Francois Boulevard. This facility shall be protected from vehicular traffic with a 15"-minimum width buffer with 6" vertical curb, segmented to facilitate drainage, and a 46"-high permanent vertical barrier.</p> <p>B) Raised Cycle Track</p> <p>If a raised facility is provided, it shall be grade-separated from adjacent travel lanes with a vertical curb. All material transitions shall be completely flush with the cycle track.</p> <p>C) Cycle Track Warning Cues</p> <p>At intersections, the cycle track shall include paved and signed warning cues indicating pedestrian crossings and vehicular intersections.</p> <p>D) Cycle Track Intersections</p> <p>Cycle track demarcation shall continue across intersections at Bridgeview Street and Terry A Francois Boulevard to indicate the primary bicycle route. See Section 2.4 and Infrastructure Plan.</p>
<p>4.8.2 CONFORMANCE TO EXISTING STANDARDS</p> <p>Mission Rock Street shall conform to OCII Mission Bay Design Standards for paving and streetscape elements. Tree species should match trees installed across Mission Rock Street.</p>	<p>4.8.4 INTERSECTION CONTROL</p> <p>At the intersections of Mission Rock Street with Bridgeview Street and Terry A Francois Boulevard, there shall be full stop control for bicycles and vehicles. Refer to Infrastructure Plan.</p>



GUIDELINES

4.8.5 CYCLE TRACK VERTICAL BARRIER AT BUFFER

The 46"-high vertical barrier for the cycle track is a wayfinding and signage opportunity for the south entry to Mission Rock. The design of the barrier should be considered with other site furnishing elements and should enhance the streetscape.



An example of a permanent vertical barrier that enhances the streetscape. SOURCE: DAVID Q MAY



An example of signage that could be incorporated into the cycle track buffer. SOURCE: WIKIMEDIA



A San Francisco example of directional markings that aid navigation and wayfinding at intersections. SOURCE: SFMTA LIVABLE STREETS



A San Francisco example of an intersection approach treatment that alerts cyclists and drivers to upcoming stop signs and conflict points. SOURCE: SFMTA LIVABLE STREETS

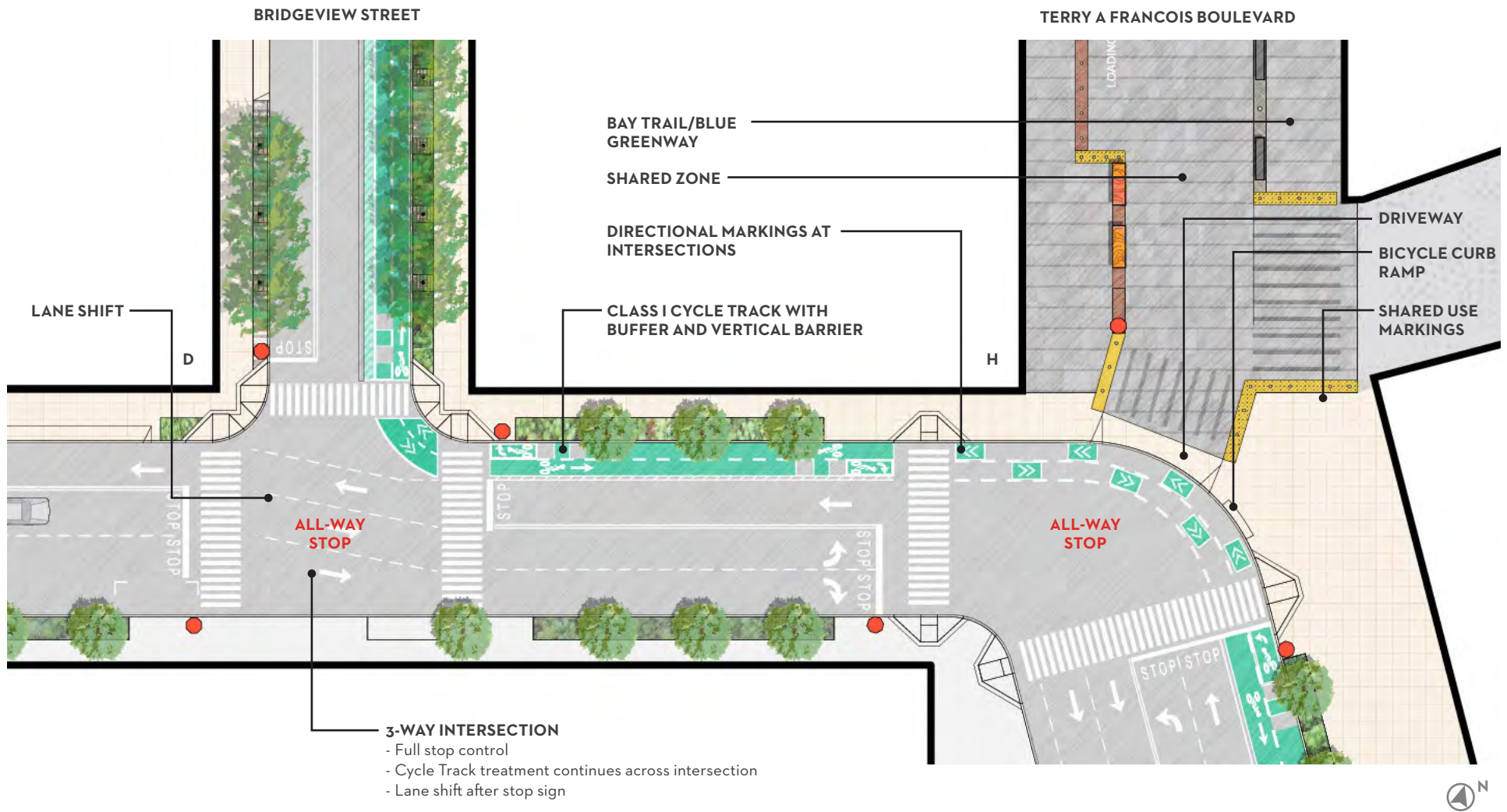


FIGURE 4.8.2 Mission Rock Street Conceptual Plan. This is provided for illustrative purposes only.



BUILDINGS

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The ground floor is the place where the activity of a building meets the parks and streets, and therefore plays the greatest role in shaping the pedestrian experience. A vibrant ground floor experience is dependent upon many different types of uses, mixed together at a fine grain, and designed at a pedestrian scale.

05

GROUND FLOOR

The controls for the ground floor of Mission Rock are closely coordinated with the Public Realm controls outlined in Chapters 2 through 4 to ensure that the programmatic use, building design, open spaces and streets will work together to support the vision of a neighborhood rich in public life.

Along the Shared Public Way, Mission Rock Square and China Basin Park, the landscape and building design will work together to create opportunities for many small shops and restaurants to spill out onto the sidewalks and occupy street rooms and park edges.

Terry A Francois Boulevard will become a Working Waterfront street where the landscape and building design combine to create a public realm that enables production uses, facilitates the movement of trucks, as well as providing a wonderful pedestrian experience next to the attraction of waterfront industry.

3rd Street is recognized as a citywide transportation corridor, as well as a front door for Mission Rock. For this and all of the neighborhood streets, the combination of landscape and building design will ensure that these streets will be inviting, safe places where people will enjoy walking and cycling.

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5.8	Working Waterfront Zone	140
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5.10	Neighborhood Street Zone: Non-Residential	146

RELATED CHAPTERS: The Ground Floor guidelines shall also be read in conjunction with *Chapter 6: Building Form* and *Chapter 7: Building Design*. Ground Floor controls shall also be viewed in conjunction with Appendix: Block Standards. Finally, this chapter refers to *Chapter 2: Public Realm*, describing integration of the ground floor and the public realm.

5.1 DESIGNING FOR ENVIRONMENTAL CHANGE

Mission Rock is a unique site due to its history as reclaimed land constructed on fill, and also for its future as a waterfront site which must plan for sea level rise.

Because of Mission Bay's unique geological context as a neighborhood constructed on fill, both new buildings and streets at Mission Rock will be pile-supported so as to minimize differential settlement between the streets and the buildings.

Furthermore, proposed new development at Mission Rock has been planned in anticipation of 66" of sea level rise by the year 2100. A comprehensive site-wide approach to sea level rise is reflected in the Public Realm chapters of the DC, and thoroughly addressed in the Mission Rock Infrastructure Plan.

Designers are encouraged to take advantage of this unique set of constraints in interesting ways that enhance each building's site-specific design.

Note that finished floor heights shown in this section are for illustrative purposes only. For exact required finished floor heights and grading, refer to the Mission Rock Infrastructure Plan.

SITE GRADE CHANGE (DIAGRAMMATIC)

- Existing Grade
- Transitional Grade
- Elevated Grade (roughly 4 feet higher)

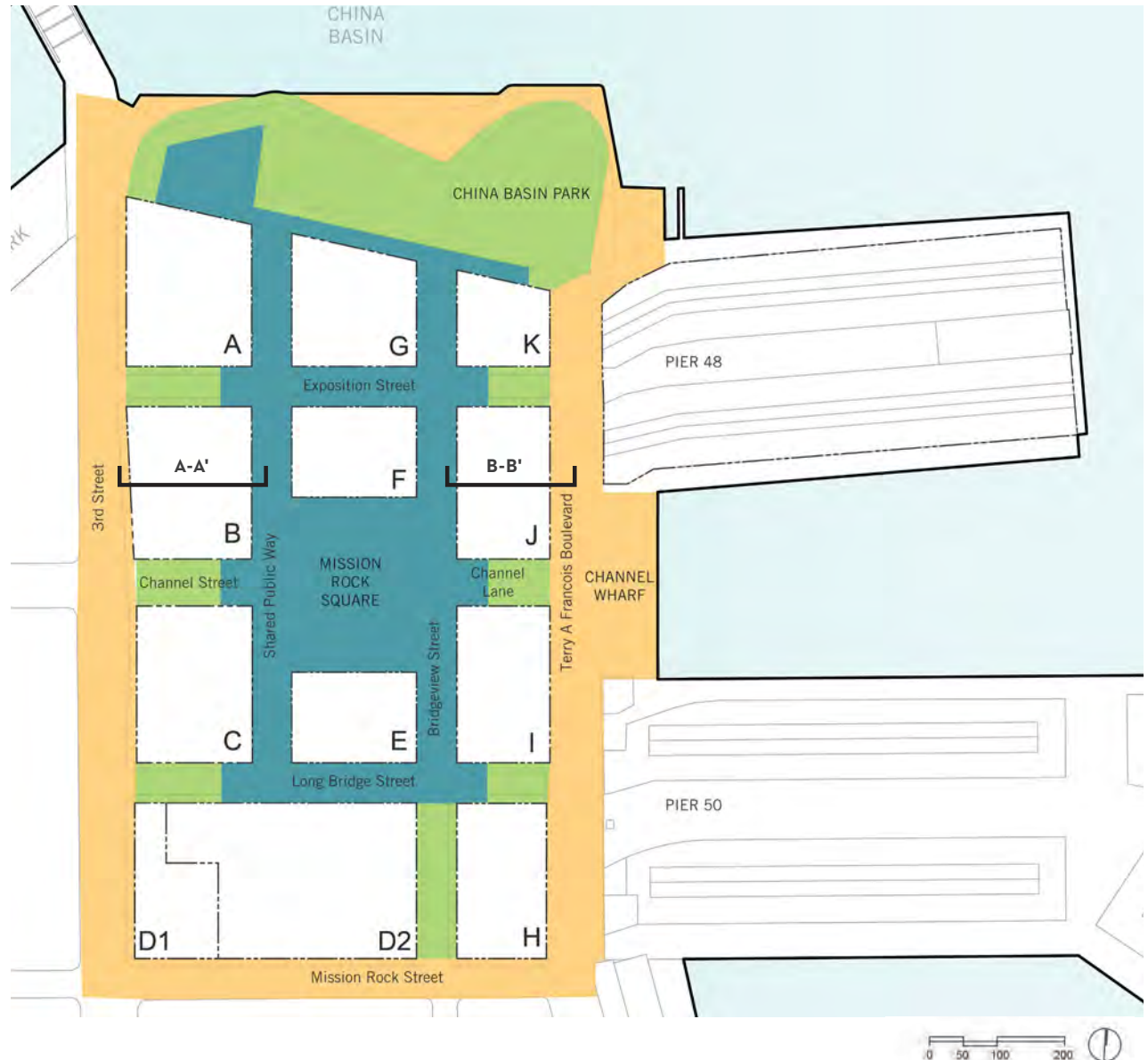


FIGURE 5.1 - Site Grade Change (diagrammatic)

GUIDELINES

5.1.1 ELEVATION CHANGES

As described in the Public Realm controls and the Mission Rock Infrastructure Plan, and conceptually diagrammed in *Figure 5.1 - Site Grade Change*, the site grading will be designed to create areas of higher elevation within the site in anticipation of sea level rise. In addition to responding to sea level rise, this provides opportunities for buildings to take advantage of the elevation changes across the site to create interesting relationships between uses within the buildings, and between the buildings to the streets.

Some examples of ways to address this elevation change are:

1. A step slab (see *Figure 5.1.1a - Step Slab*), where a step in the ground floor slab transitions between finished floor heights across the block.
2. An elevated walkway (see *Figure 5.1.1b - Elevated Walkways*). Particularly appropriate to Production uses; the slab is carried out to the edge of the street as a Elevated Walkway creating a loading dock type condition. (See also *Section 5.8.2 - Elevated Walkways*.)
3. Residential stoops which create an intermediate semi-private space for residents at a comfortable social distance from the public sidewalk.
4. Creativity in addressing how the building responds to site grading is encouraged; especially in ways that support the specific Ground Floor Zone prescribed for each frontage (see *Figure 5.5 - Ground Floor Frontage Zones*).

5.1.2 DIFFERENTIAL SETTLEMENT: 3RD ST. & MISSION ROCK ST.

Mission Rock, similar to the rest of Mission Bay, is a landfill site underlaid by bay mud. Buildings need to be constructed on piles in order to minimize settlement of the buildings due to consolidation of the bay mud. Adjacent internal streets at Mission Rock will also be pile-supported, to ensure that there is no differential settlement between buildings and adjacent sidewalks.

Building edges and entries at 3rd Street and Mission Rock Street should be designed to take into account this special configuration of adjacencies to structured streets. Some examples of ways to address this condition is:

1. Inset entries which allow for an approach slab between the entry door and the sidewalk.
2. In the Working Waterfront Zone elevated walkways provide a structured, elevated frontage that can be used by all tenant entries, limiting points for management of differential settlement to the stairs and ramps that connect the street level to the elevated walkway level (see *Section 5.8 - Working Waterfront Zone* for guidance on elevated walkways).
3. In the Neighborhood Street Zone: Residential, landscaping in the active edge can be raised or lowered and replanted as levels between the building and sidewalk may change (see *Section 5.9 - Neighborhood Street Zone: Residential* for guidance on landscaping in the active edge).

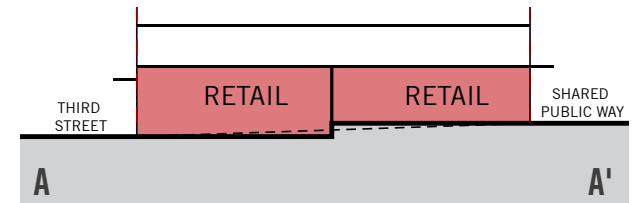


FIGURE 5.1.1A - Section A-A' - Step Slab

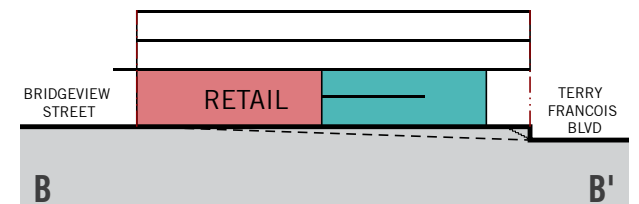


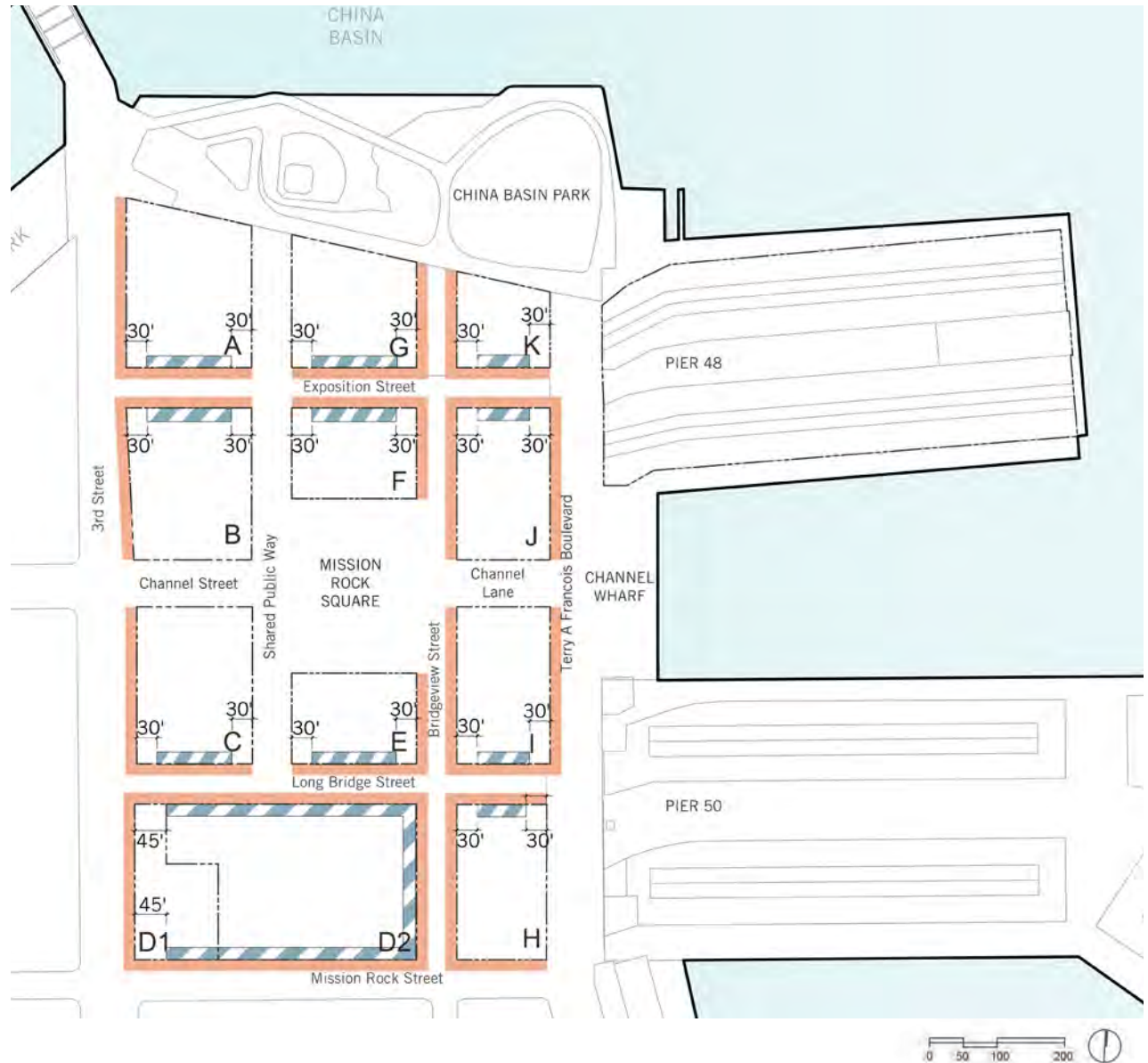
FIGURE 5.1.1B - Section B-B' - Elevated Sidewalk

5.2 BUILDING SERVICING

The experience at the various entry points of a building contributes greatly to how people experience a building and how it relates to its context.

For the everyday “back of house” operations of buildings, easy and convenient servicing for deliveries and maintenance is an important part of the functioning of a building. However, it can also negatively impact the pedestrian experience if frontages are dominated by servicing activities.

Exact locations of building servicing areas should be coordinated with the public realm—especially regarding street trees and stormwater treatment gardens. Read in conjunction with Chapters 2 and 4, and the Mission Rock Infrastructure Plan. Also see specific street guidelines for more detail.



BUILDING SERVICING

Building Servicing Zone

Fire Department Connection (FDC) Frontages

FIGURE 5.2 - Building Servicing

STANDARDS

5.2.1 BUILDING SERVICING ZONE

To minimize the visual impact of servicing along building frontages, any building servicing entry must be located within the building servicing zones indicated in *Figure 5.2 - Building Servicing*.

This zone refers to the locations where servicing activities may be provided. Each servicing activity is given a maximum dimension within this zone, as defined in 5.2.2 - *Building Servicing Entries*.

All building servicing, where it is built, must be held back 30 feet from all corners of blocks as described in Section 5.2.6 - *Corner Zone*.

Off-street loading is not required in any building.

5.2.2 BUILDING SERVICING ENTRIES

The building frontage allowed for servicing activities may not exceed the following dimensions along any given frontage for each type of servicing, as listed below:

- ▶ Loading bays, trash rooms, or other internal building servicing entries are limited to a total of 20 horizontal feet of frontage.
- ▶ Access entries to transformers are limited to a total of 12 horizontal feet of building frontage.
- ▶ Parking entries are limited to a total of 16 horizontal feet of building frontage, with the exception of Parcel D2. For podium parking controls see *Section 7.6 - Off-Street Parking*.

Loading bays, where they occur, should be designed to have direct access to the building's freight elevator.

5.2.3 COMBINE BUILDING SERVICING ENTRIES

Wherever possible, servicing entries shall be combined, such as combining a parking entry with a loading dock, or transformers accessed through doors internal to a loading dock.

5.2.4 COORDINATE SERVICING FRONTAGES WITH PUBLIC REALM

Location, design, and length of servicing frontages shall be coordinated with sidewalk design, particularly regarding placement and dimensions of stormwater gardens, street trees, and pedestrian paths.

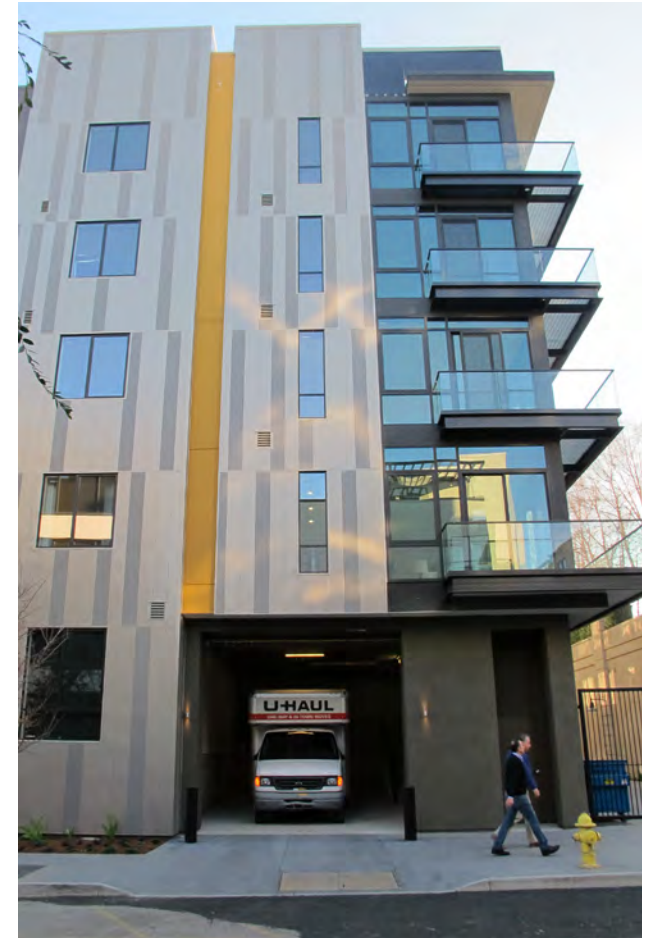
5.2.5 CORNER ZONE

To minimize pedestrian, bike, and vehicular conflicts with servicing activities, servicing entries may not be located within 30 horizontal feet of a block corner. Block D2 is exempt from this requirement.

5.2.6 FIRE DEPARTMENT CONNECTION (FDC) FRONTAGES

The configuration of streets, loading zones, stormwater BMPs and various other pedestrian and streetscape elements make some streets more ideal for fire department connections. Those frontages are indicated on *Figure 5.2 - Building Servicing*.

FDC frontages are shown here as information to be used by architects and engineers when designing the buildings. It is not necessary to demonstrate compliance with these frontages in a planning application.



Loading docks and parking entries and exits should be designed so as to minimize the frontage they occupy.

PHOTO: PERKINS+WILL

5.3 ACTIVE EDGES

Mission Rock will have vibrant streets where restaurants, cafes, and shops spill out to animate the sidewalks and create a rich public realm experience.

Each building is permitted and encouraged to utilize a portion of the public realm within the right of way or open space for spill-out space, called the Active Edge, to enliven the street through outdoor seating, signage, and merchandising.

The following controls guide the character of the Active Edge in coordination with the Public Realm controls.

ACTIVE EDGES (WITHIN ROW OR OPEN SPACE)

- 15 feet
- 12 feet
- 12 feet (Inclusive of pedestrian throughway)*
- 8 feet (Inclusive of pedestrian throughway)*
- 10 feet
- 2 feet
- Encroachment Zone for vertical circulation to access Elevated Walkway (depth of 6 feet) See also Section 5.8.2 - Elevated Walkways

*Along the Shared Public Way, the Active Edges must include a 6 foot pedestrian throughway for public access. Along Terry A Francois Boulevard, the Active Edges must include a 4 foot pedestrian throughway for public access. The throughway is included in this dimension to allow for the active edge to meander within the total active edge dimension so that the furnishing zone can shift to be against the building face or away from the building face.

Note: While there is no Active Edge along 3rd Street, the ground floor will still be required to have active uses which visually and physically engage the sidewalk, and any insets along the frontage can be used for movable furnishings and other features that may occur within the active edge.



FIGURE 5.3 - Active Edges

STANDARDS

5.3.1 ACTIVE EDGE DIMENSION

The active edge is the portion of the public realm beyond the property line which can be occupied as spill-out space in front of a building for activities like seating, display of goods, and so on. This area allows for the activities within the building to spill over into the sidewalk, and contribute to the life and activity of the public realm.

The active edge area is given a maximum perpendicular dimension from the property line, into the adjacent right of way. Dimensions for each zone are given in the description for each zone and summarized in *Table 5.5 - Ground Floor Frontage Zone Controls*.

Note that along the Shared Public Way, the pedestrian thoroughway is included in the Active Edge dimension (as noted in *Figure 5.3 - Active Edge*). This is intended to allow for the activity that spills out of buildings to have the flexibility to occur against the building face, or to shift away from the building frontage into the street, thereby allowing the pedestrian thoroughway to meander between active edge activities.

5.3.2 CLEAR PATH OF TRAVEL

For shared ways, the area between the property line and the vehicular zone must maintain a minimum of 6 feet of continuous pedestrian thoroughway that is free of all obstacles.

Placement of objects on the sidewalk must not in any way interfere with curb ramps, access to the building, driveways, or access to any fire escape or fire hydrant. (See *Section 2.3.1 - Pedestrian Thoroughway*)

5.3.3 PLANTING IN THE ACTIVE EDGE

The active edge area may not be used for permanent planting, except in the Neighborhood Street Zone: Residential, where this area can be used for planting that will help create a comfortable social distance between stoops and the street.

Potted plants and other movable plantings are allowed in the active edge zone.

5.3.4 DIVERTERS

Placement of tables and chairs on sidewalks must include the use of movable diverters at each end to guide pedestrians away from any occupied area of the sidewalk. Diverters must conform to the following design guidelines:

- Diverters must be sturdy, stable and have sufficient weight so that they cannot be tipped or blow away by the wind.
- Diverters must be at least 30 inches high and must be solid within 24 inches of the ground.

5.3.5 FURNITURE

Temporary and permanent furniture such as tables, chairs, benches, planters, heaters, signage, and merchandizing stands is allowed in any active edge, except in two-foot-wide active edges where only temporary furniture is allowed.



Active edges allow for indoor uses to spill out and activate the public realm. PHOTO: SAN FRANCISCO GIANTS

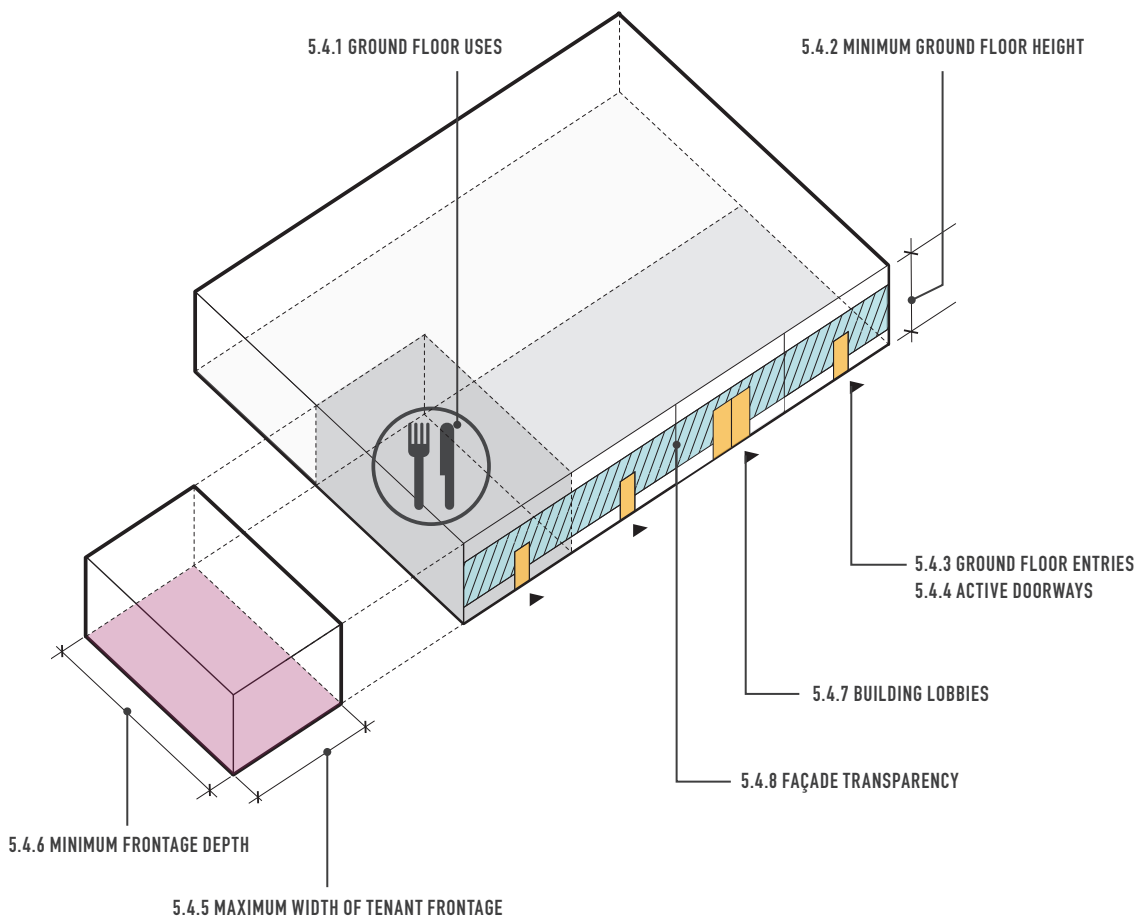


Active edges provide space for tables and chairs that extend the interior life of the building into the street. PHOTO: PERKINS+WILL

5.4 GROUND FLOOR CONTROLS

Each of the different types of ground floor frontage will have a unique character that is specific to the streets and open spaces they frame. The following standards, definitions, and guidelines apply to all of the frontages in varying ways, as described in *Table 5.5 - Ground Floor Frontage Zone Controls*.

For guidelines on color and material, lighting and signage, refer to *Chapter 6: Building Design*.



DEFINITIONS (ALSO SEE TABLE 5.5)

5.4.1 ALLOWED GROUND FLOOR USES

Read in conjunction with 1.2 - *Land Use Categories*.

Permitted land uses for each ground floor frontage zone are give in *Table 5.5 - Ground Floor Frontage Zone Controls*. Any and all land uses listed as "allowed" in this table are permitted in a given ground floor frontage zone. Note that child care centers may also be located within retail use zones see section 1.2.4.

Building entries and lobbies to residential or commercial uses of upper floors are permitted in the ground floor, even if residential or commercial use is not permitted in a given zone. Lobbies are limited to dimensions as listed in *Table 5.5 - Ground Floor Frontage Zone Controls*.

For the Neighborhood Street Zone, any frontage is allowed to be residential or non-residential; the ground floor use is not tied to the land use of the block. For example, a residential building is allowed to have non-residential uses at the ground floor; in which case the frontage would be controlled by the standards in the Neighborhood Street Zone: Non-Residential Zone. A block can also have a mix of these uses at the ground floor.

5.4.2 MINIMUM GROUND FLOOR HEIGHT

The minimum clear height for the ground floor is the distance between the finished floor and finished ceiling, before the addition of a mezzanine. This height applies to the minimum frontage depth. See *Table 5.5 - Ground Floor Frontage Zone Controls* for required minimum heights and minimum frontage depths.

DEFINITIONS (ALSO SEE TABLE 5.5 - GROUND FLOOR FRONTAGE ZONE CONTROLS)

5.4.3 GROUND FLOOR ENTRIES

Entries may be required to be flush at-grade or elevated as with a stoop or an elevated sidewalk. See *Table 5.5 - Ground Floor Frontage Zone Controls* for controls guiding the relationship of entries into different types of uses to the adjacent sidewalk.

5.4.4 ACTIVE DOORWAYS

An active doorway is the main public entry into a tenant space, such as a building lobby, the main entry to a storefront, or front door of a residential unit. The requirement for a minimum number of active doorways is intended to establish a minimum level of variety and pedestrian activity along each frontage. See *Table 5.5 - Ground Floor Frontage Zone Controls* for active doorway requirements for each frontage zone.

Additional entries into buildings or tenant spaces are allowed, but do not count toward the Active Doorways requirement. The purpose of the Active Doorways requirement is to create a greater number and variety of tenants, not to simply add more doorways.

Active doorways shall be calculated based on the linear frontage of the building that qualifies as streetwall under *Section 6.3.2 - Streetwall Area Calculation*. All active doorway numbers shall be rounded up to the nearest whole number. For example a calculation yielding 2.1 active doorways shall be rounded up to 3 active doorways.

Building lobbies, residential stoops, and public passages through buildings are counted as active doorways. A corner entry counts as an active doorway on only one frontage. Loading bays, servicing areas, parking garage entries, transformer doors, and emergency exit doors do

not count as Active Doorways and where they exist, the length of their frontage is subtracted from the required calculation of active doorways. See *Figure 5.4.4* for an example of how this is calculated.

Where there is more than one frontage zone along a frontage (as in Blocks I and J) calculate the number of active doorways required relative to the length of each frontage type.

In the Neighborhood Street Zone, where there may be a mix of residential and non-residential uses along a frontage, calculate the number of doorways relative to the corresponding frontage requirements for each use type. See *Figure 5.4.4 - Active Doorways Calculation* for an example of how this is calculated.

5.4.5 MAXIMUM WIDTH OF SINGLE USE FRONTAGE

In order to ensure an appropriate scale and variety of storefronts along a frontage, each type of frontage prescribes a limit on the linear frontage that a single use or establishment can occupy. *Table 5.5 - Ground Floor Frontage Zone Controls* provides a summary of maximum frontage dimensions.

5.4.6 MINIMUM FRONTAGE DEPTH

Each frontage zone is given a minimum depth into the building for which prescribed uses shall be accommodated. These depths are determined to ensure a minimum feasible depth for appropriate uses. *Table 5.5 - Summary of Ground Floor Controls* describes the minimum frontage depth for each type of frontage. Individual establishments may have a depth that is less than the minimum as long as the total depth minimum

is maintained among multiple establishments. For example a minimum frontage depth of 40 feet could be subdivided between a tenant with a 15 foot depth and another tenant that wraps around in an L-shape configuration providing the additional 25 foot depth.

5.4.7 MAXIMUM LOBBY DIMENSION

All building lobbies, regardless of use, are limited a maximum frontage dimension. See *Table 5.5 - Ground Floor Frontage Zone Controls* for maximum frontage dimensions.

5.4.8 FAÇADE TRANSPARENCY

To contribute to the safety and activation of the street, ground floor facades are required to be designed to a minimum percentage of transparency at pedestrian eye-level, as defined in *Table 5.5 - Ground Floor Frontage Zone Controls*.

5.4.9 LINES OF SIGHT

The interiors of non-residential ground floor spaces must create lines of sight between the public realm and ground floor spaces, allowing people inside and outside the building to see one another.

Where lines of sight are required, the area within 4 feet from the surface of the window glass must be at least 75% open to perpendicular view at a height between 4 feet and 8 feet above sidewalk grade. See *Figure 5.4.9 - Lines of Sight* for a diagram explaining dimensions.

Rolling or sliding security gates shall consist of open grillwork rather than solid material, so as to provide visual interest to pedestrians when the gates are closed, and to permit light to pass through mostly unobstructed. Gates, when both open and folded or rolled as well as the gate

DEFINITIONS (ALSO SEE TABLE 5.5)

mechanism, shall be recessed within, or laid flush with, the building facade.

5.4.10 AWNINGS AND CANOPIES

Awnings and canopies may project up to 8 feet into the public right-of-way at a minimum height of 12 feet above sidewalk grade. Awnings and canopies must be coordinated with tree planting so as not to interfere with tree cover.

GUIDELINES

5.4.11 PUBLIC PASSAGES

Public passages connecting between sidewalks, open spaces, mid-block courtyards, laneways, or covered, interior public connections are allowed and encouraged.

5.4.12 INDIVIDUALIZED STOREFRONTS

Storefronts should be designed so as to be individually customizable for each tenant to create a fine grain of variety along each street frontage. Change of facade material, varied awning height and design, unique signage and different kinds of doorways and windows are examples of ways to differentiate storefronts.

5.4.13 PERMEABILITY

In order to maximize the interaction between the uses at the ground floor of buildings and the public realm, retail frontages are encouraged to be designed so that they can be opened up to the street. Examples include but are not limited to: concertina doors, large pivot doors, roll up doors, and large operable windows.

These spaces also provide an opportunity to activate the street, animate building frontages, and increase 'eyes on the street' for neighborhood safety.

5.4.14 FACADE ARTICULATION

Storefronts should not be designed to have continuous, uninterrupted glass facades. They should be designed with texture and structure provided by architectural detailing as with columns or piers, bays, bulkheads, and recessed entries.

5.4.15 PEDESTRIAN FIELD OF VISION

A pedestrian's experience of the street is largely framed by the first and second floor of buildings, because this the part of the building most immediately within a pedestrian's range of vision.

To create a more varied and rich street level experience, there should be a higher degree of detailing and quality of design at the first and second floor of the building. These levels should be differentiated by a change in material, increase in transparency, a band course, or set back a few feet under an overhang.

5.4.16 COORDINATE ENTRIES

Coordinate the design of entries with the design of sidewalks so that slopes at entryways do not exceed 5% in any direction.

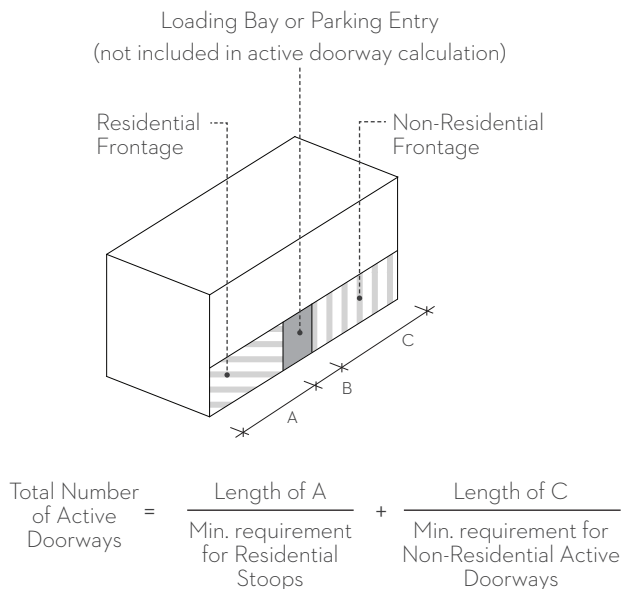


FIGURE 5.4.4 - Active Doorways Calculation (also see Section 5.4.4 - Active Doorways)

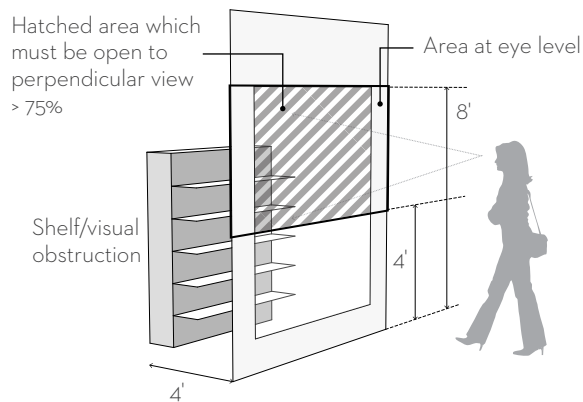


FIGURE 5.4.9 - Lines of Sight



The ability for each retail tenant to individualize their own storefront contributes to a more varied and interesting pedestrian experience. PHOTO: PERKINS+WILL



Opportunities to open up retail frontages with sliding or folding doors and windows creates more interaction between those inside and outside the building. PHOTO: PERKINS+WILL



Active uses at the second and third levels of the building also contribute to an enhanced pedestrian experience. PHOTO: PERKINS+WILL



The ground floor of buildings should be designed to create enjoyable and human-scaled experiences. PHOTO: PERKINS+WILL

5.5 GROUND FLOOR FRONTAGE ZONES

The intersection between the public realm and the ground floor of a building defines the street-level experience of the site. Each building frontage at Mission Rock has a role to play in the activation of the streets and open spaces. *Figure 5.5 - Ground Floor Frontages* shows the way that the frontage of each building will participate in the creation of a variety of ground floor experiences throughout Mission Rock, which are directly related to the character of the streets or open spaces they face.

The following pages describe each zone in detail, as well as the design elements that support this relationship between the building and the public realm. *Table 5.5 - Ground Floor Frontage Zone Controls* provides a compiled summary of the controls for each zone.

For controls regarding Color and Materials, Signage, and Lighting, see *Chapter 6: Building Design*.

GROUND FLOOR FRONTAGES

- High Retail Zone
- Parkfront Zone
- Working Waterfront Zone
- Neighborhood Street Zone

Zones are illustrative and not to scale; for minimum depth dimensions see Table 5.5 - Ground Floor Frontage Zone Controls.



FIGURE 5.5 - Ground Floor Frontages

STANDARDS (READ IN CONJUNCTION WITH SECTION 5.4 - GROUND FLOOR CONTROLS)

TABLE 5.5 - GROUND FLOOR FRONTAGE ZONE CONTROLS

This table summarizes the controls that together guide the character of the four different ground floor frontage zones. Each of the controls listed here is defined in **Section 5.4 - Ground Floor Controls**.

GROUND FLOOR FRONTAGE ZONE	5.6 HIGH RETAIL ZONE	5.7 PARKFRONT ZONE	5.8 WORKING WATERFRONT ZONE	5.9 NEIGHBORHOOD STREET ZONE: RESIDENTIAL*	5.10 NEIGHBORHOOD STREET ZONE: NON-RESIDENTIAL*
5.4.1 ALLOWED GROUND FLOOR USES (Read with <i>Section 1.2 - Land Use Categories</i>)	Retail	Retail	Production and/or Retail** **See <i>Section 5.8</i> for minimums and maximums	Residential	Retail, Active Uses, and/or Production Parking (only on Parcel D2)
5.4.2 MINIMUM GROUND FLOOR HEIGHT	17.4 feet clear from floor to ceiling	17.4 feet clear from floor to ceiling	17.4 feet clear from floor to ceiling	9 feet clear from floor to ceiling	17.4 feet clear from floor to ceiling
5.4.3 GROUND FLOOR ENTRIES	Entries must be flush at sidewalk grade	Entries must be flush at sidewalk grade	Entries must be flush at grade with the Elevated Sidewalk as described in <i>Section 5.8</i>	Entries must be raised above sidewalk grade, as with stoops; see <i>Section 5.9</i> for guidelines	Entries must be flush at sidewalk grade
5.4.4 ACTIVE DOORWAYS	Minimum of 6 active doorways per 200 linear feet	Minimum of 4 active doorways per 200 linear feet	Minimum of 4 active doorways per 200 linear feet	Minimum of 1 Residential Stoop or Entry per 30 linear feet	Minimum of 1 active doorway per 100 linear feet
5.4.5 MAXIMUM WIDTH OF TENANT FRONTAGE	60 linear feet per tenant per block	80 linear feet per tenant per block	80 linear feet per Production tenant per block; 60 linear feet per Retail tenant per block	30 linear feet per unit per block	100 linear feet per tenant per block
5.4.6 MINIMUM FRONTAGE DEPTH	40 feet minimum	40 feet minimum	40 feet minimum	20 feet minimum	
5.4.7 MAXIMUM LOBBY DIMENSION	15 linear feet per lobby per building	30 linear feet per lobby per building	30 linear feet per lobby per building	40 linear feet per lobby per building; or 60 feet if combined with a Retail use (such as a coffee shop)	
5.4.8 FAÇADE TRANSPARENCY	65% transparent between 2 feet and 12 feet vertical above street level	65% transparent between 2 feet and 12 feet vertical above street level	50% transparent between 0 feet and 12 feet vertical above finished floor height	Minimum as required by building code	65% transparent between 2 feet and 12 feet vertical above street level

*For the Neighborhood Street Zone, any frontage is allowed to be residential or non-residential; the ground floor use is not tied to the land use of the block. For example, a residential building is allowed to have non-residential uses at the ground floor; in which case the frontage would be controlled by the standards in the Neighborhood Street Zone: Non-Residential Zone. A block can also have a mix of these uses at the ground floor. (Also see *Section 5.4.1 - Allowed Ground Floor Uses*).

5.6 HIGH RETAIL ZONE

Read in conjunction with Section 5.4 – Ground Floor Controls, Section 4.2 – Shared Public Way, and Section 3.3 – Mission Rock Square.

The High Retail Zone represents the highest level of intensity of shops, cafes, and retail at Mission Rock. It is concentrated along the Shared Public Way and Mission Rock Square, creating the main focal point of retail activity for Mission Rock, and activating these important public places.

This zone is designed to accommodate many small shopfronts, with a few larger anchor stores and restaurants. As such, this zone has the greatest frequency of activity along the ground floor by pedestrian use and the smallest width of tenant frontages.

The frontages for inclusion in the High Retail Zone are indicated in *Figure 5.5 – Ground Floor Frontages*. The requirements of the High Retail Zone are summarized in *Table 5.5 – Ground Floor Frontage Zone Controls*.

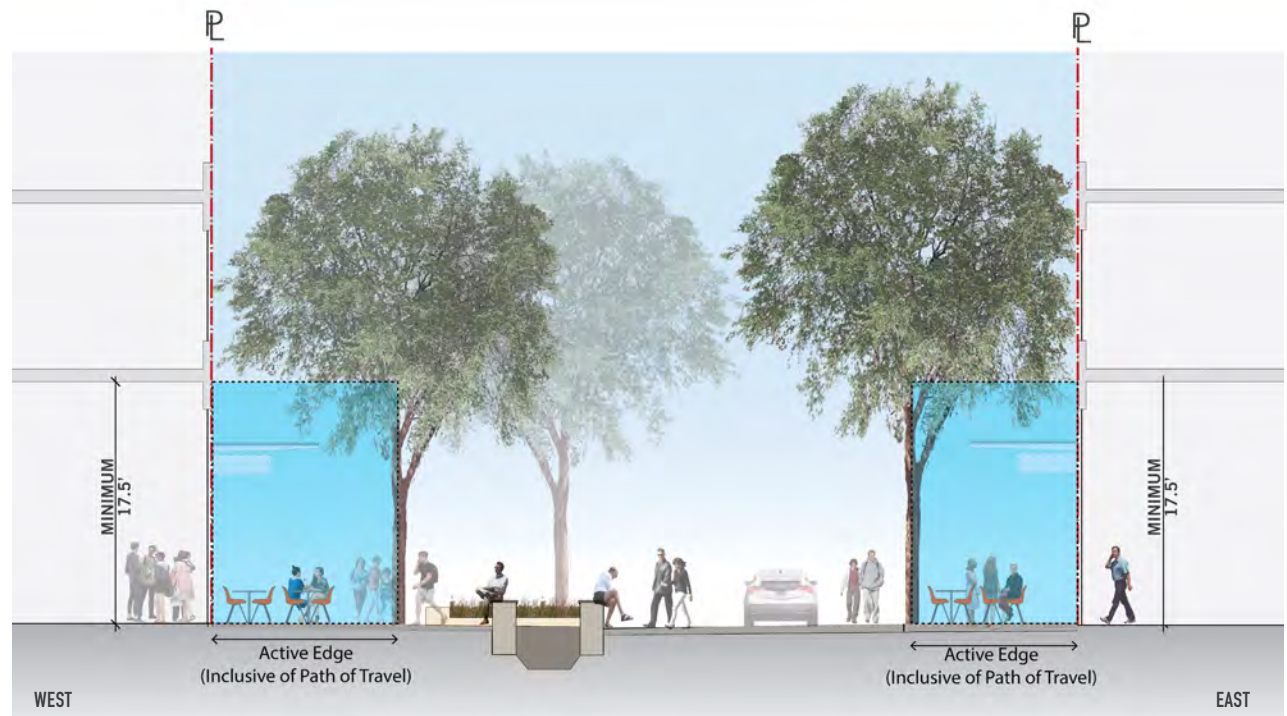


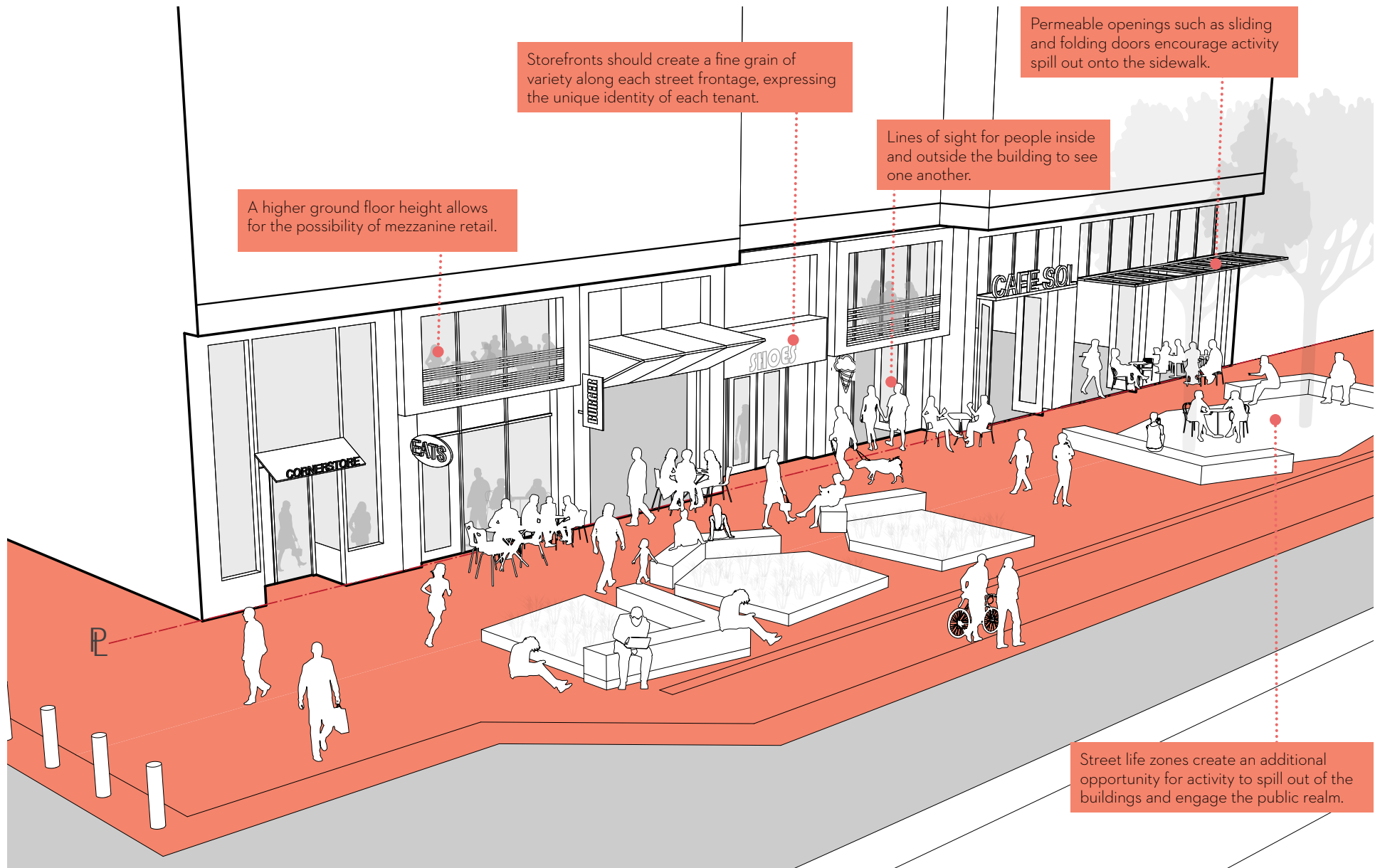
FIGURE 5.6 - High Retail Zone: Section across the Shared Public Way



Active Edge against the building frontage allows indoor life to spill out into the streets. PHOTO: SAN FRANCISCO GIANTS



Permeability creates opportunities for more interaction at the building's edges. PHOTO: PERKINS+WILL



Above is a diagrammatic representation of one way a building frontage in the High Retail Zone could be designed to achieve the goals of vibrant ground floor uses which spill out and activate the public realm.

5.7 PARKFRONT ZONE

Read in conjunction with Section 3.2 - China Basin Park.

The Parkfront Zone represents a high level of activity designed for retail, cafes, restaurants, and entertainment venues, that enliven the Promenade along the built edge of China Basin Park. Uses along this frontage will be excellent locations for outdoor dining, pre-game events, and backdrop for activities at China Basin Park.

The ground floor along the park has the opportunity to spill out into the Park Promenade, activating this edge, and taking advantage of views of the Bay and Ballpark.

The proximity to regional scale events at the Ballpark and China Basin Park mean that food and entertainment uses along this frontage should be designed to anticipate larger crowds of pedestrians.

The frontages for inclusion in the Parkfront Zone are indicated in Figure 5.5 - Ground Floor Frontages. The requirements of the Parkfront Zone are summarized in Table 5.5 - Ground Floor Frontage Zone Controls.

GUIDELINES

5.7.1 UPPER LEVEL ACTIVATION

The inclusion of balconies and terraces are encouraged along the streetwall above the ground floor in the Parkfront Zone to take advantage of views to the Bay and Ballpark, and to allow greater programmatic and visual connection between uses in the buildings and the China Basin Park.



Building frontages along the Parkfront should engage the park in interesting and dynamic ways. PHOTO: SAN FRANCISCO GIANTS

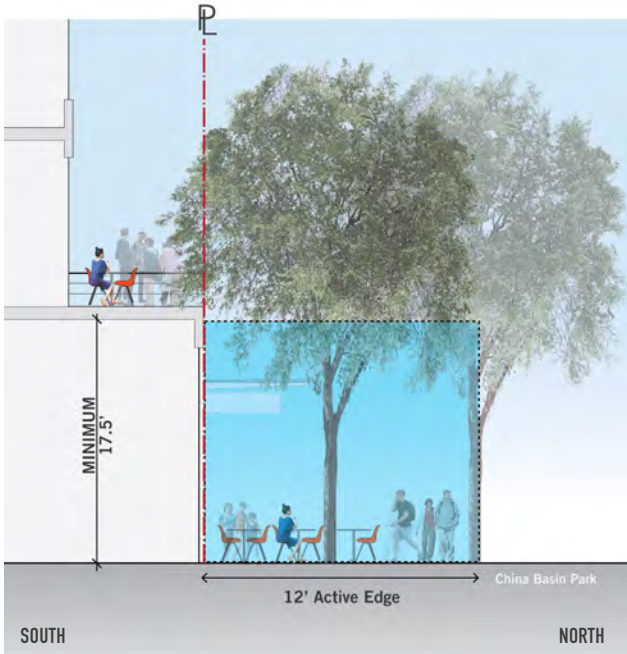
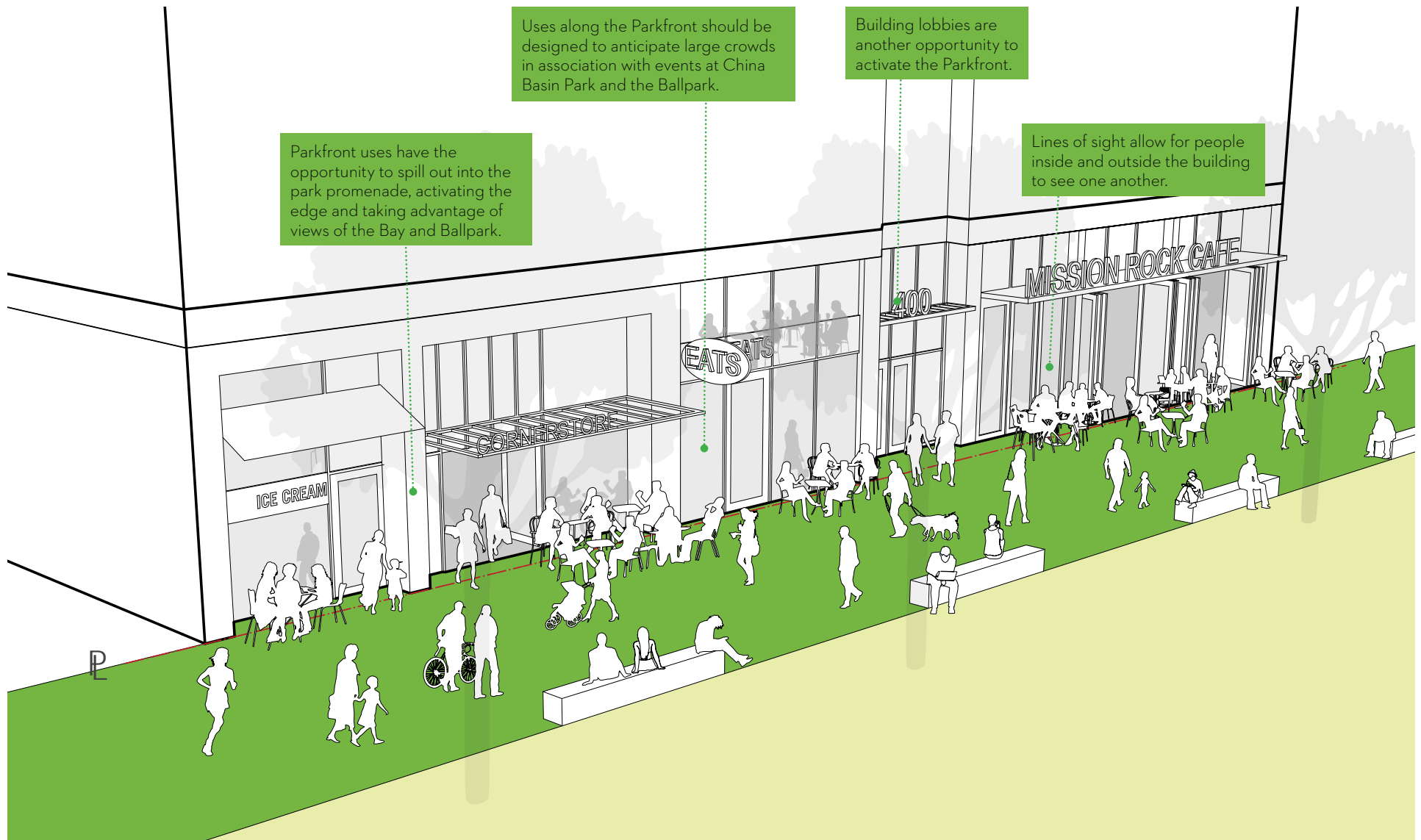


FIGURE 5.7 - Parkfront Zone



Building uses should spill out and activate the promenade. PHOTO: SAN FRANCISCO GIANTS



Above is a diagrammatic representation of one way a building frontage in the Parkfront Zone could be designed to achieve the goals of vibrant ground floor uses which spill out and activate the public realm.

5.8 WORKING WATERFRONT ZONE

Read in conjunction with Section 4.3 - Terry A Francois Boulevard.

The Working Waterfront Zone is intended to support maritime and production uses, which will benefit by being located near other production uses along Terry Francois Boulevard.

Uses in this zone include but are not limited to light industrial, production, fabrication, manufacturing, and studios for crafts people and artists. It is the goal that this zone creates a flexible framework for a broad variety of uses, and as such the requirements for this zone are intentionally broad.

The frontages for inclusion in the Working Waterfront Zone are indicated in Figure 5.5 - Ground Floor Frontages. The requirements of the Working Waterfront Zone are summarized in Table 5.5 - Ground Floor Frontage Zone Controls.

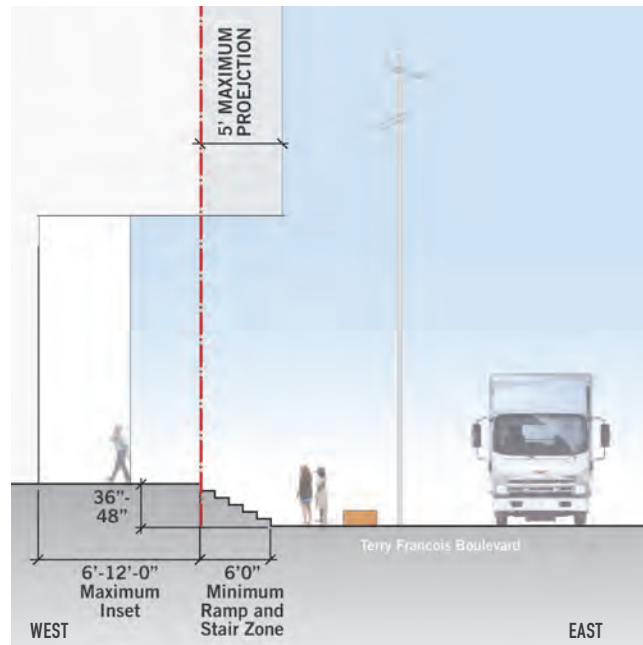


FIGURE 5.8 - Working Waterfront Zone - Elevated Walkway condition



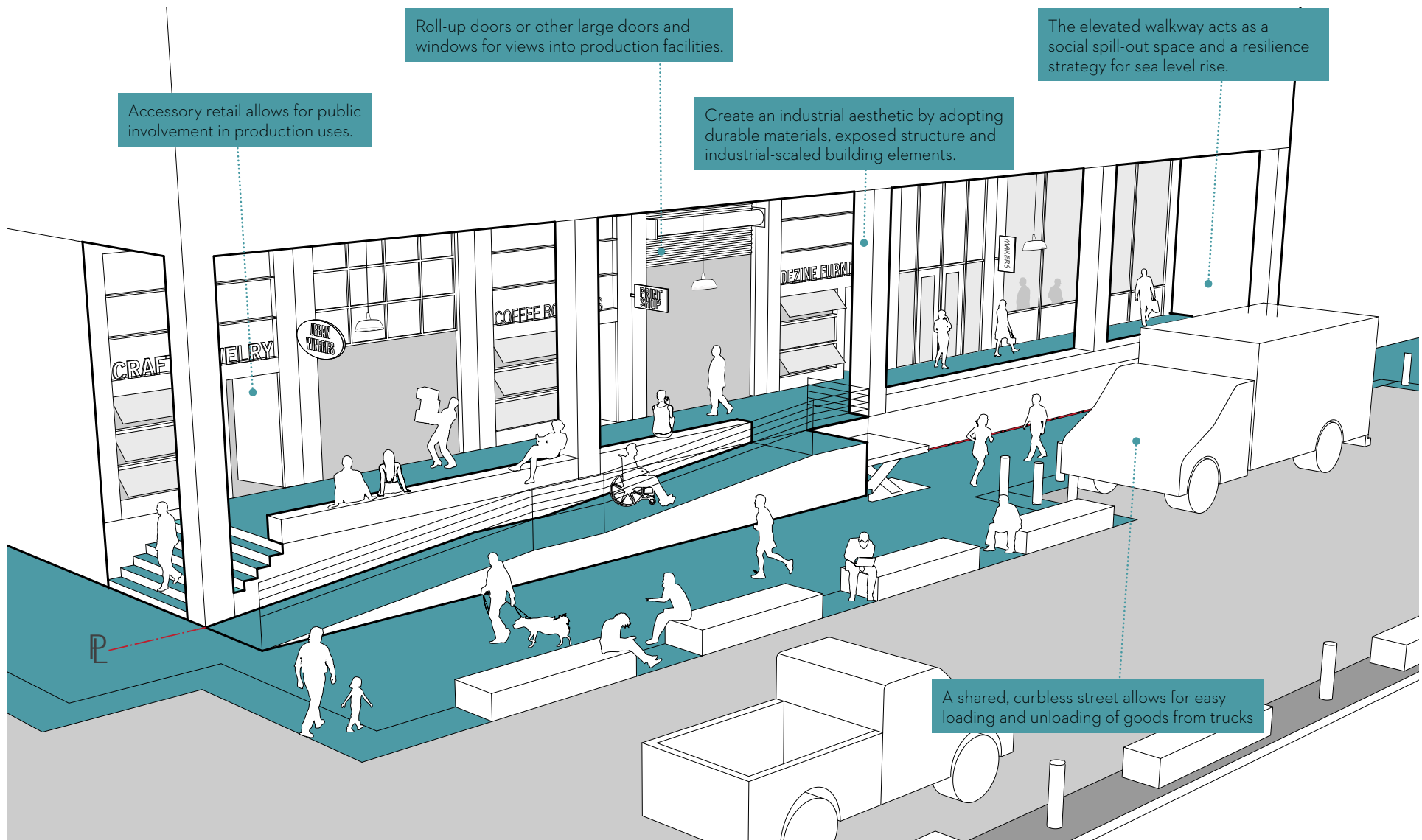
Elevated sidewalks support loading activities and also create opportunities for casual interaction. PHOTO: PERKINS+WILL



This coffee roastery also sells coffee directly to customers. CREDIT: SF MADE



High ground floor heights and roll-up doors enable production uses. PHOTO: PERKINS+WILL



Above is a diagrammatic representation of one way a building frontage along Terry A Francois Boulevard could be designed to achieve the goals of the working waterfront with an elevated walkway allowing production uses to spill out and activate the public realm.

STANDARDS

5.8.1 GROUND FLOOR USES IN THE WORKING WATERFRONT ZONE

The intent of the working waterfront zone is to create an environment for production uses alongside the waterfront which will support an active industrial area, as well as enlivening the pedestrian experience by providing access to public-facing ground floor uses beyond retail.

To create a vibrant street experience which encourages activities later into the evenings, a mix of uses is allowed in the Working Waterfront at the following ratios:

- Production is intended to be the primary use of the ground floor in the Working Waterfront Zone (which includes accessory retail as described in Section 1.2.6 - Production)
- Up to 60 horizontal feet of each block frontage is allowed be occupied by Active Uses which are not accessory to Production Uses.

5.8.2 ELEVATED WALKWAYS

Read in conjunction with 4.3 - Terry A Francois Boulevard.

The presence of production uses along Terry Francois Boulevard creates an opportunity for the Working Waterfront Zone along Blocks H,I, and J to become a functional area for shared servicing needs. An Elevated Walkway condition will be designed to serve several functions:

- A lift gate incorporated at one end of the Elevated Walkway will allow easy movement of goods off-loaded from trucks, lifted by the shared lift gate, onto the Elevated Walkway and moved easily into storefronts.
- This Elevated Walkway will also act as a social spill-out space for users and visitors to Production storefronts

and usable display or working area for the Production uses.

- In the event of sea level rise, this Elevated Walkway ensures that these frontages are at an elevation where they will be protected from flooding.

The height of the Elevated Walkway shall be between 36 inches and 48 inches in height vertical above grade (See Figure 5.8 - Working Waterfront Zone - Elevated Walkway Condition).

Elevated Walkways shall be designed to allow for a continuous 6 foot wide pedestrian throughway within the property line, along the building frontage, facilitating shared loading facilities for production uses, as well as providing the opportunity for entry and service of other uses in the building.

Freight lifts must be incorporated into the Elevated Walkway design to enable the vertical movement of large loads.

Ramps and stairs up to 6 feet in width for enhanced access to loading docks are allowed to be built as an encroachment within the public right of way, as described in Section 4.3 - Terry A Francois Boulevard.

Each block shall provide at least three points of access to the Elevated Walkway, one of which must be ADA compliant.

GUIDELINES

5.8.3 PRODUCTION TENANT NEEDS

Table 5.8.3 - Production Tenant Needs provides a basic understanding of design specifications for different user types. This is not an exhaustive list, but is meant to illustrate the difference in the needs of a production tenant as opposed to other, more common ground floor land uses.

This table is provided as information for designers and developers. It is not necessary to show compliance with this table in a planning application.

5.8.4 INDUSTRIAL AESTHETIC

To create an industrial aesthetic, the use of durable materials, exposed structure, and industrial-scaled building elements are encouraged.

5.8.5 LARGE DOORS

Roll-up doors or other large doors that provide a large opening are preferred. They help facilitate loading and allow for lines of sight into production facilities for passers-by. Where possible these doors should have translucent or vision panels incorporated to reinforce the visual connection between the production space and the public realm. (See also Section 5.7.7 Lines of Sight)

GUIDELINES

TABLE 5.8.3 PRODUCTION TENANT NEEDS

Based on a study by SF Made, this table outlines the general needs of different kinds of industrial tenants. A large majority of users fall into the first category of needs, with fairly minimal needs above and beyond the typical retail or commercial space. **(This table is presented here as information for designer and developers. It is not necessary to show compliance with this table in a planning application.)**

USER TYPE	CRAFT JEWELRY, PRINT SHOPS, CLOTHING & APPAREL MAKERS	ARTISAN FOOD PRODUCERS & COMMERCIAL KITCHENS	FURNITURE / PROTOTYPING & ADVANCED MANUFACTURERS	URBAN WINERIES	COFFEE ROASTERS
TYPICAL PROGRAM AREA (sq ft)	500 sf to 2,500 sf	500 sf to 3,000 sf	5,000 sf to 20,000 sf	5,000 sf to 20,000 sf	5,000 sf to 20,000 sf
MINIMUM CLEAR CEILING HEIGHT	17.4 feet and above	17.4 feet and above	17.4 feet and above	17.4 feet and above, 30 feet or higher preferred for stacking	17.4 feet and above
MINIMUM POWER NEEDS	100a - 200a at 120/240V 3PH	200a - 800a at 120/240V 3PH	300a - 1,000a at 120/240V 3PH (200a - 400a at 480V preferred)	200a - 400a at 120/240V 3PH	400a at 120/240V 3PH (400a at 480V preferred)
MINIMUM GAS NEEDS	1"	2"	1.5"	None	2"
MINIMUM VENTING NEEDS	Equipment based - side venting with charcoal filters / scrubbers as needed	Grease hood exhaust vent 250 CFM / lineal foot of hood General exhaust for storage	Equipment based - side venting OK with charcoal filters / scrubbers	None	12" vertical vent, afterburner (must be upblast)
MINIMUM WATER NEEDS	1.5" main line minimum (Example: slop sink)	1.5" main line (separate from fire water)	2" main line	2" main line with water filtration; both hot and cold water	2" main line
MINIMUM DRAIN / SEWER NEEDS	Typical sink drain	6" Main line	Floor drains (on occasion)	Area drains and trench drains (tenant fit-out preferred)	Floor drains throughout
MINIMUM HVAC NEEDS	HVAC preferred, not required	Make up air 90% hood exhaust CFM	Preferred, not required	Climate controlled	Climate controlled
MINIMUM SHIPPING / RECEIVING NEEDS	Ground delivery roll up doors preferred	Gate level	Grade level* roll up doors, palette jack with freight lift	Grade level* roll up doors, palette jack with freight lift	Grade level* roll up doors, palette jack with freight lift
ACCESSORY RETAIL	Highly preferred, can be shared	Highly preferred, can be shared	Highly preferred, can be shared	Highly preferred on site	Highly preferred on site

*In the case of Mission Rock, "grade level" here refers to the elevated sidewalk condition which can be accessed via freight lift or ramp.

5.9 NEIGHBORHOOD STREET ZONE: RESIDENTIAL

Read in conjunction with Chapter 4: Streets.

The Neighborhood Street Zone applies to frontages which have a lower intensity of activity, generally front onto streets that are quieter in character, and serve to make up the neighborhood feeling at Mission Rock.

Individual residential entries and stoops are an effective way to activate the street and create greater opportunity for social interaction. At the same time, they should provide a sense of privacy and comfortable social distance from the sidewalk.

The frontages for inclusion in the Neighborhood Street Zone are indicated in *Figure 5.5 - Ground Floor Frontages*. The requirements of the Neighborhood Street Zone are summarized in *Table 5.5 - Ground Floor Frontage Zone Controls*.

STANDARDS

5.9.1 GROUND FLOOR ENTRIES

Ground floor residential units shall have entries with direct, individual access onto a public right of way, open space, or easement. Residential units are required to provide a stoop to create a social distance from the street; home office units are not required to have stoops and may be entered at grade.

5.9.2 GROUND FLOOR DESIGN

In the neighborhood street zone, ground floor residential shall be designed in compliance with the City of San Francisco's Guidelines for Ground Floor Residential Design (published on 09/2016, available at http://default.sfplanning.org/publications_reports/Guidelines_for_Groundfloor_Residential_Design.pdf)

5.9.3 PLANTING IN THE ACTIVE EDGE

Permanent planting that does not impede a clear path of travel is allowed in the Active Edge of the Neighborhood Street Zone.

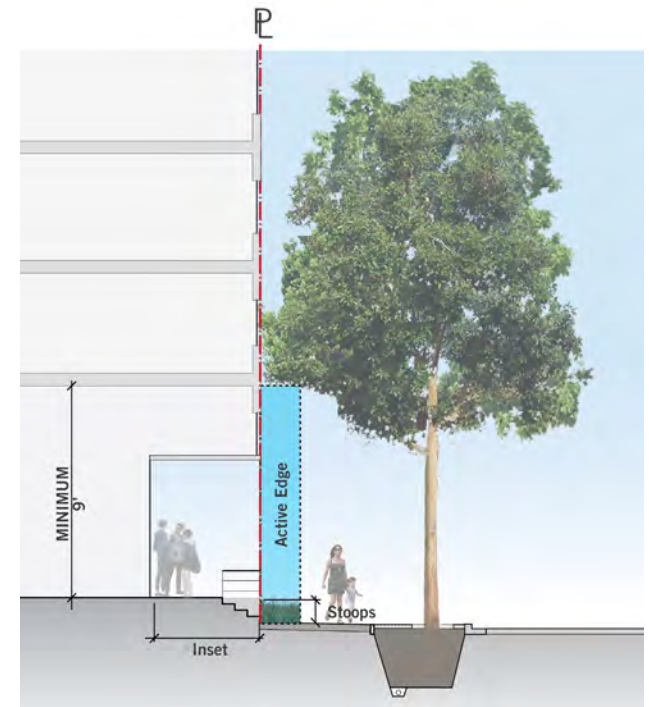
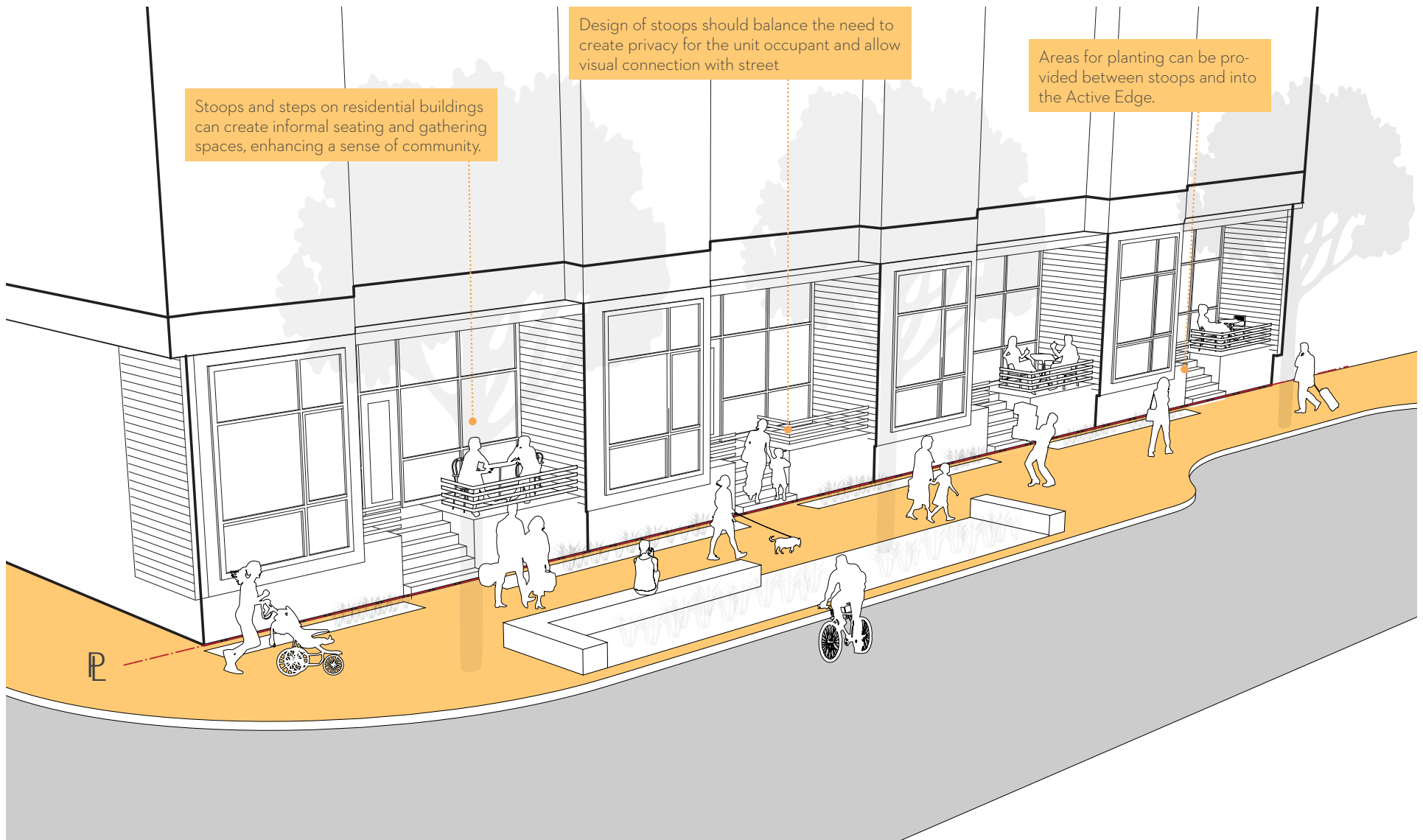


FIGURE 5.9 - Neighborhood Street Zone Section showing a residential stoop.



Stoops with a slightly raised and inset entry create a comfortable social distance between the unit and the street. PHOTO: PERKINS+WILL



Above is a diagrammatic representation of one way a building frontage in the Neighborhood Street Zone: Residential could be designed to achieve the goals of habitable stoops which are a comfortable social distance from the activity of a neighborhood street.

5.10 NEIGHBORHOOD STREET ZONE: NON-RESIDENTIAL

Read in conjunction with Chapter 4 - Streets.

The Neighborhood Street Zone applies to frontages which have a lower intensity of activity, generally front onto streets that are quieter in character, and serve to make up the neighborhood feeling at Mission Rock.

There are many different uses allowed in the neighborhood street zone. Ground floor frontages of commercial buildings should provide active uses which create variety and interest for the pedestrian realm, and contribute eyes on the street.

The frontages for inclusion in the Neighborhood Street Zone are indicated in *Figure 5.5 - Ground Floor Frontages*. The requirements of the Neighborhood Street Zone are summarized in *Table 5.5 - Ground Floor Frontage Zone Controls*.

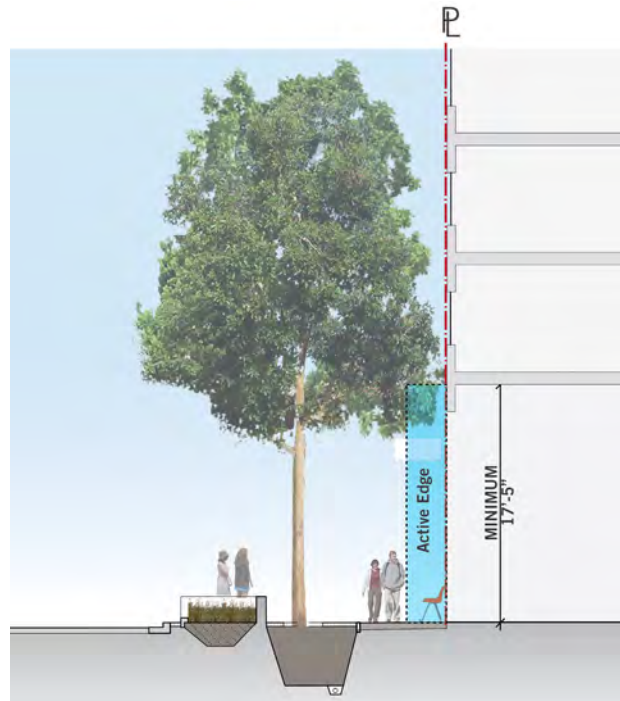


FIGURE 5.10 - Neighborhood Street Zone Section showing a non-residential frontage.



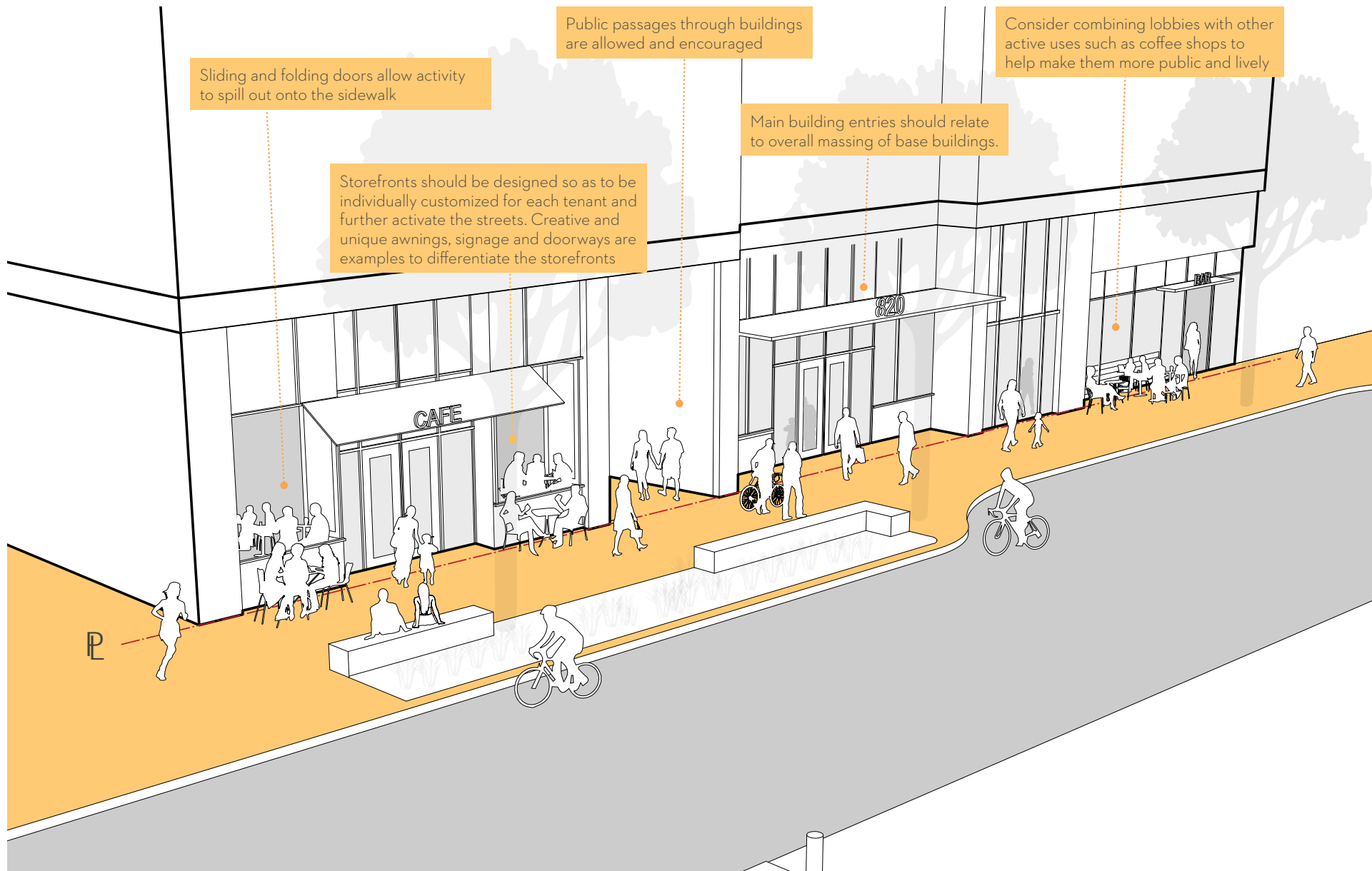
Small shops such as this coffee kiosk can also help to activate neighborhood streets. CREDIT: LIVABLE CITY



Neighborhood-serving amenities such as grocery stores and dry cleaning are used by workers and residents alike. CREDIT: WHOLE FOODS



Cafeterias, gyms and other amenities are good options to activate the lower floors of commercial buildings. CREDIT: FLY WHEEL



Above is a diagrammatic representation of one way a building frontage in the Neighborhood Street Zone: Non-Residential could be designed with a variety of ground floor uses—from commercial lobbies to retail—to activate and enliven neighborhood streets.



Chapter 6, “Building Form” expands upon the Mission Rock strategy of shaping buildings to define and enhance a walkable pedestrian experience, by putting parameters around the height and scale of buildings, and setting aspirations for how these buildings will contribute to the character of San Francisco’s cityscape.

06

BUILDING FORM

A building “envelope” is the result of a set of three-dimensional controls within which buildings will be designed. The envelopes have been set in relationship to sun, shadow, wind, views, and framing the public realm.

This chapter addresses controls for the building envelope, building height, base buildings, upper buildings, design intent for taller buildings, and environmental comfort.

The urban form of Mission Rock works to create a varied urban composition of well-designed buildings that enrich and enliven the city, orient the user, provide a sense of direction and distinguish Mission Rock as a neighborhood which defines the north-east corner of Mission Bay.

6.1	Building Envelope	150
6.2	Building Height	151
6.3	Base Building	153
6.4	Upper Building	157
6.5	Design of Taller Buildings	161
6.6	Environmental Comfort	164

RELATED CHAPTERS: The Ground Floor guidelines shall also be read in conjunction with *Chapter 6: Building Form* and *Chapter 7: Building Design*. Ground Floor controls shall also be viewed in conjunction with Appendix: Block Standards. This chapter refers to *Chapter 2: Public Realm*, describing integration of the ground floor and the public realm.

6.1 BUILDING ENVELOPE

Mission Rock will be a neighborhood with a mix of building types and a variety of building heights. The establishment of specific building envelopes set out maximum development dimensions for each block. These three-dimensional building envelopes, which constrain the shape of buildings, are quite specific. The envelopes balance the following goals:

- ▶ Create comfortable urban spaces;
- ▶ Bring an appropriate intensity of uses alongside parks and transit;
- ▶ Craft an appealing urban form on the city skyline;
- ▶ Allow views across the site to the San Francisco Bay;
- ▶ Ensure that open spaces have ample sunlight and reduce the impact of wind on the public realm;
- ▶ Set building sizes and dimensions that are economically viable; and
- ▶ Promote a diversity of building form that invites a diversity of building uses and users.

At Mission Rock, the building envelope is broken into two parts: the Base Building and the Upper Building, as illustrated in *Figure 6.1 - Components of the Building Envelope*. Due to the critical nature of how buildings meet the public realm, the ground floor has been given its own chapter in these guidelines (see *Chapter 5: Ground Floor*).

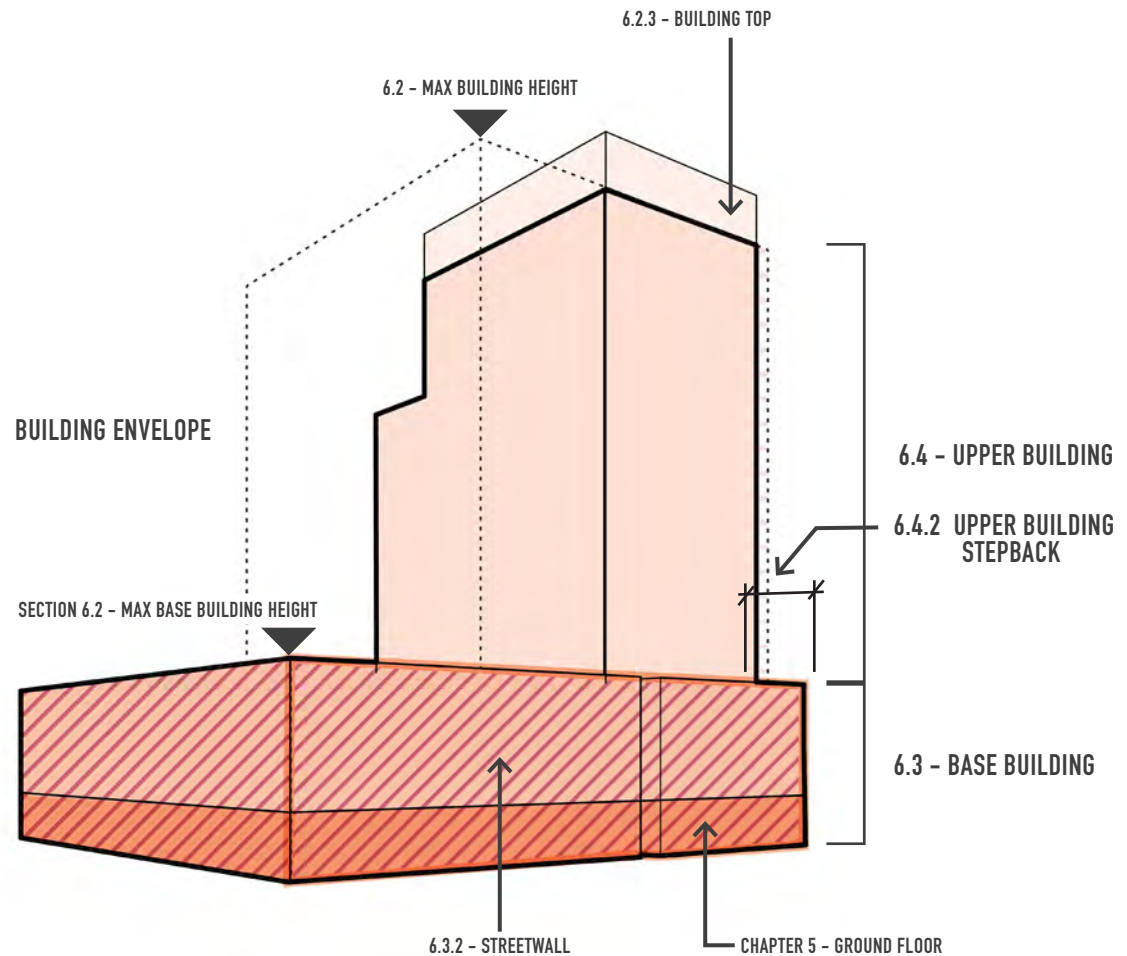


FIGURE 6.1 - Components of the Building Envelope

6.2 BUILDING HEIGHT

Building height controls indicate the maximum height that can be built on each block. The height controls for the base building set the range of allowable heights for the streetwall, while the maximum building heights set the maximum height for each upper building.

MAXIMUM HEIGHT

- 40' Maximum Base Building Height
- 60' Maximum Base Building Height
- 90' Maximum Base Building Height
- 100' Maximum Base Building Height
- Maximum Building Height Zone
- 120' Maximum Building Height
- *90'/120' For Flex Blocks: Maximum Building Height is 90 feet if Commercial or 120 feet if Residential.
- Minimum Stepback Required

Note that solid colors refer to the base buildings and diagonal hatches refer to upper buildings.

Refer to Section 6.2.2 for building height measurement.

Detailed block plans can be found in the Appendix.



FIGURE 6.2 - Maximum Height Plan

STANDARDS

6.2.1 MAXIMUM HEIGHT

The height of buildings shall not exceed the applicable maximum height as shown on *Figure 6.2 - Maximum Height Plan*.

Note that *Figure 6.2 - Maximum Height Plan* controls the maximum height of the building, as well as the specific heights for the base buildings. Read in conjunction with *Section 6.1 - Building Envelope*. Also see *Appendix A* for three dimensional drawings of envelopes.

6.2.2 MEASURING HEIGHT

Because the majority of the site will be elevated to adapt to sea level rise, the finished grade for portions of Mission Rock will be set at a higher elevation than pre-development grade, as determined by the Mission Rock Infrastructure Plan.

Maximum **building** heights are to be measured from the highest point of finished grade (referenced above) along the property line, up to the highest point of the uppermost structural slab in the case of a flat roof; up to the average height of the rise in the case of a pitched or stepped roof, or similarly sculptured roof form.

Maximum **base building** heights are to be measured from highest point of finished grade (referenced above) along the property line to the highest point on the uppermost structural slab of the base building in the case of a flat roof, and the average height of the rise in the case of a pitched or stepped roof, or similarly sculptured roof form of the base building.

6.2.3 BUILDING TOPS

For base buildings, wall plane extensions or parapets may extend up to 5 feet vertically above the maximum base building height.

The unoccupied tops of upper buildings may extend up to 20 feet vertically above the maximum building height, except on Block F, where the building top may extend up

to 40 feet vertically above the maximum building height. See *Table 6.4 Upper Building Bulk Controls*. Read in conjunction with *Section 6.5 - Design of Taller Buildings*.

6.2.4 ROOFTOP ELEMENTS

The below listed rooftop elements may project above the maximum building height limit, with the condition that:

- ▶ On base building: Must step back at a minimum ratio of 1.2 feet in a horizontal dimension from the streetwall for every 1 foot that they exceed the maximum height limit.
- ▶ On upper building: Must be screened or enclosed within the building top.

The following rooftop elements are allowed to project above given height limits:

- ▶ On upper building, mechanical enclosures and sustainable infrastructure such as photovoltaic panels, windmills, or fog catchers and greenhouses (up to 20 feet).
- ▶ On base building mechanical enclosures and sustainable infrastructure such as photovoltaic panels, windmills, or fog catchers (up to 20 feet) and common use structures (up to 20 feet) including, but not limited to: community rooms and kitchens, recreational facilities, and greenhouses. Common use structures may not exceed 25% of the roof area.
- ▶ Non-occupied architectural features on the upper building may extend up to 20 feet vertically above the maximum permitted building height, except on Block F, where the building may extend up to 40 feet vertically above the maximum permitted building height.
- ▶ Railings, planters and visually permeable building elements no greater than 48 inches above the roof are exempt from step-back requirements.

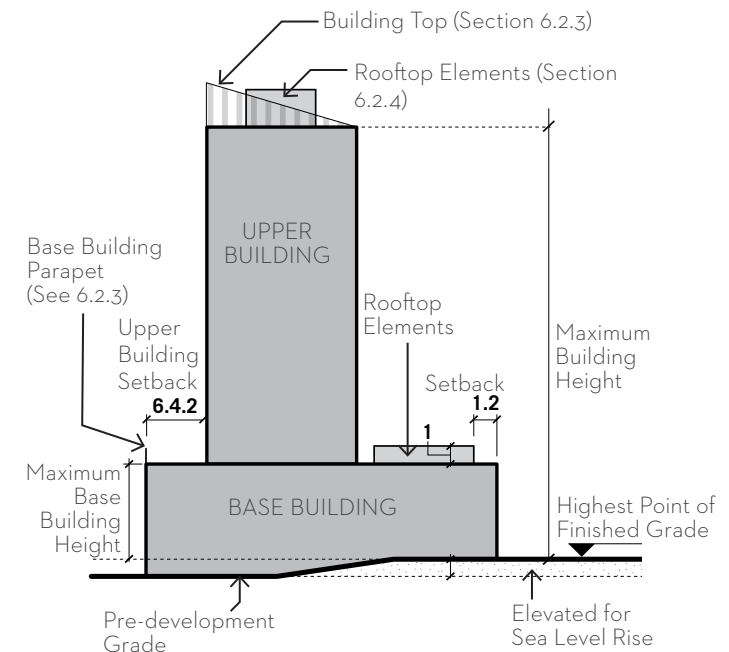
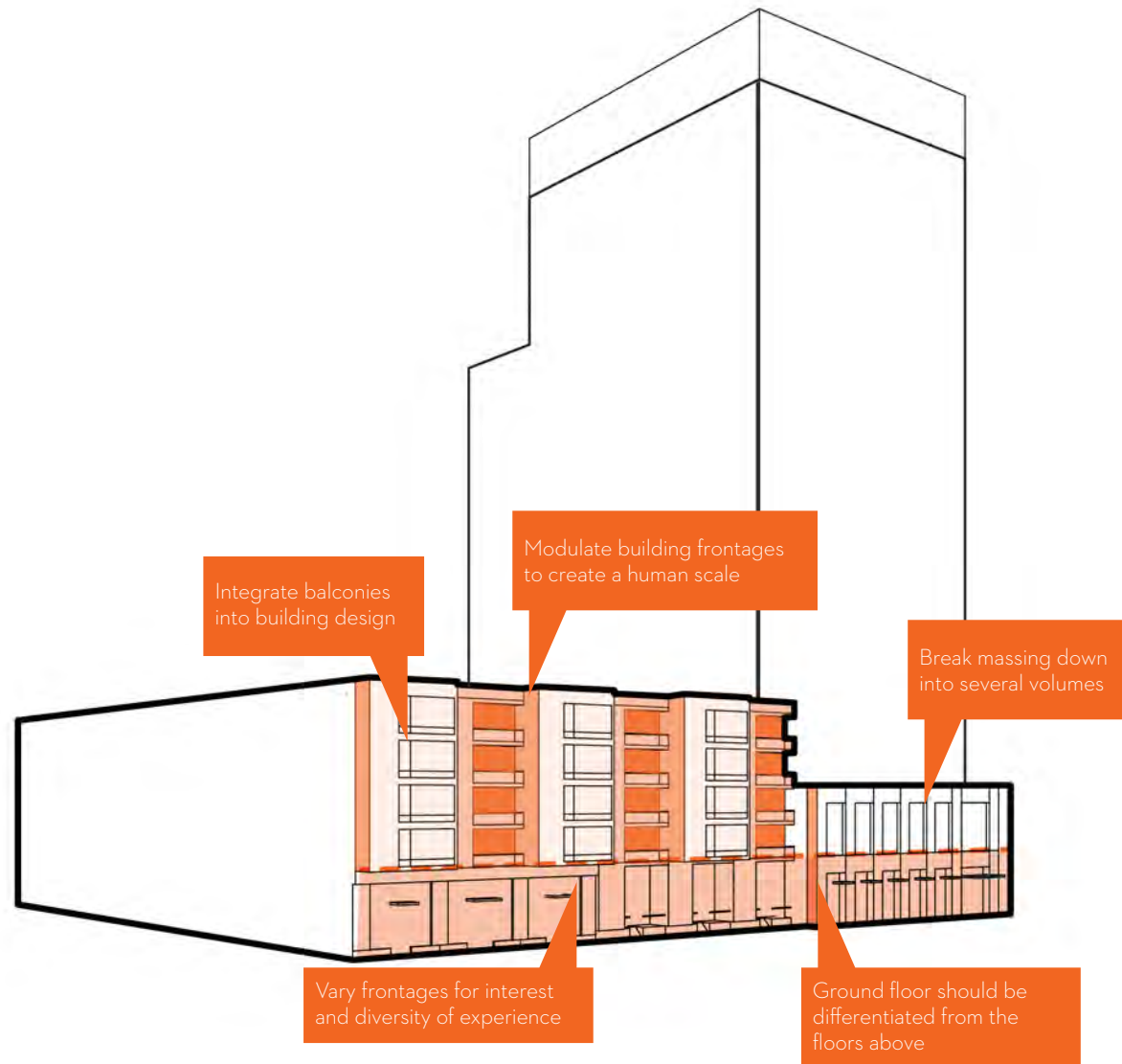
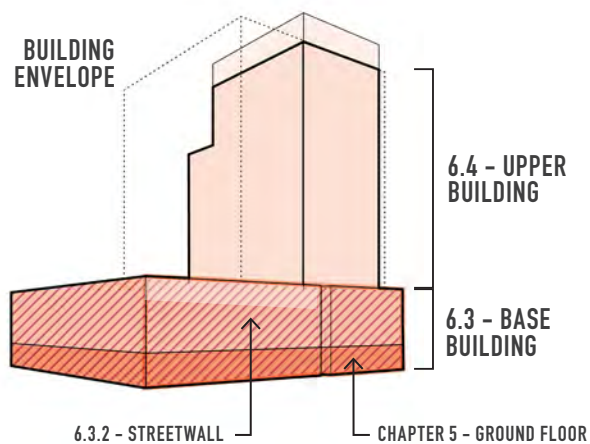


FIGURE 6.2.2 - Measuring Height

6.3 BASE BUILDING

Base buildings influence the individual character of the streets and open spaces which they frame. The streets and squares at Mission Rock are envisaged as a series of 'urban rooms' defined by streetwalls that create a sense of enclosure supporting the activity and life within these spaces. Each building should be designed with the pedestrian experience foremost, paying specific attention to the way the building meets the ground so as to support the design approach described above, and as detailed in *Chapter 5: Ground Floor*.

This section is to be read in conjunction with *Chapter 5: Ground Floor* which outlines the design approach to the ground floor of all buildings.



STANDARDS

6.3.1 BASE BUILDING MASSING

The base building is the lower portion of the envelope that creates the streetwall, which defines and enlivens the pedestrian experience of the street and frames comfortable urban streets.

This area is taken as the property line extended upwards to the maximum base building height limit as described in *Figure 6.2 - Maximum Height Plan*.

6.3.2 STREETWALL AREA CALCULATION

The streetwall is defined as that portion of the building envelope which directly fronts onto either a public right-of-way or abutting open space. Streetwall standards and calculations apply to all sides of a building that front onto a public right of way or open space.

A building's actual streetwall area is calculated as a percentage of the sum of the total area of those portions of the building, from grade up to the full height of the base building that are built to the property line, divided by the total area of property frontage from grade up to the full height of the base building. See also *Figure 6.3.2 - Streetwall Area Calculation*.

A) Minimum Streetwall Area

The minimum streetwall requirement for all building frontages at Mission Rock is 70%. The remainder of the frontage can be set back at any distance from the property line.

B) Minor Streetwall Variations

Minor variations along the streetwall are encouraged and count towards the streetwall area calculation. Minor variations include:

- Recessed building entries up to two habitable floors in height;
- Recessed balconies and seating areas;
- Vertical recesses, notches, or massing reveals up to 3 feet deep

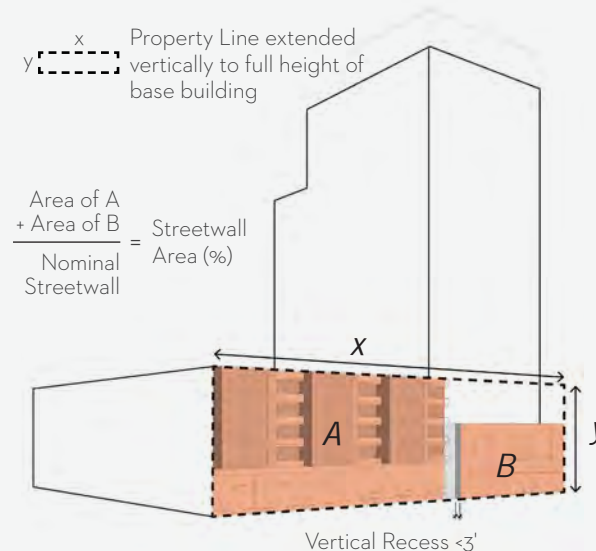


FIGURE 6.3.2 - Streetwall Area Calculation

6.3.3 STREETWALL ENCROACHMENT

At the second floor and above, enclosed or unenclosed building area may encroach into the public right-of-way up to a maximum of 5 feet from the property line on frontages facing Terry A Francois Blvd and China Basin Park, and up to 3 feet on all other frontages.

Encroachments may cover a maximum aggregate of 40% of the area of each streetwall frontage.

For unenclosed encroachments such as balconies, the encroachment area shall be calculated as that area which is less than 75% transparent or permeable. For example, the slab edge of a balcony counts toward the calculation of encroachment area, but a glass or metal picket balustrade does not. See also *Figure 6.3.3 - Streetwall Encroachments*.

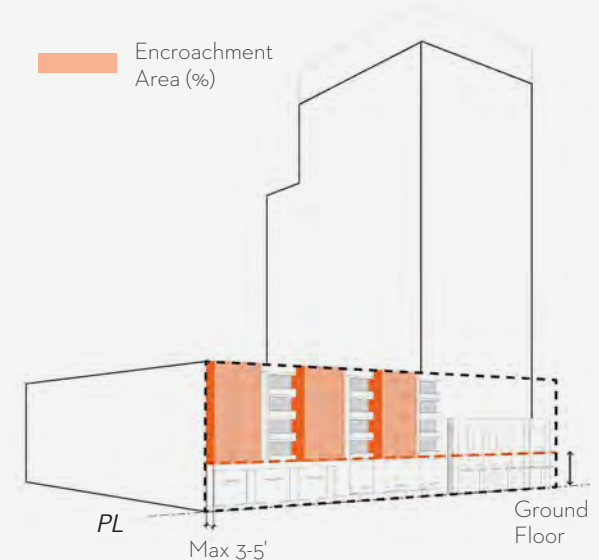
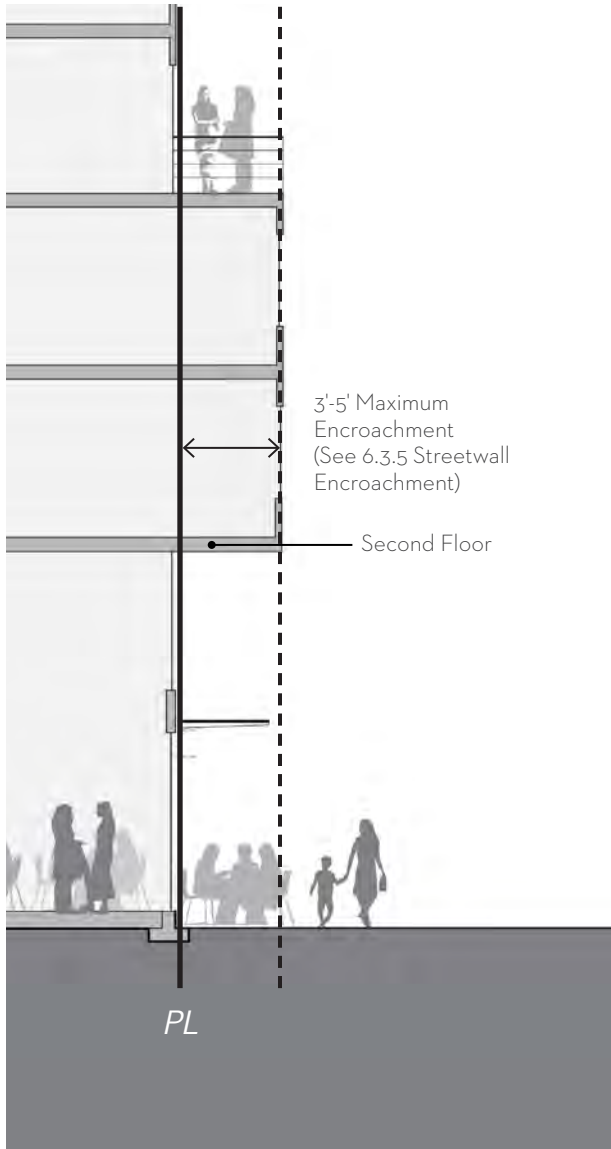


FIGURE 6.3.3 - Streetwall Encroachment



On typical streets, an encroachment of up to 3 feet is allowed, starting at the second floor and above.



Above is an example of how to calculate the encroachment area with a variety of bays and balconies, demonstrating both enclosed and unenclosed encroachments. Shaded faces would be included in encroachment area calculation. PHOTO: PERKINS+WILL

GUIDELINES

6.3.4 BASE BUILDING MODULATION

The mass of the base building should be broken down into several smaller masses. These massing moves should relate to the overall building design, design of the upper building, and to other prominent building elements such as fenestration patterns and building entries.

Requirements for base building modulation are further described in *Section 7.2.1 - Residential Building Modulation* and *7.3.1 - Commercial Building Modulation*.

6.3.5 STREETWALL CHARACTER

The length of each streetwall should be varied and articulated to create interest and diversity of experiences, forms and materials along public ways. Variety is purposely sought in order to avoid repetitive or over-sized buildings and provide visual interest.

6.3.6 VERTICAL CONTINUITY

There should be a relationship between the upper and base building which gives a sense of the upper building coming to the ground. A similar palette of materials, colors, and fenestration should continue from upper building to base building, so as to create a unified composition. Care should be taken to create a pedestrian scale at the base. Read in conjunction with *Section 6.4.2 - Stepback of Upper Building*.

6.3.7 KEY CORNERS

The Northwest corner of Block A and the Southeast corner of Block H are highly visible on approach to the site, and should have special architectural detailing which is appropriate to their prominent locations.



Building streetwalls should be broken down into discrete masses which create variety and interest. CREDIT: JEMS ARCHITECTCI



Key corners at Mission Rock should be marked with special massing and design features. PHOTO: PERKINS+WILL

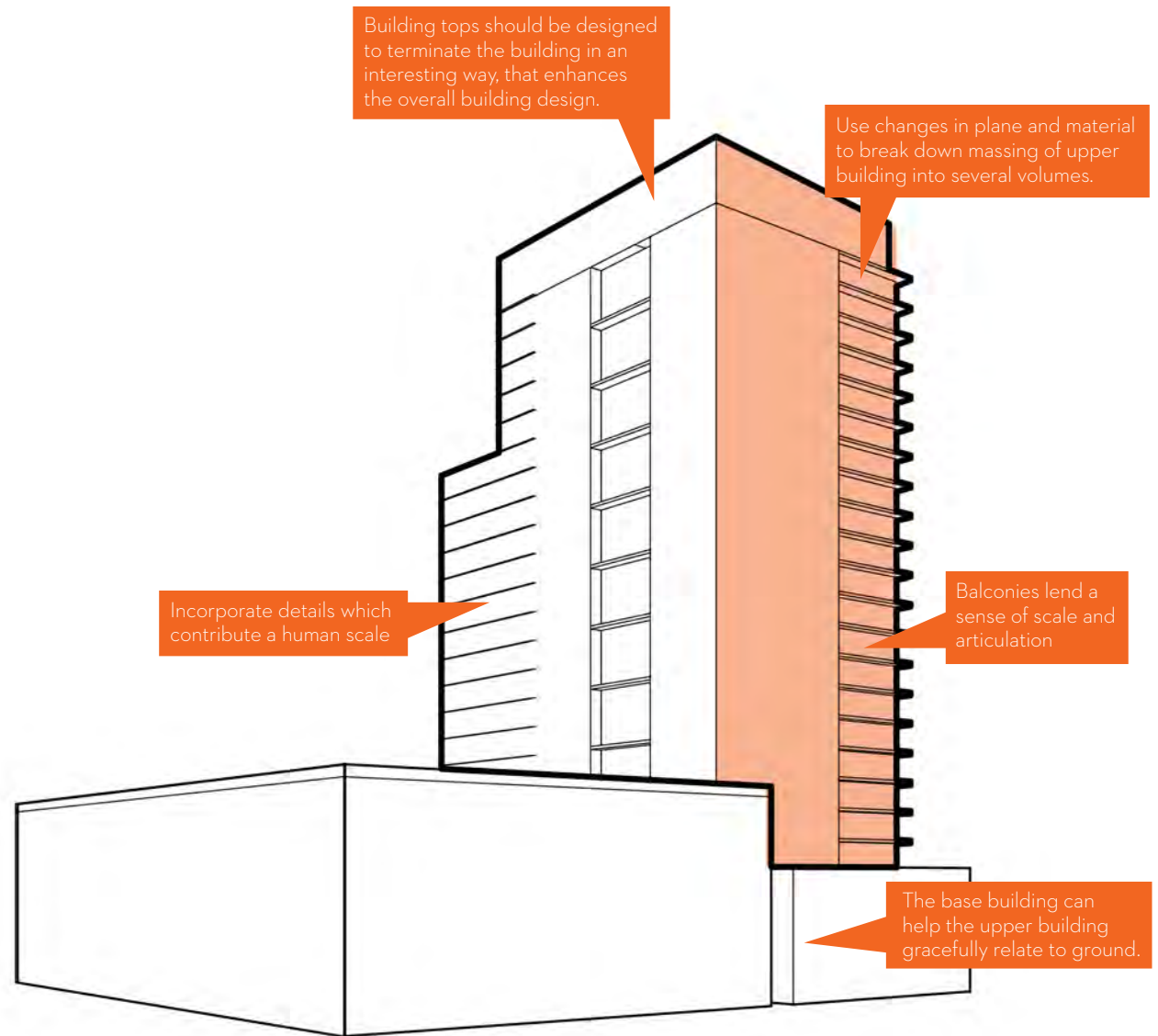
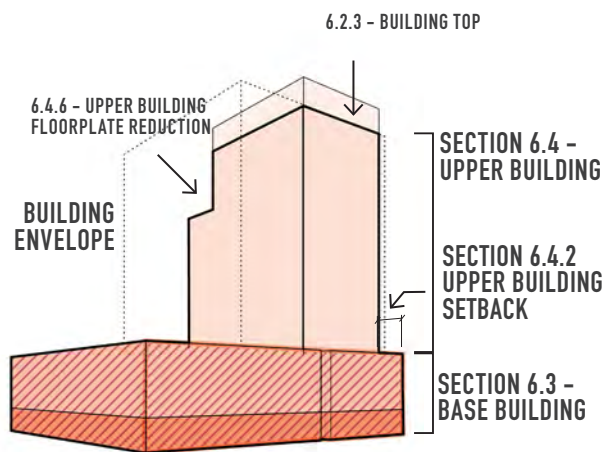


This image depicts a single building, the massing of which has been broken down with vertical recesses, projections, different kinds of balconies (inset and projecting), and changes in material so that it looks like several smaller buildings. PHOTO: PERKINS+WILL

6.4 UPPER BUILDING

The upper building is the portion of the building which rises above the base building. In many cases this part of the building envelope steps back from the property line to reduce the presence of a building's full height on the street, reinforce the streetwall at a discernible height, and in some cases to reduce or mitigate the impact of wind to ensure a more comfortable sidewalk experience.

Within the upper building envelope, the bulk of the building is constrained by controls for maximum floorplate sizes, and maximum diagonal and plan dimensions, while building tops sculpt the form of the building and contribute to a unique skyline. Controls for each of these elements are found in this section.



STANDARDS

6.4.1 UPPER BUILDING MASSING

The upper building is defined as the portion of the building which rises above the maximum base building height, up to the total building height.

The upper building massing must be located within the hatched zone indicated on *Figure 6.2 - Maximum Height Plan*, and constrained by the given stepback dimensions as well as the bulk controls in *Table 6.4 - Upper Building Bulk Controls*.

6.4.2 STEPBACK OF UPPER BUILDING

In various places, the upper building is required to be stepped back from the streetwall for the purposes of mitigating wind, and visually reinforcing the streetwall along these frontages. The minimum stepback is indicated in *Figure 6.2 - Maximum Height Plan*.

On 3rd Street the stepback requirement for the upper building can be reduced to 5' where the design meets the following criteria:

- ▶ Does not measurably increase the amount of wind on the adjacent public realm, including impacts on surrounding building frontages, AND;
- ▶ Visually reinforces the streetwall through a change in material, transparency, or change in plane at or below the maximum base building height.

6.4.3 UPPER BUILDING MAXIMUM AVERAGE FLOORPLATE

The maximum average floorplate size for the upper building is defined as the maximum size of the sum of all the upper building floorplates, divided by the number of floors in the upper building.

This calculation excludes those floors which are required to be reduced as described in *6.4.6 - Floorplate Reduction*.

The maximum average floorplates are given for each block in *Table 6.4 - Upper Building Bulk Controls*.

6.4.4 UPPER BUILDING MAXIMUM PLAN DIMENSION (RESIDENTIAL ONLY)

The maximum plan dimension of a residential upper building is the greatest plan dimension parallel to the longest side of the building at any given level of the upper building as illustrated in *Figure 6.4.4 - Maximum Plan Length and Diagonal Length*.

Maximum plan dimensions are given for each block in *Table 6.4 - Upper Building Bulk Controls*.

6.4.5 UPPER BUILDING MAXIMUM DIAGONAL DIMENSION (RESIDENTIAL ONLY)

The maximum diagonal dimension of a building or structure is the greatest horizontal distance between two opposing points at any level of the upper building as illustrated in *Figure 6.4.4 - Maximum Plan Length and Diagonal Length*.

Maximum diagonal dimensions are given for each block in *Table 6.4 - Upper Building Bulk Controls*.

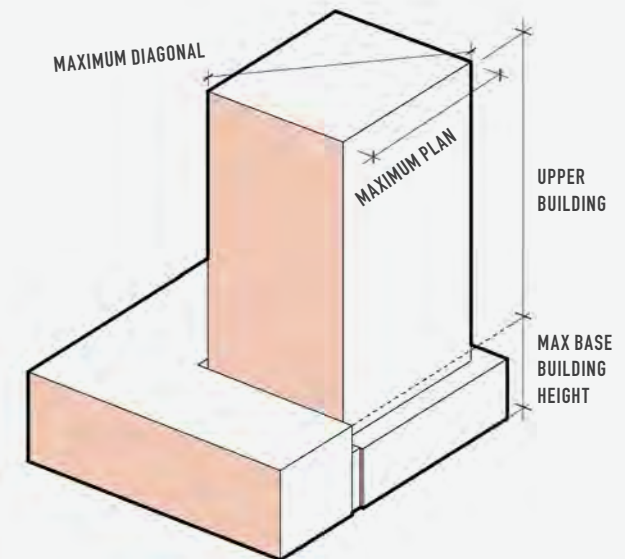


FIGURE 6.4.4 - Maximum Plan Length and Diagonal Length

STANDARDS

6.4.6 UPPER BUILDING FLOORPLATE REDUCTION

For buildings over 160 feet in height, sculpting of the upper building helps to create visually pleasing, elegant forms that reduce in bulk as they rise toward the sky.

Requirements for reducing the floorplate of the upper building are identified in *Table 6.4 - Upper Building Bulk Controls* and illustrated in *Figure 6.4.6 - Floorplate Reduction*.

The percentage reduction is calculated as the average of all of the reduced floorplates divided by the average of all the floorplates without a reduction.

For example, Block A is required to reduce the uppermost five floors by 25%. Taking the maximum average floorplate of 12,000 square feet, the five uppermost floors will be 9,000 square feet each, or the equivalent of 45,000 square feet spread across the uppermost five floors.

While the floorplate reduction is diagrammed here as a step in the building massing, the reduction can take any form, including but not limited to: a single step, several steps, tapering, and so on.

Floorplate reductions shall result in a reduction in the maximum building diagonal for the subject floors, and may not be achieved by means of inset or notching such that the diagonal is not reduced. *Figure 6.4.7 - Examples of Floorplate Reduction* show acceptable and unacceptable ways of applying the guidelines.

For buildings above 200 feet in total height, no tapering of the upper building is necessary if the average floorplate of the entire upper building is 11,000 square feet or less.

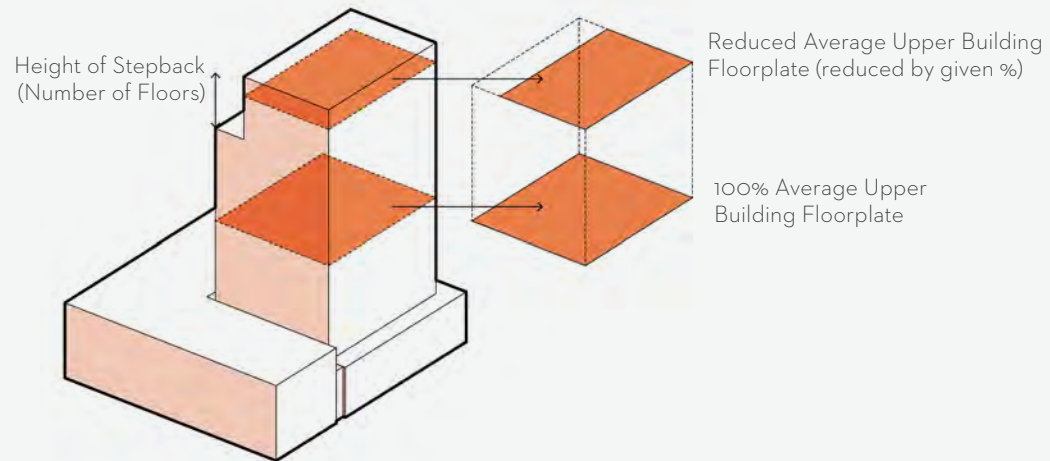


FIGURE 6.4.6 - Floorplate Reduction

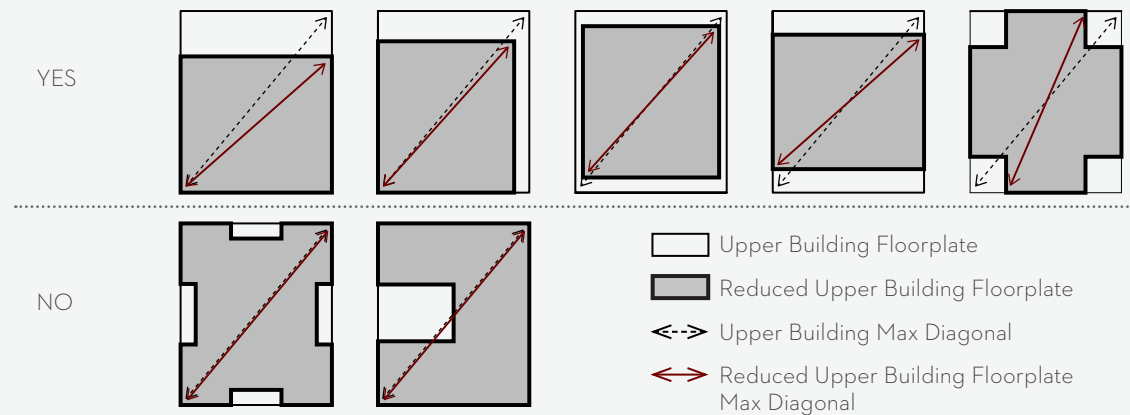


FIGURE 6.4.7 - Examples of Floorplate Reduction

STANDARDS

TABLE 6.4 UPPER BUILDING BULK CONTROLS

BLOCK	LAND USE (SECTION 1.1)	UPPER BUILDING MAX PLAN DIMENSION	UPPER BUILDING MAX DIAGONAL DIMENSION	HEIGHT OF BUILDING TOP	UPPER BUILDING MAX AVERAGE FLOORPLATE	% REDUCTION OF MAX AVG FLOORPLATE	HEIGHT OF STEPBACK
BLOCK A	Residential	140 feet	160 feet	20 feet	11,001 - 12,000 square feet	25%	Uppermost 5 floors
					11,000 square feet or less	None Required	Not Applicable
BLOCK B	Commercial	NA	NA	20 feet	25,000 square feet	None Required	Not Applicable
BLOCK C	Commercial	NA	NA	20 feet	20,000 square feet	10%	Uppermost 2 floors
BLOCK D	Residential	140 feet	160 feet	20 feet	12,000 square feet	None Required	Not Applicable
BLOCK E	Commercial	NA	NA	20 feet	NA	None Required	Not Applicable
BLOCK F	Residential	140 feet	160 feet	40 feet	11,001 - 12,000 square feet	25%	Uppermost 5 floors
					11,000 square feet or less	None Required	Not Applicable
BLOCK G	Commercial	NA	NA	20 feet	20,000 square feet	10%	Uppermost 2 floors
BLOCK H (FLEX)	If Residential	115 feet	150 feet	20 feet	10,000 square feet	None Required	Not Applicable
	If Commercial	NA	NA	20 feet	20,000 square feet	None Required	Not Applicable
BLOCK I (FLEX)	If Residential	115 feet	150 feet	20 feet	10,000 square feet	None Required	Not Applicable
	If Commercial	NA	NA	20 feet	20,000 square feet	None Required	Not Applicable
BLOCK J (FLEX)	If Residential	115 feet	150 feet	20 feet	10,000 square feet	None Required	Not Applicable
	If Commercial	NA	NA	20 feet	20,000 square feet	None Required	Not Applicable
BLOCK K	Residential	115 feet	150 feet	20 feet	10,000 square feet	None Required	Not Applicable

6.5 DESIGN OF TALLER BUILDINGS

The three taller buildings, Blocks A, D1, and F are located on transit street or open spaces, and act as landmarks for these important public places. These buildings are each situated in a unique place and context within the site and should each be designed to respond to their specific location.



ABOVE: A notch, combined with a change in material and a change in height breaks the mass of this building into three distinct forms. CREDIT: BKS ARCHITECTS

GUIDELINES

6.5.1 DESIGN INTENT: BLOCK A

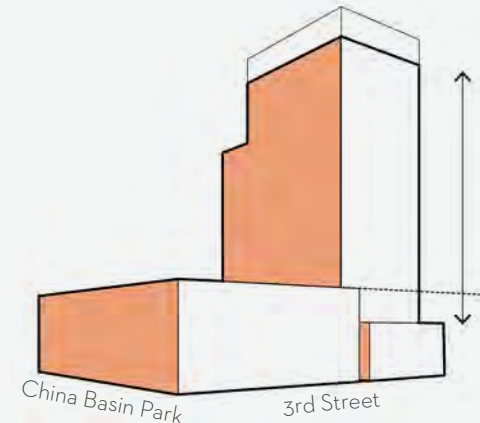
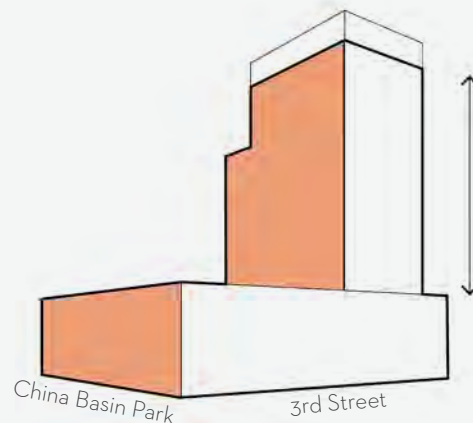
Block A, located at the acute corner of 3rd Street and China Basin Park acts as the 'prow of the ship,' visible at a distance on approach to the Lefty O'Doul Bridge south along 3rd Street. The north side streetwall of this block frames China Basin Park, while its west side is one of the longer streetwalls on the site. The design of Block A should respond to this specific context with the following approaches:

Break down the China Basin Park and 3rd Street streetwall of Block A into several smaller masses, each with different materials and/or fenestration. If the block is developed as one building, the breaking down of the massing can be achieved using different façade designs to look like separate buildings, or by using a variation on the same façade concept which differentiate masses

through setbacks or notches combined with contrasting transparency, color, or material.

Vary the base building height along 3rd Street so that the base building steps down to approximately 40 feet in height at the base of the upper building to give greater height to the form of the upper building. This strategy, combined with the changes in the streetwall will give the impression of the block as an assembly of masses, rather than a single, monolithic block.

Consider orienting the taper of the upper building so that it steps back from the eastern side of the building - creating a more generous taper when viewed from the north and south and a greater presence on the 3rd Street frontage.



ABOVE: The diagram on the left shows a base building with no notch or change in base building height, while the diagram on the right shows how adding a notch and lowering the base building in front of the upper building makes it appear more slender.

GUIDELINES

6.5.2 DESIGN INTENT: BLOCK D1

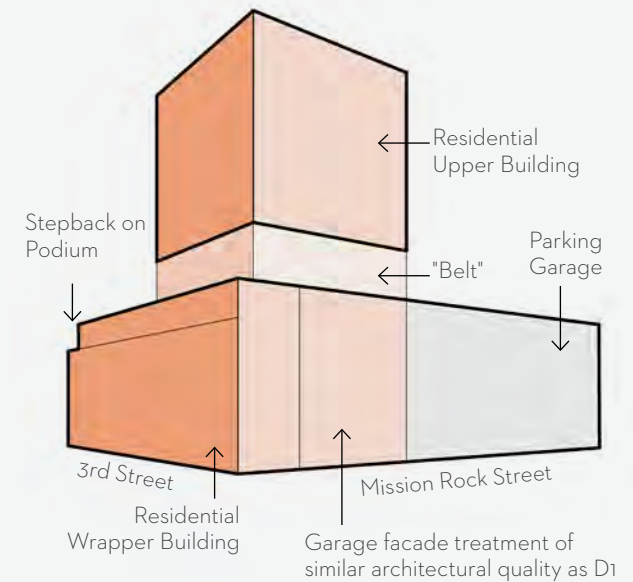
Block D1 marks the Mission Rock MUNI Metro Station along 3rd Street, and is particularly visible from the southern approach to the site. This building has constraints on its design because its structure could be combined with the parking garage on Block D2. Unlike the upper buildings on Blocks A and F, the upper building of Block D1 sits atop a higher streetwall, forming a 100-foot-tall wrap to the parking garage. This, combined with its location across Mission Rock Street from the Public Safety Building suggests a mass and form which can stand up to the robust scale of its surroundings. Due to its context, this building should consider the following design approaches:

Alternative A: Create a band course of greater transparency at the base of the upper building. Such a 'belt' on the building, along with a differentiated façade concept, can give the appearance of the upper building

as a truly distinct form, appearing to float above the base building.

Alternative B: Conversely; consider using a similar strategy for visually breaking up the podium as described on Block A, with a portion of the streetwall which is expressed as a lower height, combined with a notch between these massing elements. Use a change in the materials, massing, or unit layout of the upper levels of the residential base building along 3rd Street to reinforce a lower scale streetwall. An example of this is using a window-wall façade on floors 1-8, and then transitioning with a small stepback to a curtain-wall façade for the two upper levels, designed as two-level town homes.

In all cases the portion of the garage directly below the mass of the tower along Mission Rock Street should have a facade treatment of similar architectural quality to the residential building on D1. In no instance can parking be visible on the 3rd Street frontage.



A transparent "belt" separates upper and lower masses. CREDIT: MIR



An example of a tall residential building connected to a large parking garage. R CREDIT: OBIN HILL / ARQUITECTONICA



Stepping back the uppermost floors of a podium building creates the effect of a lower streetwall. PHOTO: PERKINS+WILL

6.5.3 DESIGN INTENT: BLOCK F

Block F is located on the northern side of Mission Rock Square and acts as a landmark identifying Mission Rock's community heart. Because of its prominence at this important open space location in the center of the site and its position on the skyline, the building will impact the identity of the site both from the ground level experience as well as from distant views.

It should be designed as a landmark building that is compelling in design and relates to Mission Rock Square through the design of the base building, the way the tower comes to ground, and through the ground level activity it supports.

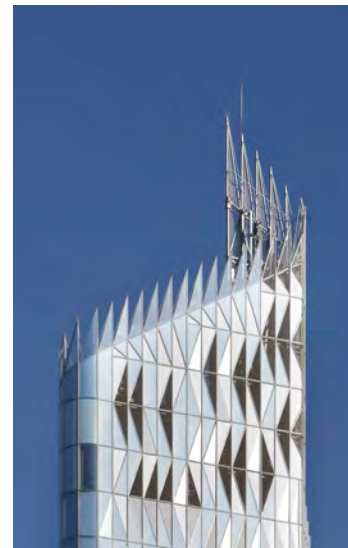
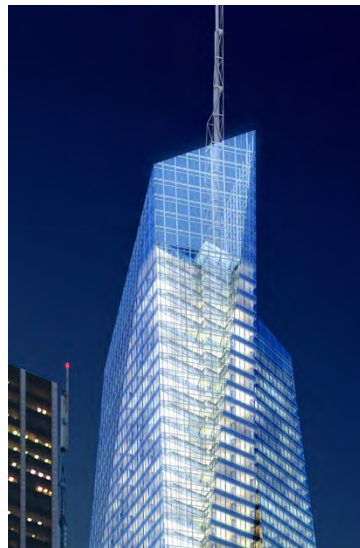
The form of this building should be simple and elegant, expressing a compelling design concept that is well-scaled, interesting, and carefully detailed. The top of this building may be shaped with wall plane extensions or other non-habitable elements up to 40 feet above the maximum building height to allow for greater differentiation and architectural expression (see Table 6.4 - Upper Building Bulk Controls).



CREDIT: ADRIAN SMITH + GORDON GILL ARCHITECTURE



PHOTO: PERKINS+WILL



ABOVE: The four images above illustrate many different ways to terminate towers in visually interesting ways. CREDIT: LEFT - COOK + FOX ARCHITECTS / RIGHT - KOHN PEDERSON FOX



Block F should be designed to embrace and enhance the experience of Mission Rock Square. CREDIT: PERKINS + WILL

6.6 ENVIRONMENTAL COMFORT

Because of San Francisco's mild climate, outdoor spaces can be enjoyed all year round. However, even on warm days, sunny open spaces will become cold and uncomfortable if they are windy.

Mission Bay can experience stronger winds than other parts of San Francisco, with winds generally coming from the West, and highest wind speeds most often occurring during summer afternoons.

The massing of the buildings at Mission Rock have been designed with a stepback above the streetwall which serves to stop much of the wind from coming to ground, ensuring a comfortable pedestrian experience.

Beyond this, the following architectural features can be used to further minimize the impact of wind on the public realm.

GUIDELINES

6.6.1 DESIGN AND ORIENTATION OF TALL BUILDINGS

Design and orient tall buildings to promote air circulation and natural ventilation, yet minimize adverse wind conditions on adjacent streets, parks, and open space, at building entrances, and in public and private outdoor amenity areas.

The stepback of upper buildings as required by the location of Upper Building Zones will help to reduce the amount of wind that comes to ground. See *Figure 6.2 - Maximum Height Plan*.

6.6.2 WIND BAFFLES AND AWNINGS

Wind baffles and randomized balconies help to delaminate wind from the face of the building, thereby reducing the speed of the wind that may come to ground.

Ensure weather protection elements, such as overhangs and canopies, are well-integrated into the building design, carefully designed and scaled for the street, and positioned to maximize function and pedestrian comfort.

Large awnings and canopies can be effective when coupled with other wind reduction strategies.

6.6.3 LANDSCAPE STRATEGIES

Landscape can be a highly effective way to reduce or mitigate wind in the public realm. For guidance on species selection see *Section 2.7 - Urban Forest*.



Generous awnings can minimize the impact of wind at entries and sidewalks. PHOTO: PERKINS+WILL

This chapter guides the development of high-quality, high-performance buildings at Mission Rock and encourages the design of well-scaled, attractive architecture.

The building envelope massing established in Chapter 6 provides for an order of form related to streetwall and building height. The design of the buildings within the constraints of these envelopes provides the opportunity to introduce variation and diversity of architecture.

To that end, these standards and guidelines encourage each building to have its own unique character, while playing a role in the creation of a coherent overall image of Mission Rock as a lively, appealing and inviting neighborhood.

07

BUILDING DESIGN

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7.1 SUSTAINABLE BUILDINGS

Performance targets and sustainable design strategies for buildings at Mission Rock are outlined in the Mission Rock Sustainability Strategy, to be read in conjunction with this document. Guidelines given here with regard to sustainability are intended to support buildings in achieving the targets identified in the Mission Rock Sustainability Strategy - a 'living document' with targets that can be updated as technology improves.

Enhancing long-term sustainability is one of the key principles guiding these Design Controls, and Mission Rock’s architectural design has been envisioned with this goal in mind. Mission Rock will be a Type 1 Eco-District, as defined by the City of San Francisco, allowing buildings to take advantage of sustainable resource management at the district scale. Buildings will tie into Eco-District infrastructure which will supply district-wide heating and cooling, and centralized water re-use.

This centralized infrastructure will make it easier for buildings at Mission Rock to achieve high energy targets. High performance means not simply taking advantage of the district-wide resources, but also reducing demand through efficient building design and community education and advocacy.

The following standards and guidelines allow for many different sustainable design approaches. It is up to the architect to design a building that will meet the performance criteria outlined in the Mission Rock Sustainability Strategy while also meeting the design criteria outlined herein.

STANDARDS

7.1.1 SUSTAINABILITY PERFORMANCE

All buildings shall meet or exceed the requirements of the Mission Rock Sustainability Checklists in the DA/DDA.
Also refer to the Sustainability Strategy for performance targets and strategies for achieving these targets.

7.1.2 PARTICIPATION IN TYPE 1 ECO-DISTRICT

The sustainability performance of buildings at Mission Rock is a critical part of achieving the goals of the Eco-District. Buildings shall be designed to connect into district-wide systems as described in the Mission Rock Sustainability Strategy and defined in the Mission Rock Infrastructure Plan.

7.1.3 SHOWERS AND LOCKERS

Subject uses shall provide shower and clothes locker facilities for short-term use of the tenants or Employees in that building. Facilities shall be calculated based on the total square footage of the building. Facilities shall be provided at the ratios given below or by code, whichever is higher.

For Commercial uses, showers and lockers shall be provided at the following ratio:

- 1 shower and 6 lockers where the occupied floor area exceeds 10,000 square feet but is no greater than 20,000 square feet,
- 2 showers and 12 lockers where the occupied floor area exceeds 20,000 square feet but is no greater than 50,000 square feet,
- 4 showers and 24 lockers are required where the occupied floor area exceeds 50,000 square feet.

For Retail and Production uses, showers and lockers shall be provided at the following ratio:

- 1 shower and 6 lockers where the occupied floor area exceeds 25,000 square feet but is no greater than 50,000 square feet,
- 2 showers and 12 lockers where the occupied floor area exceeds 50,000 square feet.

GUIDELINES

7.1.4 MINIMIZE HEAT GAIN

West- and South-facing facades should be designed to balance solar access with the need to control heat gain.

7.1.5 DAYLIGHTING AND NATURAL VENTILATION

Buildings should be designed to maximize the use of daylighting and natural ventilation for all interior spaces in order to provide a high quality indoor environment and reduce overall energy consumption.

Operable windows are strongly encouraged to allow residents access to fresh air, and as a resilient strategy for passive cooling.

7.1.6 VEGETATED & COOL ROOFS

Where building roofs are free of solar panels or other sustainability infrastructure, they should be designed to include systems such as vegetated roof covers, plants and roofing materials with high albedo surfaces in order to reduce heat island effect and slow rainwater runoff. Read in conjunction with *Section 7.2.6 - Residential Roofscapes* and *Section 7.3.4 - Commercial Roofscapes*.

7.1.7 GREEN DESIGN

Whenever possible, incorporate visible elements of sustainability – such as green roofs, shading devices, or photovoltaic panels – into the fabric of the building, and especially seen at the ground level so as to make visible the building's energy saving features. Larger elements in particular should be incorporated into the design concept of the building and site design.

7.1.8 INTERPRETIVE SIGNAGE

Provide interpretive signage to explain the features of the building which promote sustainability, and to educate visitors and occupants how their behavior can make an impact on overall building performance.

7.1.9 REGIONALLY APPROPRIATE VEGETATION

All vegetation on buildings, where it occurs, shall be regionally appropriate and not require permanent irrigation for landscaping in outdoor planted areas, rooftops and green walls.



Sustainable timber used as a visible green design element.

CREDIT: TLA & MARIE-CAROLINE LUCAT



Green roofs are a high-performing amenity. PHOTO: PERKINS+WILL

7.2 BUILDING DESIGN

Mission Rock will be a neighborhood that has a diversity of building sizes and heights which are tied together by a consistent commitment to high quality, human-scale design throughout.

Residential buildings at Mission Rock should be designed to promote social interaction amongst residents and develop a sense of community and safety by engaging the base of residential buildings with the adjoining public realm. Design should ensure a relatable human scale and rhythm of architecture, particularly at the base building. These buildings should reinforce a residential read and character, and convey a sense of life within by enlivening the exterior walls with balconies and appropriately scaled fenestration.

Commercial buildings at Mission Rock play an important role in adding diversity of program, form, materials, and activity to the neighborhood. They should be architecturally interesting, well-proportioned and reinforce the pedestrian qualities of the neighborhood. Companies are encouraged to express their individuality and values through the design of their buildings. Commercial building design should contribute to the overall urban qualities of Mission Rock by providing public-facing amenities and active uses on the second and third level facing the public realm. These buildings should strive to create healthy workplaces with plenty of daylight and fresh air.

All buildings should create visual contrast and interest by using a variety of material and changes of textures and colors that celebrate the richness and diversity of building forms at Mission Rock.

STANDARDS

7.2.1 BASE BUILDING MODULATION

Architectural modulation adds visual interest and provides relief by breaking down the façade of the building. To avoid long expanses of un-modulated building facades, building base frontages are to be modulated at an interval of at least every 90 feet as described below. This modulation requirement does not apply to building frontages less than 90 linear feet.

- ▶ A notch of at least 2 feet deep and 4 feet wide; OR
- ▶ A change in plane of least 1 foot, combined with a change in color, material, or fenestration.

See *Figure 7.2.1 - Base Building Modulation*

Exterior modulation should correspond to the delineations between individual units while corresponding to entries, porches, or setbacks along the sidewalk.

7.2.2 OPAQUE SURFACES

Long expanses of blank walls deaden the sidewalk experience and don't allow for "eyes on the street." Continuous opaque surfaces the full height of a floor or higher shall be no greater than 12 linear feet on any façade facing onto a public right of way, public easement, or park.

7.2.3 USABLE OPEN SPACE

Usable open space is defined as outdoor area designed for outdoor living, recreation or landscaping, including such areas on the ground and on decks, balconies, terrace, porches and roofs, which are safe and suitably surfaced and screened, and are on the same lot as the dwelling units they serve.

Usable open space must be provided in residential

buildings. Requirements shall either be met by providing common usable open space or private usable open space for each dwelling unit at the following ratios:

A) Common Usable Open Space

Common usable open space is defined as an area or areas designed for use jointly by two or more dwelling units.

Courtyards, rooftop terraces, and public passages shall count towards the provision of usable open space, and shall be provided at a ratio of 48 square feet per dwelling unit with a minimum dimension of 6 feet in any direction. Common open space shall be provided in a common area of the building or lot, or easily and independently accessible from each dwelling unit.

B) Private Usable Open Space

Private usable open space is defined as area that is private to and designed for use by only one dwelling unit.

- ▶ Private setback areas, balconies and decks shall count towards the provision of usable open space, and shall be provided at a ratio of 36 square feet per dwelling unit with a minimum dimension of 4 feet in any direction. Private open space shall be directly accessible from the dwelling unit it serves.

In addition to the important role in the provision of private usable open space, balconies also help residential buildings convey a sense of life within by providing an opportunity for residents to inhabit and enliven the exterior walls. Balconies add livability and sense of relatable human scale to a streetwall while at the same time expressing a readable residential character.

7.2.4 MECHANICAL EQUIPMENT

Mechanical ducts or vents must not be located adjacent

to areas designated for courtyards or terraces. Where used, fresh air intake grills must be incorporated into wall cladding or fenestration design or screened with landscape such that they are not visible.

Venting for ground floor activities must be exhausted through the roof of the building.

7.2.5 ROOFSCAPES

Rooftops of buildings that may be overlooked by others will be considered as a “fifth façade” and shall be carefully designed to be viewed from taller buildings.

Rooftop mechanical equipment greater than 4 feet in height shall be screened. Screening shall be incorporated into overall architectural character of the building and be at least of equal height to the mechanical equipment that it screens.

Base buildings which are overlooked by upper buildings shall have all mechanical and other normally rooftop mounted equipment contained in an enclosure that is screened from above. Any light source located on roofs shall be full cutoff type.

7.2.6 DWELLING UNIT EXPOSURE

All dwelling units shall face onto a public or private right-of-way, or onto an open area. Refer to the SUD for dimensions and further definition of the following open areas:

- ▶ A Public street, alley or mid-block passage
- ▶ An interior courtyard
- ▶ An exterior courtyard or terrace that is open to a public street, alley or mid-block passage
- ▶ Undeveloped airspace over rooftops of adjacent buildings



Base building modulation CREDIT: SJB ARCHITECTS

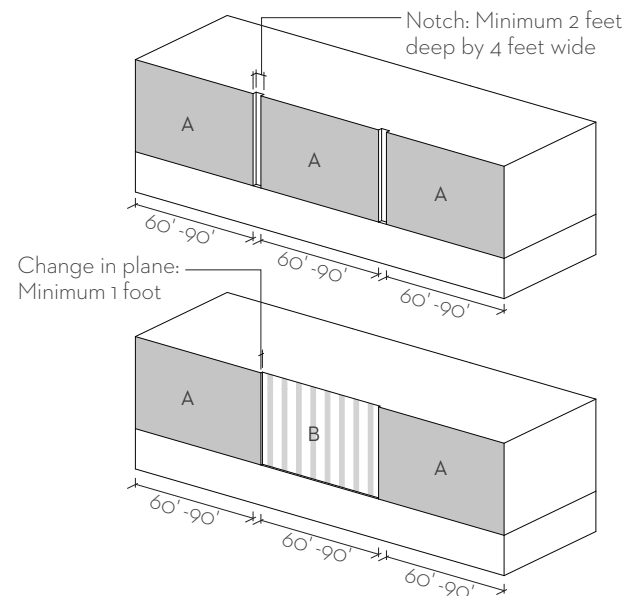


FIGURE 7.2.1 - Base Building Modulation



Use of color at the corner reveals special interior uses. CREDIT: GROUP8.
PHOTO BY RÉGIS GOLAY



Facade pattern can contrast solid to opaque, light to dark
CREDIT: CRISTIAN FERNÁNDEZ ARQUITECTOS



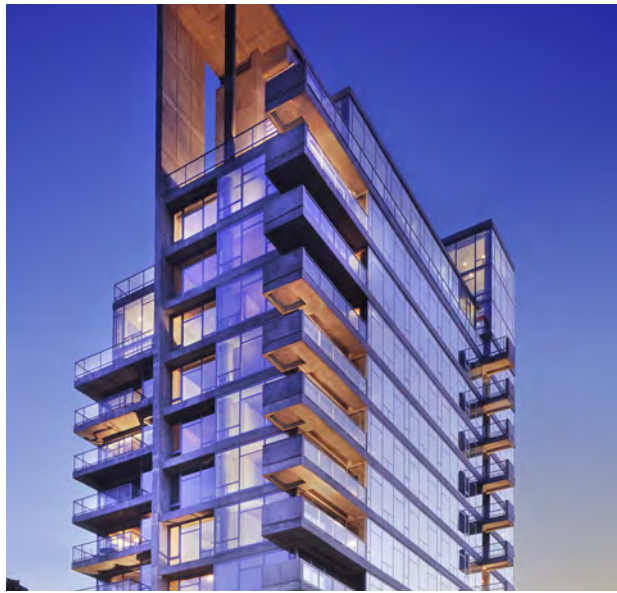
Contrast of solid and void, light and dark, opaque and transparent. CREDIT: AMELLER, DUBOIS & ASSOCIÉS ARCHITECTES



A residential roofscape should be considered a "fifth facade" PHOTO: PERKINS+WILL



The base of the building should be articulated into smaller massing components. CREDIT: BEHNISCH ARCHITEKTEN, PHOTO BY ANTON GRASSL/ESTO



Balconies are used together here with floorplate expression to express the residential scale of the building. PHOTO: PERKINS+WILL

GUIDELINES

7.2.6 MECHANICAL SCREENING

All mechanical equipment or outdoor storage areas should be screened with architectural detailing equivalent to that of the rest of the building.

Space for the location of ducts, vents, and other appurtenances associated with commercial and ground floor uses should be integrated into the building design.

Where used, fresh air intake grills must be incorporated into wall cladding or fenestration design or screened with landscape such they are not recognizable.

Similarly, exhaust ducts where complying with the conditions noted above must also be incorporated into wall cladding or fenestration and shall not be recognizable.

All other mechanical equipment or outdoor storage areas must be screened with architectural detailing equivalent to that of the rest of the building.

7.2.7 RESIDENTIAL SCALE

The following Guidelines should be read in conjunction with the Modulation called for in *Section 7.2.1 - Base Building Modulation* and *Chapter 6: Building Form*.

Residential buildings should be finely detailed to relate to a knowable, human scale. For example, when a pedestrian sees a chair on a balcony, they can understand the height of the balcony, because they know the scale of a chair. Similarly, building elements that begin close to the street level and repeat vertically up the façade of a building are knowable, because the observer can relate to the scale of the element that is close to them. As a district with both residential and commercial buildings, the residential

buildings bring a finer grained, human scale to the neighborhood experience to Mission Rock.

The design of the façade should consider the relationship of solid to void, bays and recesses and the creative use of contrasting colors, textures, and patterns.

A residential scale and proportion may be achieved using the following design measures:

- ▶ Balconies, projections, and changes in plane can be used to break up the massing of both the streetwall and upper building;
- ▶ Varied rooflines along the streetwall help to differentiate residential buildings from commercial buildings;
- ▶ Express the scale and proportion of individual residential units through the use of balconies, vertical notches or projections, and contrasting materials or changes in fenestration;
- ▶ Floorplates should be visually expressed on building facades to convey the height and configuration of the residential unit within. For example, a change from single-height to double-height unit should be made visible from a change in floorplate expression.

7.2.8 COMMERCIAL SCALE

The following Guidelines should be read in conjunction with the Modulation called for in *Section 7.2.1 - Base Building Modulation* and *Chapter 6: Building Form*.

The design of commercial facades should consider the relationship of solid to void, bays and recesses and the creative use of contrasting colors, textures, and patterns.

A commercial scale and proportion may be achieved using the following design measures:

- ▶ Break the façade up into smaller massing components toward the base (street level), with fewer, larger moves toward the top of the building;
- ▶ Projections and changes in plane can be used to break up the massing of both the streetwall and upper building;
- ▶ The longer the façade, the more significant the changes in plane, color, or material should be;
- ▶ Express the scale and proportion of interior programmatic uses through the use of vertical notches or projections and contrasting materials or changes in fenestration.

7.2.9 CONTRAST

Contrast is an important consideration that contributes to visual variety and interest in a building's design. It captures the viewer's attention and directs the eye to focus on important elements such as entry ways and design themes. Some ways to use contrast to increase visual interest are:

- ▶ Contrast of light and shadow, as with the surface of a projection which catches the sun against the shadow of a recess;
- ▶ Contrast of two different materials side by side, as with brick next to concrete;
- ▶ Contrast of opaque and transparent, as with window to wall, or window to spandrel panel;
- ▶ Contrast of scales, as with the small scaled pattern of tile next to a large pane of glass;

- ▶ Contrast of simple and complex, as with a simple fenestration pattern against a complex fenestration pattern;
- ▶ Use contrasts in light, material, opacity, or scale to reinforce a residential or commercial scale.

7.2.10 FENESTRATION

Fenestration is one of the most important elements in establishing the scale and detailing of a building. It is also the visual link between the inside private space and the outdoor public space.

Fenestration should be proportionate to the scale of the building. Fully glazed curtainwall should not be used as the predominant design material. For example, where curtain wall systems are used, spandrel panels should be used help create a visual contrast of solid material and transparent glass.

Windows should be transparent instead of tinted or reflective so that the internal life of the building can be seen from the outside, allowing streets and parks to benefit from the interior activity that buildings can visually bring to the public realm.

7.2.11 OUTDOOR AMENITY AREA

Buildings should provide generous common spaces including habitable rooftops or podium courtyards that invite use by residents or employees. Courtyards should be designed as welcoming common spaces, incorporating the individual patios of adjacent podium level units, or common indoor amenities where appropriate. Such courtyards should feature both paved and planted areas.

7.3 COLOR AND MATERIALS

The following Standards and Guidelines are intended to support simple and elegant designs that provide a clear expression of the structure and function of each building. Note that these guidelines apply to all parts of the building, including ground floor, streetwall, base building, and upper building.

STANDARDS

7.3.1 BIRD-SAFE BUILDINGS

Where applicable, buildings shall comply with the City of San Francisco’s Bird-Safe Building Standards.

7.3.2 MATERIAL CONTINUITY

In order to create material continuity, façade materials that turn the corner should extend a minimum of 5 feet.

GUIDELINES

7.3.3 COLOR

Materials and glazing selected for buildings should not be dark in color. They should be low-reflectance and “naturally” colored, utilizing the inherent and integral qualities authentic to the chosen material.

7.3.4 GROUND FLOOR MATERIALS

Ground level facades shall be designed with higher quality materials that offer color, variety, wear-resistance, and visual interest to the pedestrian. Examples include wood, stone, tile masonry, brick or terracotta.

Materials shall be proportioned to relate to the pedestrian scale, contributing to a more inviting, vibrant, and enlivened public realm.

Ground floor facades shall be finished with more than one material and be unique to the individual program or building.

7.3.5 ENVIRONMENTALLY-APPROPRIATE MATERIALS

Due to the marine environment of Mission Rock, materials selected shall demonstrate superior performance related to moisture protection, corrosion, durability, ultraviolet resistance, and low maintenance requirements.

7.3.6 QUALITY AND DURABILITY

Exterior finishes should have the qualities of permanence and durability. Materials should be low maintenance and well-suited to the specific maritime micro-climate of the Mission Rock neighborhood.

GUIDELINES

7.3.7 LOCALLY SOURCED

The use of locally sourced and sustainable building materials is encouraged.

7.3.8 FUNCTIONAL AESTHETIC

Buildings should be designed to celebrate the industrial and maritime heritage of the site. Exterior materials and colors should be simple, undecorated and expose functional details as a symbolic association to the unique history of Mission Rock and the surrounding context.



Rainscreens are decorative yet functional features. PHOTO: PERKINS+WILL



Materials can be naturally rich in color. PHOTO: PERKINS+WILL



Use higher quality materials at the ground floor. CREDIT: MGAU, PHOTO BY TAKUJI SHIMMURA



Materials should express their natural qualities. CREDIT: PERKINS + WILL

7.4 SIGNAGE

Buildings are encouraged to use signage in innovative and engaging ways with the aim of making the public realm more attractive and legible. All signs will be integrated into the building design and be compatible with their surroundings

Mission Rock signage is intended to recognize and enhance the unique character and location of this development relative to the adjacent Ballpark and the national exposure that this brings to this site.

The standards established by this Section 7.4 are not intended to in any way preclude further design refinements, subject to review by the City, as to additional aspects such as material, color, graphics, types of representations, relationship of signs to one another and to architectural building features or general design quality.

STANDARDS

7.4.1 GENERAL ADVERTISING SIGNS

All exterior or publicly visible building and parking garage signage (interior wayfinding signage is exempt) within Mission Rock shall be in compliance with the provisions of Planning Code Article 6 that apply in the C-3 District. The signage review process is set forth in the DDA.

GUIDELINES

7.4.14 UNIQUE IDENTITY

Signage helps to highlight the image of a business or residential building while enhancing the appearance of the streetscape. The design of building signage should be of a creative nature that conveys a unique identity.

7.4.15 PEDESTRIAN SCALE

Signage should primarily address the pedestrian level and should typically not be located above the ground level.

7.4.16 HIGH QUALITY MATERIALS

High quality materials and detailing are encouraged in building signs. Where window signs are used, they should maintain a high degree of transparency.



An example of a conforming business sign.

PHOTO: PERKINS+WILL



An example of a conforming wall sign.

PHOTO: PERKINS+WILL



An example of a conforming projecting sign

PHOTO: PERKINS+WILL

7.5 LIGHTING

Building designs are encouraged to use lighting in innovative and engaging ways with the aim of making Mission Rock more attractive and secure, both during the day and at night.

The following standards and guidelines apply to all retail, residential, and commercial building lighting

STANDARDS

7.5.1. ENERGY EFFICIENCY

Refer to Sustainability Strategy for additional information on energy efficiency standards for target lighting power density, lighting control, equipment efficiency, and equipment controls.

7.5.2 LIGHT TRESPASS

At a minimum, all exterior lighting must be suitable for a given "Lighting Zone" as defined by USGBC and IESNA. It is expected that most of the Mission Rock development area will be LZ3. Lighting zones are defined as follows:

LZ3: Medium (Commercial/Industrial, High Density Residential). No more than 0.20 horizontal and vertical footcandles at the site boundary and 0.10 horizontal foot-candles 10 feet beyond the site boundary. Also, 5% of total initial luminaire lumens are emitted at an angle of 90 degrees above nadir or greater.

Maximum candela values for photometric distributions of interior luminaires shall fall within the building (i.e. Not through skylights, windows or other building fenestration).

Each photometric for every luminaire type shall be reviewed for compliance to standards.

7.5.3 LIGHT POLLUTION

All lighting must be shielded to prevent glare to private and public uses, especially residential units. The angle of maximum candela from each interior luminaire as located in the building shall intersect opaque building interior surfaces and not exit out through the windows.

All new site lighting shall incorporate cut-off control as well as the "Lighting Zone" credit requirements found in the U.S. Green Building Council's LEED v4 for New Construction. All luminaires shall be at least semi-cutoff with non-cutoff types only as permitted subject to review and approval.

Definitions of cutoff control are as follows:

- *Full cutoff: Zero candela intensity occurs at an angle of 90 degrees above nadir, or greater. Additionally, no more than 10% candela intensity occurs at an angle greater than 80 degrees above nadir.*
- *Cutoff: No more than 2.5% candela intensity occurs at an angle greater than 90 degrees above nadir, and 10% at an angle greater than 80 degrees above nadir.*
- *Semi-Cutoff: No more than 5% candela intensity occurs at an angle greater than 90 degrees above nadir, and 20% at an angle greater than 80 degrees above nadir.*
- *Non-Cutoff: No candela limitation.*

Lighting Power Allowance (LPA) shall comply with the current Title 24 or ASHRAE 90.1 standard, whichever is more stringent.

GUIDELINES

7.5.4 WELL-LIT ENTRIES

Doorways and addresses of buildings should be well-lit and visible.

7.5.5 MINIMIZING LIGHT TRESPASS

Lighting of walls, soffits and other surfaces should be applied strategically. It is also encouraged that all such surfaces that are visible to the exterior be studied for luminance ratios and glare, since illuminated surfaces rather than the light source itself can often be the major source of glare from a building.

All lighting adjacent to the Bay should be designed and oriented so that lighting projects away from the shoreline, thus minimizing light trespass into adjacent waters.

7.5.6 LUMINAIRE RATINGS AND EFFICIENCY

Luminaires should be selected with rating considerations as determining factors and should demonstrate at least 60-80 lumens per watt source efficacy.

The following codes should apply to lighting installations:

- ASHRAE 90.1
- California Title 24
- IESNA Recommended light levels

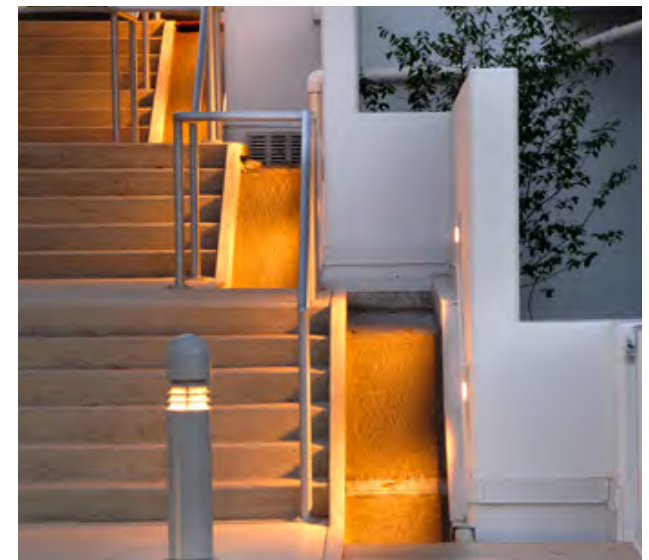
If alternate or equal fixtures are suggested during the submittal process, they should have efficiency equal to or greater than the originally specified products.

Lighting Power Allowance (LPA) shall comply with the current Title 24 or ASHRAE 90.1 standard, whichever is more stringent.



Light projected onto surfaces reduces light pollution.

PHOTO: PERKINS+WILL



Well-lit entry that reduces light pollution PHOTO: PERKINS+WILL

7.6 OFF-STREET PARKING

In addition to the Parking structures at Block D2 and below Mission Rock Square, off-street parking is permitted within buildings on all blocks at Mission Rock. For guidelines on parking entries into buildings, refer to Section 6.7 for design of ground floor servicing areas.

OFF-STREET PARKING LOCATIONS



Off-Street Bicycle Parking



Blocks permitting Basement or Podium Vehicle Parking



Vehicle Parking Ingress/Egress Frontages



FIGURE 7.6 - Off-Street Parking

STANDARDS

7.6.1 OFF-STREET PARKING

There is no minimum parking requirement for any use. Podium or basement parking is permitted in all blocks at Mission Rock and below grade at Mission Rock Square.

A maximum of total 100 off-street parking spaces is allowed within buildings at Mission Rock in aggregate across the whole site (excluding Block D2 and the Mission Rock Square garages), which can be accommodated in any combination in any of the buildings on any blocks.

For Blocks A, B, F, G, J and K, off-street parking shall be accessed via Exposition Street. For Blocks C, E, H, and I, off-street parking shall be accessed via Long Bridge Street. Access requirements for these entries is described in Section 5.2 - *Building Servicing* and in Section 7.6.4 - *Vehicular Entry and Exit*.

Standards and guidelines for these off-street parking locations do not apply to the parking structure on Block D2, which has its own specific set of controls. See 7.7 - *Parking Structure* (Block D2).

7.6.2 UNBUNDLED PARKING

All off-street vehicle parking spaces shall be leased or sold individually and not tied to the rental or purchase of any property at Mission Rock.

7.6.3 CAR SHARE PARKING

A minimum of 31 off-street car share parking spaces are required at Mission Rock in aggregate across the whole site at buildout (including Block D2), which can be accommodated in any combination in any of the buildings on any blocks.

7.6.4 BIKE PARKING

Secure, Class I bicycle parking shall be provided at the following minimum ratios, or as required by code, whichever is higher:

- One per dwelling unit, one per 2,500 sqft of office, and one per 3,750 sqft of retail.

Class I bike parking should be located along desire lines through buildings and in parking garages to make it as convenient and easy to use as possible. Examples include access via building lobbies, service corridors, or with an exterior door on the ground floor.

7.6.5 VEHICULAR ENTRY AND EXIT

Where vehicle parking is provided, there shall be a maximum of one vehicle entry lane and exit lane per Block (for a total of two lanes). They must be combined into one point of access to be located in the Servicing Zone as indicated in *Figure 6.7 - Addressing and Servicing*.

The maximum dimension of a single parking entry/exit lane shall not exceed 12.5 feet in width, and the total opening for a parking entry/exit point can occupy a maximum of 16 horizontal feet of frontage, if combined with a shared loading bay, the loading bay and parking entry/exit point combined may only occupy a maximum of 35 horizontal feet of frontage.

Coordinate the dimensions and design of parking entry/exit points with the requirements for stormwater gardens, street trees, and pedestrian paths.

7.6.6 PARKING WRAP

Where provided, parking must be fully concealed. Half-level openings or ventilation grill work is not permitted to be visible on building exteriors. Exposed structured parking at or above the street level is not permitted on any façade facing a public right-of-way or open space.

All above-grade parking shall be lined by usable building space that is a minimum of 20 feet deep from the building face. Usable building space shall include any allowed use, plus access stairs and elevators.

Above standards to not apply to Block D2 which has its own specific set of controls. See 7.7 - *Parking Structure* (Block D2).

GUIDELINES

7.6.7 VISUALLY TRANSPARENT GATES

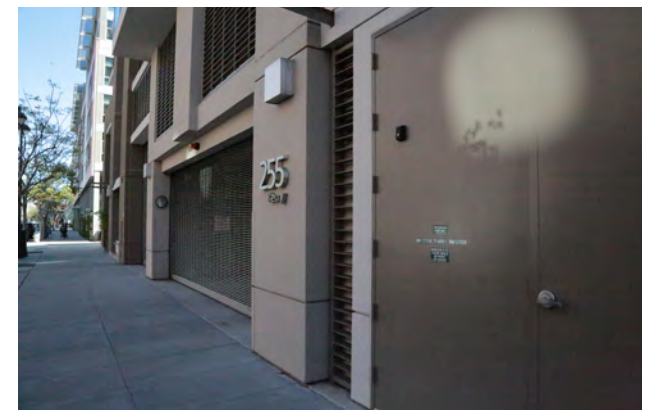
Gates for parking garages should be visually transparent for an increased sense of safety brought by higher visibility between the street level and the interior parking garage.

7.6.8 PEDESTRIAN ENTRIES

Parking entries and stairways linking parking structures to public ways should be attractive, well-lit, and secure. If provided, the below grade parking garage should have entries designed to be integrated with park kiosks or adjacent buildings.

7.6.9 AUDIBLE WARNING

Audible warning of vehicles exiting off-street parking should comply with the City of San Francisco and ADA standards



Parking garage gates should be visually transparent. PHOTO: PERKINS+WILL

7.7 PARKING STRUCTURE (BLOCK D2)

The parking structure at Mission Rock will be built to accommodate the current parking on Lot A, which serves the Ballpark on game day events. This building will also provide parking for people who live and work at Mission Rock through optional parking leases.

Locating parking in a centralized facility and unbundling parking leases from development are two important strategies in reducing car-dependence at Mission Rock. The parking Structure at Mission Rock may also house the sustainable infrastructure that will support Mission Rock as a Type 1 Eco-District.

This building also has an opportunity to serve as an intermodal facility that links drivers coming into the city with the many other modes that service this area such as MUNI, Caltrain, bike share, car share, water taxis and ferries.

The ground floor of the building will contain retail uses, including a possible transit concierge to help visitors orient themselves to the various transit opportunities in the area, and a bike commuter facility with lockers, showers, and bike repair services.

STANDARDS	
7.7.1 PARKING MAXIMUMS A maximum of total 3,000 off-street parking spaces are allowed in Block D2. There are no minimum parking requirements for the Block D2 Parking Structure.	7.7.6 VISUAL CONNECTIVITY The ground floor of the parking structure shall be at least 75% visually transparent or physically permeable to allow for lines of sight into the parking area where there is no retail or active uses.
7.7.2 ACTIVE GROUND FLOOR The parking structure is required to provide a minimum of 10,000 square feet of active uses, and/or transit related services at the ground floor.	7.7.7 FAÇADE SCREENING The parking structure shall be architecturally or artistically screened and designed with attention to detail compatible with the adjacent surrounding buildings.
7.7.3 UNBUNDLED PARKING All off-street vehicle parking spaces shall be leased or sold individually and not tied to the rental or purchase of any property at Mission Rock.	7.7.8 ROOF SCREENING The roof of the parking garage will be overlooked by other buildings and will be considered as a “fifth façade” that shall be carefully designed to be viewed from taller buildings and surrounding hills. Rooftop parking, where it occurs, shall be visually screened via shading devices, trellises, canopies, or photovoltaic solar panels. All mechanical and other normally rooftop mounted equipment shall be contained in an enclosure that is screened from above. Any light source located on the roof shall be full cutoff type.
7.7.4 MODULATION Architectural modulation adds visual interest and provides relief by breaking down the facade of the building. To avoid long expanses of un-modulated building facade, every 60-90 linear feet, the façade of the parking structure shall have a change in plane of at least 1 foot, combined with a change in material.	7.7.9 FLAT FLOOR SLABS Floor slabs that are set at a slope, such as speed ramps, shall not be expressed at the façade of the parking structure.
7.7.5 BLANK WALLS Solid, undifferentiated walls on the parking structure shall be no greater than 12 feet wide on any given façade.	

GUIDELINES

7.7.10 ARTICULATION

Façade design should be integrated with the design of the overall building massing. Express the massing of the parking structure as several volumes with the use of vertical recesses, changes in materiality, and stepping in and out of the façade.

The two long faces of the building, facing on Long Bridge Street and Mission Rock Street, should have a higher level of articulation and refinement.

7.7.11 VIEW TERMINATION

Special treatment should be given to the portion of the façade that terminates the view along the Shared Public Way.

7.7.12 MATERIALS

Higher quality building materials should be emphasized in the façade design, at the ground floor, pedestrian touch points, and circulation areas.

7.7.13 MINIMIZE HEAT GAIN

The use of planting or high-albedo materials are encouraged to minimize heat gain.

7.7.14 LIGHTING

Light spillage from the parking structure should be minimized. Indirect lighting should be used to light interior areas of the garage visible to the exterior.

All lighting for parking areas must have a low cut-off angle in order to prevent light from casting beyond the parking area boundary. Read in conjunction with *Section 7.4 - Lighting*.

7.7.15 LIGHT TRESPASS

Parapet edges of the parking trays, including the roof, must be higher than vehicle headlights to screen adjacent properties.

7.7.16 WAYFINDING

Take opportunities to be playful and creative with wayfinding and environmental graphics.

7.7.17 PUBLIC ART

The parking structure should incorporate public art wherever possible into the façade design and design of pedestrian touch points and circulation areas.

Places that would particularly benefit from the integration of Public Art are: the ground floor of the building, the facade facing the Shared Public Way, and pedestrian entry points.

7.7.18 BICYCLE COMMUTER SUPPORT

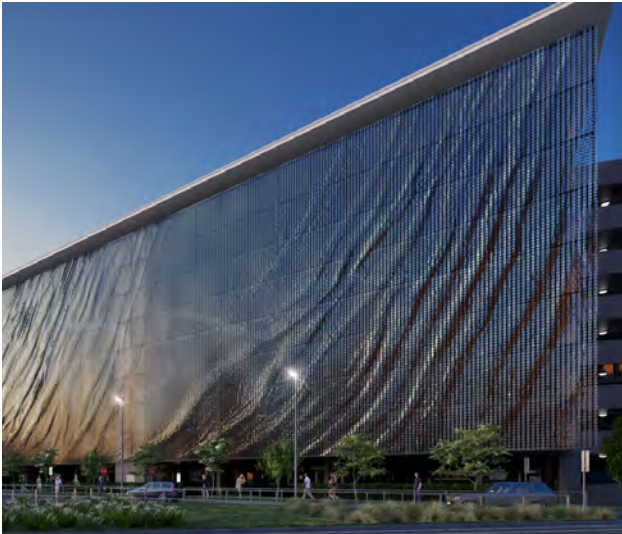
The parking structure should incorporate uses at or around the ground floor that support commuter cyclists such as bike share facilities, changing rooms and showers, a bike repair shop, and other contextually appropriate uses, especially relevant to its location along the Blue Greenway.

7.7.19 MULTIMODAL INFORMATION

Near pedestrian circulation areas such as stairs, entries, and vertical circulation points, incorporate real-time information dashboards and route maps about the various modes of transit available near the garage, including but not limited to: MUNI, Caltrain, water taxi and bike share.



This garage is a good example of how graphic wayfinding and roof screening can add interest. CREDIT: NBJ ARCHITECTS AND PHOTOS BY PAUL KOZLOWSKI



This parking garage is covered with an artistic, kinetic screen that ripples in the wind. CREDIT: NED KAHN / UAP



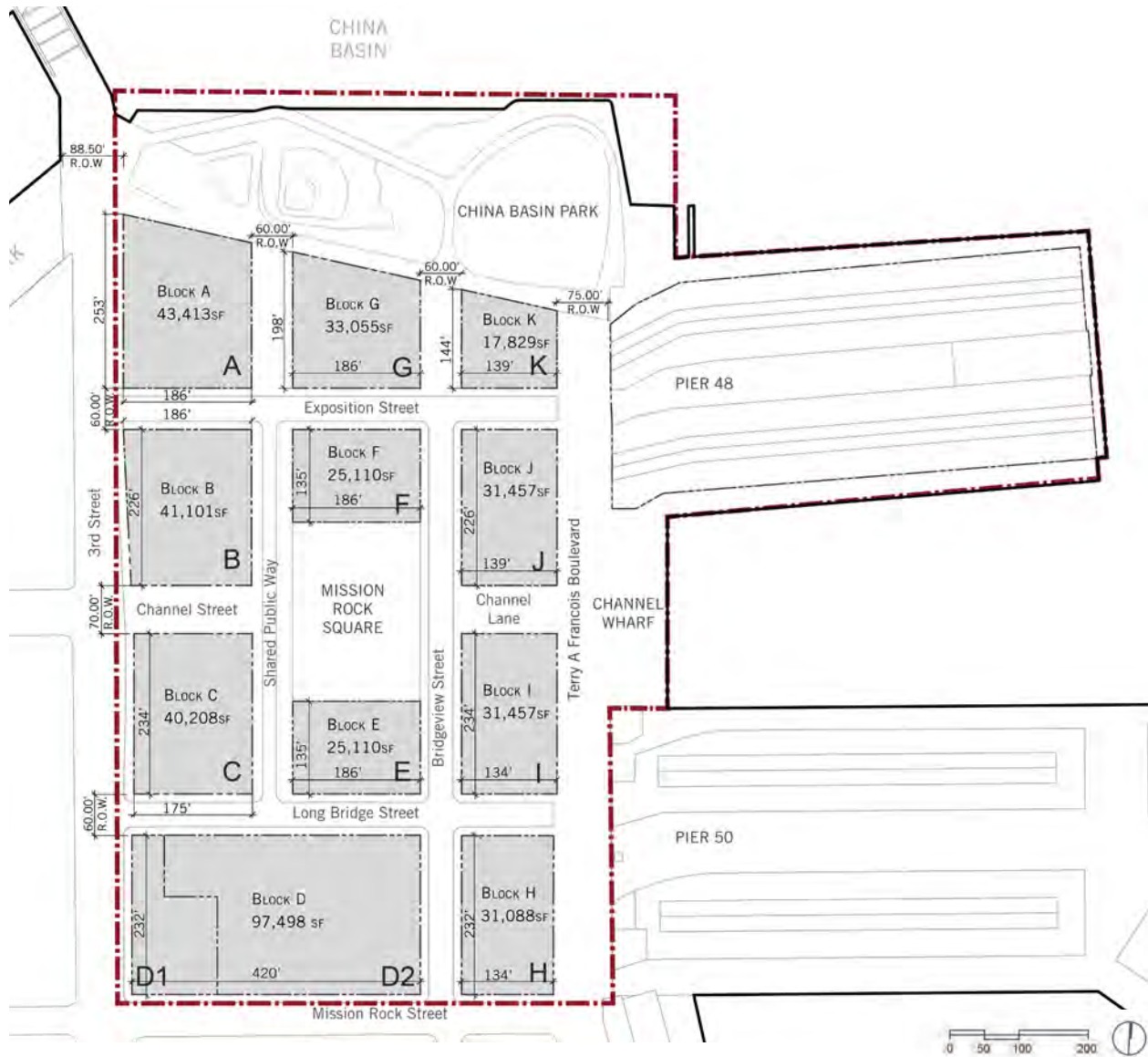
This building is not a parking garage, but is a good example for how the frontage of a mostly windowless building can be given depth and articulate a finer building scale. CREDIT: WOODS BAGOT

Summary of Block Standards

This appendix has been provided as a summary of baseline standards for each Block. While this summary is meant to be a helpful tool, satisfying the standards described in the Block Standards alone does not constitute compliance with these Design Controls.

A

APPENDIX












BLOCK PLAN

Note: All dimensions shown are for illustrative purposes only. Actual parcel and street R.O.W. dimensions to be per the Tentative and Final Parcel Maps.

BLOCK STANDARDS AND GUIDELINES USER GUIDE

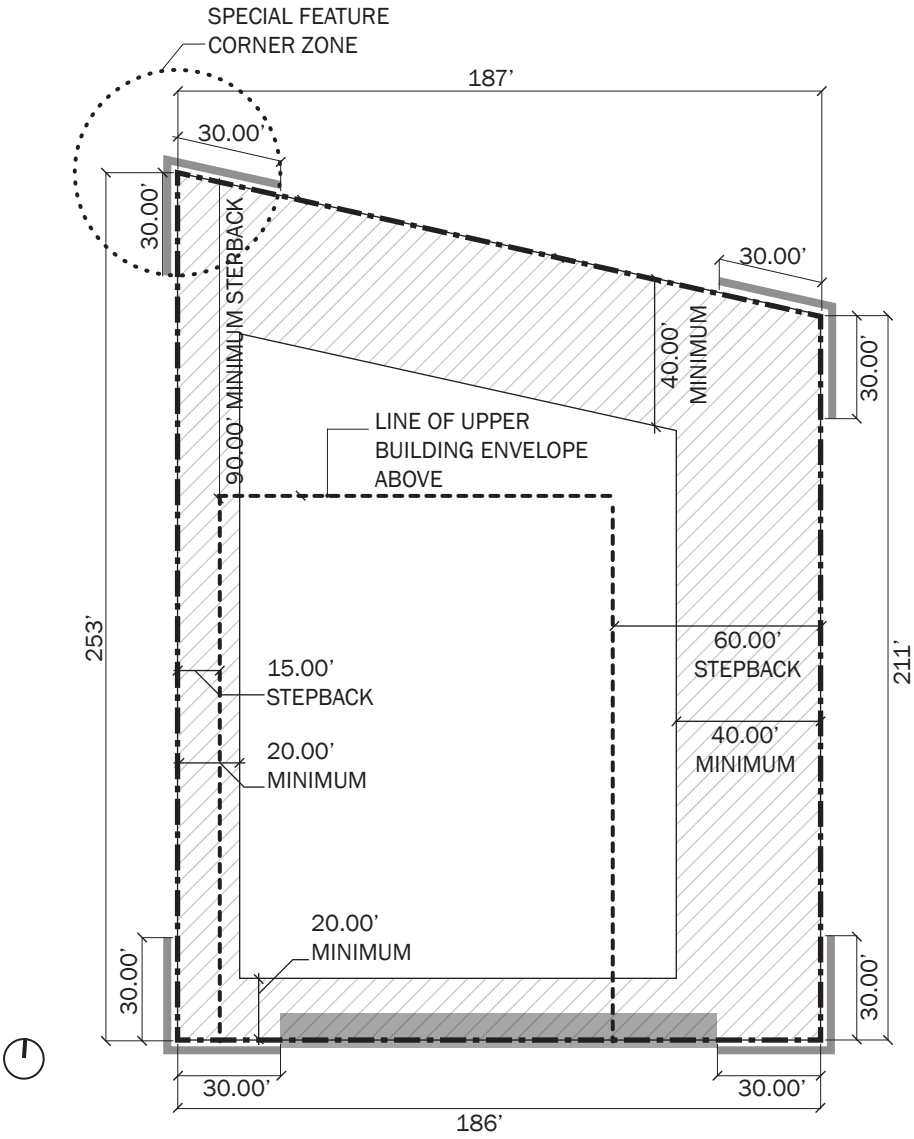
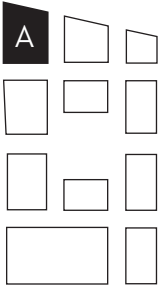
The following pages provide a summary of baseline standards for each Block. While this summary is meant to be a helpful tool, satisfying the standards described in the Block Standards alone does not constitute compliance with these Design Controls. Below is a description of the notations used for each Block.

-  **Property Line**
The legal boundary of each Block.
-  **Dimension control**
The legal dimension of the Block and building envelope controls. Refer to *Chapter 7: Building Form* for the full set of building envelope controls.
-  **Upper Building**
The line of the upper building envelope above the base building. Refer to *Chapter 7: Building Form* for upper building envelope controls.
-  **Corner Zone**
The dimension to which Corner Zone controls apply. Refer to *Section 5.2.3 - Corner Zone* for definition and controls.
-  **Servicing Zone**
The zone in which servicing may be located on each Block. Refer to *Section 5.3 - Building Access* for controls.
-  **Maximum Building Height**
The maximum envelope height for both the base and upper building. Refer to *Section 6.2 - Maximum Height Plan* for controls regulating building height.

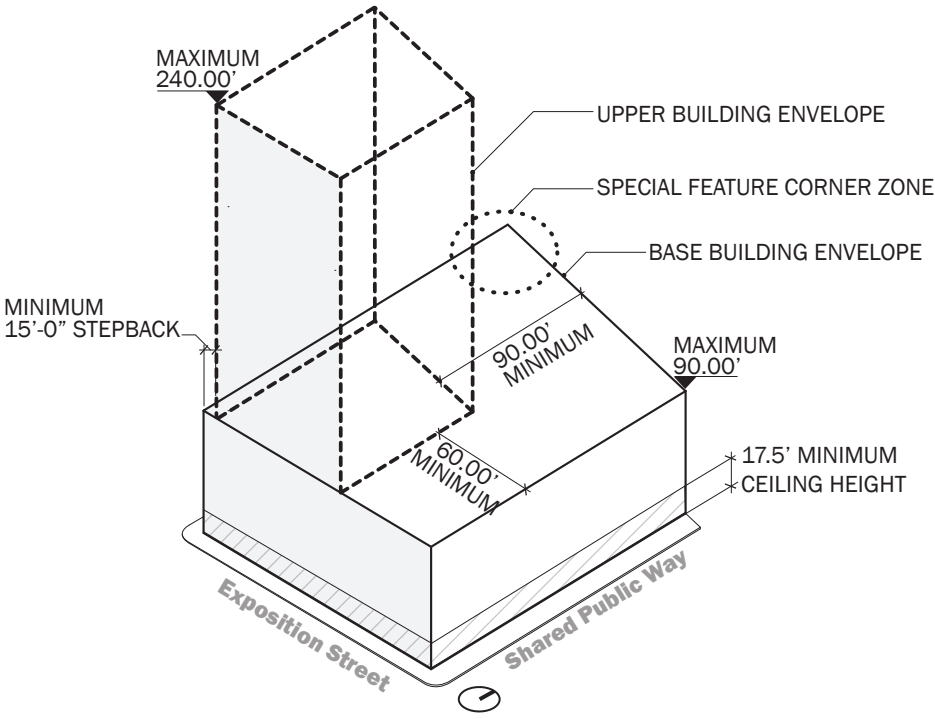
-  **Ground Floor Activation Zone**
The minimum required depth and height of ground floor uses on each Block. Refer to *Chapter 5: Ground Floor* for the full set of ground floor controls.
-  **“Active” Ground Floor Active Doorways**
Indicates the minimum number of active doorways required for each ground floor frontage. Refer to *Section 5.4.4 - Active Doorways* for the definition of Active Doorways. See *Chapter 6: Ground Floor* for the application of active doorway controls to each type of ground floor zone.
-  **Key Corners**
Specific block corners where additional design attention is required. Refer to *Section 6.3.9 - Key Corners* for definition and controls.

SUMMARY OF BLOCK STANDARDS

BLOCK A

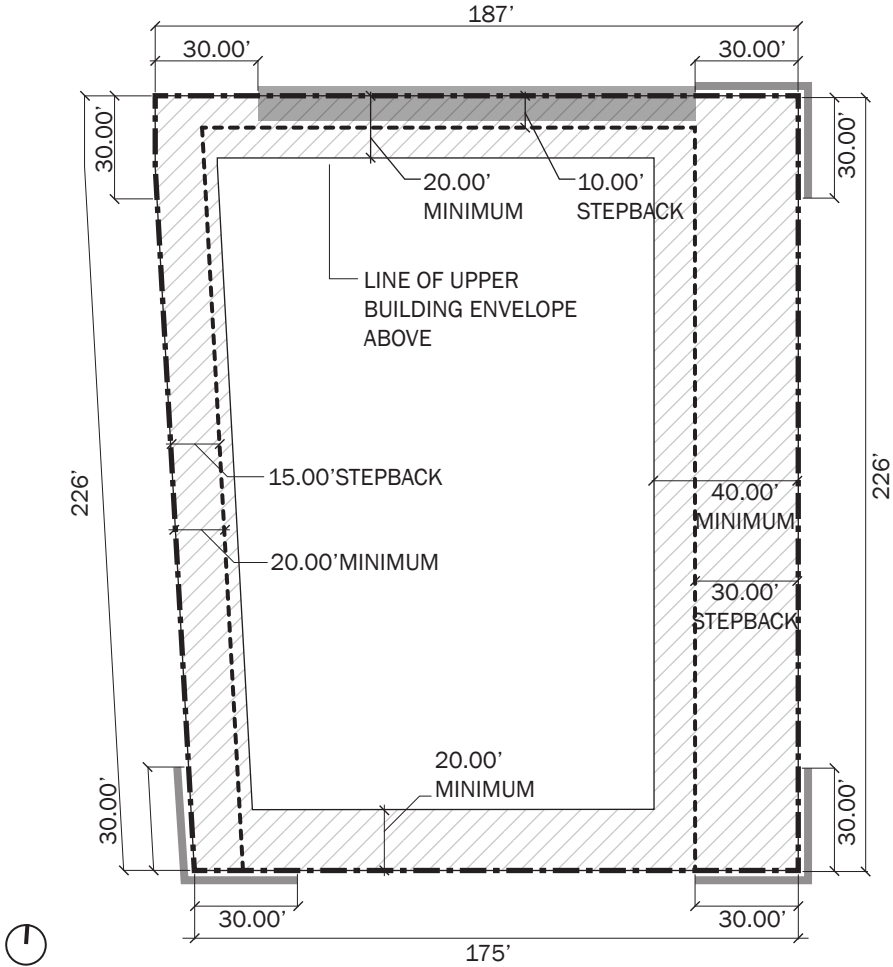
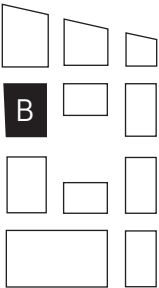


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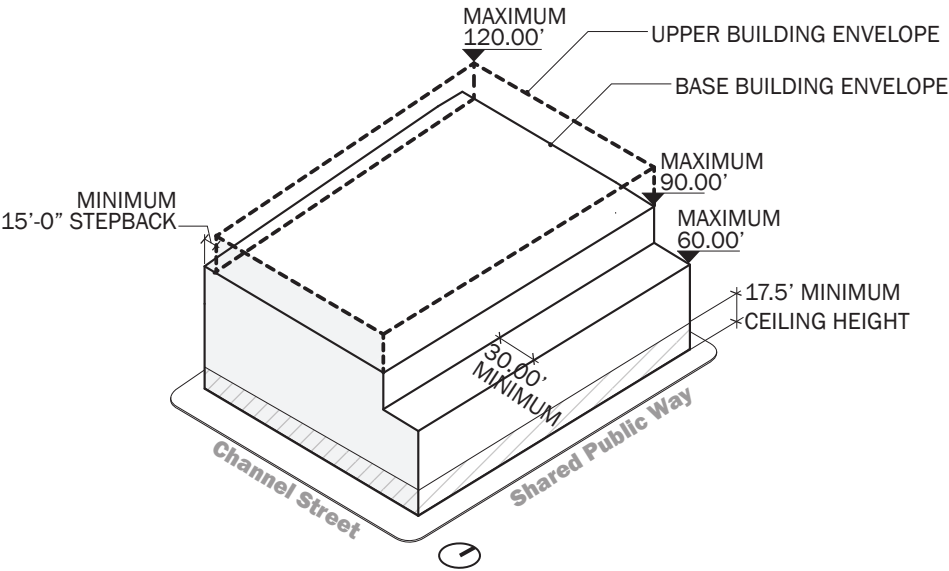


SUMMARY OF BLOCK STANDARDS

BLOCK B

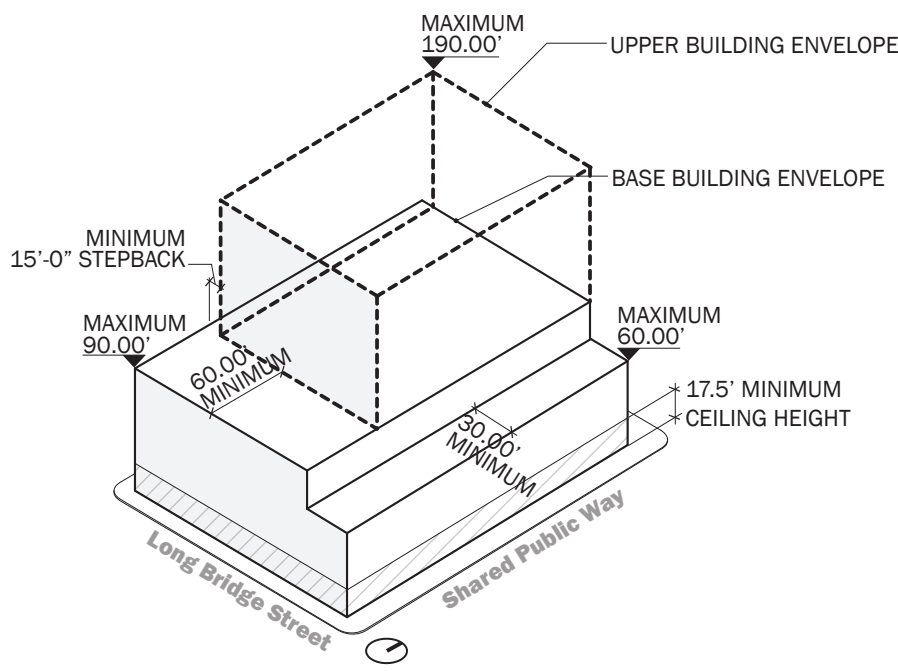
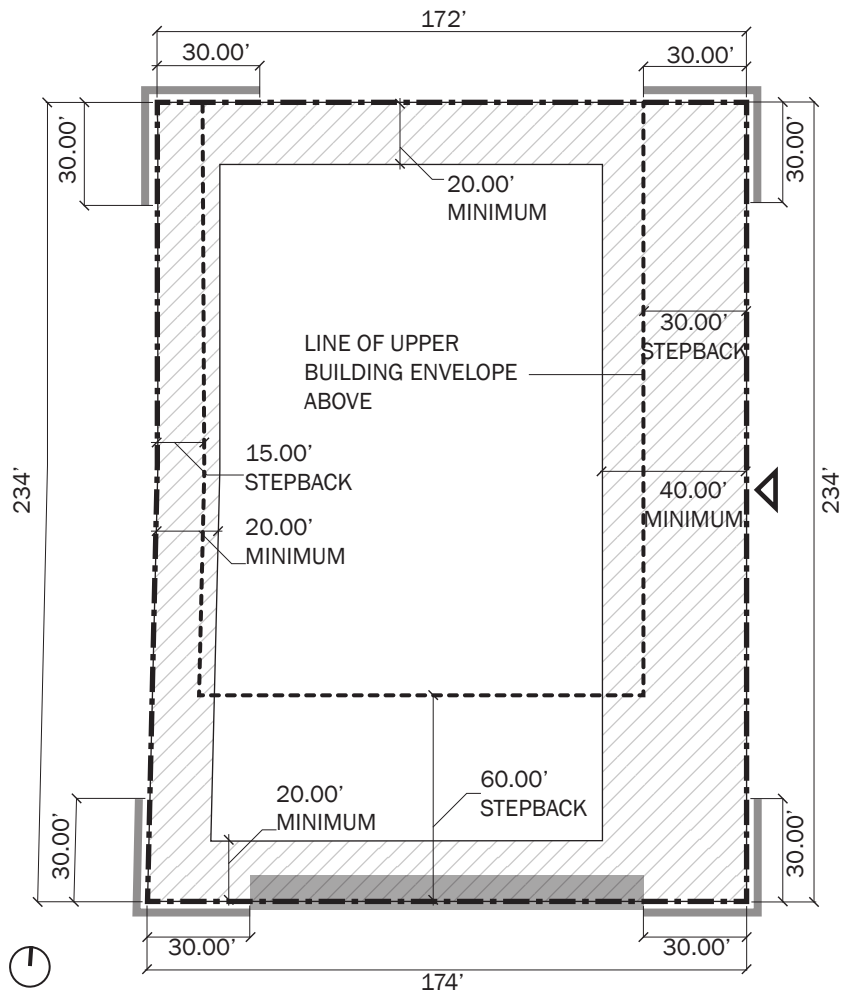
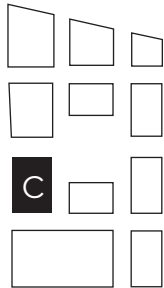


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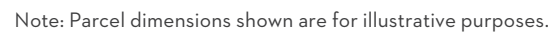


SUMMARY OF BLOCK STANDARDS

BLOCK C

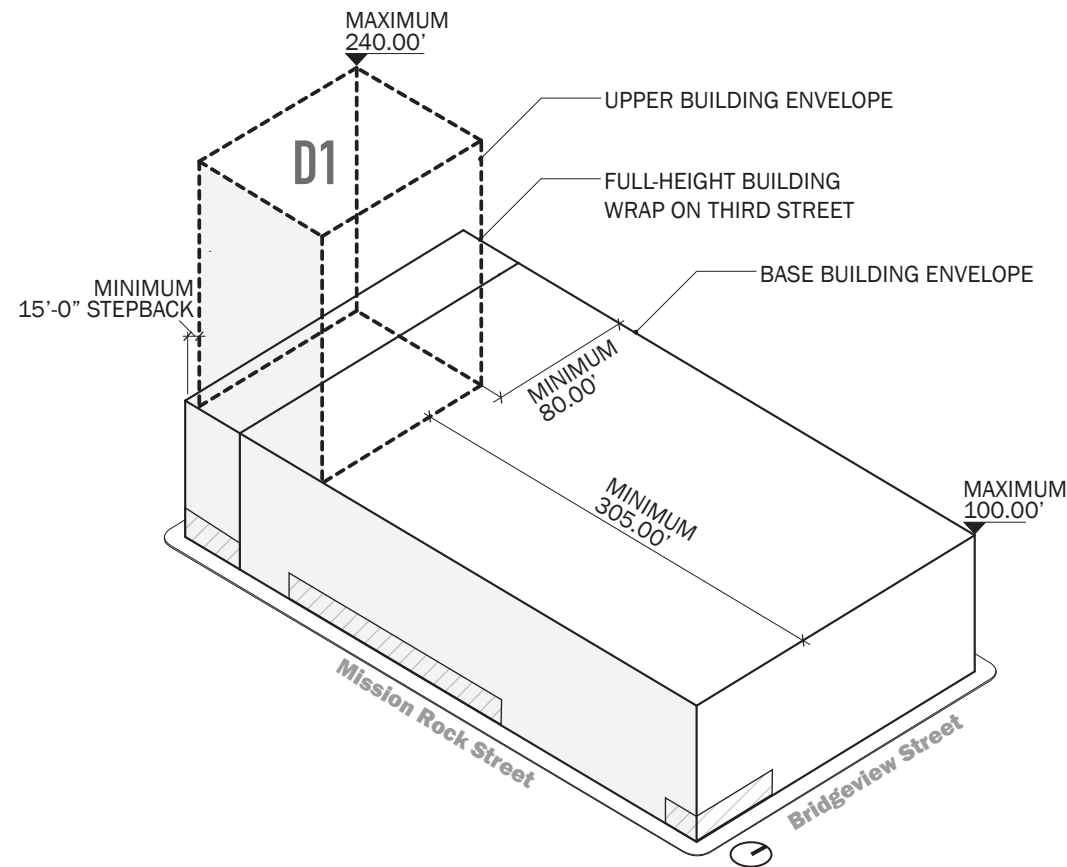
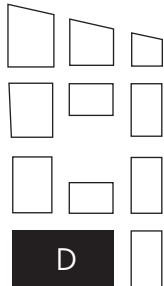


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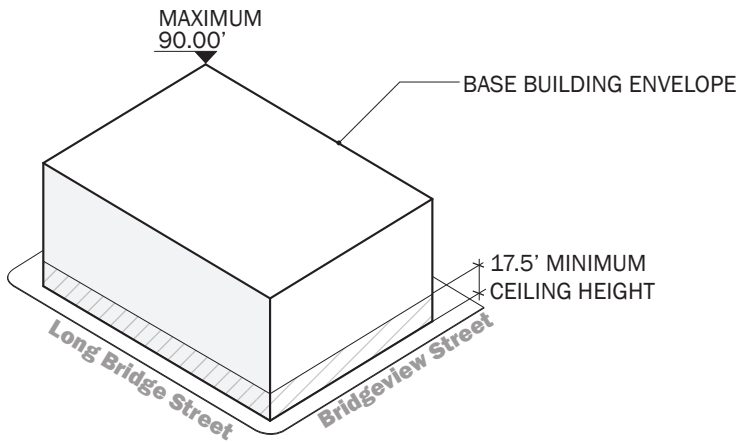
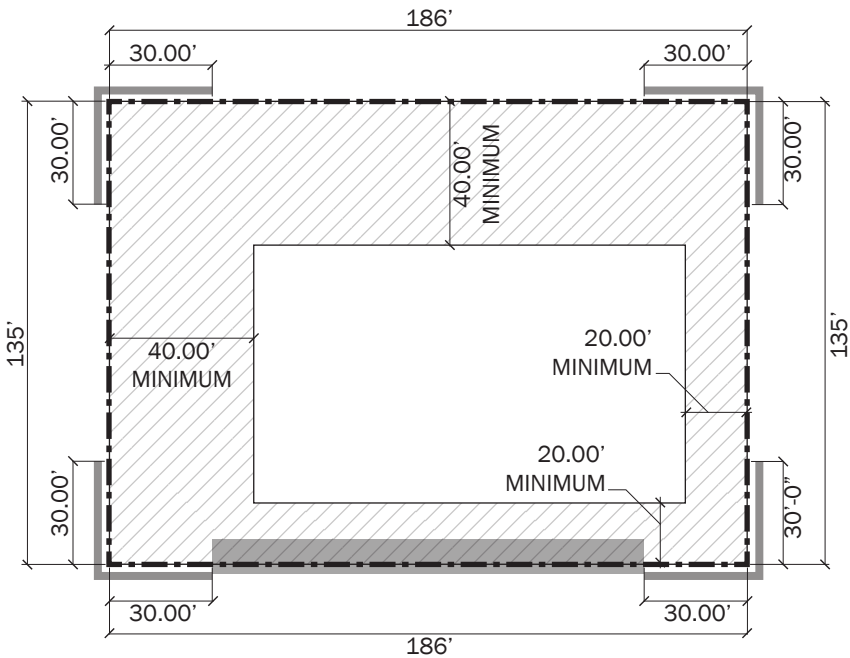
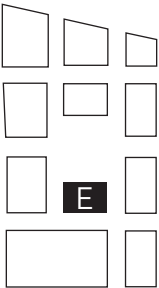
SUMMARY OF BLOCK STANDARDS

BLOCK D



SUMMARY OF BLOCK STANDARDS

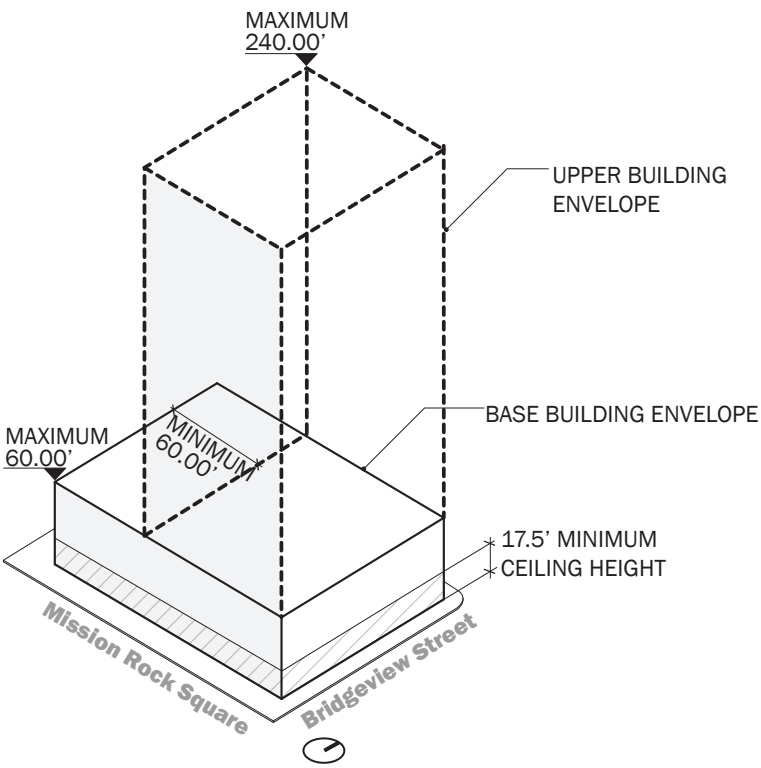
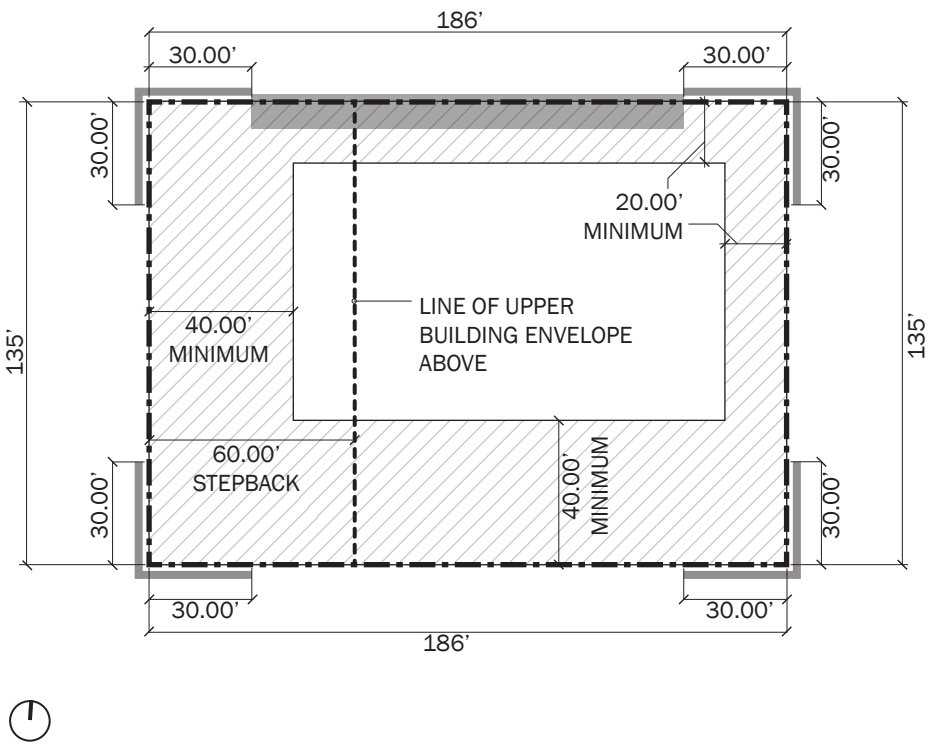
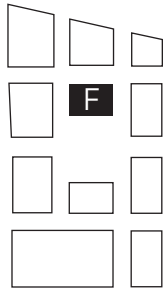
BLOCK E



Note: Parcel dimensions shown are for illustrative purposes.

SUMMARY OF BLOCK STANDARDS

BLOCK F



Note: Parcel dimensions shown are for illustrative purposes.

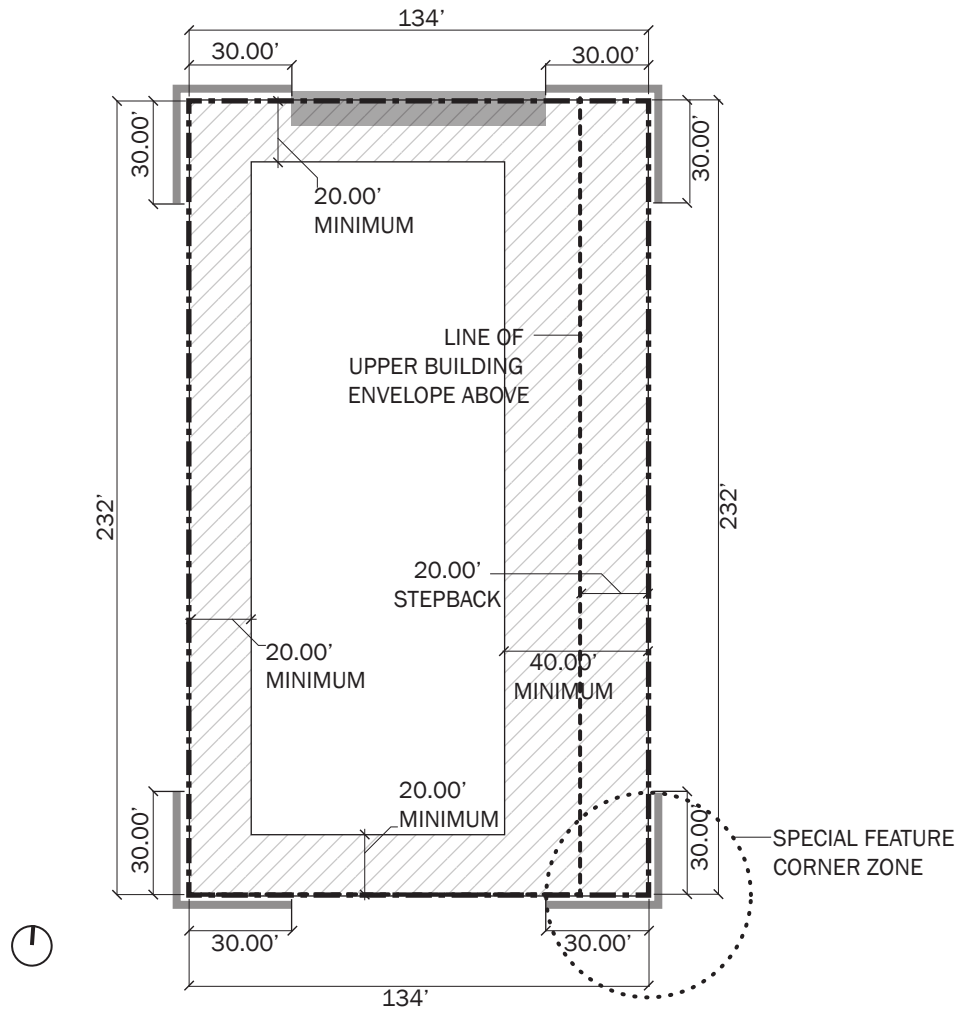
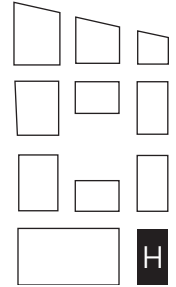


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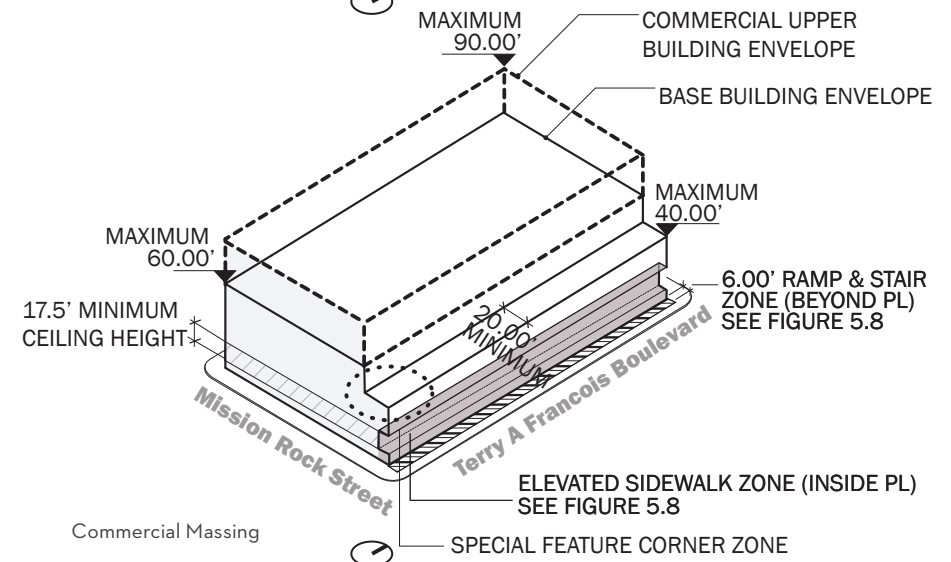
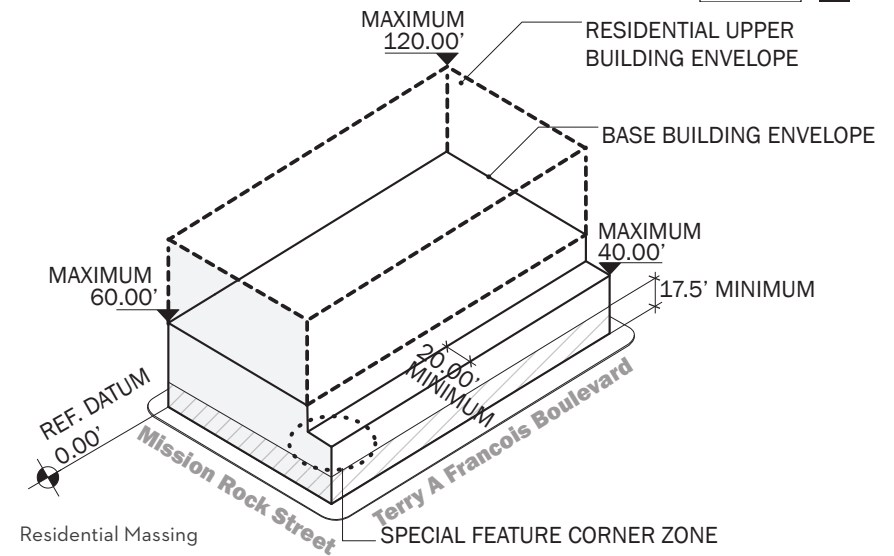


SUMMARY OF BLOCK STANDARDS

BLOCK H

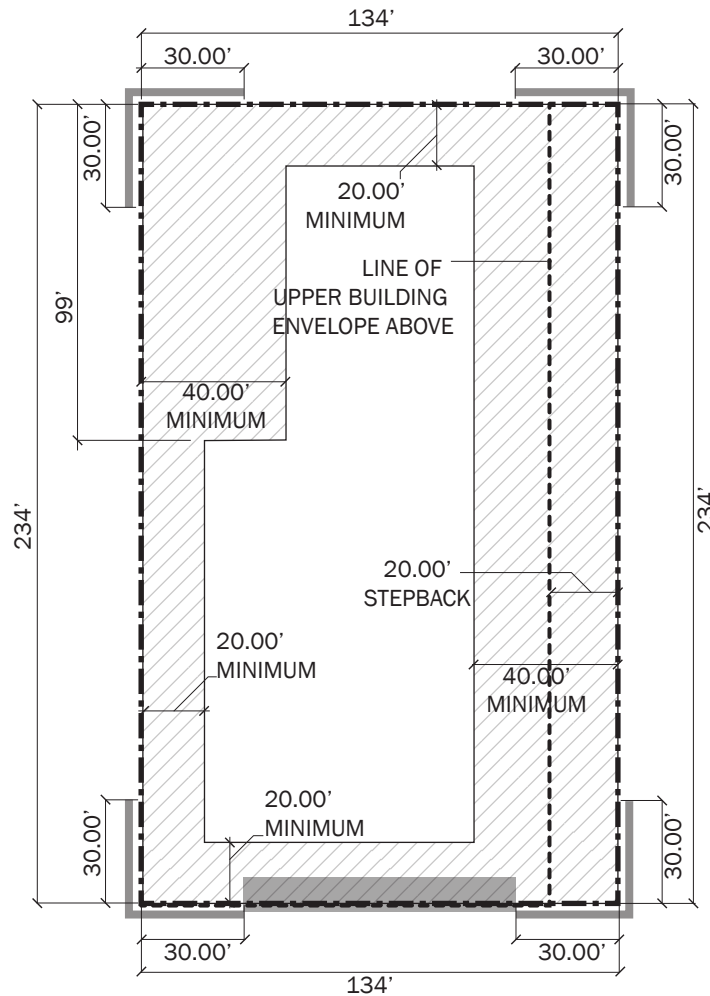
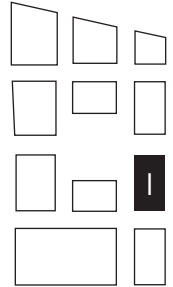


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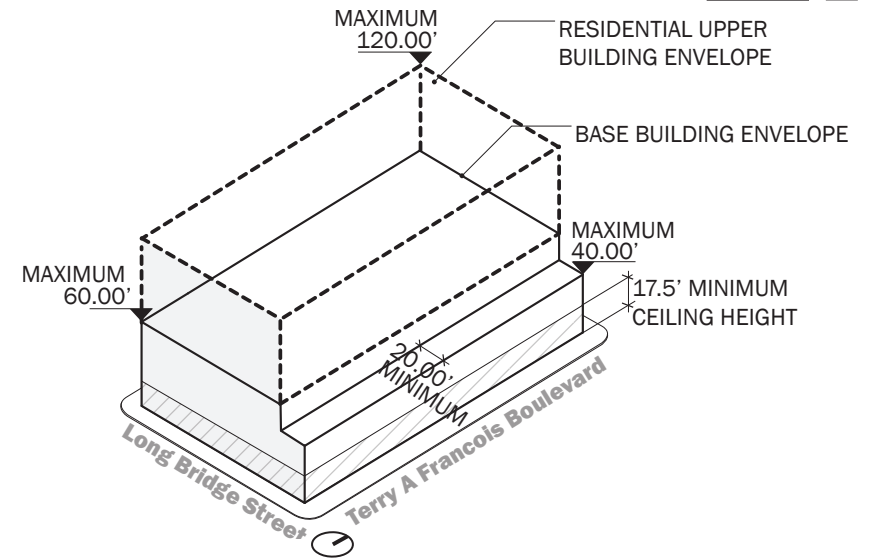


SUMMARY OF BLOCK STANDARDS

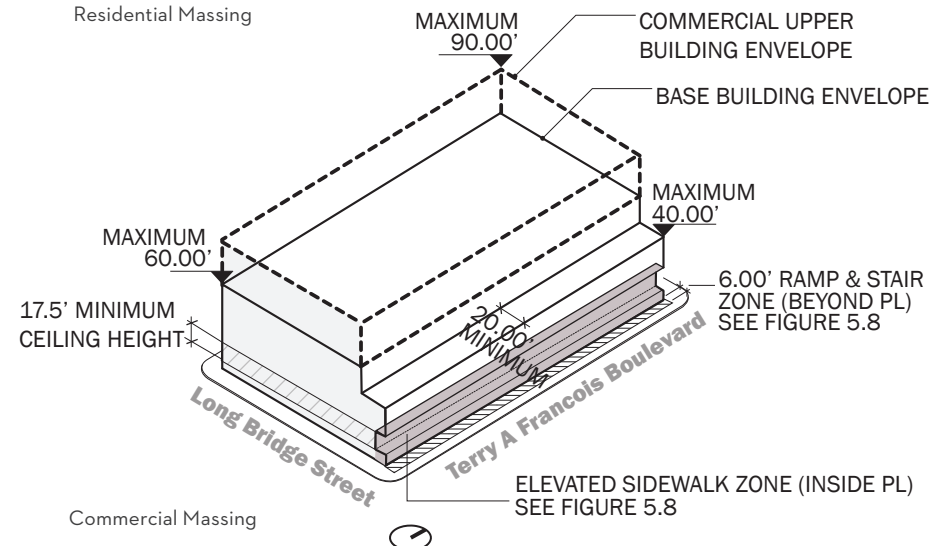
BLOCK I



Note: Parcel dimensions shown are for illustrative purposes.



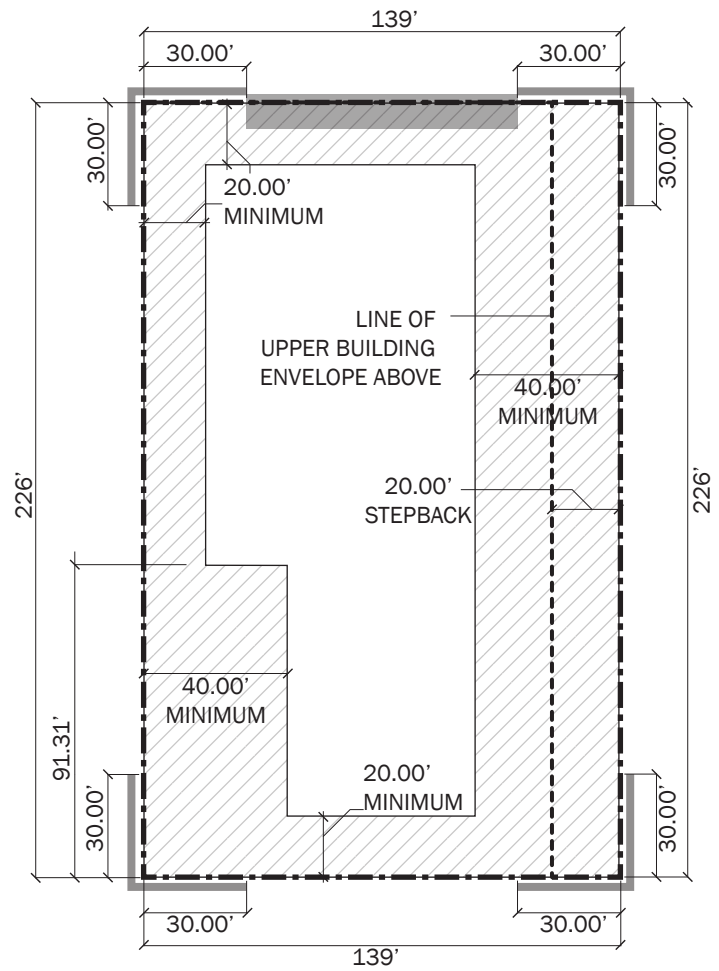
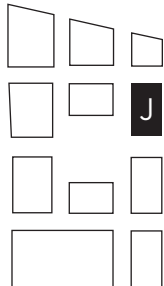
Residential Massing



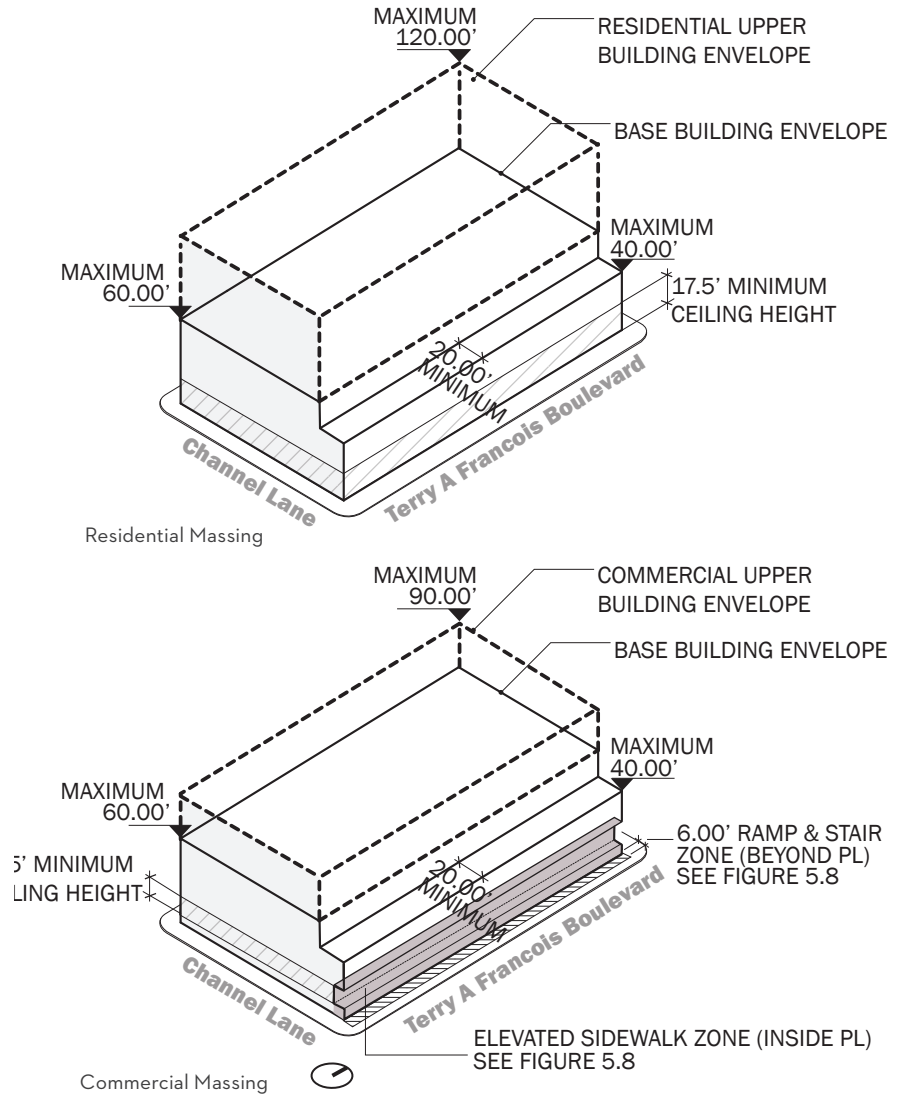
Commercial Massing

SUMMARY OF BLOCK STANDARDS

BLOCK J

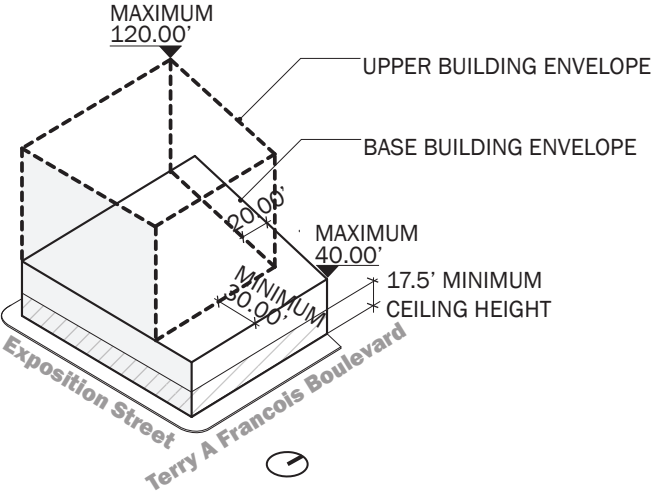
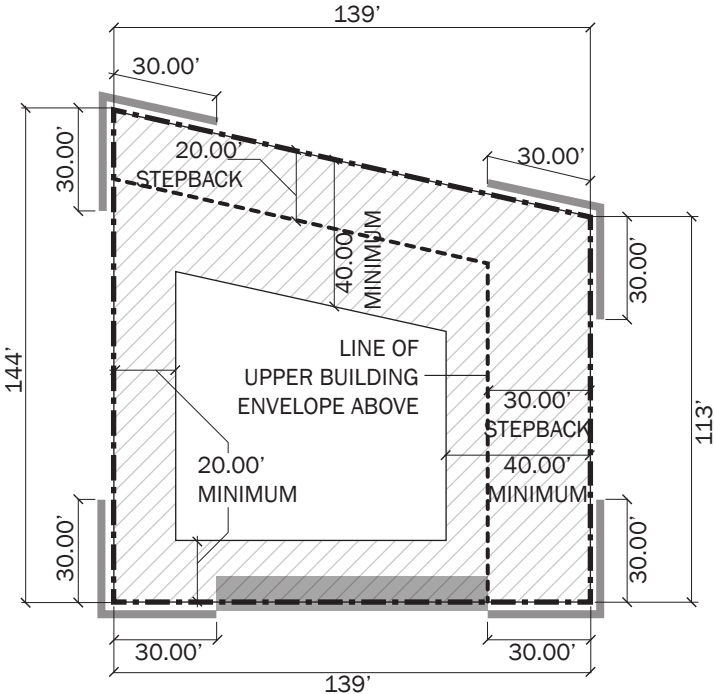
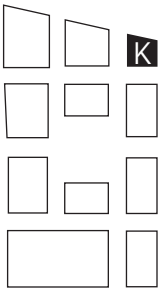


Note: Parcel dimensions shown are for illustrative purposes.



SUMMARY OF BLOCK STANDARDS

BLOCK K



Note: Parcel dimensions shown are for illustrative purposes.

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B

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Active Doorway

The main public-serving entry for a ground floor tenant.

Active Edge

A portion of a public right of way or public open space that a user of a building is allowed to occupy and create opportunities to enliven the street through furniture, signage, and merchandizing.

Articulation

Minor variations in the massing, setback, height, fenestration, or entrances to a building, which express a change across the elevation or facades of a building. Articulation may be expressed, among other things, as bay windows, porches, building modules, entrances, or eaves.

Approach Slab

An architectural detail that provides transition between the building slab and sidewalk or driveway, commonly used where differential settlement is likely to occur. On end the approach slab is directly supported on, but not anchored to, the building foundation structure, allowing the slab to hinge in reaction to the settling of the sidewalk. This detail allows for the hinged edge to effectively bridge the changing grade between the building's finished floor and the sidewalk.

Base Building

The Base Building is the lower portion of the envelope that creates the streetwall.

Block Boundary

An area of land designated to contain a specific building type or land use within a development block.

Building Envelope

The maximum dimensions of width, depth, height and bulk—within which building may exist on a given site.

Building Top

Defined as the portion of the building above the roof of the uppermost habitable floor.

Concertina Doors

A door with hinged sections that can be folded flat against one another when opened.

Controls

A set of guidelines and standards that established conceptual frameworks for land use, urban form, streets and public spaces in the Project Area.

Cycletrack

A grade-separated track for cyclists only. A contraflow cycle track runs counter to vehicular traffic.

Design Guidelines

See Guideline.

Design Standard

See Standard.

Development Block

Bounded areas defined for the purpose of site organization, establishing standards and guidelines and guiding physical development.

Diverter

A solid object at least 30 inches high and within 24 inches of the ground that guides pedestrians away from an occupied area of the sidewalk. Diverters must be flush with the building at approximately 90 degrees.

Elevated Walkway

Raised platform designed to allow for continuous pedestrian movement along the building frontage, facilitating shared loading facilities for production uses

Finished Grade

Because the majority of the site will be elevated to adapt to sea level rise, the finished grade for portions of Mission Rock will be set at a higher elevation than pre-development grade, as determined by the Mission Rock Infrastructure Plan.

Flexible Blocks

Specific Blocks on the site that are zoned for either commercial or residential.

Frontage

The portion of a development block or lot facing a street, park or other publicly accessible open space. Includes the facade of the building as well as the program or activities contained within the building that front on the public realm.

Frontage Zone

A zone along building frontages for Active Edge uses such as seating, signage, and merchandizing.

Ground Floor Setbacks

Space between the property line and the ground floor façade, measured perpendicular to the property line.

Guideline

Descriptions of building features or qualities to be considered in project designs, often requiring subjective analysis and demonstration of compliance with intent.

High Retail Zone

Zone that represents the highest level of intensity of shops, cafes, and retail.

Horizontal Development

Horizontal improvements, including infrastructure, streetscape and open space improvements that the master horizontal developer is responsible to construct.

Insets

A minor setback parallel to the property line along an entire frontage that applies only to the ground floor.

Kiosk

A small, flexible structure that contains food service and/or other retail components, with total footprint area not to exceed 200 SF (square feet) in size.

Lightweight Structure

A structure such as retail kiosks or public restrooms that do not exceed 600 GSF (gross square feet) in size.

Loading

Loading in this document refers to dedicated zones for passenger loading.

Loading Dock

A covered area within the building footprint where loading and unloading of goods may occur. Other building services such as trash compactors, dumpsters, maintenance, and storage areas may also be located here.

Massing

The exterior shape of a building or structure.

Maximum Plan Dimension

The maximum linear horizontal dimension of a building or structure at a given level, between the outside surfaces of its exterior walls.

Modification

An approved allowance for variations to certain development controls when a set of specific design guidelines are met.

Modulation

Major variation in the massing, height, or setback of a building (as a means of breaking up a structure's perceived bulk).

NIC

"Not in Contract" - indicates an area out of the scope of the project.

Parapet

A portion of a wall that projects above a roof.

Pedestrian Scale

The quality of the physical environment which reflects a sympathetic proportional relationship to human dimensions and which contributes to the pedestrian's perception and comprehension of the size, scale, height, bulk and/or massing of buildings or other features of the built environment.

Permeability

Extent of retail frontages designed to be opened up to the public realm.

Projections

Enclosed and unenclosed building area above the ground floor that encroach into the public right-of-way, such as a bay, column, cornice, or window molding.

Public Trust

The Public Trust Doctrine protects sovereign lands for the benefit, use and enjoyment of the public. Trust lands belong to the public and are to be used to promote publicly beneficial uses that connect the public to the water.

Raised Intersection

A traffic calming device whereby the intersection of two streets is raised above the level of the roadway.

Resilient

A district protected by effective defenses, adapted to mitigate climate impacts, and able to recover more quickly when those defenses are occasionally breached.

Sea Level Rise Benchmarks

MHW: (Mean High Water): the elevation benchmark used by BCDC to determine the 100' Shoreline Band. For Mission Rock, the 2016 MHW elevation is 94.3 Mission Bay Datum (MBD), and 5.7 NAVD 88.

BFE: The Base Flood Elevation, as determined by FEMA, which is the minimum elevation at which structures must be elevated or flood-proofed in compliance with FEMA/National Flood Insurance Program (NFIP) regulations to protect from the 1% annual flood event (100-year event). For the site vicinity, this elevation is 98.4 MBD, or 9.7 NAVD 88.

Servicing

Servicing refers to dedicated zones for commercial deliveries, freight loading, and building servicing; the design of these zones will be coordinated with specific blocks and land uses.

Stepback

The required distance between the vertical edge of a building above a specified height, or between the vertical edge of a building and the property line at a specific height.

Shared Public Way

Right-of-way that is designed as a single surface with no grade differentiation between street and sidewalk areas, and where roadway space is shared between pedestrians and slow-moving vehicles (SF Better Streets Plan).

Shared Street

See Shared Public Way.

Small Park Structure

A lightweight structure with total footprint area not to exceed 1,500 square feet. Where public restrooms are provided, total footprint area is not to exceed 3,000 square feet.

Social Object

Distinctive, fun, and iconic sculpture, building or landscape elements, recognizable to a particular place, that identify varied scales of gathering and use.

Standard

Mandatory and measurable design specifications applicable to all new construction.

Setback

A setback of the upper floors of a building which is greater than the adjacent setback of the lower floors.

Stoop

An outdoor entryway into residential units raised above the sidewalk level. Stoops may include steps leading to a small porch or landing at the level of the first floor of the unit.

Storefront

The facade of a retail space between the sidewalk grade and the ceiling of the first floor.

Street Room

Intimate social spaces within a street right-of-way characterized by small scale, special materials such as planting, paving, lighting, and fixed and movable furnishings, and/or program, such as retail kiosks.

Streetlife

The creation of social spaces and uses with special character and intimate scale within street right-of-ways.

Streetlife Zone

A zone within the sidewalk adjacent to the curb that houses streetscape elements such as trees, lighting, benches, and stormwater rain gardens. Equivalent to a Furnishing Zone as defined in the 2015 Subdivision Regulations.

Streetscape

The distinguishing elements and character of a particular street as created by its width, paving materials, design of the street furniture, pedestrian amenities and setback and form of surrounding buildings.

Streetwall

The aggregate effect of the façade of buildings along a property line adjacent to a public street or open space. The typical context for this term is in defining the public realm and framing or engaging the street.

Special Use District (SUD)

A Special Use District (SUD) is adopted by ordinance into the planning code and describes zoning controls such as land use, height and bulk, parking ratios, exposure, and so on. The Mission Rock SUD adopts the Mission Rock Design Controls as the document which guides the development of Mission Rock.

Sustainable Design

A multi-disciplinary design approach to balance environmental responsiveness, resource efficiency, and community context.

Tabletop Intersection

A traffic calming device whereby the intersection of two streets is raised to the level of the adjacent sidewalk.

Terrace

A raised, flat platform associated with and providing egress from a building [usually residential].

Throughway

An unobstructed path of travel for pedestrians.

Transparency

The degree of visibility through a building façade; OR

A characteristic of clear facade materials, such as glass, that provide an unhindered visual connection between the sidewalk and internal areas of the building.

Upper Building

The Upper Building is the portion of the building which rises above the Base Building.

Urban Forest

The site-wide composition of a diverse tree palette with ecological, aesthetic, and functional benefits.

Wayfinding

Tools which orient users of an area to ensure the ability to navigate through an area. Tools include signs, graphic communications, spatial markers, streetscape elements, building design, and the street network.

Working Waterfront

A street/public realm typology that prioritizes production uses and acknowledges the industrial and maritime heritage of the waterfront where it is located.

The following uses are permitted uses within Mission Rock. The list is intended to be read in conjunction with Chapter 1, which includes permitted uses by Block, and Chapter 5, which described ground floor required/ permitted uses. Please also see the SUD, which governs in the event of any inconsistency with this Appendix C. Unless otherwise defined in the SUD or these Design Controls, the definitions in the Planning Code apply in determining the nature and scope of these uses.

C

LAND USE CHART

PERMITTED LAND USES

SEE FIGURE 1.1 LAND USE PLAN

MISSION ROCK PARCELS	RESIDENTIAL USES	PRODUCTION USES	COMMERCIAL USES	RETAIL USES	PARKING GARAGES (3)	OTHER USES
A (RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
B (COMMERCIAL MIXED USE)	P	P	P	P	NP	P
C (COMMERCIAL MIXED USE)	P	P	P	P	NP	P
D1 (RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
D2	NP	NP	NP	NP	P	NP
E (COMMERCIAL MIXED USE)	P	P	P	P	NP	P
F (RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
G (COMMERCIAL MIXED USE)	P	P	P	P	NP	P
H (FLEX COMMERCIAL OR RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
I (FLEX COMMERCIAL OR RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
J (FLEX COMMERCIAL OR RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
K (RESIDENTIAL MIXED USE)	P	P	P	P	NP	P
PIER 48	NP	P	NP	NP	NP	P

LAND USE CHART

COMMERCIAL			PRODUCTION		RESIDENTIAL
AUTOMOTIVE Parking Garage, Private*	INSTITUTIONAL Education Post-Secondary Institution School Trade School Healthcare Medical Cannabis Dispensary Residential Care Facility Community Child Care Facility Community Facility Community Facility, Private Job Training Philanthropic Administrative Services Public Facility Religious Institutions Social Service or Philanthropic Facility	SALES AND SERVICES Catering Design Professional Laboratory Life Sciences Office, General Philanthropic Administrative Services Services, Administration Services, Business Services, Non-Retail Professional Trade Office	AGRICULTURAL Agriculture, Neighborhood Greenhouse	INDUSTRIAL Automotive Assembly Food, Fiber, & Beverage Processing, 1 Grain Elevator Live Stock Processing 1 Live Stock Processing 2 Manufacturing, Heavy 1 (woodworking mill only)** Manufacturing, Heavy 2 (rendering or reduction of fat, bones, or other animal material only)** Manufacturing, Heavy 3 (Manufacture, refining, distillation, or treatment of any of the following only: candles (from tallow), dye, enamel, lacquer, perfume, printing ink, refuse mash, refuse grain, or soap)** Manufacturing, Light Metal Working Sales, Wholesale** Storage, Wholesale**	Dwelling Unit Group Housing Homeless Shelters Hotel, Residential Live/Work Unit Senior Housing Single Room Occupancy Unit Student Housing

RETAIL			OTHER USES
AUTOMOTIVE	ENTERTAINMENT, ARTS AND RECREATION	SALES AND SERVICES	
Automotive Repair***	Arts Activities	Animal Hospital	Community Recycling Center
Automotive Wash***	Entertainment, General	Bar	Open Recreation Area
Parking Garage, Public*	Entertainment, Nighttime	Cat Boarding	Passive Outdoor Recreation
	Entertainment, Outdoor	Gift Store, Tourist-Oriented	Public Transportation Facility
	Movie Theater	Grocery Store, General	Utility Installation, District Serving Utility Installation only
		Grocery Store, Specialty	Wireless Telecommunications Services Facility
		Gym	
		Hotel****	
		Jewelry Store	
		Kennel	
		Liquor Store	
		Massage Establishment	
		Massage, Chair and Food	
		Mobile Food Facility	
		Mortuary	
		Non-Automobile Vehicle Sales/Rental	
		Pharmacy	
		Restaurant	
		Restaurant, Limited	
		Retail Sales and Services, General	
		Services, Financial	
		Services, Health	
		Services, Limited Financial	
		Services, Personal	
		Services, Retail Professional	
		Take-Out Food	
		Tobacco Paraphernalia Store	
		Trade Shop	
		Walk-Up Facility	

*Only permitted on Block D2 and on other Blocks as provided in the DA and DDA.

**Only permitted as accessory to a Production Use.

***Only permitted as accessory to a Parking Garage.

****Up to 300 hotel rooms.



PERKINS
+ WILL

CMG



MISSION ROCK

SUSTAINABILITY
STRATEGY





MISSION ROCK

SUSTAINABILITY STRATEGY

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EXECUTIVE SUMMARY

Mission Rock is one of the most prominent sites and a key gateway development in the Mission Bay neighborhood of San Francisco. It will be developed as a leading example of sustainable design, construction, community, and operations.

The project's ambitious sustainability vision includes a development in which 100% of building operational energy use comes from renewable sources. The project will also target zero water waste, where 100% of non-potable water demands will be met with non-potable sources; a healthy site with high outdoor air quality, active design, daylight and views; and construction materials that will be selected for low environmental impact.



MISSION ROCK PERFORMANCE GOALS

Resilient and Adaptive: Design to be resistant to San Francisco sea level rise projections for the year 2100

Energy: Target 100% operational energy use from renewable sources

Zero water waste: Target 100% of non-potable water to be met with non-potable sources

Transportation: Target 20% reduction in single occupancy vehicle trips

Healthy site: High quality outdoor environment, active design, daylight and views

Low Impact Materials: Encourage manufacturer transparency and select low impact materials through material optimization

SITE-WIDE SYSTEMS

The new infrastructure anticipated as part of the horizontal development will include an elevated site to mitigate future sea level rise, a central energy plant (CEP) with bay source cooling, and a central water treatment plant. These horizontal development features are essential to the district's ability to achieve its ambitious sustainability goals. They also provide a significant benefit to vertical developers by providing an easy connection to carbon-free cooling and a non-potable water source to meet all of the site's non-potable demands.

The Mission Rock Development is participating in the San Francisco Eco-District program. Eco-Districts are neighborhood scale public-private partnerships that strengthen the economy and reduce environmental impacts while creating a stronger sense of place and community. The Mission Rock development is looking to maximize this potential to deliver a sustainable, low-carbon neighborhood.

Mission Rock's Sustainability Strategy provides a comprehensive strategy to achieve Mission Rock's goal of becoming a model for sustainable development in the city. Multiple sustainable site strategies have been evaluated in order to inform the targets and strategies included in the Sustainability Strategy.

It is a critical objective to define strategies that are ambitious but achievable, so that the performance goals remain relevant throughout the project's longer-term delivery time frame (10-15 years) and the overall project lifespan (75-100 years). While due consideration

is given to current code requirements, the impact of future codes can only be evaluated to the point that the information is known.

The specifics of this Sustainability Strategy have been developed in consultation with the SFGiants, the project design team, the Port Planning Department, and Planning Division.

Sustainable development is influenced and defined by a wide array of environmental, economic, and social factors. The key performance areas at Mission Rock are identified as those that will maximize the environmental performance and benefits to the community. The Mission Rock development has the following key performance areas:

- ▶ Adaptability & Resilience
- ▶ Water
- ▶ Energy
- ▶ Transport
- ▶ Health and Wellness
- ▶ Waste Reduction Management
- ▶ Sustainable Materials
- ▶ Habitat and Ecosystem Function
- ▶ Community Identity

These correspond to the focus areas for San Francisco Eco-Districts, of which Mission Rock is a Type-1 Eco-District. Type 1 Eco-districts are ‘blank slate’ developments, where little or no existing development exists. As a new-build development on an existing parking lot without utility infrastructure connections,

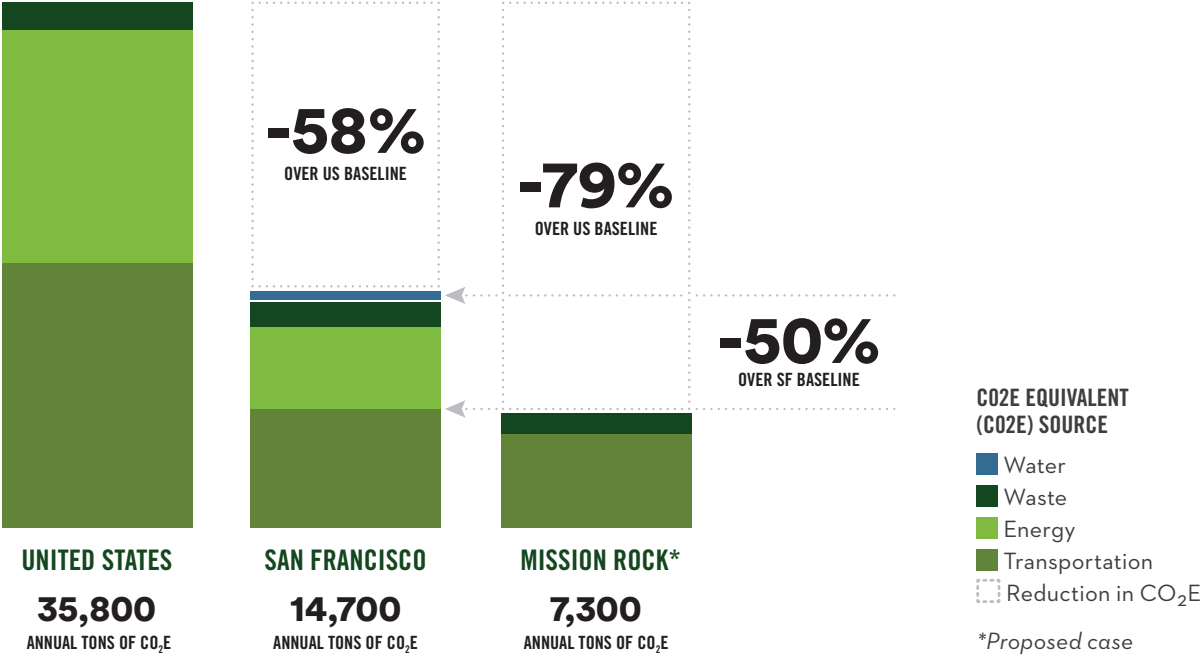


FIGURE 0.1: Site-Wide Greenhouse Gas Emissions

the development is considered to be one of the first Type 1 Eco-districts in San Francisco. The potential environmental performance of a Type 1 Eco-district can be influenced by the delivery of new infrastructure in the ground (horizontal development), new buildings (vertical development), community engagement, and management and participation strategies.

In addition, the greenhouse gas (GHG) impacts of proposed measures for energy, water, transport and waste at Mission Rock have been evaluated. The GHG assessment indicates that transport strategies are the overriding driver for GHG emissions on the

site. Energy used in the buildings has the second largest influence on total GHG emissions, while water is relatively minor in terms of GHG emissions impacts. Mission Rock intends to minimize its future GHG emissions through an innovative Transportation Demand Management strategy (TDM) and off-site renewables for the operational GHG emissions for the buildings on site.

Other key performance areas, which may not directly impact GHG emissions, should be considered in terms of regional and local impacts, economic costs, and social benefits, both now and into the future.

MISSION ROCK DESIGN DOCUMENTS

The Sustainability Strategy comprises one section of the Mission Rock Design Documents and has been developed in conjunction with the Vision & Design Intent, Design Controls (DCDG), Transportation Plan and the Infrastructure Masterplan. These design documents are part of a larger set of Transaction Documents which make up the Lease Disposition Development Agreement (LDDA). All of these documents contain requirements and recommendations for the project



MISSION ROCK VISION & DESIGN INTENT

This document contains the big picture thinking and aspirations that will guide the process for the design and implementation of Mission Rock.



MISSION ROCK DESIGN CONTROLS (DC)

This document guides the development of the open spaces, streets, and buildings at Mission Rock. The DC ensures that the site will be developed in a way that is consistent with the vision as defined in the Mission Rock Vision and Design Intent document.



MISSION ROCK SUSTAINABILITY STRATEGY

This document identifies the high level sustainability goals for Mission Rock, details the requirements for the horizontal and vertical development and summarizes the anticipated reduction in greenhouse gas (GHG) emissions resulting from the district's approach to sustainable design.



MISSION ROCK INFRASTRUCTURE PLAN

The design of the landscape, buildings, and sustainability strategies will be closely coordinated with the infrastructure planning at Mission Rock. This plan regulates the complex coordination of streets, utilities, and services.



MISSION ROCK TRANSPORTATION PLAN

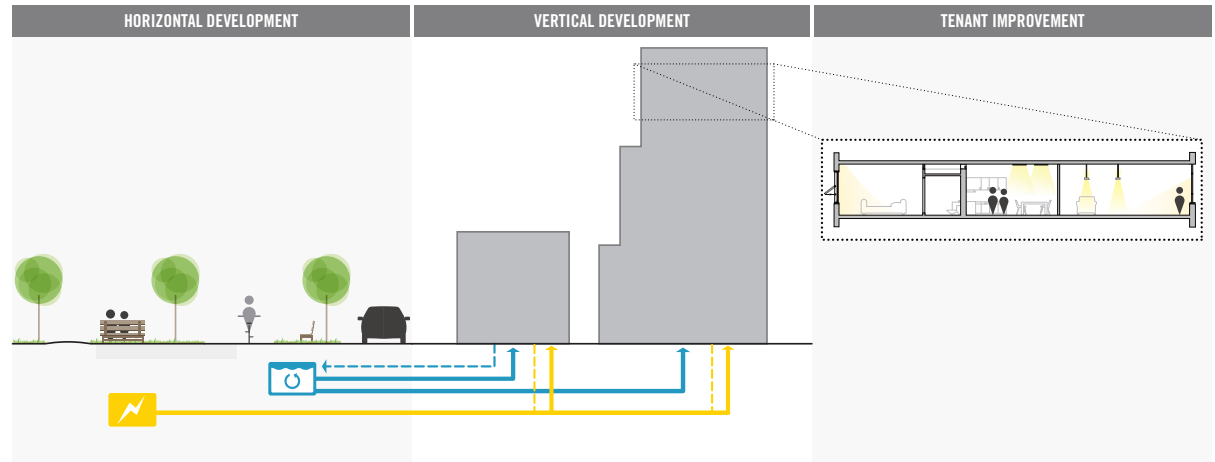
In addition to coordinating the daily circulation of people, bicycles, and vehicles to and around the site, the Transportation Plan describes how access to the site functions during peak event times.

DOCUMENT OVERVIEW

The content in the Sustainability Strategy focuses primarily on the horizontal and vertical development of Mission Rock. Requirements for tenant spaces are limited to water fixture efficiency requirements to ensure that the designed conditions for water reuse align with the assumptions made during the masterplanning phase. However, there are a number of recommendations pertaining to the tenants which should be reviewed and targeted by all project teams.

The diagram to the right shows the different areas of the Mission Rock development addressed by the Sustainability Strategy.

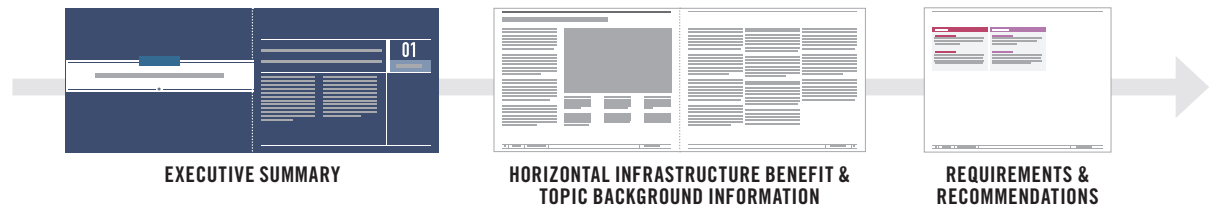
Each section of the Sustainability Strategy follows the same basic structure. The sections starts with an executive summary to provide a high level overview of the goals relevant to that topic. This is followed by a description of the horizontal development and how it supports or enables the district or individual buildings to achieve the targets related to that topic. Certain sections have background information which describe the aspects of each topic that are relevant to the Mission Rock site. Most sections have a series of Requirements & Recommendations.



Horizontal Infrastructure
Central Energy and Water Treatment
Open Space
Transportation Demand Management
Site Materials Selection
Outdoor Environmental Quality

Connection to Centralized Infrastructure
Building Performance
Structural Materials Selection

Water Fixture Performance
Lighting & Equipment Recommendations
Material Selection Recommendations



EXECUTIVE SUMMARY

HORIZONTAL INFRASTRUCTURE BENEFIT &
TOPIC BACKGROUND INFORMATION

REQUIREMENTS &
RECOMMENDATIONS



ADAPTIVE DISTRICT

Site Elevation Meets 2100 projection for sea level rise



01

ADAPTABILITY & RESILIENCE

The overall vision for Mission Rock is to create a resilient and adaptive district that is protected against coastal sea level rise and supports passive survivability and vibrance in a future climate which is hotter, drier, and less predictable.

For the city of San Francisco, changes to climate conditions are expected to manifest in:

- ▶ Continuing coastal sea level rise
- ▶ Increasing temperatures with a greater number of days over 80°F
- ▶ Decreased precipitation rates and continuing regional drought

“Adaptability” is the capacity to withstand changing environmental conditions over the lifespan of the building or system. Mission Rock’s approach to adaptability is to find strategies that also provide environmental benefits in terms of reduced resource consumption.

“Resilience” refers to the ability to withstand and recover quickly from an extreme event. In San Francisco, resilience often refers to its ability to protect occupant lives and return to partial or full function after an earthquake.

The enabling work completed as part of Mission Rock’s horizontal development addresses the fact that the site is located in a sea rise vulnerability zone and includes a number of adaptive measures as described on the following page.

HORIZONTAL DEVELOPMENT: ADAPTIVE STRATEGIES

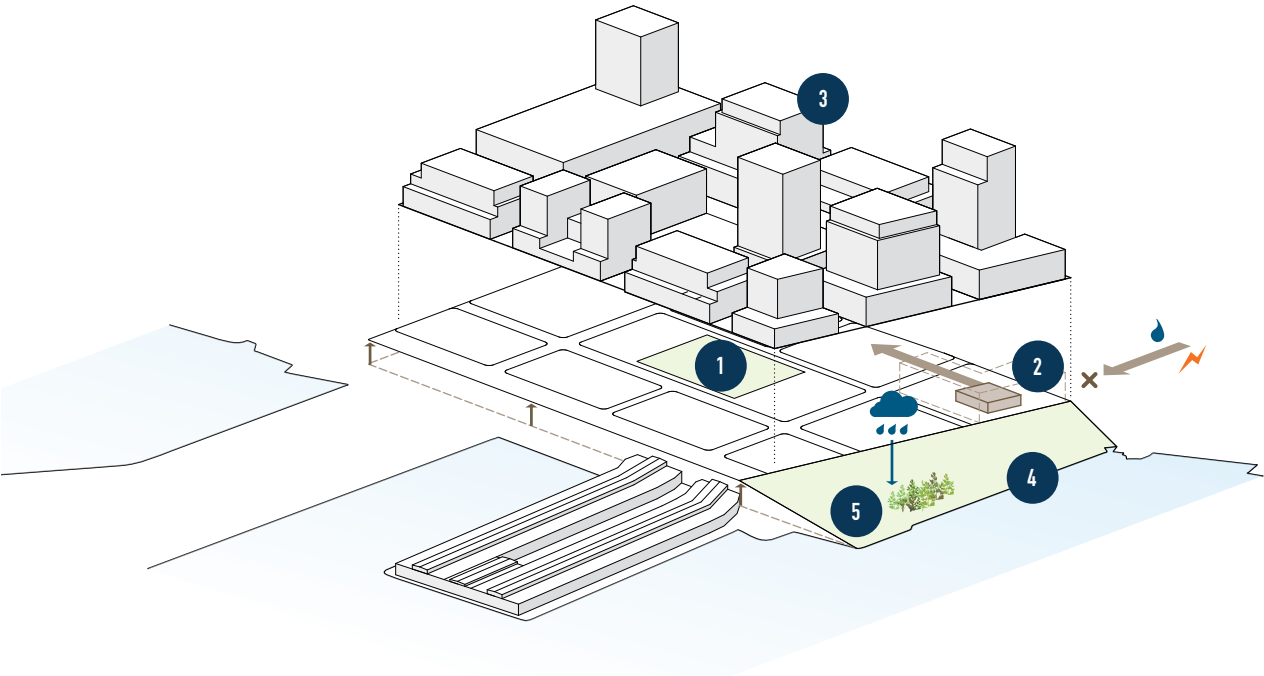
The measures taken by the horizontal development provide vertical developers with an adaptive site condition and alleviate the need for each vertical developer to invest in adaptive measures building by building. The benefits provided to the vertical developer by the horizontal development are described below and highlighted in the diagram to the right.

To protect the Mission Rock development against sea level rise and storm surges, the development blocks will be elevated to 104ft above the Mission Bay Datum (MBD). This elevation accommodates the 2100 sea level rise (SLR) projection of 66 inches above 2000 mean higher high water (MHHW) and the 100-year storm surge. China Basin Park acts as a buffer during storm events, protecting buildings and critical infrastructure. Saline-tolerant native or climate-appropriate plant species shall be included in the stormwater gardens to increase vegetation resilience in the case of a Bay flood event.

Mission Rock will require all vertical developers to connect to Mission Rock’s anticipated central thermal energy plant and water treatment plant. These two on-site resources can provide heating, cooling, and recycled water sources, even during failures of local supplies.

In addition, the site pilings provided as part of the horizontal infrastructure reduce liquefaction potential in the event of an earthquake.

All buildings on site will benefit from these strategies to increase resiliency and adaptability. Vertical developers can further increase the district’s adaptive ability by designing their buildings with high performance envelopes, and focusing on passive heating and cooling strategies to support passive survivability in the event of a power failure and loss of mechanical conditioning.



1 Development blocks will be elevated to 104ft MBD to accommodate the upper level 2100 SLR projections and the 100-year storm surge.

2 The anticipated central energy and water treatment plants may maintain function during failure of city supplies, and increase resilience in a major event and long term adaptability to drought

3 Recommended building design strategies can increase passive survivability and interior comfort in the event of power failure and comfort for long term climate change

4 China Basin Park provides a buffer on the North side for rising sea level and storm surges between the bay and the buildings and critical site infrastructure

5 Large stormwater treatment area contains saline tolerant planting and can help mitigate storm surges

ADAPTIVE SITE BACKGROUND INFORMATION

SEA LEVEL RISE & FLOOD PROOFING

Increasing sea levels and the greater likelihood of storm surges have influenced site-wide planning decisions for Mission Rock. The district will take the following measures to future proof against rising sea levels:

Development blocks will be elevated to 104 ft MBD to protect against the maximum 2100 Sea Level Rise projection and 100-year storm surge.

China Basin Park is located along the seawall while the commercial and residential buildings on site will be set back from the bay edge. This strategy provides a buffer zone between the Bay and the site's critical infrastructure of roads and buildings.

The largest storm water treatment area for the site will be located along the seawall in China Basin Park. Locating this site amenity here can help protect against storm surges. The DCDG specifies that planting in this treatment area must be salient tolerant and native or climate-appropriate in order to survive a potential storm surge event.

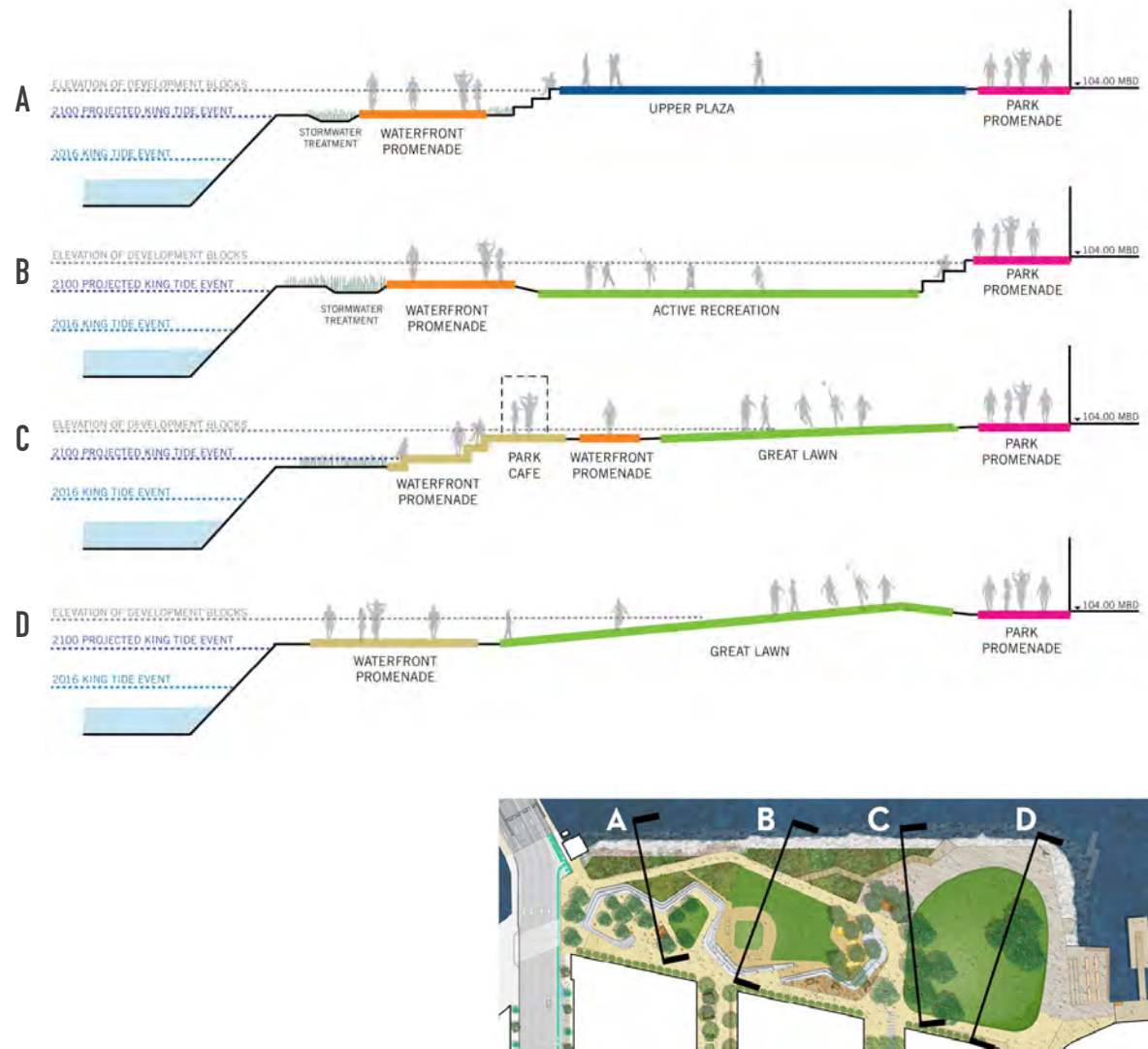
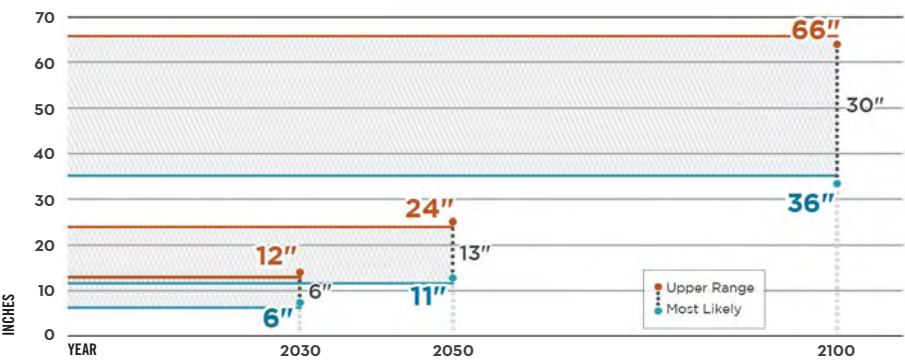


FIGURE 1.1: Programmatic Relationships and Grade Changes

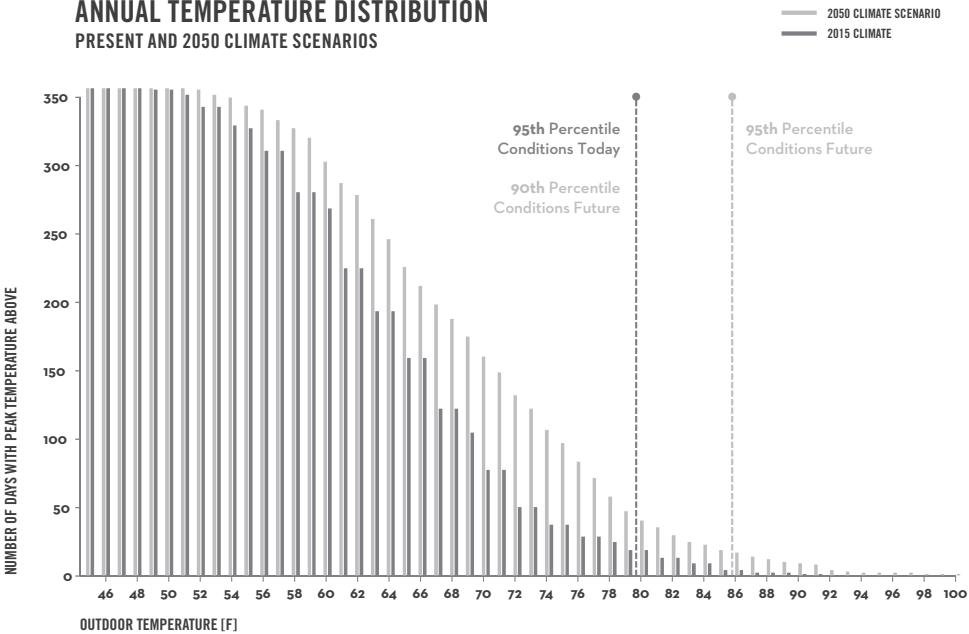
SEA LEVEL RISE PROJECTIONS FOR SAN FRANCISCO RELATIVE TO THE YEAR 2000



Lower range projections are excluded as they are not recommended for planning purposes.
SOURCE: SAN FRANCISCO SEA LEVEL RISE ACTION PLAN, NRC (2012)

NOTE: These SLR projections do not include extreme tides or coastal storms, which could add up to 41 inches of temporary flooding on top of rising sea levels, for a total of up to 107 inches above today's average high tide.

ANNUAL TEMPERATURE DISTRIBUTION
PRESENT AND 2050 CLIMATE SCENARIOS



PASSIVE SURVIVABILITY IN A FUTURE CLIMATE

Future climate models predict a gradual increase in local annual temperatures over the coming years. These regional temperature escalations are exacerbated by local heat island conditions.

The resulting increase in building cooling demands may contribute to an overburdened energy grid and increase the likelihood of blackouts and brownouts. For this reason and for assurance during disaster events, it is important that buildings on the Mission Rock site can maintain an acceptable indoor environment without heating, cooling or electricity.

REGIONAL DROUGHT AND WATER CONSERVATION

With the regional drought, there is increasing water uncertainty around California's water resources. The Mission Rock site includes over 8 acres of open space, much of which incorporates vegetated space for recreation, provision of native habitat, and gardens. Trees lining the streets provide shade and contribute to a human scale pedestrian environment throughout the site. All vegetation on the Mission Rock site will be irrigated with recycled water from the central graywater treatment facility. The Public Realm guidelines also include recommendations for drought tolerant and low water species. This approach reduces the site's water

consumption and ensures that the site's vegetation will remain vibrant even in worsening drought conditions. Additionally, the minimization of on-site cooling towers through use of bay source cooling and graywater reuse for flushing reduces overall site water demand. More information can be found in the following water section.

REQUIREMENTS

SEA LEVEL RISE PROTECTION

All building finished floors to be elevated above 104 ft (MBD) or 15.3 ft (NAVD88). Parking garages and building frontages along the perimeter of the site adjacent to existing grades are exempt from this requirement.

STORM SURGE PROTECTION

Saline-tolerant native or climate appropriate plant species shall be included in the design and maintenance and management strategy of the stormwater gardens to increase resilience of treatment gardens in the case of inundation in a Bay flood event.

PASSIVE SURVIVABILITY

Pursue a central energy plant (CEP) and a centralized graywater treatment plant to increase likely-hood that heating, cooling and non-potable water could be provided during times when City supplies become unavailable. [subject to confirmation of feasibility]

RECOMMENDATIONS

PASSIVE SURVIVABILITY

Vertical Development

- ▶ Target 40% window-to-wall ratio (WWR), with a maximum WWR of 60%
- ▶ Highly insulated envelope including high performance glazing that abate temperature swings within buildings
- ▶ Optimize shading to maximize usable daylight access and minimize solar gains
- ▶ Operable windows for natural ventilation
- ▶ For residential buildings, provide access to common area drinking water that can be supplied without power

ZERO WATER WASTE

**Meet 100% Of Non-Potable Water Demand
With Non-Potable Sources**



02

WATER

The Mission Rock district has established a goal of Zero Water Waste, meaning that 100% of non-potable water demands would be met with recycled water. This goal can be achieved through a combination of a water-efficient central energy plant, water efficient fixtures and landscape, and a centralized graywater treatment system.

At full build out, this combination of strategies is estimated to save roughly 15.5 million gallons of potable water per year over a typical San Francisco development.

The Mission Rock site was a salt marsh and lagoon in the 1880s before it was developed. Given its history, it is only appropriate that the district's most significant water conservation measure comes from maintaining a direct connection to the Bay. The largest water savings come from the elimination of cooling towers through anticipated bay source cooling at the central energy plant or other low energy cooling options. This strategy alone reduces the site's water demand by more than 6 million gallons per year.

The following page describes how the centralized energy and water systems anticipated as part of the horizontal development will contribute to site-wide water conservation; enable vertical developers to meet San Francisco's water reuse ordinance; and assist developers in meeting the SF Green Building Code.

HORIZONTAL DEVELOPMENT: WATER CONSERVATION

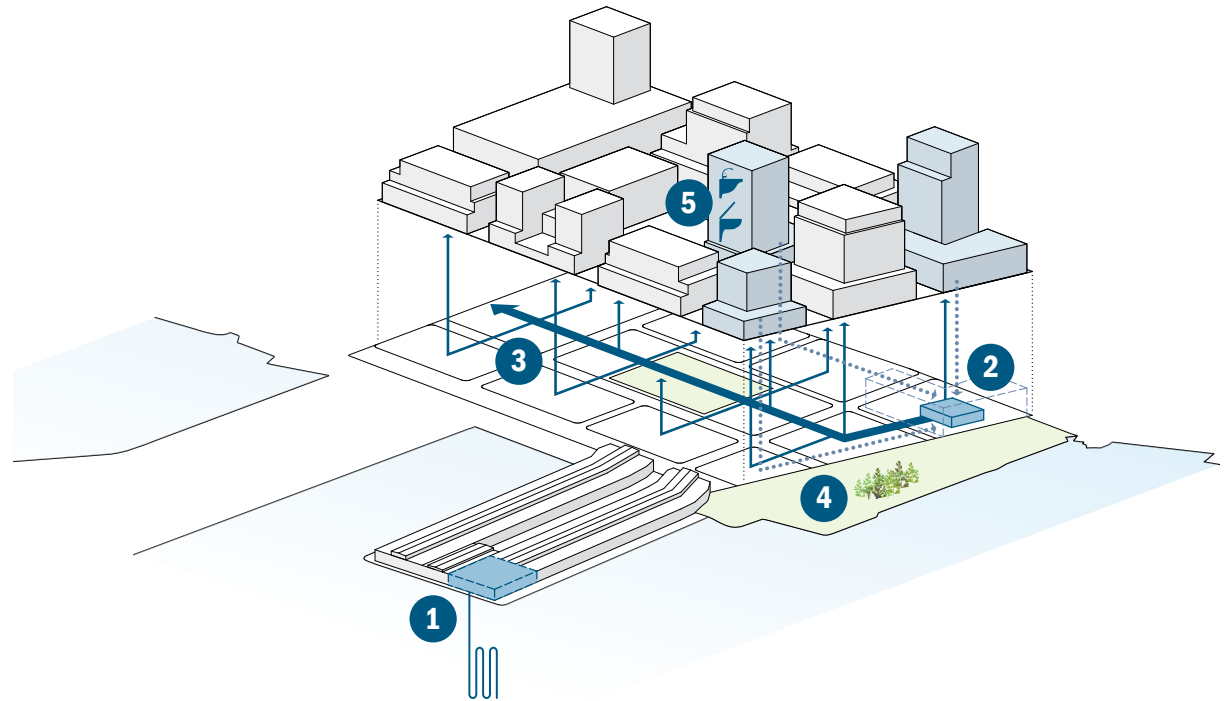
It is anticipated that the horizontal development at Mission Rock will include two critical elements that are key to achieving Zero Water Waste on site: the anticipated bay source cooling connection at the central energy plant and the central graywater treatment system.

All vertical developers are required, by local code, to provide plumbing for recycled water - or “purple pipe” - within their buildings, and to connect to the site-wide purple pipe system. Vertical developers will also be required, by code, to comply with San Francisco’s Onsite Water Reuse for Commercial, Multi-family, and Mixed Use Development Ordinance (more commonly known as the Non-potable Water Ordinance), and the water efficiency requirements related to the SF Green Building Code.

Mission Rock’s horizontal infrastructure will leverage the diversity of program types within the development to provide recycled water for 100% of the site and buildings’ flushing and irrigation demands at each phase of development. Instead of collecting graywater from all buildings, the Sustainability Strategy mandates graywater collection for only buildings A (Phase I), K (Phase I), and F (Phase III). This approach can provide all of the buildings on site with a source of recycled water while minimizing plumbing for graywater collection.

This district approach will eliminate the need for separate graywater treatment systems throughout the site and, in doing so, reduce the spatial needs and maintenance requirements associated with a series of distributed treatment systems. In addition, it provides a path for all vertical developers to comply with SF’s Non-potable Water Ordinance.

Each vertical developer will support the site’s water conservation approach by installing efficient domestic fixtures and water conserving equipment.



1

The anticipated bay source cooling connection will reduce site-wide water demand by more than 6 million gallons/year

2

Buildings A, K, and F collect graywater and send it to a graywater treatment plant

3

Anticipated central graywater treatment provides recycled water to meet 100% of flushing and irrigation demands of the entire site. Recycled water is distributed to buildings using “purple pipe”

4

Drought tolerant vegetation and efficient irrigation will minimize irrigation demand

5

Efficient fixtures and equipment will reduce domestic and process water demand

WATER BACKGROUND INFORMATION

NON-POTABLE WATER DEMANDS

The anticipated non-potable water demand for each building has been calculated to determine the total recycled water demand on site. The water required for cooling towers would have been one of the largest water demand on the Mission Rock site, but the project is considering cooling strategies that eliminate cooling towers and the associated water demand. This demand would have amounted to more than 6 million gallons per year, as shown by the dashed bars in Figure 2.1.

The projects is considering using centralized bay source cooling, geothermal energy wells, or wastewater heat recovery cooling to reducing cooling tower water demand. In the bay source cooling strategy, water would be drawn from the bay and pumped through the central plant to cool the chillers and then discharged back to the bay without negatively affecting the bay ecosystem. For the geothermal case, several wells would be installed on site. Heat exchangers would transfer heat from the closed loop well system to the district energy system. For the wasterwater energy capture system, it may be possible to use the main trunk sewer line that passes the site as a heat sink for the cooling and heating system. Any of these strategies would effectively reduce water consumption in the central plant cooling towers.

Residential buildings produce far more graywater than they consume, and can export water to the commercial buildings that cannot meet their own demand. Treatment can occur at the individual building level, but a centralized system is more efficient and minimizes required treatment capacity, storage, and infrastructure while delivering the required reclaimed water. Figure 2.3 shows the net supply of graywater and non potable demand for each building.

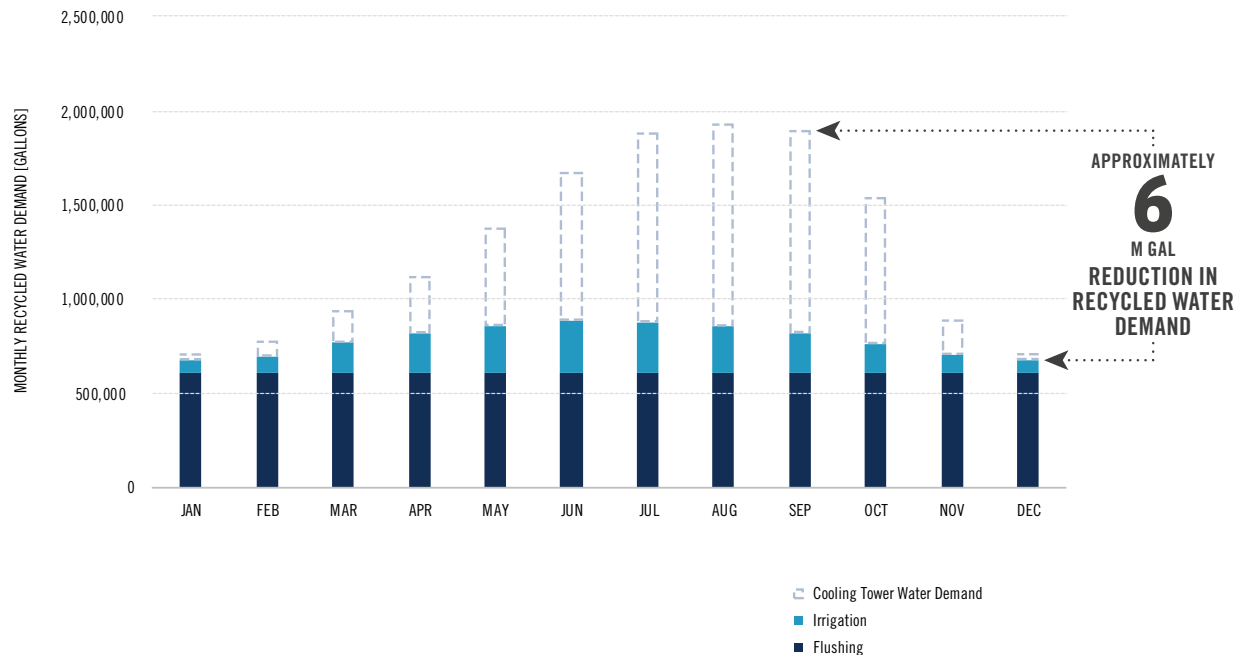


FIGURE 2.1 Monthly Reclaimed Water Demand

INFRASTRUCTURE

Treatment

A centralized water treatment system is intended to provide the buildings on the Mission Rock site with recycled water.

Collection

It is anticipated that graywater would be collected from buildings A and K in Phase I, and from building F in Phase III. The graywater supplied by these residential buildings alone is sufficient to meet the non-potable demand of the project due to the large volume of graywater produced by domestic uses, especially showers.

Distribution

The recycled, or “purple pipe,” water distribution will be installed in the street and the project team is working to ensure that they can be charged with the recycled water produced on site. Mission Rock will require each building onsite to connect to this piping network, as shown in the Infrastructure Plan.

San Francisco Recycled Water Ordinance

San Francisco has ambitious regulations in place that limit water consumption and mandate water reuse. The anticipated recycled water system on the Mission Rock site exceeds the current version of San Francisco’s Non-potable Water Ordinance, and is expected to meet future revisions. The development will reuse water in all buildings, where current code only require reuse in buildings larger than 250,000 square feet.

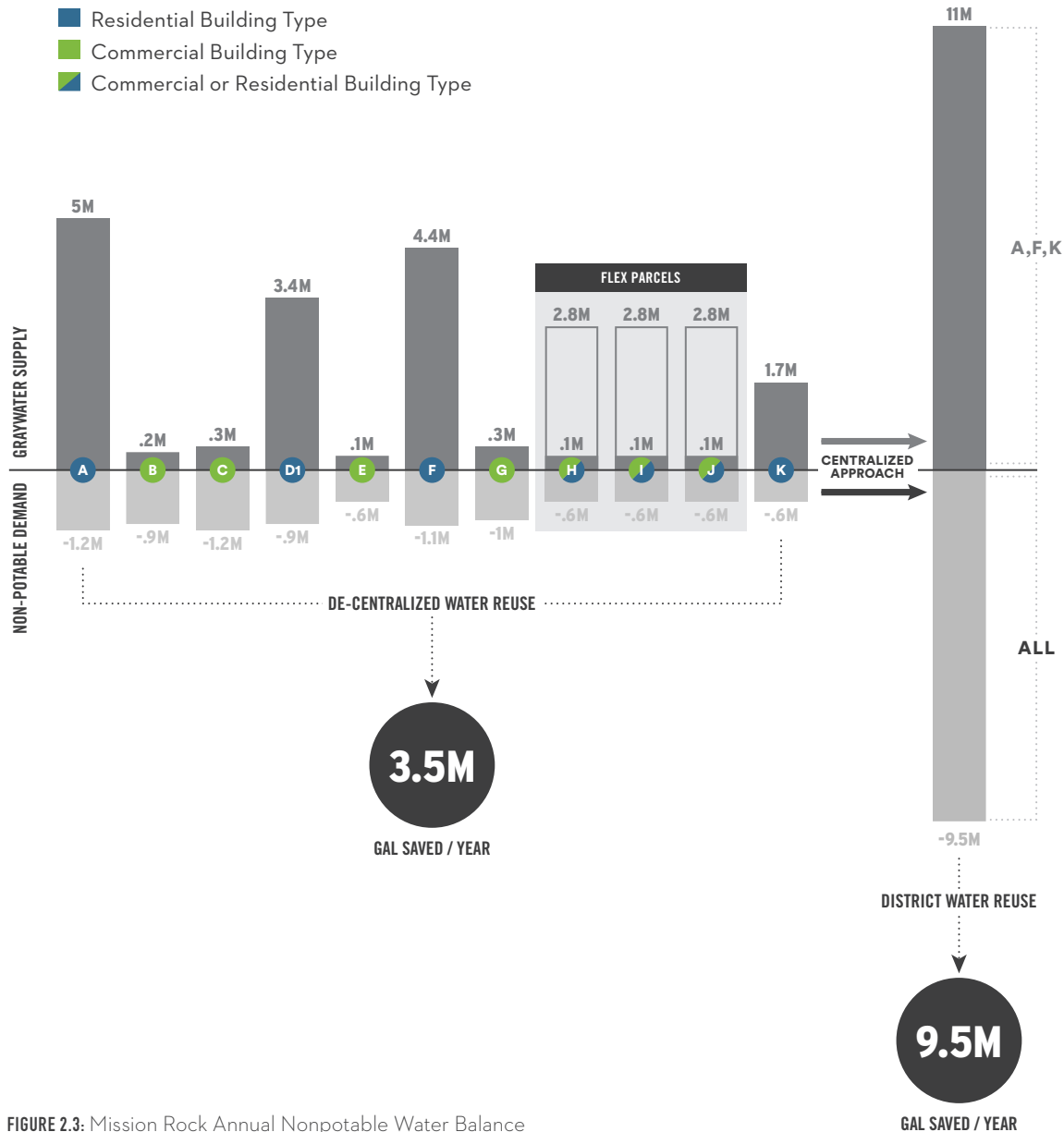


FIGURE 2.3: Mission Rock Annual Nonpotable Water Balance

OTHER DEMANDS & SUPPLIES

If the project uses on-site cooling towers to provide site-wide cooling the mechanical water demand is estimated to be more than 6 million of gallons of water per year. A centralized graywater treatment system will not be sufficient to meet this demand, and other sources of non-potable water would need to be considered in order to achieve the project's goal of zero water waste. These sources could include blackwater, rainwater, or other process water sources. If blackwater treatment is included, sewer mining will have to be coordinated with the SFPUC as necessary.



FIGURE 2.4: Graywater Collection and Reclaimed Water Distribution Infrastructure

REQUIREMENTS

WATER EFFICIENCY STANDARDS

Vertical developer must install or implement a tenant lease agreement that requires tenant to install domestic water efficient fixtures that meet or exceed the following performance requirements. All eligible fixtures must be WaterSense or ENERGY STAR labeled.

Commercial

- ▶ water closet: 1.1 gpf, WaterSense certified
- ▶ urinal: 0.125 gpf, WaterSense certified
- ▶ shower: 1.5 gpm, WaterSense certified
- ▶ lavatory: 0.5 gpm with sensors, WaterSense certified

Residential

- ▶ water closet: 1.1 gpf, WaterSense certified
- ▶ shower: 1.5 gpm, WaterSense certified
- ▶ lavatory: 1.5 gpm, WaterSense certified
- ▶ kitchen sink: 1.5 gpm, WaterSense certified
- ▶ clothes washer: 3.7 gal/cycle/ft³, ENERGY STAR certified
- ▶ standard size dishwasher: 3.5 gal/cycle, ENERGY STAR certified
- ▶ compact size dishwasher: 3.1 gal/cycle, ENERGY STAR certified

Retail & Restaurant

- ▶ commercial clothes washer: 4.5 gal/cycle/ft³, ENERGY STAR certified
- ▶ commercial dishwasher: ENERGY STAR certified
- ▶ commercial ice maker: ENERGY STAR certified
- ▶ commercial pre-rinse spray valves: 1.6 gpm, WaterSense certified

CENTRAL WATER TREATMENT

Pursue a central water treatment plant that has sufficient capacity to treat, store, and distribute recycled water to all buildings and vegetated open space on site. [subject to confirmation of feasibility]

RECYCLED WATER DISTRIBUTION

All building, vegetated open space, and streetscapes must connect non-potable demands to the recycled water distribution system. This includes toilets, urinals, and irrigation at minimum.

GRAYWATER COLLECTION

- ▶ Graywater collection piping should be provided in buildings A, K, and F, or alternative locations that are projected to collect graywater sufficient to meet all non-potable demands on the Mission Rock site. This quantity is currently projected to require collection from all showers, lavatory sinks, and washing machines at a minimum.
- ▶ Graywater collection lines shall be provided to facilitate graywater collection.
- ▶ Any pumps required to maintain pressurization of the site-wide graywater collection lines will be provided by the vertical developer on a building by building basis.

[Greywater collection will not be required if the site uses a centralized blackwater treatment system or another source of recycled water that is sufficient to meet the SFPUC's Non-potable Water Ordinance]

IRRIGATION AND VEGETATION

- ▶ All vegetation on site must use recycled water provided from the non-potable water treatment system to meet 100% of their irrigation demand.

100% RENEWABLE ENERGY

**100% of Building Energy Demand Met with
Renewable Energy Sources**



03

ENERGY

Mission Rock has established the ambitious goal of meeting 100% of its building energy demands with renewable energy. This approach will eliminate or offset all of the project's operational greenhouse gas (GHG) emissions.

This vision will be made possible by investing in energy conservation plus on-site and off-site renewable energy generation projects. Mission Rock will require vertical developers to purchase off-site renewable energy equal to the amount of anticipated energy consumption from their buildings.

Mission Rock's energy approach positions the development as a leading example of how California's policy goals may be achieved in a new construction

development in a dense urban location. The project's horizontal development includes consolidated critical energy infrastructure, and the Mission Rock district will establish investment structures to allow vertical developers to purchase off-site renewable energy infrastructure to overcome the spatial challenges associated with on-site renewable production.

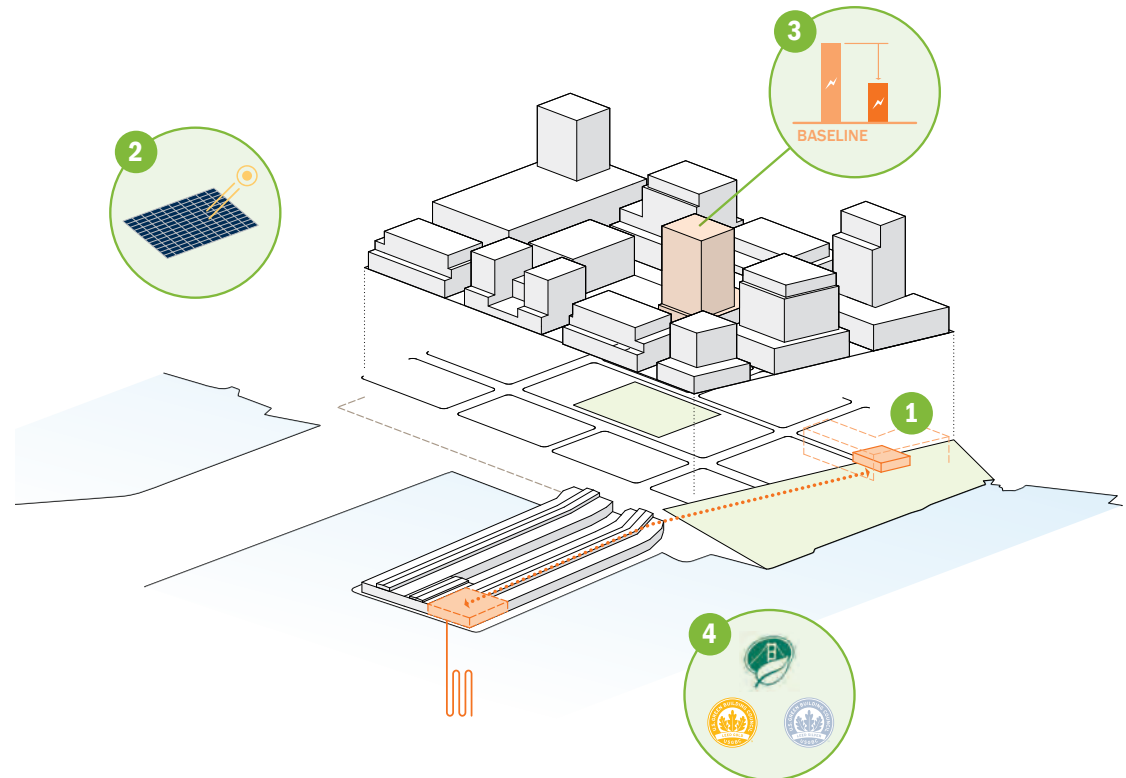
HORIZONTAL DEVELOPMENT: ENERGY RESOURCES

It is anticipated that the Mission Rock horizontal development will include a central energy plant that provides both heating and cooling energy to buildings on site.

The development is considering an array of low-energy central plant options for cooling and heating, including bay source cooling, geothermal energy wells, or wastewater heat recovery. A bay source cooling loop provides cooling by rejecting heat from central plant chillers to the bay water. By using the bay as a heat sink, cooling can be provided using very little energy. For the geothermal wells, heat exchangers would transfer heat from the district energy system to several wells drilled on site. A wastewater heat recovery system would exchange heat with the main trunk sewer line that passes near the site. With any of these strategies, the high volume of water consumed in conventional cooling towers will be eliminated. There may be backup cooling towers for peak capacity or times when the bay source cooling is taken offline for maintenance. Eliminating cooling towers also frees-up roof space that would have been dedicated to mechanical equipment for living roofs, urban agriculture, open space, and renewable energy.

Mission Rock will require all vertical developers to connect their buildings to the anticipated central energy plant. This connection provides vertical developers with an efficient source of cooling energy and frees up space within each of the buildings and on building rooftops that otherwise would have been required for local mechanical systems. In addition, the elimination of cooling towers will remove the largest water demand for each of the buildings saving annual water use and water utility cost.

The Mission Rock team will work with the central plant provider to determine options to purchase renewable power to offset central plant operations.



1 The anticipated central energy plant (CEP) provides heating and cooling to all buildings on site. It is anticipated that the CEP will use bay source cooling to minimize energy and water used to meet the site-wide cooling demand.

3 Requirements for purchasing renewable energy based on building performance incentivize building efficiency.

2 Vertical developers will purchase off site renewable energy infrastructure to meet their anticipated building energy demand.

4 All buildings will have to meet the following:

- T24 State Requirements
- SF Green Building Code

ENERGY BACKGROUND INFORMATION

To reach the site wide goal of 100% power provided by renewable energy, Mission Rock will require vertical developers to purchase off-site renewable energy infrastructure equal to the total energy consumed in the building. This approach incentivizes building developers to purchase energy efficiency measures at the building scale by creating a cost tradeoff between building energy efficiency and the cost of renewable energy.

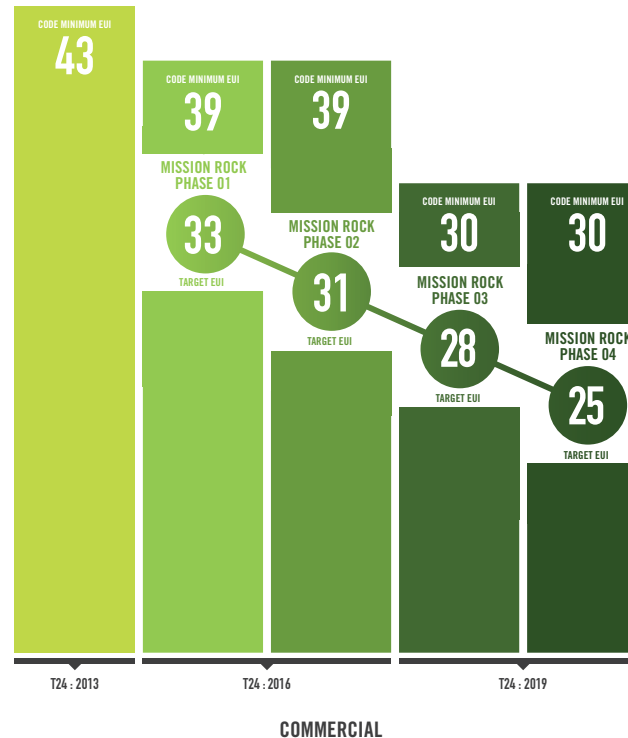
Plant efficiencies, in combination with efficiency measures at the building scale, will assist each developer in exceeding the energy requirements from the state of California and the SF Green Building Code.

Finally, the purchase structure off-site renewable energy may allow each vertical developer to capitalize on the economy of scale gained from their purchase as part of a larger project. This economy of scale can decrease up front cost and streamline negotiations with local utilities and renewable energy providers.

CALIFORNIA'S 2030 NET ZERO GOAL

California has a goal of reaching net zero for all new construction by 2030, which will be enforced through Title 24, Part 6 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. San Francisco also has a goal of a 50 percent renewable electricity supply by 2020.

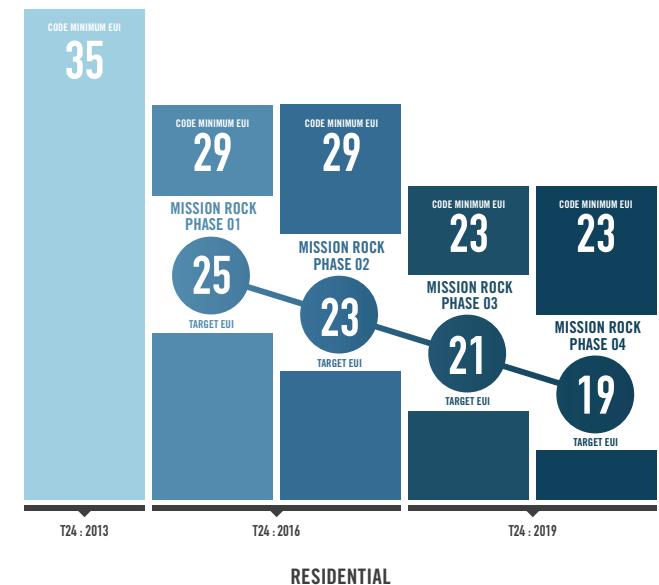
Building efficiency is always the first step towards the 100% renewable energy goal, but renewable energy will always be required to make it all the way to zero. It is not possible for high-rise projects with limited roof area in dense urban environments to meet this requirement through efficiency and on-site renewable energy alone.



The San Francisco Green Building Code currently requires that renewable energy be installed on buildings less than 10 stories, but this will be insufficient capacity to meet the 100% renewable energy target for the Mission Rock Development.

The chart in Figure 3.1 shows the decreasing building energy use intensity (EUI) that will be required to meet California's net zero goal. The minimum energy performance of buildings on site are set by the current version of Title 24 and the San Francisco Green Building Ordinance. Efficiency will be sufficient to meet the EUI

FIGURE 3.1: California Path to Net Zero Energy Buildings by 2030: Projected Energy Use Intensity (EUI) for Commercial / High-Rise Residential Buildings



target for some years to come, but, at some point, the remaining steps towards the net zero goal will have to be made through on-site or off-site renewable energy generation.

The Mission Rock development will be prototyping an approach through building efficiency and off-site renewable energy to meeting a goal of 100% renewable energy for building operations before it will be required in California.

The anticipated energy end use distribution for the building types on site is shown in Figure 3.2 (next page).

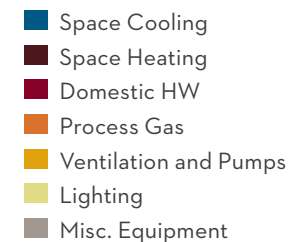
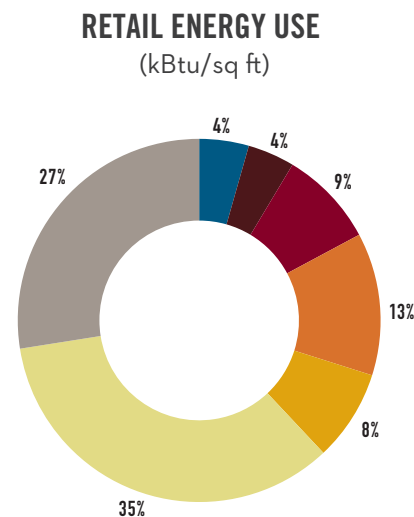
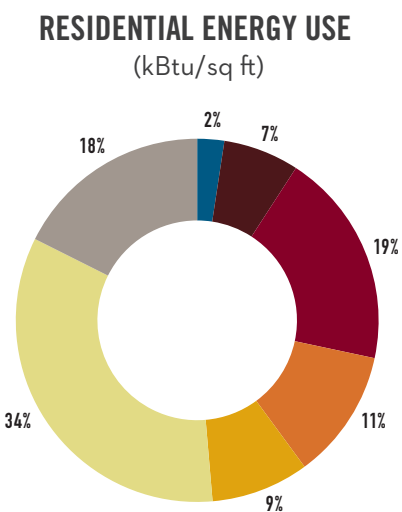
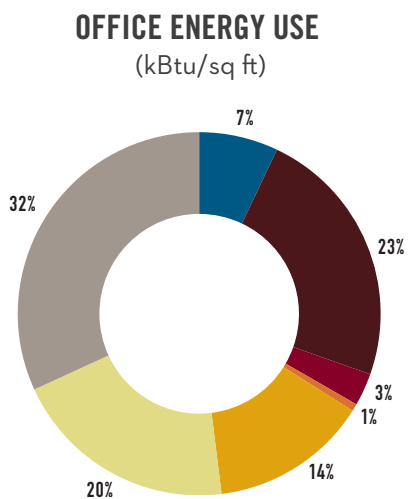


FIGURE 3.2: Anticipated Energy End Use Breakdown by Program Type

OFFICE BUILDING ENERGY SUMMARY

Office energy use is driven primarily by lighting and plug loads (computers, printers, etc.). The energy required for heating and cooling accounts for only a small portion of the annual energy use.

The design of the building envelope can have a significant impact on energy use, as daylight access reduces energy demand for electric lighting. The tenant has the largest ability to impact energy use and associated costs by reducing the electricity used within the building through efficient lighting, extensive lighting controls, and plug load management. Energy efficiency requirements in the tenant guidelines incorporated into the lease agreement can be used to document performance improvements.

RESIDENTIAL BUILDING ENERGY SUMMARY

Residential energy use is driven primarily by space heating, cooling, and domestic hot water consumption,

which accounts for around a third of annual energy use. Efficiency improvements in the heating system will have the greatest energy savings.

Beyond the use of a central plant, the tenant and vertical developer have the greatest ability to reduce annual energy cost by minimizing the energy use of appliances such as refrigerators and dishwashers. In this climate, it is recommended that the developer consider eliminating mechanical cooling from all units. This is possible if the building skin includes external shading, high performance glazing to control heat gain, and enough operable windows for effective natural ventilation.

RETAIL & RESTAURANT BUILDING ENERGY SUMMARY

The retail program in the Mission Rock development is a relatively small amount of area when compared to the distribution of office and residential space.

Retail spaces will receive the most significant energy savings benefits through tenant installation of efficient lighting fixtures, as lighting accounts for over half of energy use. This results in energy savings from both decreased electricity for lighting and decreased cooling loads within the space.

Restaurants will receive the most significant energy benefit from installation of efficient, ENERGYSTAR equipment, as more than half of end-use energy comes from equipment and refrigeration.

OFF-SITE RENEWABLE ENERGY

The amount of renewable energy purchased by each developer is determined by the anticipated energy performance of the building and quantified as part of the energy modelling conducted for LEED certification.

As shown in Figure 3.3, the vertical developers will participate in an agreement with a renewable energy developer. The local electrical utility (SFPUC or PG&E) then delivers this energy to the building. The electrical utility which will serve the site is still under discussion. The off-site options will be similar with either utility.

The off-site renewable energy development opportunities, and the legal and metering structure that enables buildings to receive the benefit of the off-site renewable energy will be identified. The following utility and legal structures could be designed as the mechanism for building developers to purchase renewable energy projects:

- ▶ Green Tariff Shared Renewables Program (GTSRP): California is implementing a program where utilities will be responsible for billing, administration,

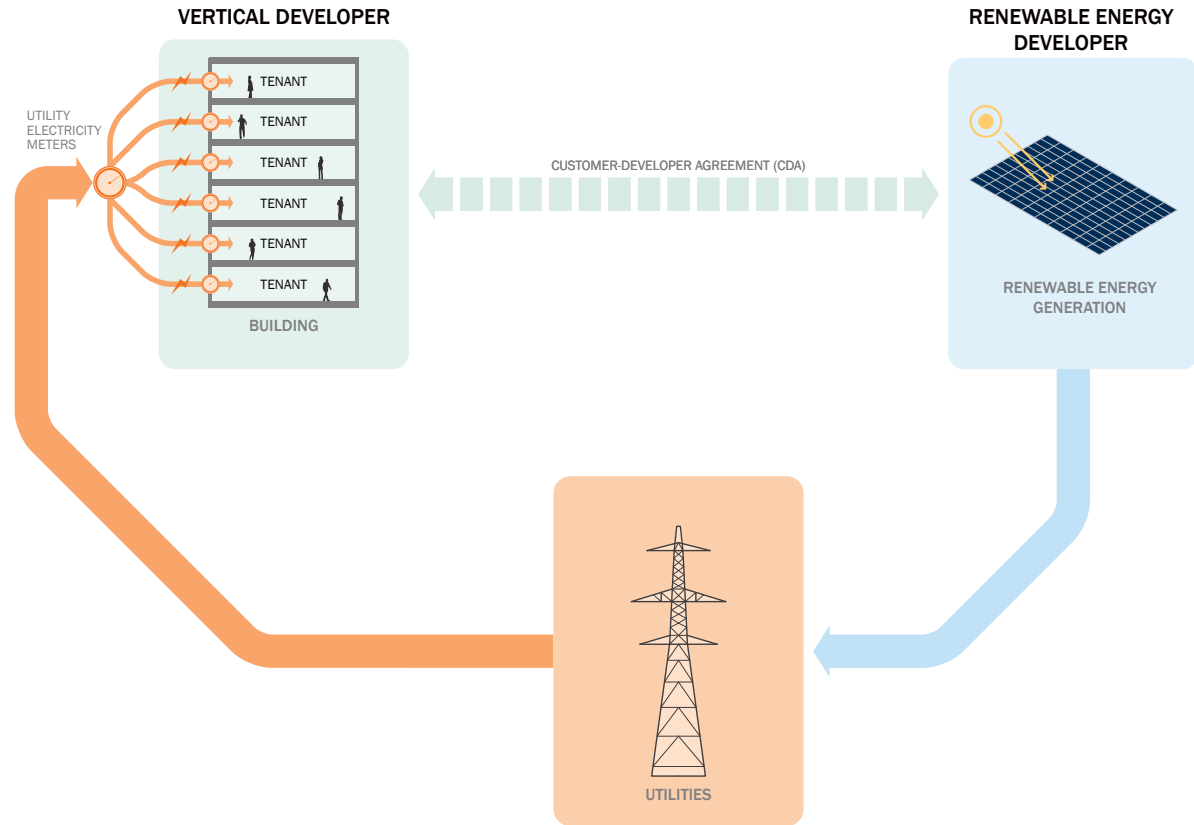


FIGURE 3.3: Off-site Renewable Energy Structure

metering and transmission, but meter owners contract directly with a solar developer to generate and provide renewable energy. The GTSRP program currently has a 2019 closing date and maximum generation cap, but the program cap may be expanded and the timeline extended once reviewed by the CPUC.

- ▶ **Direct access:** In a direct access program, large customers purchase generated energy directly and can negotiate energy purchases from the generation source of their choice. Aggregating all of the service points on the Mission Rock site may make this approach viable, but would have to be negotiated with the utility directly.
- ▶ **Virtual Direct Access:** The development can engage in a power purchase agreement with a renewable energy developer for ongoing power generation. This energy would then be sold back into the grid at wholesale prices on an ongoing basis. The revenue from these sales would then be used to offset the energy costs on site. This acts as a hedge against the increasing cost of power.

The renewable energy program selected will depend on the utility on site and the metering structures available at the time of development.

One of the most important concepts for the renewable energy is the idea of additionality, where the renewable energy purchase creates renewable energy generation that would not have existed and is not counted towards any other goal or standard. California's Renewables Portfolio Standard (RPS) requires that 33% of the energy

in California is from renewable sources by 2020 and 50% by 2030, but the Mission Rock purchase would not contribute to this standard.

The SFPUC may be the electricity utility provider on the Mission Rock site. SPFUC power is generated entirely by Hetch Hetchy hydro power, meaning the power consumed on site would be 100% carbon free. However, the Hetch Hetchy power would not meet the additionality requirement for Mission Rock because the generation infrastructure is existing and the project would not be purchasing renewable generation whose benefit could be directly attributed to the projects utility meters.

Renewable energy certificates (RECs) represent the

positive environmental attributes of renewable energy generation. These RECs can be unbundled from the actual energy and sold to someone other than the energy purchaser. The renewable energy that the Mission Rock project purchases will generate RECs for the energy produced, but instead of selling these RECs, the RECs will be retired to ensure that the environmental benefits of the renewable energy is attributable to the Mission Rock development.

While it may be considered more favorable to provide renewable energy sources on site, Mission Rock's dense urban location limits opportunities for on-site solar development. By purchasing off-site renewable energy

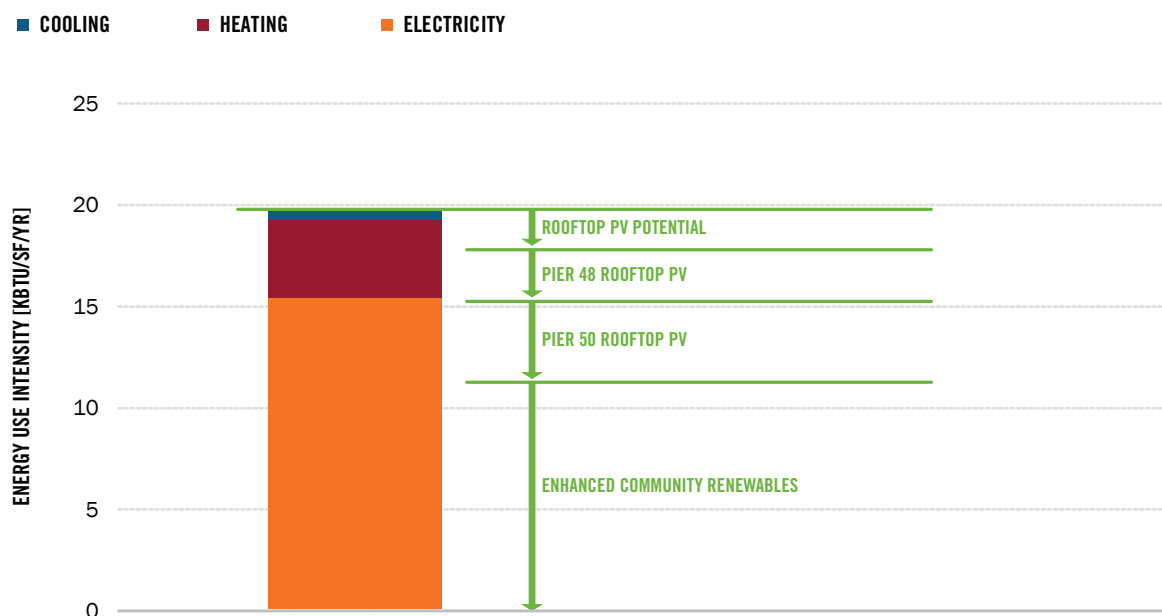


FIGURE 3.4: On-site and Off-site Renewable Potential

sources, the renewable generation for the Mission Rock project can be placed in the optimal location for increased renewable energy generation.

Figure 3.4 shows the potential for on-site renewable energy to meet the energy demand of a typical building on the Mission Rock Site. Renewable potential is broken down into rooftop PV and a proportional share of Pier 48 and adjacent Pier 50. Even with all of these sources, a typical building will be able to meet less than half its annual energy demand with on-site renewable sources.

REQUIREMENTS	RECOMMENDATIONS
<p>CENTRAL ENERGY PLANT</p> <p>Pursue one or more central utility plants on site that supply chilled water and heating hot water to all buildings on site. The plant shall utilize bay water for heat rejection to increase the efficiency of the energy system. [subject to confirmation of feasibility]</p> <p>CENTRAL ENERGY PLANT CONNECTION</p> <p>Connect buildings to central energy plant thermal utilities. [subject to confirmation of feasibility of central plant]</p> <p>OFF-SITE RENEWABLE ENERGY</p> <p>Building developers shall model the anticipated energy demand. Developers will be required to submit the final energy documentation provided for LEED certification along with the GBCI review comments. The anticipated energy use will define the developer’s purchase of off-site renewable energy generation.</p> <p>The GBCI-reviewed LEED energy model shall determine the kWh that must be offset through off-site renewable energy. The developer shall purchase off-site renewable energy through a power purchase agreement.</p> <p>ENERGY REPORTING</p> <p>Report energy use for each building on an ongoing basis. At a minimum, energy reporting should be on an annual basis and include all energy types. All vertical developers must enter their modeled energy use in ENERGY STAR Portfolio Manager and use Portfolio Manager to track energy use on an ongoing basis.</p>	<p>RENEWABLE PURCHASE ADJUSTMENT</p> <p>If measured energy use exceeds anticipated energy use, it is recommended that vertical developers update their renewable energy contribution every two years to match measured energy use.</p>

RECOMMENDATIONS

COMMERCIAL DEVELOPMENT

Lighting Power Density

Target lighting power density (LPD) of less than 0.6 W/ft²

Plug Load Occupancy Sensors

Install plug load occupancy sensors for non-essential equipment in all spaces. Non-essential equipment includes, but is not limited to:

- desktop computers and lap tops
- monitors
- imaging equipment (copiers, fax machines)
- task lights
- television screens
- projectors
- vending machines

Advanced Lighting Controls

Provide occupant sensors throughout open office, corridors and rest rooms in addition to the locations required by Title 24. Provide daylight dimming and daylight sensors in all spaces with access to daylight. This shall include offices and meeting rooms in addition to the spaces required by Title 24.

Vertical Transportation Optimization

Optimize vertical transportation through:

- regenerative elevators
- destination control elevators
- occupancy sensors on escalators
- reduced elevator fan and lighting energy

RESIDENTIAL DEVELOPMENT

Equipment

Install only ENERGY STAR or equivalent equipment, appliances, lighting, and fixtures (refer to www.energystar.gov and www.aceee.org for latest list of energy-efficiency appliances), including, but not limited to, refrigerators and dishwashers

Domestic Hot Water Demand Reduction

Install showers (1.5gpm) and sinks (1.5gpm aerators) with WaterSense label.

Domestic Hot Water Heating

Employ electric heat pump water heaters for domestic hot water heating loads.

Plug Controls

Provide a “master switch” in all apartments located adjacent to the front door that controls all ambient lighting and switched outlets. Outlets connected to the master switch should be clearly identified.

Advanced Lighting controls

Install daylight dimming and sensors in all common areas with daylight access

Energy Dashboard

Provide each residence with a system which enables tenants to see and understand their energy use in real time, control temperature settings and master switch from a remote location, and create an auto schedule and away settings for temperature and master switch

Natural Ventilation

Eliminate mechanical cooling by providing external shading on glazing to block unwanted heat gain and install operable windows to enable natural ventilation.

RETAIL & RESTAURANT DEVELOPMENT

Lighting Power Density

Target lighting power density (LPD) of less than 1.8 W/ft²²

Reduced Exhaust

Install variable flow exhaust hoods with heat recovery in restaurants

Efficient Equipment

Install only ENERGY STAR certified equipment

Hot Water Demand Reduction

- Use rest room flush and flow fixtures that are WaterSense labeled
- Install commercial dishwashers that are ENERGY STAR qualified
- Ensure pre-rinse spray valves have a max flow rate of 1.6 gallons per minute (gpm)

20% Reduction In Transportation-Related Carbon Emissions



04

TRANSPORTATION

Mission Rock is committed to shifting travel behavior towards more environmentally beneficial transportation modes.

The Mission Rock site is in a prime location for transportation alternatives to single occupancy vehicle trips. The site is close to high quality transit, is located in a developing mixed use area, and will include on-site services that will encourage the use of alternative modes of transportation.

Mission rock will implement a Transportation Demand Management (TDM) Program to increase the use of environmentally friendly transportation modes. The Mission Rock site design and the transportation demand

management strategies selected for implementation encourage occupants, employees, and visitors to use alternative modes, with an emphasis on cycling, walking, and shared rides. The strategies implemented on site are estimated to reduce single occupancy vehicle trips by more than 20%.

The Mission Rock Transportation Demand Management Plan contains details of the transportation strategies that will be implemented on site and demonstrates Mission Rocks commitment to sustainability.

SITE CONNECTIVITY

The Mission Rock site is located near many transportation resources.

From a regional standpoint, the San Francisco Caltrain station is less than a 10 minute walk and BART stations are around a mile from the site. These transit services provide regular and rapid service to the greater Bay Area region.

Multiple Muni bus and light rail lines have existing stops within a quarter mile of the site providing transit access to the rest of San Francisco.

The San Francisco Bay Trail, which is planned to circumnavigate the San Francisco Bay, passes through the site. Existing bicycle lanes serve the site.

Site Design

The Mission Rock program mix, street design, and site connectivity further encourage occupants to select alternative modes of transportation including transit services, walking, cycling, and ride sharing.

The pedestrian- and bicycle-friendly street and

sidewalk design plays an important role in encouraging the use of non-motorized transportation modes. The site design includes a well connected grid of internal streets, wide sidewalks, pedestrian-safety oriented street design, and designated bike lanes that connect to external infrastructure.

These site features establish a strong foundation for the additional transportation demand management strategies to effectively reduce single occupancy vehicle trips.



TABLE 4.1: Transit Context

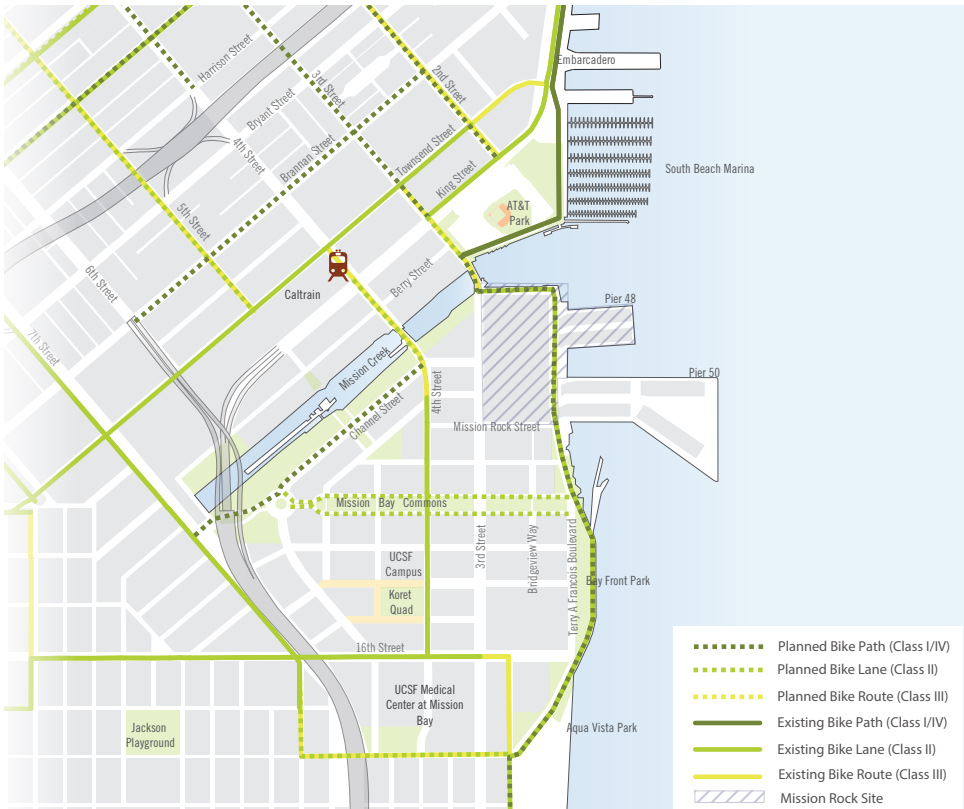


TABLE 4.2: Bike Context

TDM STRATEGIES

The Mission Rock Transportation Plan combines both infrastructure and operational strategies to reduce single occupancy vehicle use. A high level summary of the strategies being considered for the site are summarized in Table 4.3. The effects of these strategies are interactive and supportive of each other and most effective in combination.

TRANSIT
Real-time transit information
Pre-loaded Clipper Cards
BICYCLE
Bike share memberships
On-site bike share stations
Bike event programming
Bicycle resource center
Bicycle parking
Showers and clothes lockers
Bike valet
PERSONALIZED MOTORIZED TRANSPORT
Electric scooter share memberships
On-site shared scooters
On-site car share parking spaces
Car share memberships

TABLE 4.3: Transportation demand management strategies proposed for Mission Rock

In some cases these strategies shift auto trips to other modes of transportation while, in other cases, they eliminate the need for trips altogether. Both cases reduce the overall use of single occupancy vehicles. These strategies are designed to effect a permanent change in transportation decisions by occupants, employees, and visitors.

PARKING
Market-based parking pricing
Real-time parking pricing and availability information
Unbundled parking
Low parking ratio
BUILDING SCALE STRATEGIES
In-building concierge services
Coordinated delivery services
CSA delivery partnerships
Storage space for grocery and package delivery
Childcare services and facilities
Collaborative work space
SITE SCALE STRATEGIES
Mobile-friendly Mission Rock website
Signage and wayfinding across modes
Site-wide transportation staff
Coordination with local Transportation Management Association

The effectiveness of the TDM strategies will be assessed regularly by tracking through occupancy surveys, program utilization studies, and parking occupancy. The results of these studies can be used to refine and the TDM program to increase the effectiveness and better serve occupants.

Further details on each of these strategies can be found in the Mission Rock Transportation Plan.

75% Construction Waste Diversion
Maximize Occupant Source Separation and Resource Recovery



05

RESOURCE CONSERVATION

San Francisco has committed to achieving zero waste to landfill by 2020. The primary means of achieving this goal are source control (i.e. limiting plastic bags/Styrofoam) and user education (to properly divert waste), which are all required through mandatory city ordinances.

The city of San Francisco currently diverts 80% of its waste from landfill, one of the highest waste diversion rates in the country. However, over half the material which goes into San Francisco's landfill bins can be recycled or composted. If all materials were sent to the proper bin San Francisco could increase their diversion rate to 90%.

Mission Rock will primarily contribute to waste reduction efforts through construction waste management and user education to increase proper separation of waste and increase in San Francisco's overall diversion rate.

REFUSE BACKGROUND INFORMATION

CONSTRUCTION WASTE

The Mission Rock district will establish site-wide construction waste diversion requirements and recommendations to ensure that the material going to landfills during demolition and construction is minimized.

OPERATIONAL WASTE

Operational refuse sent to landfill will be reduced in the Mission Rock development primarily through enhanced user education. This will augment the policies and programs the City of San Francisco already has in place.

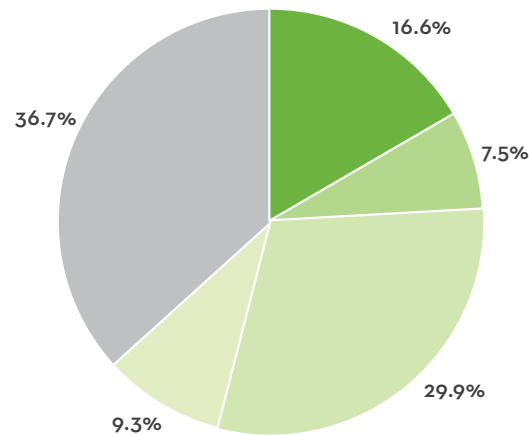
The pie charts to the right show the typical breakdown of divertible refuse streams. The largest refuse streams in a typical residential building are Other (comprising furniture, goods and electronics) and Compostable Food. The largest refuse stream in a typical commercial building also comes from compostable food. Providing residents with education about San Francisco's composting program and easy access to composting facilities will be critical to minimizing divertible refuse sent to landfill.

Refuse collected in San Francisco is sent to the Hay Road Landfill in Vacaville. Several smaller landfills receive municipal solid waste from the city, but Hay Road receives roughly 90% of non-recovered materials. The diagram to the right shows the destinations which were used to generate the GHG emissions associated with Mission Rock refuse removal.

Nearly all of the compost collected by Recology is processed by Blossom Valley Organics North located in Modesto, and then sold to local farms and city gardens. As of 2006, San Francisco composted roughly 47% of the organic material generated in the city.



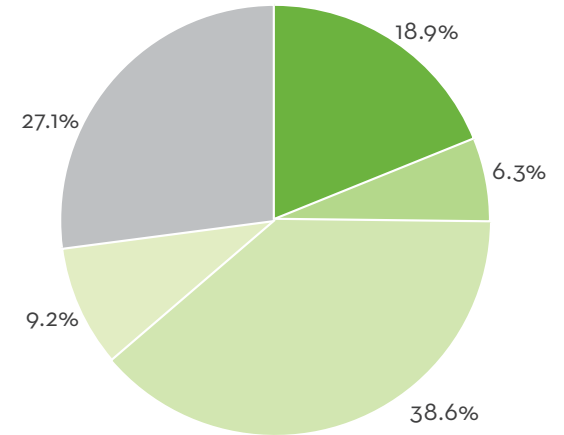
RESIDENTIAL DIVERTIBLE REFUSE



Recyclable Paper
Other Recyclable

Compostable Food
Other Compostables

COMMERCIAL DIVERTIBLE REFUSE



Other (Non Recyclable / Non Compostable)

REQUIREMENTS

CONSTRUCTION WASTE MANAGEMENT

All construction and demolition projects will be required to achieve a minimum 75% waste diversion rate as defined by the LEED v4 Reference Guide

INFRASTRUCTURE AND REFUSE RECEPTACLES

- ▶ Vertical developers will be required to provide adequate and easily accessible space in all buildings for the three primary refuse streams collected in San Francisco: landfill, recycle, and compost.
- ▶ If waste chutes are provided, one for each refuse stream will be required.
- ▶ All three refuse receptacle types to be provided at any refuse collection point both inside the buildings and throughout the Mission Rock site.
- ▶ Work with the SFE Zero Waste Team to design refuse collection on site
- ▶ Refuse chutes and receptacles to include pest prevention features

RECOMMENDATIONS

CONSTRUCTION WASTE MANAGEMENT

All construction and demolition projects should target a 95% waste diversion rate as defined by the LEED v4 Reference Guide

INFRASTRUCTURE AND REFUSE RECEPTACLES

Provide adequate refuse collection areas. Allocate sufficient space on site for on-site sorting of refuse stream to meet the Recycling and Composting Ordinance. Coordinate facility design to maximize source separation with the SF Environment Zero Waste Team.

USER EDUCATION PROGRAMS

Increased training and occupant/resident education to improve diversion rate.

SOURCE CONTROL PROGRAMS

Limit purchasing to materials that can be recycled or composed ensures that refuse can be diverted.

Provide Site With High Outdoor Air Quality, Active Design Opportunities, And Daylight & Views



06

HEALTH & WELLNESS

The Mission Rock development will be committed to delivering a project that protects occupant health, promotes occupant wellness, and prevents environmental harm.

The development will focus on a few key areas of the vertical and horizontal development that result in the most significant benefits with regard to health and wellness. The key topic areas addressed by the Sustainability Strategy are active design, outdoor environmental quality, daylight and views. Active design principles integrated into the street fabric and open space encourage occupants and the public to bike, walk, run, and actively engage with the site. The district will provide 8 acres of public parks and open space, as well as public waterfront access. The open space network will become a starting point for the Blue Greenway, a waterfront trail that will connect to Hunters Point Shipyard. These amenities will establish

the site as an active destination for the surrounding neighborhoods. The open spaces and vegetated areas will provide occupants with a connection to nature, improving personal and community health. Details on the green spaces can be found in chapter 08: Habitat and Ecosystem Function.

The Mission Rock development will be built in phases and, as a result, will be an active construction site throughout its early years of development. The Sustainability Strategy focuses on maintaining a high level of outdoor environmental quality both during construction and after project completion.

This section does not directly address tenant fit-out because of the challenges in communicating and enforcing tenant requirements at this level. Many health and wellness controls and improvements for tenant spaces are covered by CALGreen and LEEDv4, which are anticipated to apply to the Mission Rock development.

ACTIVE DESIGN

Active design encourages stair climbing, walking, bicycling, transit use, active recreation, and healthy eating. A growing body of research suggests that evidence-based architectural and urban design strategies can increase occupants' regular physical activity and healthy food choices. Designing the Mission Rock site from a blank slate provides a series of unique opportunities to address physical activity across the entire site and connections to the rest of the city.

The Mission Rock district includes eight new acres of parks and open spaces which include walking and bike trails, as well as programmed open spaces such as Little Giants Field and other sports areas. In addition, the development is adjacent to many existing surrounding recreational opportunities, including parks, playgrounds, boating, and, sports fields.

Site-wide active design strategies are recorded in the DCDG, and include integration with the Blue Greenway that runs along the waterfront, a baseball diamond, multi-use open-space, and water access for recreation. The street design for Mission Rock also encourages many transportation modes and emphasizes walking

and cycling. The cycling paths on site connect to the larger citywide cycling network. A bikeshare station will be located on site as part of the existing program.

Vertical developers also play a role in encouraging active use of the site. Designing staircases as a prominently visible, unlocked, and well daylit amenity encourages occupants to use stairs instead of elevators for vertical circulation.

OUTDOOR ENVIRONMENTAL QUALITY

The Mission Rock development will remain an active construction site after the first commercial, retail and residential occupants move onto the site. The Sustainability Strategy focuses on maintaining a high level of environmental quality during construction. Reducing pollution from construction activity minimizes environmental impacts and improves construction side-effects for both workers and local inhabitants.

Construction pollutants originate from a variety of activities: machines and equipment, building materials, site conditions, and human behavior. All project teams will be expected to develop and implement a construction activity pollution prevention plan (CAPP) that addresses emissions from construction activities, including light pollution, equipment emissions, dust and odor control, and noise control. Pollution should be defined broadly to address a variety of construction-related issues, from airborne particulates to noise control.

For construction lighting, OSHA sets standards to ensure safe working conditions for construction

workers. Temporary lighting installed on timers or manual scheduling will reduce light pollution on site. Construction managers and contractors will select energy efficient equipment for temporary lighting, site lighting, and heating, with turn-off power to non-critical equipment and lighting during non-construction hours.

Tier 4 or higher engines and limited truck and equipment idling minimizes emissions on site. Water spraying for dust control, covering powder materials, and capturing dust before it leaves the site will reduce the airborne particulates from site work before they leave the site.

DAYLIGHT AND VIEWS

Access to daylight regulates circadian rhythms and production of serotonin and melatonin, which modulate sleep patterns, energy and psychological moods. Providing views of nature has been associated with reductions in stress through physiological changes in cortisol levels, blood pressure, and heart rates.

For the Mission Rock site, individual buildings will take advantage of the extensive open space on site by maximizing daylight and views out while minimizing the risk of glare for occupants within the buildings. Careful coordination between the daylight and electric lighting strategies will ensure that users maintain a connection to the outdoors through daylit spaces. While improving occupant satisfaction, daylight also reduces electric lighting use during daylight hours, contributing to energy savings in the buildings.

REQUIREMENTS

Provide a construction activity pollution prevention plan (CAPP) that addresses the following issues:

CONSTRUCTION LIGHT POLLUTION

Lighting shall be controlled by timers or scheduled manual switching to turn off the lighting when it is not required.

TEMPORARY LIGHTING EFFICIENCY

LED lighting shall be used for any temporary lighting during and after construction.

CONSTRUCTION EQUIPMENT EMISSIONS

Have a policy in place that limits vehicle and equipment idle time to no more than 5 minutes in any hour long period. All construction equipment on site shall have Tier 4 or higher engines.

DUST AND ODOR CONTROL

Spray down site work, equipment, and vehicles with water for dust control. Cover powdered materials and provide walk-off mats. Recycled water shall be used for all dust control unless it is legally unfeasible to do so.

DUST CONTROL WITH NON-POTABLE WATER

If feasible, the contractor should use on-site recycled water from the Mission Rock graywater treatment facility before using other sources non-potable water.

GENERATOR CONTROLS

Any temporary generators used on site shall have a Tier 4 or higher rating.

RECOMMENDATIONS

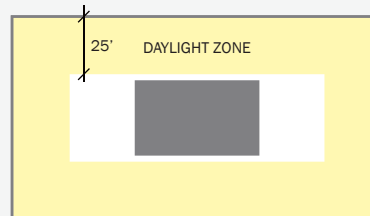
ACCESS TO DAYLIGHT & GLARE CONTROL

Create usable, glare free daylight by designing the building such that at least 50% of the area of the daylight zone achieves a spatial daylight autonomy of 50% (sDA(300/50%))* . Design the building such that the daylight zone (25ft from the perimeter) has an annual sunlight exposure (ASE(1000/250))* of less than 10%.

*As defined in illumination engineering society (IES) LM-83-12

ACCESS TO VIEWS

Provide access to exterior views for 80% of the floor area within the daylight zone.



CONSTRUCTION LIGHT POLLUTION

In addition to timers, consider other lighting controls such as daylight and vacancy sensors. Construction light fixtures shall provide cut-off shielding to prevent uplighting.

SMOKING PROHIBITION

Prohibit smoking or restrict to designated areas on site to reduce impact on other occupants.

ACTIVE CIRCULATION

Provide staircases that allow occupants to easily travel between floors of the building. To ensure basic function, the stairs should remain unlocked and accessible to occupants. The stairs should incorporate features that make them more desirable to use, including daylight, high visibility from the building entrance, lighting equivalent to the rest of the building, and adequate signage.

NATURAL VENTILATION

Provide operable windows in regularly occupied areas to enable natural ventilation when climate conditions allow. Consider eliminating mechanical cooling where possible.

NOISE CONTROL

Identify sensitive areas adjacent to the site and establish construction work schedules to minimize disturbances. Organize construction sites to reduce movement alarms and vehicle traffic.

Encourage Manufacturer Transparency And Selection Of Low Impact Materials



07

SUSTAINABILITY MATERIALS

As a large development with a progressive sustainability agenda, Mission Rock has the ability to advance efforts in product transparency, and will leverage its position within the building industry to push manufacturers towards full life-cycle and chemical ingredient assessments of their products.

The contemporary definition of “sustainable building products” exceeds conventional notations of recycled content and regional sourcing to encompass the environmental and health impacts of building materials. A critical advancement in today’s building industry, furthered by LEED version 4, is the call for manufacturers to publicly disclose information on the chemical content and manufacturing process of their products.

Similar to other sections, the sustainable material requirements for Mission Rock focus on the areas within horizontal and vertical developer control which will have the most significant environmental impact. This means

an emphasis on transparency for the largest material packages for horizontal development and core and shell vertical developers: concrete, steel, and insulation. Recommendations have also been included for tenant-selected materials such as interior finishes. The table to the left provides a summary of the certification bodies referenced in the Requirements and Recommendations of this section.

MANUFACTURING PROCESS TRANSPARENCY

Building materials can heavily impact natural resources and the Mission Rock district must consider the full life-cycle of the materials included in its construction. Materials used for the horizontal and vertical core and shell development will account for the majority of the global warming potential associated with on-site materials and, for that reason, Mission Rock’s material requirements in the Sustainability Strategy focus on minimizing this impact.

Steel and concrete will contribute to the majority of the global warming potential for the materials used in the horizontal development of site, roads and infrastructure. For vertical development steel and concrete account for over 1/3 of the global warming potential associated with a typical commercial building. An illustration of this breakdown can be seen in the diagram below.

ENVIRONMENTAL PRODUCT DECLARATIONS (EPDS)

Multi-attribute product reports evaluate the full life-cycle environmental, health, and social impacts of a product, from extraction of raw materials and manufacturing processes, to the use disposal methods. They are becoming increasingly popular in the sustainable building industry.

An Environmental Product Declaration (EPD) is an intensive product certification based on a full life-cycle assessment of products surveying the global warming potential, ozone depletion and creation, water pollution, and greenhouse gas emissions. EPDs should not be used to compare different categories of products (i.e. steel vs concrete), but may be used to compare different manufacturers or suppliers of the same product (i.e. two different concrete manufacturers).

Mission Rock will prioritize large package products from manufacturers with publicly available EPDs and consider the global warming potential as a criteria alongside quality and cost when selecting a manufacturer. While products with EPDs may be limited, best practices in material selection policies should, at the very least, be followed by contractors on the Mission Rock site to minimize the development’s environmental footprint:

- ▶ Select building products with high recycled or reuse content, biobased or rapidly renewable materials, FSC certified wood
- ▶ Prioritize products extracted, manufactured, and purchased within 100 miles of the site.
- ▶ Select products that are durable, easy to maintain, adaptable in use, and are recyclable or retrieved by the vendor after use.

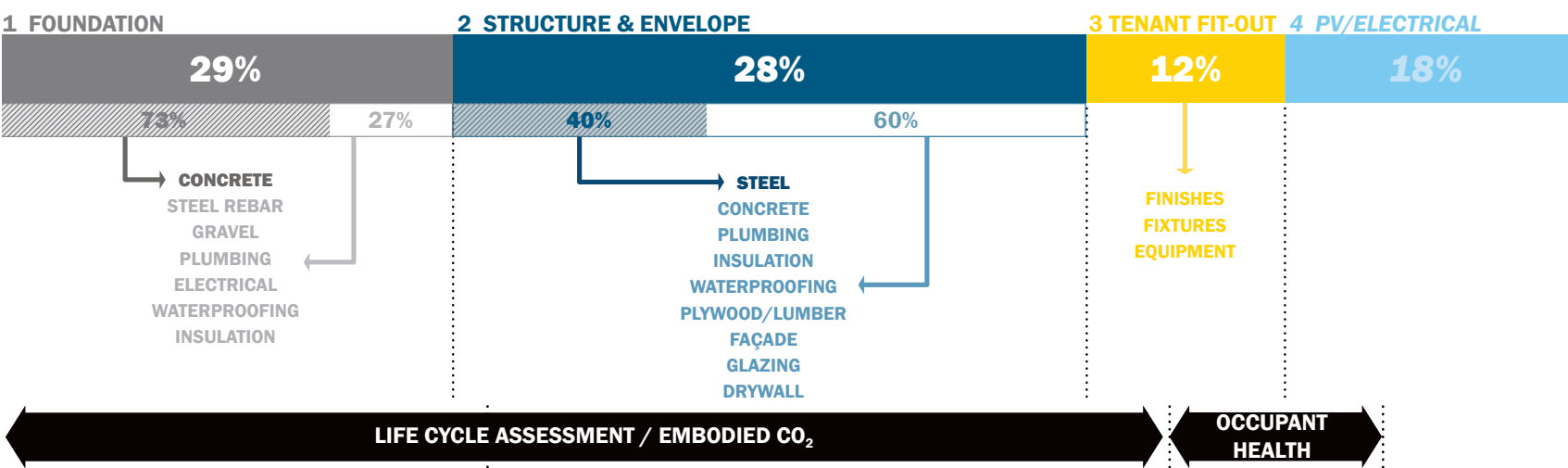


FIGURE 7.1 Lifecycle Global Warming Potential by Building System in a typical U.S. Commercial Building

MATERIAL INGREDIENTS

Only 15% of the 60,000 chemicals in use today have publicly available human health impact data and 65% of chemicals have no publicly available information. Hazardous chemicals can be categorized into various categories depending on the behavior of the compounds: persistent bioaccumulative toxins (PBTs) and volatile organic compounds (VOCs). The prevalence of these hazardous chemicals span across all categories of building products, from structural components to finishes and furnishings, harming both the environment and human health. To curb the manufacturing of products with toxins, leading organizations like the EPA and the Living Building Challenge have published “Red Lists” of hazardous chemicals.

The materials recommendations of the Sustainability Strategy include strategies to encourage increased manufacturer transparency with regard to product ingredients and provide a guideline for vertical developers and tenants to consider when selecting materials and finishes.

REQUIREMENTS

GLOBAL WARMING POTENTIAL: STEEL

- ▶ Request EPDs from steel manufacturers

GLOBAL WARMING POTENTIAL: CONCRETE

- ▶ Require EPDs from all concrete manufacturers
- ▶ Review concrete EPDs and consider lower global warming potential as a criteria in selecting a concrete provider

SUSTAINABLE MATERIAL CERTIFICATION BODIES

- ▶ Require contractors to provide subcontractors with list of certification bodies for materials as seen in Figure 7.2: Sustainable Material Certification Bodies

RECOMMENDATIONS

GLOBAL WARMING POTENTIAL

- ▶ Require EPDs from all steel manufacturers and consider lower global warming potential as a criteria in selecting a steel provider.
- ▶ Complete a Life Cycle Assessment (LCA) for concrete use and confirm at least a 10% reduction in global warming potential.
- ▶ Prioritize products with third-party verified Environmental Product Declarations (structural packages) and/or Cradle-to-cradle certifications (interior finishes and furnishings)
- ▶ Specify high recycled content and local (within 100 miles of the site) materials, rapidly renewable products, and FSC certified wood

MATERIAL INGREDIENTS

- ▶ Request product Health Product Declarations (HPDs) and Prioritize products that disclose material ingredients and hazardous chemicals through Health Product Declarations.
- ▶ Prioritize finish products or furnishings with third-party certifications such as Greenguard, Floorscore, Greenlabel, Greenseal, and BIFMA Level Standard.
- ▶ Select products that minimize or replace PVCs, CPVCs, and neoprenes. Alternatives include copper, cast iron, HDPE, and ABS.
- ▶ Eliminate use of mercury, lead, cadmium and other heavy metals where possible













Certification Bodies	
	ENVIRONMENTAL PRODUCT DECLARATION An intensive product certification based on a full life-cycle assessment of products surveying the global warming potential, ozone depletion and creation, water pollution, and greenhouse gas emissions.
	CRADLE TO CRADLE CERTIFICATION An tiered product certification assessing five categories: material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. This certification process is offered by MBDC, a global sustainability consulting and product certification firm.
	ECOLOGO A multi-attribute, life-cycle based environmental certification body for products, services and packaging that assesses materials, energy, manufacturing, health and environment, product performance, use, and innovation.
	SMaRT Comprehensive sustainable standards established for materials and products, including social impact. These comprehensive standards have been established by the Institute for Market Transformation to Sustainability.
	BIFMA LEVEL CERTIFICATION A third-party certification program for furniture that evaluates the following criteria: energy & atmosphere, human & ecosystem health, and social responsibility for all certified products.
	HEALTH PRODUCT DECLARATION A product transparency reporting tool issued by the HPD Collaborative that identifies the associated health effects of product material ingredients.
	GREENSCREEN A multilevel certification body that assesses hazardous chemicals within products. GreenScreen publishes the GreenScreen List Translator
	GREENGUARD A performance-based standard to define products and processes with low chemical and particle emissions to achieve high indoor environmental quality indoors.
	FLOORSCORE A certifying body for hard-surface flooring and adhesives that meet strict indoor air quality requirements set forth by SCAQMD Rule 1113.
	GREEN LABEL / GREEN LABEL PLUS A certifying body for carpet emissions levels of TVOC, formaldehyde and other substances known to contribute to Sick Building Syndrome
	GREEN SEAL A certifying body that evaluates the total environmental impact and health effects of a product, with periodic audits of manufacturing facilities.
	DECLARE A certifying body associated with the Living Building Challenge that reports the chemical ingredients of the product. DECLARE RED LIST has not red list chemicals.

FIGURE 7.2: Sustainable Material Certification Bodies

**Provide Ecosystem Services Which Enhance The Outdoor
Environment And Benefit Those On Site And Beyond**



The open space design for the Mission Rock district contributes a number of essential ecosystem services to residents and visitors on the site. These include the provision of comfortable microclimates, access to nature and recreation, coastal protection, stormwater mitigation, and promotion of biodiversity.

These services are fundamental to the concept of a sustainable EcoDistrict as they benefit not only those directly on site, but also humans and species on neighboring sites. This is especially critical in a dense, urban environment such as downtown San Francisco.

The guidelines and recommendations for Mission Rock's open spaces have been captured in the Mission Rock Development Controls and Design Guidelines. This section of the Sustainability Strategy highlights the sustainability benefit that is provided by these guidelines.

08

HABITAT & ECOSYSTEM FUNCTION

The Mission Rock development will support and further biophilic design for both the site and buildings. Biophilia is defined as humans’ inherent affinity for nature and research increasingly shows that regular access to nature improves health, happiness and performance. Biophilic design principles include a broad variety of physical elements and spatial characteristics found in nature that can be applied in the built environment to elicit positive physiological, psychological and emotional outcomes for humans as well as other species. The strategies implemented on the Mission Rock site align with the City of San Francisco’s 0-50-100-Roots framework aimed at protecting urban green spaces and improving San Francisco’s urban forest and gardens. Other features of the Mission Rock site are described below.

COMFORTABLE MICROCLIMATES

Mission Rock’s vegetated landscape offers a wide array of benefits from lowering heat island effects to creating comfortable areas of respite.

Introducing vegetation throughout the site reduces the heat island effect by shading pervious surfaces, limiting localized discomfort due to overheated concrete. The shading provided by trees creates variable microclimates. In addition, carefully located trees will act as windbreaks and provide sheltered gathering spaces in the open spaces and parks. The building heights, locations, and massing will be optimized to minimize overshadowing the central square and China Basin Park, and allow as much sunlight as possible to

reach the open space while reducing exposure to high winds from the Bay.

COASTAL PROTECTION

While all new building sites and infrastructure will be above the predicted 2100 sea level rise, the resilient waterfront park accommodates sea level rise through elevation change. The grade change in the parks and streets around the perimeter of the site acts as a buffer for storm surges and sea level rise. The plantings in the lower areas of the open space areas will be salt tolerant to protect them from potential intermittent seawater inundation.

ACCESS TO NATURE AND RECREATION

As a regional waterfront park, China Basin Park will be a model for sustainable ecological systems and management over time. Its active programming and location on the Bay will make it a learning environment where visitors can engage with the plants and animals that thrive in the local habitat.

The stormwater gardens integrated with the streets bring understory planting and habitat directly to the different program types and site visitors distributed throughout the entire project.

STORMWATER TREATMENT

Mission Rock’s landscapes and building systems will

work together to detain and filter water to minimize impact on city infrastructure and improve water quality. The stormwater management infrastructure is integrated with the streetscape design and open space and serve as an amenity to site occupants and species. The stormwater gardens areas on site will accommodate treatment for all impervious surfaces within the development.

BIODIVERSITY

The low-maintenance native and regionally appropriate plantings on site will require minimal irrigation. Native or climate appropriate grasses, shrubs, and ground cover will provide as much species diversity as feasible in Mission Rock’s planting areas. The rain gardens and bioswales will not only retain and filter rainwater, but provide comfortable and visually appealing outdoor environments for humans and wildlife. The green roofs, which reduce the heat island effect, promote biodiversity by providing both food and habitat for local bird species.

The landscape design and plant selection controls invasive species by limiting the opportunities for undesirable species to establish themselves. Landscaping is Bay-Friendly Rated to minimize opportunities for weed establishment and optimize other environmental benefits.

The San Francisco Plant Finder is a resource published by the City for finding plants adapted to microclimates throughout the city. The can be used to find appropriate and water saving plants for the Mission Rock site.

Create a Unique Identity and Sense of Place for the Mission Rock Development



09

COMMUNITY IDENTITY

The diverse mix of uses, careful street design, new parks and open space, will create a distinct identity for the Mission Rock development.

Mission Rock has a unique identity within the larger San Francisco context based on the ample open space, human scale oriented streetscapes, and mix of unique uses. A coherent identity contributes to a successful Type One Ecodistrict.

The neighborhood will have a complete set of uses where the commercial and residential areas directly

support the businesses, and the services available on site will make Mission Rock a desirable and distinctive place to live and work.

The unique features that contribute to the identity of the Mission Rock development are described in more detail in the Vision and Design Intent and Development Controls and Design Guidelines documents.

EQUITABLE DEVELOPMENT

Mission Rock will be an inclusive and diverse neighborhood with a mix of residential unit sizes, commercial uses, and retail services. The commercial space in the project will allow more businesses to locate in the city, increasing employment. At completion, the site will include around 1,500 residential units. To ensure the residential units will be available to a broad range of people, 40% of the units have been reserved for low and middle income residents.

The working waterfront adjacent to Pier 48 is reserved for production spaces that are struggling to find space along the waterfront in San Francisco. The waterfront zone will mix these production uses with pedestrian access to showcase the waterfront economy.

The retail spaces along the pedestrian streets and square are designed to enable and encourage local business to operate at the Mission Rock site by providing smaller, more affordable spaces. A diverse retail and service mix is critical to a vibrant and successful street culture.

OPEN SPACE

Open space is distributed throughout the site to serve both occupants of the Mission Rock site and visitors from the rest of the city. Mission Rock Square, located in the middle of the site, will be surrounded by active uses to ensure it acts as the focal point of the neighborhood, a community amenity and gathering space. The native and climate appropriate vegetation contributes to creating a sense of place for occupants and visitors.

China Basin Park, located along the north of the site and across McCovey cove, is a large waterfront park capable of accommodating many types and scales of gatherings and uses. The park will connect visitors and residents with the bay and shoreline.

The Mission Rock site fits into the Bay Trail System, linking the waterfront north of the ballpark with the cycling network below Mission Rock Street.

ACTIVE STREETS

The streets in the Mission Rock development are designed as a tight grid of walkable streets to serve as the setting for a vibrant and lively public life.

Sidewalks are generously sized to encourage businesses to spill beyond the building footprint and the diverse mix of retail storefronts, restaurants, and cafes ensure that the square and streets will have visitors throughout the day. The streets will include more smaller public Street Rooms defined by fixed and moveable furniture and plantings in order to foster social interaction. Vehicle access will be limited to prioritize pedestrians and cyclists, further cementing the development’s identity as a community oriented project.

The high density retail, with regular access points, permeable storefronts, and transparency guarantee there will be regular “eyes on the street” which ensure the safety of residents and visitors. By creating an active and well-used site, residents are more likely meet and interact, creating resilient social networks.

WORKING WATERFRONT

The Mission Rock development includes a working waterfront along Terry Francois Boulevard for small scale industrial and production-related businesses. These uses are tied to the historic use of the site as a shipping terminal and industrial production site.

The historic Pier 48 will be preserved and upgraded to provide a new home for the expanded Anchor Brewing. Locating all of these production uses together creates the opportunity to share facilities such as loading facilities and truck access.

**Target 50% reduction in GHG emissions over a typical
San Francisco development**



Most of the global climate change over the past 50 years is due to increases in greenhouse gas (GHG) emissions from sources originating from human activity, according to the Intergovernmental Panel on Climate Change (IPCC).

This global average warming causes changes to physical and biological systems that are detrimental to our environment and economic stability. Mission Rock intends to minimize its future GHG emissions through an innovative Transportation Demand Management strategy (TDM) and the purchase of on and off site renewable energy to offset operational GHG emissions for all of the buildings.

The expected greenhouse gas emissions (carbon dioxide equivalents or CO₂e) have been assessed for Energy, Water, Transport and Waste for the proposed development at Mission Rock, based on the performance measures that are required by this Sustainability Strategy. These four key performance areas are quantifiable and can be translated to an equivalent impact on greenhouse gas (GHG) emissions.

10

GHG EMISSION ASSESSMENT

METHODOLOGY

A methodology for accounting and reporting GHG emissions associated with the Mission Rock development was selected to estimate an equivalent GHG code compliant baseline based on the proposed masterplan and compare potential GHG emission reduction strategies to the GHG baseline in order to track projected GHG emission performance.

This GHG calculation is based on an independent and internationally vetted GHG accounting and reporting protocol, to ensure accuracy and transparency. Atelier Ten evaluated different GHG accounting and reporting protocols and the ICLEI U.S. Community Protocol was determined to be the most appropriate standard to assess the Mission Rock development because it provides guidance on quantifying GHG emissions across a community-wide scope. More information about the accounting methodology can be found in the appendix of this report.

NATIONAL AND LOCAL COMPARISONS

For this assessment, Mission Rock has been compared to a code-compliant equivalent development in San Francisco and also the US national average for greenhouse gas emissions. San Francisco, as a city, has significantly less greenhouse gas emissions per year than the national average. This is predominantly due to state regulations and the renewable component of the local energy supply.

TRANSPORTATION

San Francisco is predominantly a commuter city, so emissions associated with transportation in the City are only marginally different compared to a national case. On average, approximately 86% of national commuters use private vehicles to get to work, while 78% of Bay Area commuters use private vehicles (including carpoolers). The key impact is finding viable alternatives to the use of private vehicles, and by converting private vehicles to lower carbon fuel supply. The Mission Rock development is aiming to be better than a standard San Francisco development and strategies included in the transportation plan are expected to result in at least a 20% reduction in annual carbon emissions associated with transportation.

ENERGY

Due to progressive building codes in California (Title 24, including Part 6,11, and CALGreen) and San Francisco (SF Green Building Code) and local climate conditions, the energy use intensity of new buildings in San Francisco is significantly lower than the national average. In addition, electricity supplied to San Francisco is more than three times cleaner than the average energy supply in the US (due to contributions from renewable and hydroelectric power). This means that carbon emissions associated with energy use in San Francisco are already less than a quarter of the national average. The Mission Rock development looks to improve upon the city's leading emissions performance by requiring all energy used on site to come from 100% renewable sources, eliminating annual carbon emissions associated with operational energy use.

WASTE

Municipal solid waste diversion in San Francisco is about twice the national average, significantly decreasing the GHG emissions associated with landfill waste disposal. As there is still room for improvement in waste diversion, Mission Rock is targeting a further 10% reduction in annual carbon emissions associated with waste by increasing diversion, compared to the current San Francisco diversion rate of 80%

WATER

Water contributes a relatively small percentage of the total GHG emissions both nationwide and in San Francisco. Carbon emissions result from conveyance and treatment. Water conservation is a critical local priority in San Francisco driven by resource scarcity, rather than carbon emissions. However, the exemplar strategies for water conservation and reuse proposed at Mission Rock are expected to result in up to 38% reduction in annual carbon emissions associated with water.

CONCLUSION

For Mission Rock as a whole, the above performance factors combined contribute to an estimated 79% reduction in GHG emissions compared to the US national average. The Mission Rock development will result in an estimated 50% reduction in GHG emissions compared to a San Francisco code compliant development. These carbon emissions reductions may be further improved by the inclusion of the recommended measures detailed in this Sustainability Strategy.

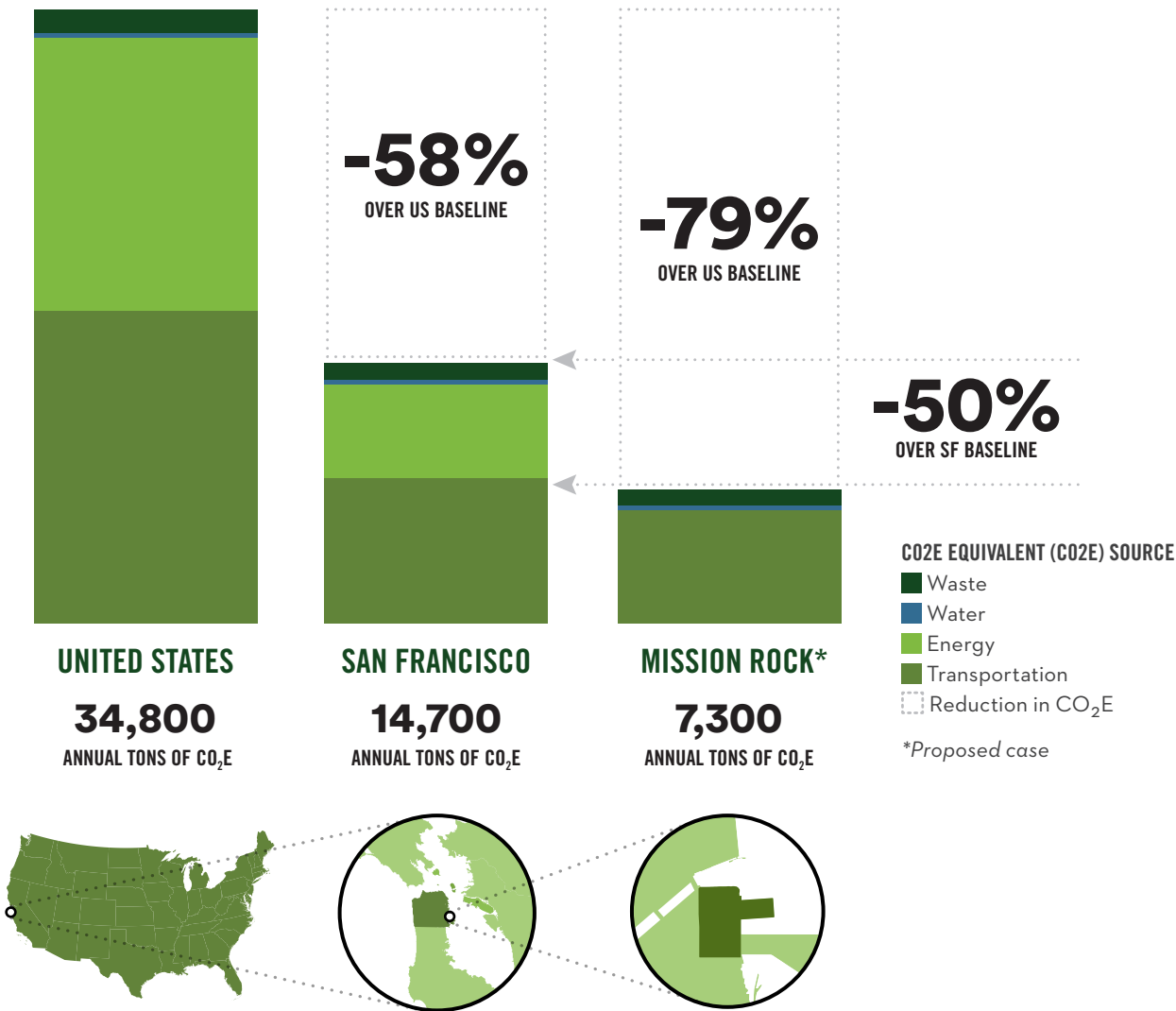


FIGURE 10.1: Site-Wide Carbon Footprint

ENERGY & CARBON

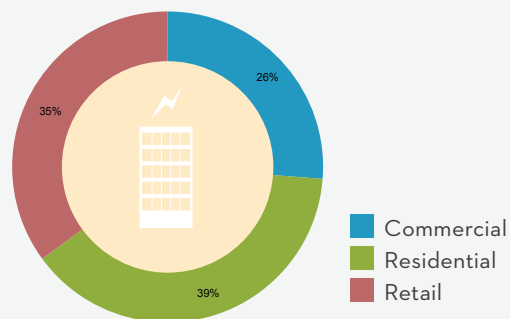
The Mission Rock district has a goal of eliminating all GHG emissions from building operations by requiring that 100% of the site's operational energy demand be met by renewable sources.

Mission Rock requires the central energy plant (CEP) and all buildings on the Mission Rock site to offset their predicted energy use by purchasing on-site or off-site renewable energy infrastructure.

Bay source cooling at the Mission Rock CEP will minimize the energy demand for cooling across the entire site. Mission Rock's requirements for renewable energy investment is based on predicted energy use and will incentivize vertical developers to purchase energy efficiency measures. The Sustainability Strategy also outlines recommendations for tenants to further minimize energy use.

The graph below shows how operations for each building type contribute to carbon emissions before the purchase of renewable energy.

ENERGY CARBON EMISSIONS DISTRIBUTION BY BUILDING TYPE



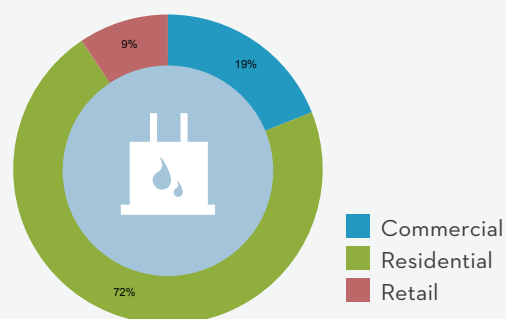
WATER & CARBON

The greenhouse gas (GHG) emissions associated with water primarily originate from the following water processes:

- ▶ Supply and conveyance
- ▶ Treatment to potable standards
- ▶ Municipal distribution
- ▶ End-use pumping
- ▶ Wastewater collection
- ▶ Conventional aerobic treatment

GHG emissions associated with water can be decreased by more than 38% through the use of bay source cooling, centralized graywater reuse, efficient fixtures and water efficient landscape design.

WATER CARBON EMISSIONS DISTRIBUTION BY BUILDING TYPE



TRANSPORTATION & CARBON

The dominant mode of transportation in the area of San Francisco that contains the Mission Rock development is personal automobile. The design of the Mission Rock site is intended to encourage pedestrian use and alternative transportation through smaller city block, MUNI extensions, bicycle lanes, and an enhanced pedestrian realm.

A comprehensive transportation management plan further reduces vehicle miles traveled (VMT) for the site. The combination of the following strategies results in a reduction in carbon emission of 20% or more through reductions in automobile use:

- ▶ ease of access to public transit
- ▶ on-site bicycle amenities and a safe biking environment
- ▶ personal motorized transport
- ▶ parking management
- ▶ on-site amenities
- ▶ site-wide transportation services

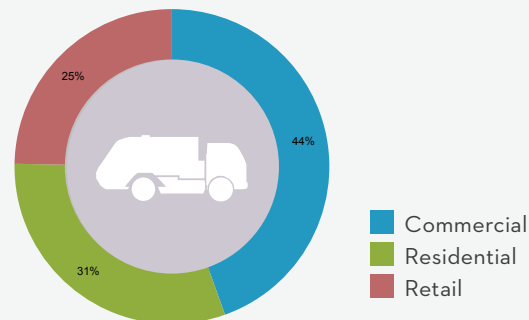
WASTE & CARBON

San Francisco has a goal of zero waste by 2020. Currently San Francisco diverts 80% of its waste from landfill.

However, over half of the material which goes into San Francisco's landfill bins can be recycled or composted. If all materials were sent to the proper bin San Francisco's waste diversion rate could increase to an overall landfill diversion rate of 90%.

Moving from an 80% diversion rate to a 90% diversion rate requires exemplary occupant participation in on-site waste separation. Mission Rock seeks to improve the on-site diversion rate through outreach, education and increased consumer responsibility. Specific measures to achieve this additional 10% reduction are outlined in the Waste section of the Sustainability Strategy.

WASTE CARBON EMISSIONS DISTRIBUTION BY BUILDING TYPE



A

APPENDIX

A1 ECODISTRICT EQUIVALENCY

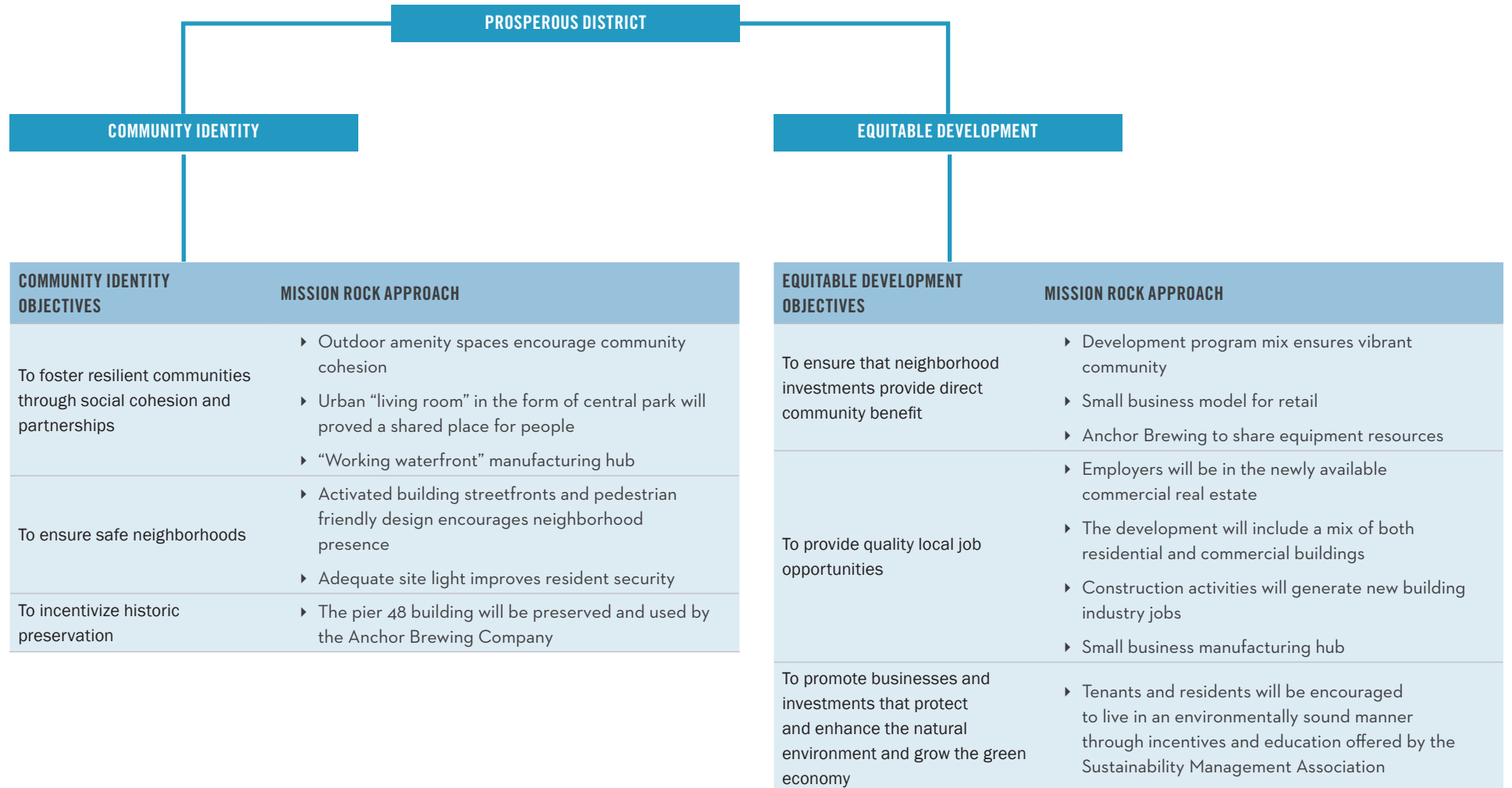
A2 GLOSSARY

A3 CODES & STANDARDS

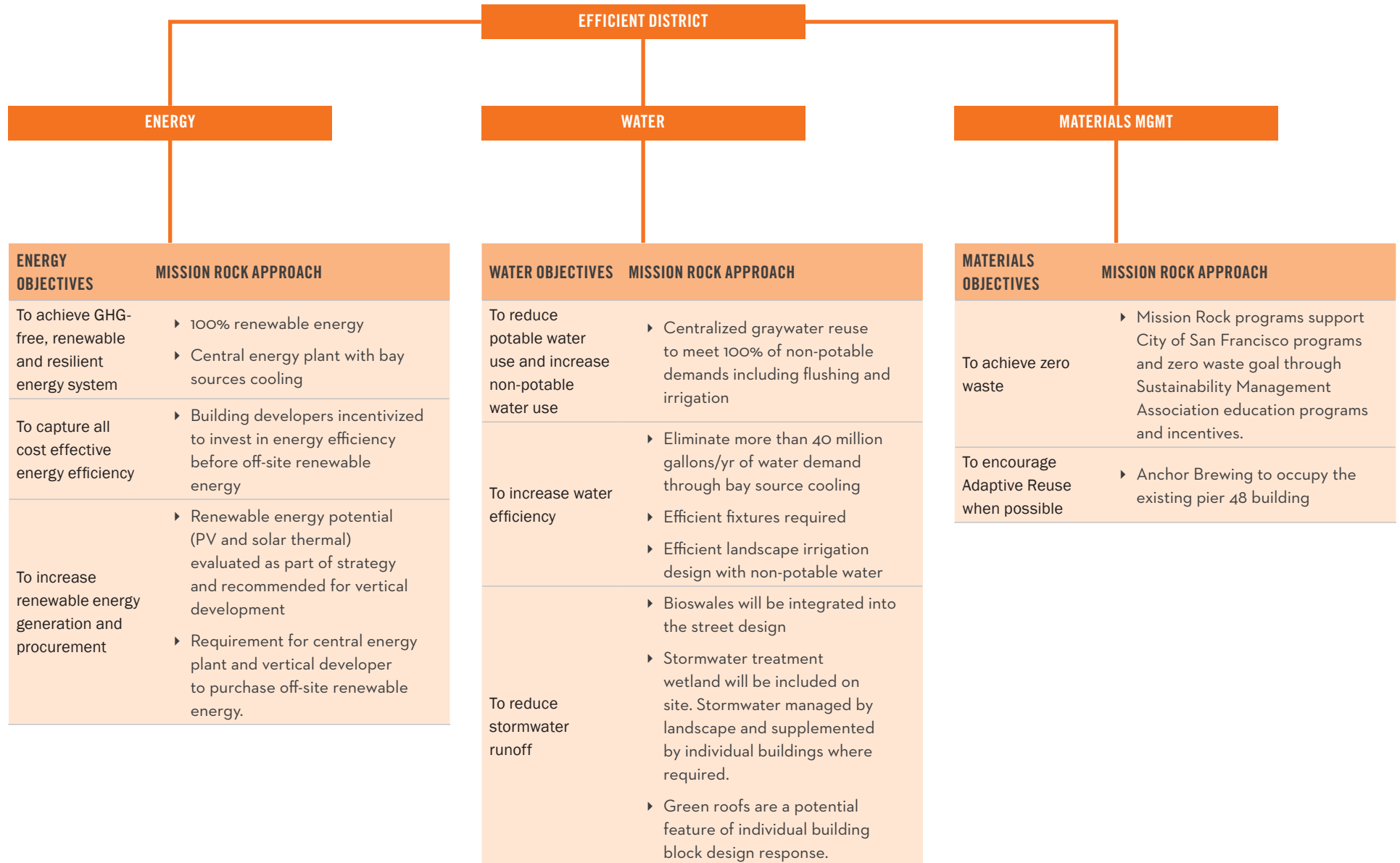
A4 GREEN HOUSE GAS ACCOUNTING METHODOLOGY

A5 ASSUMPTIONS & RESOURCES

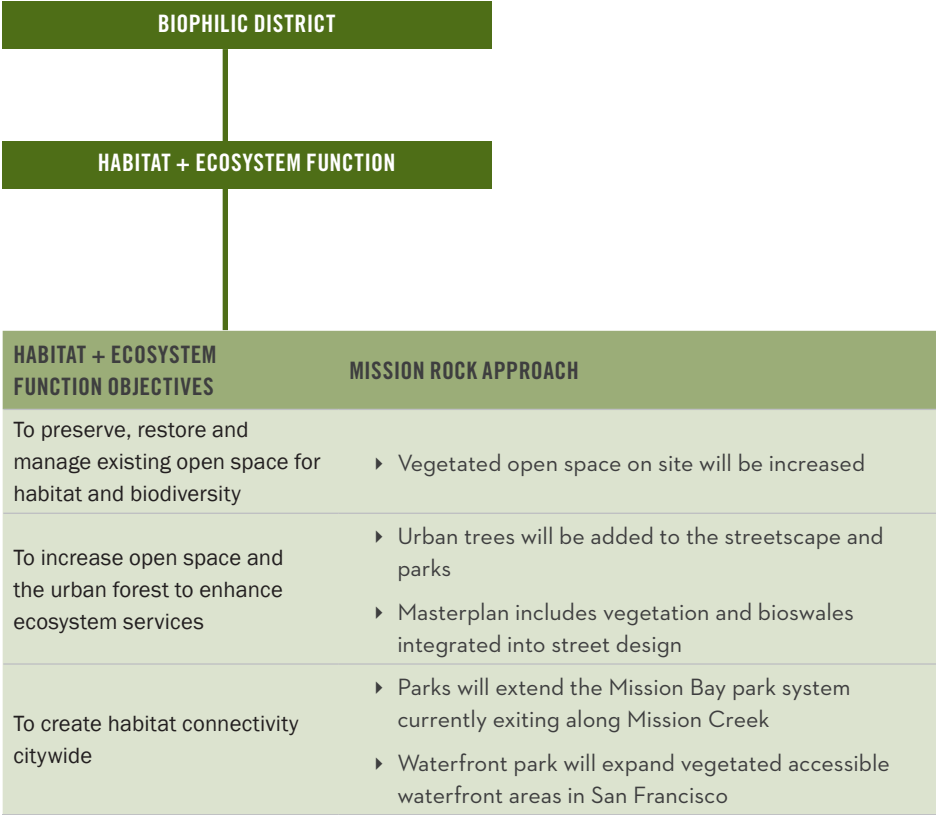
A1: MISSION ROCK ECO-DISTRICT EQUIVALENCY (TYPE 1: THE BLANK SLATE)



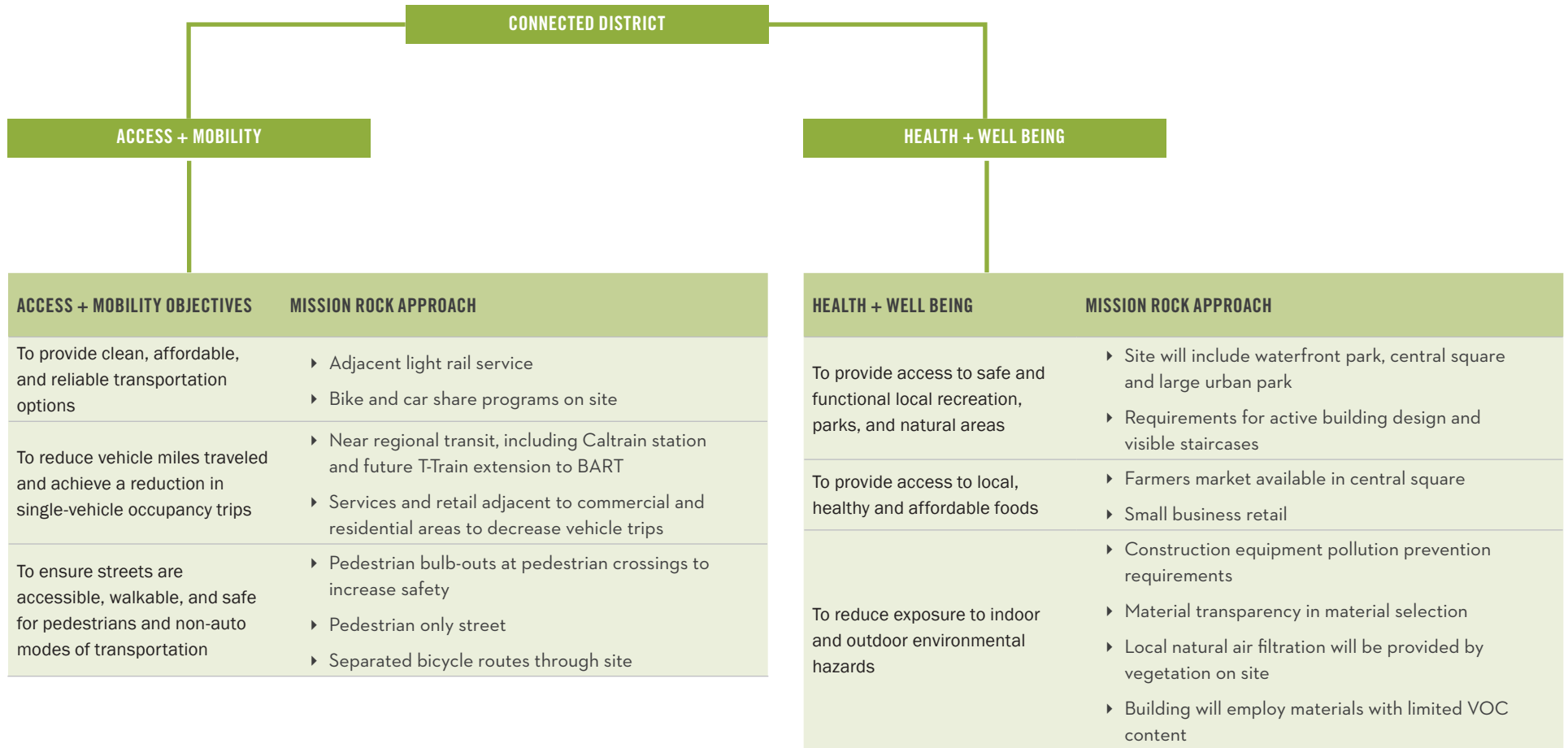
A1: MISSION ROCK ECO-DISTRICT EQUIVALENCY (TYPE 1: THE BLANK SLATE)



A1: MISSION ROCK ECO-DISTRICT EQUIVALENCY (TYPE 1: THE BLANK SLATE)



A1: MISSION ROCK ECO-DISTRICT EQUIVALENCY (TYPE 1: THE BLANK SLATE)



A2: GLOSSARY & TERMINOLOGY

WORD / PHRASE	DEFINITION / INFORMATION
CALIFORNIA AB 32	Set into law California State's GHG emissions reductions goals of returning to 1990 levels by 2020, and 80% below 1990 levels by 2050, through the development of discreet early action plans in the following areas: 1) transportation, fuels, and infrastructure, 2) energy generation, transmission and efficiency, 3) waste, 4) water, 5) agriculture, and 6) natural and working lands.
CARBON DIOXIDE	A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal human caused greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.
CEP	Central Energy Plant
CO ₂ e	Carbon Dioxide Equivalents: A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.
EMISSION FACTOR	A representative value that relates the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant

WORD / PHRASE	DEFINITION / INFORMATION
FUGITIVE EMISSION	Emissions of gasses or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities
GLOBAL WARMING POTENTIAL (GWP)	A relative measure of how much heat a greenhouse gas traps in the atmosphere as compared to the amount of heat trapped by a similar mass of carbon dioxide. Expressed as a factor of carbon dioxide.
GHG	Greenhouse Gas. Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.
GREENHOUSE GAS PROTOCOL	The most widely used international accounting tool for government and business. Developed by the World Resource Institute (WRI) and World Business Council for Sustainable Development (WBCSD)

A3: CODES & STANDARDS

CALIFORNIA CODE

California Code of Regulations, Title 24, Green Building Standards
Part 6 - California Energy Code
Part 11 - California Green Building Standards Code (also referred to as CALGreen)
AB 32: California Global Warming Solutions Act of 2006, Reduce GHG emissions to 1990 levels by 2020

ENTITLEMENTS

Environmental Impact (EIR)
Soil Management Plan (SMP)

STORMWATER & WATER REUSE

San Francisco Stormwater Requirements and Design Guidelines
San Francisco (City and County): Recycled Water Ordinance
San Francisco (City and County): Non-Potable Ordinance
San Francisco Housing Code Chapter 12A Residential Water Conservation Ordinance

GREEN BUILDING CODE

LEED Gold for Buildings or Green Point Rating
San Francisco Building Code, Chapter 13D, Commercial Lighting Efficiency
San Francisco Better Roofs Policy
RESCAPE BAY FRIENDLY LANDSCAPING GUIDELINES

WASTE

San Francisco Environment Code, Chapter 9, Climate Action Plan Solid Waste
San Francisco Mandatory Recycling and Composting Ordinance
San Francisco Building Code, Chapter 13, Section 1302B, Recovery of Construction and Demolition Debris, Construction and Demolition Ordinance
San Francisco Housing Code Chapter 12A Residential Water Conservation Ordinance

TRANSPORTATION

San Francisco Planning Department, Transportation Demand Management Ordinance (Pending, currently scheduled for adoption at the Planning Commission on July 7, 2017.)

A4

GHG ACCOUNTING METHODOLOGY

Most of the global average warming over the past 50 years is extremely likely due to increases in greenhouse gas (GHG) emissions from sources originating from human activity according to the Intergovernmental Panel on Climate Change (IPCC).

This global average warming causes changes to physical and biological systems that are detrimental to our environment and economic stability. In response to these findings, many jurisdictions have developed GHG emission reduction goals. For example, California passed the 2006 Assembly Bill 32: Global Warming Solutions Act (AB 32) and San Francisco developed the 2004 Climate Action Plan for San Francisco. In alliance with these GHG emission reduction goals, Mission Rock intends to minimize its future GHG emissions through reduction strategies.

To determine the most effective GHG emission reduction strategies for the Mission Rock development,

Atelier ten developed a tool that evaluates GHG emissions from energy, waste, water, and transportation sources. The purpose of the tool is to 1) define a methodology for accounting and reporting GHG emissions associated with the Mission Rock development, 2) estimate an equivalent CO₂ (CO₂e) baseline based on the proposed masterplan, and 3) compare potential GHG emission reduction strategies to the CO₂e baseline. This tool will be used during development of the Sustainability Strategy to make informed design decisions, track projected GHG emission performance, and demonstrate potential GHG emission reductions on the Mission Rock site.

METHODOLOGY

Atelier Ten have defined a methodology for accounting and reporting GHG emissions specifically associated with the Mission Rock development. This provides an equivalent CO₂ (CO₂e) baseline, which is the concentration of CO₂ that would cause the same effect as a different greenhouse gas. The applied methodology is based on an independent and internationally vetted GHG accounting and reporting protocol to ensure accuracy and transparency. Atelier Ten evaluated ten different GHG accounting and reporting protocols. From this evaluation, Atelier Ten determined that the ICLEI U.S. Community Protocol (Community Protocol) was the best protocol to use to assess the Mission Rock development because it provides guidance on quantifying GHG emissions on a community-wide scope. Unlike the other protocols that assess individual organizations or single projects, the Community Protocol accounts for GHG emissions associated with the sources and activities of an entire community.

To develop the methodology, Atelier Ten adapted the Community Protocol to fit the scope of the Mission Rock development. Atelier Ten did not include the other sectors (agricultural livestock, materials, and consumption-based activities) in the methodology because these sectors are outside the scope of the Mission Rock development or have significant industry-based data gaps. Therefore, the methodology estimates the GHG emissions from the built environment (energy), water, waste, and transportation.

BOUNDARY

Each sector has a different boundary around the Mission Rock site for which associated GHG emissions are included in the CO₂e baseline. For example, the boundary of the built environment is limited to the residential and commercial buildings within the Mission Rock site boundary. The water boundary includes surface water and groundwater supply sources outside of the site boundary. The waste boundary includes landfills and recycling centers within 50 miles of the Mission Rock site. The transportation boundary includes San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin counties.

EXCLUSIONS

The results from the assessment presented here exclude carbon emissions associated with the proposed Anchor Brewery development (although a preliminary assessment has been completed). The brewery will naturally increase annual carbon emissions across all four performance areas (adding additional uses generally increases greenhouse gas emissions). However, the brewery also has the unique potential to reduce to not only carbon emissions associated with its own operations but also opportunities to reduce carbon emissions across the Mission Rock site. These opportunities have not yet been fully explored by the project team. Once further developed, these proposals are expected to be included in a future update of the Sustainability Strategy.

COMPARISON ASSUMPTIONS & NOTES

- ▶ The energy baseline is linked to ASHRAE 90.1 code compliant EUIs for the San Francisco climate.
- ▶ It is expected that all development at Mission Rock will need to follow LEED version 4 (effective 2015) requirements. As LEED certification is a San Francisco requirement for new development, this sets a code-compliant base case of at least 5% energy improvement over ASHRAE 90.1-2010.
- ▶ The emission factors for electricity and gas were provided by Pacific Gas & Electric, as also used by the project team in the assessment of the central plant. Alternative emissions factors may be supplemented when more is known of the proposed energy supply to the development.
- ▶ The water baseline is based on national average performance by using the LEED baseline assumptions for water use.
- ▶ GHG Emissions associated with water are a result of conveyance and treatment.
- ▶ The baseline estimated waste GHG emissions estimate is based on current diversion rates and disposal methods in San Francisco. The proposed case includes the expected additional achieved diversion.
- ▶ The transportation baseline has been established by the Transport Demand Management Plan and data supplied by Adavant Consulting. This is based on the current transportation mode breakdown for the Mission Rock location. The proposed case shows the expected decrease in vehicle miles traveled based on strategies implemented in the TDM plan and the Sustainability Strategy, which are expected to increase use of alternate modes of travel within and to/from the Mission Rock neighborhood.

- ▶ Carbon emissions may change as a result of defining carbon emission factors associated with the proposed central plant, depending on the design of the plant and energy sources.
- ▶ Carbon results could also easily change as a result of purchasing lower carbon electricity.
- ▶ Grid emissions factors are amended on an annual basis to represent the changing energy supply sources across the US.

ENERGY

The built environment includes the residential and commercial buildings as well as the supporting infrastructure in the Mission Rock development. GHG emissions from the buildings, occupant activities, and operational processes are included in the CO₂e baseline. The CO₂e baseline includes GHG emissions associated with the following energy end-uses:

Electricity:

- ▶ Hvac
- ▶ Lighting
- ▶ Plug loads/miscellaneous

Gas:

- ▶ Domestic water heating
- ▶ Hydronic/space heating
- ▶ Kitchen
- ▶ Central utility plant (CUP)

GHG emissions associated with the built environment and related energy use were calculated by applying a variety of EUI factors for energy end-uses to aggregated anticipated land use distribution and multiplying by energy use emission factors.

The EUI for the national baseline was estimated using the ENERGY STAR Portfolio Manager U.S. National Median Reference and Energy Information Administration Residential Energy Consumption Survey. Emissions factors for the U.S. baseline were based on the national averages provided by the Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID).

The anticipate EUI for the San Francisco Baseline was calculated based on a Title 24, 2016 code compliant building for the respective program types.

Electricity emission factors from Pacific Gas and Electric (PG&E) annual emissions data was used to calculate the GHG emissions associated with the San Francisco baseline built environment. However, this emission factor can vary each year based upon available energy sources (coal, nuclear, hydro, wind, and solar).

Natural gas emission factors are also provided by PG&E. The natural gas emission factor does not vary annually because it accounts only for the combustion of the gas, not the extraction and delivery of the gas.

Tables 1 and 2 show a summary of the CO₂e baseline assumptions for the built environment/energy sector.

WATER

Water consumption by Mission Rock's residents and businesses will have a relatively small GHG implications because the source of water, distances and topography associated with conveyance, and treatment processes are favorable. Wastewater treatment also creates process, stationary, and fugitive GHG emissions. The CO₂e estimate includes GHG emissions associated with the following water processes:

Supply and conveyance

Treatment to potable standards

Municipal distribution

End-use pumping

Wastewater collection

Conventional aerobic treatment

These processes emit the majority of GHGs associated with water use by Mission Rock's residents and businesses. However, fugitive GHG emissions from wastewater generation and treatment process are included.

Emissions associated with water consumption and wastewater treatment were calculated by applying a variety of energy use intensity factors to selective processes within each system, and multiplying these values by a representative population and per capita water use figure. These values were drawn from the Community Protocol, Appendix F. Table 3 in the Appendix details the assumptions made in characterizing water and wastewater emission profiles.

TRANSPORTATION

Transportation is one of the largest potential sources of GHG emissions in the Mission Rock development. Combustion of fuel in vehicle engines produces various GHG emissions. Electric vehicles also produce indirect emissions from electricity generation. GHG emissions associated with the movement of people and goods by public transportation and vehicles are estimated in the CO₂e baseline.

Vehicles: Emissions associated with transportation are based on the number of vehicles, vehicle type, distance travelled, and emission factors per vehicle type. On-road vehicle statistics are based upon San Francisco averages interpolated for a site weighted percentage, by applying a population diversity factor. This data comes from the EMFAC database software developed by the California Department of Transportation and California Air Resources Board.

EMFAC database provides aggregated vehicle statistics specific to each county in California including vehicle type miles travelled (vmt), vehicle type distribution/ population/age/fuel, vehicle type emissions/vehicle/ miles, and number of trips. This data is used to determine the estimated number of miles travelled, ignitions, and minutes idling for each vehicle type and class. Emission factors for ignitions, running, and idling are then multiplied by their respective vehicle type miles, ignitions, and idling time to calculate the associated GHG emissions. These were aggregated to create a typical vehicle for San Francisco.

For the Mission Rock site, the number of vehicle miles traveled (VMT) that can be attributed to the site were calculated for a baseline case without any strategies to reduce car reliance. The VMT multiplied by the emissions per mile determined the total GHG emissions due to transportation. Once the transportation strategies had been identified for the site, the estimated reduction in VMT was calculated with the corresponding reduction in GHG emissions.

WASTE

GHG emissions result from the management and natural decay of solid waste. Management of solid waste results in emissions from the combustion of fossil and/or biological fuel in equipment used to transport and process the waste and from the combustion of the solid waste in incinerators and waste-to-energy technologies. The CO₂e baseline includes emissions from the solid waste generated by the residents and businesses in Mission Rock (regardless of where it is disposed of) and emission from the solid waste disposed of inside the Mission Rock boundary.

San Francisco has aggressive waste disposal policies and high diversion rates (80% commercial / 50% residential), which results in relatively low solid waste levels. GHG emissions associated with the collection, transportation, and landfill disposal are included in the CO₂ baseline. Inputs include a per capita waste generation value, collection and transportation emissions factors, efficiency factors to account for various processes involved in the degradation of solid waste, and a mixed stream factor.

Atelier Ten assumed solid waste was sent to the Altamont Landfill, which is within 50 miles of the Mission Rock site. Reliable data on waste stream characterization (ie % paper, % biodegradable, % fabrics, etc.) of the Mission Rock waste stream is not available; therefore, Atelier Ten assumed a representative mixed solid waste stream, with a single emission factor.

Table 5 in the Appendix lists the assumptions made in calculating CO₂e emissions associated with waste generation and disposal for Mission Rock.

EMISSION FACTOR ASSUMPTIONS		
TERM	VALUE	REFERENCE SOURCE
U.S. Electricity emission factor	1,136 lbs. CO ₂ e/ MWh	EPA Emissions & Generation Resource Integrated Database (eGRID)
SF Electricity emission factor	431 lbs. CO ₂ e/ MWh	Pacific gas and Electric (PG&E)
Gas Emission Factor	11.7 lbs. CO ₂ e/ therm	Pacific gas and Electric (PG&E)

TABLE 1: Energy Emission Factor Assumptions

EUI ASSUMPTIONS		
TERM	VALUE	REFERENCE SOURCE
U.S. Commercial EUI	46.2	Peer Projects, ASHRAE 90.1-2007 Baseline
U.S. Residential EUI	27.5	Peer Projects, ASHRAE 90.1-2007 Baseline
U.S. Retail EUI	81.8	Peer Projects, ASHRAE 90.1-2007 Baseline
SF Commercial EUI	33.0	Peer Projects, T24 Code Complaint
SF Residential EUI	25.1	Peer Projects, T24 Code Complaint
SF Retail EUI	72.7	Peer Projects, T24 Code Complaint

TABLE 2: Energy Use Intensity Assumptions

WATER EMISSIONS ASSUMPTIONS		
TERM	VALUE	REFERENCE SOURCE
U.S. water supply source (self/ground/surface)	14/28.4/57.6 %	Community Protocol, Appendix F
U.S. Groundwater Extraction Energy Intensity	540 kWh/MG	Community Protocol, Appendix F
U.S. Water Conveyance, Treatment, and Distribution EI	110/210/540 kWh/MG	Community Protocol, Appendix F
U.S. Wastewater collection and aerobic treatment EI	280/2300 kWh/MG	Community Protocol, Appendix F
CA Water Supply/Conveyance, Treatment, and Distribution EI	150/100/1200 kWh/MG	Community Protocol, Appendix F
CA Wastewater collection and aerobic treatment EI	2500 kWh/MG	Community Protocol, Appendix F
CA grey water pump, grey water treatment EI	19.03 9 kWh/MG	Atelier Ten Energy Analysis

TABLE 3: Water Use Emission Assumptions

TRANSPORTATION EMISSIONS ASSUMPTIONS		
TERM	VALUE	REFERENCE SOURCE
Commercial Regional VMT	19.1 Daily VMT/capita	Mission Rock Transportation Impact Study
Residential Regional VMT	17.2 Daily VMT/capita	Mission Rock Transportation Impact Study
Retail Regional VMT	14.9 Daily VMT/capita	Mission Rock Transportation Impact Study
Commercial Site VMT	12.1 Daily VMT/capita	Mission Rock Transportation Impact Study
Residential Site VMT	3.5 Daily VMT/capita	Mission Rock Transportation Impact Study
Retail Site VMT	10.4 Daily VMT/capita	Mission Rock Transportation Impact Study
Emissions per Mile Traveled	434 g CO ₂ e/mile	Calculated Value from EMFCA 2014

TABLE 4: Transportation Emission Assumptions

WASTE ASSUMPTIONS		
TERM	VALUE	REFERENCE SOURCE
Residential per Capita Waste Generation	5.4 lbs/day/person	US EPA, San Francisco value
Commercial Per Employee Waste Generation	1,515 lbs/employee/year	2006 Alameda Waste Characterizatin Study
Commercial Per Employee Waste Generation	2,881 lbs/employee/year	2006 Alameda Waste Characterizatin Study
SF Waste Diversion Rate	51%	Calculated from San Francisco department of public works, municipal refuse collection rates comparative analysis, 2012
US Waste Diversion Rate	35%	EPA, Advancing Sustainable Materials Management: 2013 Fact Sheet
Waste material mass fraction	100% mixed solid waste	
Municipal solid waste emission factor	0.06 mt CH ₄ per wet short ton	Community Protocol, Appendix E, Table SW5 (epa data source)
Landfill process emissions factor	0.011 mt CO ₂ per wet short ton	Community Protocol, Appendix E (US EPA Municipal Solid Waste publication 2008)
LFG collection Efficiency (on-site landfill gas collection equipment)	0.75	Community Protocol, Appendix E (US EPA Municipal Solid Waste publication 2008)
Collection emissions factor (assumes CNG fueled municipal collection fleet)	0.014 mt CO ₂ per wet short ton	Community Protocol, Appendix E , SW6 (US EPA Municipal Solid Waste publication 2008)
Transportation process emissions factor (assumes CNG fueled municipal collection fleet)	0.0001 mt CO ₂ e per wet short ton/mile	Community Protocol, Appendix E , SW6 (US EPA Municipal Solid Waste publication 2008)
Distance travelled to city landfill	50 miles	

TABLE 4: Waste Emission Assumptions

A5: WATER

The Mission Rock development identified zero water waste, where no potable water is used for non-potable demands, as the primary water goal. This goal minimizes the impact of the development on water systems by aggressively reducing the overall water demand and producing on-site recycled water to meet the site’s non-potable demand.

Recycled water distribution piping serving each building is required by the city and is assumed in all of the cases.

Rainwater was excluded from the calculations because the seasonal availability means that it would not be possible to meet the zero water waste goal throughout the summer without huge storage capacity.

REUSE OPTIONS CONSIDERED

Various reuse options were evaluated, including decentralized graywater treatment and reuse, centralized graywater or blackwater treatment and distribution using a variety of buildings as potential sources, and an option to team with adjacent developers to engage a third party recycled water provider. On-site centralized graywater treatment with collection from a limited number of residential buildings was determined to be the most cost effective strategy to meet the zero water waste goal.

The site water demands for irrigation and flushing were calculated to determine the anticipated demand for water. The availability of non-potable water was determined for each option and compared against the non-potable demand to determine if the zero water waste goal could be met.

A detailed description of each of the primary water reuse options that was considered is included below and in Figure A5.1.

CODE MINIMUM DECENTRALIZED TREATMENT

The current version of San Francisco's Mandatory Use of Alternate Water Supplies In New Construction Ordinance No. 109-15 as amended in May 2015 requires water reuse in new buildings larger than 250,000 ft². Currently this only applies to five buildings in the Mission Rock development: A, B, C, F, and G. Future versions of the ordinance may extend this requirement to all buildings.

To minimally meet the code, graywater reuse systems would be required within five buildings, but the remaining buildings on site wouldn't have recycled water, so the option falls short of the zero water waste goal.

1. Code Minimum Centralized Treatment

A centralized graywater treatment system that only collects graywater from the buildings that are required by code to have reuse systems places no additional burden on other buildings in the development.

Graywater collection piping would be required in five buildings and the street.

This case, summarized as Option 1 in Figure A5.1 uses a centralized treatment that distributes recycled water to all buildings on site and provides sufficient water to meet the zero water waste goal, however collecting water from office buildings is inefficient because they do not produce much graywater and due to spatial

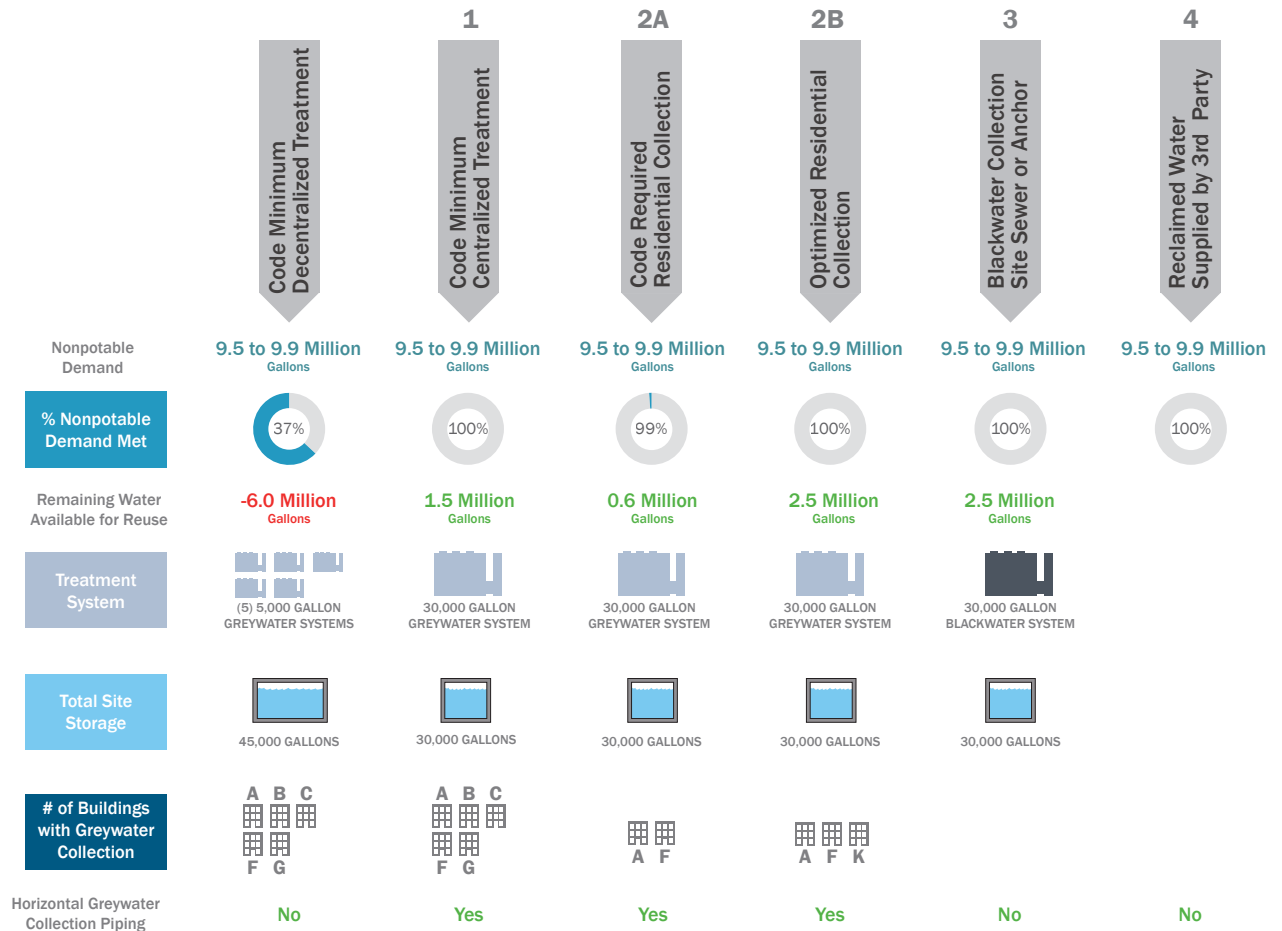


FIGURE A5.1: Recycled Water Options

constraints under certain streets it was not possible to provide the pipes to bring graywater from all of these buildings to a central location.

2A. Code Required Residential Collection

Limiting water collection to residential buildings A and F because they produce substantially more graywater than commercial buildings is more cost and material efficient than case 1, but does not meet the zero water waste goal.

2B. Optimized Residential Collection

To reach the zero water waste goal, including building K in addition to A and F ensures that enough graywater producing buildings are connected to the collection and treatment system. This case was selected for the Mission Rock development because it includes the smallest infrastructure investment while easily meeting the zero water waste goal. The infrastructure requirements in the streets for this scenario are feasible.

3. Blackwater Collection

Blackwater could be withdrawn directly from sewer so no additional collection piping in buildings or the street would be required in a blackwater treatment case. Water quality testing requirements, and cost are substantially more than a graywater treatment system. A blackwater treatment system also requires a larger footprint in the central plant for equipment and water storage. This option could easily meet the zero water waste goal, but has additional operational and infrastructure requirements that make it less desirable than a graywater option.



FIGURE A5.2: Graywater collection and recycled water distribution infrastructure

4. Recycled Water Supplied by 3rd Party

A third party supplying recycled water to the site would require the smallest infrastructure investment on site, but due to the operational timeline, is not a viable option for the Mission Rock project. The SFPUC and third party operators have proposed municipal neighborhood scale recycled water supply systems, but these supplies will not be available.

WATER REUSE OPTION PROPOSED

The optimized graywater collection from residential buildings meets all of the project requirements while limiting infrastructure investment. Figure A5.3 shows the anticipated collection and distribution layout. Calculation summary tables are included at the end of this section.

Phasing

Because two residential buildings with graywater collection, A and K, are included in Phase I, there should be a sufficiency supply of treated graywater to meet all flushing and irrigation demands on site until Building F is built in Phase III.

Infrastructure

The central energy plant is currently planned in Building A and will include sufficient space for a graywater treatment and storage system.

Graywater collection from residential buildings is required in buildings A, F, and K. Because of space limitations in the streets, it is anticipated that the collection piping will be routed along the inside of China Basin Park.

SITE INFORMATION

PARCEL	USE	TOTAL GFA [FT ²]	Area/Person [sf/person]	Occupants
A	Residential	350,200	500	700
B	Commercial	242,654	250	971
C	Commercial	324,548	250	1,298
D	Residential	238,828	500	478
E	Commercial	125,275	250	501
F	Residential	307,720	500	615
G	Commercial	279,698	250	1,119
H	Commercial	129,914	250	520
I	Commercial	129,634	250	519
J	Commercial	129,458	250	518
K	Residential	121,146	500	242
	Retail	264,777	130	2,037
TOTAL		2,643,852	3,880	9,517

FIXTURE RATES

USE	WC [gpf]	URINAL [gpf]	LAVATORY [gpm]	KITCHEN FAUCET [gpm]	SHOWER [gpm]	WASHING MACHINE [gpc]
Commercial	1.28	0.125	0.5	1.8	1.5	N/A
Residential	1.28	N/A	1	1.8	1.5	20
Retail	1.28	0.0125	0.5	1.8	1.5	N/A

FIGURE A5.3: Collection and distribution layout

Recycled water distribution piping is required by the city and will serve all of the buildings and park in Mission Rock development. Mission Rock is working with the SFPUC to confirm who will own and maintain these pipe and ensure that they can be charged with recycled water from the central treatment system.

BAY SOURCE COOLING

Bay source cooling is currently anticipated for the project, saving more than 40 million gallons of water a year by eliminating the need for cooling towers and their associated water consumption.

If the bay source cooling is not viable for the project due to regulatory obstacles, cooling towers will be instated in the project to meet the cooling demand. If this is the case the water demand of the cooling towers should be met with non-potable sources. Graywater resources from all buildings on site are insufficient to meet the 40 million gallon anticipated demand. Blackwater harvesting and treatment from both buildings and the brewery wastewater would begin to meet this demand. If cooling towers are introduced to the project, the approach to water conservation and reuse will have to be reassessed.

DAILY END USE DEMAND

PARCEL	USE <i>Water Input Water Output</i>	WC [gal/day] <i>Non-potable Blackwater</i>	URINAL [gal/day] <i>Non-potable Blackwater</i>	LAVATORY [gal/day] <i>Potable Greywater</i>	KITCHEN FAUCET [gal/day] <i>Potable Blackwater</i>	SHOWER [gal/day] <i>Potable Greywater</i>	WASHING MACHINE [gal/day] <i>Potable Greywater</i>
A	Residential	2,690	-	3,502	5,043	8,405	4,202
B	Commercial	2,485	121	364	437	728	-
C	Commercial	3,323	162	487	584	974	-
D	Residential	1,834	-	2,388	3,439	5,732	2,866
E	Commercial	1,283	63	188	225	376	-
F	Residential	2,363	-	3,077	4,431	7,385	3,693
G	Commercial	2,864	140	420	503	839	-
H	Commercial	1,330	65	195	234	390	-
I	Commercial	1,327	65	194	233	389	-
J	Commercial	1,326	65	194	233	388	-
K	Residential	930	-	1,211	1,745	2,908	1,454
	Retail	1,521	7	216	199	336	-
TOTAL		23,277	687	12,437	17,307	28,849	12,215

TOTAL ANNUAL SUPPLY & DEMAND

PARCEL	USE <i>Water Type</i>	POTABLE DEMAND [gal] <i>potable</i>	NON-POTABLE DEMAND [gal] <i>non-potable</i>	GREYWATER SUPPLY [gal] <i>greywater</i>	BLACKWATER SUPPLY [gal] <i>Blackwater</i>
A	Residential	7,720,509	981,681	4,997,879	-
B	Commercial	397,467	677,587	-	-
C	Commercial	531,610	906,268	-	-
D	Residential	5,265,202	669,483	-	-
E	Commercial	205,200	349,818	-	-
F	Residential	6,783,995	862,601	4,391,626	-
G	Commercial	458,145	781,029	-	-
H	Commercial	212,799	362,772	-	-
I	Commercial	212,340	361,990	-	-
J	Commercial	212,052	361,499	-	-
K	Residential	2,670,785	339,596	1,728,935	-
	Retail	274,245	557,716	-	-
	Irrigation	-	2,144,868	-	-
TOTAL		24,944,350	9,356,906	11,118,440	-

A5: ENERGY

The Mission Rock development is focused on reducing the GHG emissions associated with energy consumption. A variety of approaches were analyzed to define the most effective structure for meeting the district's energy requirements. These approaches included Title 24 exceedance, a energy use intensity (EUI) target, and a percentage better than ASHRAE 90.1-2010. Ultimately, a requirement for 100% renewable energy was selected for the Mission Rock development because it eliminates GHG emissions associated with energy consumption on site and encourages efficiency at the building scale.

CONSIDERED APPROACHES

Title 24 Exceedance

Tying the energy performance to Title 24 through a fixed percentage better than code was considered as a method to enforce increased building efficiency. Because of uncertainty in projecting energy code requirements and challenges in demonstrating compliance with current Title 24 modelling software this was not considered an effective approach. The Title 24 energy model also uses a different energy metric and a standardized operational schedule and climate file, so modeled energy performance may differ considerably from actual operational energy consumption.

EUI Target

A ramping EUI target for each of the different building types was also considered. However, understanding how an EUI target would track with code was not feasible because California has not indicated its path to meeting its 2030 Net Zero Energy goals. As a result, establishing an EUI target which continues to be aggressive but achievable relative to code is challenging. An EUI target may substantially over or underestimate code, either becoming meaningless because it is too easy to comply with or excessively difficult, placing a burden on developers.

Also, an EUI target does not accurately reflect differences in operation schedule and occupancy type that might occur within each building type. An office building with late night occupants and lots of equipment would have the same target as an office building that sticks to a strict regular office hours schedule with few computers, even though it would consume substantially more energy, potentially causing unequal burden on different developers.

ASHRAE 90.1 Exceedance

A percentage improvement over ASHRAE 90.1-2010 baseline was also considered as a method for enforcing energy efficiency because it accommodates different occupancies is the industry recognized standard used for LEED compliance. The primary concern is that it does not track with changing energy code in California and will not remain aggressive enough throughout the Mission Rock timeline.

PROPOSED APPROACH

In the end, the team arrived at an approach with that calls for 100% renewable energy to eliminate GHG emissions associated with energy consumption. The program requires developers to purchase off-site renewable energy to offset all of the energy consumption at the building scale. This structure provides incentive for vertical developers to build more efficient buildings by associating up front cost with operational energy cost. Developers can determine the most cost effective path to meeting this requirement through a balance of energy efficiency and renewable investment. A minimum level of building performance is guaranteed by Title 24 energy code, and given the progressive nature of this code, will remain at the cusp of viable energy efficiency.

Off-site Renewable Energy

While on-site renewable would be preferred, there is not enough space on site to meet energy demand with on-site renewable energy generation. Figure A5.6 shows the potential for on-site renewable energy including solar panels installed on the roof and a proportional share of Pier 48 and adjacent Pier 50. Even with all of these sources, a typical building will only be able to meet less than half its annual energy demand with on-site renewable sources. Off-site solar panels installed at a remote site can provide sufficient renewable energy to serve the project. Additionally, solar potential is greater in locations outside of the Bay Area.

Investing directly in new renewable energy generation capacity is central to ensuring the Mission Rock development receives its power from renewable sources. Renewable energy credits (RECS) are not an acceptable source of off-site renewable energy offsets because they cannot be proven to result in direct investment in new renewable sources and so do not meet the additionality requirement for the Mission Rock development. Similarly, the existing renewable energy component of the electric grid is existing and cannot be counted towards the renewable energy requirement on the Mission Rock site.

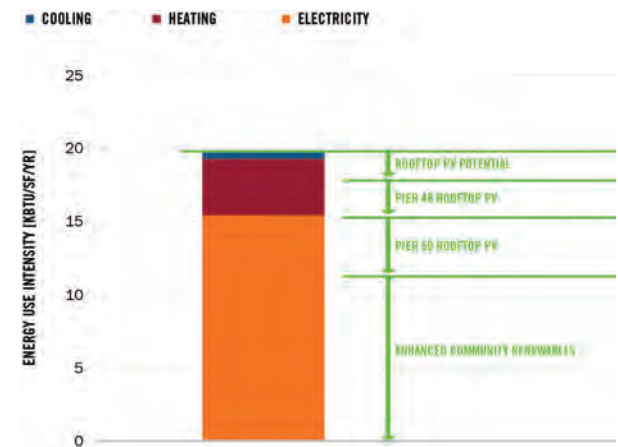


FIGURE A5.6: On-Site Renewable Potential

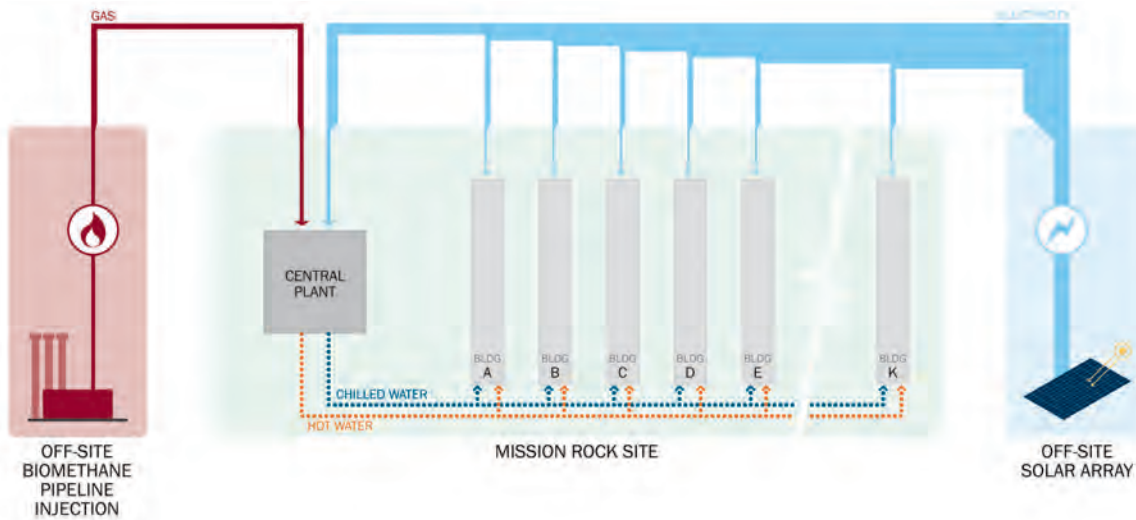


FIGURE A5.7: Off-site Electricity and Biomethane Renewable Energy Offset

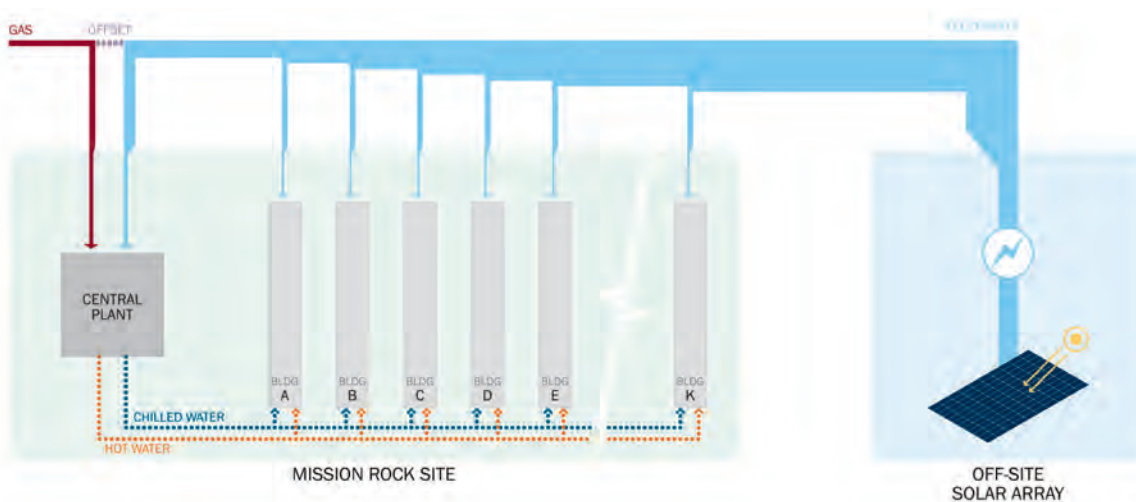


FIGURE A5.8: Off-Site All Electricity Renewable Energy Offset

The anticipated energy demand determined as part of the energy modelling conducted for LEED certification will be used to determine the required renewable energy investment. The energy model will be reviewed by the Green Business Certification Institute (GBCI) and part of LEED certification, placing the technical verification of the energy performance on an impartial third party. The anticipated annual energy use of the building will determine the amount of off-site renewable energy that needs to be purchased. On-site renewable energy can contribute to compliance, but off-site renewable energy will be required to reach 100%.

While vertical developers will primarily control the core and shell of the building, savings in tenant areas of the building can be enforced (and thus reduce the renewable energy requirement) through lease agreements or other legal structures.

There are a variety of factors that have to be clarified to ensure that a program like this will be possible on the Mission Rock site including utility provider, metering requirements, rate structure, how gas consumption at the central plant and individual buildings will be accommodated, and cost of the program.

UTILITY PROVIDER

The exact utility program or metering structure to allow off-site renewable power will be determined as the development progresses. The electricity utility serving the site will either be PG&E or SFPUC Power. Each has different implications for off-site renewable energy.

Precedents for purchasing off-site renewable energy in this manner exist, but Mission Rock will still be providing an innovative and progressive solution to renewably sourcing energy for the development. The goal of 100% renewable energy is an commitment informed by utility limitations, energy markets, and environmental impact.

Pacific Gas & Electric

For PG&E there are a couple of rate structures that may allow offsite renewable energy to server the site.

Direct access: This program allows large customers to purchase energy directly. PG&E still provides administration and delivery for the energy, but the customer can negotiate energy purchases directly from the generation source of their choice. Aggregating all of the service points on the Mission Rock site may make this approach viable. The PG&E direct access program is currently at the maximum annual load cap, although the cap may be expanded or the program changed when the Mission Rock buildings open for occupancy. Direct access is also typically only for commercial accounts, not residential. The expansion of the direct access program is currently being considered by the State Assembly.

Regional Solar Choice: In this program, solar developers build solar farms and negotiates to sell power directly to customers. PG&E is still responsible for billing, administration, metering and transmission. This program is best managed at the building scale, where individual vertical developers engage with solar developers to provide offsite renewable energy for the whole building. The Regional Solar Choice program currently has a 2019 closing date, but the program cap may be expanded and the timeline extended once reviewed by the CPUC. Any renewable energy that falls under this program does not count towards the renewable portfolio standard required in California, which requires 33% renewable energy by 2020 and 50% by 2030. The regional solar program limits system size to 3 MW, which should substantially exceed individual building demand.

Because of the size and regulatory environment of PG&E, the Mission Rock project would probably have to fit into an existing rate structure.

San Francisco Public Utilities Commission

The SFPUC may be the electricity utility provider on the Mission Rock site as the property is owned by the Port of San Francisco. SFPUC serves city properties in San Francisco, but is expanding service to non-city customers, including the Pier 70 development. SFPUC power is generated entirely by Hetch Hetchy hydro power. If the Mission Rock development connects to this power source, the power consumed on site could be considered 100% carbon free, but California does not consider power from large scale hydro projects

to be renewable to count towards the renewable portfolio standard. Also this power would not meet the additionality requirement established by the Mission Rock project because the generation infrastructure is existing and the project would not be investing in new renewable generation sources meant solely to serve the project.

If SFPUC is power provider on site, there may be more flexibility to create a program that meets the goals for the site, while meeting metering and regulatory requirements. Arranging this program would require meeting with the SFPUC to determine the both the metering requirements and generation source. This may be easiest to manage at horizontal developer scale, to simplify negotiations. A structure similar to PG&E's Direct Access program or a program where SFPUC operates the generation source, but the Mission Rock development pays for the infrastructure, could work.

If none of these options with either utility meet Mission Rock's requirements, a pure financial transaction "contract for differences" might be a viable alternative. Mission Rock would enter into an agreement with a solar developer to build and operate a renewable energy generation source. The solar developer would then sell this power directly to the utility at wholesale prices. This revenue would then be used to offset the cost of power purchased on the Mission Rock site. A program like this would essentially work as a virtual net metering arrangement at the utility scale. This acts as a hedge against the cost of power increasing.

CENTRAL PLANT OFFSETS

The central plant will also need to offset its energy consumption with a renewable source. The electricity required to operate the chillers and other equipment can be offset the same as the rest of the electricity on site, while the approach to offsetting gas consumption may require a different approach.

Biomethane Pipeline Injection

Biomethane produced from biomass, dairy manure, or other low impact sources can be injected into the grid to offset traditional gas production and consumption. This gas can be purchased remotely by customers to offset gas consumption on a project site. This method of gas offset is very similar to the structure proposed for renewable electricity offsets on the Mission Rock site. There are multiple companies injecting biomethane into the natural gas grid in California. Biomethane grid injection is the preferred energy approach as it is a direct investment in gas. This approach is summarized in Figure A5.7.

On-site Biomethane Production

Wastewater, rich in nutrients, from the Anchor Brewery on site can be used to produce biomethane for use in the central plant. The amount of energy produced by this system is difficult to predict without further information from Anchor, but it would probably be insufficient to meet the entire demand of the central plant and the remaining offset would have to be met through other approaches. Furthermore, Anchor may already be planning to install a system to treat their wastewater and produce energy, which would make

this source of biomethane unavailable to the Mission Rock central plant.

Electricity Offsets

The natural gas consumption in the central plant and individual buildings can be offset with renewable energy, where the renewable production is equal to the gas consumption of the central plant. A framework for translating gas consumption to electricity is defined in the DOE definition of Net Zero buildings in “A Common Definition for Zero Energy Buildings” which permits the use of renewable energy to offset non-renewable fuel consumption. This approach to gas consumption offsets is summarized in Figure A5.8.

This approach would require the roofspace of Pier 48, the parking garage in Parcel D, or equivalent renewable energy output off-site.



MISSION ROCK

TRANSPORTATION
PLAN





MISSION ROCK

TRANSPORTATION PLAN

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MISSION ROCK DESIGN DOCUMENTS

The Transportation Plan comprises the fifth in a set of five documents which together describe the requirements for the development of Mission Rock.



MISSION ROCK VISION & DESIGN INTENT

This document contains the big picture thinking and aspirations that will guide the process for the design and implementation of Mission Rock.



MISSION ROCK DESIGN CONTROLS (DC)

This document guides the development of the open spaces, streets, and buildings at Mission Rock. The DC ensures that the site will be developed in a way that is consistent with the vision as defined in the Mission Rock Vision and Design Intent document.



MISSION ROCK SUSTAINABILITY STRATEGY

This document identifies the high level sustainability goals for Mission Rock, details the requirements for the horizontal and vertical development and summarizes the anticipated reduction in greenhouse gas (GHG) emissions resulting from the district's approach to sustainable design.



MISSION ROCK INFRASTRUCTURE PLAN

The design of the landscape, buildings, and sustainability strategies will be closely coordinated with the infrastructure planning at Mission Rock. This plan regulates the complex coordination of streets, utilities, and services.



MISSION ROCK TRANSPORTATION PLAN

This plan describes the ways in which the site will be designed to support the mobility choices of all users, with a special emphasis on safe and comfortable conditions for pedestrians and cyclists.

01

INTRODUCTION

Located just steps from the center of the Bay Area's transportation system and along one of the premiere bicycle and pedestrian routes in the region, Mission Rock is poised to be a model for sustainable transportation. With a multitude of mobility choices built directly into the site's DNA, it will be one of the first true 21st Century developments in San Francisco.

Small, walkable blocks, wide sidewalks, and a diverse mix of uses will make it easy for those who live or work at Mission Rock to avoid traveling far to eat or shop for everyday necessities. A range of cycling facilities will ensure that cyclists of all ages and skill levels are comfortable navigating the site on two wheels. The opening of the Central Subway will mean frequent, rapid service to Market Street and downtown is just

steps away via the T-Third Muni Metro line, and access to the Peninsula and South Bay is just a few minutes further at Caltrain's 4th and King Street terminal. Supplemented by a suite of services and incentives that will make it easy to choose any mode, this wide range of mobility options mean the site will truly be a good fit for any modern lifestyle.

1.1 OVERVIEW

This document details how Mission Rock will achieve this vision. It starts by laying out the elements of the project's context that make it an ideal fit for a moment in which San Franciscans are choosing to accomplish more and more each year by a range of modes (Chapter 2). It walks through plans for the design of the site's internal streets, describing how bikes, pedestrians, and vehicles will circulate through the site and connect to its surroundings (Chapter 3). Mission Rock is committed to a robust set of infrastructure investments and ongoing programs that will make it easy to choose modes like walking, biking, and taking transit, and Chapter 4 details the planned package of transportation demand management (TDM) programs. With AT&T Park just steps away from the site, event-related travel will have an important impact on circulation patterns. Chapter 5 walks through how circulation will be managed around events to help reduce impacts on residents and employees, both on the site and in the surrounding neighborhood.

Note that this document focuses on the site's transportation programs at full build-out. The Infrastructure Plan discusses how the project will be phased and implications for the site's physical infrastructure, including transportation.



The proposed project, aerial view simulation from the northwest

1.2 GOALS

Mission Rock aims to do the following through its transportation program:

1. Facilitate lifestyles low in vehicle miles traveled (VMT) by providing a robust set of sustainable choices for movement to and from the site
2. Create a vibrant, pedestrian-oriented, and visually interesting public realm within the site
3. Connect seamlessly to the site's broader context, including the City's growing bike network, the Mission Bay neighborhood's developing network of streets and sidewalks, and the city and region's transit systems
4. Ensure that the site is adaptable to new transportation technologies and changing travel habits over time
5. Play a productive role in the City's efforts to manage event-related travel



Shared Public Way, the shared street that will serve as the primary north-south pedestrian route through the site

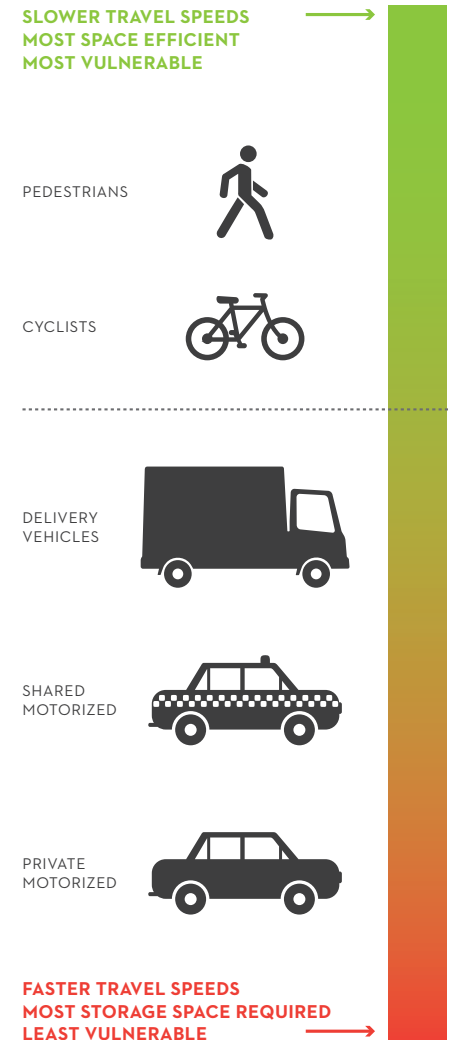


Terry A. Francois Boulevard, another shared street, will have a more maritime-industrial character

1.3 STRATEGIES

The project will accomplish those goals through the following primary strategies:

- ▶ Prioritize movement on-site using a modal hierarchy that puts the focus on the most space-efficient and environmentally sustainable modes
- ▶ Encourage walking, biking, and taking transit through convenience and meaningful incentives
- ▶ Design a highly connective street grid with generous and active pedestrian areas
- ▶ Allow for a diverse mix of uses that enables residents and employees to avoid long trips for daily necessities
- ▶ Design for safety through smart deployment of traffic calming strategies on internal streets
- ▶ Facilitate bike connectivity by adding an important link to City and regional bike networks through the site and providing safe and comfortable routing options for people of all cycling skill levels
- ▶ Create generous curb-side loading areas to:
 - ▶ Facilitate site access for people with mobility limitations and for families with small children
 - ▶ Facilitate the use of taxis and ride hail services, which can help obviate the need to bring a personal automobile to the site
 - ▶ Help site users avoid vehicle trips by facilitating convenient delivery of goods
- ▶ Actively manage parking to ensure it is used efficiently as part of the larger multimodal network
- ▶ Work in concert with neighborhood groups to help in responsibly managing event-related travel



A modal hierarchy for travel through Mission Rock

The figure on this page shows the site's urban street grid and mixed land-use plan. The site plan and approach to circulation are two key ingredients in making the transportation vision come to life.



02

PROJECT CONTEXT

Mission Rock's location, mix of uses, density, and design approach are all consistent with regional trends in land use and transportation and supportive of Bay Area planning agencies' efforts to direct new housing toward urban infill locations near transit stations.

The site's mix of uses, including residential, commercial, and retail, will make it easy for residents and employees to take care of most needs within a short walk, and the project's location will naturally facilitate the use of transit and other shared modes for longer-distance trips.

This chapter details the context into which Mission Rock fits. It looks at the broader trends and policy context, as well as the array of local transportation resources that will help make the site's sustainable, multimodal vision come to life.

2.1 TRENDS IN POLICY AND TRAVEL BEHAVIOR

Mission Rock fits into a larger context of city, regional, and state policy encouraging transit-oriented mixed-use development, as well as the emergence of new transportation options that are changing the way Bay Area residents travel to work and play. The project is poised to both take advantage of the new mobility options and further encourage these shifts.

2.1.1 STATE, REGIONAL, AND CITY POLICIES

Starting in 2006, the State of California began laying out a constellation of policies aimed at reducing the state's carbon footprint. Assembly Bill (AB) 32, signed into law in 2006, required that the state reduce greenhouse gas emissions to 1990 levels by 2020, a 15 percent reduction relative to expected trends. Senate Bill (SB) 375 was the first major policy aimed at implementing AB 32. It required that each major region in the state create a "sustainable communities strategy" that would use a combination of land use and transportation planning to create more sustainable development patterns. Furthermore, the City of San Francisco's Climate Action Strategy specifically calls for shifting 80% of all trips to non-automobile trips by 2030.

Plan Bay Area is this Bay Area's sustainable communities strategy, and concentrating growth around the existing transit system is a key pillar of the plan. The plan identified Priority Development Areas with strong transit access and higher existing densities, and Mission Rock sits along a major axis of priority development areas along the eastern edge of San Francisco.

Infill and transit-oriented development are the two most important strategies for developing in a more sustainable fashion. When projects are located in areas that are already developed, they generally allow their inhabitants to travel shorter distances to reach jobs,

grocery stores, and other daily destinations. When located near existing transit networks, they make transit the default mobility option.

Infill development has long been a priority for the City of San Francisco, and the City has an array of policies aimed at aligning the transportation system to denser development patterns. Policies include the city's long-standing "transit first" policy, a 20% bicycle mode share goal, and a collection of recent policy changes – known as the Transportation Sustainability Program – that aim to further invest in transit, bike, and pedestrian network improvements, align the environmental review process for development with other city policies, and shift travel behavior toward non-motorized or shared modes while ensuring access and mobility. Mission Rock's transportation program is consistent with this approach.

With these policies in the background, travel behavior in San Francisco seems to be steadily shifting toward transit and non-motorized modes, and the market for developments that enable transit-, bicycle-, and pedestrian-oriented lifestyles has strengthened. The last few years have seen increases in transit ridership (including record ridership levels on BART and Caltrain in recent years) and major increases in cycling, particularly for commutes.

2.1.2 THE IMPACT OF TECHNOLOGY

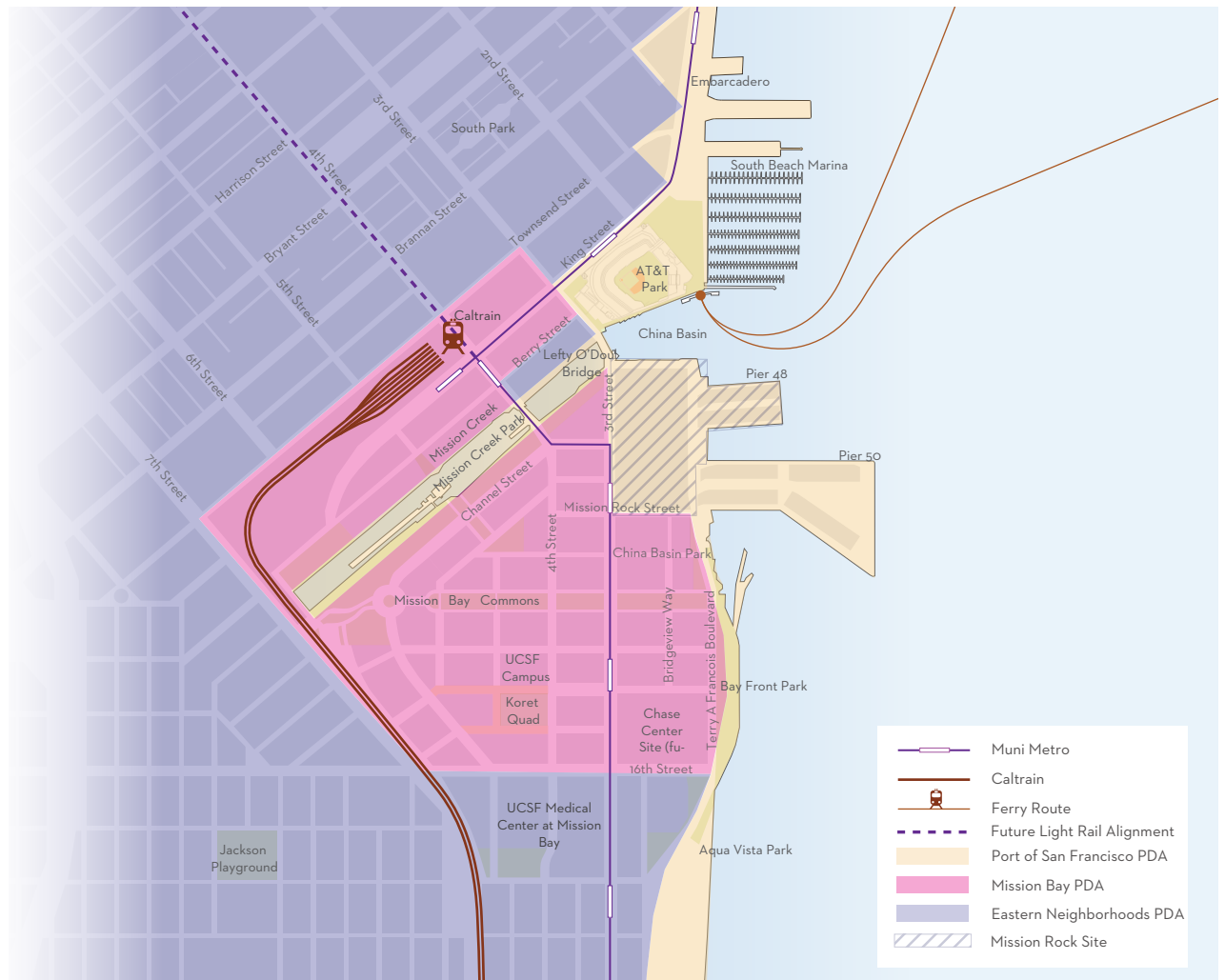
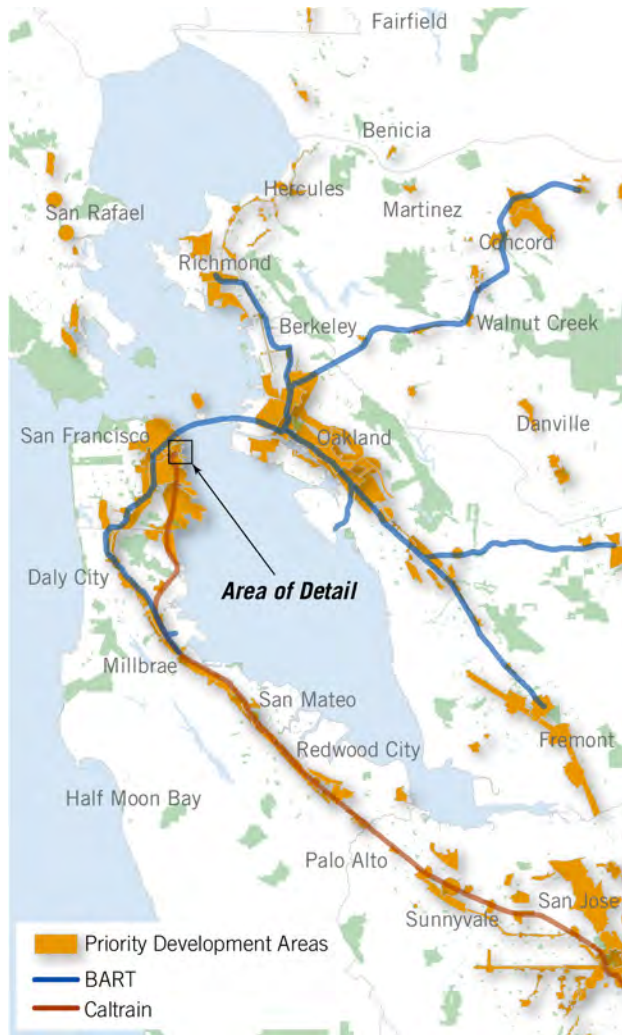
New technology-enabled travel options have also emerged, making it easier to routinely travel longer distances or make trips that do not align well to the transit network without owning a car. Car share companies like Zipcar and City Car Share have made it easy to rent vehicles, stored conveniently in small pods across the city, for short periods. This allows people who



SFMTA has installed "red carpet" transit-only treatments around the city in recent years (SFMTA)



Cycling rates have increased dramatically in recent years (FLICKR USER RICHARD MASONER)



Plan Bay Area's Priority Development Areas (PDAs) and regional transit connections

do not own a car to conveniently accomplish errands that require hauling more than one can carry on transit or a bicycle. Transportation network companies (TNCs) like Uber and Lyft and taxi hailing apps like Flywheel have made it far easier and more convenient to hail rides for trips the transit system is less well set up to handle – across town or late at night.

These trends and the new suite of travel options seem to be affecting people’s behavior. A recent study showed that newcomers to the city began taking advantage of them as they emerged, with nine in 10 net new households in the city since 2000 not owning an automobile, according to data from the U.S. Census Bureau. Additional evidence from the Shared Use Mobility Center (TCRP Report 188) shows that individuals who use car sharing frequently tend to own vehicles at lower rates.

2.1.3 THE FUTURE OF TRANSPORTATION

More dramatic changes could be in the offing. In the middle of 2016, several companies announced the first limited public use of autonomous vehicles, in Pittsburgh (Uber) and Singapore (nuTonomy). Google has been developing its own autonomous vehicles and testing them around its Mountain View headquarters for several years, and several other major Bay Area companies are also working hard – sometimes in partnership with more traditional auto companies – to develop their own models. When autonomous vehicles emerge in large numbers, the Bay Area is likely to be an area that adopts them quickly.

The precise effects self-driving cars will have on urban environments is unclear, given that the technology

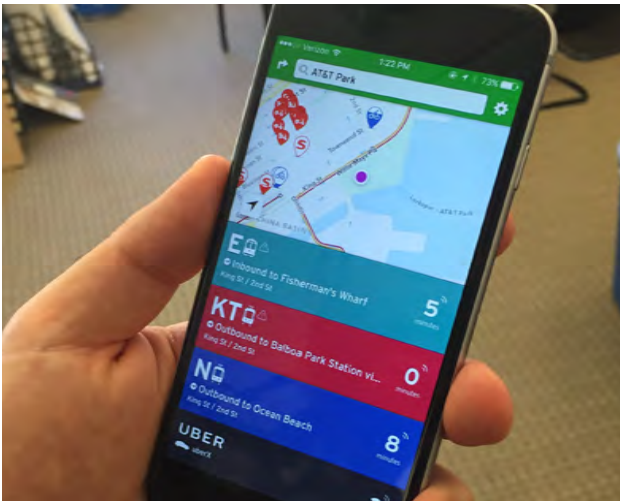
is still in the early stages of development. What is clear, though, is that they have the potential to dramatically change the way we get around, as the advent of motorized mobility did 100 years ago. Indeed, the emergence of automobiles in the early 1900s reshaped the economics and urban space needs of the transportation system.

If autonomous vehicles are used mainly as shared mobility resources, rather than privately held ones in the pattern of the vast majority of small vehicles today, they could lead to shifts like a major drop in parking demand and a major increase in the need for passenger loading space. Even if they emerge as privately owned mobility resources, though, the urban parking footprint is likely to go down. For example, if autonomous vehicles are able to communicate with each other while parking, they could theoretically squeeze together more efficiently, in much the same way as cars parked by valet can be lined up and parked in more narrow columns than can self-parked cars.

Mission Rock is set up to weather these changes well. As Chapter 3 describes, the site’s curbs prioritize loading and delivery activities, which have already taken on increasing importance with growth in online shopping and, more recently, the earliest releases of new mobility technologies. The ways in which the site’s transportation program has been shaped by its location will also help its design stay current in a world of changing mobility patterns. As detailed in the following sections, Mission Rock is located at the heart of the region’s bicycle, pedestrian, transit, and roadway networks, giving future residents, employees, and visitors a wide range of natural options for getting around, even in the absence of new technologies.



Google’s autonomous vehicle prototype (WIKIMEDIA COMMONS, USER GRENDULKHAN)



Smartphones have revolutionized access to transportation information (NELSON/INNYGAARD)

2.2 NEARBY NETWORKS

2.2.1 NON-MOTORIZED NETWORKS

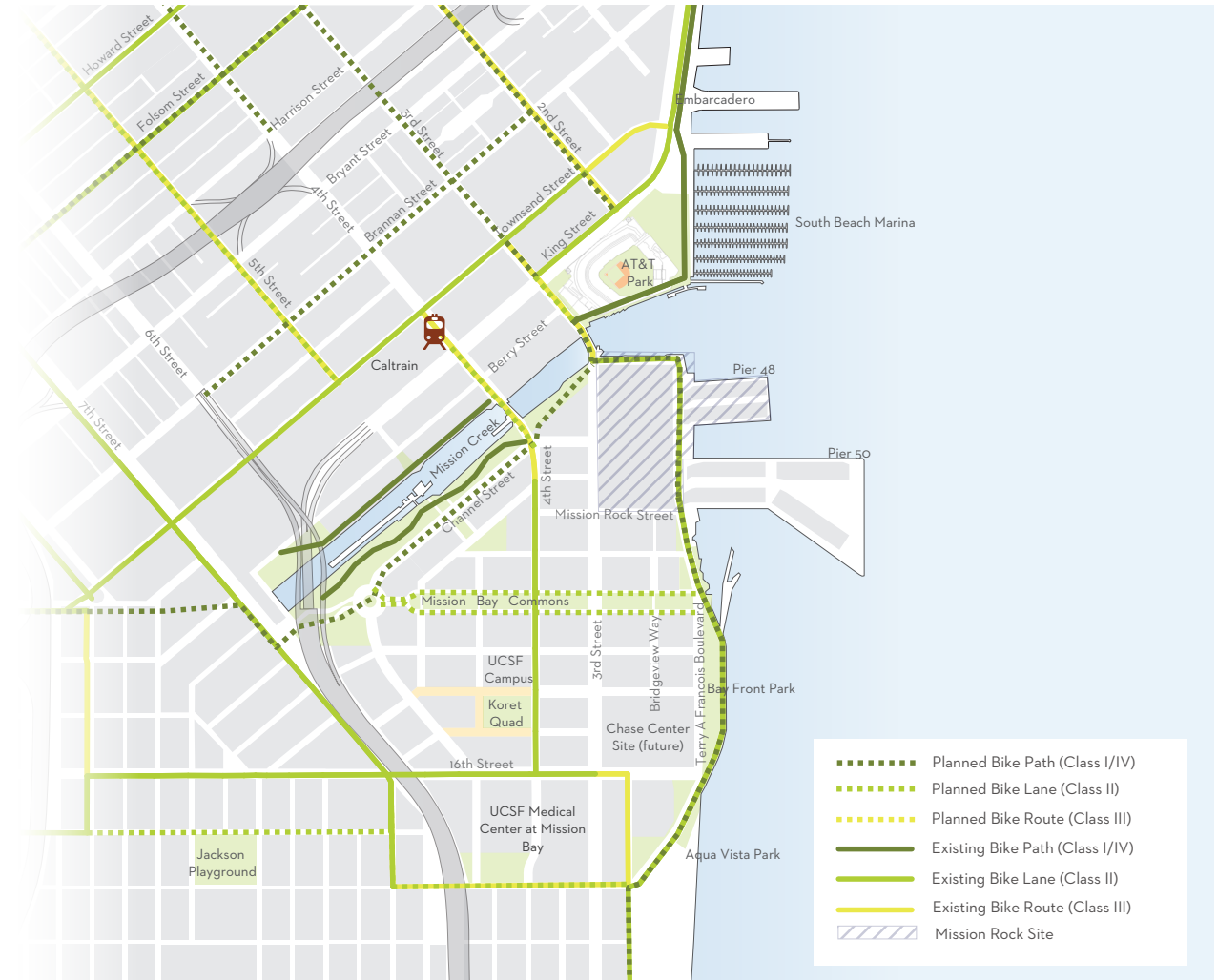
Pedestrian

Most trips begin or end on foot, so safe and robust pedestrian space is the backbone of any high quality transportation system.

The Embarcadero, 3rd Street, and Fourth Street are the major pedestrian routes between Mission Rock and the jobs and transit connections in SoMa and Downtown San Francisco. Pedestrian facilities on the Embarcadero are wide and spacious, while sidewalks through SoMa are typically more narrow and less well maintained. The City's Central Corridor Plan aims to steadily improve pedestrian conditions as the area grows and changes in the coming years. Mission Bay's street network is also in the process of being built out. Once the area's development is complete, all streets in the area will have sidewalks on both sides that are six feet wide, and in many places 10 or 12 feet.

Bicycle

San Francisco continues to build bicycle lanes of various class distinctions throughout San Francisco as part of its implementation of the 2009 San Francisco Bicycle Plan. In Mission Bay, dedicated bicycle lanes exist on Terry A. Francois Boulevard, Fourth Street, and 16th Street. The facilities on Terry A. Francois Boulevard will soon be improved to a full two-way cycle track as part of the larger San Francisco Bay Trail, which will ultimately be a high quality bicycle and pedestrian route along the entire bay-front. New or improved bicycle facilities are slated for multiple streets running north to Market Street, including 2nd, 3rd, and 5th streets.



Mission Rock's connections to the broader bicycle network and planned routes

2.2.2 TRANSIT NETWORKS

Mission Rock is served by several local and regional transit networks within a half-mile walk, including bus, light rail, and commuter rail. More regional connections are available a bit further to the north, along Market Street, the Embarcadero and in eastern SoMa, where there are additional regional rail, bus, and ferry options.

Local Transit – Muni

Muni provides local transit service throughout San Francisco. The following Muni routes have stops within a quarter-mile of Mission Rock:

- **Light Rail** – N-Judah, T-Third, and E-Embarcadero
- **Bus** – 10-Townsend, 30-Stockton, 45-Union-Stockton, 47-Van Ness, 55-16th Street, 81X-Caltrain Express, 83X-Mid-Market Express

Notable investments and plans underway by SFMTA include:

The Central Subway project will place the T-Third line in a subway along Fourth Street north of Bryant Street and along Stockton Street, extending it 1.7 miles north through the SoMa, Union Square, and Chinatown neighborhoods. This will provide a more direct connection between the Mission Bay neighborhood and BART at Powell Station, as well as transit-, job-, and destination-rich neighborhoods near and north of Market Street. The project is due to open to the public in 2019.

Muni Forward is a comprehensive update to Muni routes and service plans. A subset of lines called the Rapid Network is receiving particular attention through the project, including increases in service frequency and other improvements. Service along 16th Street, through

the Mission and into Mission Bay, will see notable improvements through the project, including transit-only lanes, stop consolidation, transit signal priority, and additional transit bulbs and islands. An early Muni Forward improvement that directly affected Mission Bay was the implementation of the 55-16th Street bus, creating a direct connection between the BART station at 16th and Mission streets and the center of Mission Bay, at 3rd and Mission Bay Boulevard North. In several years, that route will be replaced by a re-routed 22-Fillmore, a trolley bus that provides crosstown connections along 16th Street through the Mission and north along Church and Fillmore streets to the Lower Height, Fillmore, Pacific Heights, and the Marina. Other routes in the vicinity of the project that will see updates include the 10-Townsend and the 12-Folsom/Pacific (the latter will be replaced by the 11-Downtown Connector).

Regional Transit

Caltrain

Caltrain provides commuter rail service between San Francisco and the South Bay, with stops along the Peninsula, into San Jose and, during peak periods, south to Gilroy. Caltrain offers local, limited stop and “baby bullet” express routes which all serve San Francisco. Caltrain’s northernmost station is located about a quarter mile from the Mission Rock site at the intersection of 4th and King streets in San Francisco and is the busiest in the Caltrain system.

Notable planned Caltrain investments include:

- **Caltrain electrification** will replace the existing diesel service with electrified service between San Francisco and San Jose by 2020, allowing for increased speeds and service levels along the



Caltrain (CALTRAIN)



SF Bay Ferry (FLICKR USER PHOCA2004)

Peninsula corridor. The electrification project will also accommodate shared use of the corridor by Caltrain and planned high-speed rail service.

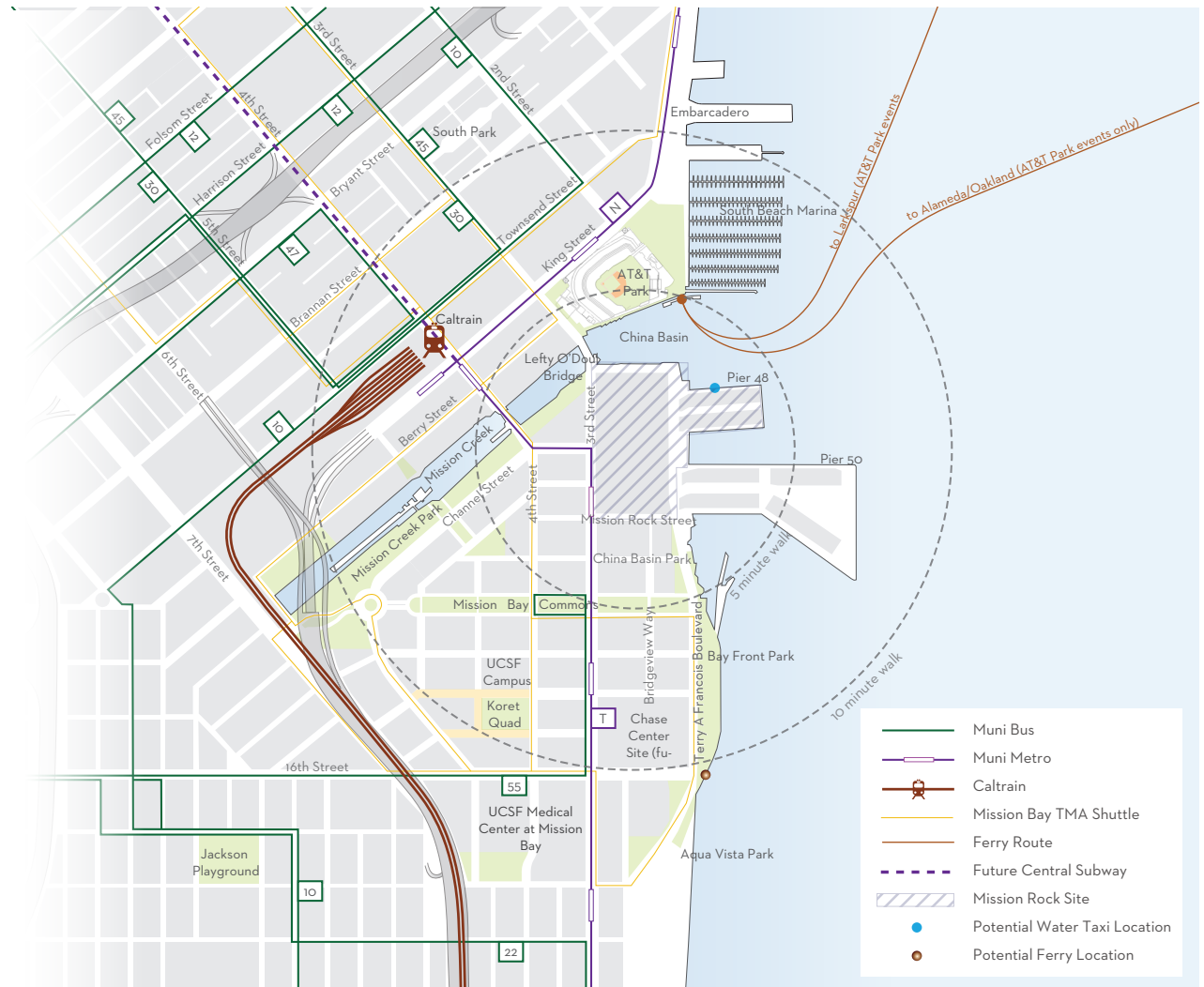
- Caltrain's **Downtown Extension** would connect Caltrain to the new Transbay Transit Center. The alignment of the extension is still being determined and is among the items being advanced in the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study.

BART (Bay Area Rapid Transit)

BART provides regional transit service to the East Bay, Peninsula, and other parts of San Francisco. The closest stations to Mission Rock – Embarcadero and Montgomery – are a little more than one mile from the neighborhood. When it opens, the Central Subway will provide a rapid light rail connection between the site and Powell Station. BART is the region's rail spine, and it operates every 5 to 15 minutes on lines serving downtown San Francisco during the afternoon peak and every 20 minutes during non-peak times, including weekends.

Ferries

SF Bay Ferry (operated by the Water Emergency Transportation Authority, or WETA) and Golden Gate Ferry provide daily ferry service between the San Francisco Ferry Building and the North and East Bay. Aside from services at the San Francisco Ferry Building, the nearest terminal is currently just beyond AT&T Park's center field gate, where ferries provide service to and from home baseball games. WETA and the City are exploring the potential for a new terminal in Mission Bay near 16th Street, though planning is in the very initial stages.



Local transit connections as of 2017

Transbay Transit Center: Regional Bus and High Speed Rail

The under-construction Transbay Transit Center is located approximately one mile northeast of Mission Rock and will be open by the time the development is built out. The Transit Center will provide bus connections to regional destinations, as well as access to Greyhound and Amtrak Thruway Connection buses. Once the Downtown Extension is complete, the center will also be the terminal for California High-Speed Rail and Caltrain. Upon completion, the terminal will be served by 11 transit systems: AC Transit, BART, Caltrain, Golden Gate Transit, Greyhound, Muni, SamTrans, WestCAT Lynx, Amtrak, Paratransit, and High Speed Rail.

2.2.3 VEHICULAR CIRCULATION AND PARKING

Mission Rock is located near the center of the Bay Area's auto network, providing easy access to the region's freeway system but also exposing drivers in the area to congestion resulting from the large number of daily trips to, from, and through northeast San Francisco.

Local Streets

Third, 4th, and 16th streets are the key arterials providing vehicular access to and from Mission Rock and the broader Mission Bay neighborhood. Lefty O'Doul Bridge is also a drawbridge that is used several times per day, causing traffic congestion at one of the key access/egress points for the site on 3rd Street. The bridge is a historic landmark for which major structural modification is not an option, though the city is planning to realign lanes traveling across the bridge in the



Local street network

coming years to make space along its the eastern edge for bicycle and pedestrian facilities as part of the San Francisco Bay Trail.

Regional Connections

For connections to the region, ramps to Interstate-80 and access to the East Bay are located approximately a half mile north of the site, via 4th and 5th streets. Interstate 280 provides the main connection to the South Bay, and ramps are located less than a half mile of the site to the west, via King Street, or slightly further to the southwest, at Mariposa Street.

Parking

As of SFMTA's most recent parking inventory in 2011, the Mission Bay and the Central Waterfront area (bound by the Bay to the east, Mission Creek Channel to the north, 7th Street and Iowa Street to the west, and Pier 80 to the south) had approximately 7,000 off-street parking spaces, and SoMa (bound by the Bay, Market Street, 7th Street, and the Channel) had an additional 26,000 spaces. Many of the spaces in Mission Bay are reserved for the users of specific sites like University of California, San Francisco's hospital and medical campus, but a sizable share of the spaces in SoMa are in paid publicly accessible lots and garages. Parking supplies in that area have shrunk somewhat in recent years, as surface parking lots have been redeveloped.

Many streets in SoMa and Mission Bay also have on-street parking. A large share of the on-street parking in both neighborhoods is currently metered per SFpark pricing policies to manage demand during nearby special events.



Parking facilities near Mission Rock (2015)

2.3 TECHNOLOGY-BASED TRANSPORTATION

As noted earlier, technology-based transportation companies offering car share, bike share, and app-based ride hailing (e.g. Lyft and Uber) are changing the way people travel. Although it has yet to be determined how ride hailing trips affect the number of overall driving trips, these innovative services have enjoyed early and growing adoption by Bay Area residents, particularly San Franciscans, and they are widely available in the areas around the project.

Car-share has emerged as a strong mobility option for households without cars. Efforts to quantify the impacts of car sharing have found that car share members drive 40% fewer miles than the average driver and take 46% more public transit trips, 10% more bicycle trips, and 26% more walking trips. The average household reduces its vehicle ownership by 50% after joining a car-share service.

Bike share provides another short-term mobility option, offering hourly rental of bicycles. Unlike car share programs offered in San Francisco, bike share allows for one-way rentals. Bay Area Bike Share is poised to expand dramatically throughout San Francisco by the



City Car Share (WIKIMEDIA COMMONS, USER MARIORDD)



Bay Area Bike Share (WIKIMEDIA COMMONS, USER MARIORDD)



Scoot (FLICKR USER MARTIN WICHARY)



Water taxi service in Chicago (FLICKR USER LUKE GORDON)

time Mission Rock opens, with a plan to expand to 7,000 bicycles by 2018.

Scooter sharing is another service that has emerged in San Francisco in recent years. Scoot offers \$3 one-way rentals of its fleet of more than 400 small two- and four-wheeled vehicles. The two-wheelers travel as fast as 30 miles per hour, and the four-wheeled “mini-cars” travel 25 miles per hour. Users of the service find nearby vehicles and unlock them using the company’s smartphone app.

TNCs like Lyft and Uber provide on-demand booking of one-way car trips via smart phone app, and have recently expanded to facilitate shared vehicle trips (through Lyft Line and UberPool).

The rest of the private transit market is an evolving landscape, consisting of long-distance employer shuttles, short-distance institutional and transportation management association (TMA) shuttles, on-demand commuter shuttles, and other services.

Long-distance employer-sponsored shuttles currently make trips to many office campuses outside of San Francisco (e.g. technology companies in the South Bay). An SFMTA program that designated certain Muni bus stop and other designated curb locations is ongoing.

There are a number of **short-distance shuttles** in operation in the project area. Currently, the Mission Bay TMA operates five routes from Mission Bay to Market Street and points throughout SoMa. Most of the routes operate only during peak periods Monday through Friday. Numerous companies and institutions also offer shuttle service within San Francisco. For example, Levi’s operates a shuttle between Caltrain and BART stations and the company’s headquarters in Levi’s Plaza.

Chariot, which offers a **demand-responsive microtransit service** using 14-passenger vans, operated nine public routes during the morning and evening commute periods as of August 2017. The service typically utilizes white curb loading zones for passenger drop-off and pick-up. Chariot recently expanded many of its routes

and now serves points in the South Bay and East Bay, in addition to intra-San Francisco routes.

Two **water taxi** companies currently run limited service between points along the Bay, including the San Francisco Ferry Building. Over time, water taxi operations may expand with growing demand, and there is potential for a landing at Pier 48 and, with the exception of winter, at AT&T Park’s ferry dock.

These evolving transportation services provide people in San Francisco with new options to move around the city and the region, further supporting a multimodal lifestyle not dependent upon ownership or use of a private vehicle.

03

GETTING AROUND AT MISSION ROCK

Mission Rock will be designed to give all users high quality choices for how they move about the site and how they get to and from it.

The site will feature generous and active pedestrian areas throughout, and the bicycle network will give cyclists of different ages and skill levels high quality options. Wide sidewalks and wayfinding will help people find the variety of nearby transit options, and Mission Rock's entire street grid will provide comfortable access

to the waterfront and, at Pier 48, a variety of water transportation options as well.

This chapter expands on these ideas, laying out the vision for how people will get around Mission Rock. Note that the project's Design Controls go into more detail on dimensions and materials.

3.1 NON-MOTORIZED CIRCULATION

Mission Rock's streets will be designed with the site's modal hierarchy in mind, prioritizing the safe and comfortable movement of pedestrians. Streets will include a variety of features that will help ensure that pedestrians feel safe and comfortable moving throughout the site by keeping vehicle speeds slow and ensuring that those on foot or on bicycles are highly visible to motorists.

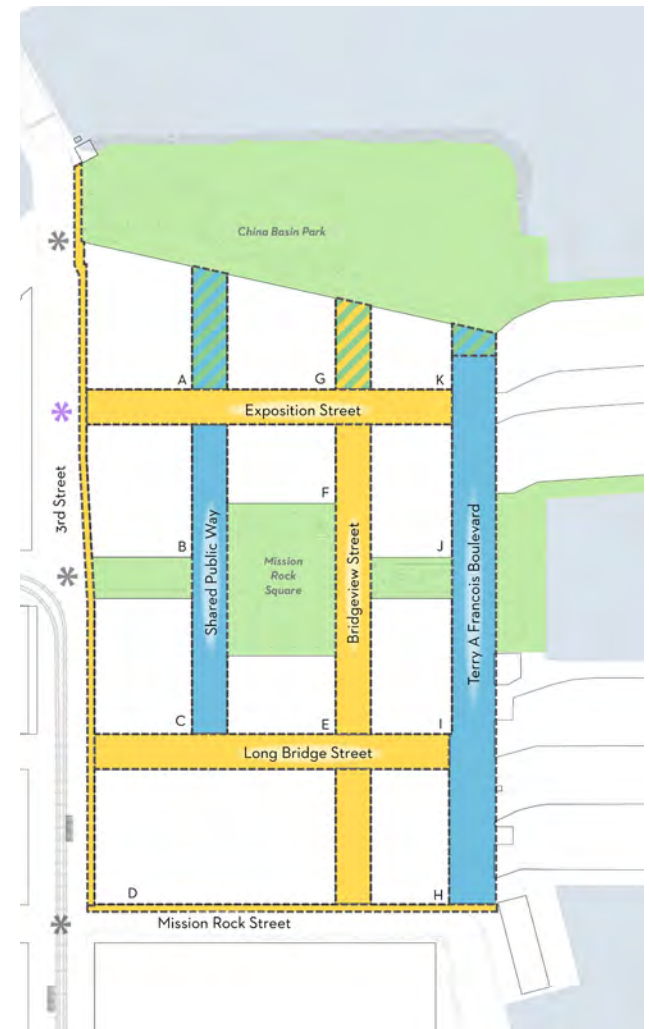
As specified in the Design Controls, all crossings will be marked using high visibility paint and other treatments, and all curbs will include ramps to facilitate accessible paths of travel. Some will be reinforced by bulbouts that bring curbs to the edge of travel lanes, shortening crossing distances and making pedestrians who are readying to cross more visible to drivers. At others, "tabletop" treatments will bring the roadway to sidewalk level and change paving materials through intersections. The changes in grade and visual treatment have been shown to make motorists instinctively slow down through these sensitive zones.

On the site's curbed streets, a combination of street furnishings, lighting treatments, and generous sidewalks will make pedestrian space vibrant, inviting, and comfortable even when pedestrian volumes are higher before and after events. Lighting will be at a pedestrian scale, and furnishings like benches and planters will create variety and a sense of protection from vehicle flows between the curbs. All three north-south streets will transition seamlessly into China Basin Park via vehicle-free zones at their northern ends.

3.1.1 SHARED STREETS

Shared streets, in which all modes mix across the entire street cross-section, will form the backbone of north-south pedestrian circulation, strategically placed along key paths of travel. These streets will be curbless, following street design approaches seen in Europe along key walking corridors and high streets. Visual and tactile cues like changes in the color or texture of pavers, bollards, street furniture, light fixtures, plantings, and tactile warning strips will differentiate between areas dedicated to pedestrian movement and areas shared by pedestrians, bicycles, and vehicles. These types of streets are somewhat rare in San Francisco, but the Mission Rock team has worked closely with the City to design the streets in a way that works with local norms and regulations. The Design Controls document describes the design of these streets in more detail.

The Shared Public Way will be a key retail corridor through the site, creating a vibrant connection between AT&T Park to the north and the ballpark's main parking facility at the southern end of Mission Rock. Lined with ground-floor shops and cafes, the street will feature



Street types on the Mission Rock site

patio seating and displays that extend the ground-floor uses into the right-of-way, creating “street rooms” that invite people to stroll and linger. The street will only allow northbound vehicle movement, and entrances to the zone will feature signs and other visual cues to make clear that vehicle access is for drop-off, pick-up, and deliveries only.

Terry A. Francois Boulevard, along the eastern edge of the site, will be a slightly different shared street, mixing the area’s maritime history with a newer identity as a place where people come together for all kinds of activities. The boulevard will feature a slow two-way, plaza-like shared zone for all modes between wide zones reserved for walking, biking, and loading. The San Francisco Bay Trail will extend through the site on the east side of the street, and the west side will allow pedestrian and loading access to ground-floor maker spaces, which will be raised slightly above street level in an ode to traditional industrial and warehouse building vocabulary.

3.1.2 BICYCLE FACILITIES AND CIRCULATION

In keeping with the rest of the transportation program, Mission Rock’s approach to bicycle circulation is about providing a multitude of choices, with facilities designed for leisurely riders along the waterfront and higher speed facilities along more direct routes to SoMa, Downtown, and other points north of the site.

Even in cities with higher rates of bicycle commuting like San Francisco, researchers estimate that a considerable number of additional people might consider cycling if there were a network of slower, more protected facilities that made them feel safe and comfortable while riding. Mission Rock will provide routes to and through the site that speak to this need, and these facilities will connect to a large and growing network of bicycle facilities in the surrounding area.

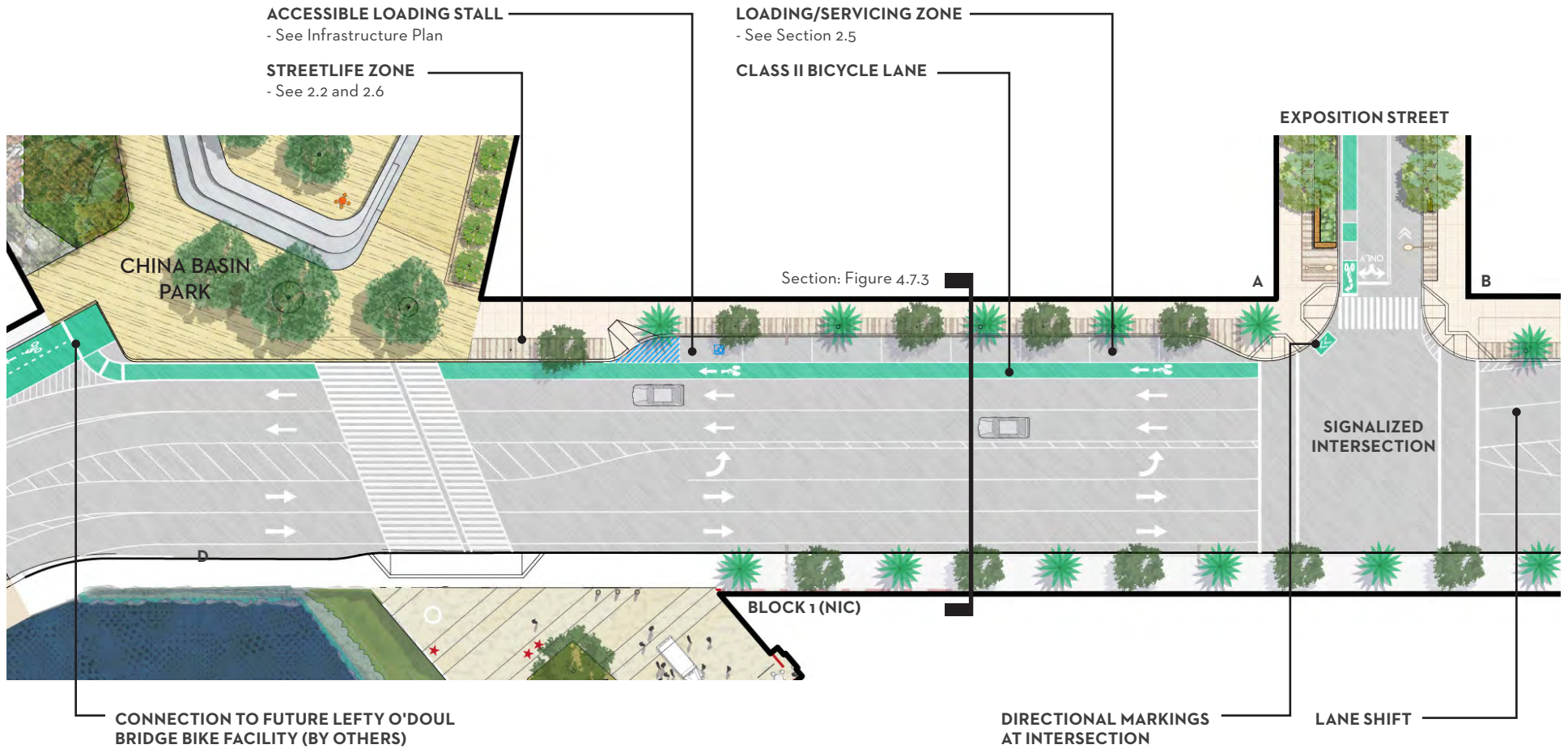
The San Francisco Bay Trail’s connection through the site will provide a comfortable route for cyclists of all ages. Visual cues at north and south gateways to the multi-use path will encourage slower bicycle speeds, opening space for younger and older cyclists, as well as pedestrians. The figures on the following pages show how the bicycle facility is anticipated to connect into the City’s bicycle network on the north and south ends. For more detail on the proposed design of these intersections or other streets, see Chapter 4 of the Design Controls.

A cycle track route along Bridgeview Street will provide a higher speed connection between the Embarcadero and points south of the site for commuters and more

-  Planned Bike Path (Class I/IV)
-  Planned Bike Lane (Class II)
-  Planned Bike Route (Class III)
-  Existing Signal Location
-  Planned Signal Location
-  Access to Below-Grade Parking (if provided)



Bicycle circulation concept



A northbound buffered bicycle lane would provide commuters an alternative to traveling through China Basin Park to connect to a planned two-way cycle track across Lefty O'Doul Bridge.

experienced cyclists. A raised and green-painted two-way track protected by a painted buffer zone and soft-hit posts or another buffering approach will clearly reserve a piece of the right-of-way for cyclists. A two-way stop will control cross-traffic on Long Bridge Street to enable a faster and smoother ride for north- and south-bound cyclists. The intersection will be raised to the level of the cycle track to slow cars as they approach and move through the intersection. To connect to high quality bicycle facilities planned for Lefty O'Doul Bridge and the Embarcadero, the route will rejoin the San Francisco Bay Trail in China Basin Park. Northbound cyclists will be able to bypass the park via a painted bicycle lane along Exposition and 3rd streets.

The Design Controls document contains more detail on the planned design of these facilities. That document will be updated as the design team works with the City to ensure that bicycle facilities on the site connect seamlessly to improved facilities north and south of the site, to be implemented in the next several years.

For cyclists with destinations in Mission Rock, the site will provide a variety of bicycle storage options, including a network of spaces in public areas and conveniently located secure spaces inside the site's residential and office buildings. The project team anticipates that an existing bike share provider will install at least one bike share pod on the site, connecting to the much expanded bike share network that hit San Francisco streets in 2017.



Bridgeview Street imagined, with a two-way cycle track providing a faster option for commuters.

3.2 TRANSIT ACCESS

The Mission Rock site offers close, comfortable connections to several fast, high frequency, and high capacity transit options. By the time Mission Rock opens for occupancy, the T-Third Muni light rail line will have begun providing quick access to Market Street via 4th Street and the Central Subway (Mission Rock Station is located adjacent to the site, at the intersection of 3rd and Mission Rock streets). Caltrain's San Francisco terminal is a 10-minute walk from the site at 4th and King streets, and BART will be a 20-minute walk or quick T-Third ride away. Bay Area Bike Share will also provide a fast and convenient way to get to transit nodes like Market Street's subway stations and the Transbay Terminal.

The project team will implement a multi-pronged signage and wayfinding strategy to ensure that residents, employees, and visitors understand just how convenient it is to access these high quality mobility options. Outdoor static wayfinding will show basic directions and distances to nearby transit stops, and interactive information kiosks in key places on the site will provide access to more specific directions and real-time transit service information. For residents and employees, a Mission Rock website and screens in building lobbies will both show real-time transit information.

Elements of the site's transportation demand management program will also encourage transit use. See Chapter 4 and the Mission Rock TDM Strategy for more information on transit-supportive programs and incentives.



Transit screens set up in an office lobby (TRANSITSCREEN.COM)



Wayfinding signage in Amsterdam (FLICKR, ANDREY KARMATSKY)



Interactive information kiosk (USDOT)



Directional wayfinding to transit (FLICKR, CHRIS HEATHCOTE)

3.3 VEHICULAR CIRCULATION

Mission Rock’s street network will be dense, highly connective, and strongly tied into its surroundings. The interior street grid will link up with the developing Mission Bay street network at several points, continuing east-west and north-south streets that currently dead-end at the edges of the project site. Bridgeview Way, which today runs between South Street and the southern border of the project site at Mission Rock Street, will continue as Bridgeview Street through the site to China Basin Park. Long Bridge Street, which today links Third and Fourth Streets will extend to the waterfront at Terry A. Francois Boulevard.

Most vehicles will enter the site from 3rd Street, the main north-south vehicular route through Mission Bay. The figures on this page show estimated relative vehicle flows through the site at peak periods, extrapolated from traffic modeling done for the Transportation Impact Study.

The site’s approach to providing parking would place a single garage near the southwestern corner of the project site, which would keep most private vehicle traffic at the southern and western edges of the site. The project’s entitlement documents also include an alternative parking approach that would distribute the site’s parking supply between an above-ground facility at the site’s southwest corner and a smaller facility under Mission Rock Square.

Vehicular circulation through the rest of the site should mostly consist of delivery vehicles and cars dropping off

or picking up passengers. Mission Rock will proactively manage commercial delivery activity, discouraging deliveries during commute periods and encouraging them instead in the early morning hours or late at night. The Mission Rock team will put together a detailed loading management plan for each phase of the project. The team will also work with tenants that are likely to regularly receive large-truck deliveries, such as potential tenants in Pier 48, to ensure that individual deliveries are appropriately staffed to maintain safe conditions for other street users.

As specified in the Design Controls, passenger loading spaces on the Shared Public Way, Bridgeview Street, Long Bridge Street, and Terry A. Francois Boulevard each have curb conditions that meet the standards of the Americans with Disabilities Act, for pick-up and drop-off of passengers with mobility limitations. During specified hours, parcel delivery will be concentrated around commercial loading zones on 3rd, Exposition, and Long Bridge streets and Terry A. Francois Boulevard. Outside of those hours, these spaces would open up to use by private cars picking up and dropping off passengers and for-hire passenger vehicles like taxis and TNCs.

The shared streets – Shared Public Way and Terry A. Francois Boulevard – are expected to see very low traffic volumes, consisting mainly of loading for passengers with mobility limitations. “Traffic calming” treatments like changes in paving materials and changes in roadway grades will help ensure that volumes and speeds stay low

(see the Design Controls for more detail). If all parking is concentrated in a single facility at the southwest corner of the site, Channel Lane and Channel Street will each be closed to vehicle traffic. If the project ultimately includes a parking facility under Mission Rock Square, one or both streets may provide vehicle access to the facility.

3.3.1 INTERSECTION CONTROLS

Most internal intersections will be controlled by all-way stop signs. As noted earlier, one intersection along Bridgeview Street will only stop cross traffic on Long Bridge Street to allow for smooth and efficient cycling along the route.

Third Street’s interfaces with Mission Rock and Channel streets will be controlled by traffic signals, as they are today. A signal that currently controls the intersection of 3rd Street and Terry A. Francois Boulevard and halts traffic when Lefty O’Doul Bridge is raised for boat traffic entering Mission Creek is anticipated to remain where it is, allowing for signalized control of what will be an important pedestrian and bicycle connection between China Basin Park and a linear park on the west side of 3rd Street. An additional signal is planned at the intersection of 3rd and Exposition streets. The exact sequence of signals along 3rd Street will be determined by the San Francisco Municipal Transportation Agency and the Department of Public Works.

In keeping with the way major entries and exits from AT&T Park’s main parking lot are managed before and after events today, intersections around the site’s



Relative parking-related vehicle flows and garage access control plan (one-garage scenario)



Planned passenger loading zones



Proposed intersection control plan

parking garage may be controlled by traffic control personnel (also known as parking control officers, or PCOs) before and after events. The number and location of PCOs will be identified in the project's development agreement with the City. See Chapter 5 for more on traffic control before and after major events.

3.3.2 PARKING

Strategic parking management is a cornerstone of the Mission Rock transportation program. A parking garage on the site's southwestern parcel will be the site's main parking facility, with 2,300 to 3,000 of the maximum of 3,100 parking spaces allowed on-site, per the development's entitlement documents. The garage will be used to serve the needs of both users of Mission Rock and users of AT&T Park, replacing the surface parking lot that currently covers the entire site. The site's entitlement documents include an alternative parking approach that could reduce the size of the main garage and locate some of the site's parking supply in a smaller facility under Mission Rock Square.

The site's parking supply will be managed around major AT&T Park events in much the same way as the surface lot is today: To ensure that there is adequate space available for event attendees, prices will be raised around event times to clear the garage at the site's southwest corner. When there is not an AT&T Park event on the calendar, available capacity in the facility could serve the needs of some users of Chase Center (the Golden State Warriors' planned arena and event center at 16th and 3rd streets) as well.

Outside of event times, most parking at Mission Rock will be a resource shared flexibly by all of the users of the site. This arrangement is an alternative to the traditional suburban model of requiring that a certain number of spaces be reserved for each individual use (i.e. office, residential, retail, or restaurant), with enough to accommodate each use’s estimated peak demand. Sharing allows a more limited number of spaces to go further by taking advantage of the fact that different uses have different peak periods. For example, peak demand for parking related to office uses tends to take place in the late morning or early afternoon, while peak demand for residential uses is typically overnight. One set of parking spaces can serve both needs. The figures at the right illustrate how this approach to parking management typically results in the need for fewer spaces.

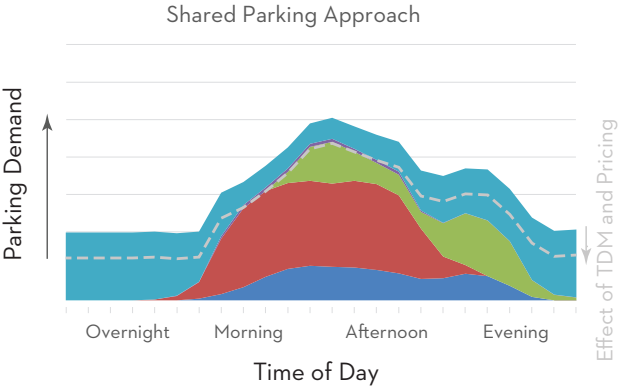
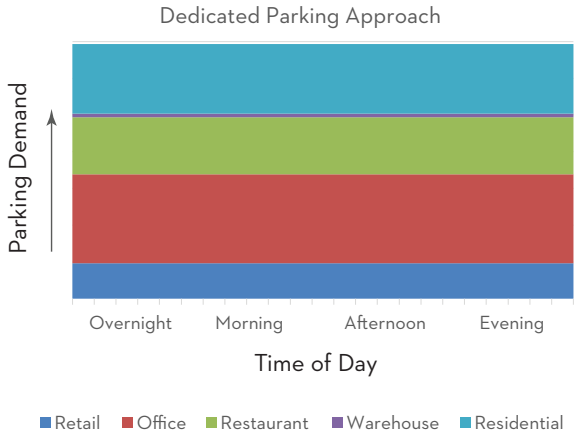
While most spaces will be designed for a typical self-park arrangement, with parking stall widths of eight to nine feet and vehicle circulation lanes, a portion of the spaces for long-term users could be in more

space-efficient vehicle stackers. Approximately 60 of the vehicle spaces will also be reserved for car share and scooter share vehicles (see additional information about vehicle sharing programs in Chapter 4).

3.3.2.1 Parking Pricing

The price of parking has been shown to be a highly effective mechanism in changing parking and travel behavior. Parking prices at Mission Rock will be set according to levels of demand: During times with higher levels of typical demand, parking might have a higher price, encouraging the use of other modes. Prices would not change in real time based on current occupancy, but might be adjusted overall a few times a year based on recent occupancy data. Prices might automatically increase by a pre-set amount during peak periods, based on typical demand patterns, or for scheduled events.

Given the project’s desire to encourage people to the most sustainable mode that fits their lifestyle, hourly, daily, and monthly parking prices will be set based



These figures illustrate how the concept of shared parking often results in reduced parking supplies overall. Because different uses see peak demand at different times, the total parking needed at any given time in a shared arrangement can be as much as one third less than what would be needed if each use had to accommodate peak demand separately. Pricing and TDM can reduce demand further.

on market prices in the surrounding neighborhood. Disseminating pricing and availability information is critical to ensuring that users are able to change behavior in response to changes in price. Real-time parking information will be shared in a variety of ways, including the Mission Rock website and dynamic signs at entrances to the site.

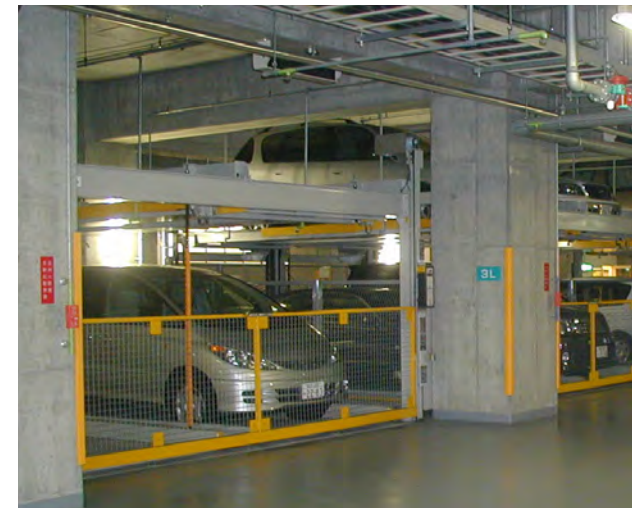
The price of parking at Mission Rock will be unbundled from residential and commercial leases, which means parking will not be included in rental agreements by default – residents and employees will need to purchase a daily or monthly parking permit separately. This approach is in-line with City of San Francisco policy and ensures that site users who do not own a car or do not plan to commute to the site by single-occupancy vehicle are not burdened with the price of parking they do not plan to use.

3.3.3 EMERGENCY ACCESS

All of Mission Rock’s streets have been designed to provide appropriate clearance for emergency vehicles like large fire trucks. Corners have also been designed to accommodate the turning needs of large vehicles. The site’s highly connective street grid will help facilitate emergency access to all of the site’s buildings. Streets closed to general vehicle traffic will be made accessible to emergency vehicles as needed. The Infrastructure Plan contains further detail on the streets’ technical specifications that allow for the safe circulation of emergency and other larger vehicles.



Dynamic parking information board (NELSON\WYGARD)



Car stacker (SAEPARKINGSOLUTIONS.COM.AU)

3.4 CONCLUSIONS

Mission Rock’s design reflects the future of transportation in San Francisco. More and more, people count on having convenient access to several ways of getting around, and Mission Rock provides comfortable facilities for all kinds of lifestyles. Mission Rock is designed to be safe and comfortable to pedestrians and cyclists, to create easy paths of access to the wealth of nearby public transit options, and to ensure that those who rely on motorized transportation can be dropped off or picked up in convenient locations around the site.

Of course, circulation infrastructure is only part of the program. The next chapter details the strategies and up-front investments that will help further provide incentives for the use of sustainable, space-efficient modes of transportation.

04

TRANSPORTATION DEMAND MANAGEMENT

Mission Rock's transit-rich context and its bicycle and pedestrian-oriented approach make the site a prime candidate for robust and effective transportation demand management (TDM).

This chapter summarizes a comprehensive TDM program that will enable Mission Rock to actively manage travel demand through a variety of up-front infrastructure investments and ongoing programs. Ultimately, a robust

TDM program will reinforce Mission Rock's forward-thinking vision and its aspirations to be an active and vibrant district that is inclusive and safe for all users.

4.1 PLANNED STRATEGIES

Cities and campuses alike have implemented TDM programs to reduce single-occupancy vehicle (SOV) travel and find the optimal balance of transportation modes to accommodate growth. New residents and office tenants increasingly demand convenient access to quality multimodal infrastructure, and in urban areas like San Francisco, they assume that parking will be treated as a limited commodity that will be priced based on occupancy levels and market rates. The Mission Rock TDM Plan is in line with these expectations and exceeds them in important ways to maximize user satisfaction and foster travel choices that are sustainable in all senses of the word.

As summarized in this chapter, the Mission Rock TDM Plan consists of a package of cost-effective strategies that will work together to affect behavioral change. Strategies include incentives, programs, and infrastructure improvements, and they include many that have been successfully implemented in other mixed-use and urban environments. The package of strategies aims to reduce the number of daily SOV trips to the project site (as projected in the site’s environmental impact report) by 20%.

The tables on this and the opposite page give an overview of the individual programs that comprise the site’s overall TDM Plan. The text that follows provides some information on these programs; complete operational details are included in a separate TDM Plan document. A few of these recommendations have also been directly integrated into the design of Mission Rock, as codified in the Design Controls and other design documents.

Note that TDM programs work together to reduce demand, providing users with a complete package of incentives and infrastructure that can allow them the flexibility to use the mode that makes the most sense for them on a given day. This is in-line with the overall approach to transportation at Mission Rock - providing a variety of high quality mobility choices.

The collection of programs has been thoughtfully crafted into the cohesive strategy outlined in this chapter and further detailed in the TDM Plan document. While some TDM strategies like parking pricing have a more direct effect on travel behavior, others like facilitating delivery services play a more supportive role. Individual strategies would be unlikely to have the same impact in the absence of other strategies.

MEASURE TYPE	INFRASTRUCTURE AND POLICY	OPERATIONAL	
4.1.1 TRANSIT	4.1.1.1 Real-Time Transit Information and Marketing Screens	4.1.1.1 Dynamic Transportation Information	4.1.1.2 Transit Subsidies
4.1.2 BICYCLE	4.1.2.1 On-Site Bike Share 4.1.2.5 Bicycle Parking 4.1.2.6 Showers and Lockers	4.1.2.2 Bike Share Memberships 4.1.2.3 Bicycle Community Programming	4.1.2.4 Bicycle Resource Centers 4.1.2.7 Bicycle Valet
4.1.3 MOTORIZED TRANSPORT	4.1.3.1 On-Site Shared Scooters 4.1.3.3 On-Site Car Share Parking Spaces	4.1.3.2 Scooter Share Memberships	4.1.3.4 Car Share Memberships
4.1.4 PARKING	4.1.4.3 Unbundled Parking	4.1.4.1 Parking Pricing 4.1.4.2 Real-time Parking Pricing and Availability Information	
4.1.5 BUILDINGS	4.1.5.4 Cold and Dry Delivery Storage Space 4.1.5.5 Convenient Zones for Loading and Building Servicing 4.1.5.6 Childcare Facilities 4.1.5.7 Collaborative Work Space 4.1.5.8 Affordable Housing	4.1.5.1 In-Building Concierge Services 4.1.5.2 Coordinated Delivery Services	4.1.5.3 CSA Partnerships 4.1.5.6 Childcare Services
4.1.6 ALL AREAS	4.1.6.1 Signage & Wayfinding Across Modes 4.1.6.4 Improved Walking Conditions	4.1.6.2 Mobile-Friendly Mission Rock Transportation Website 4.1.6.3 Site-wide transportation staff	

4.1.1 TRANSIT STRATEGIES

4.1.1.1 Real-time Transit Information and Marketing Screens

Dynamic transit information and transportation marketing to residents, employees, and visitors will be displayed on screens in building lobbies, or a similar approach will be used based on state-of-the-practice technology at the time of occupancy. Information will be also displayed in other high traffic areas, such as collaborative work spaces inside residential and office buildings around the site or childcare facility entrances. Making such information readily available can increase residents’ awareness of local transit options and facilitate efficient trip planning.

4.1.1.2 Transit Subsidies

Clipper Cards pre-loaded with some cash value will be provided to all residents upon move-in, and business tenants will be required to offer employees the same. Clipper is the Bay Area’s transit fare payment card and can be used on more than 20 of the region’s transit agencies, including BART, Muni, and the ferries. Providing Clipper Cards upon move-in can increase residents’ awareness of nearby transit options and increases the ease with which they can start using it. Clipper Cards can also be customized through a bulk purchase through the Metropolitan Transportation Commission, helping site users further associate Mission Rock with transit access.

Providing Clipper Cards could increase the ease of using transit for employees and residents who currently do not have Clipper. For individuals who already have cards, the one-time financial subsidy could help lower

one barrier to increased transit use.

4.1.2 BICYCLE STRATEGIES

4.1.2.1 On-Site Bike Share

At least one high visibility space will be made available for a Ford GoBike dock on-site, with the possibility of additional docks depending on Ford GoBike’s intended Mission Bay expansion. Prominently located bike share docks can increase awareness of bike share as a viable transportation option while also facilitating use. Each bicycle dock would be provided and maintained by the Ford GoBike management company, Motivate, and the project team will work with the company to identify appropriate dock locations on the Mission Rock site.

4.1.2.2 Bike Share Memberships

Single-year Ford GoBike memberships will be offered to all residents 18 years or older upon move-in. Members of Ford GoBike can take free, unlimited 45-minute one-way bicycle rides between bike share stations.

Providing residents with bike share memberships could help tenants with minimal experience cycling in San Francisco a low-cost and low-obligation opportunity to try cycling, and it would provide residents with a quick and easy way to get to the Transbay Transit Center and Market Street, for BART connections and a variety of other transit options and recreational activities.

4.1.2.3 Bicycle Community Programming

Through the site transportation staff, regular bicycle parties or happy hours for the bicycling community will be hosted at Mission Rock, potentially paired with gear giveaways. Bicycle-oriented programs and events encourage bicycling by raising public acceptance and



Real-time transit information in Seattle (FLICKR USER ORAN VIRIYINCY)



Bay Area Bike Share (FLICKR USER DAVID GOEHRING)

support for non-motorized transportation and building connections between residents who regularly bicycle, making biking a fun, social activity. Integrating bicycling into the social fabric of the Mission Rock community will raise the profile of bicycling as a viable mode of transportation and encourage people to try biking for a portion of trips.

4.1.2.4 Bicycle Resource Centers

Each building's secure bicycle parking area will be equipped with a bicycle maintenance space, with resources like a bicycle stand, a workbench, tools, and a basic repair kit. These dedicated spaces contribute to social acceptance of bicycling and reduce one key barrier associated with owning a bicycle – concern about complications related to ongoing maintenance – by providing tools and parts through a vending machine at low prices.

This measure will also include working to incorporate a bicycle store in the site retail plan and establishing a resource center containing a vending machine for bicycle parts, a “fix-it” work station with basic tools, and bicycle pumps somewhere else within the site at an easily accessible location.

4.1.2.5 Bicycle Parking

Given the importance of non-motorized transportation to the site's overall design concept, more bicycle parking will be provided than is required by San Francisco City Code. This will include secure Class I parking spaces in residential and office buildings and a network of Class II bicycle parking spaces throughout public areas.

Class I parking consists of secure long-term bicycle parking, including bicycle lockers, bicycle cages, and bicycle rooms. Class II bicycle parking refers to more short-term bicycle parking, including on-street bicycle racks. The site's location in a flat part of San Francisco and the numerous planned bicycle facilities through the site imply a strong potential for very high rates of bicycle usage, and this will be encouraged through easy access to ample, convenient bicycle parking. Bicycle parking facilities will also be available to accommodate various types of bicycles including those with cargo and trailer attachments.

There are several methods of providing secure (Class I) bicycle parking spaces for residents and employees. The site will employ approaches that reflect best practices regarding secure short-term and long-term bicycle parking. For instance, one approach may be to locate bicycle cages at convenient locations within buildings, and bicycle owners who qualify can receive a key or access card to use the cages for a set period of time (e.g. during work hours). The access card can be the same as one used to access an elevator or parking garage. Public bicycle parking is often considered secure when it is situated in well-lit, highly visible areas.

4.1.2.6 Showers and Lockers

The site will meet the San Francisco Code requirement to provide shower and clothes locker facilities for tenants and employees in buildings with certain uses. Offices (including childcare, business services, and light manufacturing) that exceed 10,000 square feet must provide at least one shower and six clothes lockers;



Bicycle fix-it station (FLICKR USER JOE)



Bicycle room (Class I parking) (NELSON\WYGAARD)

for facilities between 20,000 and 50,000 square feet, the building must provide two showers and 12 lockers. Those exceeding 50,000 square feet must provide four showers and 24 lockers. Retail sales and restaurants exceeding 25,000 square feet must also provide one shower and six clothes lockers; those exceeding 50,000 square feet must provide at least two showers and 12 lockers.

4.1.2.7 Bicycle Valet

Free bicycle valet services will be provided for large on-site events (per code requirements). Complementing the bicycle parking available on a daily basis, bicycle valet services during special events can encourage people to travel to and from events by bicycle by eliminating the challenge of finding safe and convenient bicycle parking in an area crowded with event attendees. These services also raise public acceptance and support for non-motorized transportation by building connections with visitors.

4.1.3 MOTORIZED VEHICLE STRATEGIES

4.1.3.1 On-Site Shared Scooters

Off-street parking spaces will be reserved for 15 to 20 shared scooters (approximately six car parking spaces in total). These spaces will be made available to scooter share companies at no cost. Electric scooters are highly convenient in a dense urban environment and may have additional marketing value, given the cache scooters carry among certain population segments. Scoot is a current provider of this type of service. One of the benefits of Scoot's network is the ability to travel point-to-point, instead of needing to return scooters

to their point of origin. Scoot already has pods within a short walk of Mission Rock. The parking garage would accommodate space for a scooter dock, which the scooter share vendor would provide and maintain.

4.1.3.2 Electric Scooter Memberships

Pending a partnership with Scoot Networks, a one-year Scoot membership will be offered to all new residents, and Scoot Networks could provide its scooter orientation on-site. Like a bike share membership, a scooter share membership could help establish new travel behavior patterns upon move-in. This measure would entail forming a partnership with Scoot or another electric scooter share vendor to provide free memberships in exchange to reserving space for electric scooter parking on-site.

4.1.3.3 On-Site Car Share Parking Spaces

Designated car share spaces will be provided in the parking garage, with flexibility to increase over time in response to demand. The number of spaces provided will exceed the amount required by the San Francisco Zoning Code. These spaces will be made available to car share companies at no cost.

Research indicates that a single car-share vehicle can remove as many as 20 private cars from the transportation network. Spaces will be located in high-visibility parking spots within the parking garage, which will be publicly accessible. Clear exterior signage will increase these spaces' visibility and emphasize the convenience of car share. Depending on the car share vendor provided, additional partnerships with ChargePoint may be required to provide infrastructure



SF Bicycle Coalition bicycle valet AT&T Park (NELSON\NYGAARD)

for electric vehicle charging.

4.1.3.4 Car Share Memberships

Car share memberships will be offered to all households for their first year of residency. Depending on specifics of agreements with car share vendors, membership fees could be reduced or waived and some rental credit could be provided. These memberships could help establish new behavioral patterns upon moving in. Pairing access to car sharing vehicles with car sharing memberships is also shown to be more effective than implementing one or the other on its own.

4.1.4 PARKING STRATEGIES

Priced and actively managed parking is a cornerstone of the Mission Rock transportation program. The following measures will ensure that driving is not the default choice for access to the site.

4.1.4.1 Parking Pricing

The price of parking has been shown to be a highly effective mechanism in changing travel behavior, and as such, parking will be priced strategically at Mission Rock. During times of higher demand, parking might have a higher price, encouraging a higher rate of turnover and the use of other modes. Prices will not change in real time based on current occupancy, but instead might automatically increase by a pre-set amount during peak periods, based on typical demand patterns, or for scheduled events. Prices might be adjusted overall a few times a year based on recent occupancy data.

By refining the price of parking periodically, it would be possible to keep parking occupancy rates relatively close to the optimal level, typically around 90% for off-street parking. Researchers have found that parking facilities function efficiently (i.e. without requiring excessive parking-search time) up to roughly this level of occupancy. Demand-responsive pricing has been successfully piloted in San Francisco, Berkeley, Los Angeles, and other cities, and the AT&T Park lot on which Mission Rock will be built currently employs a form of this concept.

4.1.4.2 Real-Time Parking Pricing and Availability Information

Dynamic displays (or another state-of-the-practice price-information sharing strategy) will be installed to show real-time parking price and availability information. This information will also be made available through other channels like a Mission Rock transportation website; this will require installing technology and associated information systems to automatically monitor parking usage. For market-based parking pricing to be truly effective, the dynamic between price and availability must be clearly communicated to drivers. Making such information readily available to potential drivers, particularly at parking garage entrances, decreases the likelihood of drivers' circling for parking or potentially increases the possibility of choosing other modes.

4.1.4.3 Unbundled Parking

Parking costs will be unbundled from all residential, commercial, and retail leases and ensure that the users of parking are the ones who ultimately pay for it. In other words, individuals desiring parking will be required to pay the cost of parking themselves, and the price of parking will not be included in the leases of any residential or commercial tenants. "Unbundling" parking means that the cost for parking is separate from the cost of residential and commercial units. It is an increasingly common practice in urban areas, and it is required in San Francisco. Thirty percent of San Francisco households do not own a vehicle, and unbundled parking makes housing more affordable, particularly for those who do not need a parking space.



Car share spaces (NELSON\NYGAARD)



Parking pricing information sign (NELSON\NYGAARD)

This approach provides financial savings to households who decide to dispense with one of their cars, and it can help attract households who wish to live in a transit-oriented neighborhood where it is possible to live well with only one car, or even no car, per household. Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households can freely choose how many spaces they wish to lease.

Unbundling parking tends to reduce demand for parking by specifically calling out and making optional the previously hidden cost of “free” parking. This in turn allows developers to provide less parking, which increases the area that can be developed with more lucrative land uses such as additional housing units. For this measure to work optimally for office users, the users of parking – not their employers – must be the ones who ultimately pay daily or monthly costs.

4.1.5 BUILDING STRATEGIES

4.1.5.1 In-Building Concierge Services

Mission Rock will work with the managers of individual buildings to appoint an in-building concierge to provide information about local merchants and coordinate/facilitate delivery services for residents. In-building concierge services and/or multi-purpose front-desk staff can facilitate valet parking, farm-to-table produce delivery, cold and dry storage for grocery or produce delivery, and secure package delivery. Concierge staff could also provide information about the nearest stores and services like dry cleaning and laundry service, as well as pickup/delivery services from local merchants.

Residents would pay for all services.

The site-wide transportation staff would provide centralized transportation support to the in-building concierges. The combination of these services will provide targeted travel information, consolidating or eliminating the need for additional trips.

4.1.5.2 Coordinated Delivery Services

Mission Rock will consider partnering with delivery service companies, in addition to establishing a centralized staging location for parcel delivery and a distribution system that relies on non-motorized transportation to deliver packages to the various buildings within the development. In the absence of an official partnership, ways of making ordering in more appealing instead of making separate trips off the property for daily needs would be facilitated, thus reducing vehicle trips in the process. One potential way to do this would be to offer direct ordering through the Mission Rock website. Each building would manage these services individually as needed.

4.1.5.3 Community-Supported Agriculture Partnerships

Local community-supported agriculture (CSA) deliveries will be coordinated. Fostering the use of local CSA organizations has the potential to reduce greenhouse gas emission and vehicle-trips by providing project residents convenient access to locally sourced food, reducing the number of trips and vehicle miles traveled by both vendors and consumers. This measure could also have marketing benefits and reinforce the site’s overall message about sustainability.



In-building concierge (FLICKR USER ALAN LIGHT)



CSA box (FLICKR USER NIKI SUBLIME)

4.1.5.4 Cold and Dry Delivery Storage Space

Mission Rock will work with individual building managers to provide storage space near the concierge and elevators to store packages, perishables, laundry, and other deliveries. Storage should be family friendly, including room to store car seats and strollers and near to car share locations. Providing storage space for groceries, laundry, and other packages can have a direct effect on reducing trips by encouraging and facilitating online ordering. A centralized storage facility within each building can also consolidate delivery trips by enabling delivery vehicles to only make one stop for multiple recipients instead of several.

4.1.5.5 Convenient Zones for Loading and Building Servicing

Passenger loading and building servicing zones are integrated into Mission Rock's overall street design. These zones will reduce the need for personal vehicle trips by facilitating deliveries and also enabling easy pick-up and drop-off of seniors and people with disabilities by locating them near elevators and at corners with curb ramps.

4.1.5.6 Childcare Facilities and Services

Mission Rock will aim to attract a provider of on-site childcare services and facilities to ensure easy access for Mission Rock residents and employees. Ensuring that childcare services are provided on-site at Mission Rock would break down a key barrier for parents to taking non-auto modes to work by bringing such services within walking distance and near the many commute options around the Mission Rock site. The

childcare services could be provided on the ground floor of a northern parcel, near China Basin Park. Other family-friendly amenities will also be established, including storage spaces with room to store car seats, strollers, and other family-related equipment.

4.1.5.7 Collaborative Work Space

Mission Rock will work with the developers of individual parcels to establish a collaborative work space in each residential building. A typical offering in residential buildings today, business services rooms can help encourage and facilitate working from home, which can directly reduce trips to and from the site.

Work spaces could include for-rent work rooms that can be reserved in advance, equipped with video conference equipment, high-speed internet connections, projectors, white boards, basic office supplies, and printing, scanning, and faxing services. For residents interested in using this work space long term, dedicated mailboxes for businesses could be set aside and located nearby. The developers and managers of individual buildings will ultimately be responsible for developing and maintaining these business services rooms and ensuring that they are equipped with appropriate equipment.

4.1.5.8 Affordable Housing

Forty percent of on-site units will be restricted to inclusionary affordable housing, to be provided in a balanced manner throughout the phasing of the development. Affordable units are generally associated with lower rates of auto trip-making, as residents living in affordable housing typically own fewer cars

per household than residents of market-priced units. They are more likely to use transit and are less likely to require parking, reducing overall vehicle trip generation.

4.1.6 ALL-REALM STRATEGIES

4.1.6.1 Signage and Wayfinding across Modes

ADA compliant signage and wayfinding will be installed at key points throughout the development. Signs can help indicate points of connection between different modes, as well as estimated travel times and directions by mode, and they can help increase people's understanding of travel options. Clear signage is also important for ensuring safety for all types of users, differentiating spaces for different users within shared public spaces.



Transit-focused wayfinding (NELSON\NYGAARD)

4.1.6.2 Mobile-Friendly Mission Rock Transportation Website

An ADA compliant site-wide website will be maintained with a dynamic and engaging section dedicated to transportation information and services, with specific portals for each user type (or the state-of-the-practice equivalent to this measure, per changes in technology by the time of first occupancy). A mobile-friendly website oriented toward all residents, employees, and visitors providing online access to concierge services and transportation programs can help raise awareness and visibility of transportation options and facilitates connections among transportation modes. The transportation information on the website will likely include but not be limited to real-time transit information and a transportation tab with all nearby options (e.g. Muni, car share, scooter share, ride-sourcing apps) showing locations and availability.



The informative website of a TMA in Mountain View. The site is mobile-friendly, as the images on the next page show.

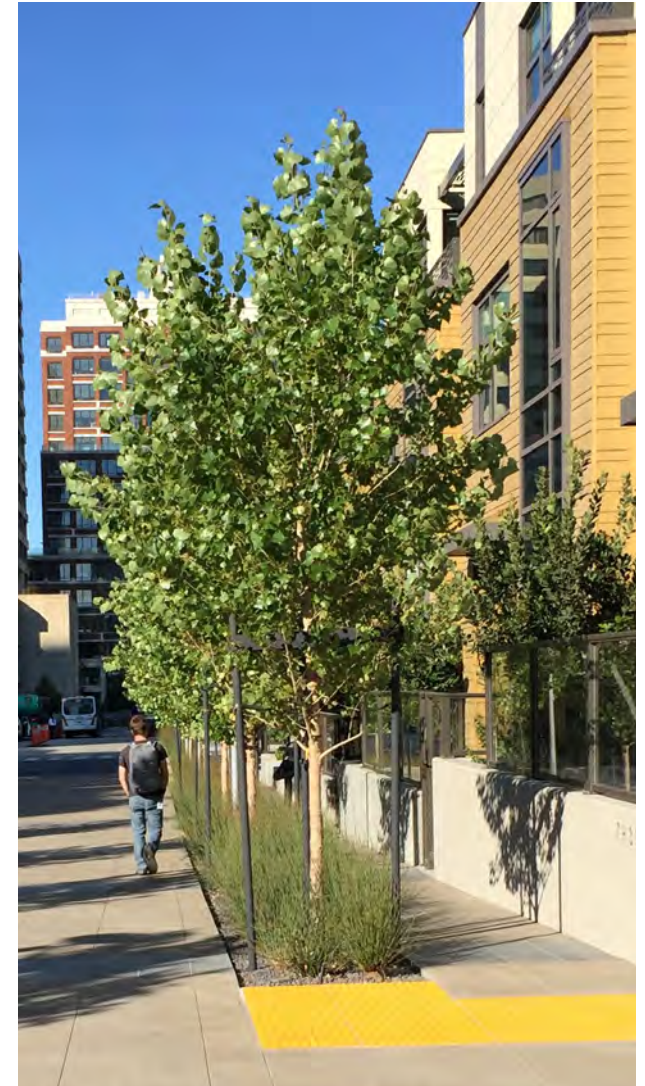
4.1.6.3 On-Site Transportation Staff

A site-wide, dedicated transportation staff will be hired and tasked with providing individualized advice and information on transportation options to residents and employees. This can help raise awareness and understanding of transportation options and ensure that site users can find non-auto transportation options that meet their unique travel needs.

Other staff, such as the in-building concierge or those tasked with organizing bicycle events and maintaining the bicycle resource room, could also provide similar targeted information and facilitate discussions around using different modes. This dedicated transportation staff would act as a centralized transportation resource to the in-building concierges, providing up-to-date transportation information and expert support to front-line staff that are less likely to have the same depth of knowledge of the transportation system. Staff responsibilities may include active campaigns encouraging sustainable trip-making.

4.1.6.4 Improved Walking Conditions

High-quality pedestrian design features (high connectivity, wide sidewalks, highly visible crossings, and others) are directly integrated in the design of Mission Rock. As described in the Mission Rock Design Controls, the development will add over half a mile of complete streets, including new and improved sidewalks and pedestrian crossings. Today, many sidewalks in Mission Bay are narrow or missing in areas. The new streets within Mission Rock will greatly improve the overall walking conditions of the neighborhood and facilitate safer and more convenient pedestrian connections. A pedestrian-oriented urban design is essential for residents, employees, and visitors to fully take advantage of the other TDM strategies, supporting access to all of the available transportation options and programs throughout the site and nearby. These improvements help shape the environment for the other TDM strategies to succeed.



High-quality design for pedestrians (NELSON\NYGAARD)

4.2 MARKETING AND COMMUNICATIONS

A strong communication strategy is critical to the success of any TDM program, ensuring that residents, employees, and visitors receive information about relevant resources and incentives at appropriate times and through channels that are easily accessible. Incorporating consistent branding into all communications can help create a sense of place and establish a cohesive identity for the transportation program. Branding can be used to support marketing and communication efforts, particularly on signage and wayfinding, to emphasize that residents, employees, and visitors can travel seamlessly through the area.

The TDM strategies cited in the chapter include three main channels for transportation-related communications: its site-wide transportation staff, a mobile-friendly web portal for site users, and physical signage and other wayfinding mechanisms on site. This section includes examples of communication tactics and channels to illustrate how specific channels can help reach target audiences.

4.2.1 SITE-WIDE TRANSPORTATION STAFF

Led by a coordinator, Mission Rock transportation staff would be responsible for maintaining information about TDM programs and acting as a point of contact to assist residents, employees, and visitors with transportation-related questions, concerns, or general assistance. The transportation coordinator would have the authority to implement TDM strategies, oversee the management and marketing of all measures, manage the TDM program budget, and monitor success of the TDM program.

The transportation staff might also be responsible for compiling a print and/or electronic transportation handbook to be distributed to residents on move-in and employees on hiring. This handbook could include information on transportation programs, policies, and service options, in addition to the following information:

- ▶ Transportation staff contact information, including information for the in-building concierges (if relevant)
- ▶ How to access transportation information in other media and locations, such as the website, relevant mobile applications, and real-time screens
- ▶ Commute trip planning information, including links to the regional 511 Rideshare program
- ▶ Clipper Card and vehicle (including car, bicycle, and scooter) share membership subsidies and parking policies
- ▶ Information on accessing other TDM program details and amenities, such as the in-building storage facilities
- ▶ Walking and biking routes within the area, estimated walking and cycling times to key locations, including transit hubs, and a link to the San Francisco bicycle map
- ▶ Local transit options and schedules, including links to Muni, BART, and Caltrain schedules, route maps, and existing trip planner mobile applications

The handbook would be distributed to all prospective residential tenants and all prospective employees who receive an offer to work within the development as part of welcome packets or employee orientation, or posted



Signage that combines directional and map-based wayfinding (NELSON\NYGAARD)

in prominent locations for all residents and employees.

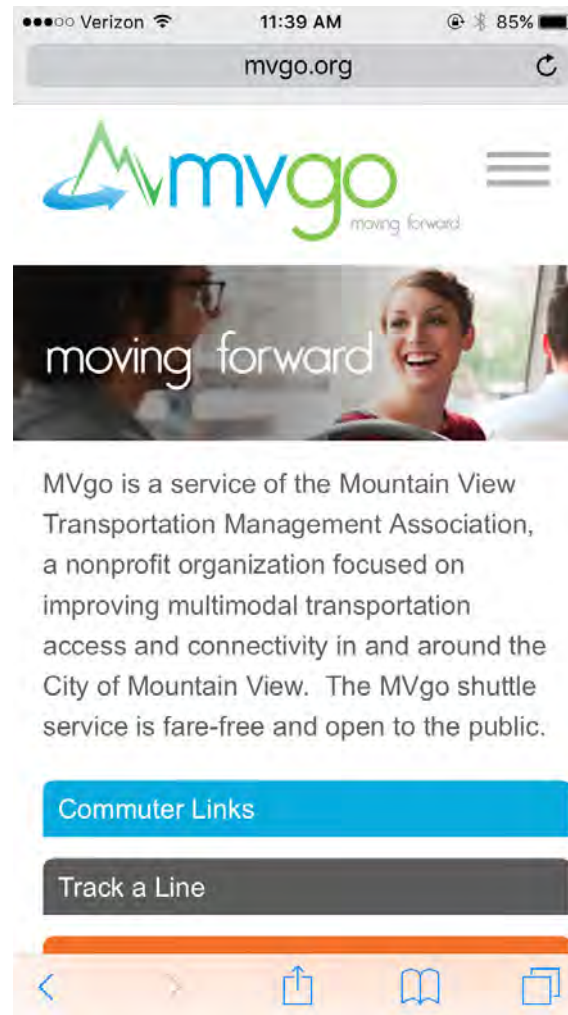
To make sure information stays useful to residents and employees over time, transportation staff will endeavor to keep all information and materials up to

date and relevant. Staff may also consider developing other transportation tools in addition to or instead of a handbook as appropriate, drawing on available best practices.

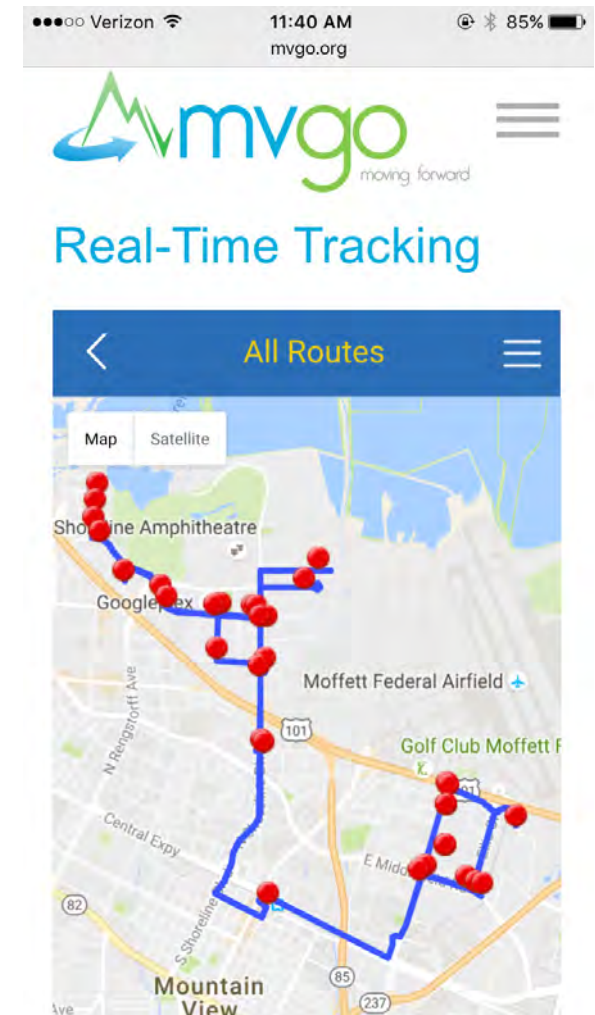
4.2.2 MOBILE-FRIENDLY WEBSITE

Mobile-friendly websites are a way to create a dynamic and engaging repository for transportation information, point-to-point navigation tools, travel suggestions, user engagement campaigns, and other efforts to raise awareness of alternatives to drive-alone travel options and residents, employees, and visitors to use them. In addition to supporting the information already provided in the resident and employee handbook, this website could include the following:

- ▶ Real-time transit information
- ▶ Real-time parking pricing and availability information
- ▶ Notifications of upcoming transportation-related events, such as bicycle parties and farmers' markets, and alerts
- ▶ Integration with internet delivery services for ordering
- ▶ Registration for car share, bicycle share, and/or scooter share memberships
- ▶ Room reservations for the collaborative workspace
- ▶ On-site childcare services enrollment
- ▶ Specific pages or portals for residents, employees, and visitors so that each of these audiences has access to the appropriate and relevant travel information



The mobile-friendly version of the Mountain View TMA's website. The TMA offers real-time transit information and links to a variety of other resources.



- Functionality which allows for tracking travel behavior and enables gamification for incentives

This website will be ADA/Section 508 compliant to ensure that users of all abilities are able to easily access this information. Establishing specific portals for each audience can allow for the delivery of targeted, individualized TDM information for each of the audience groups. Each of the portals could also provide specific information on costs and multimodal options available for traveling to and from Mission Rock, as well as information on nearby attractions and services and links to citywide or regional information. The images on the previous pages show an example of computer and mobile-friendly versions of landing pages for this type of website.

4.2.3 SIGNAGE AND WAYFINDING

Clear, consistent, and predictable signage and wayfinding can help residents, employees, and visitors navigate the site easily. Signage can also bring awareness to important information such as parking prices and availability, bicycle parking locations, estimates of bicycle and pedestrian travel times, and other information on Mission Rock programs or services. Simply providing information on non-motorized travel prominently can increase the likelihood that people will select biking or walking as their mode of transportation.

The efficacy of signage and wayfinding is dependent on the design and placement of signs. Signage should be clear and provide relevant information at key decision points in people's journeys, in areas that are highly

visible, and in clear lines of sight. For instance, when entering the site, cyclists should be able to clearly understand their route options through the site. This signage will be especially important for safety along the shared public ways, to ensure that users understand the encouraged forms of travel and appropriate behavior on each mode. Temporary signage may be used in areas more highly trafficked by residents or employees, to provide information on specific events or programs, such as CSA pick up locations.

Wayfinding examples throughout the chapter show how it can be used in vibrant, mixed-use areas. Some signs offer clear guidance for the nearby area at several scales while providing clear directional guidance to nearby transportation hubs and popular destinations.

For further information on the design considerations that will be accounted for in designing signage for the Mission Rock site, see section 2.10 of the Design Controls.

4.2.3.1 Transportation Information Kiosks

Transportation information kiosks in the public realm can provide centralized locations for relevant transportation information for trips within Mission Rock and to nearby services and attractions. These kiosks could be placed throughout the site, at strategic decision-making locations where residents, employees, and visitors might need the information, such as the intersection of Terry A. Francois Boulevard and Mission Rock Street, China Basin Park, and Mission Rock Square. The kiosks could include transit schedules and fare information, walking and cycling routes, real-time

transit information, and Bay Area Bike Share dock locations and bicycle availability.

It is recommended that these kiosks be digital, interactive displays (as shown in the accompanying image) to allow information to be updated easily and regularly. These boards would be maintained and updated as needed by the transportation staff.

While the information kiosks can provide detailed information on transportation options to visitors and others new or unfamiliar with Mission Rock and the surrounding area, real-time transit screen technology is designed to offer an opportunity to understand transportation options at a quick glance. This would be particularly useful for employees and residents, those who make recurring trips frequently and don't need detailed guidance.

Each of the communication-based TDM measures are pertinent to residents, employees, and visitors at different times during their life cycle at Mission Rock. As such, it is critical to think strategically about when to share what with each of these key segments to reach certain groups of users.

The mobile-friendly Mission Rock website will be an important avenue for sharing information about programs, policies, and services. It is reasonable to assume that the website will act as a front-line communications vehicle to reach all of those who have or may be interested in having a connection with the site. Signage and wayfinding will be seen on a daily basis and is an important element for users of the development to efficiently navigate Mission Rock.

4.3 CONCLUSIONS

Establishing a robust TDM program reaffirms Mission Rock's commitment to sustainability and inclusivity. The program will encourage the site's residents, employees, and visitors to use the most environmentally friendly and spatially efficient mode possible for each trip, with an emphasis on cycling, walking, and shared rides.

TDM MEASURE	TARGET AUDIENCE		
	RESIDENT	EMPLOYEE	VISITOR
4.1.1.1 Real-Time Transit Information			
4.1.1.2 Clipper Cards			
4.1.2.2 Bike Share Memberships			
4.1.2.1 On-Site Bike Share			
4.1.2.7 Bicycle Valet			
4.1.2.3 Bicycle Community Programming			
4.1.2.4 Bicycle Resource Centers			
4.1.2.5 Bicycle Parking			
4.1.2.6 Showers and Lockers			
4.1.3.1 On-Site Shared Scooters			
4.1.3.2 Scooter Share Memberships			
4.1.3.4 On-Site Car Share			
4.1.3.4 Car Share Memberships			
4.1.4.1 Parking Pricing			

TDM MEASURE (CONT'D)	TARGET AUDIENCE		
	RESIDENT	EMPLOYEE	VISITOR
4.1.4.2 Real-Time Parking information			
4.1.4.3 Unbundled Parking			
4.1.5.1 In-Building Concierge Services			
4.1.5.2 Coordinated Delivery Services			
4.1.5.3 CSA Partnerships			
4.1.5.4 Cold and Dry Delivery Storage Space			
4.1.5.5 Convenient Zones for Loading			
4.1.5.6 Childcare Services			
4.1.5.7 Collaborative Work Space			
4.1.5.8 Affordable Housing			
4.1.6.2 Mobile-Friendly Website			
4.1.6.3 Site-Wide Transportation Staff			
4.1.6.1 Signage and Wayfinding			
4.1.6.4 Improved Walking Conditions			

Target audience for each TDM program

05

EVENT MANAGEMENT

The energy and excitement generated by San Francisco's premiere event venues will be part of what makes Mission Rock a fun and interesting place to live, work, and play. AT&T Park will bring thousands of good-natured baseball fans to the area during the summer months, and the planned Chase Center will bring the Warriors' spirited fans through the winter and spring.

Concerts and smaller events at both venues and in Mission Rock's two smaller event spaces will bring the area to life at other times.

Mission Rock will be designed and actively managed to maximize the best aspects of these festivities while

responsibly managing the potential inconveniences that large crowds can cause. This chapter outlines the basic site's anticipated approach to managing pedestrian activity, vehicle flows, and bicycle parking around them to ensure that residents and employees can enjoy the energy without the hassle.

As the team has since it moved to AT&T Park in 2000, the San Francisco Giants will continue to work closely with the City and with citizens advisory committees in the area to manage the effects of event crowds on surrounding neighborhoods, through measures like deploying traffic control officers (known in San Francisco as parking control officers, or PCOs). In addition to such measures, the Mission Rock transportation staff might also be empowered to take additional actions like closing on-site streets or individual lanes to vehicle traffic and encouraging the use of non-auto modes for travel to events. This chapter describes how these types of strategies might be combined for three scenarios, representing the likely range of common events: A primary event at AT&T Park (40,000+ attendees), a secondary event at AT&T Park (15,000 to 25,000 attendees), and on-site events (2,000 to 5,000 attendees) in China Basin Park and Mission Rock Square. More detailed event management plans will be developed in the future.

Given their storage-space needs, automobiles naturally pose challenges for organizers of any large event. As such, most scenarios include some restrictions on vehicle movement through the site, and the TDM Plan's efforts to reduce reliance on single-occupancy vehicles for travel to and from the site will be particularly crucial during these times. However, some vehicle movement will be accommodated. A 2,300 to 3,000-space parking garage at the southwest corner of the site will serve as AT&T Park's main parking facility, replacing the surface lot on which Mission Rock will be built. During AT&T Park and Mission Rock events, curb space around the site will also provide important capacity for passenger loading.



Mission Rock and AT&T Park



Parking control officers (PCOs) (NELSONWYGAARD)



On game days today, vehicle circulation is adjusted to account for high pedestrian volumes. Note that the Lefty O'Doul Bridge street closure shown in the photo above will likely change with planned changes to the roadway. (NELSONWYGAARD)

5.1 PRIMARY EVENTS

AT&T Park, 35,000 to 40,000+ Attendees

A primary event at AT&T Park will be the most common scenario, occurring between 80 and 100 times per year, depending on whether the Giants make the playoffs and on how many non-baseball events (like concerts or other sporting events) AT&T Park hosts.

5.1.1 MANAGEMENT STRATEGIES

Parking Pricing

As noted in Chapter 4, it is anticipated that the Mission Rock garage will be actively managed around event times to ensure that there is space available for AT&T Park event attendees. To encourage regular users of the garage to find alternative ways to get to the site on event days, parking prices could be raised during a period covering a few hours before and after AT&T Park events. This approach has already been successfully employed to manage parking demand in the existing main AT&T Park lots, Lot A and Pier 48. People arriving at the garage around event times could pay a flat event rate that might amount to a total that is higher than typical hourly rates would be (i.e. if the event period is six hours long, the flat event rate would exceed the total cost of parking for six hours at typical hourly rates).

Vehicle Flows and Curb Space

Vehicular circulation through Mission Rock could be restricted during primary events in anticipation of high pedestrian volumes through the site. The Shared Public Way is a particularly critical north-south pedestrian route, providing the most direct path of travel between the main garage and the ballpark. As such, it is anticipated that the street would be closed



Giants games at AT&T Park regularly sell out, bringing a festive atmosphere to the neighborhood

to vehicle traffic around major event times. Right turns from Mission Rock Street to 3rd Street could also be prohibited before events, to reduce volumes on Mission Rock Street in front of the Public Safety Building. Left turns into and out of the site at 3rd Street's intersections with Long Bridge will be prohibited at all times. The eastern-most lane on 3rd Street between Exposition and King streets will also likely be closed before and after events, as it is today, to facilitate the movement of large volumes of pedestrians near the ballpark.

Traffic flows will be actively managed through PCOs and strategically placed signs, and garage entrances and exits will be managed to allow for efficient processing of major vehicle flows. To ensure that emergency vehicles have clear access to Public Safety Building driveways on the south side of Mission Rock Street, keep clear zones will be maintained and could be reinforced by one or more PCOs. Traffic flows on Mission Rock Street could also be managed to maintain an open lane for potential emergency vehicle movement. Event vehicles will also be encouraged, via signs and PCOs strategically located at points south of the site, to enter and exit the area via Terry A. Francois Boulevard. Specific PCO locations will be determined by the SFMTA with the goal of supporting pedestrian safety, limiting impacts on transit, and keeping intersections clear of vehicles.

Most vehicular circulation through the site is expected to be for passenger pick-up and drop-off. Key

passenger loading locations will include the north side of Exposition Street and the east side of the block of 3rd Street just north of Exposition Street. Primary loading zones for people with mobility limitations include the east side of 3rd Street north of Exposition Street and an accessible loading zone on Exposition Street between the Shared Public Way and Bridgeview Street.

To manage vehicle movement at points of potential conflict between modes, this plan recommends the use of PCOs in key places along 3rd Street and through the site, including the intersections of Mission Rock and 3rd, Mission Rock and Bridgeview, and Mission Rock and Terry A. Francois Boulevard, and the 3rd Street crossing just south of Lefty O'Doul Bridge.

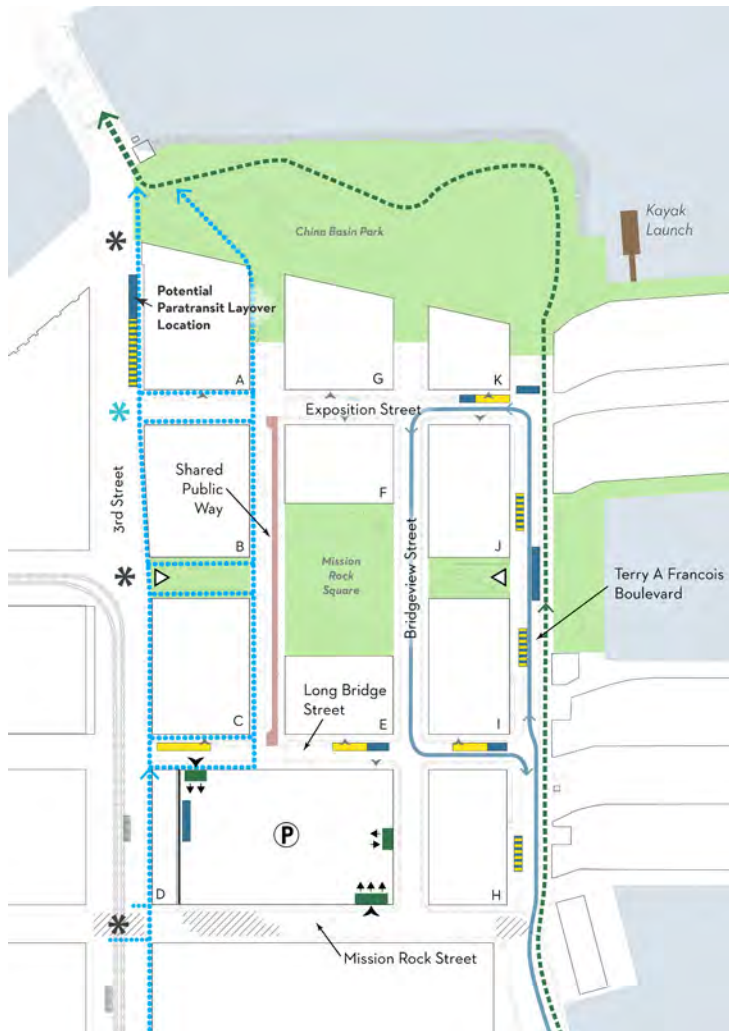
Pedestrians

It is anticipated that all pedestrian paths of travel will be open, but pedestrian activity is likely to concentrate along the Shared Public Way and 3rd Street, the two key north-south routes between Long Bridge Street and the ballpark.

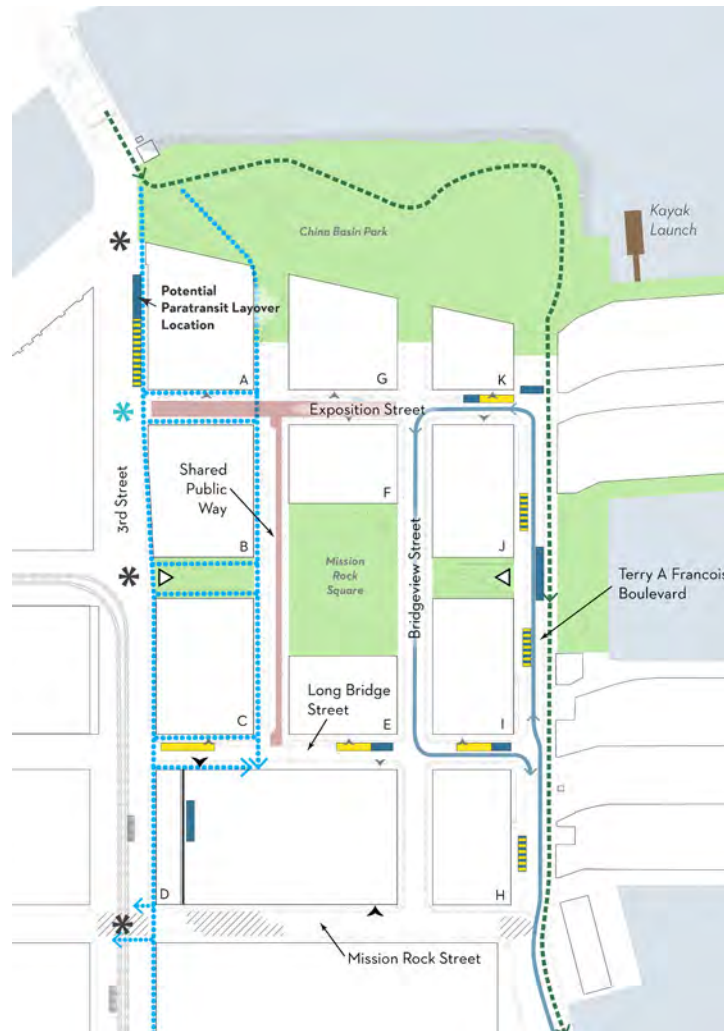
Bicycles

Primary bicycle flows south of China Basin are expected to be along the San Francisco Bay Trail to and from bicycle parking facilities immediately around AT&T Park. Some cyclists may also use Bridgeview Street, but they might be less likely to do so than in normal conditions due to larger numbers of vehicles turning into and out of the garage. Cyclists will be encouraged

to dismount at the western end of China Basin Park to reduce conflicts with the heavy pedestrian flows across Lefty O'Doul Bridge. Some event attendees will also likely lock their bicycles on the Mission Rock site, to visit on-site bars and restaurants before or after games or to avoid crowds closer to the venue. An additional ballpark bicycle valet facility could also be located on the Mission Rock site, if usage of the main valet facility warrants it.



Pre-event circulation patterns



Post-event circulation patterns

- Key Pedestrian Routes
- Primary Bicycle Route
- ← Primary Passenger Loading Flow
- ADA-Accessible Loading
- Commercial Deliveries Only
- Time-Limited Commercial Loading
- Closed to Vehicular Traffic
- * Existing Traffic Signal
- * Planned Traffic Signal
- ⬮ Potential Traffic Control Officer Location
- ⬮ Garage Lanes
- ▲ Planned Driveway
- ▲ Potential Driveway
- ▨ Keep Clear Zone
- ▷ Access to Below-Grade Parking (if provided)

5.2 SECONDARY EVENTS

AT&T Park, 15,000 to 25,000 Attendees

Circulation patterns at Mission Rock are anticipated to be similar around smaller events at AT&T Park. The Shared Public Way could be closed, and the relative intensity of different vehicle flows should be consistent with the basic patterns seen for the biggest events at the ballpark, though overall flows should be much smaller. Bicycle and pedestrian circulation patterns are also expected to be consistent with those anticipated for larger events.

Given lower levels of expected parking demand, it is anticipated that the garage at the southwest corner of the site would generally not need to use flat-rate event pricing around secondary events. Event attendees would be able to park in available spaces as long as spaces are available. However, communications related to AT&T Park events would likely still encourage the use of other modes to access the ballpark, in the interest of reducing congestion and parking demand overall.



Football at AT&T Park (FLICKR USER ELTON LIN)



Opera at AT&T Park (SFOPERA.COM)



Concert at AT&T Park (FLICKR USER REBECCA WILLIAMSON)



Race at AT&T Park (FLICKR USER PRESIDIO OF MONTEREY)

5.3 ON-SITE EVENTS

Mission Rock, 500 to Several Thousand Attendees

Mission Rock will have two spaces equipped to host large events. The Great Lawn in China Basin Park will have room to host concerts, movie nights, and other large gatherings. Mission Rock Square will likely host a broader range of events, from staged performances to farmers markets or craft fairs, with thousands of people flowing through the space over a several-hour period.

The garage at the southwest corner of the site's parking prices could be converted to event rates for a period covering several hours before and after the biggest events, to discourage use by regular users.

5.3.1 CHINA BASIN PARK EVENT

5.3.1.1 Vehicle Circulation and Passenger Loading

For the biggest China Basin Park events, Terry A. Francois Boulevard and Exposition Street could be closed to through traffic (the project team will apply for street closure permits through the standard City process), with the streets reserved for event-related pick-up and drop-off. To make vehicle flows predictable for pedestrians crossing these key streets, Terry A. Francois Boulevard could be converted to a one-way street northbound, and Exposition Street could be one-way westbound to complete a site-wide circuit.

It is anticipated that the north end of Terry A. Francois Boulevard, at or north of the intersection with Exposition Street, would be the main drop-off and pick-up location for people with mobility limitations. Taxi, TNC, and other vehicular loading could be focused along Exposition Street west of Terry A. Francois Boulevard.



Movie in a public park (FLICKR USER AARON MOLINA)



Stern Grove concert series (NELSON/INYGARD)



Farmers market (NELSON/INYGARD)



Shakespeare in the Park (FLICKR USER COREY TEMPLETON)

5.3.1.2 Pedestrian Circulation

Pedestrian traffic is likely to focus along two major routes: 1) through China Basin Park and up 3rd Street to/from the Caltrain terminal at 4th and King streets and toward BART on Market Street, and 2) through the site to/from the parking garage and the Muni light rail station on 3rd Street south of Channel Lane. Flows through the site can be expected to concentrate on Bridgeview Street north of Mission Rock Square, in the square, and along the Shared Public Way and Long Bridge Street, en-route to the parking facility and the Muni station at the southwestern corner of the site. PCOs may be helpful on Exposition Street at Shared Public Way and Bridgeview Street, to enable vehicles picking up or dropping off passengers to exit the site.

5.3.1.3 Bicycle Circulation and Parking

Bicycle valet facilities could be located along the San Francisco Bay Trail, just southeast of the event space, and cyclists will also be able to use the network of public bicycle parking spaces throughout the site.

Cyclists from the north could be encouraged to

dismount at the edge of China Basin Park and walk their bicycles around the event space to the bicycle valet facility. Cyclists from the south could be encouraged to dismount as they approach the area for pick-up and drop-off of attendees with mobility limitations.

5.3.2 MISSION ROCK SQUARE EVENT

5.3.2.1 Vehicle Circulation and Passenger Loading

For the biggest Mission Rock Square events, Shared Public Way could be closed to vehicle traffic (with appropriate City permits), and Bridgeview Street between Long Bridge and Exposition streets will be closed to all but pick-up and drop-off of people with mobility limitations. As for China Basin Park events, Terry A. Francois Boulevard and Exposition Street could create a one-way loop for taxi, TNC, and other vehicular drop-off, and they could be closed to through traffic.

5.3.2.2 Pedestrian Circulation

Major pedestrian flows to transit nodes north and northwest of the site are anticipated to follow the

Shared Public Way through China Basin Park to 3rd Street. Flows southwest to the main garage and the T-Third Muni light rail stop would follow Shared Public Way to the south and Long Bridge Street between Shared Public Way and 3rd Street.

5.3.2.3 Bicycle Circulation and Parking

Bicycle valet could be located on Channel Lane east of Mission Rock Square. The main flows of cyclists from points south would follow the San Francisco Bay Trail to Channel Lane. Temporary signage at the north end of the site would encourage cyclists to follow the San Francisco Bay Trail to Channel Lane. The cycle track on Bridgeview Street could be closed to bicycle traffic temporarily, to make way for large pedestrian flows and for the primary loading area for event attendees with mobility limitations.

Mission Rock residents, employees, and visitors would also be encouraged to travel to and from the site on foot, bike, or transit on days with events on-site or at AT&T Park. Site transportation staff would keep and prominently display a calendar of major events as a planning resource for regular users of the site.



China Basin Park event circulation patterns



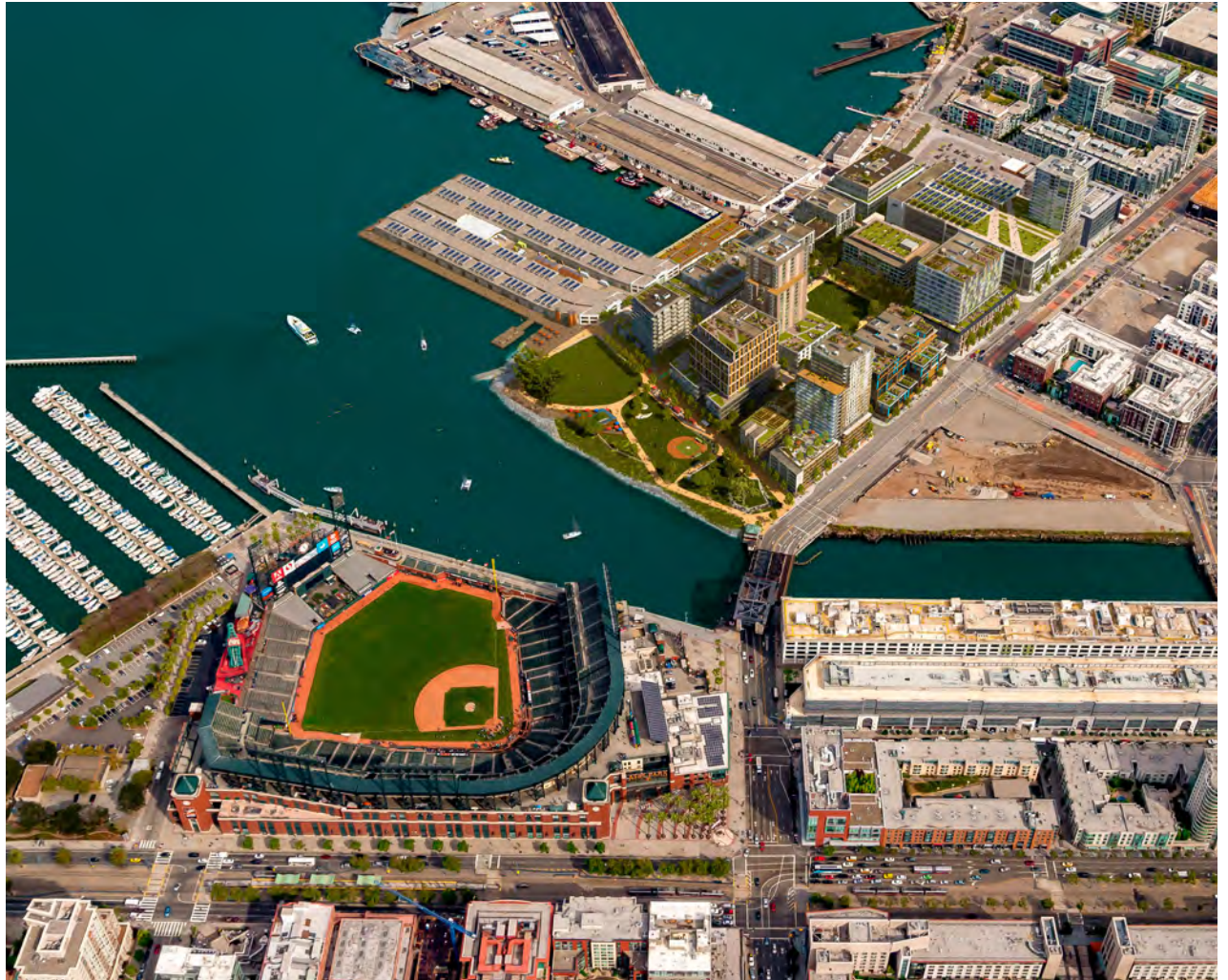
Mission Rock Square event circulation patterns

- Passenger Pickup & Dropoff
- ADA-Accessible Loading
- Commercial Deliveries Only
- Closed to Vehicular Traffic
- Existing Traffic Signal
- Potential Traffic Signal
- Garage Entry Lane Open
- Garage Exit Lane Open
- Planned Driveway
- Potential Driveway
- Keep Clear Zone
- Access to Below-Grade Parking (if provided)

5.4 CONCLUSIONS

Those who live and work near AT&T Park enjoy the exciting, festive atmosphere created by such a premiere urban event space, and they also know it takes some extra planning to make trips to and from the area as smooth as possible. The Giants and the transportation staff at Mission Rock will work hard to aid in this planning by providing users of the site ready access to an abundance great information and a range of travel choices.

In the same spirit, the Giants and the Mission Rock team are committed to working with neighborhood organizations to responsibly manage event-related transportation conditions and make sure inconveniences related to events are kept to a minimum.



AT&T Park and Mission Rock

MISSION ROCK INFRASTRUCTURE PLAN

SEPTEMBER 15, 2017

Prepared by



BKF Engineers
with assistance from the Seawall Lot 337 Association,
CMG, Perkins+Will, Langan Treadwell and Rollo, KPFF, ARUP,
Atelier Ten, Nelson Nygaard Consulting Associates, Moffatt & Nichol,
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1. INTRODUCTION

1.1 Purpose

This Infrastructure Plan is an exhibit to the Development Agreement (DA) between Sea Wall Lot 337 Associates, LLC (Developer) and City and County of San Francisco (City), the Development Agreement between the Developer and the City (DA), and the Development and Disposition Agreement (DDA) between the Developer and the City, acting by and through the San Francisco Port Commission. The Infrastructure Plan describes the Horizontal Improvements (also referred to herein as Infrastructure), and the Infrastructure improvements to be constructed for the Project, associated with Project sustainability, environmental remediation, demolition, grading, street and transportation improvements, open space and park improvements, potable water system, sanitary sewer system, storm drain system, auxiliary water supply system (AWSS), central utility plant and eco-district system, stormwater management system, and dry utility system.

The Project Site includes approximately 28 acres including the existing 14.2-acre Seawall Lot 337, the 0.3-acre lot known as Block P20, the 6.0-acre Pier 48, the 2.2-acre China Basin Park, 3.5-acre Terry A Francois Boulevard, 1.4-acre Pier 48 and 50 access zone, and 0.5-acre of Marginal Wharf. Initially capitalized terms unless separately defined in this Infrastructure Plan have the meanings and content set forth in the DDA and DA.

1.2 Infrastructure Plan Overview

This Infrastructure Plan describes and governs the construction and development of Infrastructure to be provided by Developer for the development of the Project on the Project Site, including known associated off-site improvements needed to support the Project.

The Project infrastructure obligations of the Acquiring Agencies, are described herein, with ownership, maintenance, and acceptance responsibilities of the Acquiring Agencies identified in the DA and DDA. A condition of the Developer's performance under this Infrastructure Plan is the obtaining of all requisite approvals in accordance with the DDA, DA and Interagency Cooperation Agreement (ICA).

1.3 Property Acquisition, Dedication, and Easements

The mapping, street vacations, property acquisition, dedication and acceptance of streets and other Infrastructure improvements is generally anticipated to occur through the subdivision mapping process.

Except as otherwise noted, infrastructure described in this Infrastructure Plan shall be constructed within the public right-of-way or dedicated easements to provide for access and maintenance of infrastructure facilities.

Public service easements will be allowed within the Project as necessary to provide infrastructure and services to the Project and are subject to review and approval by the affected City agency. Proposed public water, storm drain, sanitary sewer, recycled water, Auxiliary Water Supply System (AWSS), and power easements benefitting the San Francisco Public Utilities Commission (SFPUC) on Port property will be reviewed on a case-by-case basis. Full access for vehicles and equipment for the maintenance and repair of utility mains will be provided. Public utilities within easements will be installed in accordance with applicable City regulations for public acquisition and acceptance within public utility easement areas, including provisions for maintenance access. Where improvement standards proposed herein differ from the 2015 City and County of San Francisco Subdivision Regulations (Subdivision Regulations), such standards and Infrastructure shall be subject to review and approval by the affected Acquiring Agencies during the project Phase application or construction document approval process.

1.4 Project Datum

Elevations, including tidal elevations, hydraulic grade lines (HGLs), and site elevations, referred to herein are based on the Mission Bay Datum (MBD). The MBD is defined as the Mission Bay Datum, which equates to the following:

- The Old City Datum (OCD) plus 100 feet
- The San Francisco Vertical Datum 13 (SFVD13) plus 88.7 feet
- The North American Vertical Datum 88 (NAVD88) plus 88.7 feet

1.5 Conformance with EIR & Entitlements

This Infrastructure Plan has been developed to be consistent with Project mitigation measures required by the Draft Environmental Impact Report (EIR) and other entitlement documents. Regardless of the status of their inclusion in this Infrastructure Plan, the mitigation measures of the EIR shall apply to the Project.

1.6 Applicability of Uniform Codes and Infrastructure Standards

Future deviations from or modifications to this Infrastructure Plan and/or current City Standards, Guidelines, and Codes are subject to the procedures and provisions of the DA and DDA.

1.7 Master Plans

Each publicly-owned or accepted Infrastructure system described herein will be more fully described and evaluated in Draft Master Utility Plans (MUPs), which will be submitted to the Acquiring Agencies upon substantial completion of the Infrastructure Plan. The MUPs provide detailed layouts of each Infrastructure system. The Infrastructure Plan is to be approved by the Acquiring Agencies as part of the DA and DDA approval processes. Approval of this Infrastructure Plan does not imply approval of the MUPs, which will be approved after DA and DDA execution and prior to submittal of street improvement plans for the first phase of development.

1.8 Project Phasing

It is anticipated that the Mission Rock Site will be developed in several phases subject to the approval process outlined in the DA, DDA, and ICA. Each phase would include a Development Parcel or Parcels and associated Infrastructure and open space areas.

The parties acknowledge that certain Horizontal Improvements, as described in Sections 3, 4, 5, 6, 7, and 8 of the Infrastructure Plan, such as site preparation, removal or remediation of soils, grading, soil compaction and stabilization, may be required or desired at an earlier stage of development and in advance of such Phase Improvements. As described in the DA and/or DDA, the parties will cooperate in good faith in determining the scope and timing of such advance Horizontal Improvements, so as not to delay the construction of Development Parcels and associated Phase Improvements, or affect the criteria for the proportional scope of Phase Improvements.

1.9 Phases of Infrastructure Construction

The construction of Infrastructure, as described in the Infrastructure Plan, master tentative map and other Project approvals, will be phased to serve the incremental build-out of the Project in accordance with the Project approvals. Phase Improvements, are the street, access, utility and open space improvements necessary to accommodate development of a particular Development Parcel or Parcels. Phase improvements will be described in subsequent improvement plans and associated public improvements agreements or permits approved prior to filing a final map for the associated Development Parcels.

For each Development Parcel proposed for development, the associated adjacent and as needed Infrastructure to provide access and utilities to serve that development, such as streets, and

improvements therein and thereon, will be constructed. As described in the DDA and DA, adjacent Infrastructure refers to Infrastructure that is necessary and near to and may share a common border or end point with the proposed Development Parcel or Parcels.

The conceptual limits of the existing Infrastructure to be demolished as well as conceptual layouts of the permanent and/or temporary infrastructure systems for each Development Parcel will be provided as part of the construction document submittals for that Development Parcel or Phase. Repairs and/or replacement of the existing facilities necessary to serve the Development Parcel will be designed and constructed by the Developer.

Where requested by Developer, and if the Acquiring Agency(s) with jurisdiction over the affected Infrastructure, determines it is appropriate in connection with the phased development of the Project, portions of the Phase Improvements may be constructed or installed as interim improvements to be owned and maintained by the Developer. Interim improvements would be removed or abandoned, as determined by the Acquiring Agency, when substitute permanent Phase Improvements are provided to serve a subsequent Development Parcel. Where a connection of interim Infrastructure to completed permanent Infrastructure Improvement has been approved or conditionally approved, such connection will not be grounds to reject or delay acceptance of or release security for such Infrastructure.

Demolition of existing Project Area infrastructure and construction of each proposed Development Parcel and associated Phase Improvements will impact site accessibility. During construction of each Development Parcel and associated Phase Improvements, interim access shall be provided and maintained for emergency vehicles, subject to San Francisco Fire Department (SFFD) approval, as well as pedestrian access on at least one side of the street around the construction perimeter that is American with Disabilities Act (ADA) compliant. Interim access to the existing parking will also be maintained and coordinated between the Port, Developer, and City, as required.

The Acquiring Agency will be responsible for maintenance of proposed publicly owned and/or accepted Infrastructure installed by the Developer once construction of the proposed Infrastructure is complete and accepted by the Acquiring Agency, except as otherwise specified in the DA and/or DDA. At all phases of development prior to full build out, the Developer shall demonstrate to the Acquiring Agency

that functioning utility systems are in place at all times and comply with applicable City laws, codes and regulations.

2. SUSTAINABILITY

The Mission Rock Project will be a leading exemplar for sustainable design development through high performance infrastructure and attention to community health and prosperity. Improvements comply with the City and County of San Francisco and State sustainability requirements including Title 24 (Divisions 6 and 11), San Francisco Non-Potable Water Ordinance and The San Francisco Green Building Code. Key benefits of the Project's sustainable site design and infrastructure elements include improved health, cleaner environment, minimal water dependency and greenhouse gas-free energy. Anticipated sustainable infrastructure includes, but is not limited to, stormwater management facilities (i.e. landscaped park areas, landscape strips, flow-thru planters, bioretention areas), a central energy distribution plant and infrastructure, treatment of greywater for non-potable reuse within the buildings, green building material selection, and water fixture and lighting efficiency. A more detailed description of the sustainability strategies for the Project is found in the latest edition of the Sustainability Strategy Document, by Atelier Ten within the Project DA.

3. ENVIRONMENTAL REMEDIATION

3.1 Historical Use Background

The planned mixed-use Mission Rock development is proposed to be located in an area that was formerly an industrial property built upon filled marshland and shallow tidal flats between 1877 and 1913. The existing fill includes construction and demolition debris, rubble, rock and dirt originating from the nearby hills and the 1906 earthquake. The site has been historically used for railroad transportation, shipping related support structures and automobile parking. H&H Ship Service occupied the area from 1950 to 1996 for wastewater treatment and transfer operations to treat petroleum contaminated wastewater. In 1978 the Department of Health Services, now known as the Department of Toxic Substances Control (DTSC), declared wastes managed at the site to be hazardous under federal and state hazardous waste management regulations and the property was later designated as a hazardous waste treatment facility. The DTSC approved a Closure Plan prepared by H&H Ship Service which was compliant with the California Hazardous Waste Control Law (HWCL) in 1995. As a requirement to the hazardous waste treatment facility closure, use restrictions are imposed on the Project site and compliance with a Soil Management Plan (SMP) prepared by Geomatrix Consultants in 1999 is required (see Appendix C).

3.2 Environmental Constraints and Regulations

The Project site is subject to environmental monitoring regulations and use restrictions that will impact the Mission Rock Project improvements. The Developer is responsible for addressing and complying with the following regulations and restrictions for the site:

3.2.1 Maher Ordinance Requirements and Site Assessment

The Mission Rock Project site is within a location required to adhere to Article 22A of the City and County of San Francisco Health Code. This code requirement, often referred to as the Maher Ordinance, in reference to the original legislation that resulted in regulation, requires project proponents to evaluate presence of contaminants in soil and groundwater and, if warranted based on presence of contaminants, develop health and safety plans and/or site managements plans to protect workers, future users, and the environment.

The Maher Ordinance site assessment requirements were satisfied during the previous parking lot construction with the development of an SMP, dated June 1999. The SMP provided a

summary of the soil samples taken and the contaminants detected throughout the site. The primary chemicals detected in the soil included polynuclear aromatic hydrocarbons (PAHs) and metals such as antimony, arsenic, copper, lead, nickel and mercury. The groundwater sampling did not yield PAH contaminants, but did show low concentrations of several metals. It was determined that the presence of chemicals within the soil and groundwater are not considered an unacceptable risk to future on-site construction workers, nearby residents and visitors under the future use as a paved parking lot that was anticipated at that time. However, to best manage the contaminated soil and groundwater, the SMP outlined removal, handling, stockpiling and disposal procedure requirements for the parking improvements, as well as future site development.

3.2.2 Use Restrictions

As part of the regulatory closure of the former H&H Ship Service facility, Covenant to Restrict Use of Property agreements ("use restrictions" were recorded between The Port of San Francisco and the DTSC restricting the use of certain portions of the Seawall Lot 337 property (approximately three acres of total 16-acre site). The use restrictions require that future activities comply with the Maher Ordinance, as applicable, and that the property shall not be used for any of the purposes stated in the use restrictions dated January 27, 2000 and July 25, 2002 (see Appendices D and E). Should the site be developed for any use of that which is listed as "restricted", then a variance request can be submitted to the DTSC for review.

3.3 Anticipated Site Remediation Procedures

The Developer will be responsible for adhering to the requirements stated in this section and will coordinated with the appropriate agency for environmental clearance prior to construction, as required. The Project requirements are described in the Hazardous Soil Remediation Plan Letter "Mission Rock Development – Seawall 337 San Francisco, CA 1868-00," dated September 12, 2011 by Ash Creek Associates, Inc. (See Appendix B).

3.2.1 Maher Ordinance Compliance

The anticipated site remediation procedures will remain consistent with the SMP. The SMP will also be updated as required to support the proposed redevelopment. These remediation construction procedures shall include, but not be limited to, dust control, erosion and sediment

control, stockpile management and appropriate soil disposal and sampling. Any excess soil that has been excavated and cannot be re-used within the excavation area will be considered waste soil and will be profiled to determine suitable disposal options. Although chemical analysis results show that the soil samples collected on-site contain metal and organic constituents at concentrations less than the Total Threshold Limit Concentrations, additional testing may be needed to determine the concentration of soluble constituents and appropriately classify waste soil with respect to California state waste classification criteria. Waste soil containing contaminants at concentrations exceeding the Solubility Threshold Limit Concentrations of the state will be profiled as California Hazardous Waste and will be disposed of at the appropriately licensed landfill location.

The SMP requirements are consistent with the current parking lot site improvements. However, due to changes in the regulation, which now requires characterization of soil gas in some cases, and proposed change in use, additional evaluation of site conditions for compliance with the Maher Ordinance may be required. These issues will be discussed with the City and County of San Francisco Department of Public Health during a meeting with the Project team and additional documentation may be required

3.2.2 Use Restriction Variance

The January 27, 2000 use restriction states that residential housing is prohibited. Mission Rock is currently proposing high-density housing improvements on a portion of land subject to that restriction. It is the Project team's understanding that the intent of the use restriction is to prevent residents' direct contact with site soil, such as might occur in single family home development , but would not occur in a high-density, multi-family residential development. Consequently, the Developer and Port of San Francisco will work with the DTSC to revise or obtain a variance from the existing use restriction to enable proposed development in a manner that does not enable future site occupants to come into direct contact with existing site soil.

4. SITE DEMOLITION

4.1 Scope of Demolition

The Developer will be responsible for the demolition and deconstruction of all non-retained existing buildings and infrastructure features. Demolition and deconstruction will include removal and disposal of hardscape, landscape, utilities, and temporary building structures. The demolition limit of work consists of the existing parking lot known as Giants Lot A, China Basin Park, Terry A Francois Boulevard and select sidewalk and vehicular pavement replacement along 3rd Street and Mission Rock Street. Demolition activities will be performed in compliance with the City Construction Demolition Debris Ordinance. Project demolition and grading activities will comply with City Ordinance 175-91 for use of non-potable water for soil compaction and dust control. Where feasible, concrete and asphalt pavements will be recycled and used on-site or made available for use elsewhere. The existing Channel Wharf at the eastern end of Terry A Francois Boulevard will be renovated and Pier 48 will remain and undergo structural upgrades with the Project improvements. Soil removal associated with demolition activities will comply with the Project environmental permit requirements.

As part of the vegetation grubbing and clearing operation, trees and other plant materials will be removed, relocated or protected in place, as required. Tree removal within the public right-of-way will be reviewed and approved by the Department of Public Works, Bureau of Urban Forestry. Trees and plant materials removed as part of the demolition process will be recycled by composting or similar methods for on-site uses associated with the planting of new vegetation and erosion control to the extent feasible.

The Developer shall be responsible for providing for the permanent improvements proposed to replace the existing infrastructure in accordance with approved building and construction permits issued by the City. The extent of these improvements and associated demolition will be finalized during the construction document approval process.

4.2 Existing Utility Demolition

Existing utility demolition scope includes storm drain, sanitary sewer, water and dry utility infrastructure removal. All storm drain utilities and utilities associated with the interim development, The Yard, at the northern edge of the existing parking lot and Terry A Francois Boulevard will be removed and disposed of. A portion of the existing sanitary sewer pipe along Terry A Francois Boulevard will be removed as

well and replaced with a sanitary sewer line which will connect the existing Pier 48 and Pier 50 laterals to the public system. Existing water infrastructure along Terry A Francois Boulevard and China Basin Park will also be removed, disposed of and replaced to accommodate the proposed improvements. Gas utilities throughout Terry A Francois Boulevard will be removed and existing laterals that serve Piers 48 and 50 will be protected in place. Existing outfalls on Terry A Francois and China Basin Park will be protected in place during adjacent demolition activities. Where transite pipe (asbestos–cement pipe) is encountered, appropriate abatement methods will be used to satisfy applicable regulatory agency requirements.

4.3 Phases of Demolition

Demolition will occur in phases based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of demolition will be the minimum necessary to support the Development Phase and maintain minimum required parking allocations, access and utility connections. Such phased demolition will allow the existing utility services, vehicular and pedestrian access areas, and landscaped spaces to remain in place as long as possible and reduce disruption of existing uses on the site and adjacent facilities. Project demolition activities will comply with City Ordinance 175-91 for use of non-potable water for soil compaction and dust control.

5. SITE RESILIENCY

5.1 Overview

Resilience is the ability to reduce risks and recover more easily from natural occurring events with large impacts on performance and use. The Project is located adjacent to the San Francisco Bay and faces potential risks from such events as earthquakes, settlement, liquefaction, lateral spreading, wave run-up, sea level rise, and climate change. The Developer plans to build site resiliency into the Project by implementing disaster risk reduction and resilient infrastructure. The Project will identify development areas and utility infrastructure guidelines to accommodate tidal elevations, the 100-year Base Flood Elevation (BFE), and Sea Level Rise (SLR).

5.2 Project Datum

Elevations, including tidal elevations and site elevations, referred to herein are on the Mission Bay Datum (MBD). Refer to Section 1.4 for additional information related to the MBD and conversion information for OCD and SFVD 13.

5.3 Federal Emergency Management Agency Regulations

The Federal Emergency Management Agency (FEMA) under the jurisdiction of the Department of Homeland Security has recently completed a Preliminary City and County of San Francisco Flood Insurance Study (SF FIS) Number 060298V00A, version 2.3.2.0, dated November 12, 2015. This study has helped inform the development of preliminary Flood Insurance Rate Maps (FIRM) that categorize sites within "Flood Zones" based on their susceptibility to flood events. Flood Zone designations are used to inform the design process and insurance requirements for buildings to ensure that protections are made for human health and safety based on the flood hazard potential at a particular site. Per the FEMA website, the following is a description of the various Flood Zone designations employed by FEMA:

"Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30.

Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded)."

5.3.1 Seawall 337, China Basin Park and Terry A Francois Boulevard FEMA Flood Plain Designations

Based on our review of the Preliminary Flood Insurance Rate Map 0602980119A (FIRM map), dated November 12, 2015, the Mission Rock development site, excluding Pier 48, Pier 50, and the coastal perimeter along China Basin Park, is located in a flood hazard classification of "Zone X." Per the FIRM map, the Zone X designation of our site describes the following:

"0.2% Annual Chance of Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas less than one square mile."

With a Zone X designation, the Project site is subject to minor flood of less than a foot during large storm events, which is considered a low to moderate risk area.

Since the majority of the site is in Flood Zone X, FEMA does not require specific grading or flood-proofing requirements. Proposed site grading, described in greater detail in Section 7, will be designed to elevate the site higher than the existing condition to protect against the effects of SLR, which in turn will provide a greater level of protection against the potential for flooding the area. Proposed buildings with basements and loading docks will comply with FEMA regulations and provide appropriate flood-proofing measures to ensure compliance, if required.

5.3.2 Pier 48, Pier 50, and Coastal Perimeter FEMA Flood Plain Designation

Based on the Preliminary Flood Insurance Rate Map 0602980119A (FIRM map), dated November 12, 2015, Pier 48, Pier 50, and the coastal perimeter along China Basin Park are located in a special flood hazard area (SFHA) "Zone AE," which has a 100-year base flood elevation (BFE) of 11-feet (NAVD 88 datum). The more detailed Preliminary SF FIS, dated November 12, 2015 indicates a 1-percent annual chance Total Water Level Elevation (TWLE) of 11.4-feet (NAVD 88), which is the assumed 100-year BFE value for the pier structure for the purposes of this analysis. The TWLE is the maximum combined sea water level elevation, wave setup, and wave run-up considered for coastal BFEs.

The datum conversion is approximately 11.32-feet between NAVD 88 and Old City Datum, and 100 feet between the Old City Datum and MBD. Combining these datum conversions, the approximate conversion from elevation 11.4 feet (NAVD 88) to the MBD is 88.68 feet, resulting in a 100-year BFE of 100.08 feet (MBD) for Pier 48, Pier 50, and the coastal perimeter along China Basin Park.

Based on the FIRM map, the existing pier structures are subject to flooding from the 1% annual flood event (100-year event). The BFE refers to the minimum elevation at which Pier 48 and Pier 50 must be elevated or flood-proofed in compliance with FEMA/National Flood Insurance Program (NFIP) regulations to provide protection from the 1% annual flood event. Given a designation of SFHA "Zone AE" with a BFE of 11.4 feet (NAVD 88) / 100.08 feet (MBD), the Pier 48 and Pier 50 structures are subject to mandatory Flood Insurance coverage requirements from the NFIP. Since the Pier 48 and Pier 50 structures are a historical resource and will remain at its current elevation, there may be options for receiving variances for portions of the Flood Insurance requirements that the structure is subject to.

5.4 Sea Level Rise

5.4.1 Sea Level Rise (SLR) Design Guidance

The increase in elevation of the Earth's water bodies over time is referred to as SLR. As SLR occurs, there is increased pressure on infrastructure along shoreline areas to provide protections for infrastructure, health, and safety. Studies on the effects of climate change on surface water elevations across the Earth are evolving as more scientific data becomes available. The following is a brief chronology of the guidance documents that inform the SLR strategies being developed for the Project to date:

- The Intergovernmental Panel on Climate Change (IPCC) was formed in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to provide policy makers with regular assessments of climate changes on a scientific basis. The IPCC issues reports which are produced by three working groups. The latest round of documents issued are based on their fifth assessment report which includes the following:

- Working Group 1, "Climate Change 2013: The Physical Science Basis," dated 2013.
 - Working Group 2, "Climate Change 2014: Impacts, Adaptation, and Vulnerability," dated 2014.
 - Working Group 3, "Climate Change 2014: Mitigation of Climate Change," dated 2014.
 - IPCC, "Climate Change 2014: Synthesis Report," dated 2014.
- Governor Schwarzenegger issued Executive Order S-13-08 in 2008 directing state agencies to study and plan for the potential effects of SLR
- Port Engineering commissioned URS and AGS to analyze available literature and studies related to SLR and prepare coasting engineering analysis of the Port's Northern Waterfront. The joint venture between URS and AGS published "Port of San Francisco Sea Level Rise and Adaptation Study," January 2012.
- The National Research Council (NRC) issued the report titled "Sea Level Rise for the Coasts of California, Oregon, and Washington," dated June 2012 and revisions dated December 6, 2013.
- Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) with science support from the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust issued "State of California Sea-Level Rise Document," dated March 2013
- City and County of San Francisco (CCSF) Sea-Level Rise Committee "Guidance for Incorporating Sea-Level Rise into Capital Planning in San Francisco: Assessing Vulnerability and Risk to Support Adaptation," September 2014.
- City and County of San Francisco (CCSF) "San Francisco Sea Level Rise Action Plan," March 2016.
- San Francisco Bay Conservation & Development Commission (BCDC) and Delta Alliance issued "Mission Creek Draft Sea Level Rise Adaptation Study," dated 2015.

5.4.2 Sea Level Rise Design Parameters

The minimum design elevations for the Project Development Area will accommodate potential future sea level rise estimates for San Francisco Bay. The SLR estimates for the Project were developed in response to the CCSF guidance, which is based on both the NRC and CO-CAT

studies. Under CCSF SLR guidance, the Project will be designed to accommodate the SLR criteria provided in Table 5.1.

Table 5.1
SLR and Associated Planning Requirements for Development Area

YEAR	SLR AND PLANNING REQUIREMENTS
2030 SLR	6 to 12-inches by 2030. Planning for adaptive management not required.
2050 SLR	11 to 24-inches by 2050. 12-inches is the mean 2050 estimate for SLR. Planning for adaptive management not required.
2065 Mean SLR	16-inches by 2065.
2100 Mean SLR	36-inches by 2100. Planning for adaptive management required.
2100 High SLR	66-inches by 2100. Planning for adaptive management required.

The existing historical Pier 48 structure and Channel Wharf will remain at their current elevations and not incorporate provisions included in Table 5.1.

5.4.3 Existing Mission Bay Grading for Resiliency

The existing finished grades in Mission Bay adjacent to the Project site range from elevations 97-100.5 feet (MBD). Grading and hydrology designs for Mission Bay were established prior to the more recent SLR investigations of the past 8 years, and do not accommodate for the 2100 High SLR estimates as currently graded. The existing perimeter streets of the Project including 3rd Street and Mission Rock Street will remain at their approximate existing grades. Along the east edge of the Project, Terry A Francois Boulevard will be reconstructed relatively close to its current grade. For existing grades at the Project site and surrounding existing streets, refer to Figure 7.1.

5.5 Proposed Site and Infrastructure Designs

5.5.1 Grading

The proposed Project grading designs and approaches are documented in Section 7 Site Grading. The grading design criteria has been separated between:

- Elevation design criteria as it relates to tides, sea level rise, site elevations, hydraulic grade lines, and existing streets

- Grading design criteria as it relates to site slopes.

The following summarizes the grading approaches for site building parcels and roadway areas, open space areas, and historic structures:

- Maintain public access along the entire 100-foot shoreline band.
- In the zone between the development area and shoreline, provide access opportunities to water.
- Elevate and flood-proof proposed buildings and unadjustable structures to minimize the need for adaptive measures, even under high SLR estimates.
- Conform to grades of existing perimeter streets, pier structures, and wharf structure.

5.5.1.1 Building and Roadway Areas

The minimum elevation design criteria for the proposed buildings and streets within the Development Areas are shown in Table 5.2.

Table 5.2
Elevation Design Criteria

AREA	MINIMUM DESIGN CRITERIA
Development Area – Proposed Buildings	Provide a minimum finished floor elevation of 104.0 feet (~95 feet 2000 Mean Higher High Water elevation (MHHW) + 100-yr storm surge (100SS) (~3.5 feet) + 66 inches of 2100 High SLR) and/or flood-proof to 2100 High SLR projections for new occupied facilities.
Development Area – Proposed Parking Structures	The Block D Parking Garage entrances will be set based on the grade of the adjacent street. At a minimum, the garage entrances will be set with a minimum finish floor elevation of 99.83 feet (95 feet 2000 MHHW + 100-yr storm surge + 16 inches of 2065 Mean SLR). As required, Adaptive Management Strategies will be incorporated within the structure to provide resiliency and protection through 2100.
Development Area – Proposed On-Site Streets	The street elevation shall accommodate 2 feet of freeboard between the 5-year storm drain system hydraulic grade line and the street gutter flow line. The starting hydraulic grade line design elevation for the 100-year storm for the storm drain system will be set based on the grade of the adjacent street's lowest top of curb elevation. Refer to Section 13.

Development Area – Pier 48	The pier structure will remain at existing elevation. As SLR occurs, Adaptive Management Strategies may be incorporated within the structure to provide resiliency and protection through 2100, subject to jurisdictional approval.
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For adjacent streets serving the project, including 3rd Street and Mission Rock Street, street elevations will remain relatively close to their current elevations. Along the east edge of the project, Terry A Francois Boulevard will be reconstructed relatively close to its current elevation. Proposed streets within the development will slope up from the existing conform elevations of approximate elevations of 99-101.5 feet at 3rd Street, Terry A Francois Boulevard, Piers 48 and 50, and Mission Rock Street to elevations of approximately 102.9-104.3 feet at the center of the site. By elevating the center of the site, access can be provided to building finished floors, which are set to accommodate protection from the 2100 High SLR projections or be flood-proofed to meet the 2100 High SLR projections.

5.5.1.2 Shoreline Open Space Areas and Parks

5.5.1.2.1 China Basin Park

China Basin Park will maintain shoreline elevations close to the existing grade of approximately 100 feet (MBD). The park will transition to the Bay Trail at an approximate elevation of 102 feet (MBD) through the center of the park. The Bay Trail through the center of the park provides approximately 6 feet of freeboard from the King Tide elevation of 96 feet (MBD). When sea level rises above 48-inches, the park will function as a space where future adaptations will creatively be implemented to maintain flood protection for existing public access features. The promenade which interfaces between the south portion of the park and the northern part of the development area will maintain access to the public at an elevation of approximately 103.5 – 104 feet (MBD).

5.5.1.2.2 Historical Pier Structures

Pier 48 and Pier 50 are historical structures that will be maintained at existing elevations. The existing grades for accessible areas at Pier 48 range from 99.2 to 101.0 feet (MBD). Accessible areas at Pier 50 have existing grades of 99.5 to 100.9 feet (MBD). The low lying areas of the piers may be susceptible to the 100-

year TWLE of 100.08. Since the existing pier structures are a historic resource, they will remain in place. To minimize impacts during a 100-year storm event, the interfacing street of Terry A Francois Boulevard will be regraded to channel stormwater away from the pier structures so that overland release to the San Francisco Bay will occur between Pier 48 and Pier 50. Existing grades of the piers provide protection beyond 2050 Mean SLR for potential future flooding.

5.5.2 Stormwater System

The 100-year Still Water Level Elevation (SWLE) is the 100-year return period water elevation, which is defined as the water elevation that is exceeded on average once every 100 years or the water elevation with a 1% annual chance of occurrence.

The SWLE for the design of the Development Area is 98.5 feet (MBD). The 100-year return period water elevation for the Development Area includes the effects of tides, storm surges, and tsunamis. The SWLE has been included with the drainage design of the 100-year storm event and overland flow release.

With the project's proximity to the San Francisco Bay, the Project must consider tidal elevations for drainage outfall conditions. The tidal elevation within the San Francisco Bay Area varies by location. For Mission Bay, the 2015 Subdivision Regulations provide a tidal elevation of 96.5 feet (MBD, -3.5 feet Old City Datum) for the Project which has been included in design to analyze the 5-year storm event.

The SLR and tidal elevations for the Project have been prepared in the SLR Adaptation Strategy Memorandum by Moffatt & Nichol in Appendix I. The tidal elevations, SWLE, and SLR for the Project have been compiled in Table 5.3.

Table 5.3

Tidal Elevations, SWLE and SLR by Datum

Elevation	NAVD88	OCD	MBD
100-Year SWLE+66" SLR (2100 High SLR) MHHW+100SS+66" SLR (2100 High SLR)	15.3'	4.0'	104.0
100-Year SWLE+36" SLR (2100 Mean SLR) MHHW+100SS+36" SLR (2100 Mean SLR)	12.8'	1.5'	101.5
100-Year SWLE+16" SLR (2065 Mean SLR) MHHW+100SS+16" SLR (2065 Mean SLR)	11.1'	-0.2'	99.8'

Elevation	NAVD88	OCD	MBD
100-Year SWLE+12" SLR (2050 Mean SLR) MHHW+100SS+12" SLR (2050 Mean SLR)	10.8'	0.7'	99.5'
100-Year SWLE	9.8'	-1.5'	98.5'
MB Tidal Elevation	7.8'	-3.5'	96.5'
King Tide (Roughly)	7.3'	-4.0'	96.0'
MHHW	6.3'	-5.0'	95.0'
Sea Level (Mean Lower Low Water)	0.0'	-11.3'	88.7'

5.6 Adaptive Managements Strategies

Sea Level Rise (SLR) has the potential to increase flooding risk along the shoreline areas as the MHHW, 100-year SWLE, TWLE, and BFE increases over time. The Project will be built to protect against varying amounts of SLR and has allocated space for future adaptive management strategies to be implemented in the future to respond to adjusted SLR projections. Strategies for the Project have been developed for Development Areas, Shoreline, and Pier.

5.6.1 Development Parcel Strategy

The proposed strategy for the Development Parcels, including unadjustable structures, is to set proposed grades to a minimum of 104 feet (MBD), high enough to accommodate for the current 2100 High SLR projects thus adaptive management strategies are not required. The Parcel D Parking Garage entrances will be set based on the grade of the adjacent street to accommodate for 2065 Mean SLR of 16-inches.

5.6.2 Shoreline Adaptation Strategy

The shoreline adaptation strategy will be applicable to areas surrounding the Development Parcels. The Promenade and Bay Trail within China Basin Park will be raised to an elevation of 102 feet (MBD) to provide 3.5-feet of freeboard above present day BFE. The China Basin Park shoreline, Terry A Francois Boulevard, 3rd Street, and Mission Rock Street will be maintained at existing grades to provide protection to Development Parcels from inundation during the king tide events beyond 2080. Along the shoreline of China Basin Park, the entire 100-foot shoreline band will be reserved for public access. For sea level rise above 48 inches, the shoreline band will provide an opportunity for creative implementation of future adaptation strategies to

maintain flood protection to Mission Bay and the Development Parcels. Adaptive management strategies within China Basin Park may include modifications to create a raised promenade with retaining walls, realignment of the promenade, reconfiguration of shoreline protection to provide flatter slopes and wave breaks. Beyond 2050, future adaptive management strategies may be implemented by the Port to the pier apron and below the pier structure to maintain flood protection for the structure.

Today, the National Oceanic and Atmospheric Administration (NOAA) monitors weather conditions and notifies the public of potential risk for flooding in low lying areas. Future adaptation of the shoreline would be enacted by the Port when published information from NOAA indicates that flooding to the public access areas would occur during king tide events. Funding for adaptive management strategies would be provided by the Port through a Community Financing District (CFD) or other equivalent funding mechanism.

6. GEOTECHNICAL CONDITION

Site geotechnical investigations have been completed and potential site wide geotechnical improvements have been identified by Langan Treadwell & Rollo, culminating in the development of the "Preliminary Geotechnical Investigation Seawall Lot 337 – Mission Bay" (Geotechnical Report) by Treadwell & Rollo, dated September 8, 2011 and subsequent evaluations. In addition, Langan Treadwell & Rollo has also provided a supplemental memorandum: "Preliminary Geotechnical Recommendations and Summary Memorandum No. 1" (Geotechnical Memorandum), dated January 26, 2016 for additional reference, which is attached as Appendix F.

6.1 Existing Site Geotechnical Conditions

The site was originally a shallow bay below water and a part of Mission Bay. It is understood the site was elevated using building rubble and debris from the 1906 San Francisco earthquake as fill. Borings indicate 13 to 37-feet of heterogeneous fill is underlain by approximately 46 to 72-feet of Bay Mud consisting of weak, soft to medium stiff, compressible clay. The over-consolidated Bay Mud at the site is evidence of complete settlement under the existing fill weight. Locations where Bay Mud has failed beneath the heavy fill loads show a "Bay Mud wave" condition and is comprised of clayey gravel and gravely clay. The borings also encountered the bedrock surface to be at a depth of approximately 160-feet near the northwest corner of the site and 260-feet near the northeast corner of the site.

Groundwater was encountered approximately 7 to 9-feet below grade (Elevations 91 to 93 feet). Other sites within Mission Bay have encountered groundwater measured at approximately five feet below grade (Elevation 94.5 feet).

6.2 Existing Site Geotechnical Constraints

6.2.1 Liquefaction/ Settlement of Sand Layers

Liquefaction is the transformation of soil from a solid state to a liquefied state during an earthquake where saturated soil builds up excessive pore water pressure and temporarily loses its strength. The result is immediate settlement and possible lateral movement of the sand material.

Conservatively, all loose to medium dense soil materials (sands, silts and low plasticity clays) within both the artificial fills and underlying Bay Deposits are potentially liquefiable. The potential for soil liquefaction is likely to occur during a major earthquake. With the potentially liquefiable layers being random and discontinuous throughout the site, it is estimated the site

will experience up to 3-inches of liquefaction-induced settlement within the fill material of the site. Along the west end of Pier 48, the analysis indicated that 3 to 5-inches of liquefaction-induced settlement could occur.

6.2.2 Lateral Spreading

Lateral spreading is considered the most damaging type of liquefaction-induced ground failure caused by earthquakes. In this case, surficial soil is displaced along a shear zone that has formed within a liquefied layer resulting in surficial blocks sliding downward toward unbound space, such as the Bay. These conditions are common in multiple San Francisco regions, such as the Downtown and Mission Bay districts. The southeast corner and northwest portion of the Project have been identified as being susceptible to lateral spreading estimated to result in 4 to 6-feet of lateral displacement during a large earthquake.

6.2.3 Settlement of Bay Mud

The site is underlain by a layer of Bay Mud estimated to be 46 to 72-feet thick which appears to be over-consolidated. Placing the new fill on top of the existing bay mud layer will initiate a new cycle of consolidation settlements for the Bay Mud layer. It can be expected that for each additional foot of fill placed on the site, approximately 2-inches of settlement may occur at entrances to pile supported structures, 3-inches within streets, and 4-inches in open space areas. During an earthquake, an additional settlement of approximately 9 inches could potentially occur due to seismic densification and liquefaction. For proposed building and structures designed to be pile supported, it is anticipated that 1 to 2-inches of settlement may result from a major earthquake.

If mitigation measures or preventative designs are not incorporated, differential settlement may occur resulting in interrupted access, utility infrastructure damage, and accessibility issues

6.3 Geotechnical Approaches

Successful site development will require engineering design and project construction methods that account for the existing soil, existing conforms, and shoreline conditions. These improvements will help ensure that site accessibility and building access is maintained during seismic events, SLR, and minor long-term consolidation settlement. Proposed building will be constructed on piles with a similar approach proposed for the on-site streets and utilities supporting the new development. The

geotechnical design approaches considered and recommended for the Project have been summarized below and are documented in the Geotechnical Memorandum.

6.3.1 Site Grading Strategies

The proposed development will be elevated 1 to 5-feet above existing grade to accommodate for future sea level rise. The use of soil fill to raise the site would cause ground settlement of up to a few feet. At the existing Project conforms with Terry A Francois Boulevard and Piers 48 and 50 to the east, new constructed Mission Rock Street to the south, and existing 3rd Street to the west, proposed grades will match the approximate existing grades to mitigate the potential for settlement. To raise the center of the site, the design team has explored several different alternatives to adding soil fill to the site, which include the following strategies:

6.3.1.1 Soil Surcharging with Wick Drains

Adding mounds of surcharge soil with perforated wick drains to collect water across the site will induce Bay Mud Settlement in advance of Project construction. This effectively mitigates the settlement of Bay Mud that the new fill proposed as part of the finished Project would typically cause. Considering that parking operations must be maintained at the site prior and during build-out of the Project, this settlement mitigation solution is not appropriate for the development since parking availability would be eliminated or severely limited.

6.3.1.2 Deep Soil Mixing

Deep Soil Mixing (DSM) acts to improvement the stability of the underlying site by mechanically mixing cementitious binder slurry with weak and compressible soils. Due to the depth of the Bay Mud layers at the site extending down to nearly 90-feet below existing finished grade, DSM is both cost prohibitive and less practical than other solutions considered by the Geotechnical Memorandum.

6.3.1.3 Lightweight Fill to Raise Grades

Lightweight fill materials such as cellular concrete or Geofoam weigh less than traditional soil fill. Using such materials in lieu of soil to raise site grades significantly reduces the settlement of the Bay Mud layer. However, lightweight fill may present several utility installation and maintenance challenges. Installation of utilities can be

difficult, as cutting foam in the shape of the utilities may not be easily feasible. Long term maintenance of utilities within Geofoam would also require cutting of the Geofoam to access the utilities, which is a labor and cost intensive process. Additionally, storm drain and sanitary utilities will be installed as deep as 12 to 13-feet below finished grade, which is within the groundwater table, and can potentially cause uplift and complex dewatering strategies. Although lightweight fill is not anticipated to be used throughout the majority of the site, it may be utilized within park areas where utility grids and access for maintenance and operations is not a constraint.

6.3.1.4 Pile supported structures, streets and utilities

Due to the infeasibility of other options outlined above, the proposed Project streets are proposed to be pile supported “U-shaped” corridors that extend the width of the right-of-way and built to a depth required to support the installation of utilities. The “U-shaped” corridor would then be backfilled with soil to provide the typical street sub-surface condition, allow utilities to be installed with standard trenching method, and provide for long term utility and infrastructure maintenance using typical construction and City standards. Pile designs could include friction or end-bearing solutions with final designs prepared and approved during the construction document process. This is the preferred solution for mitigating site settlement issues, and with site structured street approaches are described in greater detail in Section 8 and on Figure 8.14 of this document. The pile-supported structure for the streets will be owned, maintained and accepted by the Acquiring Agency subject to the terms of the DA and DDA.

6.3.2 Liquefaction and Lateral Spreading Mitigations

In order to mitigate the potential effects of earthquake induced lateral spreading and soil liquefaction, the Project proposed to incorporate solutions that would include Stone Columns, Deep Dynamic Compaction, or combination of both solutions.

Compaction Grouting and Rapid Impact Compaction (RIC) were also reviewed as potential solutions for mitigating lateral spreading and liquefaction. However, RIC has proven successful

to depths of 10-feet, which is less than required for the site, and there is not enough soil overburden present in the site soils to handle the required pressures for Compaction Grouting.

6.3.3 Flexible Utility Connections

Portions of the site may experience differential settlement at the interface of pile supported streets with proposed buildings and the utility connections at 3rd Street, Mission Rock Street, Terry A Francois Boulevard, and China Basin Park. Differential settlement at these location could cause the utility connections to shear and break along this plane. Therefore, flexible utility connections, incorporating such solutions flexible pipe materials, ball joints or settlement vaults, may be installed at the interface of the structured street with a non-structured on-grade street (Terry A Francois Boulevard, Mission Rock Street, 3rd Street, or Park) to mitigate the displacement of the utility connections and ensure continuous utility service to the Project and existing adjacent properties. Final design solutions, if required, will be subject to review and approval by the Acquiring Agency.

6.3.4 Site Accessibility

Minor Long-term settlement of the ground plane may occur along the site conforms at Mission Rock Street, 3rd Street, and Terry A Francois Boulevard. Where a pile-supported structure interfaces with the on-grade public streetscape, minor differential settlement may occur where the compressible material beneath the street begins to settle relative to pile supported buildings and proposed on-site streets. To mitigate areas where differential settlement is anticipated, grading and building designs will incorporate measures to ensure that continuous accessible paths of travel are maintained where building access points and private passageways interface with the public right-of-way. Where required, measures such as hinge slabs, gangways, and other adjustable surfaces, may be designed to mitigate the maximum anticipated long-term differential settlement. Refer to Figure 6.1 for the anticipated locations where flexible utility connections would be required.

6.4 Phases of Geotechnical Stabilization

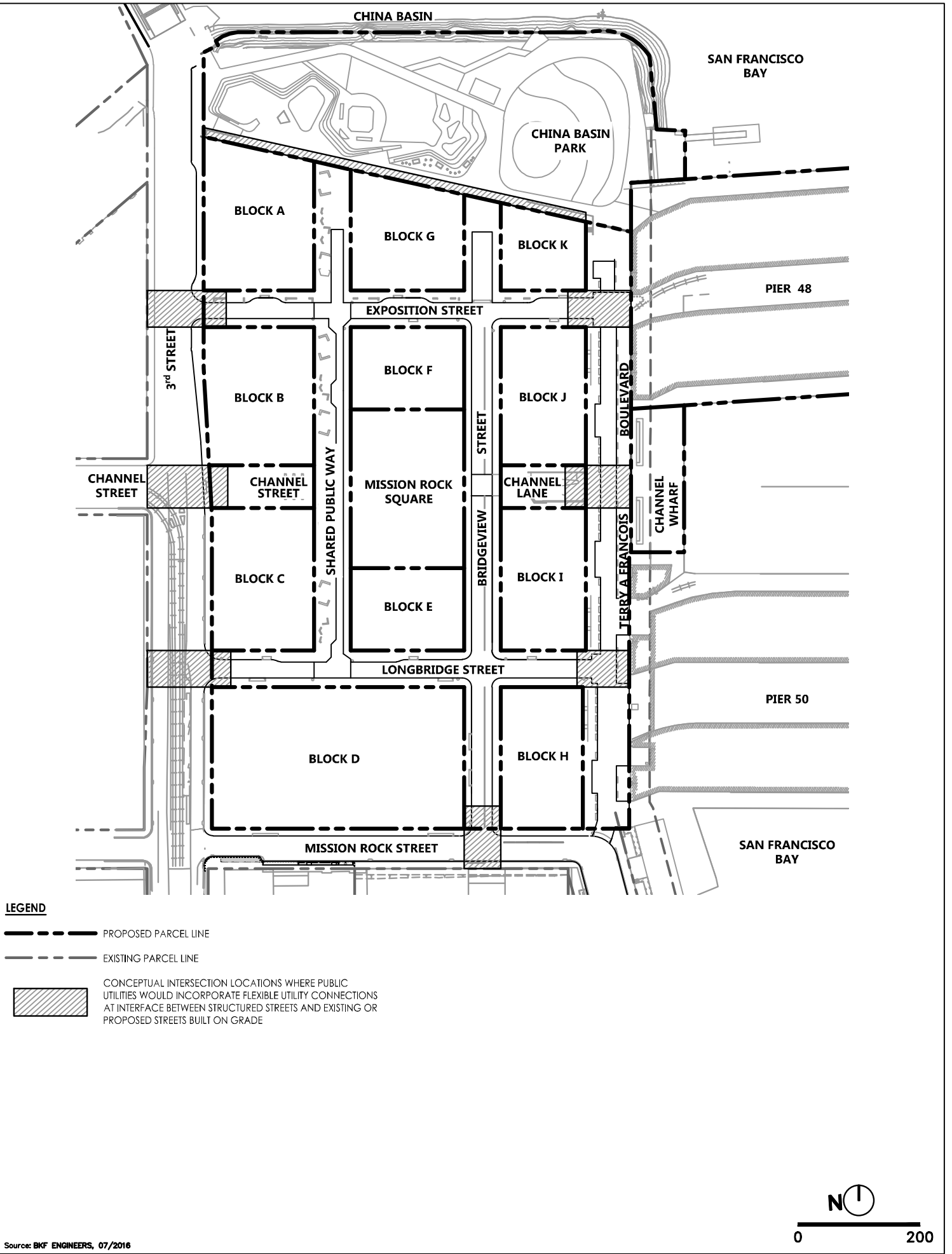
Geotechnical stabilization will occur in phases based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of geotechnical stabilization will be the minimum necessary to support the Development Phase and maintain minimum required parking allocations, access and utility

connections. Such phased geotechnical stabilization will allow the existing utility services, vehicular and pedestrian access areas, and landscaped spaces to remain in place as long as possible and reduce disruption of existing uses on the site and adjacent facilities. Additional geotechnical stabilization, such as mitigations for lateral spreading and liquefaction, may be completed above the minimum necessary per phase due to constructability and efficiency considerations. Dewatering, and associated permits, may be required to support the Geotechnical Stabilization and construction process

6.5 Schedule for Additional Geotechnical Studies

Supplemental Geotechnical Studies and Reports will be prepared as required to support the proposed Project public improvements. In addition, Geotechnical Reports for private building parcels will be prepared and submitted to the City as part of the building permit process.

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 6.1 Flexible Utilities.dwg
 PLOT DATE: 07/13/17
 PLOTTED BY: FELI



Source: BKF ENGINEERS, 07/2016

MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 6.1 - FLEXIBLE UTILITIES

7. SITE GRADING

7.1 Project Datum

Elevations, including tidal elevations, hydraulic grade lines (HGLs), and site elevations, referred to herein are on the Section 7 Mission Bay Datum (MBD), unless identified otherwise. The MBD is defined as the Mission Bay Datum which is the Old City Datum plus one hundred feet.

7.2 Existing Site Conditions

The existing grade within the Project site slopes gradually east, west, and south away from the center of the existing parking lot with ground elevations ranging from approximately 101 feet elevation at high points to approximately 97 feet elevation to the south at low points in the existing parking lot. Along the western and eastern borders, the site is bounded by and conforms to the existing grades along 3rd Street and the Piers with ground elevations ranging from 99 feet to 100.5 feet in elevation. The northern border is bounded by the north interface of China Basin Park at the rip rap of China Basin. Along the southern border, there is a grade different of 3 feet to 4 feet of elevation between the existing parking lot and the newly constructed Mission Rock Street. The existing site elevations are shown in Figure 7.1.

7.3 Site Geotechnical Constraints and Approach

The geotechnical report and geotechnical memorandum were prepared for the Project by Langan Treadwell & Rollo. The Project site was originally a shallow bay below water as part of Mission Bay. It was later elevated by using building rubble and debris from the 1906 San Francisco earthquake as fill sourced from Potrero Hill. Site investigation found the fill is underlain by Bay Mud, building rubble, and debris.

Placement of new fill on top of existing Bay Mud layers will initiate a new cycle of consolidation settlements. The Project Site may experience minor amounts of liquefaction, settlement, and lateral spreading due to existing sand layers and soft Bay Mud. The geotechnical engineer and explored different measures to mitigate these site constraints, which are described in greater detail in Section 6.

7.4 Project Grading Overview

The Developer will be responsible for the design and construction of the proposed grading for the Project. Below is a description of the grading design for the different areas of the site. The proposed Project grading plan is shown in Figure 7.2.

The Project is comprised of the Development Parcel at the center of the project, the Waterfront Promenade and China Basin Park to the north, and Terry A Francois Boulevard to the east that interfaces with Pier 48, Channel Wharf, and Pier 50. The Development Parcel consists of the private development blocks and structured street grids.

Proposed grading for the Project raises the Development Parcel to approximate elevations of 103.5 feet to 104.5 feet at the center of the site. The structured street grid grades will slope down to the existing adjacent streets, the San Francisco Bay and China Basin shorelines, or park areas. The streets and sidewalks have been designed to provide overland release and Americans with Disabilities Act (ADA) compliant accessible pathways throughout the site and adjacent parcels. The proposed street grid with interconnected open space and accessible pathways will be constructed to link 3rd Street with Terry A Francois Boulevard in the west-east direction and China Basin Park with Mission Rock Street in the north-south direction. Throughout the site, grades less than 5 percent are provided.

7.5 Elevation and Grading Design Criteria

The grading design criteria has been separated between:

- Elevation design criteria as it relates to tides, sea level rise, site elevations, hydraulic grade lines, and existing streets
- Grading design criteria as it relates to site slopes.

7.5.1 Elevation Design Criteria

The minimum elevations are based on the FEMA 100-year BFE. For existing perimeter roads serving the Project and adjacent properties, proposed infrastructure within these existing streets will be designed to accommodate tidal elevations. For more information on the Project as it relates the FEMA, refer to Section 5 Site Resiliency.

7.5.1.1 Sea Level Rise (SLR)

SLR will result in changing water levels in the San Francisco Bay that the Project will need to accommodate. The design criteria employed at the time of this Infrastructure Plan are based on the best scientific forecasts and potential design strategies currently available. The forecasts will very likely change over time and will provide guidance for the future.

The minimum design elevations for the Project Development Parcels will accommodate potential future SLR estimates for San Francisco Bay as discussed in Section 5 Site Resiliency. The Project will be designed to accommodate the SLR criteria provided in Table 7.1.

Table 7.1
SLR and Associated Planning Requirements

YEAR	SLR AND PLANNING REQUIREMENTS RELATIVE TO YEAR 2000
2030 SLR	6 to 12-inches by 2030. Planning for adaptive management not required.
2050 SLR	11 to 24-inches by 2050. 12-inches is the mean 2050 estimate for SLR. Planning for adaptive management not required.
2065 Mean SLR	16-inches by 2065. Planning for adaptive management required.
2100 Mean SLR	36-inches by 2100. Planning for adaptive management required.
2100 High SLR	66-inches by 2100. Planning for adaptive management required.

The minimum SLR to be accommodated for the elevation design of structures and streets in the Project is 16-inches. To the extent feasible, the Project plans to develop structures in the Development Parcels to accommodate a 2100 High SLR of 66-inches above the BFE. For more information on the Project as it relates the Sea Level Rise, refer to Section 5 Site Resiliency and Table 5.1.

7.5.1.2 100-Year Base Flood Elevation and Tidal Elevation

The 100-year BFE is the 100-year return period water elevation, which is defined as the water elevation that is exceeded on average once every 100 years or the water elevation with a 1% annual chance of occurrence.

The BFE for the design of the Development Parcel is 98.5 feet. The 100-year return period water elevation for the Development Parcel includes the effects of tides, storm surges, and tsunamis. The BFE has been included with the drainage design of the 100-year storm event and overland flow release.

With the project's proximity to the San Francisco Bay, the Project must consider tidal elevations for drainage outfall conditions. The tidal elevation within the San Francisco

Bay Area varies by location. For Mission Bay, the 2015 Subdivision Regulation provide a tidal elevation of 96.5 feet for the Project which has been included in design to analyze the 5-year storm event.

The SLR and tidal elevations for the Project have been prepared in the SLR Adaptation Strategy Memorandum by Moffat & Nichol in Appendix I, and are provided in Table 7.2.

Table 7.2

SLR and Tidal Elevations by Datum

Elevation	NAVD88	Old City Datum	MBD
FEMA 100-Year BFE +66" SLR 100-Year SWLE+66" SLR (2100 High SLR) MHHW+100SS+66" SLR (2100 High SLR)	15.3'	4.0'	104.0
FEMA 100-Year BFE/100-Year SWLE	9.8'	1.5'	98.5'
MB Tidal Elevation	7.8'	-3.5'	96.5'
King Tide (Roughly)	7.3'	-4.0'	96.0'
MHHW	6.3'	-5.0'	95.0'
Sea Level (Mean Lower Low Water)	0.0'	-11.3'	88.7'

7.5.1.3 Minimum Site Elevations

The minimum elevation design criteria for the Development Parcels are shown in Table 7.3.

Table 7.3
Elevation Design Criteria

AREA	MINIMUM DESIGN CRITERIA
Development Parcel – Buildings	Provide a minimum finished floor elevation of 104.0 feet (~95 feet 2000 Mean Higher High Water elevation (MHHW) + 100-yr storm surge (100SS) (~3.5 feet) + 66 inches of 2100 High SLR) and/or flood-proof to 2100 High SLR projections for new occupied facilities.
Development Parcel – Parking Structures	The Block D Parking Garage entrances will be set based on the grade of the adjacent street. At a minimum, the garage entrances will be set with a minimum finish floor elevation of 99.83 feet (95 feet 2000 MHHW + 100-yr storm surge + 16 inches of 2065 Mean SLR). As required, Adaptive Management Strategies will be incorporated within the structure to provide resiliency and protection through 2100.
Development Parcel – Proposed On-Site Streets	The street elevation shall accommodate 2 feet of freeboard between the 5-year storm drain system hydraulic grade line and the street gutter flow line. The starting hydraulic grade line design elevation for the 100-year storm for the storm drain system will be set based on the grade of the adjacent street's lowest top of curb elevation. Refer to Section 13.
Development Parcel – Pier 48	The pier structure will remain at existing elevation. As SLR occurs, Adaptive Management Strategies may be incorporated within the structure to provide resiliency and protection through 2100, subject to jurisdictional approval.

For adjacent streets serving the project, including 3rd Street and Mission Rock Street, street elevations will remain relatively close to their current elevations. Along the east edge of the project, Terry A Francois Boulevard will be constructed relatively close to its current elevation. Proposed streets within the development will slope up from the existing conform elevations of approximate elevations of 99-101.5 feet at 3rd Street, Terry A Francois Boulevard, Piers 48 and 50, and Mission Rock Street to elevations of approximately 102.9-104.3 feet at the center of the site. By elevating the center of the site, access can be

provided to building finished floors, which are set to accommodate protection from the 2100 High SLR projections.

7.6 Proposed Grading Designs

7.6.1 Building Areas

Proposed finished floors will be set at a minimum of the 100-year tide level plus 66-inches of SLR to ensure protection from anticipated rising tide levels. Project development and grading designs will be developed to comply with the City requirements for accessible paths of travel.

7.6.2 Proposed Roadways

Proposed slopes along public streets and private alleys will be set at a maximum longitudinal slope of 5 percent to provide ADA accessible pathways of travel without requiring handrails as shown in Figure 7.2. The proposed Public street system is designed in a saw tooth grading pattern as illustrated in Figure 7.3, such that adjacent high and low points have relatively the same elevations. At conforms, the site slopes down to the existing adjacent streets, China Basin, or park areas. With exception to Channel Street and Channel Lane, which will function primarily as pedestrian zones, handrails will be provided for stairs and accessible areas exceeding 5 percent, where required.

At street intersections, grades will be designed at a maximum slope of 2% to provide an accessible path of travel in crosswalks. In addition, vertical curves within the streets will be designed to both begin and end outside the limits of the crosswalk areas.

7.6.3 Overland Release

As required by the City Subdivision Regulations and grading designs will be developed such that the 100-year HGL is contained within the top of curb elevations on opposite sides of a street throughout the Project site. For streets without curbs or with flush curbs, such as Terry A Francois Boulevard, Shared Public Way and the northern block of Bridgeview Street, grading and hydrology designs will be developed to contain the 100-year HGL within the street while providing a 4-foot wide accessible path on one side of the street. The proposed on-site street grid will be graded to provide overland release for the Project. The proposed Public street system is designed in a saw tooth grading pattern to facilitate overland flow of stormwater to adjacent streets.

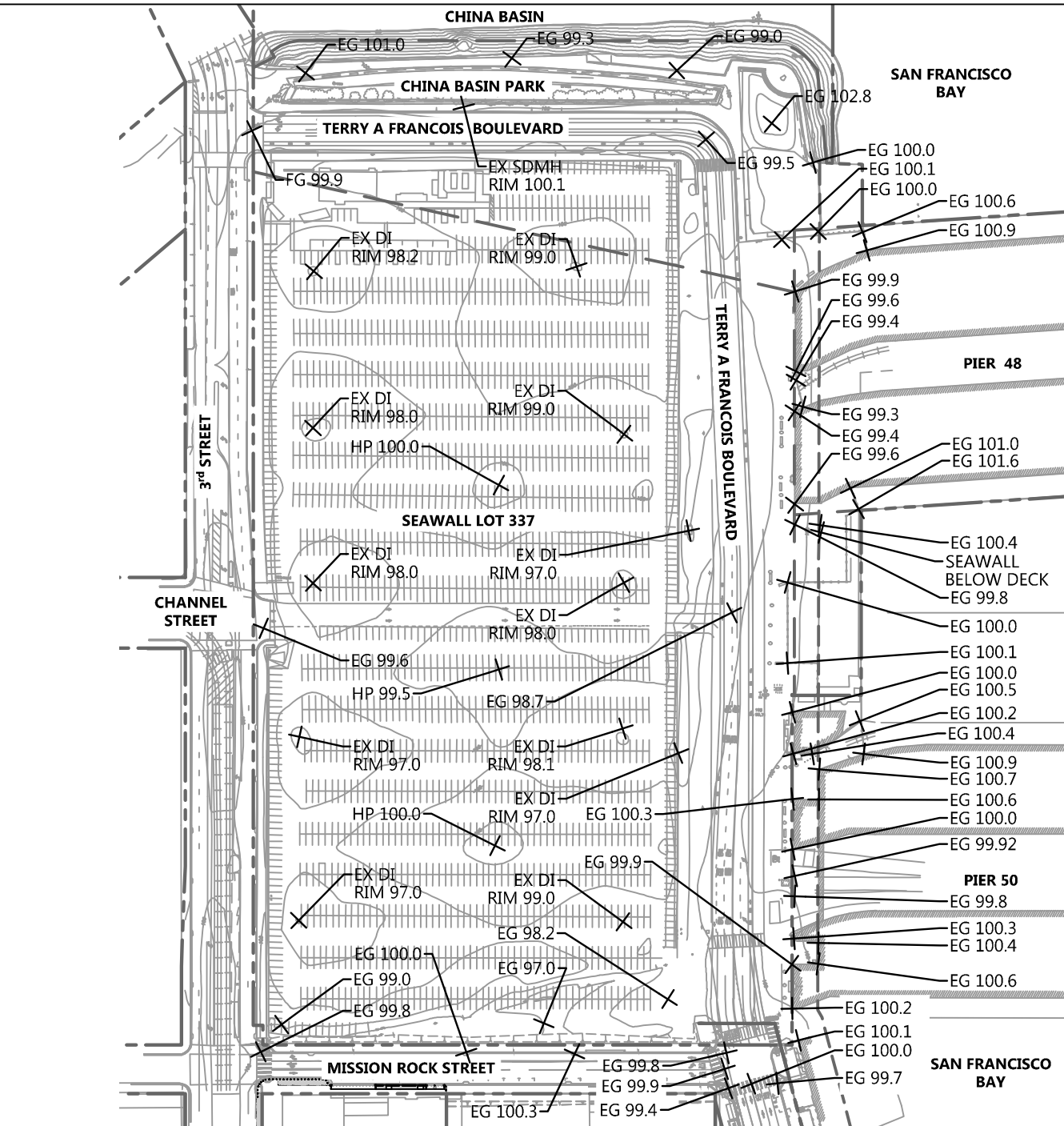
7.7 Proposed Site Earthwork

The conceptual grading plan for the Project will require approximately 75,000 CY of gross earthwork to grade for topsoil within China Basin Park and the pile-supported structured streets. Within China Basin Park, grades will be elevated by a combination of topsoil and geo-foam. Development Parcels and Mission Rock Square may be pile-supported, requiring no additional fill to grade, or elevated using light-weight fill, geof foam, topsoil, or a combination thereof. To support grading activities, a Storm Water Pollution Prevention Plan (SWPPP) / Erosion and Sediment Control Plan (ESCP) will be submitted in parallel with future grading permits. Grading in conjunction with site remediation efforts will be performed by the Developer.

7.8 Phases of Grading Activities and Approvals

The Developer will grade the site based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the grading proposed will be the minimum necessary to support the Development Phase. The new Development Phase will conform to the existing grades as close to the edge of the Development Phase area as possible while maintaining the integrity of the remainder of the Project. Repairs and/or replacement of the existing facilities necessary to support the proposed Development Phase will be designed and constructed by the Developer. Interim grading will be constructed and maintained by the Developer as necessary to maintain existing facilities impacted by proposed Development Phases. Project grading activities will comply with City Ordinance 175-91 for use of non-potable water for soil compaction and dust control.

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 7.1 Existing Grading Plan.dwg
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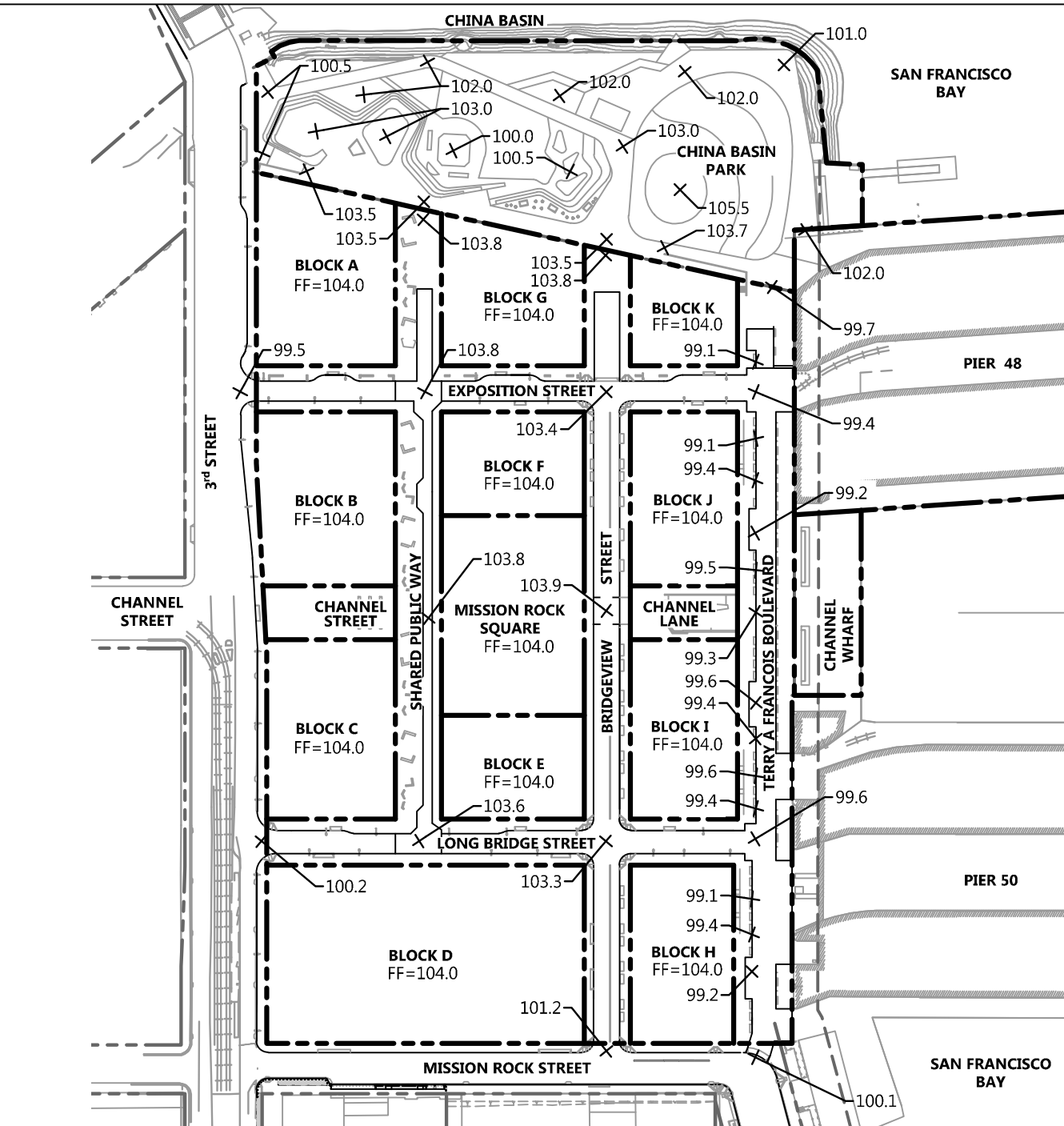
LEGEND

- EXISTING PARCEL LINE
- EXISTING CONTOUR



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DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 7.2 Conceptual Grading Plan.dwg
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 PLOTTED BY: FELI



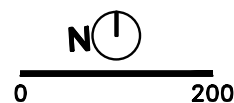
LEGEND

- PROPOSED PARCEL LINE
- EXISTING PARCEL LINE
- x 103.6 PROPOSED ELEVATION

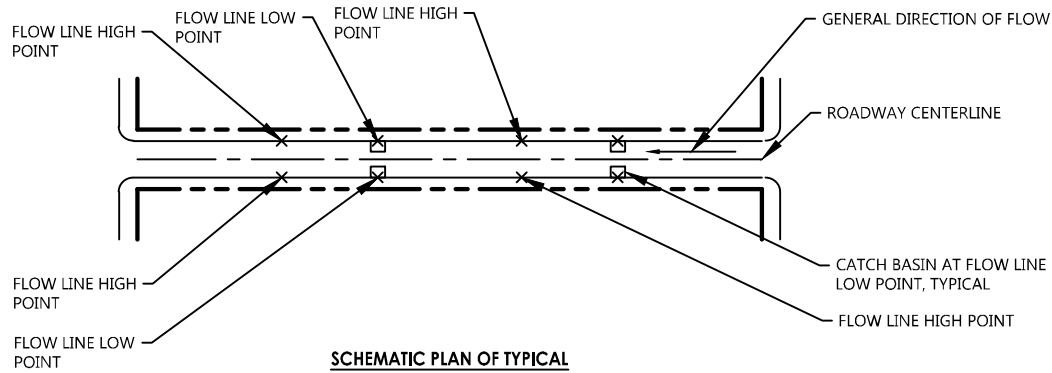
NOTE

ALL ELEVATION ARE BASED ON THE MISSION BAY DATUM. THE MISSION BAY DATUM EQUALS THE OLD CITY OF SAN FRANCISCO DATUM PLUS 100 FEET.

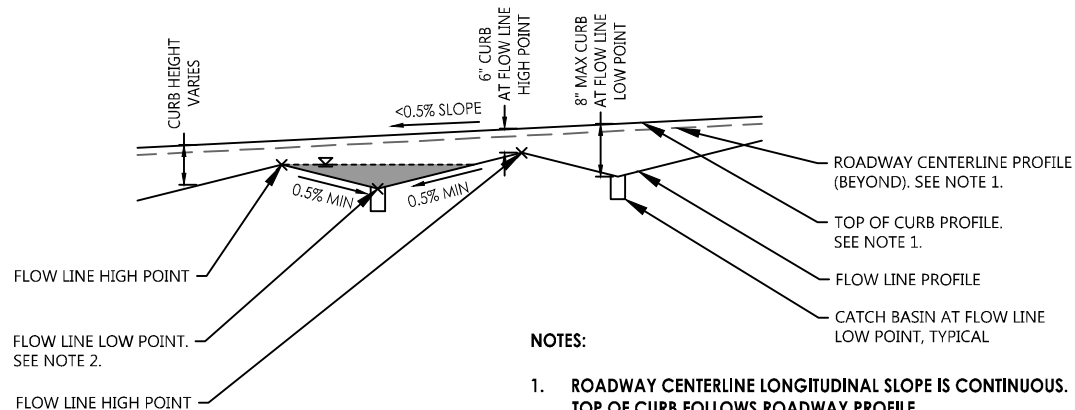
Source: BKF ENGINEERS, 07/2016



DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 7.3 Street Sawtooth Grading.dwg
 PLOT DATE: 07/13/17 PLOTTED BY: FELI



**SCHEMATIC PLAN OF TYPICAL
SAWTOOTH GRADING**



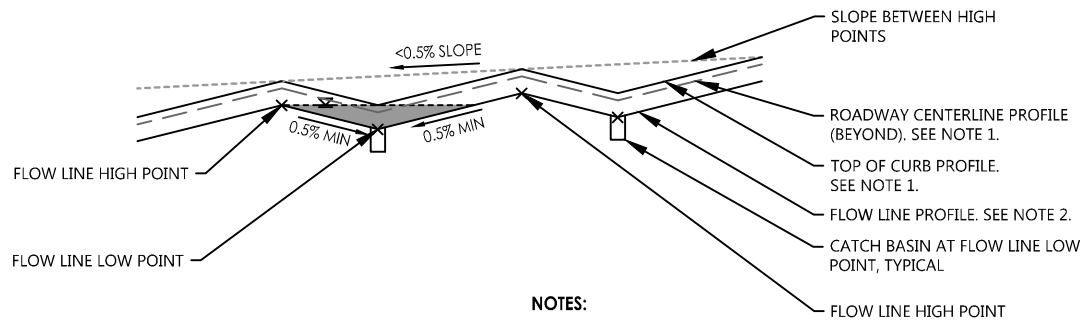
OPTION 1

**SCHEMATIC PROFILE OF SAWTOOTH GRADING WITH
CONTINUOUS CENTERLINE AND TOP OF CURB**

NOTES:

1. ROADWAY CENTERLINE LONGITUDINAL SLOPE IS CONTINUOUS. TOP OF CURB FOLLOWS ROADWAY PROFILE.

STREET CROSS SLOPE VARIES BETWEEN 2% AND 5% AND CURB HEIGHT VARIES BETWEEN 6-INCHES AND 8-INCHES (EXCEPT AT CURB RETURNS, CROSSWALKS, ACCESSIBLE PARKING SPACES, AND ACCESSIBLE PASSENGER LOADING ZONES) TO ACHIEVE A FLOW LINE WITH A 0.5% MINIMUM LONGITUDINAL SLOPE.
2. THE LOW POINT OF THE FLOW LINE COINCIDES WITH THE STEEPEST STREET CROSS SLOPE AND 8-INCH CURB.
3. THE ROADWAY CENTERLINE SLOPE ON TERRY A FRANCOIS BOULEVARD IS LESS THAN 0.5% SLOPE DUE TO EXISTING CONDITIONS.



OPTION 2

**SCHEMATIC PROFILE OF FLOW LINE SAWTOOTH GRADING
WITH PARALLEL ROADWAY CENTERLINE AND TOP OF
CURB**

NOTES:

1. ROADWAY CENTERLINE PROFILE AND TOP OF CURB FOLLOWS FLOW LINE PROFILE.
2. FLOW LINE HIGH POINT ELEVATIONS ARE LOWER THAN THE UPSTREAM TOP OF CURB LOW POINT ELEVATIONS.
3. THE ROADWAY CENTERLINE SLOPE ON TERRY A FRANCOIS BOULEVARD IS LESS THAN 0.5% SLOPE DUE TO EXISTING CONDITIONS.



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8. STREET AND TRANSPORTATION INFRASTRUCTURE

Mission Rock's street network will be comprised of short, walkable blocks that connect to existing Mission Bay streets adjacent to the Project. The Project will prioritize pedestrian and bicycle safety and access to the buildings, streets, and open spaces at Mission Rock through careful consideration of transit and transportation connections, accessibility, traffic calming measures, and a centralized site parking facility instead of on-street parking. The bicycle network at Mission Rock will provide an important link for the district, connecting the Bay Trail/Blue Greenway to the Embarcadero, and will include a variety of facilities that will provide choices for cyclists of all ages and skill levels. These facilities will be integral to the unique character of Mission Rock's streets.

8.1 Design Controls: Plan Overview

The Design Controls describe the public realm, open spaces, and streetscapes at Mission Rock represented in Figure 8.1. The street designs described herein represent one potential application of these controls. As a pedestrian-priority development, Mission Rock's street network will provide safe and easy access to open spaces, building entrances, and retail, with unique street types designed to the scale and speed of the pedestrian experience. A combination of traffic calming strategies will discourage unnecessary vehicle traffic and ensure that internal traffic will be low-speed and low-volume. The public realm will be fully integrated with the design and scale of the ground floor of Mission Rock's buildings.

8.2 Public Street System

The Developer will be responsible for the design and construction of the public streets. Improvements will generally include the following:

- Pavement structural sections
- Concrete curbs and gutters
- Concrete sidewalk and curb ramps
- Traffic control signage and striping
- Traffic signals
- Street lighting and pedestrian-scale lighting
- Street landscaping and trees
- Stormwater management facilities (may include such methods as landscape strips, permeable pavements, and bio-retention areas)

- Street furnishings (includes, but are not limited to, benches, trash cans and bike support facilities)
- Accessible on-street passenger loading zones with adjacent street level passenger loading aisles and curb ramps.
- Accessible curb ramps
- Accessible Pedestrian Signal (APS) at traffic signal
- Raised crosswalks
- Raised Intersections
- Sidewalk bulb-outs
- Class I and II bikeways
- Enhanced Paving
- Installation of accessible pedestrian signals
- Utility Clearance Requirements

Streetscape and landscape improvements are further defined in Section 8.4 and in the Design Controls.

8.2.1 Public Street Layout and Parcelization

A system of street and parcel numbers has been created to facilitate planning and design coordination and is shown on Figure 8.2. The new grid network of public streets includes three streets oriented north to south: the Shared Public Way, Bridgeview Street, and the existing Terry A Francois Boulevard, which will be realigned and reconstructed. Exposition Street and Long Bridge Street will be oriented east to west. Property frontage improvements will result in partial renovation of the existing 3rd Street and Mission Rock Street sidewalks, with bicycle facilities to be coordinated with the City adjacent to Blocks A and H. Typical cross sections for the proposed streets and existing street improvements can be found on Figures 8.5 – 8.12, with streetscape improvements shown on Figures 8.29-8.42.

8.2.2 Roadway Dimensions

Street widths—curb to curb—are designed to accommodate emergency access, utility clearances, bicycle facilities, passenger loading and building servicing, and vehicular access throughout the site. Typical vehicular travel lanes within streets will range from 10-feet to 11-feet in width. Travel lanes are measured from the face of curb or outside edge of bicycle facilities. All streets except the Shared Public Way will provide for two-way traffic and fire access,

with street widths varying from 22 to 34-feet. The Shared Public Way will provide a one-way 12-foot wide vehicular travelway within a Shared Zone that will have 20-foot minimum clearance between streetscape elements to facilitate fire access. All buildings will be Type 1 Construction. Additional roadway dimension information is shown in Figure 8.3 and detailed cross section information can be found on Figures 8.5-8.12, 8.29, 8.31, 8.33, 8.35, 8.37, 8.39, and 8.41.

8.2.3 Structured Streets and Open Space Areas

Due to existing geotechnical constraints that make the Project site susceptible to differential settlement, liquefaction, and lateral spreading when fill is added to the site, the conceptual geotechnical approach is to provide structured street sections that are pile supported in fill areas. Refer to Section 6 for a detailed analysis of the Project's decision-making process for selecting the structured street and open space area approach to mitigating the site geotechnical constraints. Pile-supporting Mission Rock's streets will provide a geotechnically sound foundation for standard street and open space construction that will support the street designs described in Section 8.4, while mitigating the site's tendency for differential settlement.

The proposed structured streets include Exposition Street, Long Bridge Street, Shared Public Way and Bridgeview Street. The proposed open space areas include Channel Street and Channel Lane. Structured street and open space area locations are identified in Figure 8.13. The structured streets and open space areas will be comprised of street pavement and/ or pedestrian concrete paving, landscape, utility infrastructure, and sidewalk improvements built on top of and within structural fill throughout the street sections within the public right-of-way. Subject to the final design, preliminary designs for the concrete slab thickness at the bottom of the structure is conceptually 2-feet thick and walls will potentially be 1 foot thick. The depth of the structured streets will be a minimum of 6-feet deep beneath landscaping to provide sufficient room for tree roots and at least 1 foot deeper than the bottom of the deepest utility pipe per SFPUC vertical clearance requirements. Subdrains will be provided within the structured streets and open space areas to prevent accumulation of water and will drain via a gravity connection or through a sump pump and force main to the sanitary sewer system as described in Section 12. A preliminary typical structured street cross section is shown on Figure 8.14.

Structured streets and open space areas will be supported by steel H-piles or precast, pre-stressed concrete piles with no down drag. There are two types of pile systems being considered for supporting the structured streets and open space areas. The first consideration is friction-only piles that extend below the Bay Mud sub-layers and gain friction in the clay and sand beneath. The second consideration is a combination of friction plus end-bearing piles which will extend to dense sand or bedrock approximately 100 – 160-feet beneath the bottom of the Bay Mud layers. These preliminary pile-supporting systems are further discussed in Appendix F and are subject to final geotechnical studies and structural designs to be completed as part of the Construction Document process.

The structured streets and open space areas will be integrated within the Project's street grid and conform to existing and reconstructed streets of 3rd Street, Mission Rock Street, and Terry A Francois Boulevard. Final designs to determine pile spacing, depths, waterproofing and drainage will be completed as part of the Construction Document process.

8.3 Public Street Modes of Travel and Access

8.3.1 Pedestrian Circulation and Accessibility

Creating a safe, accessible, and comfortable pedestrian experience will be a priority on all streets at Mission Rock, with safe pedestrian street crossings and connections to open spaces and surrounding streets. Mission Rock's three north-south streets will have reduced-height or flush curbs separating the pedestrian realm from the vehicular travelway. In addition to privileging pedestrian access, this strategy will facilitate paratransit vehicle access that can serve all of Mission Rock's Development Parcels and open spaces. Passenger loading and building servicing strategies will be designed to minimize conflicts between pedestrians and vehicles, and to maximize the special streetlife elements that create a rich pedestrian experience.

8.3.1.1 Pedestrian Throughway

On all sidewalks and major pedestrian routes to and within Open Spaces, a pedestrian throughway that is 6-feet minimum in width will be maintained. This throughway is defined as a universally accessible path of travel that does not exceed 5% maximum longitudinal slope and 2% maximum cross slope. See Section 8.4 for mandated minimum widths of pedestrian throughway and circulation routes for specific streets.

8.3.1.2 Access to Development Parcels and Open Spaces

Universal access to and within open spaces shall be provided for significant pedestrian connections, identified on Figure 8.15. Loading zones for passenger loading shall be provided, distributed to enable access to all Development Parcels and open spaces, with priority given to significant pedestrian connections.

8.3.2 Vehicular Circulation

All streets at Mission Rock shall have two-way low-volume, low-speed traffic circulation, with the exception of the Shared Public Way, which shall have one-way traffic in the northbound direction only. Circulation and controlled intersections are shown on Figure 8.16 and described in Sections 8.7 and 8.8.

8.3.2.1 Paseos

Paseos are proposed at the terminus of the Shared Public Way, Bridgeview Street, and Terry A Francois Boulevard at China Basin Park. These paseos shall accommodate Emergency Vehicle Access for a maximum distance of 150-feet from the Exposition Street right-of-way. The terminus of this access shall be clearly marked by permanent site furnishings or street trees. Along Exposition Street, paseos shall include signage and design cues that prohibit access for unauthorized vehicular traffic.

8.3.2.2 Intersections

All stop-controlled and signalized intersections shall adhere to City standards for signage and street markings. Where crosswalks at uncontrolled intersections are proposed at Open Space connections, an appropriate combination of traffic control strategies, including crosswalk markings, shall be employed to maximize visibility and safe pedestrian crossing. Refer to Section 8.8 for more detailed information on intersection design and controls.

8.3.3 Bicycle Circulation

The Mission Rock development is dedicated to improving bicycle transportation throughout the Mission Bay area by implementing the 2009 San Francisco Bicycle Plan and providing infrastructure for improved cyclist safety. In addition to providing a key link within the Bay Trail, between the Blue Greenway south of the site and the Embarcadero north of the site, bicycle

lanes of various class designations will be incorporated into the public streets throughout the site. Terry A Francois Boulevard will include the Bay Trail/Blue Greenway, a multi-use trail along the waterfront, as well as sharrows within the Shared Zone. Bridgeview Street and Terry A Francois Boulevard will accommodate the majority of bicycle traffic traveling north and south through the site on protected bicycle facilities or multi-use trails, providing a safer environment that separates bicycles from vehicular traffic and prioritizes bicycle travel. Bridgeview Street and Mission Rock Street will include cycle tracks that are separated from vehicular traffic using mountable curbs, horizontal buffers, or vertical barriers. Bridgeview Street and Terry A Francois Boulevard will accommodate the majority of bicycle traffic traveling north and south through the site on protected bicycle facilities or multi-use trails, providing a safer environment that separates bicycles from vehicular traffic and prioritizes bicycle travel. Figure 8.17 indicates the conceptual strategy for these facilities at a network scale. Refer to Section 8.4 for specific street designs, bicycle facilities, and safety strategies.

8.3.4 Loading, Servicing, and Parking

Loading, servicing, and parking at Mission Rock will be distributed to minimize impact on the public realm pedestrian experience. While no permanent street parking will be provided, passenger loading across the site will be accommodated in dedicated areas. Servicing needs for all of Mission Rock's Development Parcels will be accommodated on Exposition Street, Long Bridge Street, 3rd Street at Parcel A, and Terry A Francois Boulevard in time-limited commercial or dedicated commercial zones. Figure 8.18 describes this conceptual strategy.

8.3.4.1 Passenger Loading

Passenger loading zones are distributed across the public realm, with dedicated accessible passenger loading stalls located on all streets except Bridgeview and Mission Rock Streets. Refer to the Transportation Plan for more detailed information. Refer to Section 8.4 for streetscape designs, and Section 8.6 for accessible loading stall details.

8.3.4.2 Servicing

Servicing for Development Parcels, including ground floor tenants, will be located in dedicated or time-limited commercial loading zones for deliveries, freight loading, and building servicing. Dedicated commercial loading zones will be provided on Exposition

and Long Bridge Streets, and time-limited commercial zones will be located on 3rd Street and Terry a Francois Boulevard.

8.3.4.3 Large Vehicle Access

Exposition and Long Bridge Streets and Terry A Francois Boulevard shall accommodate commercial vehicle circulation. Access to pier sheds, aprons, and valleys shall be maintained for WB-50 trucks to Pier 50, and access to the Pier 48 valley by WB-67 shall be provided; refer to Figures 8.19 and 8.20 for access studies. Commercial vehicle access for trucks that are a maximum size of SU-30 shall be accommodated in time-limited commercial loading zones on the west side of the Terry A Francois Boulevard right-of-way for Working Waterfront tenants; see Section 8.4.

8.3.4.4 Parking and Driveways

Per Chapter 5 of the Design Controls, driveways may be provided for interior servicing of Development Parcels. If provided, driveways to access off street parking on all blocks except D are only permitted on Exposition Street and Long Bridge Street in accordance with Section 7.7. Driveways for the shared parking facility at Block D shall be provided on Long Bridge Street, Bridgeview Street and Mission Rock Street. See Section 8.6 for information regarding placement of driveways relative to streetscape elements.

8.3.4.5 Mission Rock Square Garage

In accordance with the DDA and other Transaction Documents, Port and Developer may determine to develop the underground Mission Rock Square Garage as part of the Project, including associated access improvements and facilities at Channel Street and Channel Lane. The development of the Mission Rock Square Garage, and associated improvements, facilities, and mitigation under the MMRP, is anticipated under the Transaction Documents and, accordingly, would not constitute a Material Change to this Infrastructure Plan. If Mission Rock Square Garage is proposed for a Phase, prior to the First Submittal of Improvement Plans for that Phase, Developer will: (i) submit and obtain the approvals and consents required for a non-material Infrastructure Plan amendment describing the additional or modified horizontal improvements to be constructed by the Developer to serve the underground Mission Rock Square Garage;

and (ii) include the associated Mission Rock Square Garage infrastructure improvements in the applicable Basis of Design documents submitted for that Phase. This provision does not limit the City's obligation to comply with CEQA, in connection with any subsequently proposed modifications to the Mission Rock Square Garage or associated facilities or improvements.

8.3.5 Fire Department Access

Based on the planning efforts undertaken during the Design Controls and meetings with the San Francisco Fire Department, intersection radii, street widths from curb to curb, and right-of-way layouts have been designed to accommodate fire truck turning movements at the Project intersections shown on Figure 8.21. Per the SFFD requirements, intersections are designed to accommodate the truck turning movements of the City of San Francisco 57-foot Articulated Fire Truck (Fire Truck), which is shown on Figure 8.22. Other emergency vehicles turning movements analyzed included the SFFD Engine, SFFD Rescue squad, and a second version of the 57-foot Articulated Truck. The SFFD 57-foot Articulated Fire Truck shown in figures 8.21-8.27 was the most restricted vehicle and thus was the basis for street layout designs. At intersection approaches and within intersections, the Fire Truck may encroach into the opposing vehicular travel lane to complete turning movements, but a minimum of 7-feet of refuge area is provided for any cars within these lanes. Figures 8.23-8.27 show enlargements of the fire truck turning movements for the San Francisco 57-foot Articulated Fire Truck at the site intersections.

8.4 Public Street Network and Hierarchy

The Mission Rock street network will include several street types with distinctive character, planting, traffic speed, and streetlife elements – site furniture, street trees, special paving, and understory planting that combine with active ground floor uses to enrich the pedestrian experience. These street types include:

- Shared Public Way: A pedestrian-oriented shared street with one-way, low-speed, low-volume traffic (Shared Public Way, 8.29-8.30).
- Working Waterfront: A shared street with two-way, low-speed, low-volume traffic that integrates industrial and maritime uses with the Blue Greenway (Terry A Francois Boulevard, 8.31-8.32).

- Neighborhood Street: Streets with generous sidewalks, stormwater treatment gardens, and slow traffic; vehicular travelway curb-separated from sidewalk; must include sharrows, standard bicycle lanes, or protected bicycle facilities (Bridgeview Street, 8.33-8.34; Exposition Street, 8.35-8.36; and Long Bridge Street, 8.37-8.38).
- Paseo: Non-vehicular street connection adjacent to China Basin Park that accommodates emergency vehicle access (Bridgeview Street, Terry A Francois Boulevard, and the Shared Public Way).
- District Street: Streets referencing OCII Mission Bay design standards that include sidewalk and bicycle improvements only (3rd Street, 8.39-8.40; Mission Rock Street, 8.41-8.42)

8.4.1 Street Zones and Designs

The streets will contribute to a varied public realm while satisfying above- and under-ground infrastructure needs at Mission Rock. Proposed streets largely conform to the 2015 Subdivision Regulations, with exceptions noted in Section 8.4.2: Street Designs. The public right-of-way must be open to the sky with the exception of permitted landscape and street-wall encroachments per the Design Controls, Sections 3.8, 4.3, and 6.3.5, and publicly accessible at all times unless subject to maintenance, operations, security and safety rights, or closure by Master Developer for events.

8.4.1.1 Street Zones: General Definitions

The overall dimension of each streetscape is divided into several sidewalk and roadway zones. The following zones apply to the pedestrian realm of all streets:

- Frontage Zone: A zone along building frontages for Active Edge uses such as seating, signage, and merchandizing, a portion of the public realm that a ground floor building is permitted and encouraged to occupy, as defined in Chapter 5 of the Design Controls.
- Pedestrian Throughway: An unobstructed path of travel for pedestrians that is 6-feet minimum in width and universally accessible, with longitudinal slopes not to exceed 5% maximum.
- Streetlife Zone: A zone within the sidewalk that houses streetscape elements such as trees, lighting, furnishings, and stormwater gardens; equivalent to a

Furnishing Zone as defined in the 2015 Subdivision Regulations. See 8.4.1.3.

- Stormwater Treatment Zone: A zone at sidewalk grade on Exposition and Long Bridge Streets where large feature stormwater treatment gardens are proposed within the right-of-way.
- Loading Zone: A zone where temporary spaces for passenger loading and building servicing will be provided. See Figure 8.18 for locations.

The following zones apply to the roadway of Bridgeview, Exposition, Long Bridge, 3rd, and Mission Rock Streets:

- Loading Zone: A zone where temporary spaces for passenger loading and building servicing will be provided.
- Travel Lanes
- Bicycle Facilities

The following zone applies to the Shared Public Way and Terry A Francois Boulevard:

- Shared Zone: The Shared Zone will be shared by pedestrians and vehicles and will be flush with the pedestrian realm. The vehicular travelway will be located between pedestrian-only areas, and defined by visual and tactile detection cues, site furniture, and designed in accordance with applicable accessibility codes and guidance to ensure pedestrian safety. Crosswalks will be marked at regular intervals.

8.4.1.2 Street Markings

Street markings shall be in accordance with City and Port standards for street and intersection markings. See Section 8.8.

8.4.1.3 Streetlife Zone: Elements

Each street will include a Streetlife Zone, equivalent to a Furnishing Zone as defined by the 2015 Subdivision Regulations, which will include the following elements:

- Tree Planting. Trees should be adapted to the particular microclimate and shade conditions of each street, and sited with consideration of localized wind conditions and City spacing requirements. See Section 8.5.3 for street tree palette, distribution, and species attributes.

- Street Furnishings. Street furnishings, located in the Streetlife Zone, should contribute to wayfinding and identity of each street, and should be a mix of fixed and flexible, movable elements in accordance with specific standards and guidelines for each street. These performance criteria are provided in lieu of a specific palette:
 - Seating. Seating should be an inviting element allowing visual permeability and social use. Special street furnishings are encouraged to emphasize each street's unique character.
 - Accessibility. All street furnishings should be universally accessible, or modifiable to meet or exceed CBC and CAL-DAG minimum requirements.
 - Trash Receptacles. Trash receptacles should be standardized across the site. Location of selected receptacles should not impede visual access or mobility.
 - Bicycle Parking. Bicycle parking shall be provided at building and park entries within the Streetlife Zone as described on each street. Bicycle racks should be standardized on all internal site streets, with the exception of Bridgeview Street.

8.4.2 Street Designs

8.4.2.1 Shared Public Way

The Shared Public Way will be a major pedestrian route linking important site anchors such as Mission Rock Square and China Basin Park to site arrival points for MUNI, vehicles, and bicycles, as well as the main site parking garage on Block D. Shared Public Ways are curbless streets that privilege pedestrian movement, following traditional street planning approaches in Europe and other pedestrian-friendly urban centers. The Shared Public Way at Mission Rock will be a dynamic space with active ground-floor retail, street rooms, stormwater gardens, and tree groves that will create a lively and unique environment. These design elements will also serve as cues to differentiate pedestrian-dedicated areas from the shared pedestrian/vehicular zone. Vehicles on the Shared Public Way will be limited to low-volume, low-speed, one-way northbound travel for

drop-off, pickup, and deliveries, with traffic volumes not anticipated to exceed 100 vehicles per hour. The Shared Public Way will include the following zones as shown in Figures 8.29 and 8.30:

8.4.2.1.1 Shared Public Way: Active Edges

Active Edges will be located along the retail frontages on both sides of the Shared Public Way and will include the following zones:

- A) Pedestrian Throughway: An unobstructed, 6-feet-minimum clear width path of travel for pedestrians shall be maintained within the Active Edges on both sides of the ROW.
- B) Furnishing Zone: A 6-feet-maximum width zone for furniture, signage, and merchandizing with tree planting shall be included in the 12' active edge on the east side of the ROW.
- C) Frontage Zone: A 2-feet-maximum zone shall be maintained for furniture, signage, and merchandizing on the west side of the ROW.

8.4.2.1.2 Shared Public Way: Streetlife Zone

The Streetlife Zone will be a 20-feet-maximum width zone located along the Shared Zone for its entire length. This zone will provide for safe east-west connections across the ROW. This zone shall include:

- A) Street Rooms: Special landscape areas with non-standard paving, built-in furniture, and ample space for flexible seating, small newsstands, and temporary kiosks.
- B) Tree Groves: Finely textured tree groves that provide dappled shade and enclosure along the entire Shared Public Way. See Section 8.6.
- C) Stormwater Gardens: Stormwater treatment infrastructure that functions ecologically, aesthetically, and programmatically, designed to maximize permeability of movement and view and to encourage lingering, with integrated seating. See Sections 8.6 and 16.

8.4.2.1.3 Shared Public Way: Shared Zone

The Shared Zone shall be a 20-feet-minimum clear zone shared by pedestrians

and vehicles. It shall include a non-meandering 12-foot wide travel lane and will be separated from dedicated pedestrian-only areas with visual and tactile detection cues. Crosswalks shall be marked at regular intervals. This zone shall include:

- A) One-way Traffic: Vehicular traffic shall be permitted one-way northbound, from Long Bridge Street to Exposition Street. North of Exposition Street, the street becomes a paseo; emergency vehicle access only shall be permitted on the paseo between Blocks A and G. No vehicular access is permitted to the Shared Public Way from Channel Street. The Shared Public Way may be closed to vehicular traffic during special events.
- B) Delineated Loading Areas: Paving and demarcation of 8-foot wide passenger loading zones shall be distinct from the 10'-wide vehicular travel lane. See Figure 8.56.

8.4.2.1.4 Shared Public Way: Vehicular Intersections

Raised intersections with visual/tactile detection marking the pedestrian route shall be provided at Exposition and Long Bridge Streets and will comply with applicable accessibility guidance. Refer to traffic calming design described in Sections 8.6 and 8.8.

8.4.2.1.5 Shared Public Way: Visual/Tactile Detection Cues

Visual/Tactile Detection Cues shall differentiate the Shared Zone travel lane and loading zones from dedicated pedestrian areas; these shall be coordinated in consultation with applicable codes and accessibility guidance and include the following:

- A) Paving Strategies: Material tactics, including contrasting paving color, texture, or material type, shall ensure safe pedestrian connections across the Shared Zone. These cues shall delineate the Shared Zone for its entire length. Also see 8.5.2 and Figures 8.44-8.45.
- B) Spatial Cues: Incorporate design and spatial cues such as a 'gateway' to the Shared Zone from Long Bridge Street -- a constricted entry point with physical elements that will provide a visual/physical cue for drivers to slow

down. Raised intersections at Long Bridge and Exposition Street are proposed in order to maximize pedestrian safety and visibility. Additional spatial cues are described in Section 8.6: Traffic Calming Design.

8.4.2.1.6 Shared Public Way: Non-Standard Curbs and Drainage

The Shared Public Way is curbless on both sides of the vehicular-accessible Shared Zone, which is not in conformance with the Subdivision Regulations. A linear drainage element, which is described in greater detail in Sections 10 and 13, will convey surface runoff. A design modification and exception or an Encroachment Permit will be requested of the Acquiring Agency for construction of the linear drainage element during the permitting process for the street improvements. See Figure 8.29 and Section 8.6.

8.4.2.2 Terry A Francois Boulevard

Terry A Francois Boulevard will be a unique Working Waterfront that supports active maritime, industrial, and production uses on the waterfront. Terry A Francois Boulevard will also connect the Bay Trail/Blue Greenway to China Basin Park and the Embarcadero to contribute to uninterrupted public access along San Francisco's eastern waterfront. Connecting the Mission Rock development to its active and historical maritime context, the expression of craft and industrial character along Terry A Francois Boulevard will be central to the personality and experience of this working waterfront. Terry A Francois will include the following zones, shown in Figures 8.31 and 8.32:

8.4.2.2.1 Terry A Francois Boulevard: Waterfront Zone

Located adjacent to Pier 48, Pier 50, and Channel Wharf, the Waterfront Zone shall include the following zones within a minimum cumulative width of 22-feet, measured from Pier 50:

- A) Bay Trail/Blue Greenway: A multi-use trail located along the east side of the entire Terry A Francois Boulevard ROW, with a 16-feet-minimum clear path of travel for bikes and pedestrians.
- B) Buffer/Furnishing Zone: A 3-feet-minimum width buffer comprised of furnishings and iconic lighting, located along the entire length of the

Shared Zone. This zone will have contrasting paving and other cues to be coordinated with applicable accessibility codes and guidance.

8.4.2.2.2 Terry A Francois Boulevard: Shared Zone

The Shared Zone will be a 26-feet-minimum width zone with two-way traffic that is shared by pedestrians and vehicles from Mission Rock Street to Exposition Street. The Shared Zone will be separated from the Waterfront Zone and the Building-Front Zone with flush curbs per 8.4.2.2.7 and Buffer/Furnishing Zones per 8.4.2.2.1-B and 8.4.2.2.3-B.

8.4.2.2.3 Terry A Francois Boulevard: Building-Front Zone

The Building-Front Zone shall be contained within a maximum width of 24-feet adjacent to Blocks H, I, and J. The Building-Front Zone will include:

- A) Pedestrian Throughway: A 12-feet-minimum width pedestrian area with 6-feet minimum clear path of travel at street grade along Blocks H, I, and J.
- B) Encroachments: Where an Elevated Walkway is provided within the property line of the adjacent Development Parcels per Chapter 5 of the Design Controls, a 6-feet-maximum width encroachment within the right-of-way shall be provided to accommodate accessible circulation to the Elevated Walkway and a dock lift or similar apparatus at the building face to serve ground floor tenants.
- C) Buffer/Furnishing Zone: A 3-feet-minimum width buffer comprised of furnishings, located along the entire length of the Shared Zone. This zone will have contrasting paving and other visual/tactile detection cues for pedestrians, to be coordinated with applicable accessibility codes and guidance.
- D) Loading Area: A 9-feet-wide loading area that accommodates a maximum truck size of WB-30, located adjacent to the Shared Zone at Blocks H, I, and J. See Figure 8.55.
- E) Streetlife Zone: A 9-feet-wide dedicated pedestrian spill-out space, located adjacent to the loading area.

8.4.2.2.4 Terry A Francois Boulevard: Paseo North of Exposition Street

Between Block K and Pier 48, Terry A Francois Boulevard will become a paseo that will accommodate emergency vehicle access for up to 150-feet of its length, with the terminus of this access marked by permanent street furnishings. The paseo will include the following zones:

- A) Waterfront Zone at Pier 48: A 28-feet-wide zone, located adjacent to the Pier 48 bulkhead, shall accommodate the Bay Trail/Blue Greenway per 4.3.1-A) and additional public space for Pier 48.
- B) Vehicular Turnaround + Loading Spaces: A vehicular turnaround with passenger loading spaces, accessed from the Shared Zone.
- C) Pedestrian Thoroughway: A 6-feet-minimum clear path of travel for pedestrians, located along Block K.

8.4.2.2.5 Terry A Francois Boulevard: Vehicular Intersections

Flush intersections with visual/tactile detection marking the pedestrian route shall be provided at Exposition and Long Bridge Streets. An uncontrolled, marked intersection shall be provided at the pedestrian crossing between Channel Lane and Channel Wharf. These will comply with applicable accessibility guidance. Aural warnings will be integrated within paving adjacent to intersections.

8.4.2.2.6 Terry A Francois Boulevard: Streetscape Elements

Streetscape elements are an important aspect of experience and character of Terry A Francois Boulevard.

- A) Placement: Streetscape elements shall be placed within the Buffer Zones at regular intervals as determined by applicable accessibility guidance. Additional permanent streetscape elements in the Waterfront or Building-Front Zones, if desired, shall not block thoroughway areas or impede circulation along Terry A Francois Boulevard.
- B) Expression of Production Character: Street furnishings, especially benches, along Terry A Francois Boulevard shall express the industrial character of the Working Waterfront Typology. Industrial and salvaged materials are strongly encouraged for these elements.

- C) Consistency of Elements: Trash receptacles and bicycle racks shall be consistent for the length of this streetscape. Benches may be varied.

8.4.2.2.7 Terry A Francois Boulevard: Non-Standard Curbs and Drainage

Terry A Francois Boulevard has flush curb conditions on both sides of the vehicular-accessible Shared Zone, with flush intersections at Long Bridge and Exposition Street, which are not in conformance with the Subdivision Regulations. Additionally, a linear drainage element, which is described in greater detail in Sections 10 and 13, along the flush curb condition will convey surface runoff. A design modification and exception or an Encroachment Permit will be requested of the Acquiring Agency for construction of the linear drainage element during the permitting process for the street improvements.

8.4.2.3 Bridgeview Street

Bridgeview Street will be a Complete Street with dedicated bicycle infrastructure, active sidewalks, stormwater treatment gardens, and low-speed, low-volume vehicular traffic. An important north-south bicycle connection from China Basin Park to Mission Bay, Bridgeview Street will integrate protected bicycle facilities into the life and character of the street. Bridgeview Street will include the following zones, shown in Figures 8.33 and 8.34:

8.4.2.3.1 Bridgeview Street: Sidewalk Zones

Sidewalks on Bridgeview Street shall be 14-feet-wide along the east side of the right-of-way, and 12-feet wide along the west side of the right-of-way. The sidewalk shall include:

- A) Frontage Zone: A 2-feet-maximum width zone shall be maintained along building frontages for furniture, signage, and merchandizing.
- B) Pedestrian Throughway: An unobstructed, 6-feet-minimum clear width path of travel for pedestrians, with width as noted on Figure 8.33, shall be maintained between the Frontage Zone and the Streetlife Zone.
- C) Streetlife Zone: A zone between the curb and pedestrian throughway with width as noted on Figure 8.33. This zone shall include trees, lighting, and

furnishings that shall be consistent for the entire length of the street. Stormwater treatment gardens shall be included in the Streetlife Zone with minimum area as noted in Section 16.

- D) Driveway Restrictions: Driveways shall not be permitted, except at the Block D parking garage.

8.4.2.3.2 Bridgeview Street: Roadway Zones

The 34-foot-wide roadway will accommodate two-way vehicular traffic from Exposition Street to Mission Rock Street and will include:

- A) Bicycle Facility: A two-way Class 1 cycle track with total width of 10-feet on the east side of the right-of-way, including two 5-foot-wide lanes. This facility shall be protected from vehicular traffic with a 3-foot-wide horizontal buffer that is flush with the cycle track surface. This horizontal buffer will include a mountable curb that grade-separates the facility from the adjacent vehicular travelway. Approved safe-hit posts that are 46-inches in height shall be provided in this area.
- B) Travel Lanes: Two 10.5-foot-wide travel lanes shall be provided to accommodate two-way vehicular traffic.

8.4.2.3.3 Bridgeview Street: Paseo North of Exposition Street

Between Block G and Block K, Bridgeview Street will become a paseo that will accommodate emergency vehicle access for up to 150-feet of its length with the terminus of this access marked by permanent street furnishings or street trees.

The paseo will include the following zones:

- A) Multi-Use Trail Connection: A 16-foot-minimum clear multi-use trail shall connect China Basin Park to the Class 1 bicycle facility. This connection shall include paving and signage delineating this shared use path and warning cues for pedestrians and cyclists at crossings.
- B) Emergency Vehicle Clear Access Width: A 20-foot-minimum clear zone shall accommodate emergency vehicle access for up to 150 feet, measured from the Exposition Street right-of-way.

- C) Pedestrian Throughway: A 6-feet-minimum clear path of travel for pedestrians shall be provided on the east and west sides of the right-of-way.

8.4.2.3.4 Bridgeview Street: Traffic Control and Calming Measures

The intersections of Bridgeview Street with Mission Rock and Exposition Streets will have full stop control. The intersection at Long Bridge Street will be a raised intersection at cycle track grade with two-way stop control for Long Bridge, but no stop control for Bridgeview Street bicycle or vehicular traffic. See Section 8.8. A raised mid-block crosswalk at the intersection of Bridgeview Street, Mission Rock Square, and Channel Lane shall be included. Bicycle facility treatment shall continue across the intersection, with signage to yield to pedestrians. See Figures 8.63, 8.65, and 8.67.

8.4.2.3.5 Bridgeview Street: Bicycle striping, signage, and wayfinding

Bicycle Signage and Wayfinding should refer to City, Port, and NACTO (National Association of City Transportation Officials) Urban Bikeway Standards. Signage should be mounted at the curb edge of the Streetlife Zone, or inset in bicycle facility paving. Before all intersections and at the northern paseo portion of Bridgeview Street, the cycle track shall include paved and signed warning cues for pedestrian crossings. Cycle track demarcation shall continue across intersections at Exposition and Long Bridge Streets to indicate that cyclists have the right-of-way. Signs should indicate that vehicles must yield to cyclists.

8.4.2.3.6 Bridgeview Street: Non-Standard Curbs and Drainage

Bridgeview Street has a raised cycle track with a mountable curb separating the cycle track from the vehicular travel way, and a 4-inch curb separating the cycle track from the sidewalk on the east side of the street; these are not in conformance with the 2015 Subdivision Regulations.

8.4.2.4 Exposition Street

Exposition Street is designed to calm traffic and create a lush pedestrian connection with bulb-out gardens that will treat stormwater and provide seating. It will also

accommodate service and loading demands for Blocks A, B, F, G, J, and K. Exposition Street will include the following zones, shown in Figures 8.35 and 8.36:

8.4.2.4.1 Exposition Street: Sidewalk Zones

Sidewalks on Exposition Street shall be 14-feet-wide along the south side of the street, and 20-feet wide along the north side, with inset loading zones for passenger loading and servicing access. The sidewalk shall include:

- A) Frontage Zone: A 2-feet-maximum width zone shall be maintained along building frontages for furniture, signage, and merchandizing.
- B) Pedestrian Throughway: An unobstructed, 6-feet-minimum clear width path of travel for pedestrians, with width as noted in Figure 8.35, shall be maintained between the Frontage Zone and the Streetlife Zone.
- C) Streetlife Zone: A zone between the curb and pedestrian throughway with width as noted on Figure 8.35. This zone shall include trees, lighting, stormwater treatment gardens, and furnishings that shall be consistent for the entire length of the street.
- D) Stormwater Zone: An 8-feet-wide zone between the Streetlife Zone and Roadway on the north side of the right-of-way, at grade with the sidewalk, shall include large stormwater treatment gardens with unique integral seating located at the southeast and southwest corners of Blocks A, G, and K.

8.4.2.4.2 Exposition Street: Roadway Zones

The 26-feet-wide roadway will accommodate two-way vehicular traffic from 3rd Street to Terry A Francois Boulevard, and shall include:

- A) Bicycle Facilities: A 5-feet-wide painted Class II bike lane in the westbound direction, separated from vehicular traffic with a 6-inch-wide solid white line. Minimize utility covers and material transitions in this area. This facility shall be located 1-foot from the face of the adjacent curb. Eastbound sharrows shall be provided.
- B) Loading Zone: An 8-feet-wide zone shall be provided at grade with the roadway, located between stormwater treatment gardens described in

Figure 8.36, to provide passenger loading and servicing access. See Section 8.5.6 and Figures 8.18 and 8.54.

- C) Travel Lanes: Two 10-foot-wide travel lanes shall be provided to accommodate two-way traffic.

8.4.2.4.3 Exposition Street: Traffic Control and Calming Measures

The intersection of Exposition Street with Bridgeview Street shall have full stop control for bicyclists and vehicles. At the Shared Public Way and Terry A Francois Boulevard, there shall be stop-controlled raised or flush intersections with pedestrian throughway clearly delineated by crosswalks. At intersections, bicycle lane treatment shall continue across intersections at Bridgeview Street and the Shared Public Way. See Section 8.8 and Figures 8.63 and 8.66.

8.4.2.4.4 Exposition Street: Large Vehicle Circulation

Large vehicle circulation to and from Terry A Francois Boulevard and Pier 48 shall be accommodated on the roadway between Blocks K and J. See Figures 8.22-27.

8.4.2.5 Long Bridge Street

Long Bridge Street will be an important pedestrian entry point to the site from MUNI on 3rd Street. It is designed with wide throughways, shade trees, ample street furniture opportunities, and compact linear stormwater gardens. Long Bridge Street will accommodate service and loading demands for Blocks C, D, E, H, and I and will be the vehicular entry point for the Shared Public Way. Long Bridge Street will include the following zones, shown in Figures 8.37 and 8.38:

8.4.2.5.1 Long Bridge Street: Sidewalk Zones

Sidewalks on Long Bridge Street shall be 15-feet-wide on both sides of the right-of-way. The sidewalk will include:

- A) Frontage Zone: A 2-feet-maximum width zone shall be maintained along building frontages for furniture, signage, and merchandizing.
- B) Pedestrian Throughway: An unobstructed, 8-feet-clear width path of travel for pedestrians shall be maintained between the Frontage Zone and the Streetlife Zone.

- C) **Streetlife Zone:** A 5-foot-wide zone between the curb and pedestrian throughway with width as noted on Figure 8.37. This zone shall include trees, lighting, stormwater treatment gardens, and furnishings that shall be consistent for the entire length of the street.
- D) **Bulb-Out with Stormwater Treatment:** A 4-foot-maximum width bulb-out that includes stormwater treatment gardens shall be provided on the north side of Long Bridge Street, on either side of the Shared Public Way intersection.

8.4.2.5.2 Long Bridge Street: Roadway Zones

The 30'-wide roadway will accommodate two-way vehicular traffic from 3rd Street to Terry A Francois Boulevard, and will include:

- A) **Loading Zone:** An 8-foot-wide loading zone shall be provided at grade with the roadway on the north side of the right-of-way, to provide passenger loading and building servicing access. This zone shall be painted with a unique surface treatment that differentiates it from the travel lanes. This zone shall not interfere with fire truck access or turning movements at intersections. Refer to Transportation Plan for loading and servicing strategies.
- B) **Travel Lanes:** Two 11-foot-wide travel lanes shall be provided to accommodate two-way traffic.
- C) **Bicycle Markings:** East- and west-bound sharrows shall be provided.

8.4.2.5.3 Long Bridge Street: Traffic Control and Calming Measures

The intersection of Long Bridge Street with Bridgeview Street shall have stop control for all Long Bridge Street traffic only. At the Shared Public Way and Terry A Francois Boulevard, there shall be stop-controlled raised intersections with pedestrian throughway clearly delineated by crosswalks. See Section 8.8.

8.4.2.5.4 Long Bridge Street: Driveways at Block D Parking Facility

Driveways shall be provided at the Block D parking facility to accommodate ingress and egress. Refer to Transportation Plan.

8.4.2.6 3rd Street

3rd Street is Mission Rock's gateway to Mission Bay. A wide multi-modal street, its character is fundamentally different from the interior streets of Mission Rock. South of Long Bridge Street, the sidewalk is a key threshold into Mission Rock from the MUNI station at Mission Rock Street. 3rd Street will adhere to approved San Francisco Office of Community Investment and Infrastructure (OCII) Mission Bay standards or approved substitutions for paving materials, trees, street furniture, and lighting. 3rd Street will include the following zones, shown in Figures 8.39 and 8.40:

8.4.2.6.1 3rd Street: Sidewalk Zones

The sidewalk on 3rd Street will be 12-feet-wide as shown in Figure 8.39 and will include:

- A) Pedestrian Throughway: An unobstructed, 6-feet-minimum clear width path of travel for pedestrians shall be maintained between the building façade and the Streetlife Zone.
- B) Streetlife Zone: A zone between the curb and pedestrian throughway with width as noted on Figure 8.39. This zone shall include trees, lighting, stormwater treatment gardens, and furnishings that shall be consistent for the entire length of the street.

8.4.2.6.2 3rd Street: Roadway Zones at Block A

At Block A only, the following shall be provided:

- A) Loading Zone: An 8-feet-wide zone shall be provided at grade with the roadway to provide passenger loading and servicing access per Figure 8.18.
- B) Bicycle Facility: A 6-feet-wide painted Class II bike lane in the north-bound direction, separated from vehicular traffic with a 6-inches-wide solid white line.

8.4.2.6.3 3rd Street: Emergency Vehicle Access Radii

Vehicular turning radii from Long Bridge Street and Exposition Street onto Third St have minimum requirements for emergency vehicle access. Refer Figures 8.21-8.27 for truck turning analysis.

8.4.2.7 Mission Rock Street

Mission Rock Street will provide an important link to the Blue Greenway at the terminus of Bridgeview Street. The Block H frontage will incorporate bicycle facilities connecting Bridgeview Street to the Blue Greenway on Terry A Francois Boulevard. Mission Rock Street will adhere to approved San Francisco Office of Community Investment and Infrastructure (OCII) Mission Bay standards or approved substitutions for paving materials, trees, street furniture, and lighting. South of Block H, a contraflow Class 1 cycle track will connect cyclists from Bridgeview Street to Terry A Francois Boulevard's Blue Greenway infrastructure. Sidewalk improvements will extend along the north side of the right-of-way from Terry A Francois Boulevard to 3rd Street. Mission Rock Street will include the following zones, shown in Figures 8.41 and 8.42:

8.4.2.7.1 Mission Rock Street: Sidewalk Zones

Sidewalk improvements on Mission Rock Street shall be 12-feet-wide, on the north side of the right-of-way, as shown in Figure 8.41. The sidewalk shall include:

- A) Frontage Zone: A 2-feet-maximum width zone shall be maintained along building frontages for furniture, signage, and merchandizing.
- B) Pedestrian Throughway: An unobstructed, 6-feet-minimum clear width path of travel for pedestrians shall be maintained between the building frontage and the Streetlife Zone.
- C) Streetlife Zone: A zone between the curb and pedestrian throughway with width as noted on Figure 8.41. This zone shall include trees, lighting, and furnishings that are consistent for the entire length of the street. Refer to OCII Mission Bay Standards.
- D) Driveways: Driveways shall be permitted at the Parcel D parking garage.

8.4.2.7.2 Mission Rock Street: Bicycle Facilities

- A) Bicycle Facility: A two-way Class 1 cycle track with total width of 10 feet measured from the face of curb on the north side of the right-of-way, from Bridgeview Street to Terry Francois Boulevard. This facility shall be protected from vehicular traffic with a raised buffer that is a minimum of

15-inches in width, 6 inches in height, and includes a 46-inches-high permanent vertical buffer. This buffer will be segmented to permit drainage. Installation of the raised buffer is adjacent to an existing low pressure water main and will require an agreement between the SFMTA and SFPUC regarding the disposition of the existing water main that will be coordinated during the permitting process.

- B) Cycle Track Warning Cues: At intersections, the cycle track shall include paved and signed warning cues indicating pedestrian crossings and vehicular intersections.
- C) Cycle Track Intersections: Cycle track demarcation shall continue across intersections at Bridgeview Street and Terry Francois Boulevard to indicate the primary bicycle route.
- D) Reduced-width travel lanes: existing travel lanes on Mission Rock Street will be narrowed to 10-feet wide. Proposed changes to existing roadway striping will be coordinated at a future date with SFMTA.

8.5 Components of Public Streets

8.5.1 Curb Heights

A variety of curb types will be installed throughout the site. Mission Rock Street, 3rd Street, Long Bridge Street and Exposition Street improvements will consist of crowned asphalt roadway and six-inch curb and gutter on either side. Terry A Francois Boulevard will have flush curb for optimal pedestrian access. Shared Public Way and the northern end of Bridgeview are curbless streets with continuous paving across the right-of-way. Overland release and stormwater drainage information for curbless streets can be found in Section 7: Site Grading and Section 13: Storm Drainage System, respectively. Bridgeview Street will utilize both mountable curb as well as four-inch and six-inch curb and gutter. The mountable curb will delineate the class I cycle track bicycle facility from the vehicular travel lanes and the four-inch curb and gutter will elevate the adjacent landscape and sidewalk above the bike lanes. Curb height variances from the City Subdivision Regulations will be reviewed and approved by the City on a case-by-case basis. For further reference of curb type locations throughout the site and typical curb details, see Figure 8.43.

8.5.2 Paving

Paving will be a key component that defines the character, connectivity, and identity of Mission Rock's varied streets and open spaces. See Figures 8.44, 8.45, and 8.46 for proposed paving by street and zone. All paving in areas with high pedestrian traffic will facilitate universal accessibility. Paving connections to surrounding streets should be carefully considered for their impact on the larger Mission Bay neighborhood. Final pavement design for the roadway sections will be designed for the anticipated traffic load and equivalent single axial loads (ESAL) for a design life coordinated with the Acquiring Agency per the terms of the DA and DDA.

The Pedestrian Throughway defined on each street shall be an accessible path of travel that is unobstructed by non-ADA-compliant paving or material treatments. Paving and built-in site elements shall be comprised of high-quality materials and finishes that are durable to withstand high-intensity use in the Bay environment. All material textures in designated clear path of travel and accessible use areas shall be ADA-compliant.

Where trees are planted in paving, surfacing material shall allow air and water to reach tree roots. Tree grates or stabilized crushed stone are permitted in the Streetlife Zone and in Open Spaces outside of dedicated Pedestrian Throughways. Where trees are planted in planting areas on streets, finish grade shall be within 2" of adjacent pedestrian paving.

8.5.3 Street Trees

Planting at Mission Rock will function ecologically to help achieve the Project's goals for sustainability and contribute to a healthy environment. Composition and distribution of a diverse, adapted urban forest, stormwater gardens, and planted areas will create a resilient ecological framework to shape varied sensory experiences across the site and provide waterfront and urban habitat. See Figures 8.47, 8.48, and 8.49.

Trees will be used to block and mitigate wind, provide shade and reduce urban heat island effect, and to provide shelter for birds. Native or climate appropriate grasses, shrubs, and ground cover will provide as much species diversity as feasible in Mission Rock's planting areas, as well as function in stormwater treatment gardens. Upon construction, maintenance and

management of tree and understory planting, soils, and irrigation will be essential to the successful function of the site's urban ecological systems.

Tree species shall be considered for their aesthetic and ecological benefits. Suggested species diversity in Figure 8.48 is a baseline; species selected for specific areas shall conform to this general distribution and diversity for the Mission Rock urban forest. Tree species suggested for each component of the Public Realm network have been selected in consultation with a certified arborist. If alternative species are chosen, they shall conform to the aesthetic and performance requirements outlined in Figure 8.48.

8.5.3.1 Wind Mitigation

Tree selection and maintenance will be vital to maintaining a comfortable public realm experience in both streets and open spaces. Trees shall be sited with consideration given to wind modeling at the neighborhood and local scale. Mandatory wind tolerances have been noted under the design criteria for tree species selection.

8.5.3.2 Tree Species Installation and Establishment

Trees shall receive adequate soil volume to sustain long-term health. Trees shall receive adequate irrigation and monitoring during a three-year establishment period. Large and medium-size trees shall be installed at a minimum size of 48-inch-box; small trees shall be installed at a minimum size of 36-inch box. Refer to Figure 8.48 for tree size and corresponding minimum size at installation. To meet functional requirements in both streets and open spaces, clear trunk requirements shall be achieved within five years of installation. Branches shall not interfere with pedestrian thoroughway (minimum 84 inches of clearance measured from ground surface) or mandated fire truck vertical clearance of 13.5-inches-minimum (measured from roadway surface).

8.5.3.3 Tree Maintenance and Management

Trees in the Public Realm should be pruned yearly to sustain long-term health and to maintain desired growth habit. Determine appropriate water application after establishment (three years) in consultation with a certified arborist's comprehensive review of tree health on the site. Monitor water application yearly.

8.5.3.4 Recommended Soil Volume for Trees

Trees in the public realm should have adequate soil volume and infiltration, particularly trees planted in paving. Large tree species require 1500-2000 cubic feet of soil volume per tree; Medium tree species require 1000-1500 cubic feet of soil per tree; Small tree species require 800-1000 cubic feet of soil per tree. Tree species sizes are noted in Figure 8.48.

8.5.3.5 Minimum clearance at On-Structure Conditions

Where trees are planted in on-structure conditions, at least 4-feet of soil depth, and a continuous gravel drainage layer that is 6-12 inches in depth, should be maintained.

8.5.4 Sustainable Water Strategies

Mission Rock's landscapes and building systems will work together and be designed to conserve, re-use, and filter water. Site hydrology will be intertwined with daily life at Mission Rock in a unique and systematic way, with stormwater treatment gardens that are a part of the public realm experience in every streetscape and open space, building-integrated recycled water systems, and advanced greywater reuse strategies. Irrigation is an essential element of plant health and should be considered as part of the site hydrology strategy.

8.5.4.1 Stormwater Treatment

Stormwater treatment will be handled through a combination of treatment within specific streets, and in centralized, large feature stormwater gardens to which runoff is conveyed by gravity or force main for treatment. See Figures 8.50 and 8.51 for a conceptual diagram of the site stormwater treatment approach, and refer to Section 16 for detailed discussion and analysis of stormwater management.

8.5.4.2 Irrigation

All plant species shall receive establishment irrigation for a minimum of two years. Tree species shall receive establishment irrigation for three years or as deemed necessary for long-term health by a certified arborist. Refer to Mission Rock Sustainability Strategy for guidance about water usage. Planting design shall optimize irrigation efficacy by grouping plants with similar water needs into efficient irrigation hydrozones. Permanent irrigation infrastructure shall be provided for all trees, understory planting, stormwater

treatment gardens, and lawn areas. Irrigation flow meters for all irrigation hydrozones will be installed to record and monitor water use across the site, and watering records kept for all site trees, with a yearly water audit to track the amount of water applied.

Efficient irrigation systems will be utilized, with drip irrigation except in lawn areas, where spray irrigation is acceptable. Refer to Local Model Water Efficient Landscape Ordinance for regulatory guidance. Recycled water shall be used for irrigation, with potable backup, to minimize potable water use. This use shall conform to applicable public health standards; edible plants and play areas shall not be irrigated with non-potable water. See Sustainability Strategy for recycled water resources and minimum water quality treatment thresholds.

8.5.5 Lighting

Lighting will be an important component of nighttime identity, experience, and safety at Mission Rock. Lighting of special, unique character should reinforce key pedestrian routes along the Shared Public Way and Channel Lane and Channel Street. Where possible, a variety of lighting types should work together to create a warm, inviting, and safe nighttime environment. See Figures 8.42-8.53.

Lighting across the site will be scaled to the pedestrian and bicycle experience and will reinforce key pedestrian circulation routes and connections. Lighting strategies will also take care to protect site residents by minimizing light pollution. Lighting along the waterfront will operate on a gradient of intensity from a well-lit Promenade at the Buildings and Piers to a more uniformly diffused, minimal character along the water that will not disrupt the ecology of the Bay edge. Lighting strategies shall minimize glare, light trespass outside the development, and light pollution in areas adjacent to residential buildings and along the waterfront. Refer to Section 7.6 of the Design Controls and to the Sustainability Strategy for vertical development lighting controls. Site lighting will comply with applicable regulatory standards.

Lighting fixtures and bulbs shall meet or exceed applicable energy-efficiency standards. Lighting shall be designed to allow facial recognition along paths of travel. Lighting shall not create glare or "hot spots" that would inhibit visual acuity, or unnecessary vertical transmittance of light.

Lighting strategies shall facilitate sight lines and perception of safety across the public realm. Lighting uniformity ranges in open spaces shall allow for variation in light levels to create hierarchy and a range of experiences.

8.5.6 Accessible Loading

Loading zones for vehicular and paratransit loading and unloading will be distributed across the site to enable access to all Development Parcels and open spaces, with priority given to significant pedestrian connections noted in Figure 8.15. Proposed configurations for loading stalls are described for the following conditions:

DPW-Standard Curb, 6-inches typical: Figure 8.54.

Non-DPW-Standard flush curb, Shared Public Way: Figure 8.56

Non-DPW-Standard flush curb, Terry A Francois Boulevard: Figure 8.55.

8.5.7 Driveway and Streetscape Coordination

The project will ensure that locations of above-grade utility boxes, where provided, are coordinated with streetscape elements. These locations shall be coordinated with tree spacing to ensure Urban Forestry standards are applied to the greatest extent possible. If provided at all Development Parcels except Block D, driveways shall be located only Exposition or Long Bridge Streets. Driveways for Block D shall be provided on Long Bridge, Bridgeview, and Mission Rock Streets. Driveways are not permitted on the Shared Public Way, Terry A Francois Boulevard, 3rd Street, or Bridgeview Street north of Long Bridge Street. Driveway locations shall be coordinated with placement of streetscape elements per Figure 8.57.

8.6 Traffic Calming

As part of the pedestrian and bicycle focused development plan outlined in the Mission Rock Transportation Plan, traffic calming elements are proposed to improve non-vehicular traffic safety and access. Proposed traffic calming elements for the Project street rights-of-way are identified in Figure 8.58 and include raised intersections, raised crosswalks, bulb-outs, and narrowed lane widths to accommodate bicycle infrastructure.

8.6.1 Raised Intersections and Raised Crosswalks

Raised intersections are proposed along the Shared Public Way, Terry A Francois Boulevard, and Bridgeview Street and are described in greater detail in Section 8.8. A raised mid-block pedestrian crosswalk is proposed along Bridgeview Street adjacent to Mission Rock Square and

Channel Lane. A City Standard driveway is also proposed on Terry Francois Boulevard at the Mission Rock Street intersection to provide additional traffic calming measures as vehicles enter Terry A Francois Boulevard. At raised crosswalk and intersection locations, the street pavement areas will be raised as much as 6-inches to match the adjacent curb heights and will change paving material for a more effective visual cue to motorists. Final grades are dependent on overland release feasibility studies.

Where raised intersections or crossings are proposed, decorative crosswalk treatments or striped continental crosswalks shall be provided and comply with City and MUTCD standards and required review. Proposed decorative treatments shall meet ADA standards for slip-resistance. The design for these intersections and crosswalks will be coordinated with and are subject to the approval of the SFPUC, SFPDW, the SFMTA, and the San Francisco Fire Department (SFFD). Refer to Section 7: Site Grading for additional information about Project grading and overland release requirements. A typical raised crossing detail is shown on Figure 8.59.

The Developer or HOA will be responsible for maintenance and restoration of the street pavement sections, including pavement markings, within the raised intersection and raised crosswalk. Designs will incorporate measures to minimize maintenance and reduce the potential for dirt, silt and other debris to settle within the crosswalks.

8.6.2 Intersection Bulb-Outs

Bulb-outs have been strategically added along Long Bridge Street at the Shared Public Way intersection and along 3rd Street between Exposition Street and China Basin Park. These locations are expected to have a high concentration of pedestrian traffic traveling between the parking garage at Block D, the amenities along Shared Public Way, residential housing on the west side of 3rd Street, China Basin Park and AT&T Park just north of the development site. Bulb-outs will narrow driving lanes, create a shorter pedestrian crossing, make pedestrians more visible to motorists and require vehicles to reduce speeds. The final design for the bulb-outs will be coordinated with the SFMTA, SFPDW, SFPUC, and the SFFD. Bulb-out improvements will be constructed if the designs can meet the Acquiring Agency's requirements for overland drainage release, utility clearances, and accessibility for persons with disabilities. Overland Release at

these locations will be studied in the Grading and Drainage Master Plan. A typical bulb-out detail is shown on Figure 8.59.

8.7 Off-Site Traffic Signalization

As shown in Figure 8.60 and described below, the Developer will be responsible for design and construction funding, either as partial contribution or in full, of traffic signal modifications or new traffic signals, as well as striping. Where possible, the electrical service for traffic signals will be located within the joint trench (see Section 17). Traffic signals shall be designed by and constructed to the specifications of the SFMTA and SFDPW. If determined feasible, planned off-site intersection improvements include, but may not be limited to the following:

8.7.1 3rd Street and Existing Terry A Francois Boulevard

The existing traffic signal infrastructure at Terry A Francois Boulevard and 3rd Street will be removed or modified during the demolition of the northern segment of Terry A Francois Boulevard that currently provides east-west access across the site. The new intersection at this location will serve northbound and southbound vehicular and bike traffic as well as eastbound and westbound bike and pedestrian traffic. An updated signalized intersection is anticipated to provide safe crossing for bikes and pedestrians across 3rd Street. The developer will be responsible for SFMTA costs to review, design, coordinate and implement improvements including signal design and signal timing changes.

8.7.2 3rd Street and Channel Street

To accommodate improvements at the existing 3rd Street and Channel Street intersection, signal timing and phasing will be revised. Vehicular access on Channel Street will now terminate at 3rd Street and will no longer continue eastward onto the site. The left turn from southbound 3rd street and phasing segments will be removed from the signalization at the intersection. The developer will be responsible for SFMTA costs to review, design, coordinate and implement improvements including signal design and signal timing changes.

8.7.3 3rd Street and Mission Rock Street

The existing traffic signals at the 3rd Street and Mission Rock Street intersection are planned to remain in place. Restriping of the Mission Rock lanes will likely require phasing and timing design alterations for the intersection. Revisions to the existing signalization at 3rd Street and Mission Rock Street will be completed by the SFMTA.

8.7.4 3rd Street and Exposition Street

A new traffic signal will be installed at the intersection of 3rd Street and Exposition Street to provide safe mobility for vehicular traffic, cyclists and pedestrians. Vehicles exiting the site from Exposition Street will be permitted to turn right and left onto 3rd Street. Northbound vehicles on 3rd Street will be allowed right turn access into the site at Expositions Street. Left turns from southbound 3rd Street on to Exposition Street will be permitted. Pedestrian crosswalks will also be incorporated across Exposition Street in the north-south and east-west directions. The developer will be responsible for SFMTA costs to review, design, coordinate and implement improvements.

8.7.5 4th Street Intersection Improvements

As described in the project DEIR, the Developer will provide funding to the SFMTA, for a maximum amount of one-million dollars to SFMTA to design and construct traffic signals at the intersections of 4th Street and mission Rock Street and 4th Street and Long Bridge Street. Funding shall be provided prior to the issuance of approval for the third building site permit, but in no event later than the site permit for Block D2 parking garage, SFMTA will construct the improvements in advance of the Developer's proposed date of opening for the Block D2 parking garage.

8.7.6 Mission Rock Street Striping

As described in the project DEIR, the Developer will provide the following:

- Stripe a "keep clear" zone in front of the easternmost driveway closest to Bridgeview Street.
- Extend the southbound left-turn lane at the Third Street-Mission Rock Street intersection to a total length of 350-ft. In combination with the re-striped left-turn lane, install advance traffic signal detention equipment in coordination with SFMTA.
- Stripe a "keep clear" zone on Mission Rock Street adjacent to the driveway access points serving the public services building. Final location and extents of the "keep clear" zone will be coordinated with the SFFD and San Francisco Police Department during the construction document approval process.

8.8 On-Site Traffic Controls

Traffic calming and stop-controlled intersections, rather than signalization, are the primary strategy for on-site traffic control. Stop signs will be added at most of the intersections, with final locations to be determined by traffic sight distance requirements, Project phasing and coordination with the City. If implemented, stop signs on city streets will require legislation from SFMTA Board and traffic calming may also require SFMTA Board and/or public hearing.

8.8.1 All-Way Stop-Controlled Intersections: DPW-Standard Curb Condition

Mission Rock will have two all-way stop-controlled intersections at streets with DPW-Standard curbs, at the intersection of Bridgeview Street with Exposition Street (Figure 8.63) and the intersection of Bridgeview Street with Mission Rock Street (Figure 8.67). Bicycle and vehicular traffic will stop in all directions at these intersections. Crosswalks will be marked with City-standard markings, and DPW-Standard curb ramps will be provided at crosswalks. Bicycle facility treatment will continue across these intersections for all streets. Refer to Transportation Plan for traffic volume information at these intersections.

8.8.2 All-Way Stop-Controlled Intersections: Raised Intersections

Mission Rock will have two all-way stop-controlled intersections that are also raised intersections. These occur at the intersection of the Shared Public Way with Long Bridge Street and at Exposition Street. The Shared Public Way will have one-way northbound traffic only, from Long Bridge Street to Exposition Street. Refer to Transportation Plan for traffic volume information at these intersections.

8.8.2.1 Shared Public Way at Long Bridge Street

At the intersection of the Shared Public Way with Long Bridge Street, vehicular and bicycle traffic on Long Bridge Street will stop in both directions; Long Bridge Street traffic is permitted to turn onto the Shared Public Way at this intersection, but turning will be discouraged through design cues. Refer to Section 8.4.2 and Figure 8.64.

8.8.2.2 Shared Public Way at Exposition Street

At the intersection of the Shared Public Way with Exposition Street, vehicular and bicycle traffic on Exposition Street will stop in both directions and no turns will be permitted. Shared Public Way traffic will stop at the intersection with Exposition Street, and is

permitted to turn right or left. The Shared Public Way becomes a paseo north of this intersection; vehicular traffic will not be permitted on the paseo, but it will accommodate emergency vehicle access for up to 150-feet of its length per Section 8.4. Approved removable or hydraulic bollards will be installed at Exposition Street to prohibit vehicular entry.

8.8.3 2-Way Stop at Raised Intersection

Mission Rock will have one internal two-way stop-controlled intersection, at the intersection of Bridgeview Street with Long Bridge Street (Figure 8.65). Vehicular and bicycle traffic on Long Bridge Street will stop in both directions, while bicycle and vehicular traffic on Bridgeview Street will continue through without stopping. This intersection will be raised to meet the grade of the raised cycle track. Crosswalks will be marked with City- standard markings, and DPW-Standard curb ramps will be provided at crosswalks. Bicycle facility treatment on Bridgeview Street will continue across this intersection. Refer to Transportation Plan for traffic volume information at these intersections.

8.8.4 All-Way Stop-Controlled Intersections: Flush Intersections

Mission Rock will have two all-way stop-controlled intersections that are also flush intersections, at the intersection of Terry A Francois Boulevard with Long Bridge Street and at Exposition Street. Grade transition will occur within the Terry A Francois Boulevard ROW. Terry A Francois Boulevard will have two-way traffic.

8.8.4.1 Terry A Francois Boulevard at Exposition Street (Figure 8.66).

At the intersection of Terry A Francois Boulevard with Exposition Street, vehicular and bicycle traffic on Exposition Street will stop; Exposition Street terminates at Terry A Francois Boulevard. For all vehicles except trucks servicing Pier 48, right turns only will be permitted onto Terry A Francois Boulevard. Northbound Terry A Francois Boulevard traffic will stop at the intersection with Exposition Street, and is permitted to turn left only. Terry A Francois Boulevard becomes a paseo north of this intersection. The paseo will accommodate emergency vehicle access for up to 150-feet of its length. Approved removable or hydraulic bollards will be installed to restrict vehicular entry; vehicular traffic will be permitted only for passenger loading within a clearly delineated and signed area (refer to Section 8.4.3).

8.8.4.2 Terry A Francois Boulevard at Long Bridge Street.

At the intersection of Terry A Francois Boulevard with Long Bridge Street, vehicular and bicycle traffic on Long Bridge Street will stop; Long Bridge Street terminates at Terry A Francois Boulevard. Long Bridge Street traffic is permitted to turn onto Terry A Francois Boulevard in both directions at this intersection. Terry A Francois Boulevard traffic will stop at this intersection in both directions, and turning onto Long Bridge Street is permitted. This intersection will be coordinated with Pier 50 operational requirements.

8.9 Public Transportation System

The Mission Rock site is adjacent to the Muni light rail along King Street and 3rd Street and the Caltrain 4th and King station. It is nearby the Bay Area Rapid Transit (BART) stations for Embarcadero, Montgomery and Powell Street. The Transbay Transit Center, currently under construction, within the Financial District is also within close proximity to the proposed development. To encourage the use of these and other modes of sustainable transportation, the Mission Rock development has prioritized pedestrian, bike and transit access through the site. Ride share programs are also promoted within the design by incorporating loading and drop off zones throughout the proposed public street network.

Although there are no anticipated bus or light rail improvements associated with this Project, it is the Project team's understanding that SFMTA plans on enhancing the existing Muni transit networks near the Mission Bay area to improve commuter connections and efficiency throughout San Francisco. These improvements will be under the responsibility of SFMTA. For additional information regarding the public transportation system, refer to the latest edition of the Project Transportation Plan.

8.10 SFMTA Infrastructure

Where required, the following list of infrastructure items includes items to be owned, operated and maintained by the SFMTA within public rights-of-way:

- Security monitors and cameras
- Signals and Signal Interconnects, including Muni Bus Prioritization signals
- TPS signal preempt detectors
- Conduit containing TPS signal cables
- Shelters (with Vendor)
- Paint – poles and asphalt delineating coach stops

- Asphalt painting for transit lanes
- Departure prediction ("NextBus") monitors and related communications equipment
- Bicycle racks
- Crosswalk striping, except for areas with a raised intersection/crosswalk or with painted concrete special striping or other special decorative treatment
- Bike lane and facility striping
- APS/Pedestrian crossing signals
- Street Signs

8.11 Acceptance and Maintenance of Street Improvements

Upon acceptance of the new and/or improved public streets, including the structures supporting the streets, by the Acquiring Agency, responsibility for the operation and maintenance of the roadway and streetscape elements will be designated to the appropriate Acquiring Agency as defined in the City of San Francisco Municipal Code and related ordinances, or the Project DA and DDA. Conflicts between proposed public utility infrastructure and the surface improvements proposed as part of the Project, including but not limited to dedicated transportation routes, trees, bulb-outs, traffic circles and medians, shall be minimized in the design of the infrastructure and surface improvements. The Acquiring Agency responsible for said utility infrastructure will review all proposals for surface improvements above proposed public utility infrastructure on a case-by-case basis to ensure that future access for maintenance is preserved. Stormwater management improvements installed as part of the streetscape to meet the Stormwater Management Requirements and Design Guidelines (SMR) will be maintained by the Master Developer and/or Acquiring Agency subject to the terms of the DA and DDA.

As outlined in the DA and/or DDA, the Master Developer or Port will be responsible for maintenance and restoration of the non-standard materials, including decorative paving and hardscape elements. Restoration will include replacement of the pavement markings within areas with non-standard materials.

8.12 Phasing of New Roadway Construction

New roadway construction will occur in phases based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan and DA/DDA. The amount and location of roadway repair/ or replacement will be the

minimum necessary to support the Development Phase and maintain minimum required parking allocations, access and utility connections. Such phased roadway construction will allow the existing utility services, vehicular and pedestrian access areas, and landscaped spaces to remain in place as long as possible and reduce disruption of existing uses on the site and adjacent facilities.

Temporary Fire truck turnaround areas, if any, will be coordinated with the SFFD and constructed by the Developer consistent with the Fire Code. Phasing of traffic signalization improvements will be based on cumulative development thresholds identified by the Project traffic consultant and/or the SFMTA coincident with the Phase applications, construction documents or as stated in the DA. Sidewalk and other accessible pedestrian paths of travel, either permanent or temporary, shall be provided to serve the pedestrian entrance and exit requirements of each Development Parcel prior to being released for occupancy. Such paths of travel will connect to the sidewalks along 3rd Street, Mission Rock Street and Terry A Francois Boulevard and hence to the public transit stations and bus stops thereon.

Impacts to improvements installed with previous phases of development due to the designs of the new phase will be the responsibility of the Developer and addressed prior to approval of the construction drawings for the new phase development.

FIGURE 8.1: PUBLIC REALM PLAN

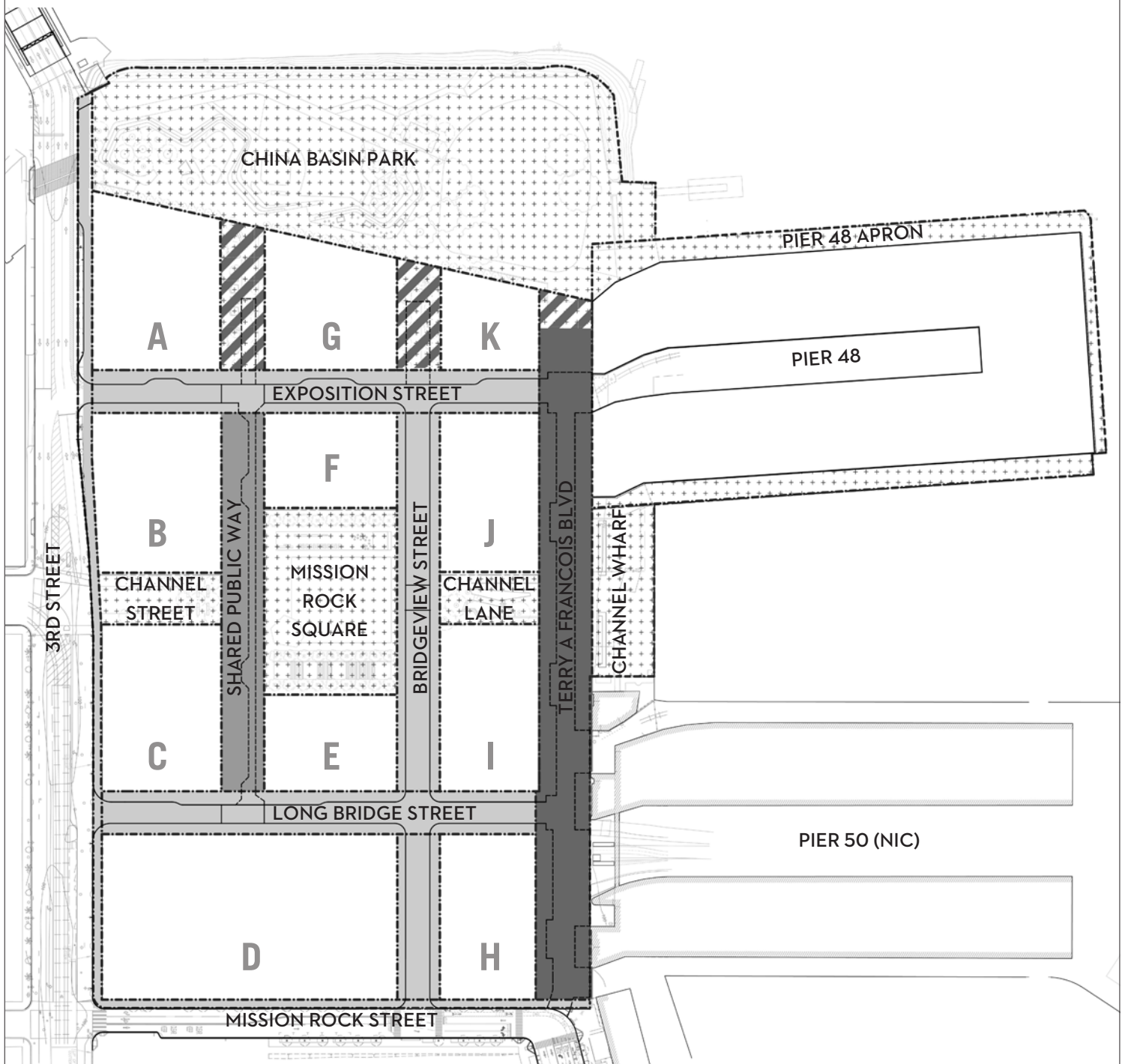


FIGURE 8.1: PUBLIC REALM PLAN

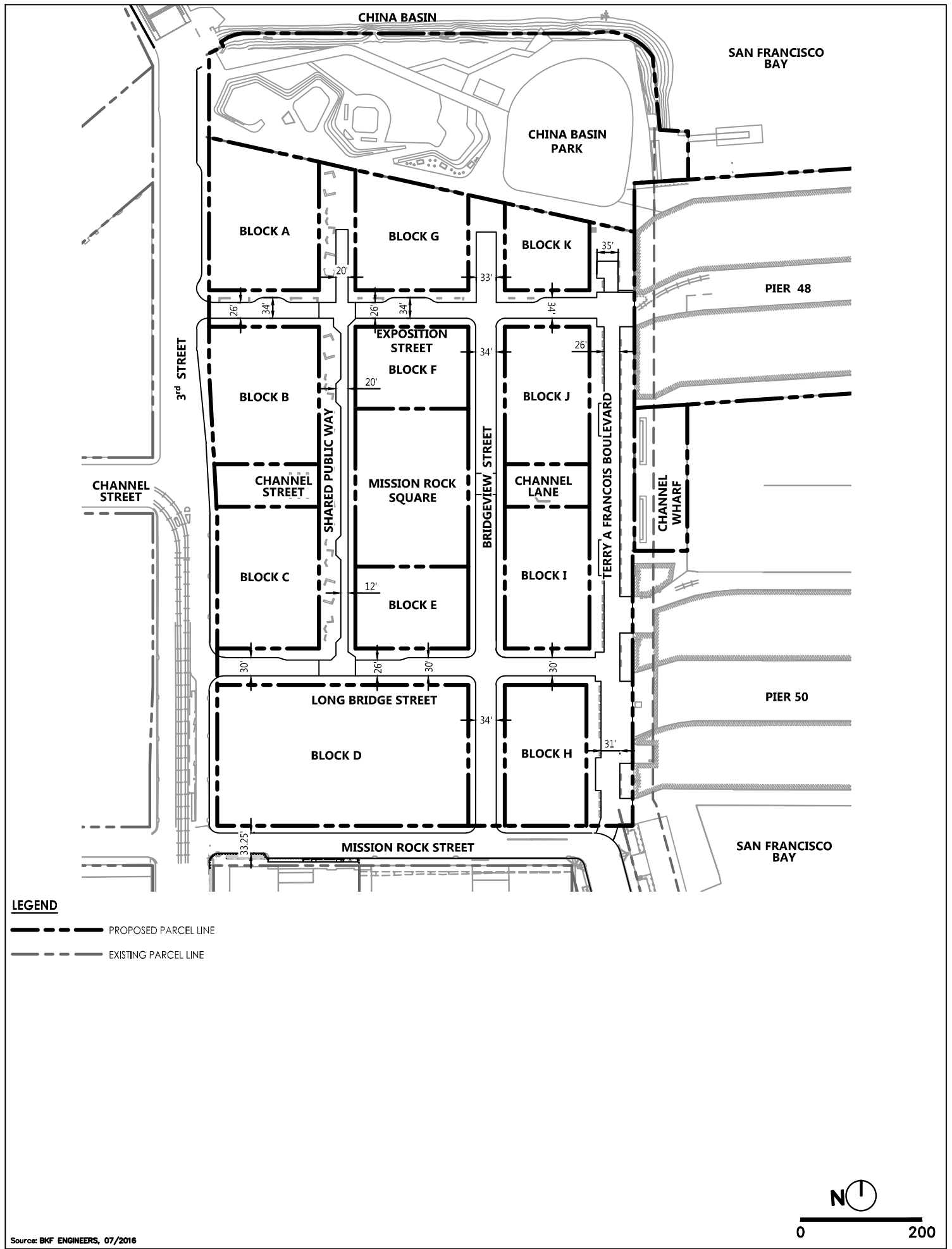


- | | |
|--|--|
| <p>Shared Public Way</p> <ul style="list-style-type: none"> - Pedestrian access permitted across entire ROW; vehicular traffic permitted in Shared Zone only - Traffic volumes anticipated not to exceed 100 cars per hour; one-way northbound traffic - Flush curb on both sides of vehicular zone <p>Working Waterfront (Terry A Francois Boulevard)</p> <ul style="list-style-type: none"> - Pedestrian access permitted across entire ROW; vehicular traffic permitted in Shared Zone only - Traffic volumes anticipated not to exceed 100 cars per hour; two-way traffic - Flush curb on both sides of vehicular zone | <p>Vehicular/Neighborhood Street</p> <ul style="list-style-type: none"> - Two-way street with curb-separated sidewalk - Must include bicycle facilities or sharrows - Loading and service access provided in dedicated areas <p>Paseo (Open Space within R.O.W.)</p> <ul style="list-style-type: none"> - Non-vehicular street connection; accommodates emergency vehicle access <p>Open Space (Shown for reference only)</p> <p>Proposed Boundary</p> |
|--|--|

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.3 Roadway Dimensions.dwg
 PLOT DATE: 07/13/17
 PLOTTED BY: FELI

Source: BKF ENGINEERS, 07/2016



MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 8.3 - ROADWAY DIMENSIONS

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.4 Plan View & Cross Section Locations.dwg
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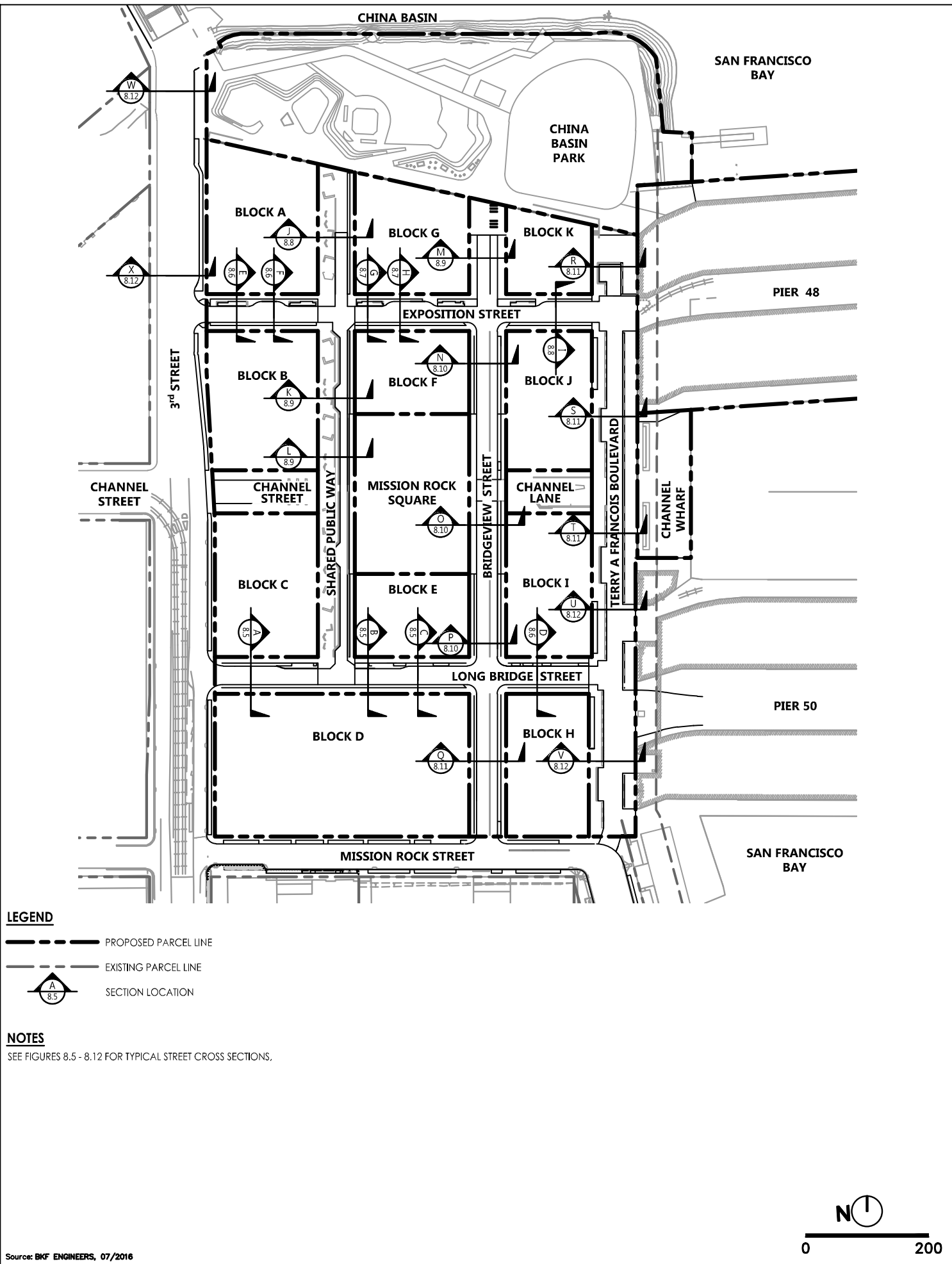
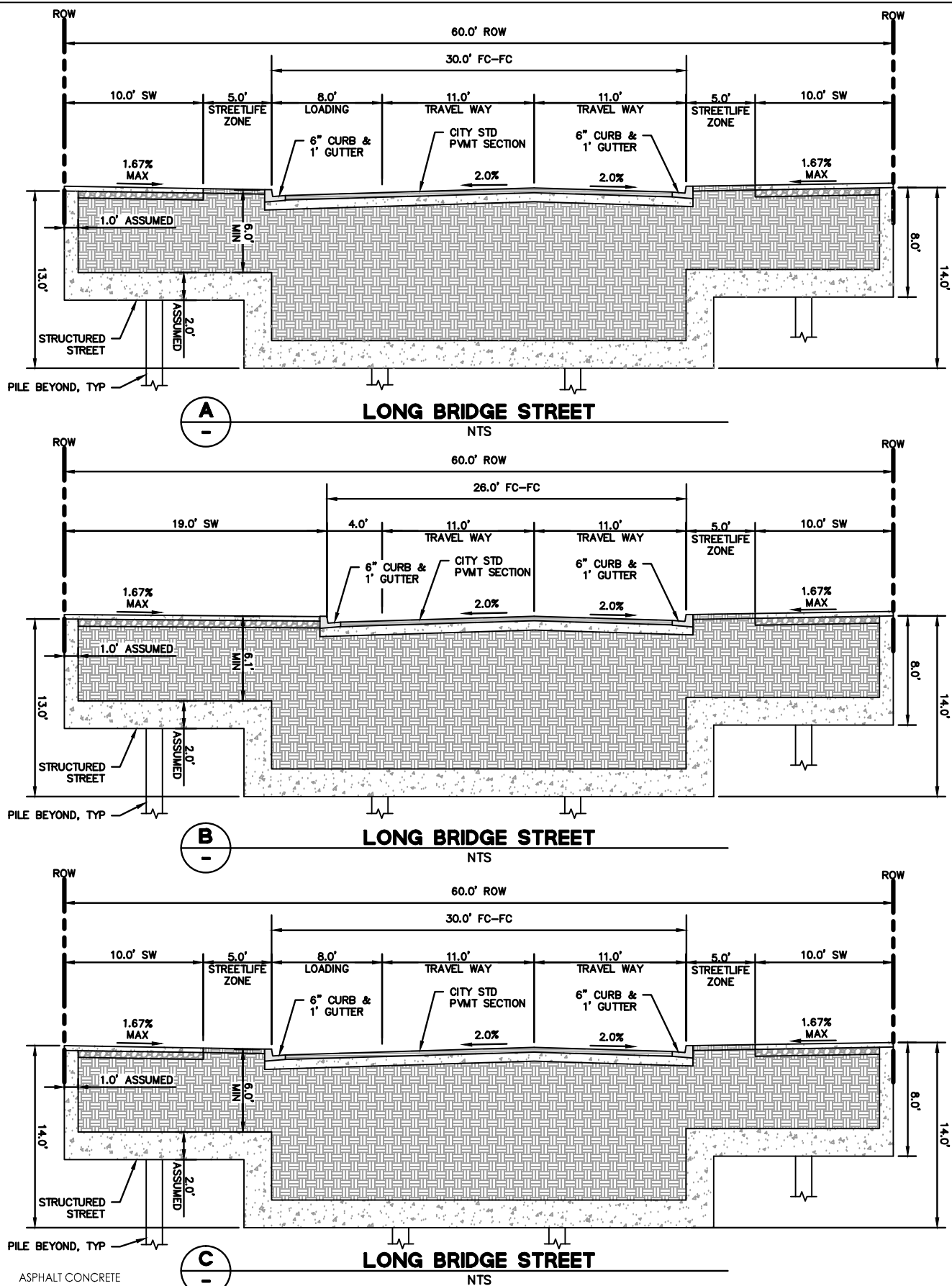
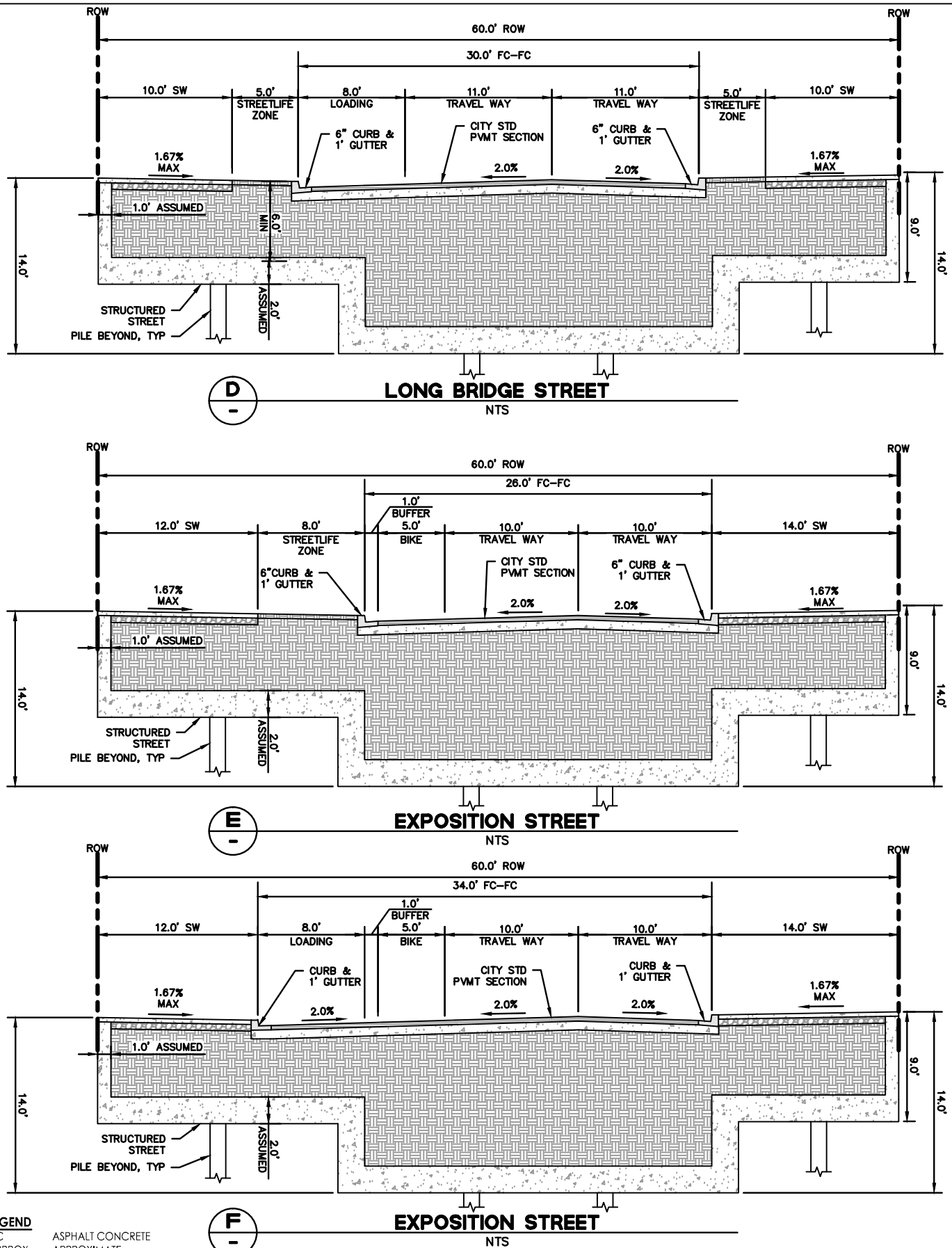


FIGURE 8.4 - PLAN VIEW & CROSS SECTION LOCATIONS

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.5-8.12 Typical Street Cross Sections.dwg
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DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission_Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.5-8.12 Typical Street Cross Sections.dwg
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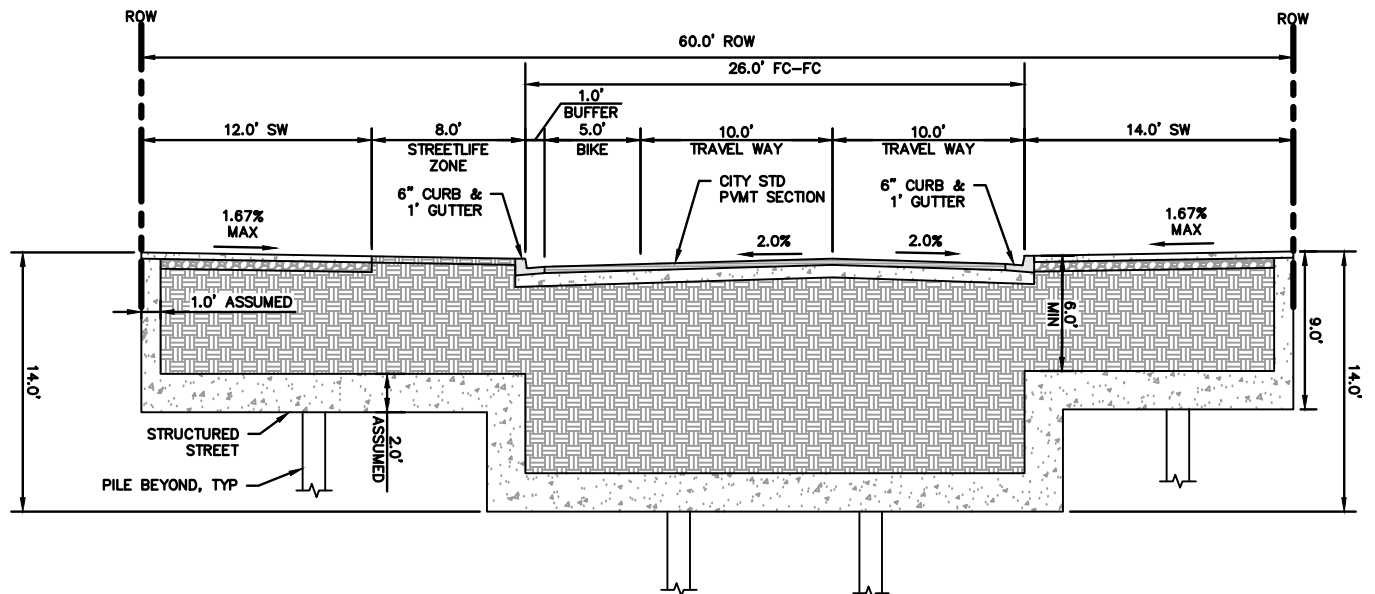
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BCDC	BAY CONSERVATION AND DEVELOPMENT COMMISSION	SW	SIDEWALK
EX	EXISTING	TYP	TYPICAL
FC	FACE OF CURB		
MIN	MINIMUM		
PCC	PORTLAND CONCRETE CEMENT		
PVMT	PAVEMENT		

NOTES

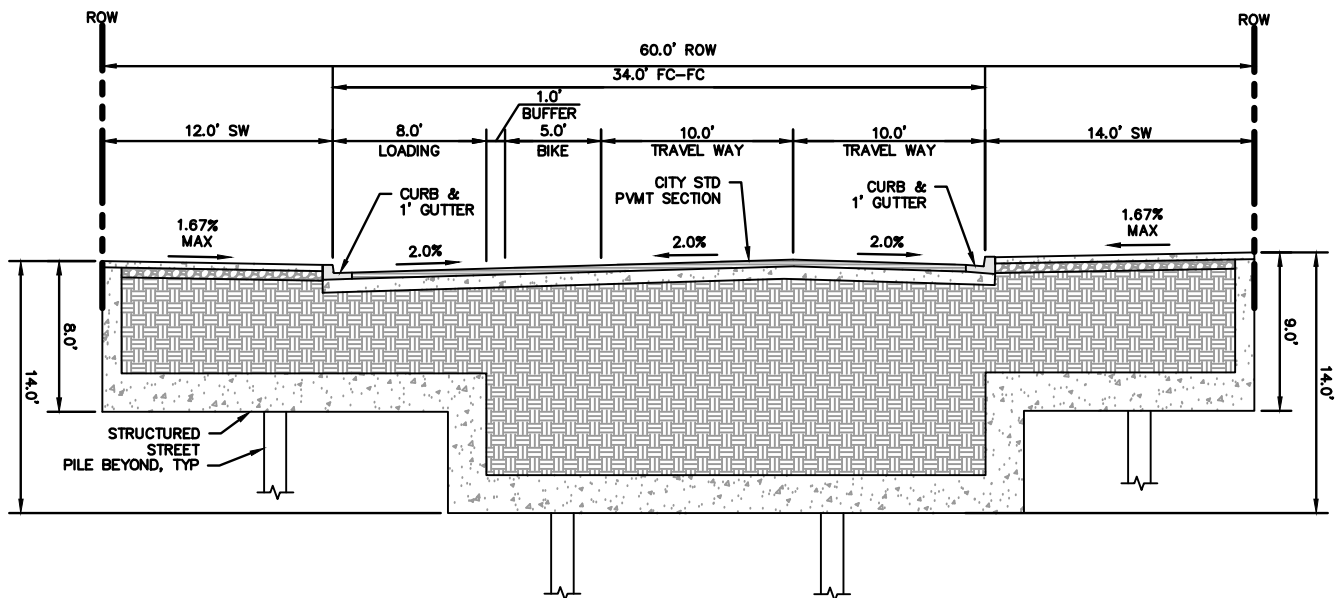
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2. DIMENSION SHOWN ARE FROM FACE OF CURB TO FACE OF CURB.

Source: BKF ENGINEERS, 07/2016

DRAWING NAME: \\BKF-SF-Vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.5-8.12 Typical Street Cross Sections.dwg
 PLOT DATE: 07/13/17 PLOTTED BY: FELI



EXPOSITION STREET
NTS



EXPOSITION STREET
NTS

LEGEND

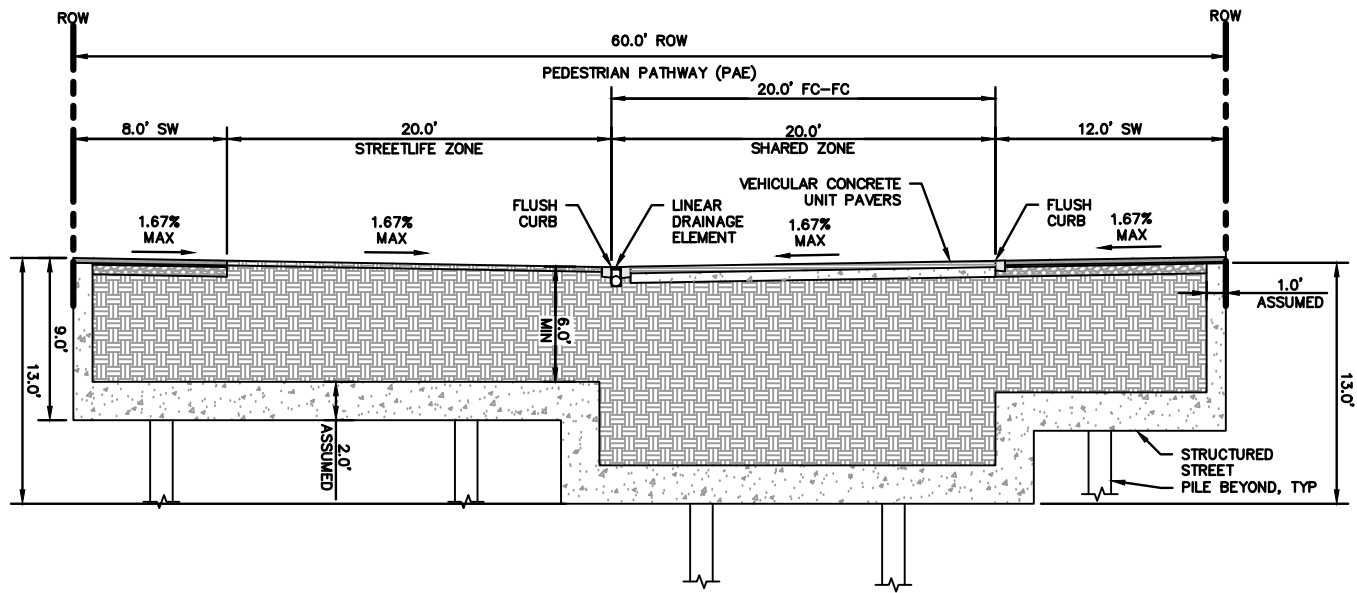
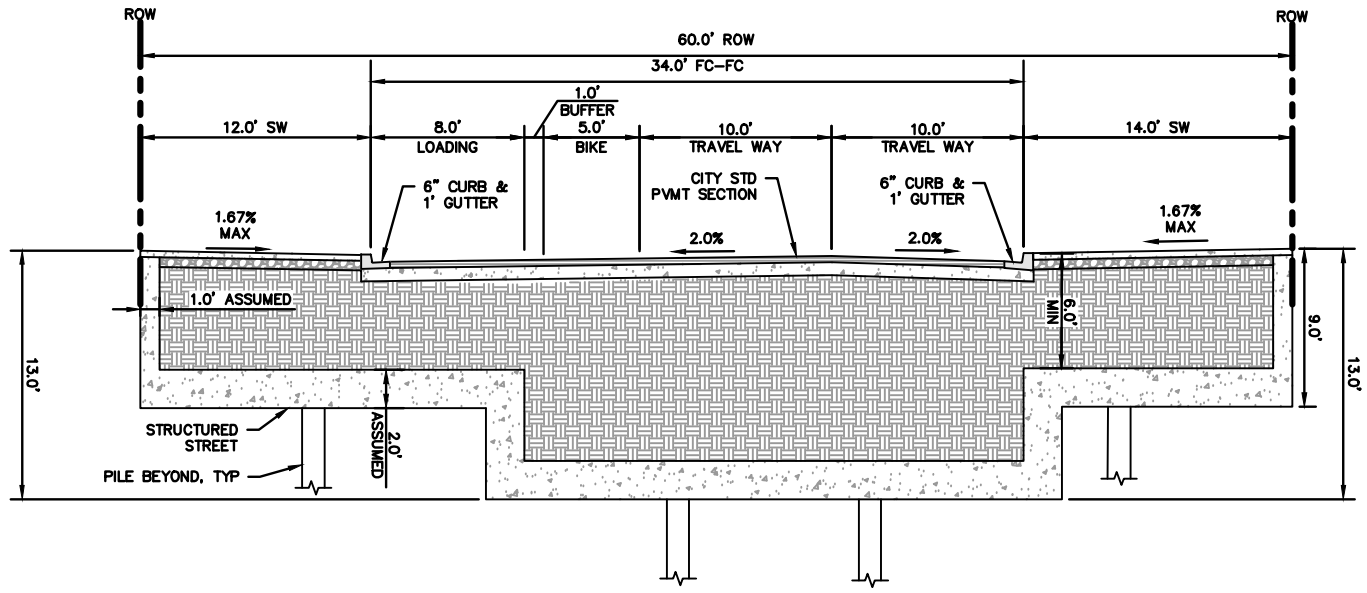
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BCDC	BAY CONSERVATION AND DEVELOPMENT COMMISSION	SW	SIDEWALK
EX	EXISTING	TYP	TYPICAL
FC	FACE OF CURB		
MIN	MINIMUM		
PCC	PORTLAND CONCRETE CEMENT		
PVMT	PAVEMENT		

NOTES

- STREETLIFE ZONE MAY INCLUDE LANDSCAPE ELEMENTS, STREET LIGHT, BIORETENTION AREAS, AND PAVEMENT.
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Source: BKF ENGINEERS, 07/2016

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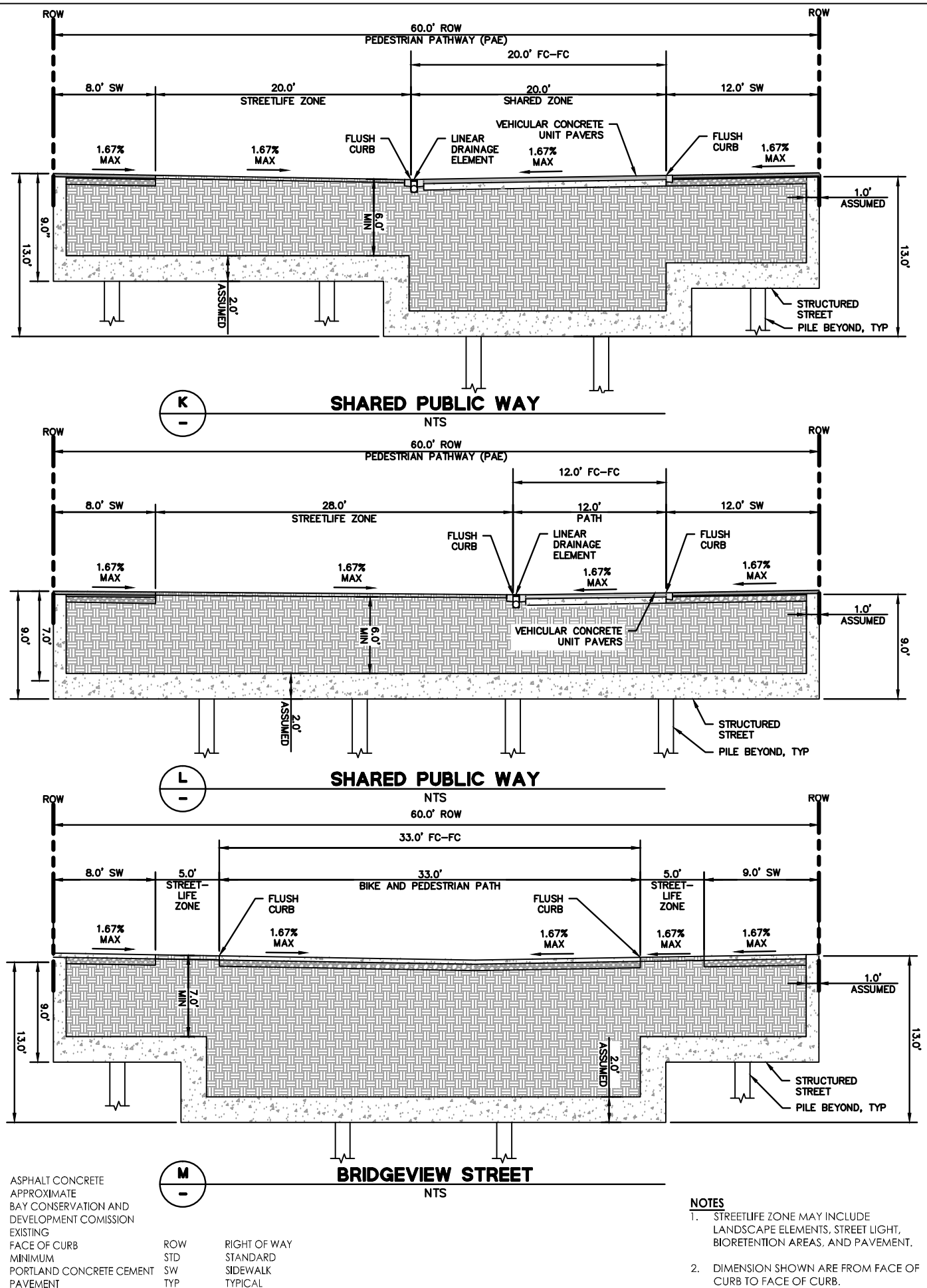
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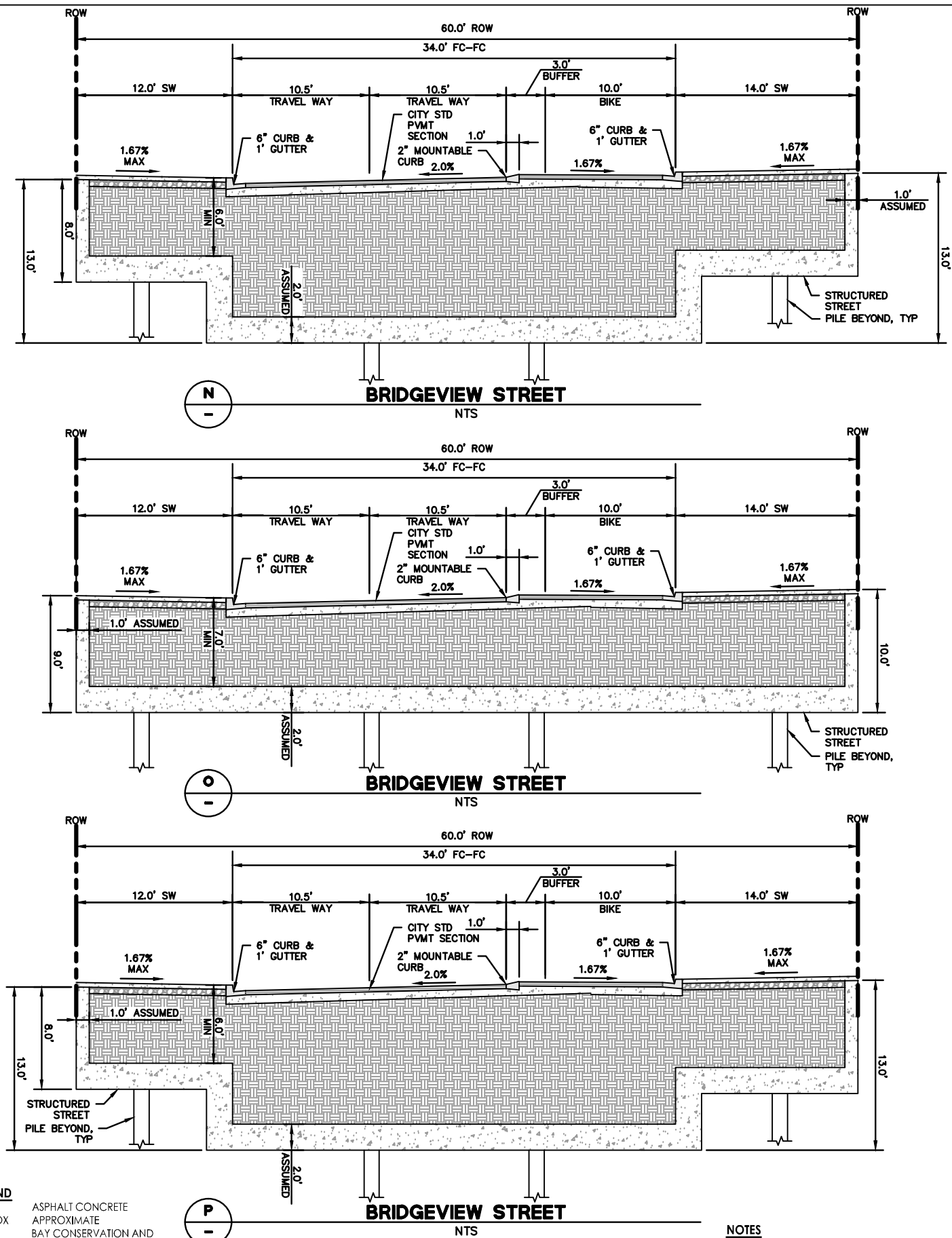
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Source: BKF ENGINEERS, 07/2016

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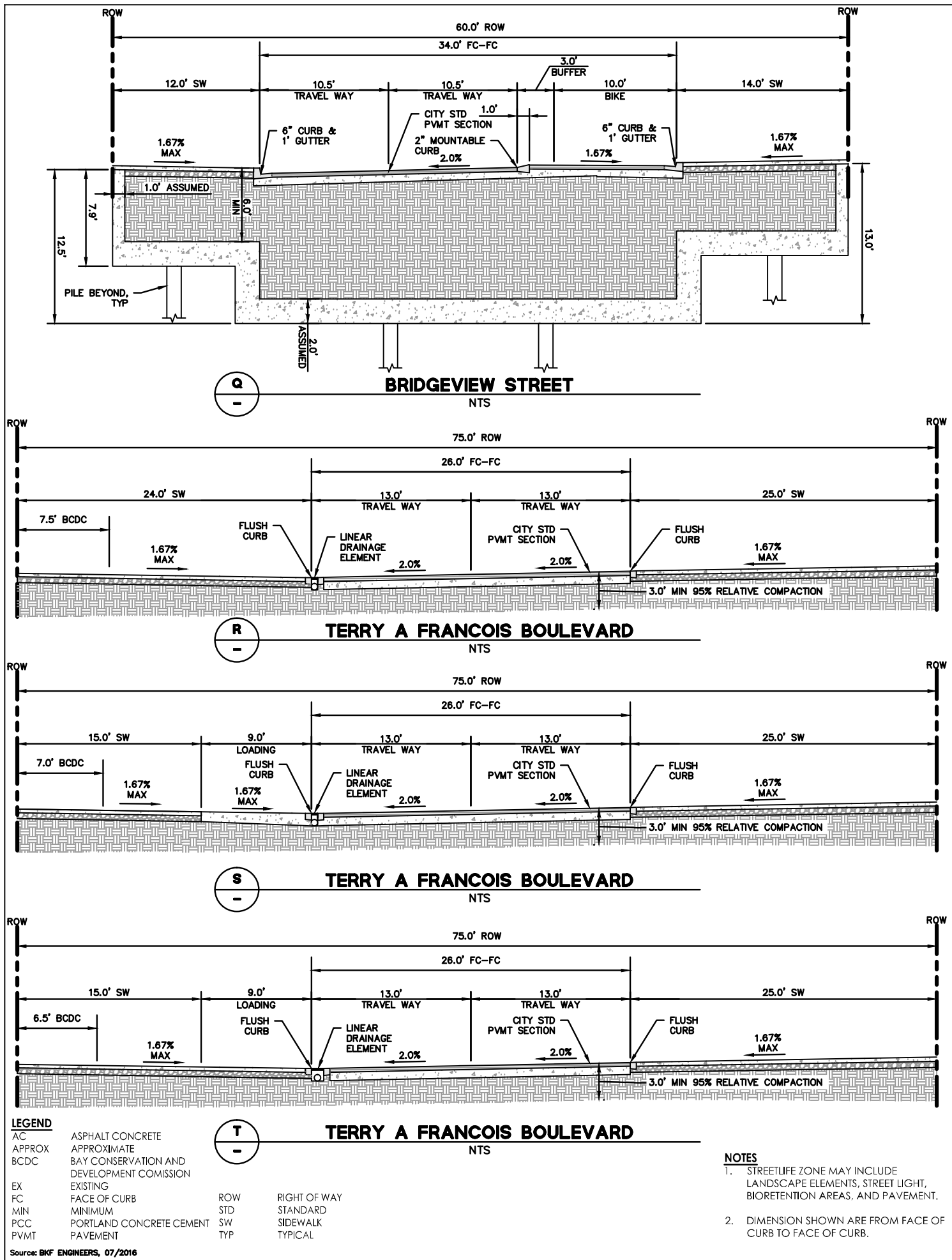
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PVMT	PAVEMENT		

NOTES

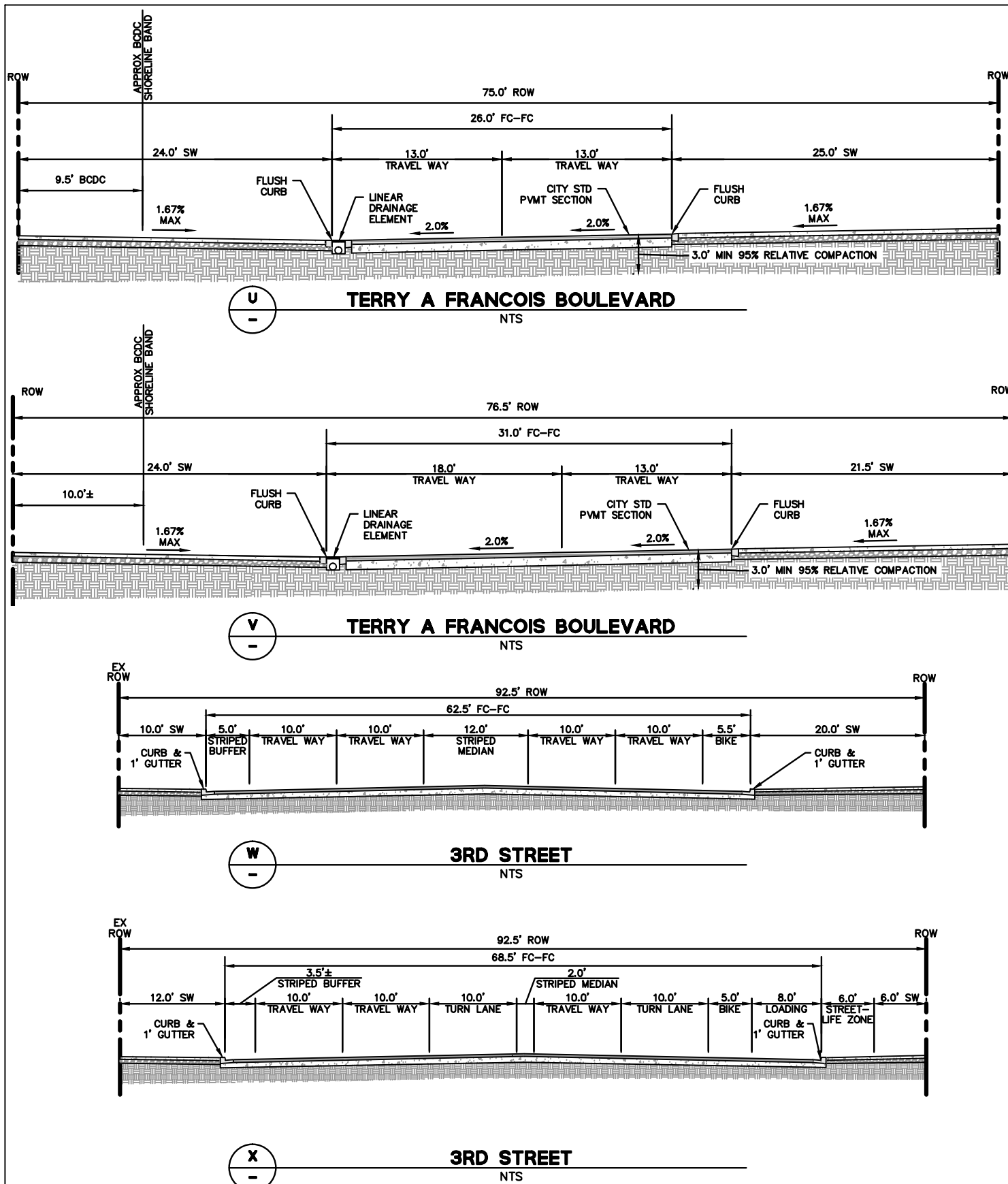
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Source: BKF ENGINEERS, 07/2016

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DRAWING NAME: \\BKF-SF-Vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.5-8.12 Typical Street Cross Sections.dwg
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LEGEND

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APPROX	APPROXIMATE	STD	STANDARD
BCDC	BAY CONSERVATION AND DEVELOPMENT COMMISSION	SW	SIDEWALK
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FC	FACE OF CURB		
MIN	MINIMUM		
PCC	PORTLAND CONCRETE CEMENT		
PVMT	PAVEMENT		




NOTES

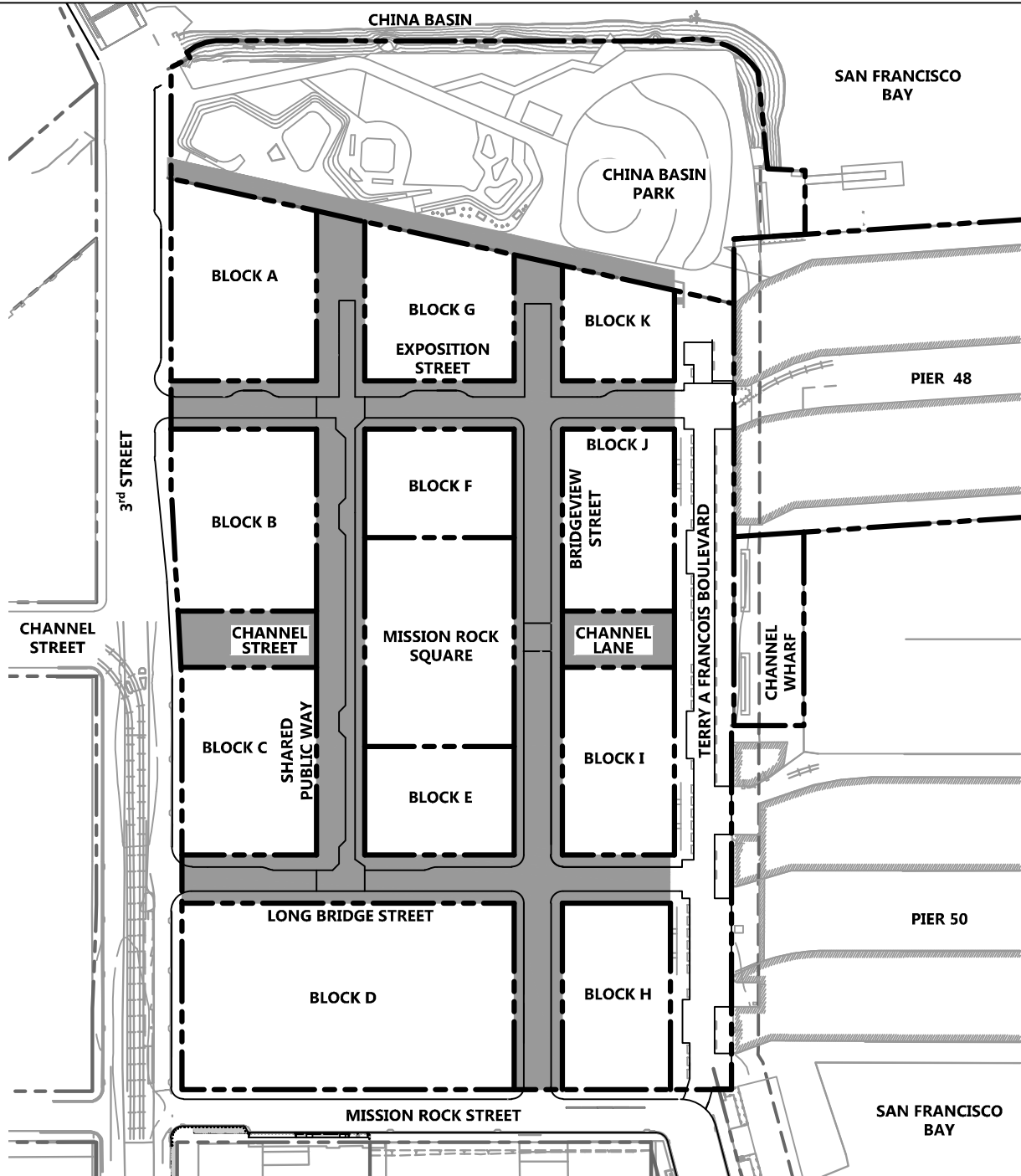
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Source: BKF ENGINEERS, 07/2016

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.13 Structured Streets Limits.dwg
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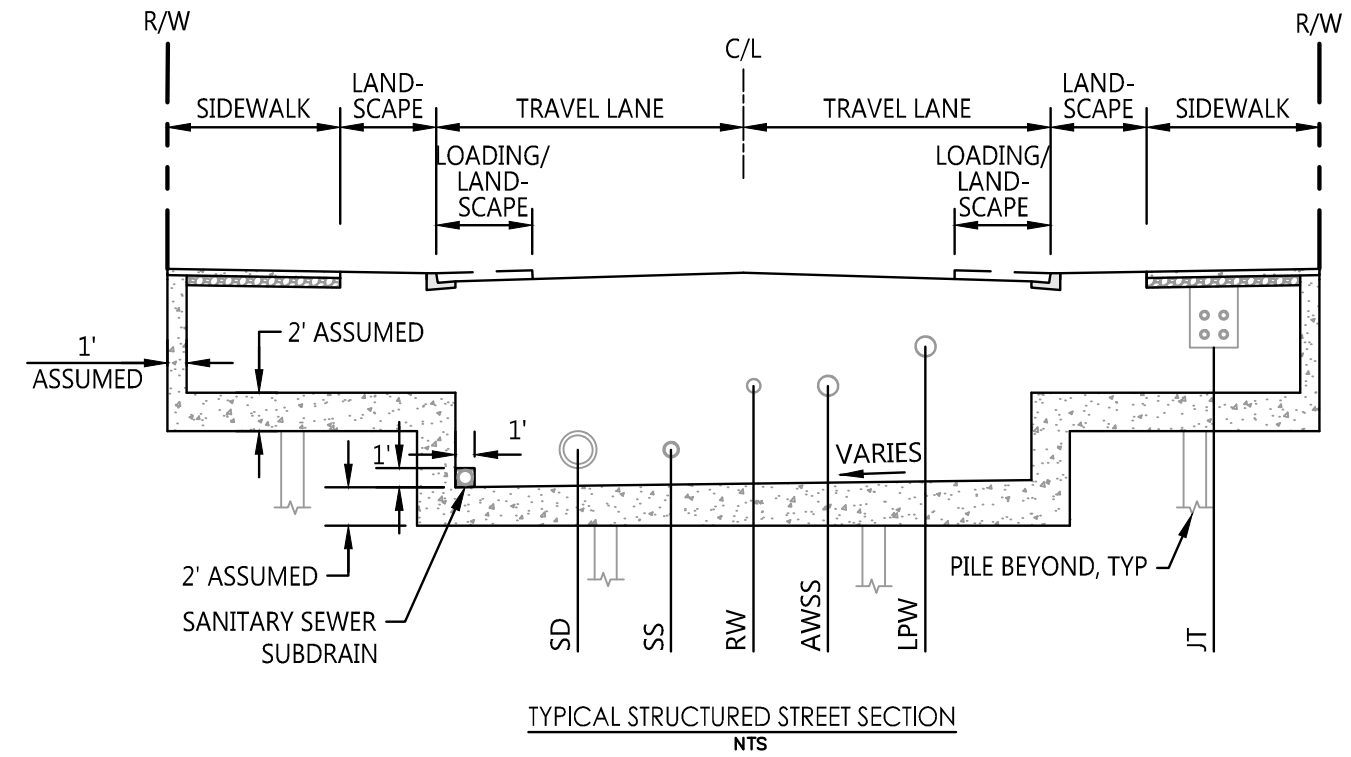
-  PROPOSED PARCEL LINE
-  EXISTING PARCEL LINE
-  STRUCTURED STREET OR OPEN SPACE AREA (210,000 SF)



Source: BKF ENGINEERS, 07/2016



DRAWING NAME: \\BKF-SF\vol14\2008\080006_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.14 Typical Structured Streets.dwg
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Source: BKF ENGINEERS, 07/2016

FIGURE 8.15: PEDESTRIAN CIRCULATION + ACCESSIBILITY

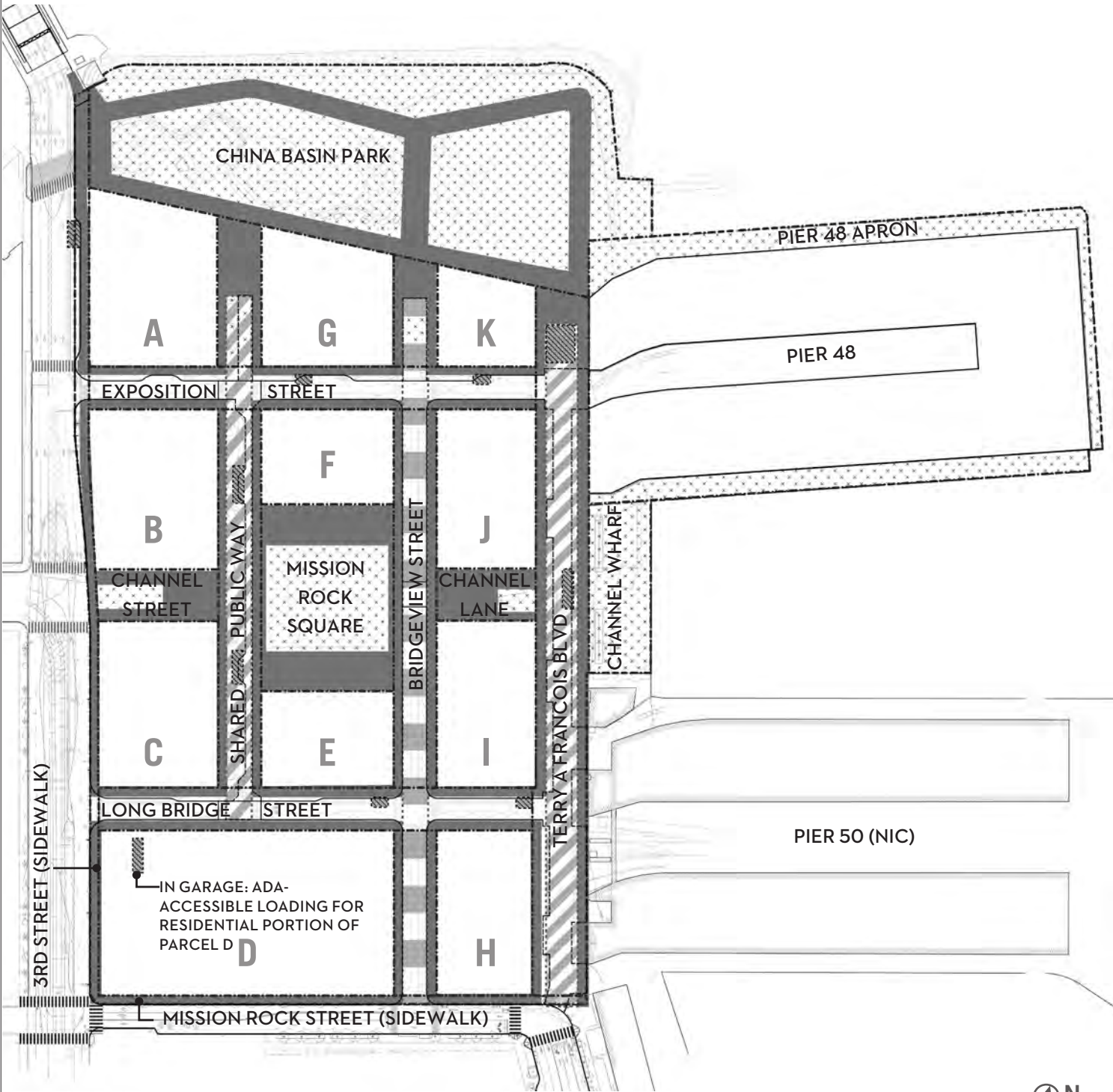


FIGURE 8.15: PEDESTRIAN CIRCULATION + ACCESSIBILITY

- < 5% Path of Travel (all sidewalks)
 - Accessible path of travel to all potential building entrance locations
- Accessible Loading Stall/Dedicated Passenger Loading
 - Delineated drop-off area within ROW
 - Located in central areas
 - Curb ramps where required by curb condition
- Shared Street with Flush Curb
 - Delineated drop-off areas as noted
 - Entire vehicular area can be used for paratransit drop-off
- Vehicular Street with Reduced-Height Curb
 - 4" curb accessible by paratransit vehicles for drop-off
- Open Space (Shown for reference only)

FIGURE 8.16: VEHICULAR CIRCULATION

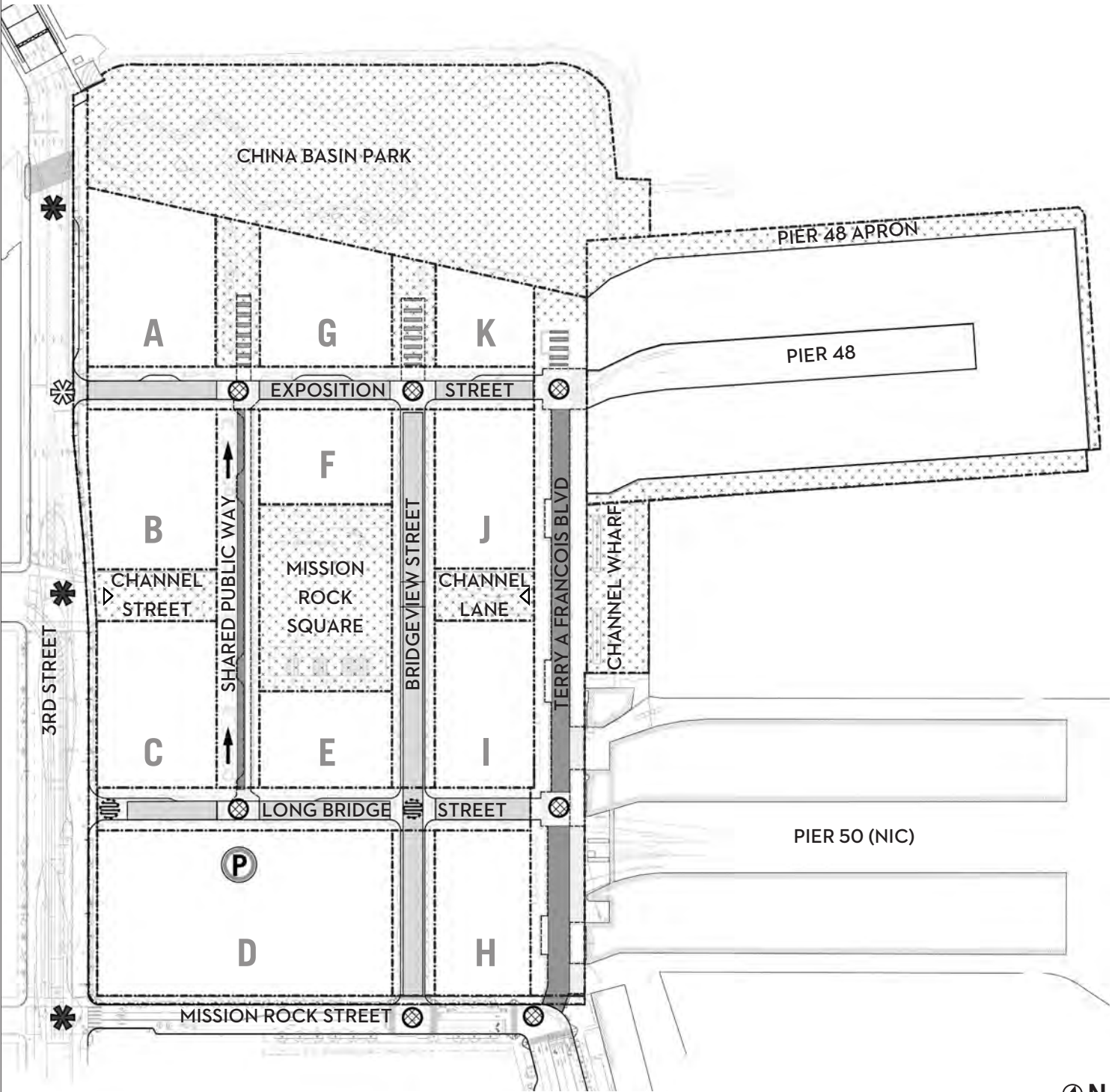


FIGURE 8.16: VEHICULAR CIRCULATION

Shared Street (No Street Parking)

2-Way Street (No Street Parking)

Paseo with Emergency Vehicle Access

Open Space (Shown for reference only)

Direction of 1-Way Traffic



Shared Site Parking Location



Stop Sign: All-Way



Stop Sign: At Through Streets



Existing Signalized Intersection



Proposed Signalized Intersection



Access to Below-Grade Parking (if provided)

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.17: BICYCLE CIRCULATION + FACILITIES

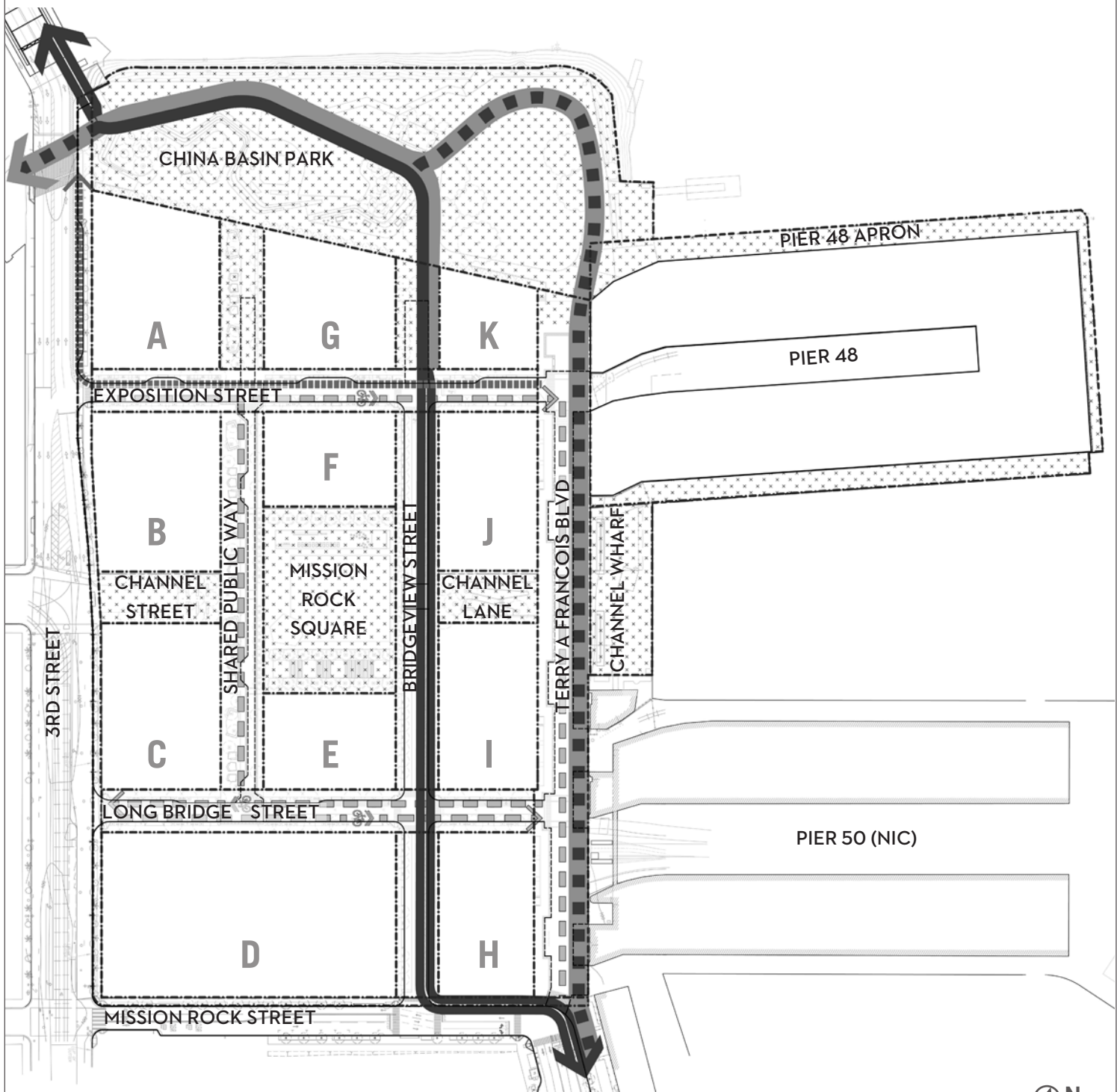


FIGURE 8.17: BICYCLE CIRCULATION + FACILITIES

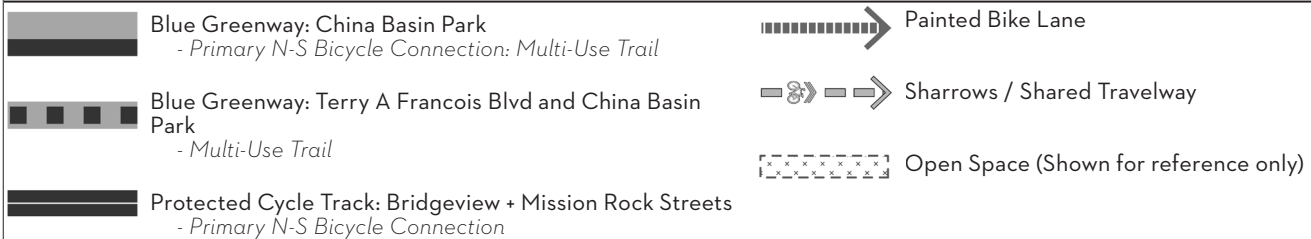


FIGURE 8.18: LOADING, SERVICING, + PARKING

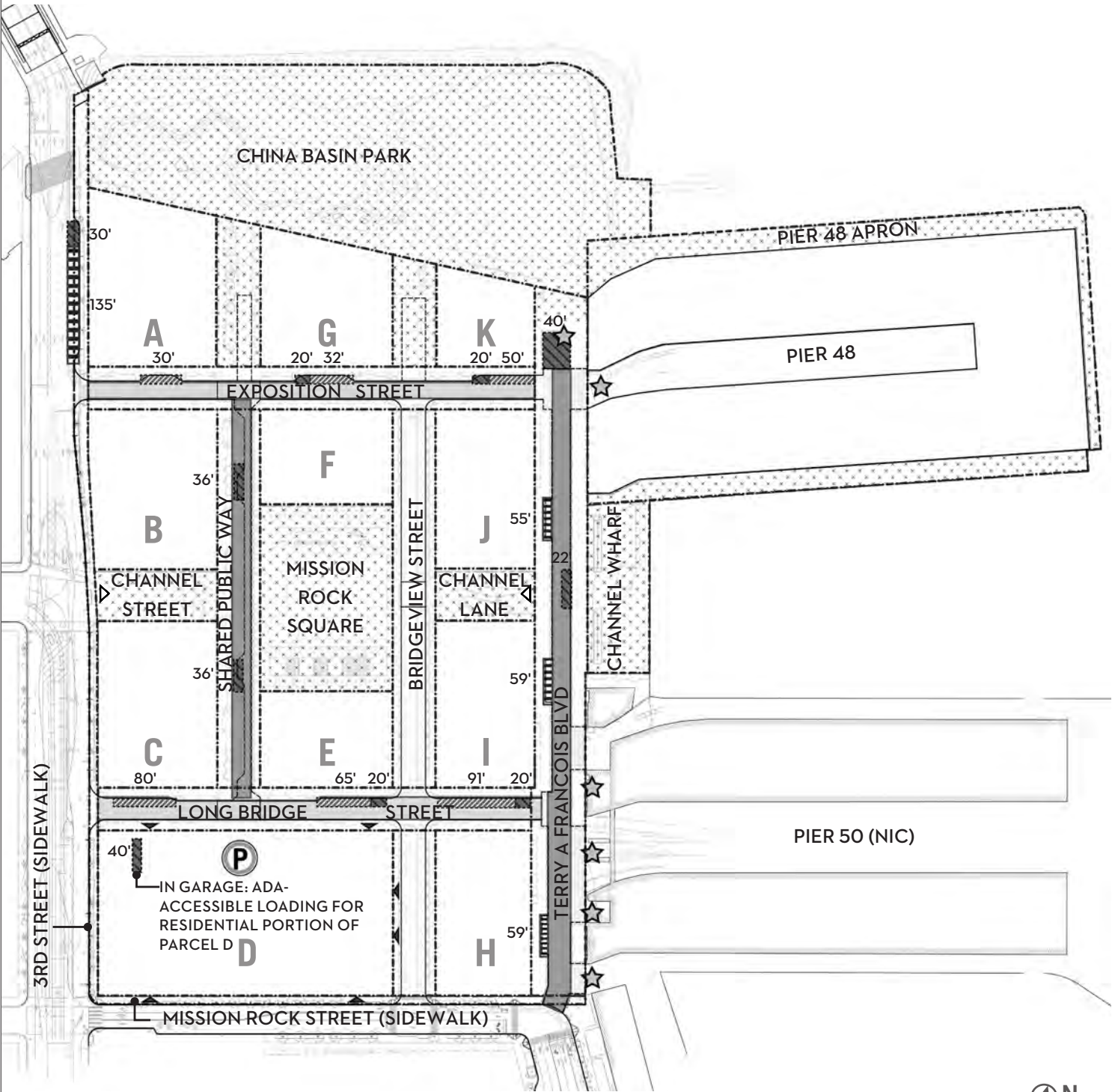
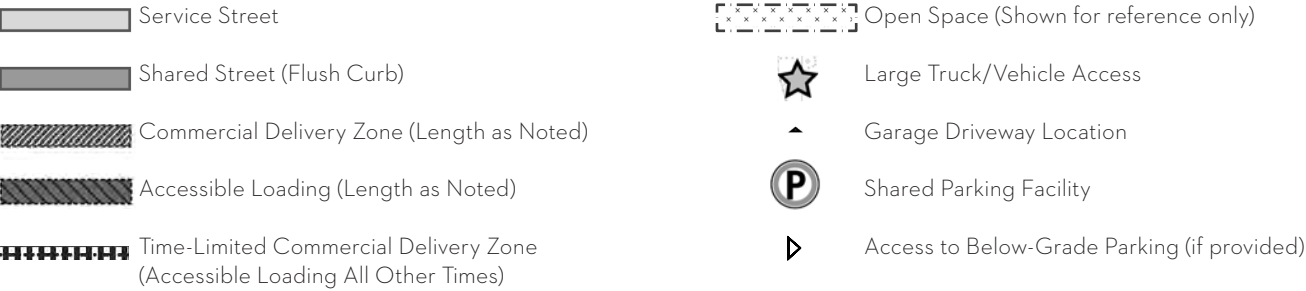
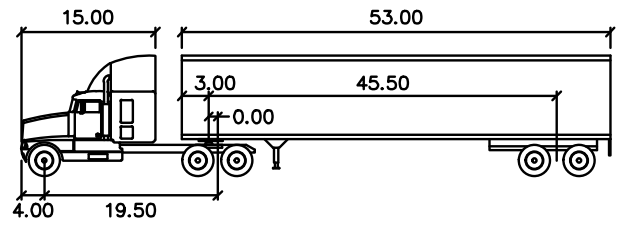


FIGURE 8.18: SERVICING AND LOADING

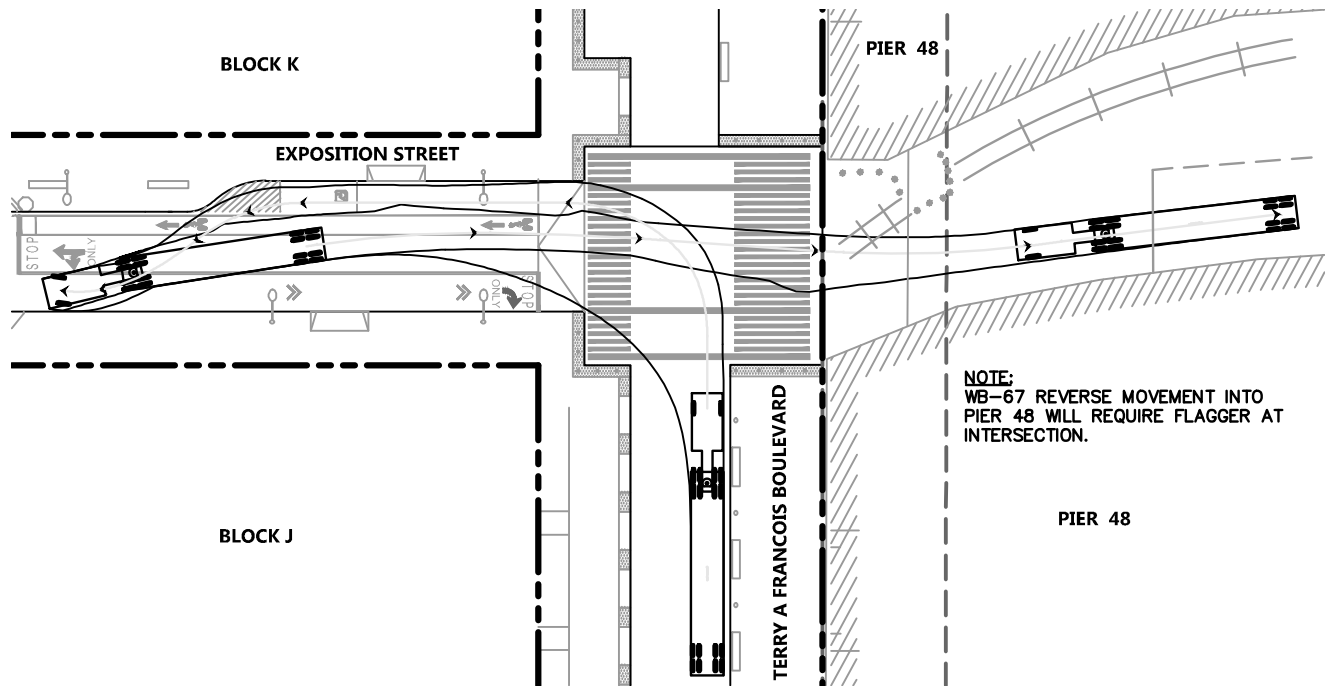


Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

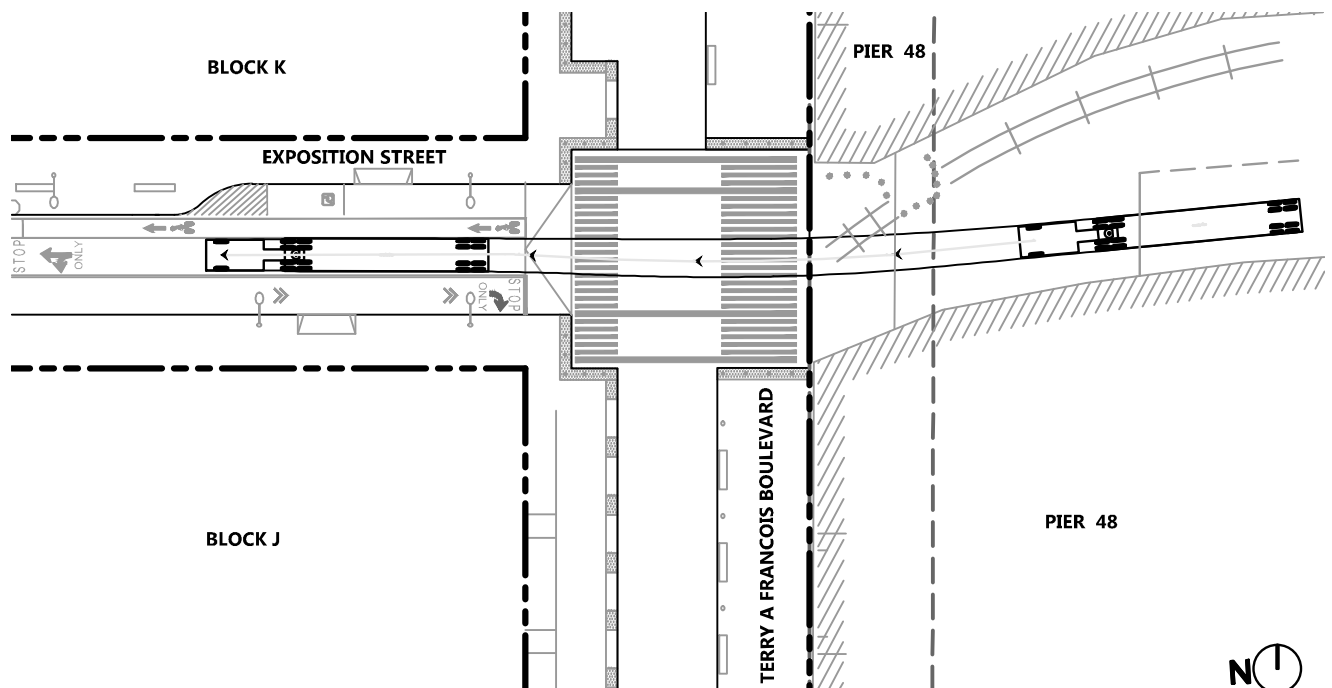


WB-67		feet	feet
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Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

WB-67 TRUCK TEMPLATE

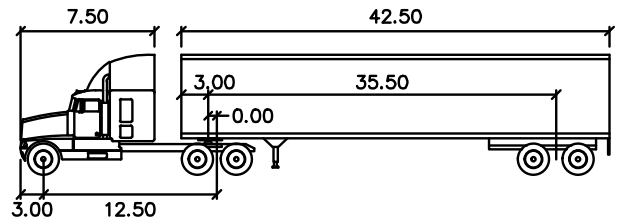


WB-67 TRUCK ENTERING PIER 48



WB-67 TRUCK EXITING PIER 48



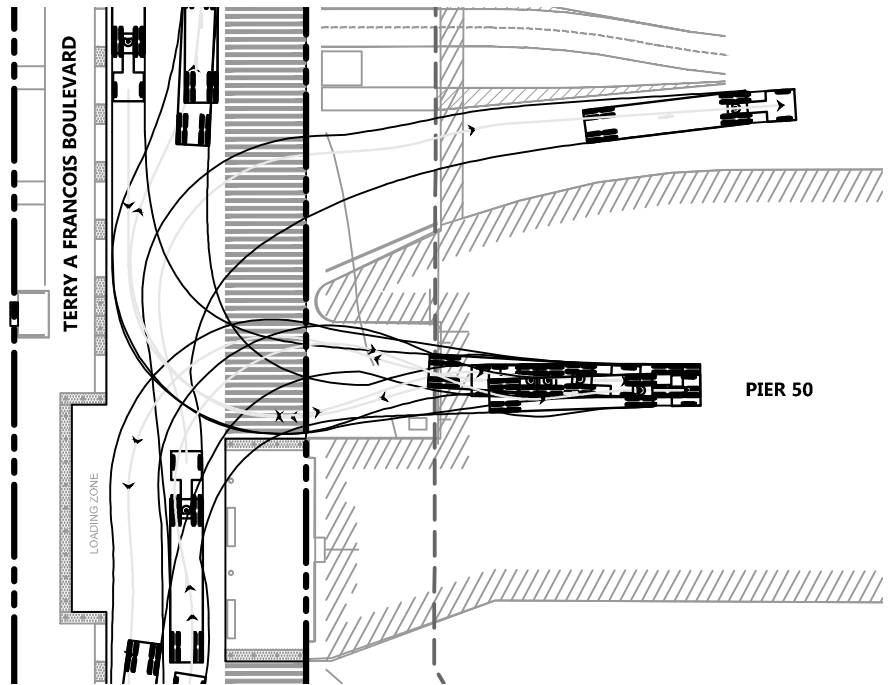


WB-50

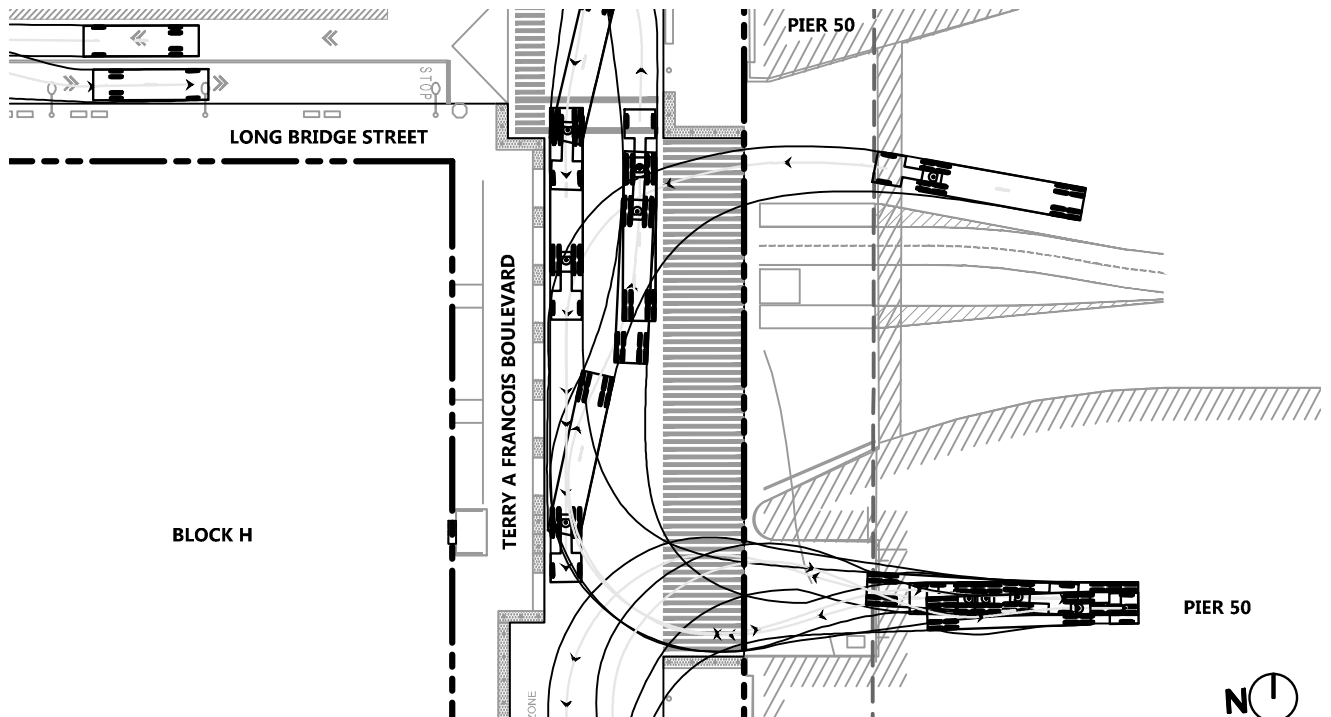
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Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WB-50 TRUCK TEMPLATE

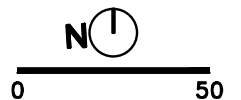
BLOCK H



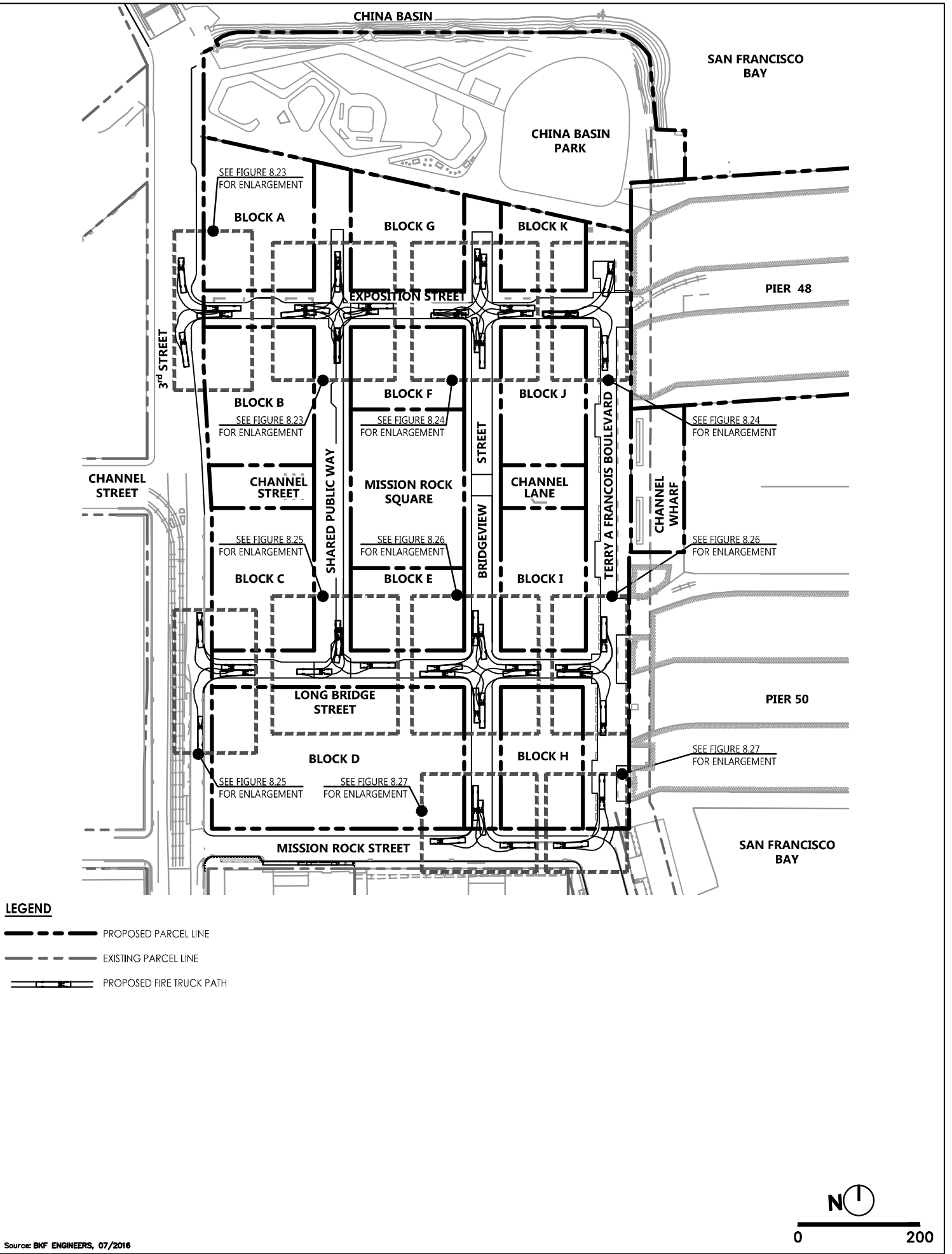
WB-50 TRUCK ENTERING PIER 50



WB-50 TRUCK EXITING PIER 50

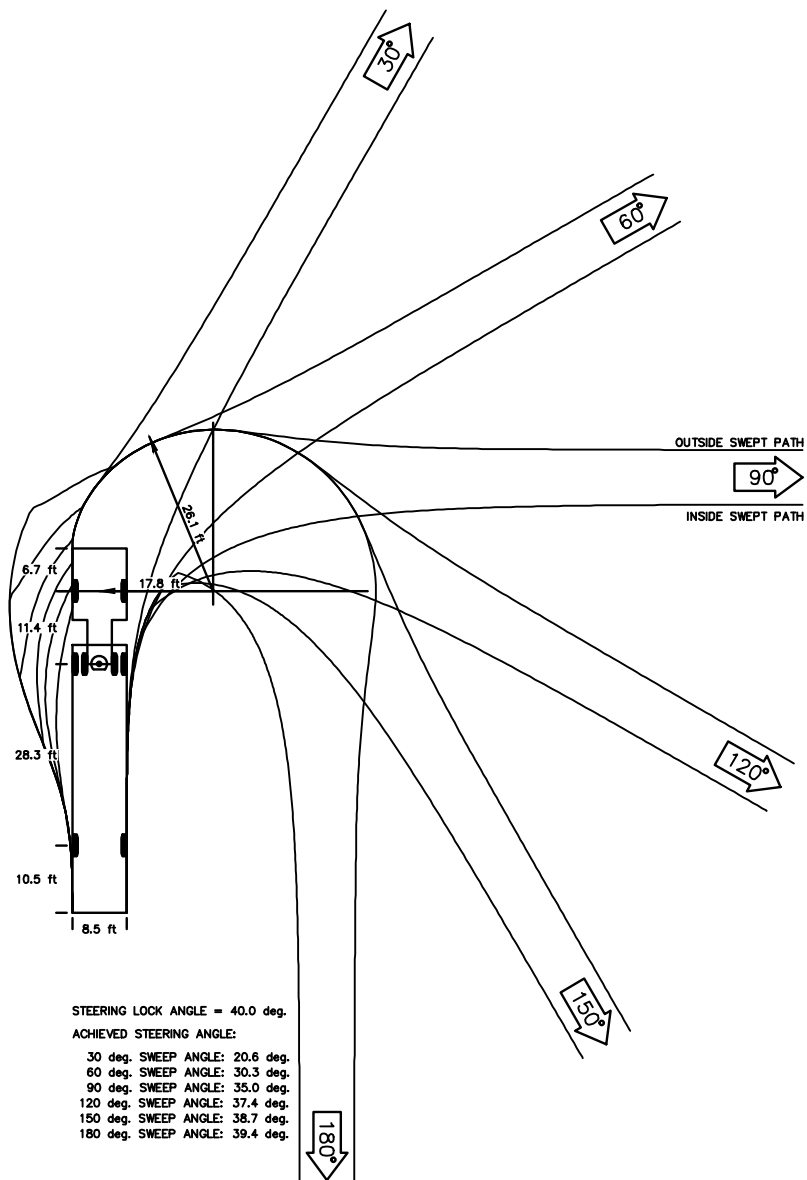


DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.21 Conceptual Fire Truck Turning Analysis.dwg
 PLOT DATE: 07-13-17
 PLOTTED BY: FELI



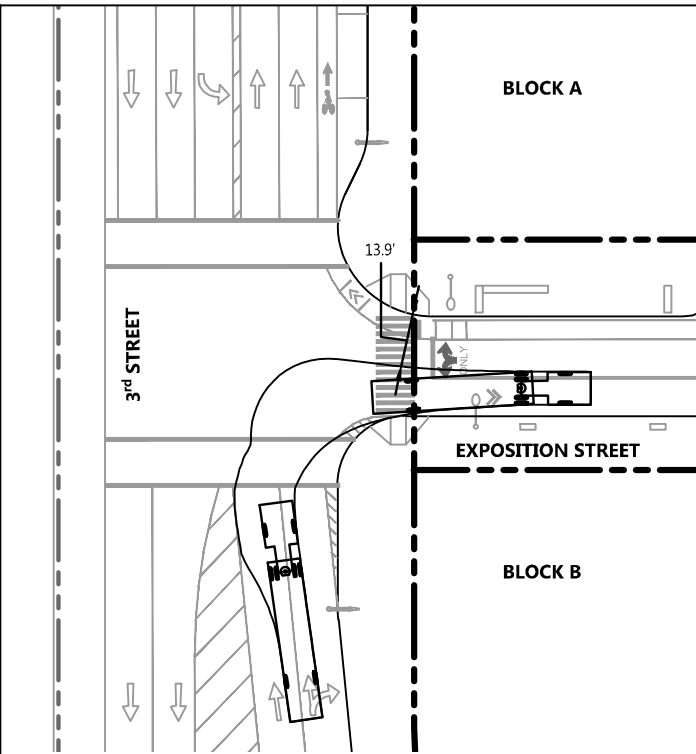
Source: BKF ENGINEERS, 07/2016

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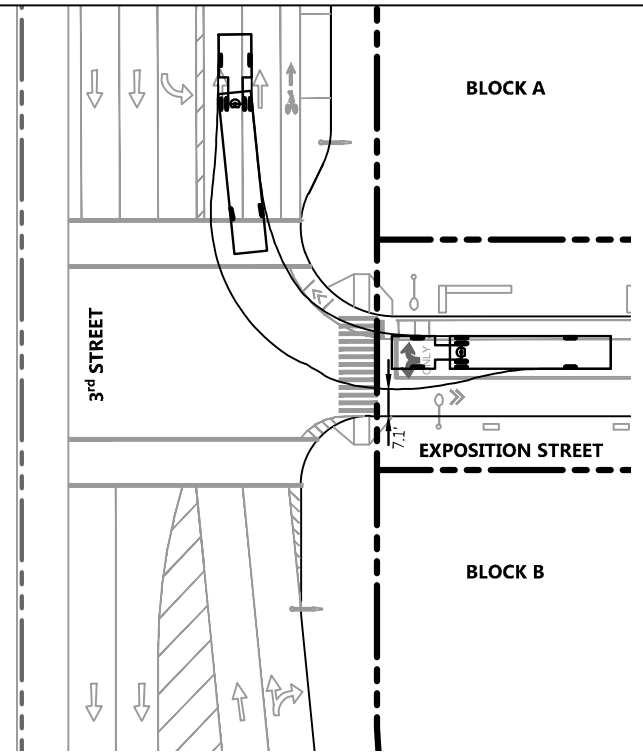


SFFD 57' Articulated_V2
Custom
[ft]
(c) 2014 Transoft Solutions, Inc. All rights reserved.
0FT 10FT 20FT

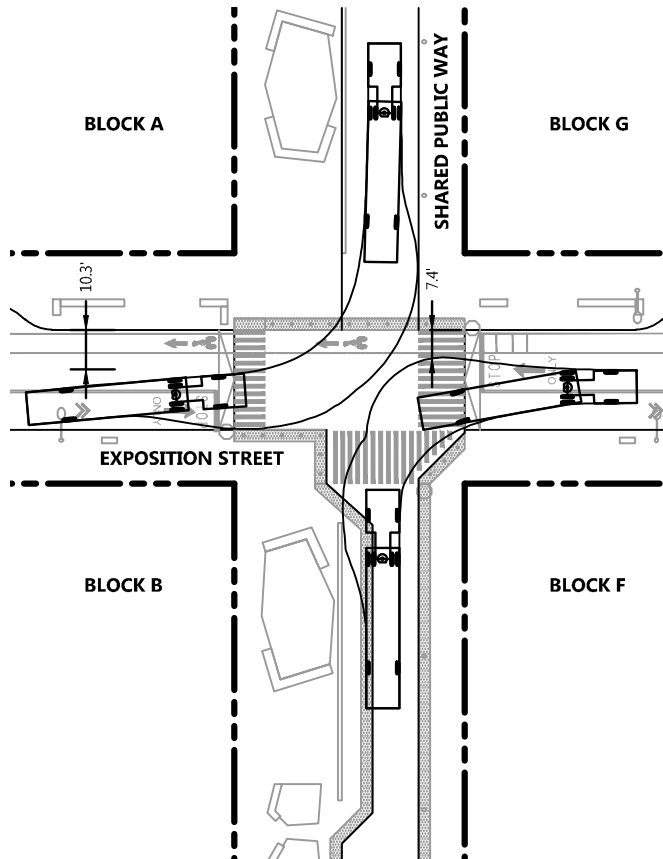
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 PLOTTED BY: FELI



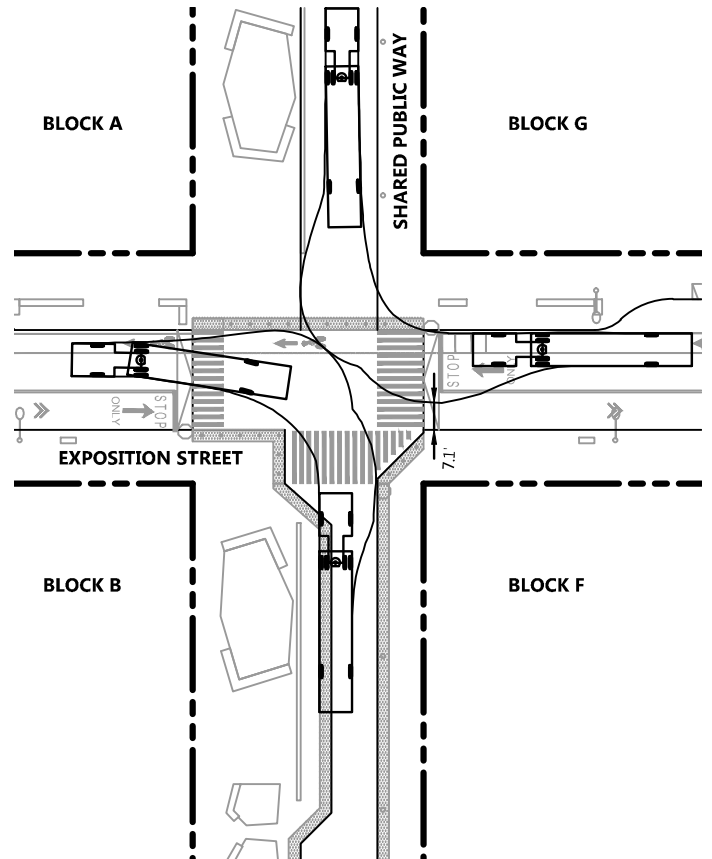
EXPOSITION STREET & 3rd STREET INTERSECTION
(NW-SE)



EXPOSITION STREET & 3rd STREET INTERSECTION
(NE-SW)



EXPOSITION STREET & SHARED
PUBLIC WAY INTERSECTION
(NW - SE)



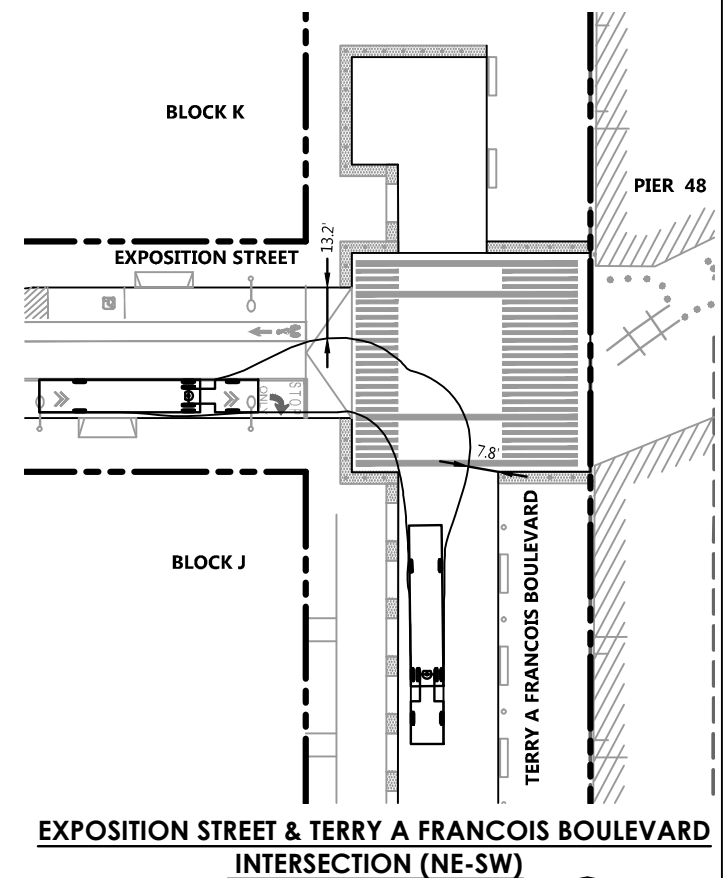
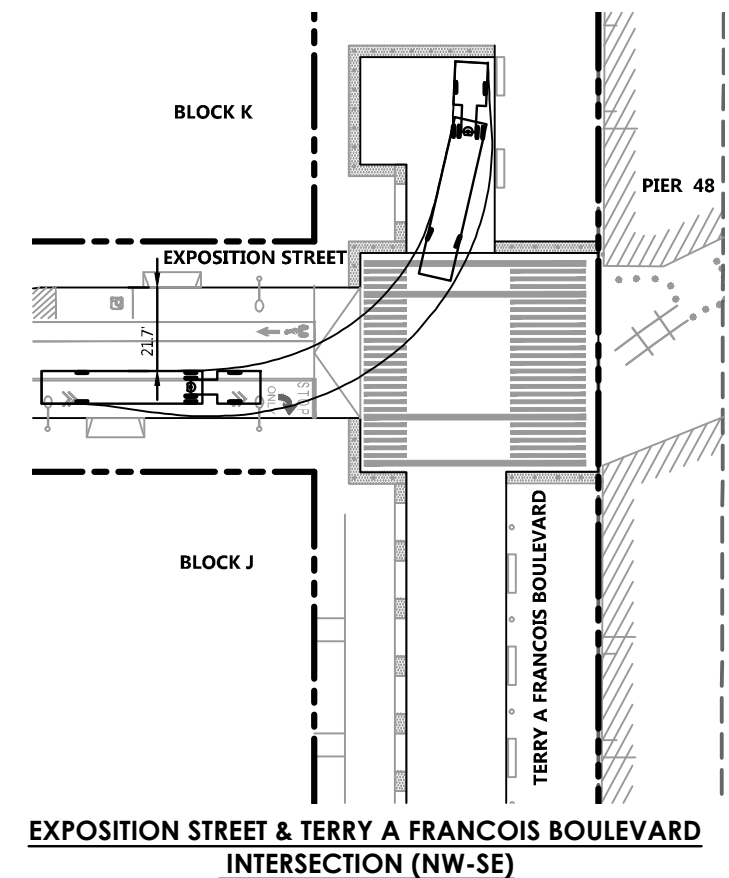
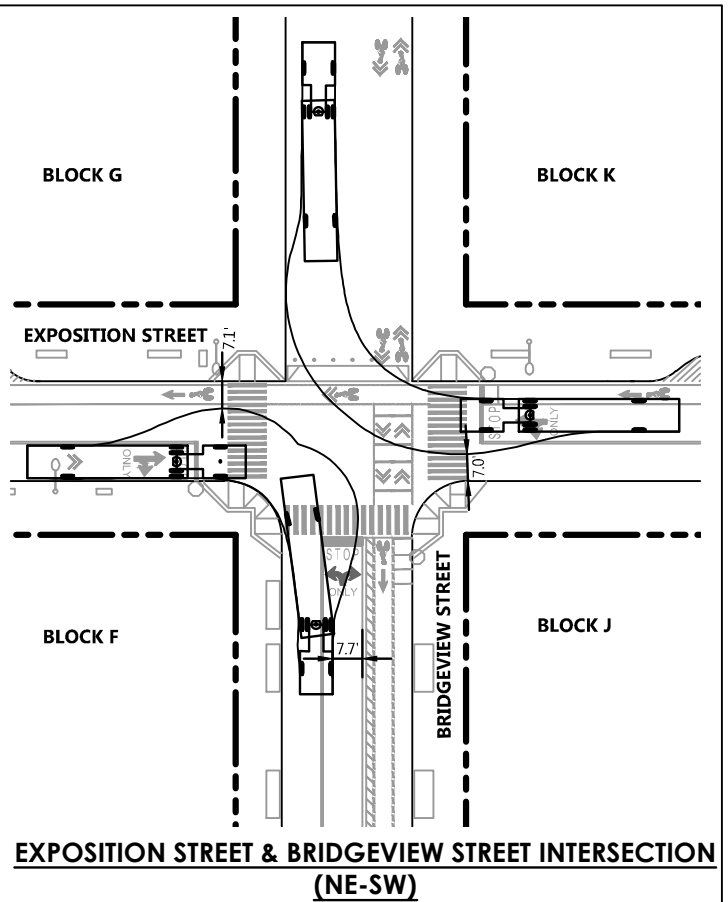
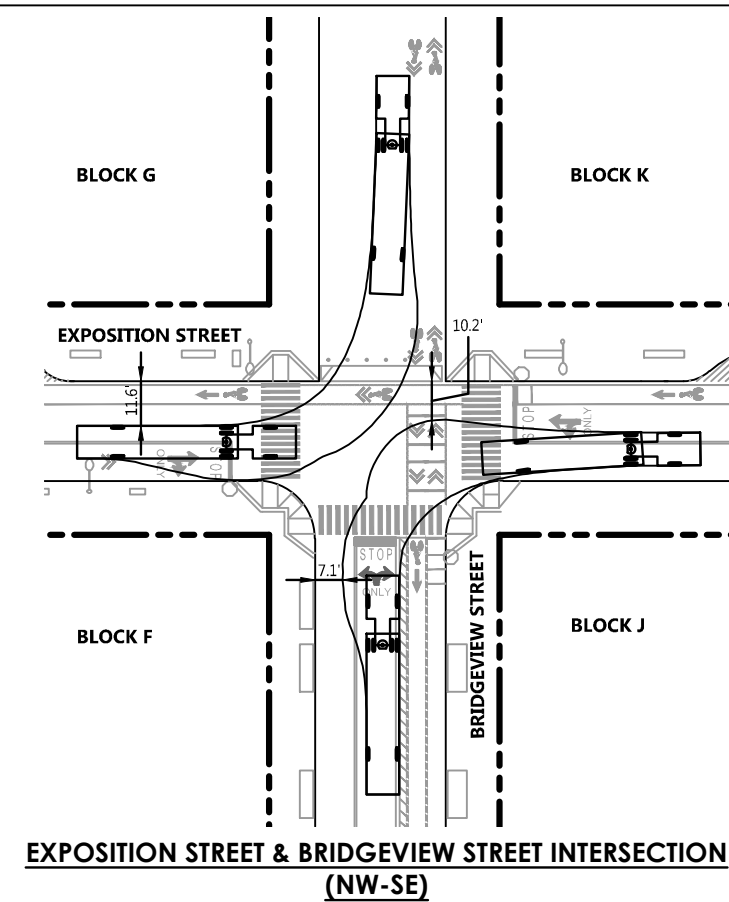
EXPOSITION STREET & SHARED
PUBLIC WAY INTERSECTION
(NE-SW)



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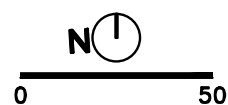
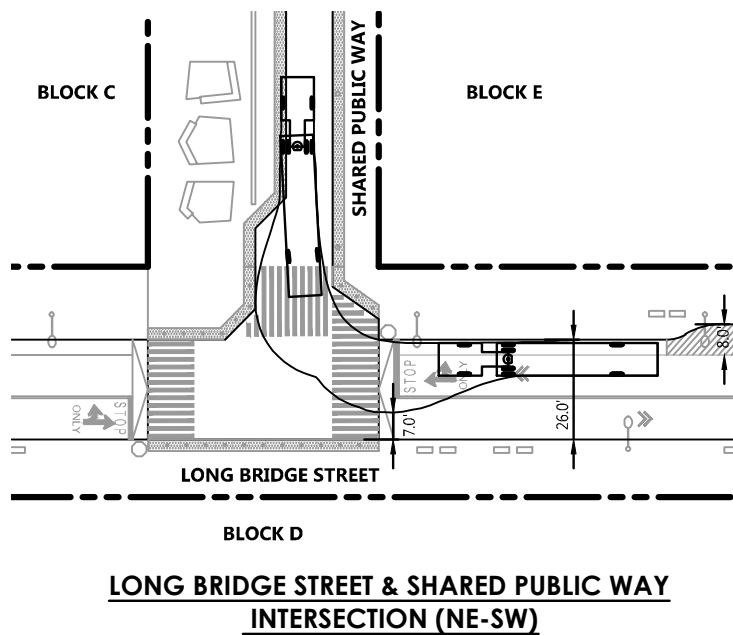
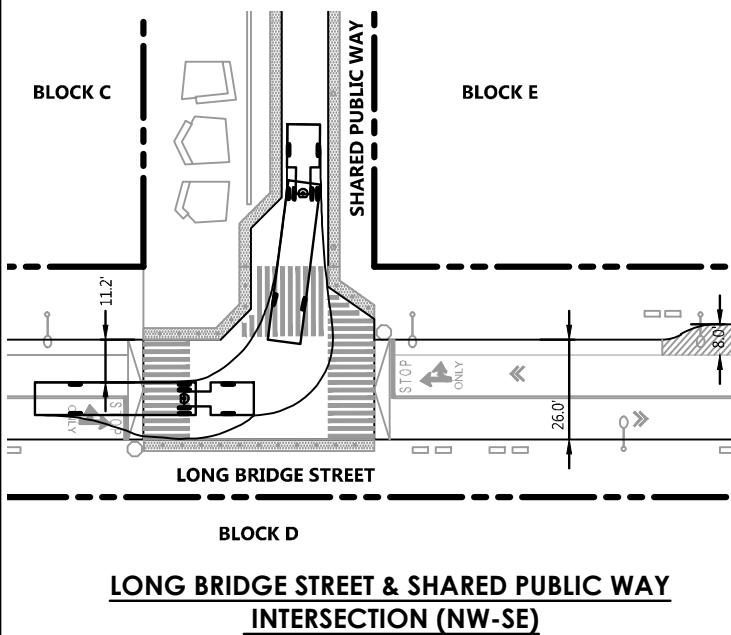
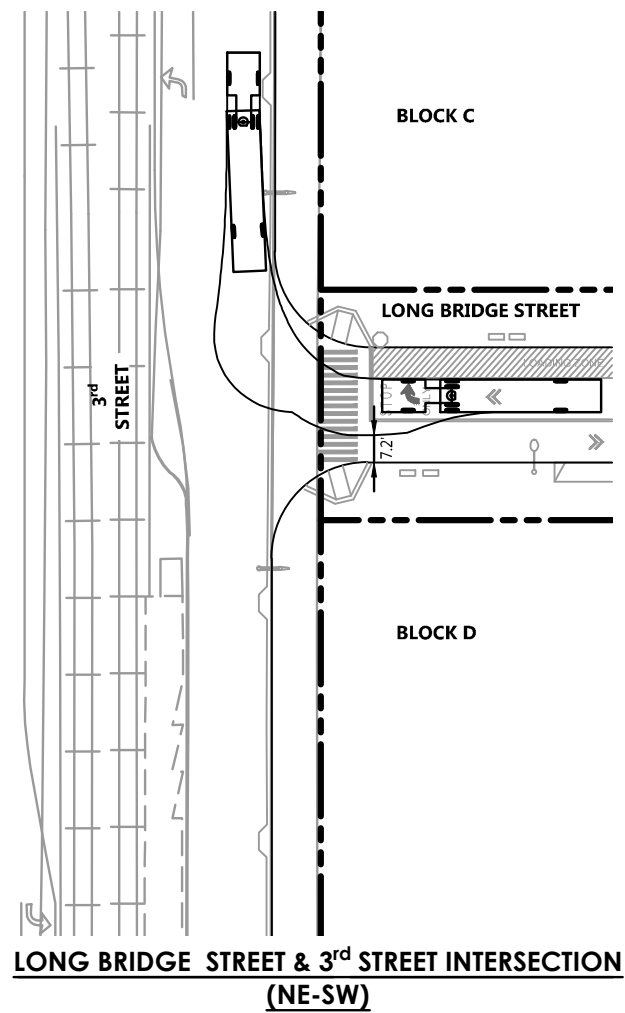
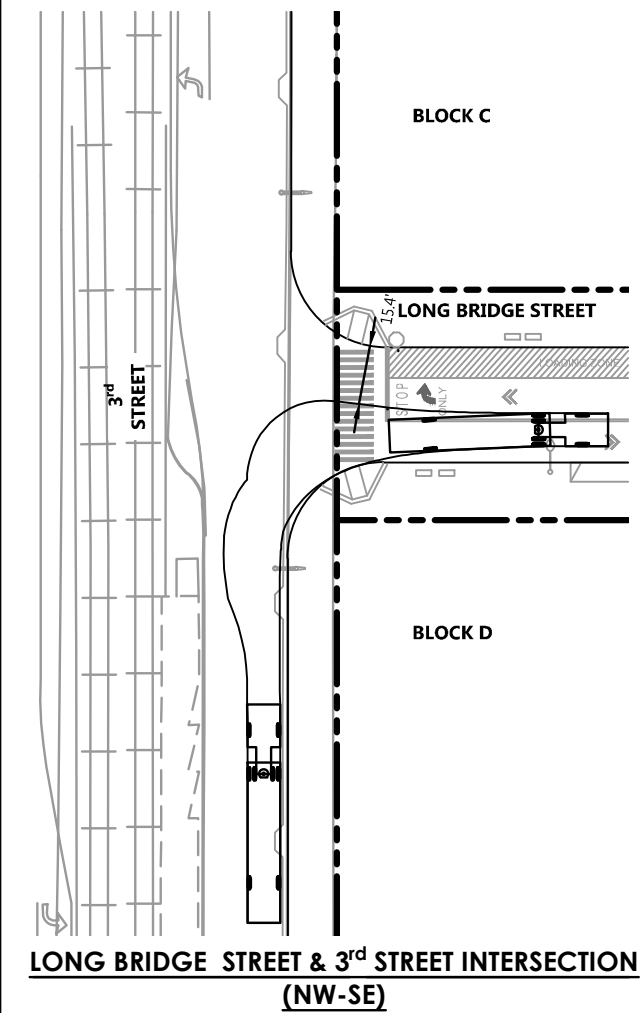
Source: BKF ENGINEERS, 07/2016

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.23-8.27 Truck Turning Enlargements.dwg
 PLOT DATE: 07/13/17
 PLOTTED BY: FELI

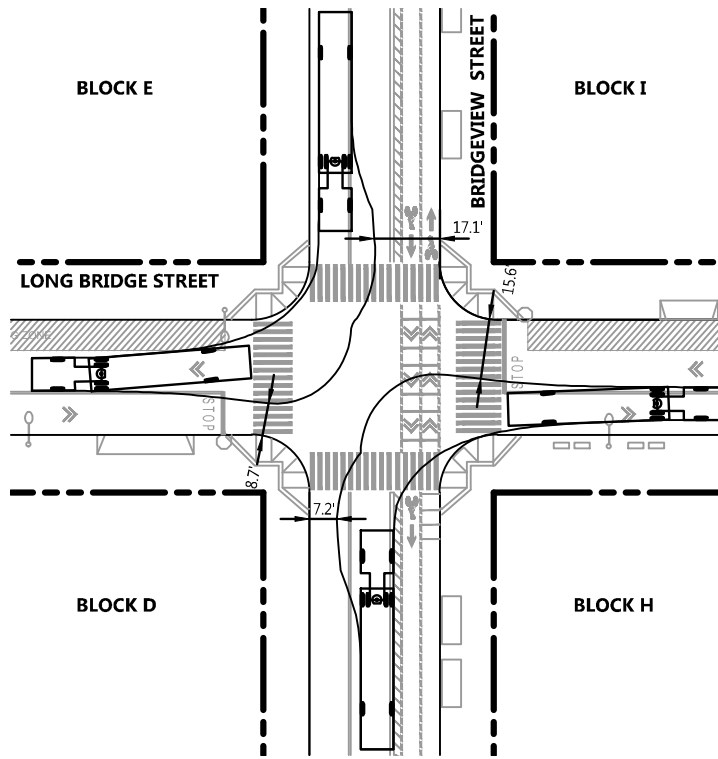


Source: BKF ENGINEERS, 07/2016

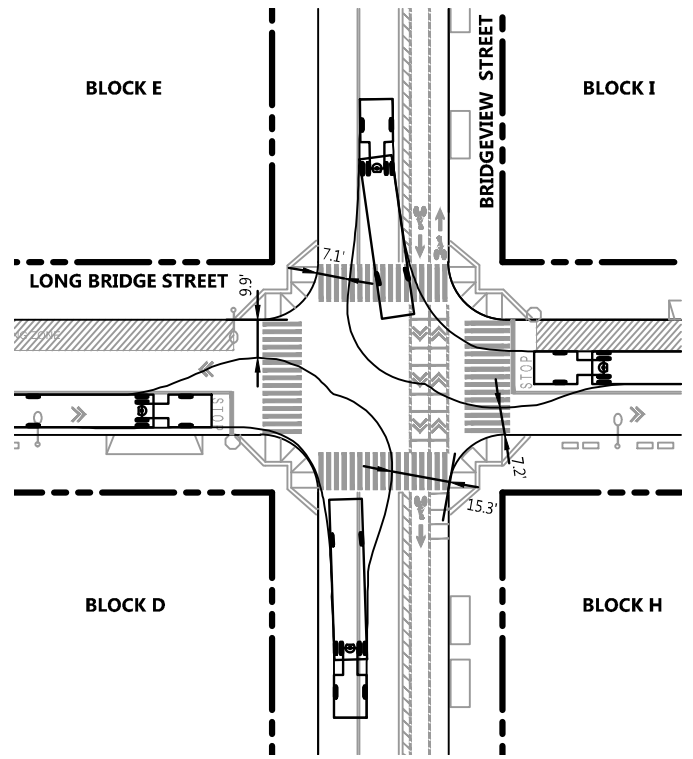
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 PLOTTED BY: FELI



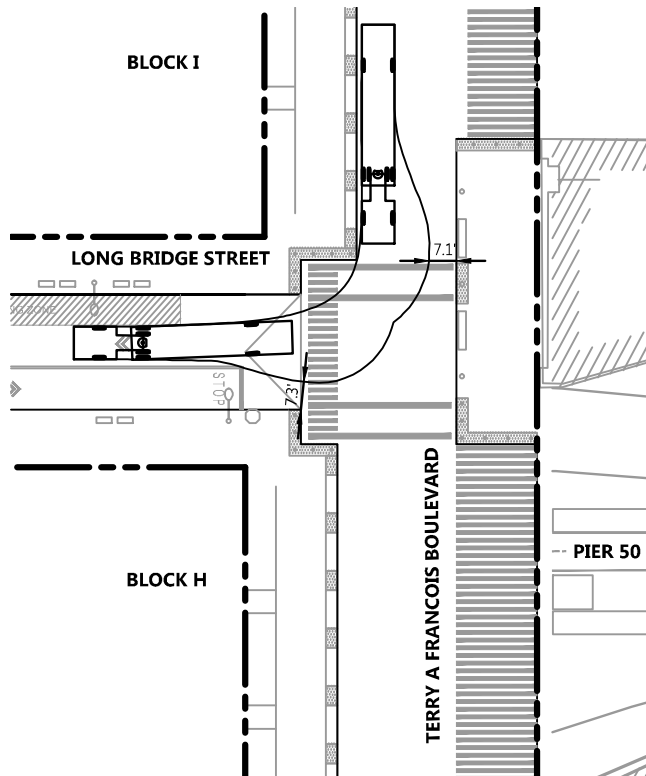
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 PLOTTED BY: FELI



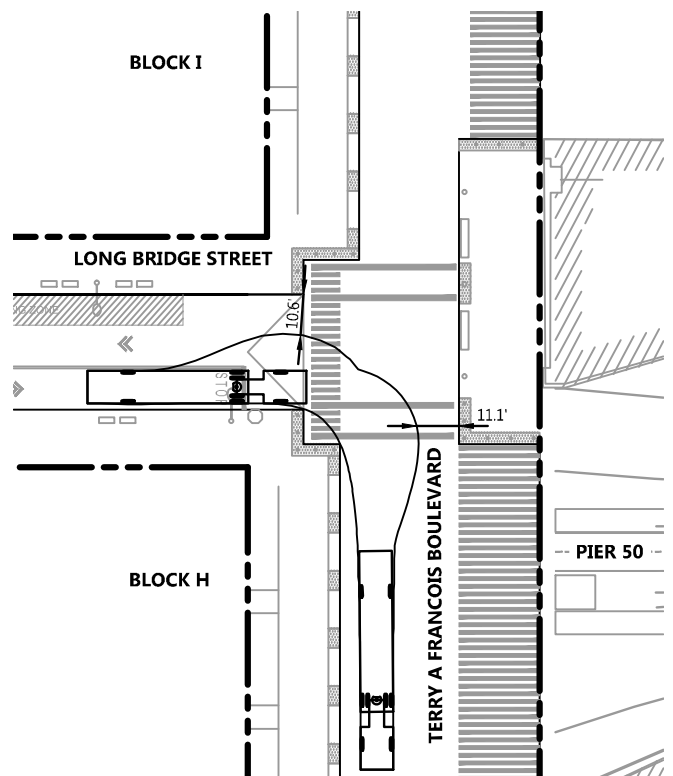
**LONG BRIDGE STREET & BRIDGEVIEW STREET
INTERSECTION (NW-SE)**



**LONG BRIDGE STREET & BRIDGEVIEW STREET
INTERSECTION (NE-SW)**



**LONG BRIDGE STREET & TERRY A FRANCOIS
BOULEVARD INTERSECTION (NW-SE)**

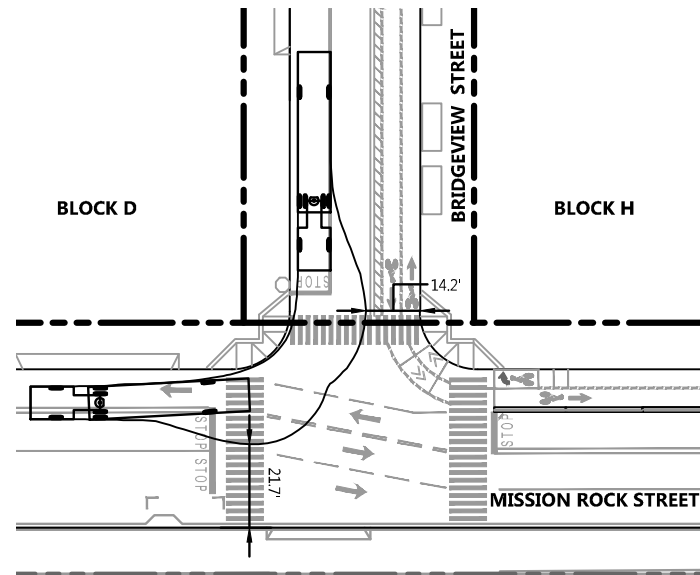


**LONG BRIDGE STREET & TERRY A FRANCOIS
BOULEVARD INTERSECTION (NE-SW)**

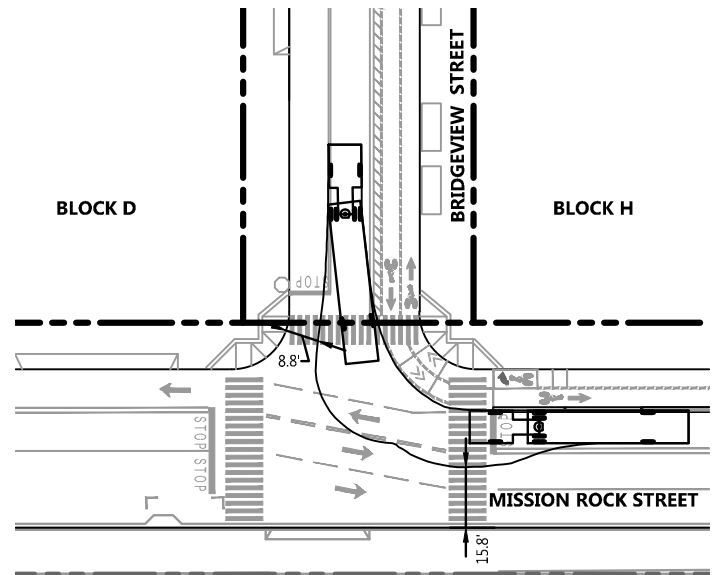


Source: BKF ENGINEERS, 07/2016

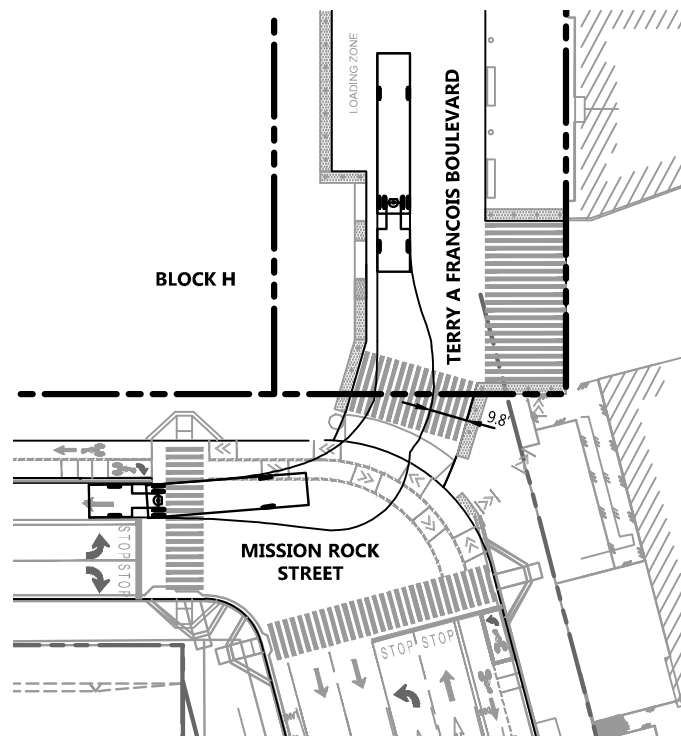
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 PLOT DATE: 07/13/17
 PLOTTED BY: FELI



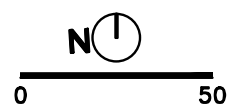
**MISSION ROCK STREET & BRIDGEVIEW STREET
INTERSECTION (NW-SE)**



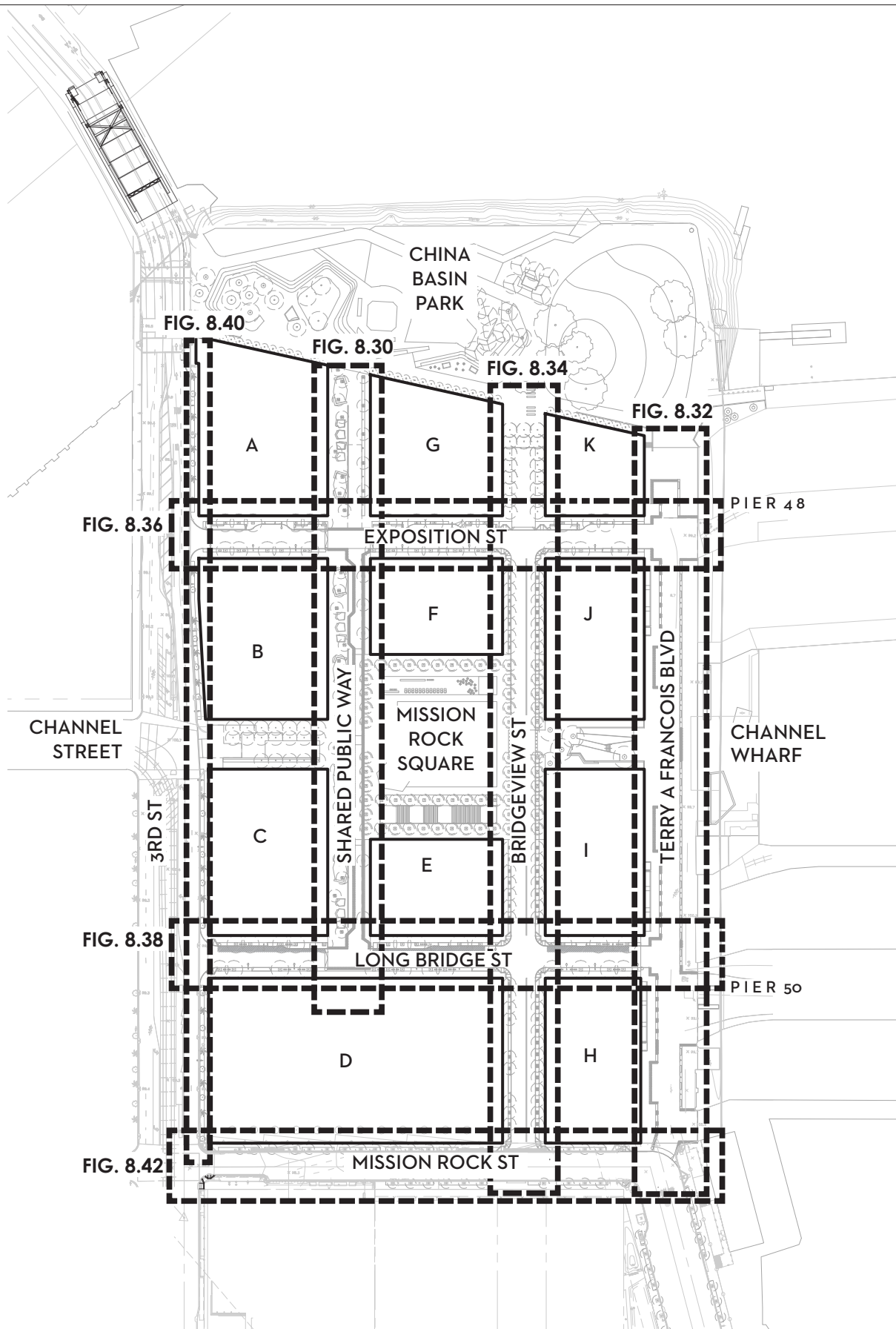
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INTERSECTION (NE-SW)**

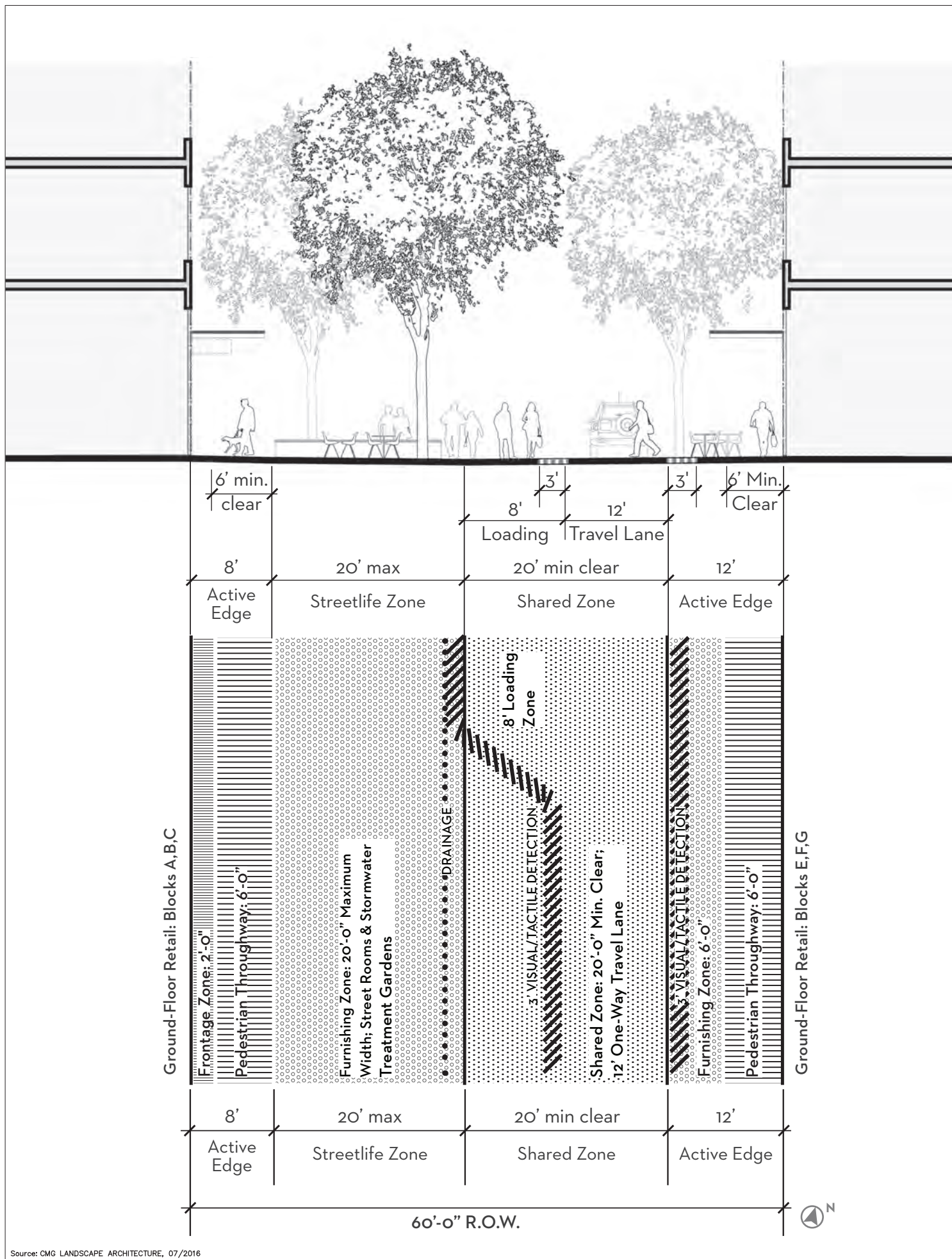


**MISSION ROCK STREET & TERRY A FRANCOIS
BOULEVARD INTERSECTION (NW-SE)**

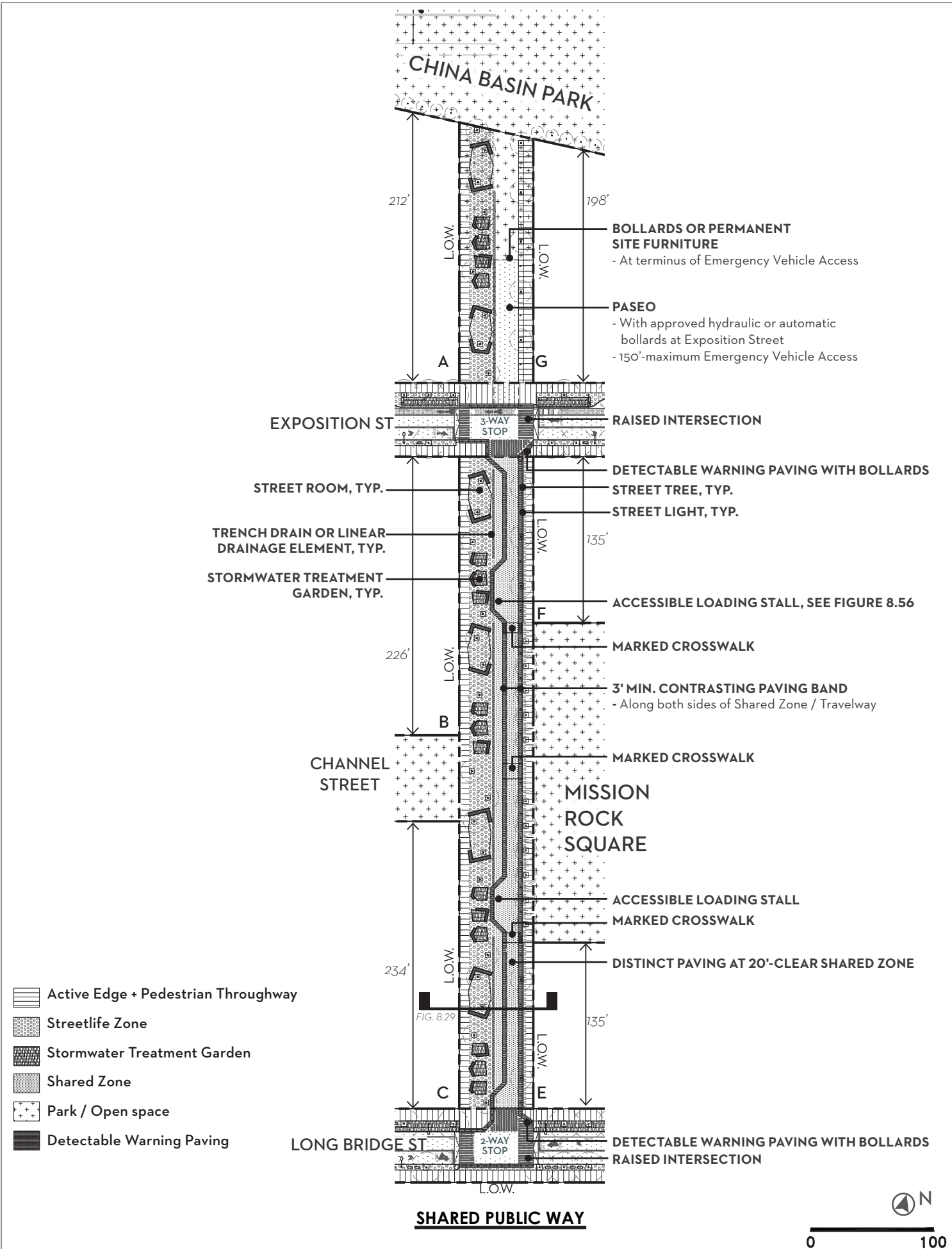


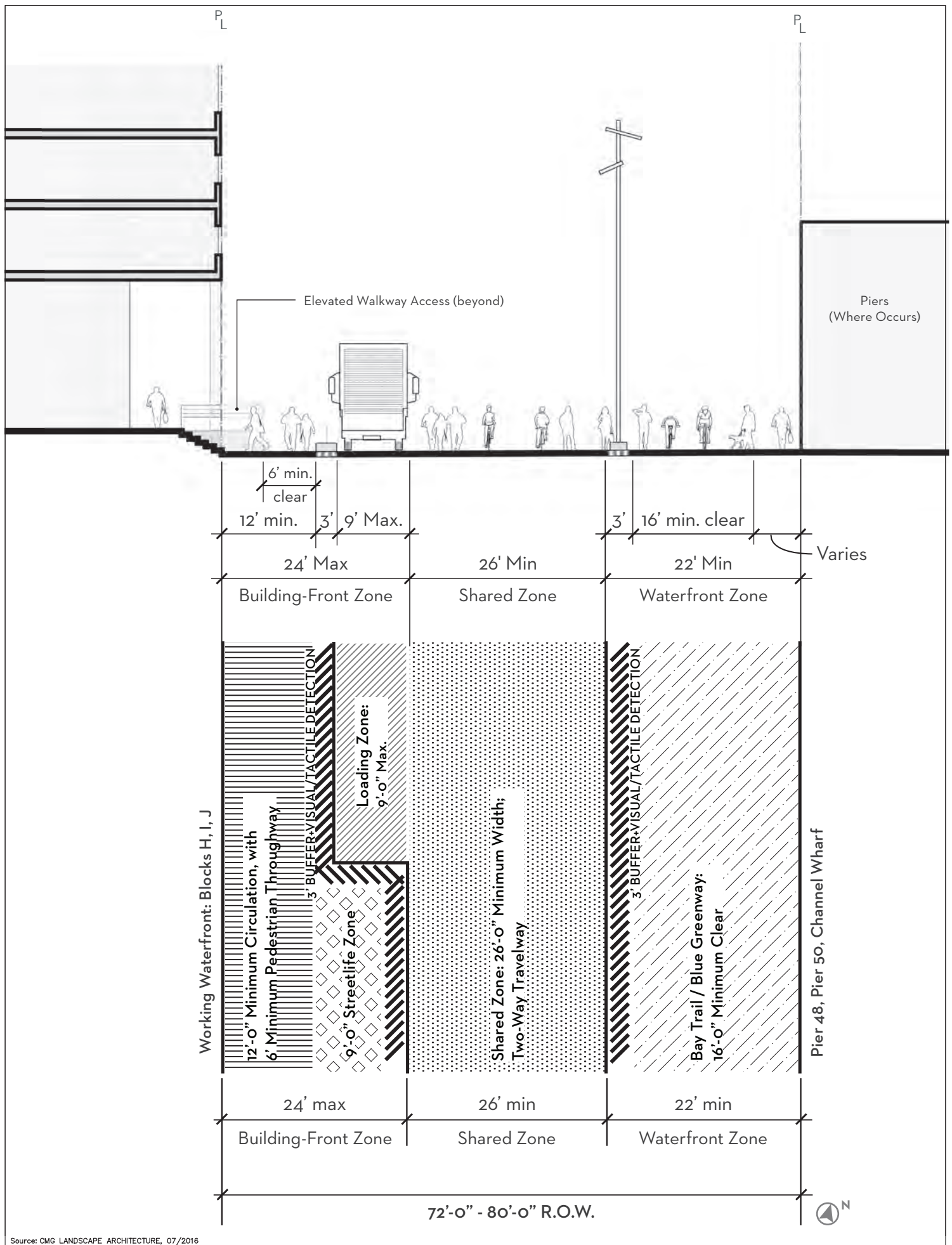
Source: BKF ENGINEERS, 07/2016



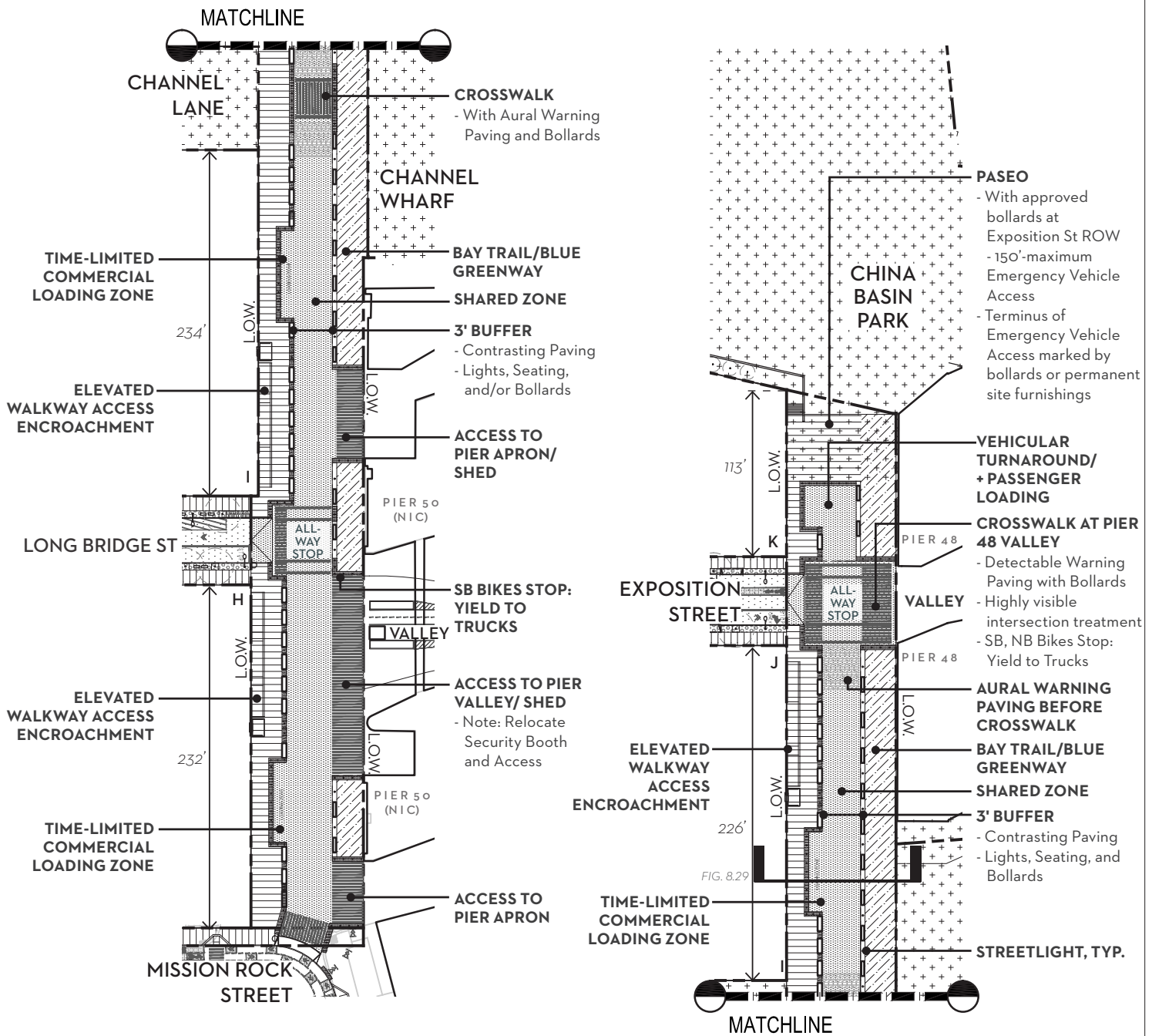


Source: CMG LANDSCAPE ARCHITECTURE, 07/2016





Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

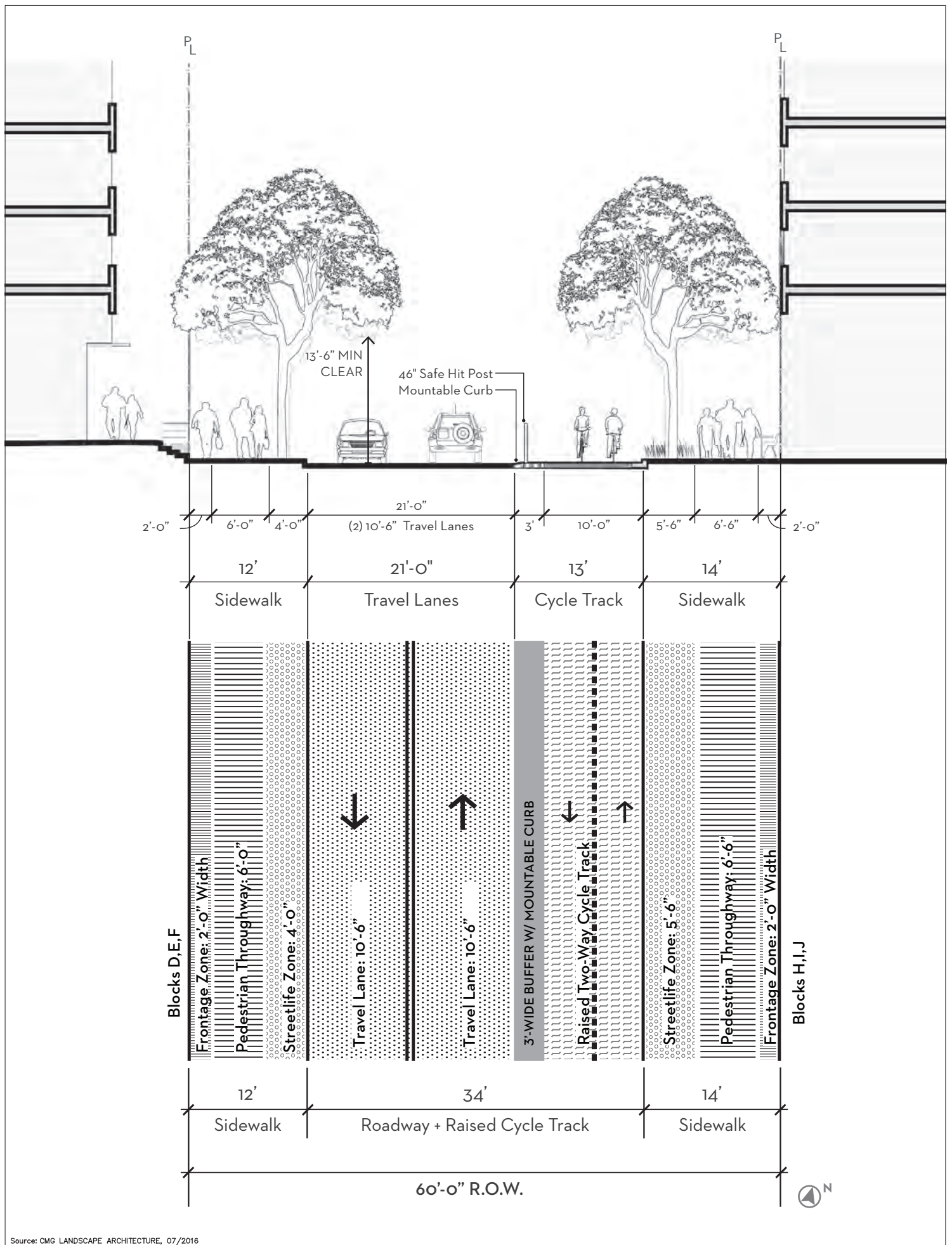


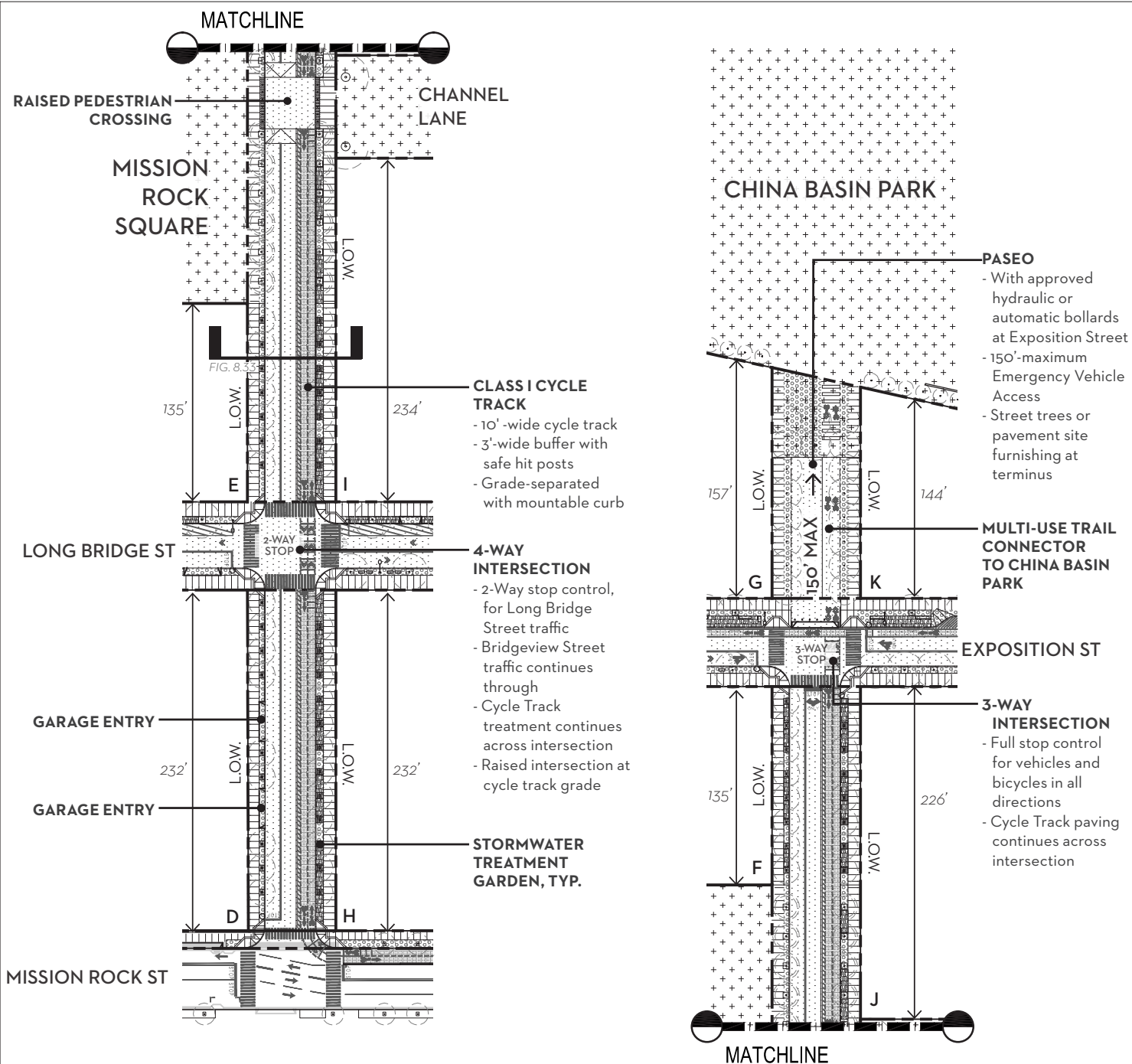
- Pedestrian Circulation + Throughway
- 3' Buffer (Tactile Warning + Bollards)
- Shared Zone
- Loading Zone
- Waterfront Zone
- Park / Open Space
- Detectable Warning Paving
- Aural Warning Paving

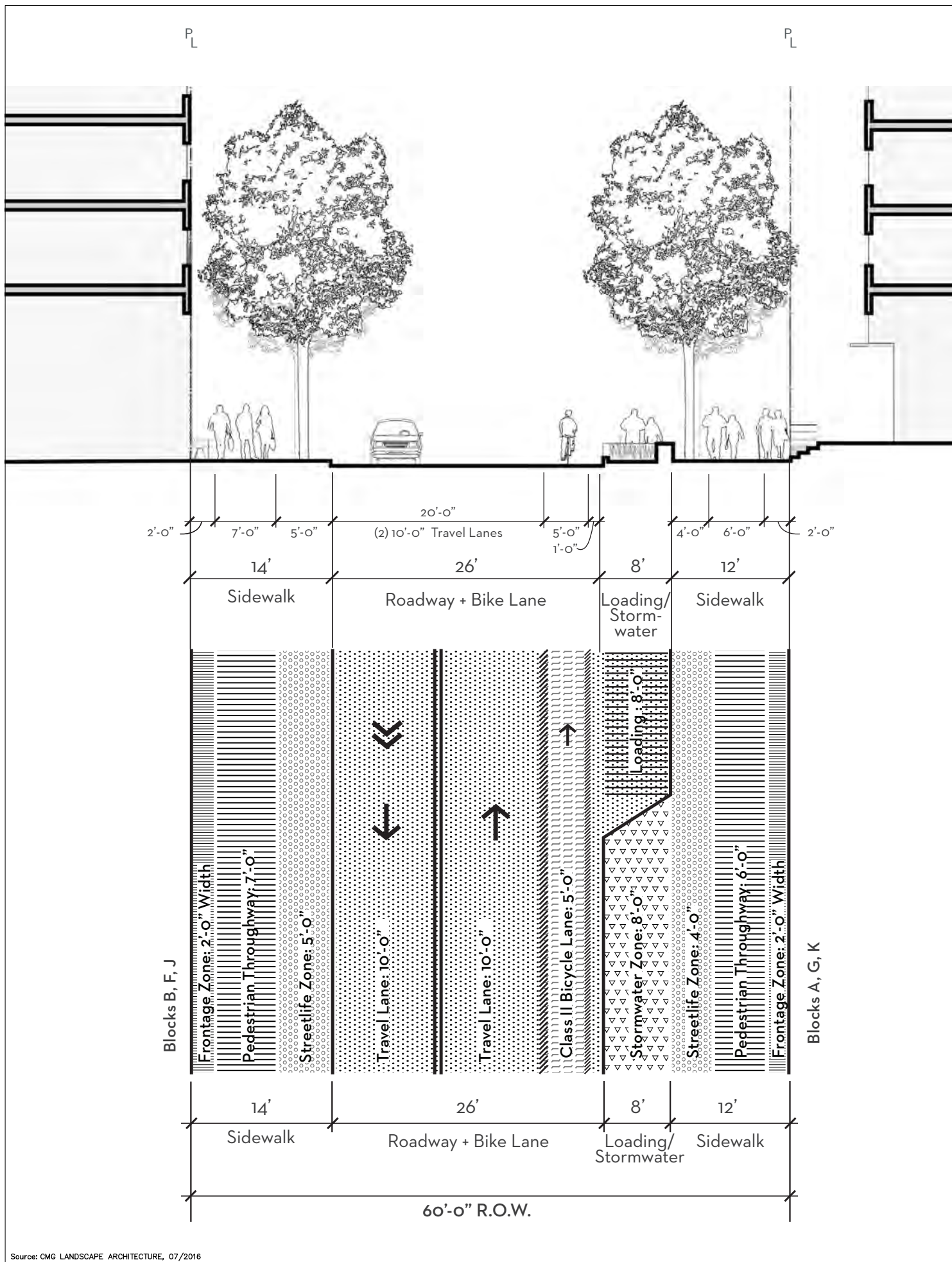
TERRY FRANCOIS BOULEVARD

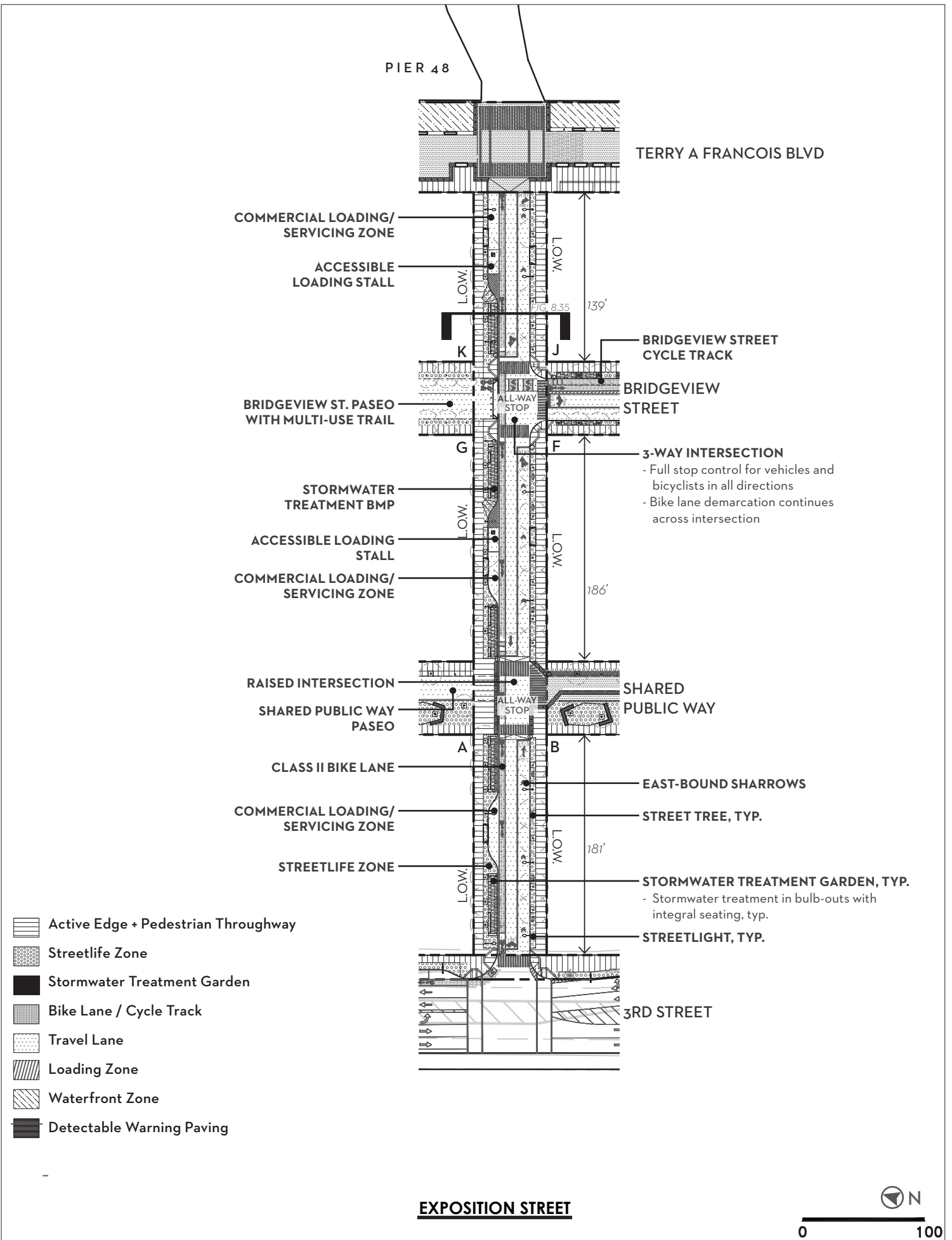


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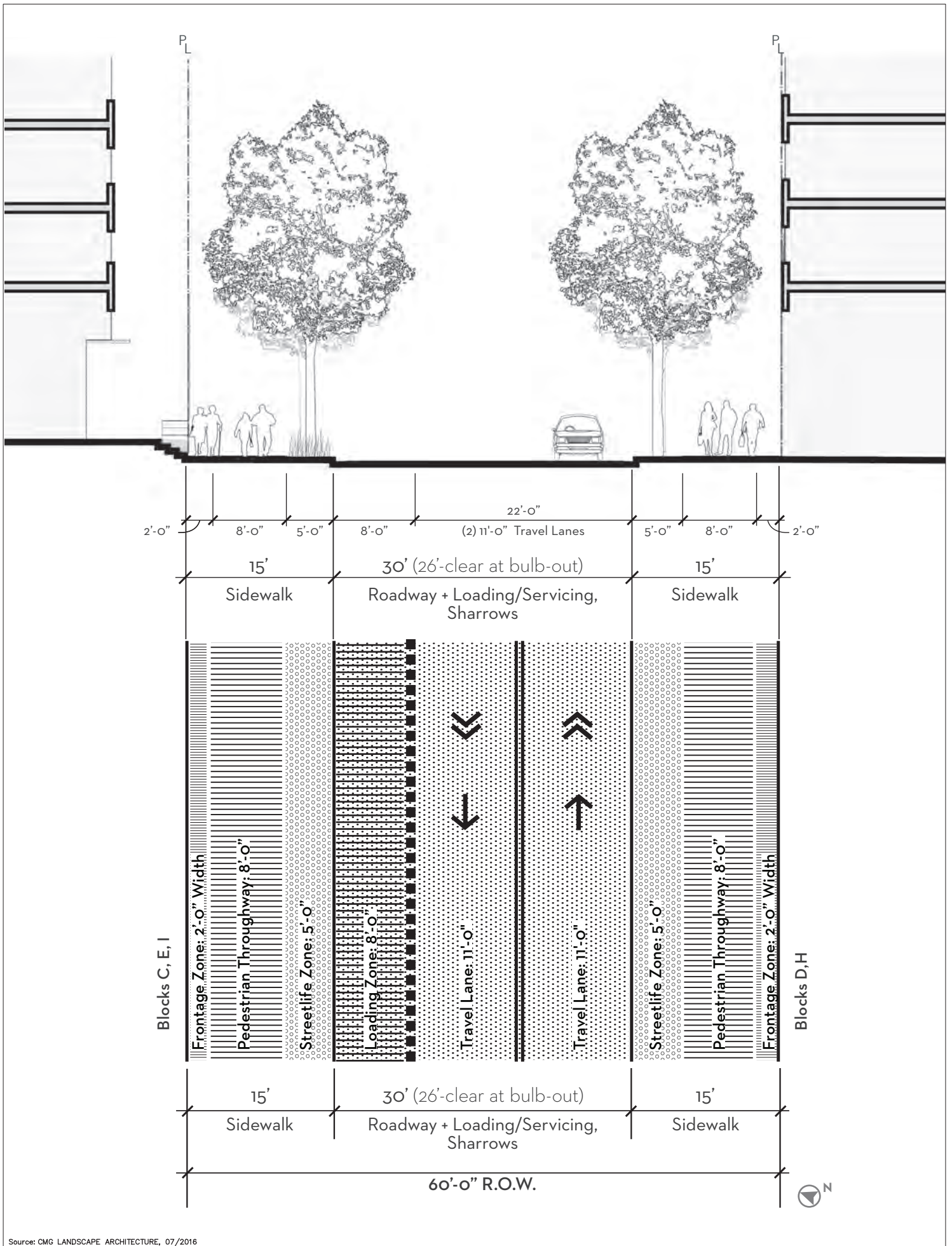


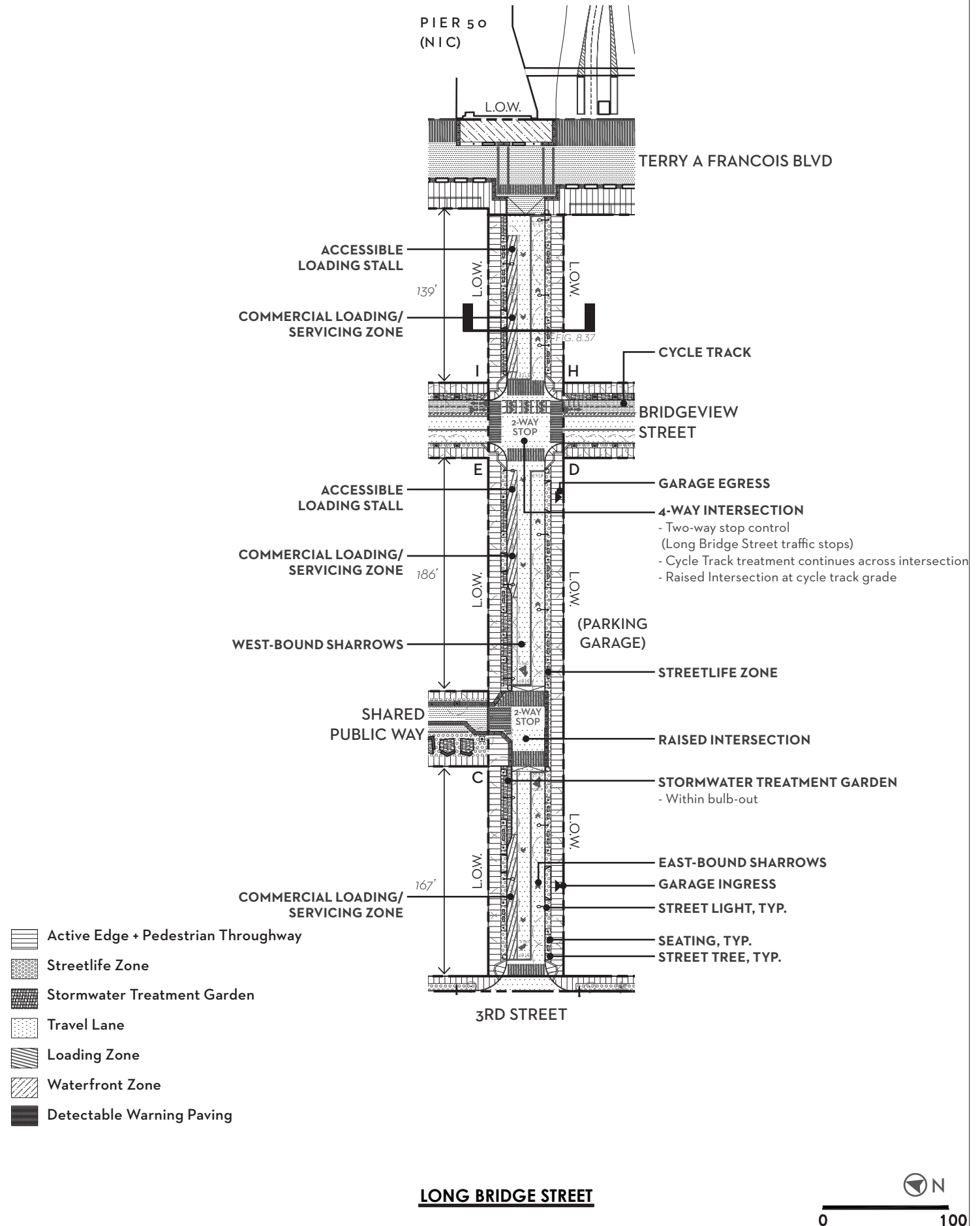




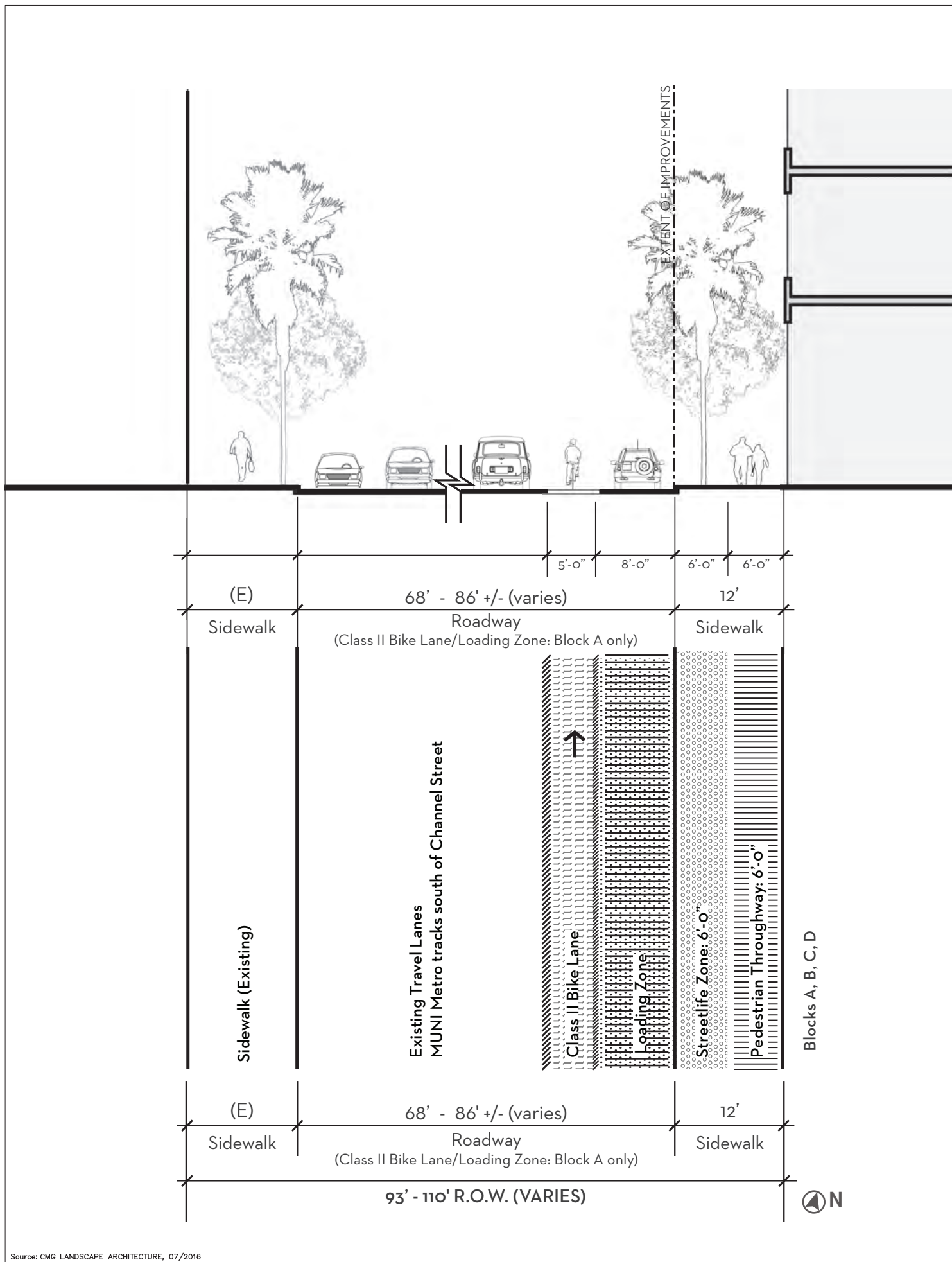


Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

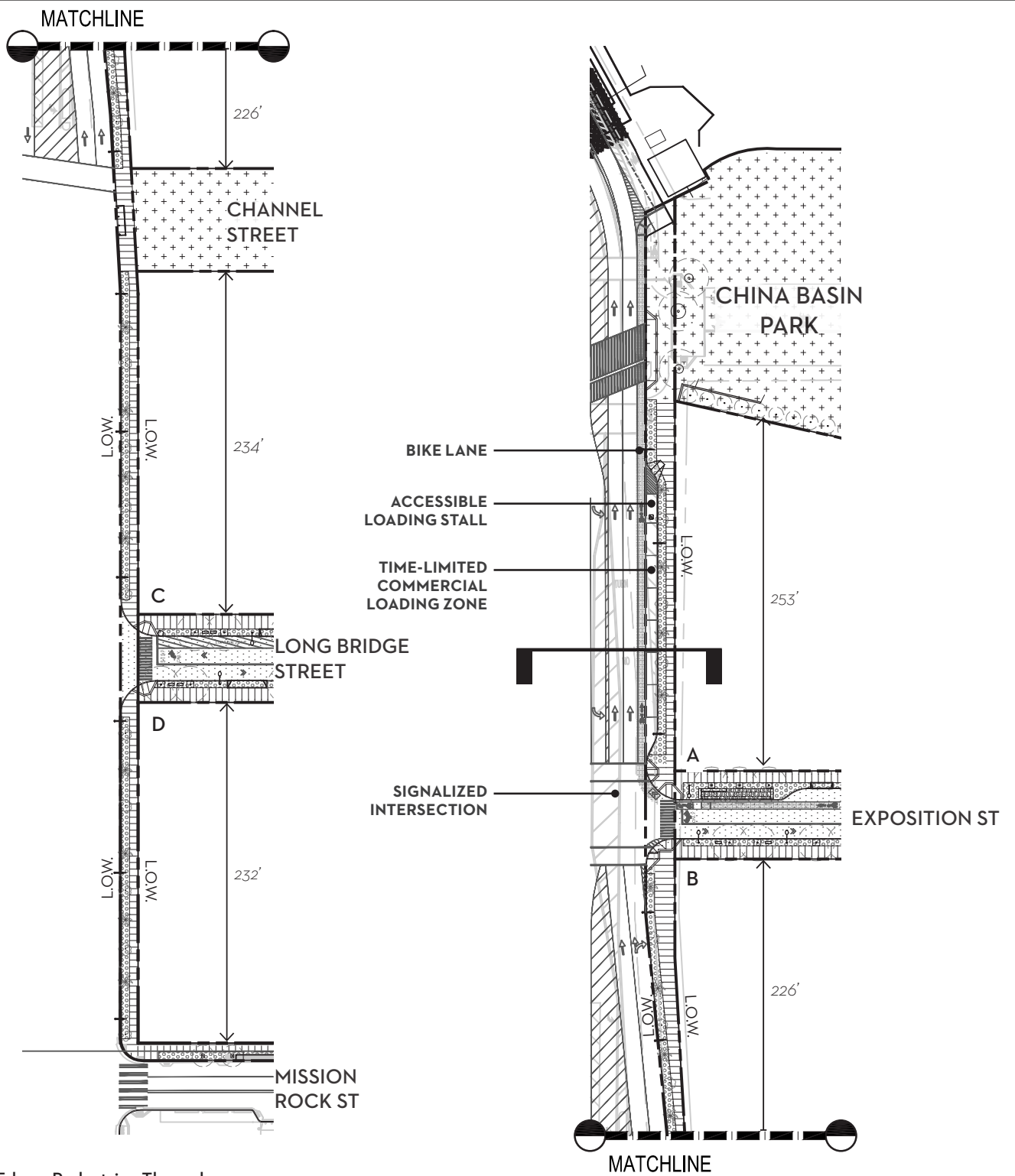


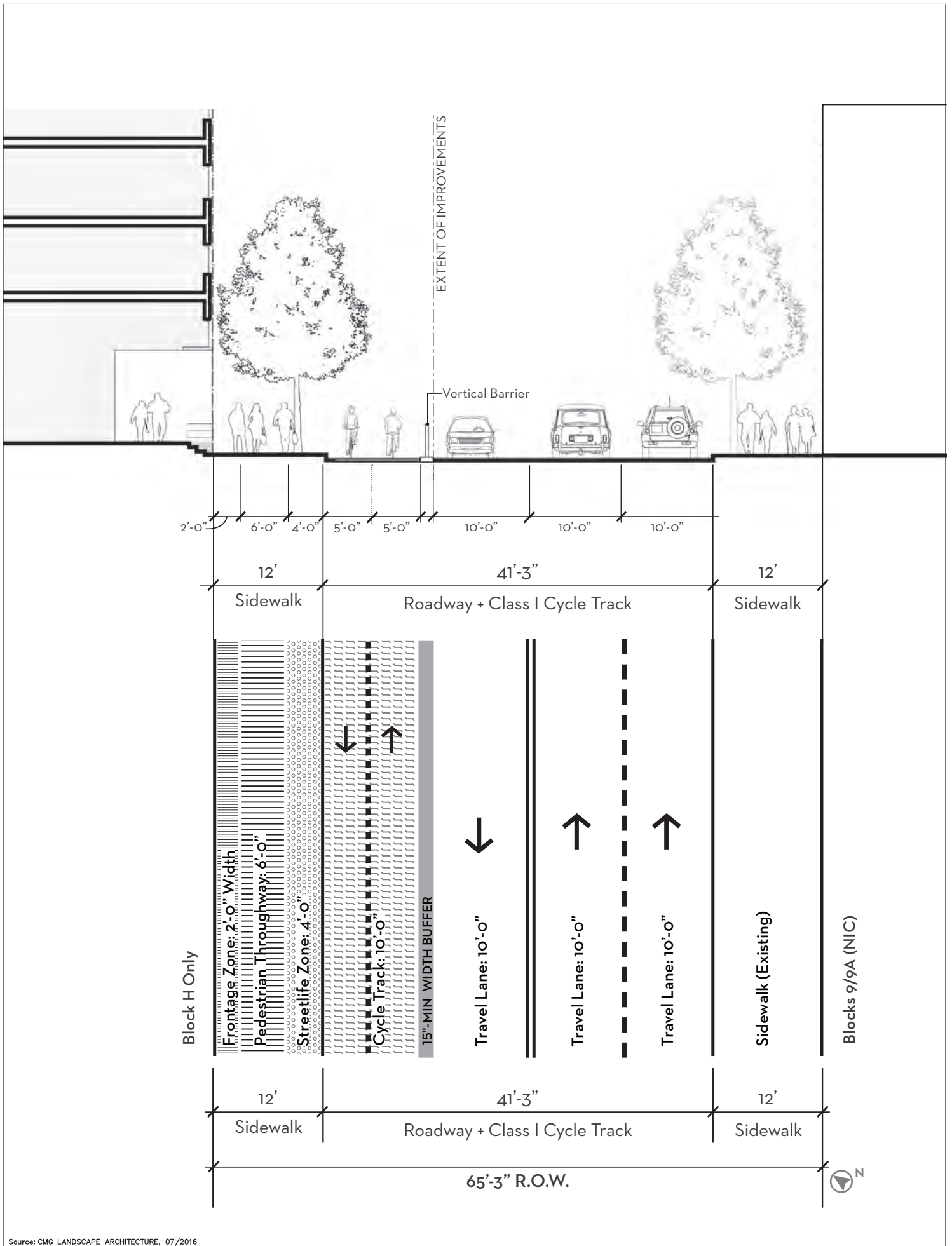


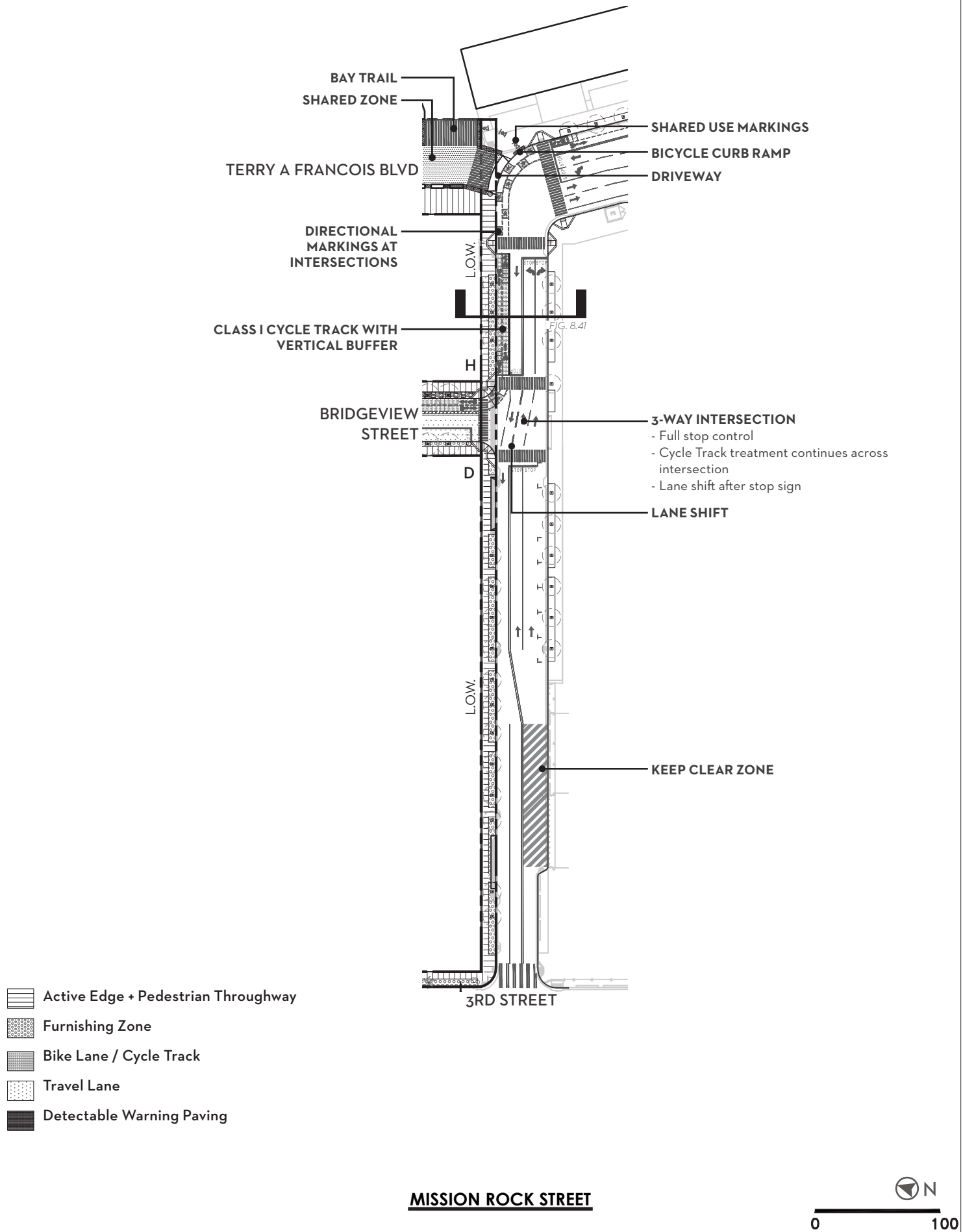
Source: CMG LANDSCAPE ARCHITECTURE, 07/2016



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

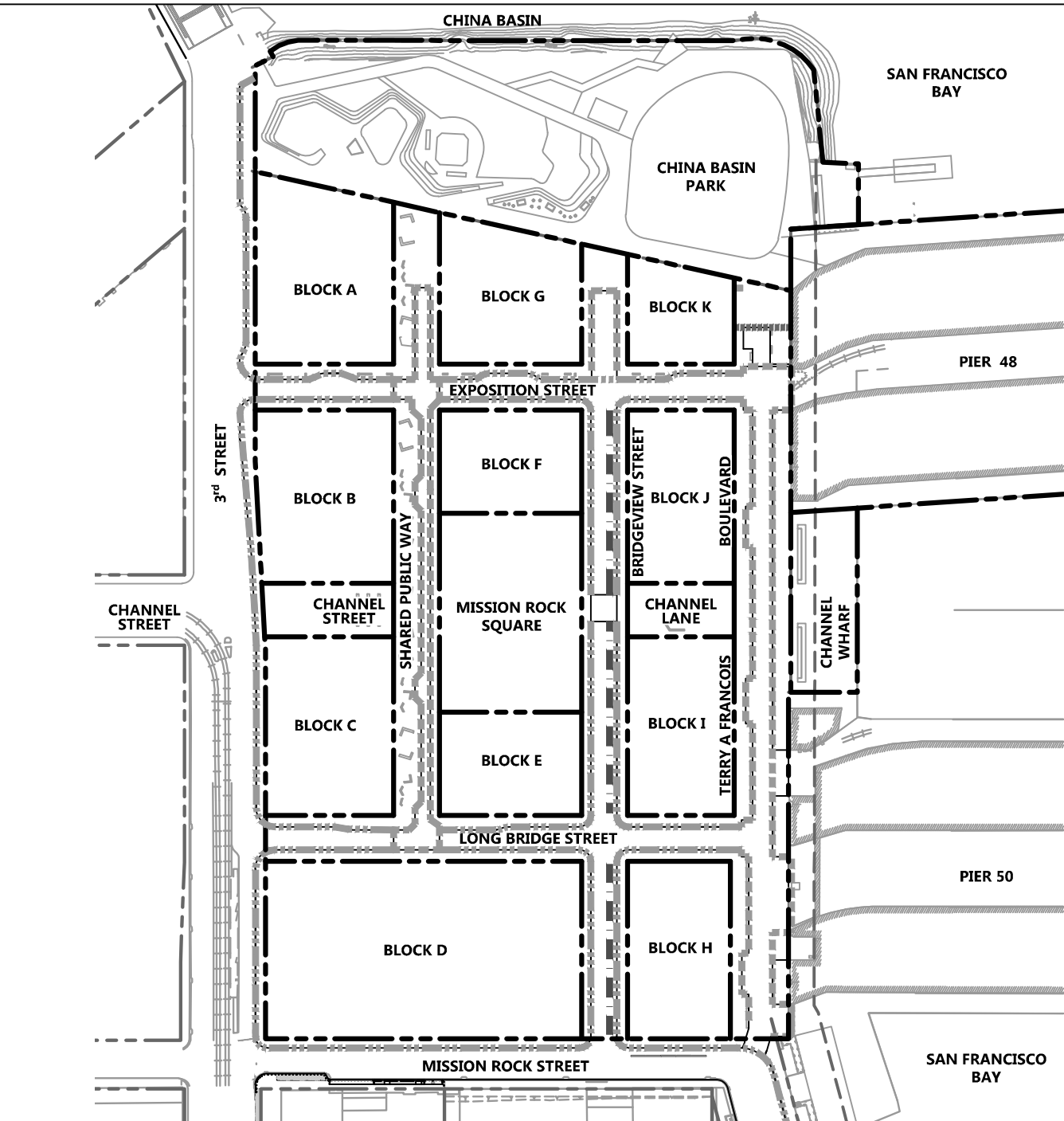






Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.43 Curb Heights Plan.dwg
 PLOT DATE: 07/13/17
 PLOTTED BY: FELI



LEGEND

- PROPOSED PARCEL LINE
- - - EXISTING PARCEL LINE
- ===== FLUSH CURB OR CURBLESS
- ||||| 6" CURB
- ===== 6" CURB & GUTTER
- |--- MOUNTABLE CURB AT CYCLE TRACK

Source: BKF ENGINEERS, 07/2016



FIGURE 8.44: PAVING DIAGRAM

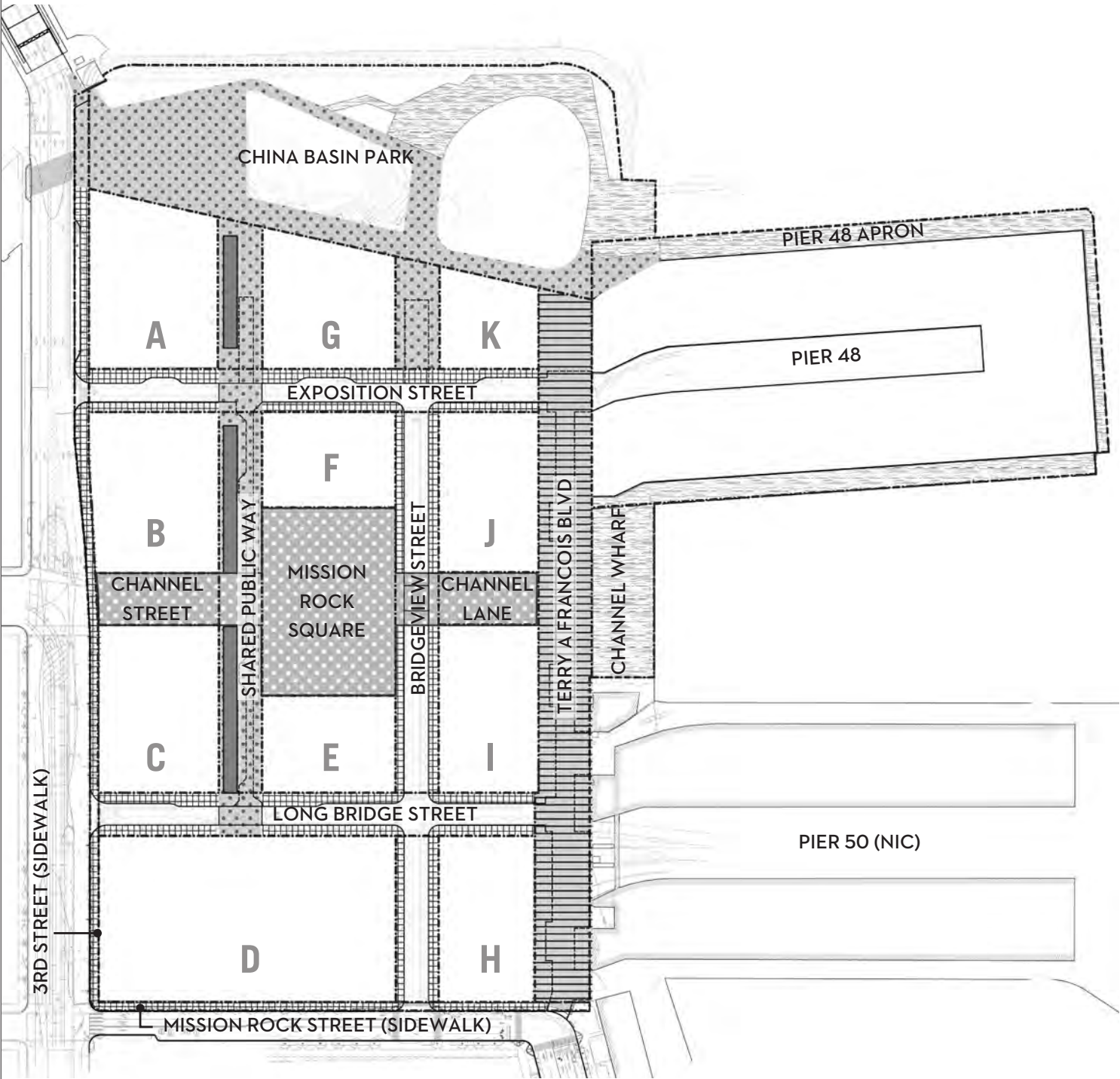
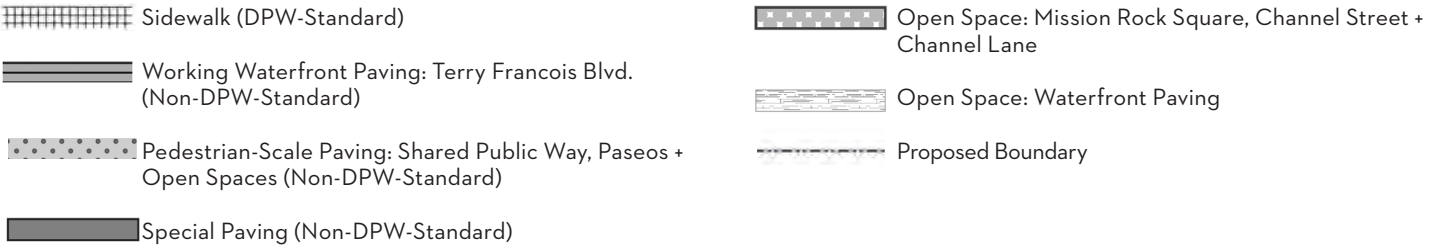


FIGURE 8.44: PAVING DIAGRAM (OPEN SPACES SHOWN FOR REFERENCE)



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.45: PAVING ZONES BY STREET

SHARED PUBLIC WAY		
PAVING	STREET ZONE	DESCRIPTION
Active Edge	Pedestrian Throughway	Pedestrian Unit Pavers, with approved tree pit surfacing at trees.
	Furnishing Zone	
	Frontage Zone	
	Buffer at Shared Zone	Detectable Surface Paving: Alternate (non-DPW-Standard) tactile paving, with 70% visual contrast from adjacent paving and textured surface.
Streetlife Zone	Furnishing Zone	Pedestrian Unit Pavers, with approved tree pit surfacing at trees and special paving street rooms.
	Buffer at Shared Zone	Detectable Surface Paving: Alternate (non-DPW-Standard) tactile paving, with 70% visual contrast from adjacent paving and textured surface.
Shared Zone	Vehicular Travelway	Vehicular Unit Pavers
	Loading Zones	Vehicular Unit Pavers, with color contrast.
	Crosswalks	Textured Paving, contrasting from adjacent surfaces, with DPW-Standard detectable paving.
CURBS AND DRAINAGE		
Curb at Shared Zone		Curbless
Trench Drain		6" - 12" wide trench drain/linear drainage element, located outside of vehicular travelway.
TERRY A FRANCOIS BOULEVARD		
PAVING	STREET ZONE	DESCRIPTION
Building-Front Zone	Pedestrian Throughway	Pedestrian Unit Pavers or CIP Concrete Paving
	Streetlife Zone	
	Loading Zones	Vehicular Unit Pavers or CIP Concrete Paving.
	Buffer at Shared Zone	Detectable Surface Paving: Alternate (non-DPW-Standard) tactile paving, with 70% visual contrast from adjacent paving and textured surface.
Waterfront Zone	Blue Greenway	Pedestrian Unit Pavers or CIP Concrete Paving
	Buffer at Shared Zone	Detectable Surface Paving: Alternate (non-DPW-Standard) tactile paving, with 70% visual contrast from adjacent paving and textured surface.
Shared Zone	Vehicular Travelway	Vehicular Unit Pavers or CIP Concrete Paving
	Crosswalks	Textured Paving, contrasting from adjacent surfaces, with DPW-Standard detectable paving.
CURBS AND DRAINAGE		
Curb at Shared Zone		CIP Concrete Flush Curb
Trench Drain		6" - 12" wide Trench Drain, located outside of vehicular travelway.
BRIDGEVIEW STREET		
PAVING	STREET ZONE	DESCRIPTION
Sidewalk	Frontage Zone	DPW-Standard CIP Concrete or Pedestrian Unit Pavers
	Pedestrian Throughway	DPW-Standard CIP Concrete
	Streetlife Zone	Pedestrian Unit Pavers, with approved tree pit surfacing at trees.
Roadway	Raised Cycle Track	Painted Asphalt with contrasting buffer
	Travel Lanes	DPW-Standard Asphalt Concrete Paving
CURBS AND DRAINAGE		
Curb + Gutter, West Side		DPW-Standard, 6" Curb typical
Curb + Gutter, East Side		Non-DPW Standard 4" Vertical Curb
Curb at Raised Cycle Track		Mountable Curb

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.46: PAVING ZONES BY STREET

EXPOSITION STREET		
PAVING	STREET ZONE	DESCRIPTION
Sidewalk	Frontage Zone	DPW-Standard CIP Concrete or Pedestrian Unit Pavers
	Pedestrian Throughway	DPW-Standard CIP Concrete
	Streetlife Zone	Pedestrian Unit Pavers, with approved tree pit surfacing at trees
	Stormwater Treatment	Custom/Feature Flow-Through Planters with Understory Planting
Roadway	Travel Lanes	DPW-Standard Asphalt Concrete Paving
	Class II Bicycle Lane	Painted DPW-Standard Asphalt Concrete Paving
	Loading	DPW-Standard Asphalt Concrete Paving
CURBS AND DRAINAGE		
Curb + Gutter		DPW-Standard, 6" Curb typical
LONG BRIDGE STREET		
PAVING	STREET ZONE	DESCRIPTION
Sidewalk	Frontage Zone	DPW-Standard CIP Concrete or Pedestrian Unit Pavers
	Pedestrian Throughway	DPW-Standard CIP Concrete
	Streetlife Zone	Pedestrian Unit Pavers, with approved tree pit surfacing at trees
Roadway	Loading Zone	Painted DPW-Standard Asphalt Concrete Paving
	Travel Lanes	DPW-Standard Asphalt Concrete Paving
CURBS AND DRAINAGE		
Curb + Gutter		DPW-Standard, 6" Curb typical
MISSION ROCK STREET		
PAVING	STREET ZONE	DESCRIPTION
Sidewalk	Pedestrian Throughway	OCII / Mission Bay Standard CIP Concrete.
	Streetlife Zone	OCII / Mission Bay Standard Pedestrian Unit Pavers, with approved tree pit surfacing at trees
Roadway	Cycle Track	Painted Asphalt Concrete Paving
	Travel Lanes	DPW-Standard Asphalt Concrete Paving
CURBS AND DRAINAGE		
Curb + Gutter		DPW-Standard, 6" Curb typical. OCII / Mission Bay Standard
Raised Buffer at Cycle Track		6" high x 15" minimum width buffer, segmented to facilitate drainage
3 RD STREET		
PAVING	STREET ZONE	DESCRIPTION
Sidewalk	Pedestrian Throughway	OCII / Mission Bay Standard CIP Concrete
	Streetlife Zone	OCII / Mission Bay Standard paving and approved tree pit surfacing at trees

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.47: URBAN FOREST

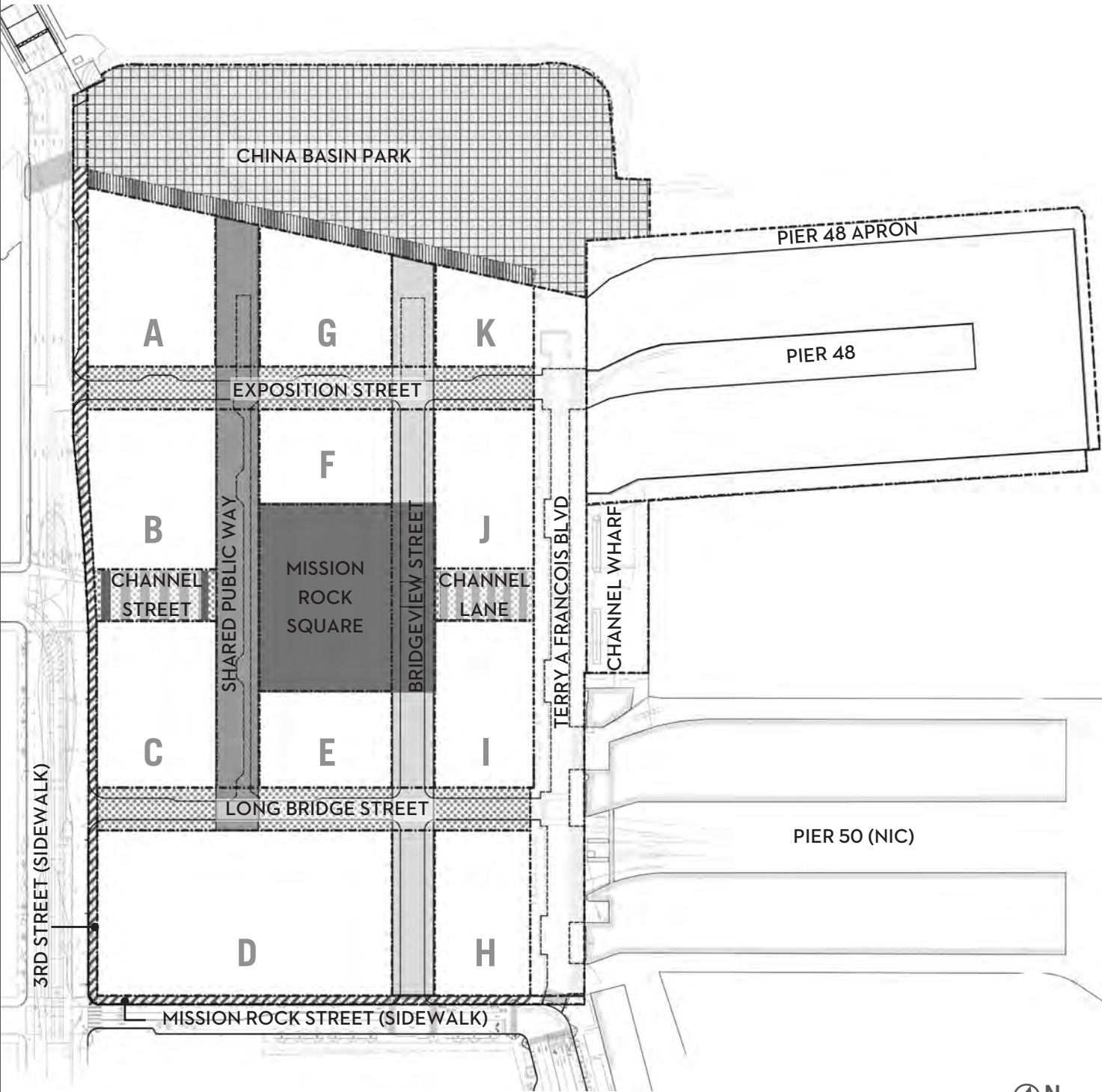










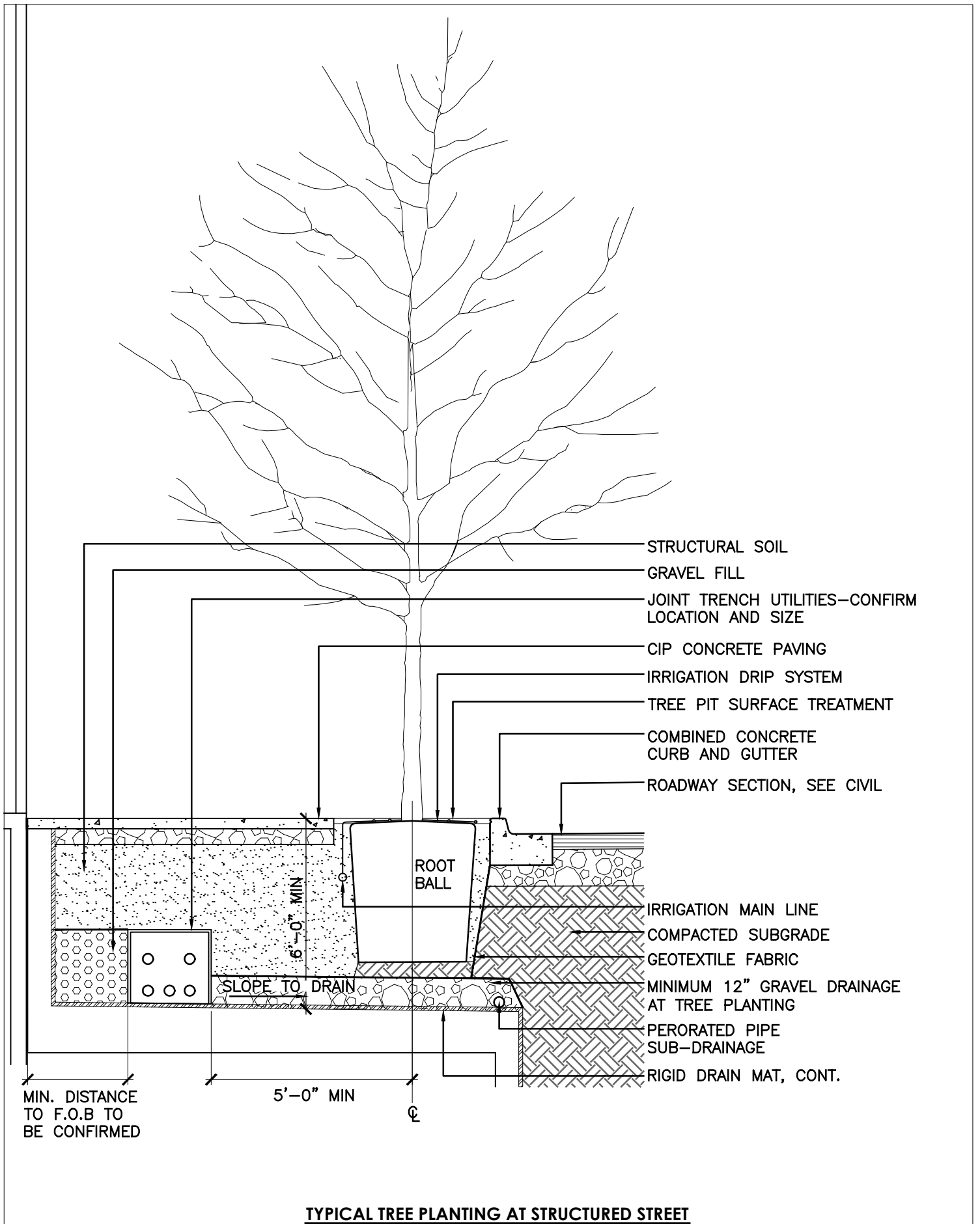
FIGURE 8.47: URBAN FOREST DIAGRAM (OPEN SPACES SHOWN FOR REFERENCE)



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.48: URBAN FOREST DESIGN CRITERIA

TREE TYPE	SIZE	TOLERANCES	WATER USE	DESIGN CRITERIA	RECOMMENDED SPECIES
China Basin Park: Specimen Tree 	At Installation: Min. 48" Box At Maturity: 50' x 60' (HxW)	Wind: High Shade: Partial Shade	Low to Medium	<ul style="list-style-type: none"> Iconic character Windbreak Healthy in paving and/or lawn Coastal tolerance 	Monterey Cypress [<i>Cupressus macrocarpa</i>] New Zealand Christmas Tree [<i>Metrosiderous excelsa</i>] Red-Flowering Gum [<i>Corymbia ficifolia</i>]
China Basin Park: Park Promenade 	At Installation: Min. 48" Box At Maturity: 30' x 35' (H)	Wind: Medium-High Shade: Deep Shade	Low	<ul style="list-style-type: none"> Scaled to intimating walking experience Ornamental leaves, flowers, bark Paving tolerant Coastal tolerance 	Red Oak cultivar [<i>Quercus rubra</i> 'Crimson Spire'] Melaleuca [<i>Melaleuca quinquenervia</i>]
Shared Public Way 	At Installation: Min 48" Box At Maturity: 45'-50' (H)	Wind: High Shade: Partial Shade	Low	<ul style="list-style-type: none"> Fine textured canopy Trunk 13'-6" clear from paving 48" box min 	Chinese Elm [<i>Ulmus parvifolia</i>] Strawberry Tree [<i>Arbutus</i> 'Marina'] Southern Live Oak [<i>Quercus virginiana</i>]
Mission Rock Square 	At Installation: Min 48" Box At Maturity: 45'-50' (H)	Wind: Medium Shade: Partial to Full Shade	Low	<ul style="list-style-type: none"> Medium-Fine textured canopy Winter/Summer interest Trunk 8' clear from paving 48" box min 	Ginkgo [<i>Ginkgo biloba</i> cultivar] Freeman Maple [<i>Acer x. freemanii</i>] Chinese Elm [<i>Ulmus parvifolia</i>]
Neighborhood Street: Upright 	At Installation: Min 48" Box At Maturity: 40' (H)	Wind: Medium Shade: Partial to Full Shade	Low	<ul style="list-style-type: none"> Winter/Summer interest Trunk 13'-6" clear from paving/travel lanes 	Brisbane Box [<i>Lophostemon confertus</i>] Red Oak cultivar [<i>Quercus rubra</i> 'Crimson Spire']
Neighborhood Street: Arching 	At Installation: Min 48" Box At Maturity: 35'-40' (H)	Wind: Medium Shade: Partial Shade	Low	<ul style="list-style-type: none"> Special flowering Trunk 13'-6" clear from paving/travel lanes 	Victorian Box [<i>Pittosporum undulatum</i>] California Pepper [<i>Schinus molle</i>] Cork Oak [<i>Quercus suber</i>]
Channel Street / Channel Lane 	See description for: Mission Rock Square and/or Neighborhood Street Tree: Upright				
Mission Bay Street Trees 	Per OCII / Mission Bay Standards				



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 8.50: STORMWATER TREATMENT CONCEPTUAL DIAGRAM

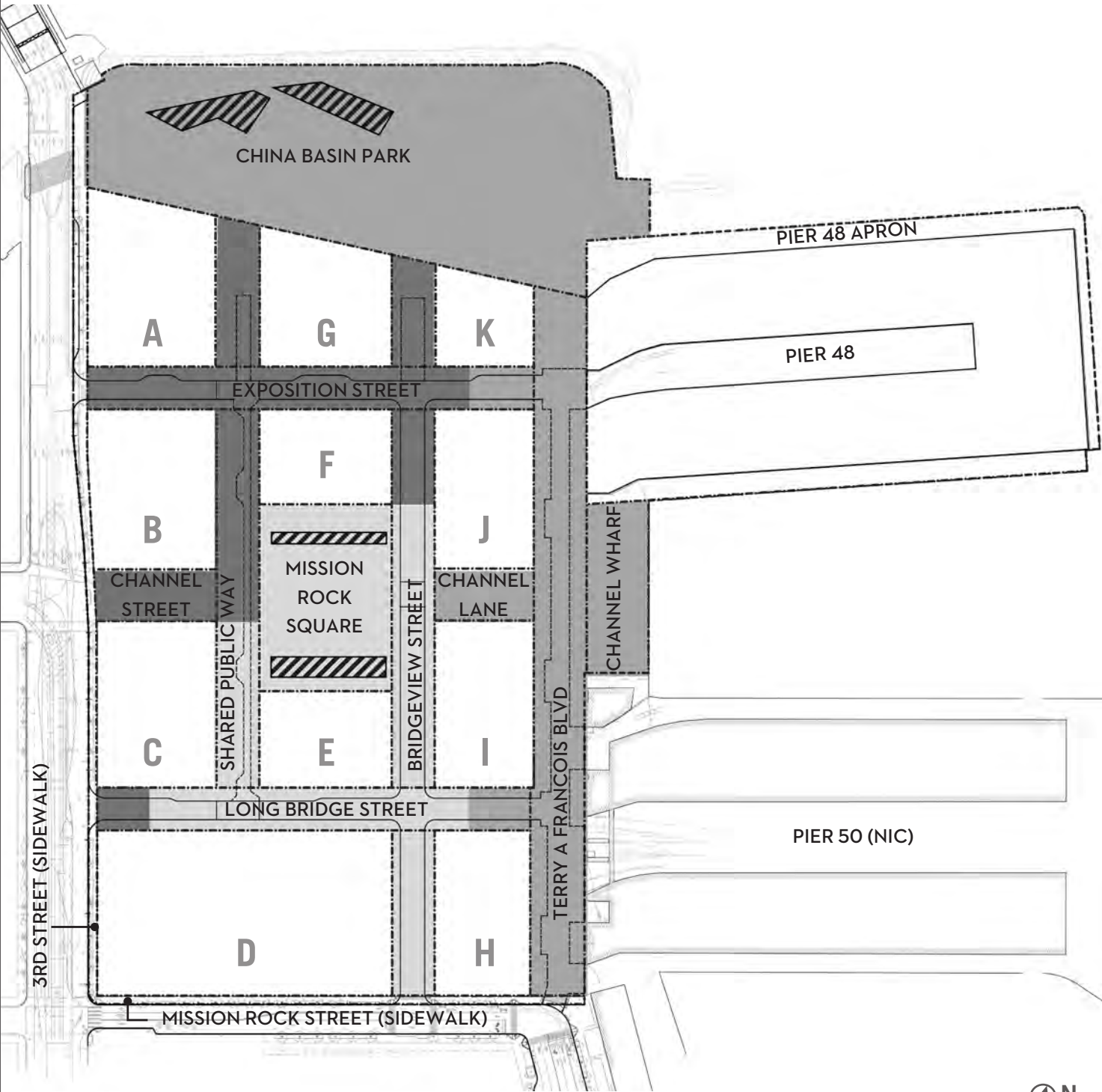
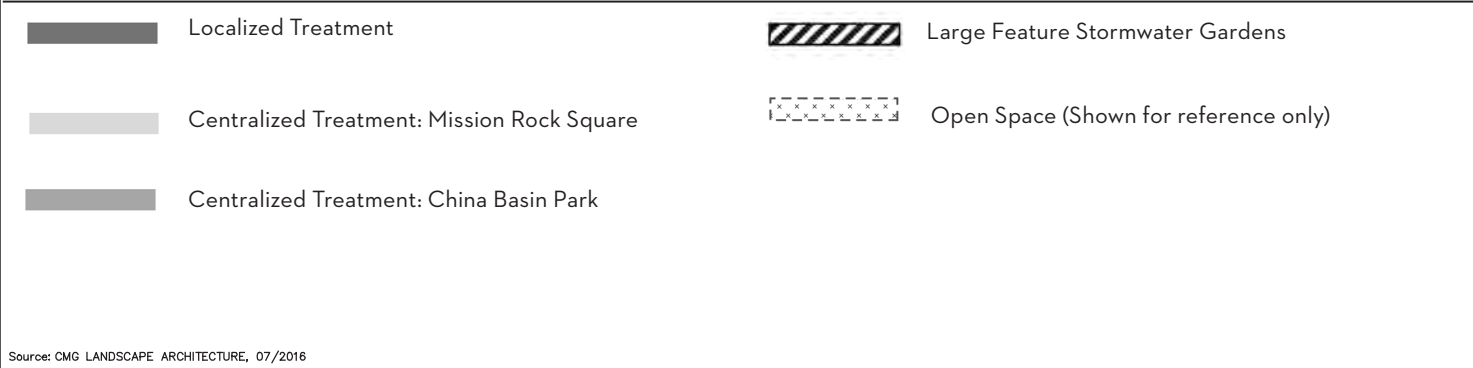
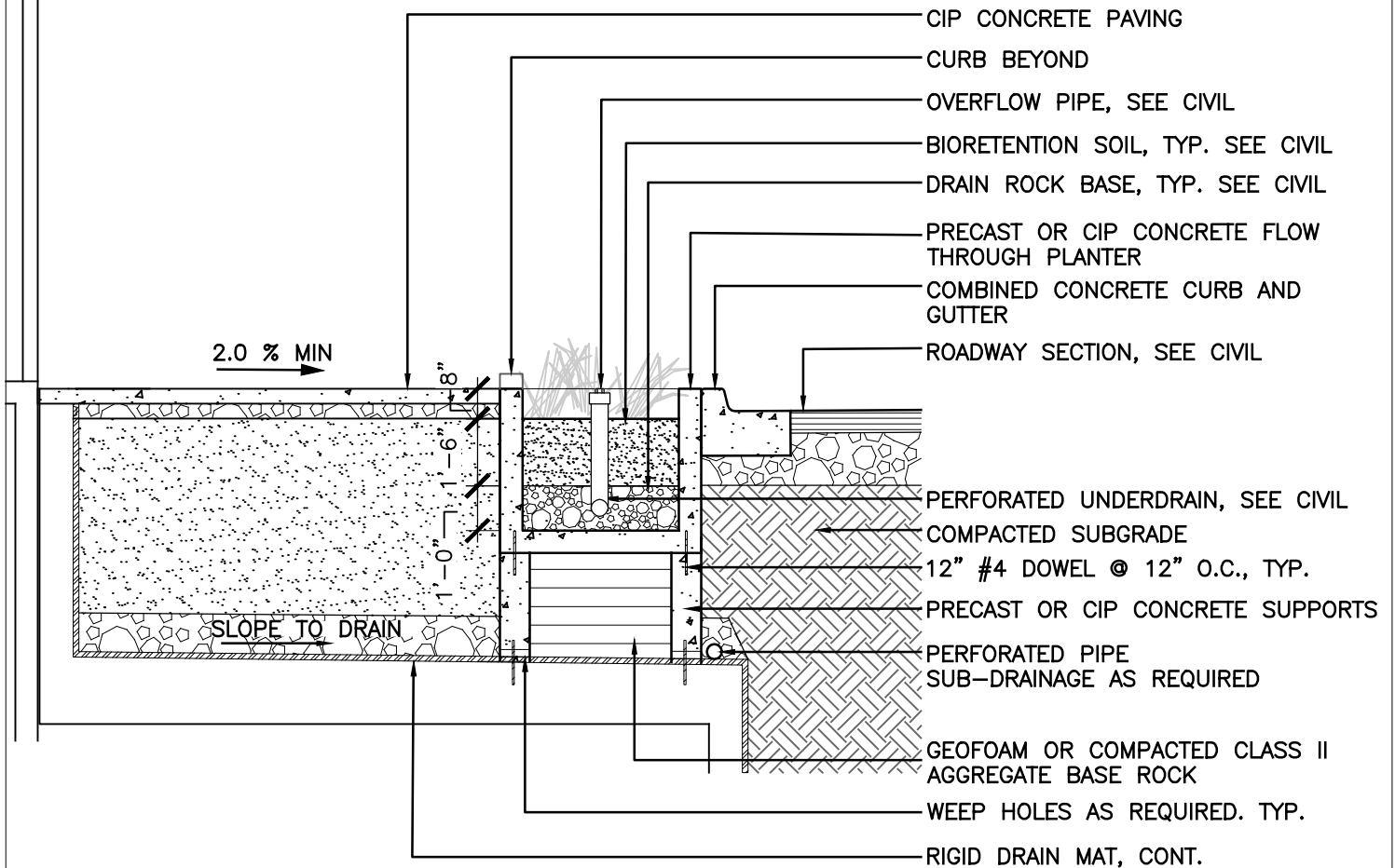


FIGURE 8.50: STORMWATER TREATMENT CONCEPTUAL DIAGRAM



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016



TYPICAL STORMWATER FLOW THROUGH PLANTER

FIGURE 8.52: LIGHTING DIAGRAM

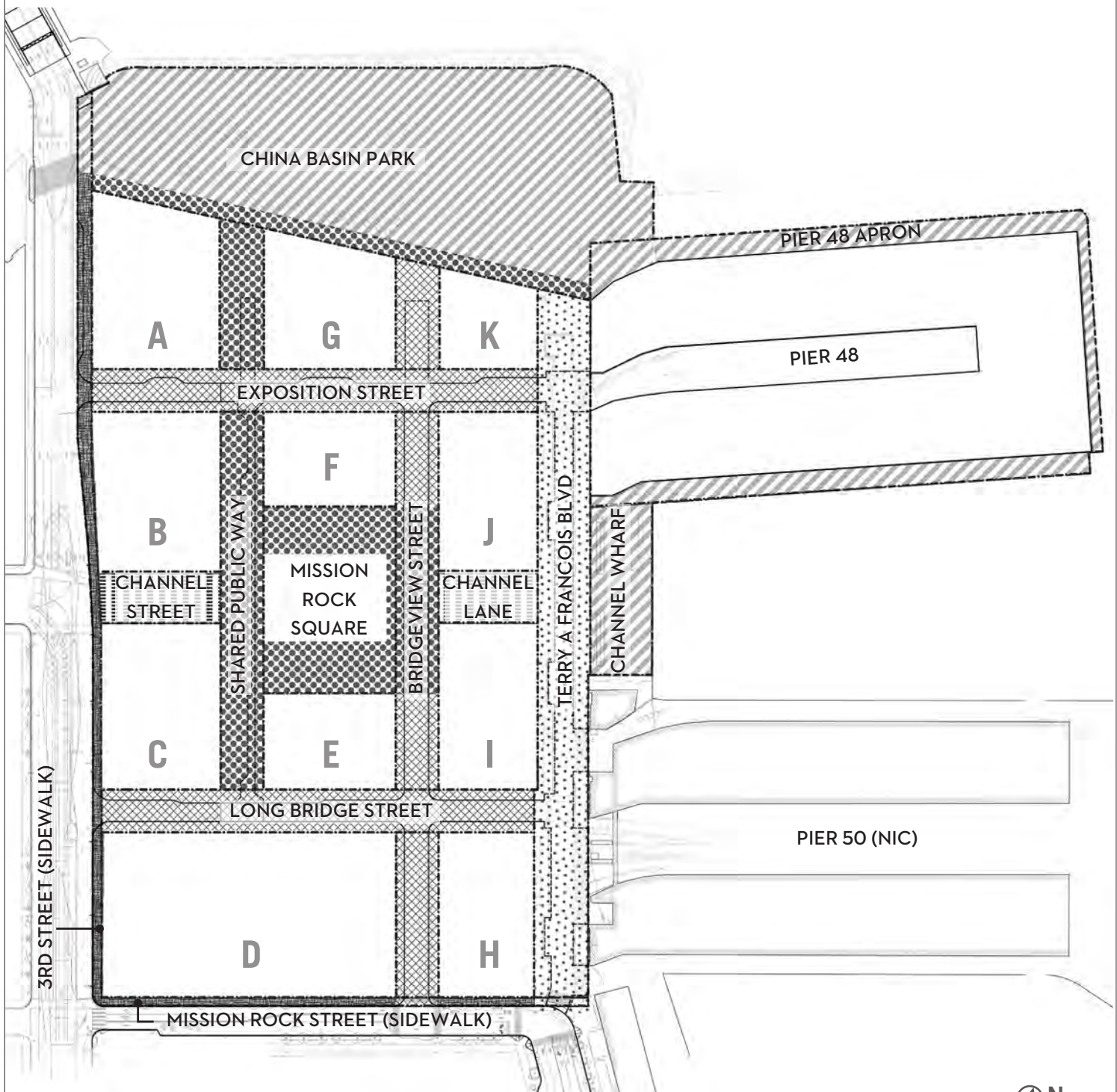








FIGURE 16: LIGHTING DIAGRAM (OPEN SPACES SHOWN FOR REFERENCE)

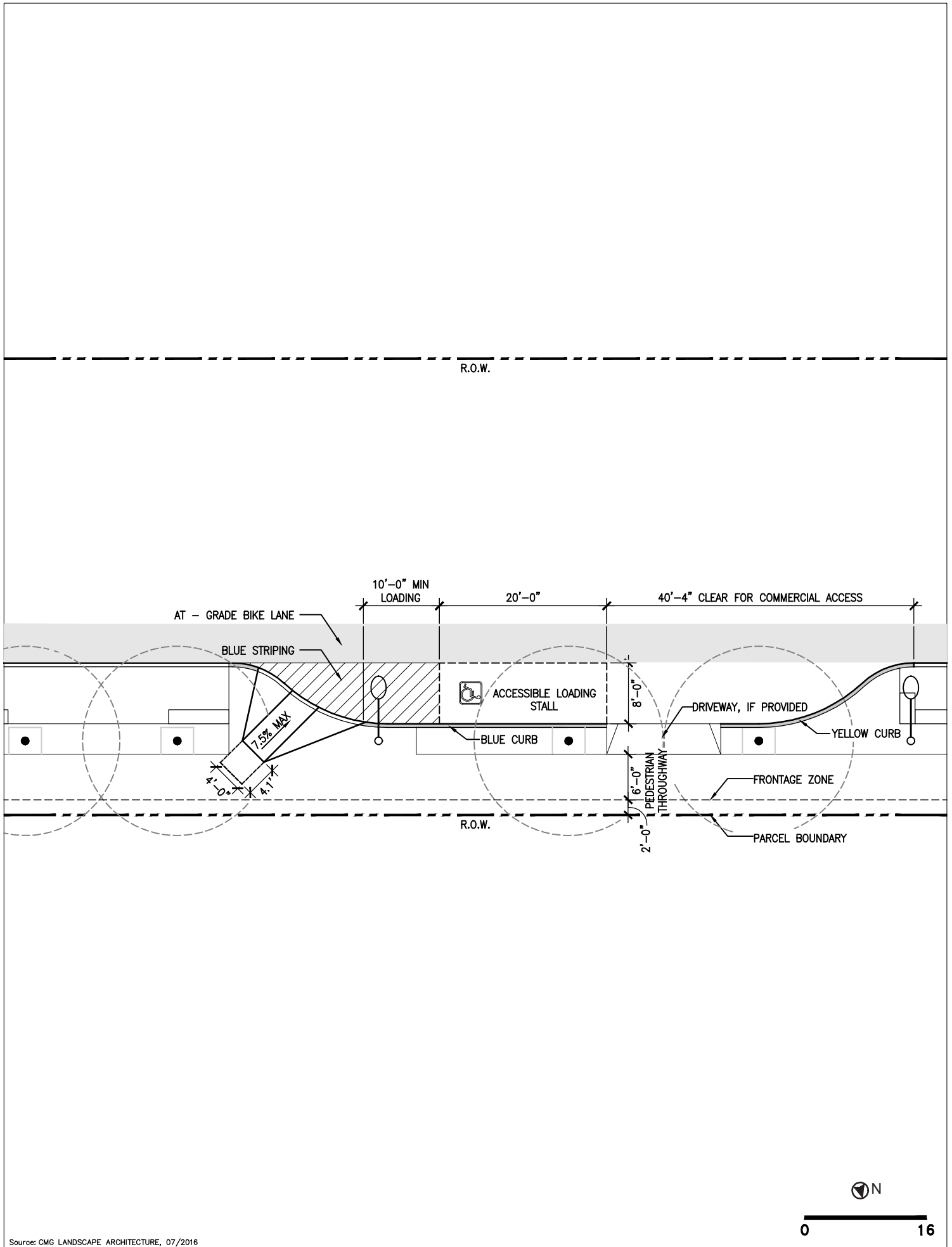
- | | |
|---|--|
| <p>Zone 1: Waterfront</p> <ul style="list-style-type: none"> - Light levels should be brightest at the buildings, and less bright at the waterfront to minimize impact on the ecosystem at the water's edge. <p>Zone 2: High-Activity, High Retail</p> <ul style="list-style-type: none"> - Opportunity for feature lighting; variety of light types encouraged; contributing ambient light from ground floor uses. <p>Zone 3: Working-Waterfront</p> <ul style="list-style-type: none"> - Iconic lighting; intersections should be highly visible. | <p>Zone 4: Neighborhood Streets</p> <ul style="list-style-type: none"> - Some contributing light from ground-floor uses, especially on Bridgeview Street; intersection should be highly visible. <p>Zone 5: Gateways</p> <ul style="list-style-type: none"> - Opportunity for overhead lighting. <p>Zone 6: District Streets</p> <ul style="list-style-type: none"> - Mission Bay. Refer to OCII Mission Bay controls. |
|---|--|

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

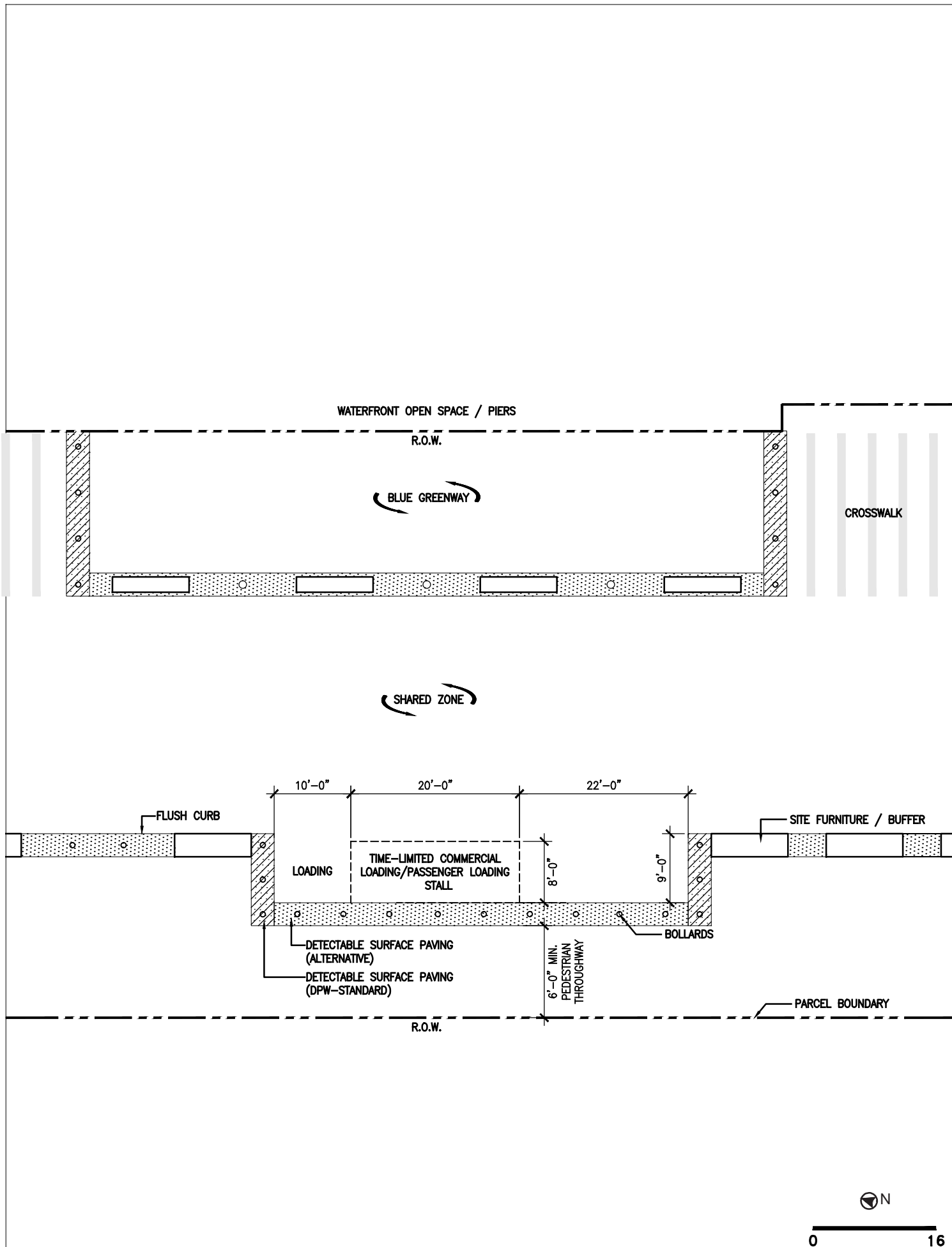
FIGURE 8.53: LIGHTING ZONES

LIGHTING ZONE	LIGHTING ZONE: DESCRIPTION	PEDESTRIAN LIGHT LEVELS (FOOTCANDLES)*	ROADWAY MINIMUM MAINTAINED AVERAGE LIGHT LEVEL (fc)*	UNIFORMITY RATIO, AVERAGE / MINIMUM*
Zone 1: Waterfront	<i>Light levels should be brightest at the buildings, and less bright at the waterfront to minimize impact on the ecosystem at the water's edge.</i>			
	Non-Waterfront Paths	1 fc Average	N/A	10:1
	Planting/Lawn Areas	0.5-0.8 fc Average	N/A	40:1
	Plaza/Wharf Areas	0.8-1 fc Average	N/A	20:1
	Waterfront Paths	0.5-0.8 fc Average	N/A	5:1
Zone 2: High Activity, High-Retail Zone	<i>Opportunity for feature lighting; variety of light types encouraged; contributing ambient light from ground-floor uses</i>			
	Mission Rock Square	0.5-0.8 fc Average	N/A	40:1
	Shared Public Way	1 fc Average	0.4 to 1 fc	4 to 6
Zone 3: Working Waterfront	<i>Working Waterfront. Iconic lighting; intersections should be highly visible.</i>			
	Terry A Francois Boulevard	1 fc Average	0.4 to 1.7 fc 1.8 fc at intersections	3 to 6
Zone 4: Neighborhood Streets	<i>Some contributing light from ground-floor uses, especially on Bridgeview Street. Intersections should be highly visible.</i>			
	Bridgeview Street & Exposition Street	0.5-0.8 fc Average	0.4 to 1.2 fc 1.4-1.8 at intersections	4 to 6
	Long Bridge Streets	1 fc Average	0.4 to 1.2 fc 1.4-1.8 at intersections	3 to 6
Zone 5: Gateways	<i>Opportunity for overhead lighting.</i>			
	Channel Street	1-1.2 fc Average	N/A	10:1
	Channel Lane	1-1.2 fc Average	N/A	10:1
Zone 6: District Streets	<i>Mission Bay. Refer to OCII Mission Bay controls.</i>			
	3rd & Mission Rock Streets (See OCII Standards)			

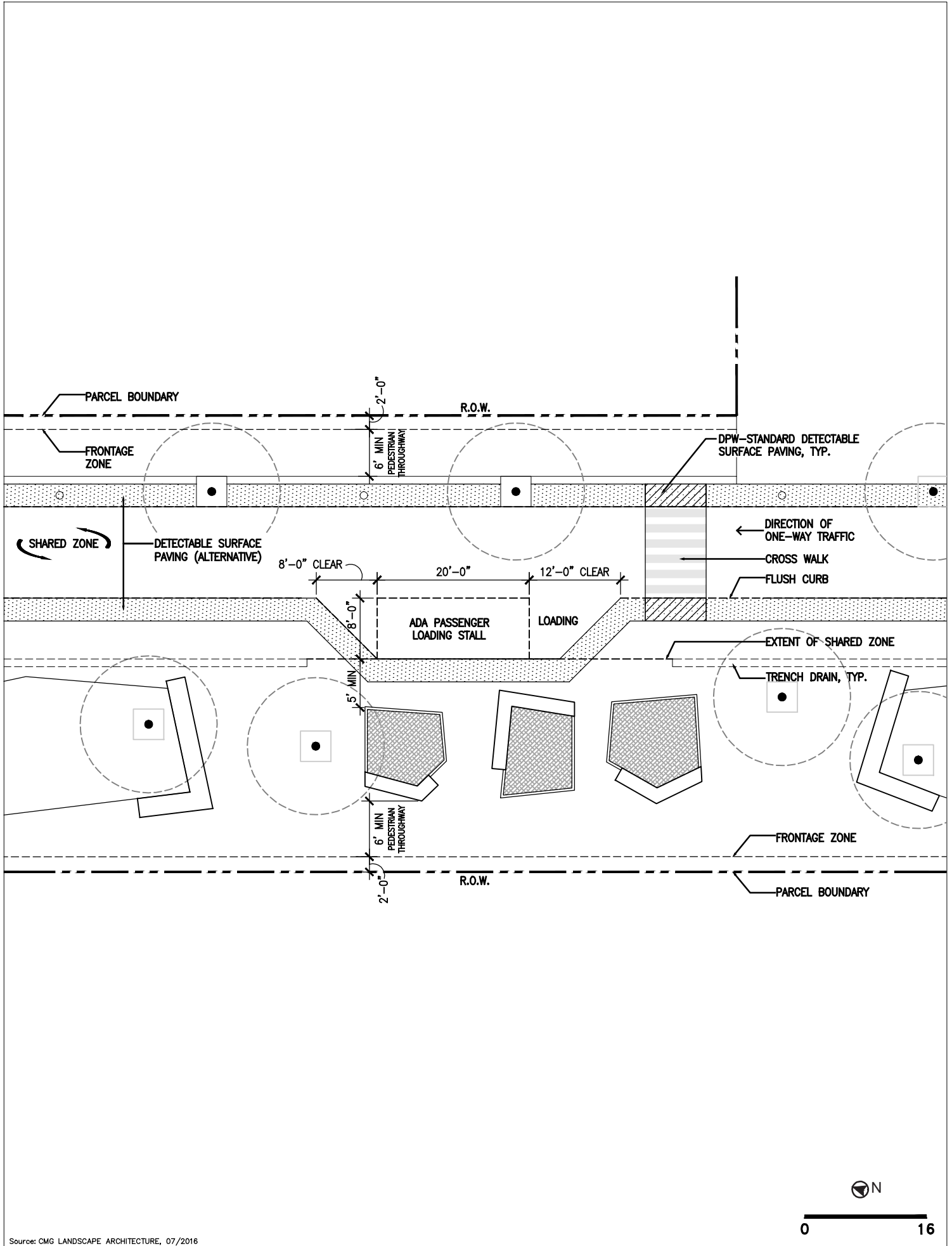
*Source: Better Streets Plan <www.sfbetterstreets.org/find-project-types/streetscape-elements/street-lighting/>



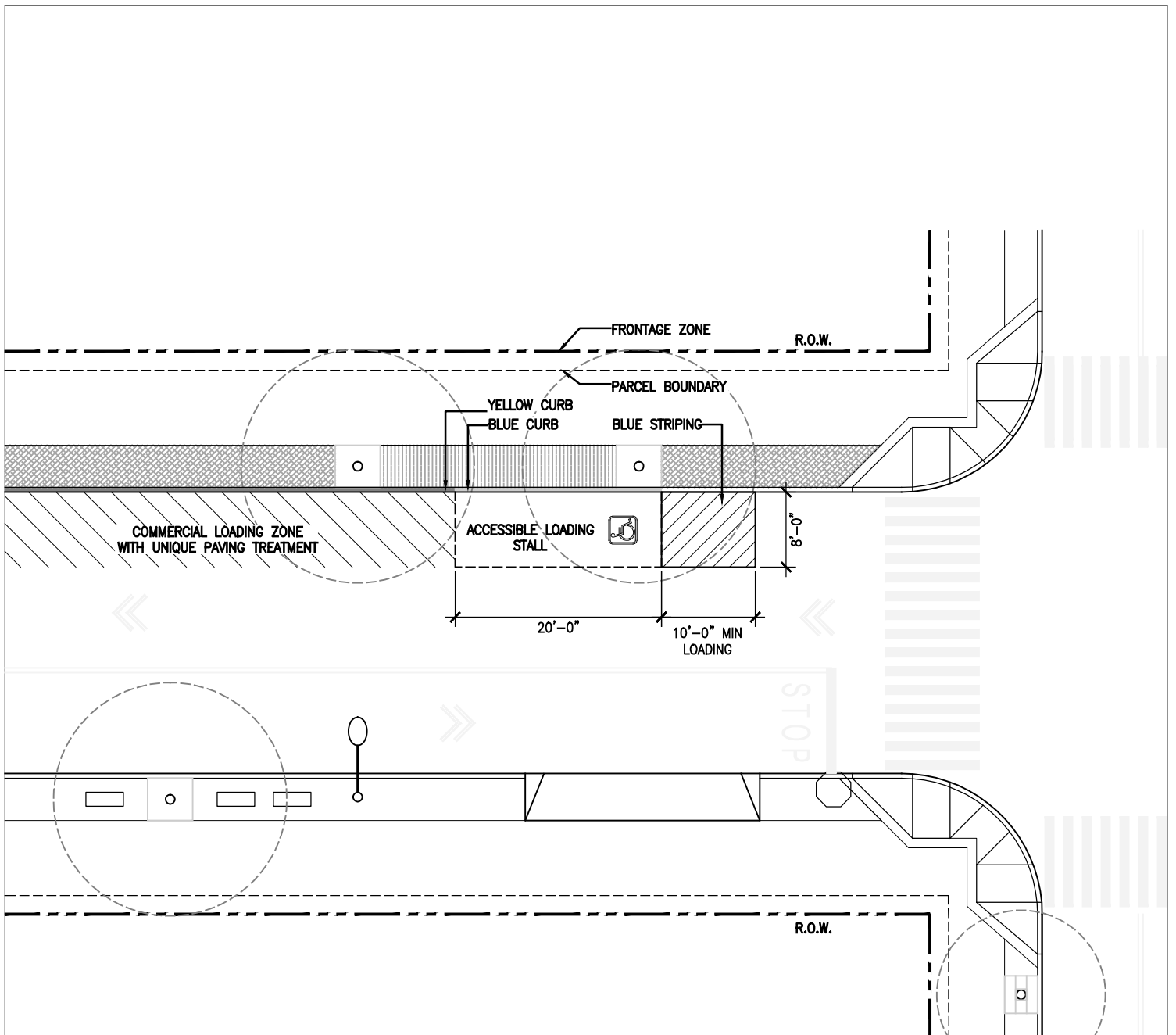
Source: CMG LANDSCAPE ARCHITECTURE, 07/2016



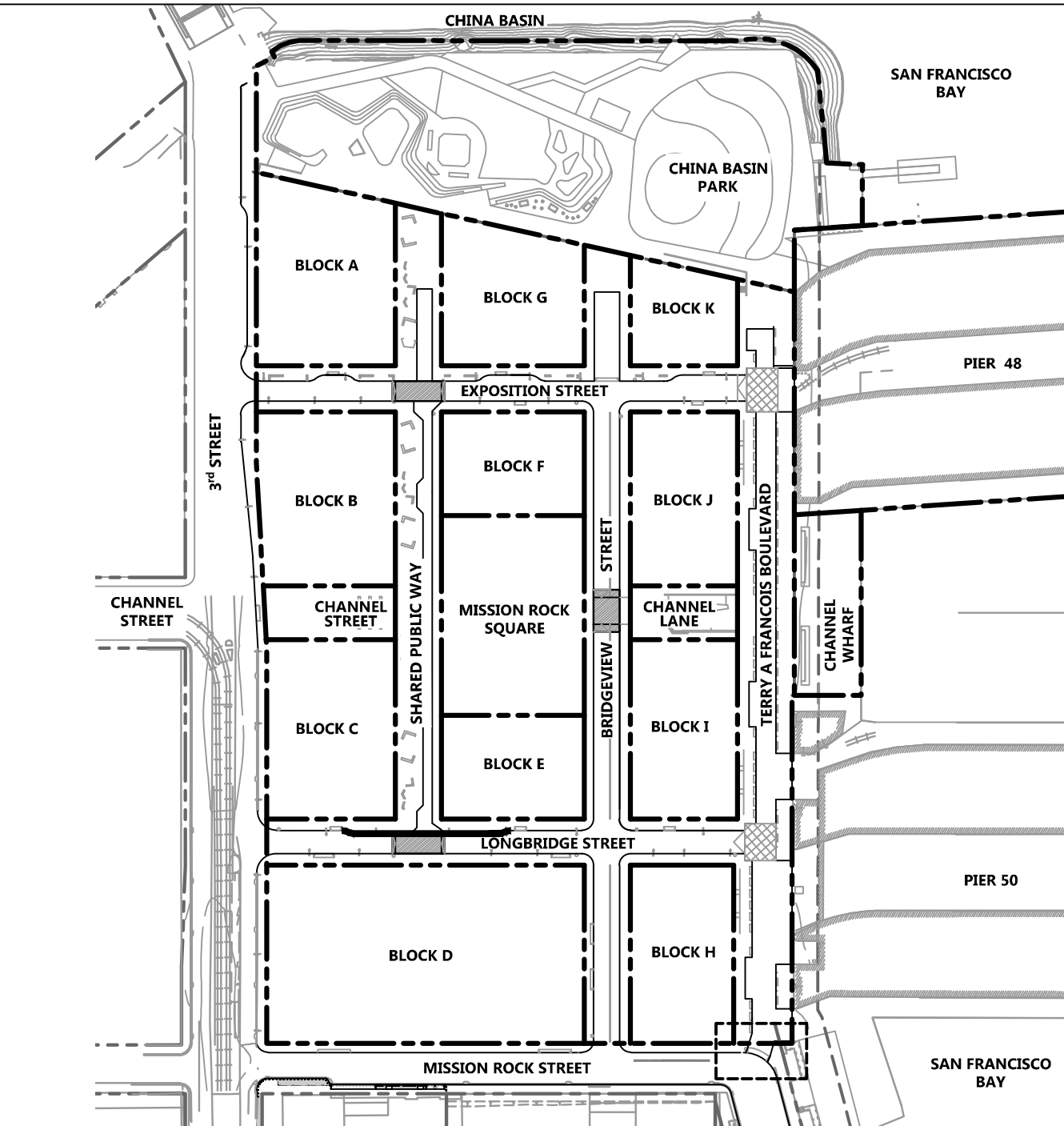
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Source: CMG LANDSCAPE ARCHITECTURE, 07/2016



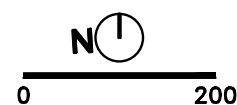
DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.58 Potential Traffic Calming Elements.dwg
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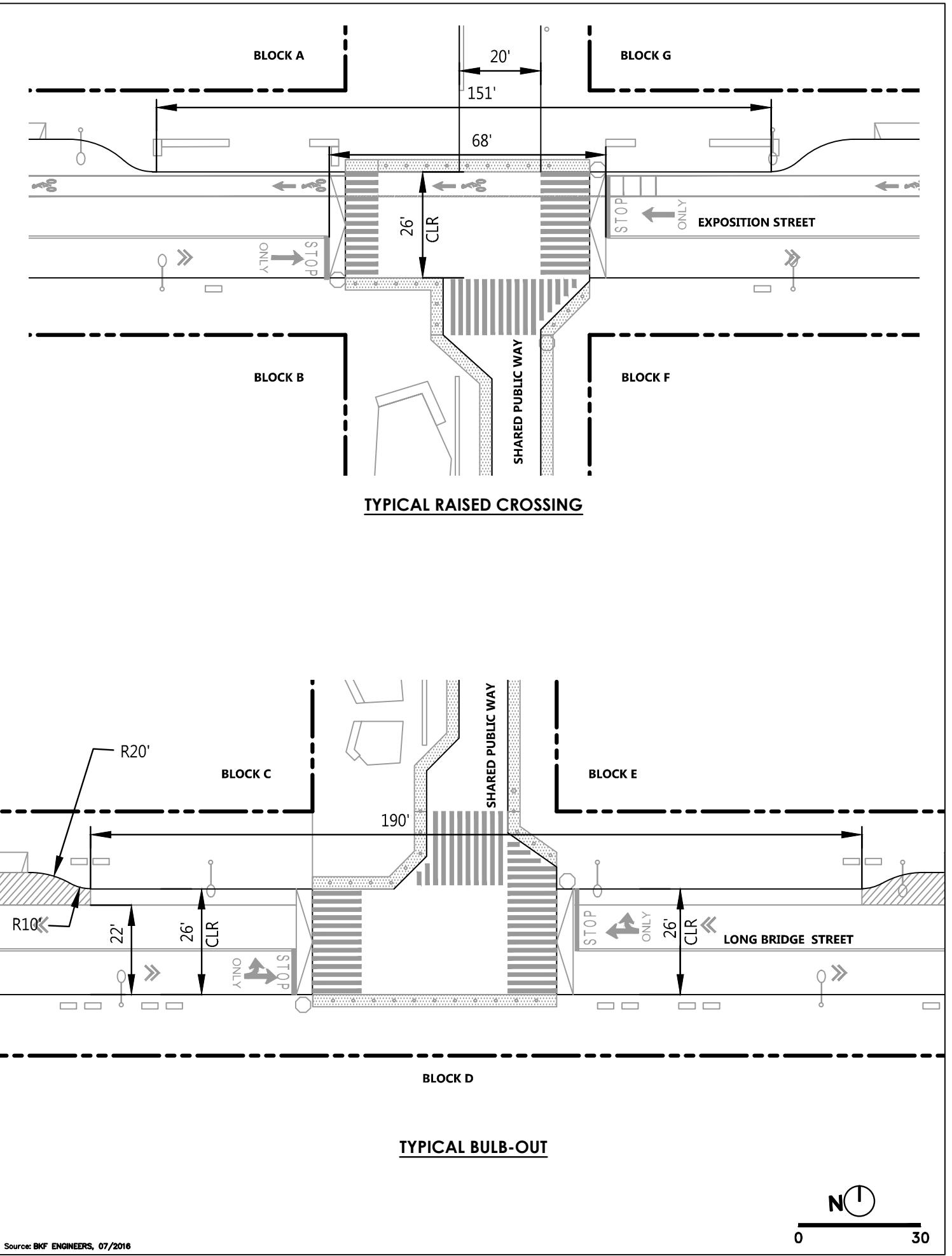
LEGEND

- PROPOSED PARCEL LINE
- EXISTING PARCEL LINE
- RAISED CROSSWALK, SEE FIGURE 8.59
- BULB-OUT LOCATIONS
- CITY STANDARD DRIVEWAY AT TERRY A FRANCOIS BOULEVARD & MISSION ROCK STREET INTERSECTION
- RAISED INTERSECTION AT TERRY A FRANCOIS BOULEVARD

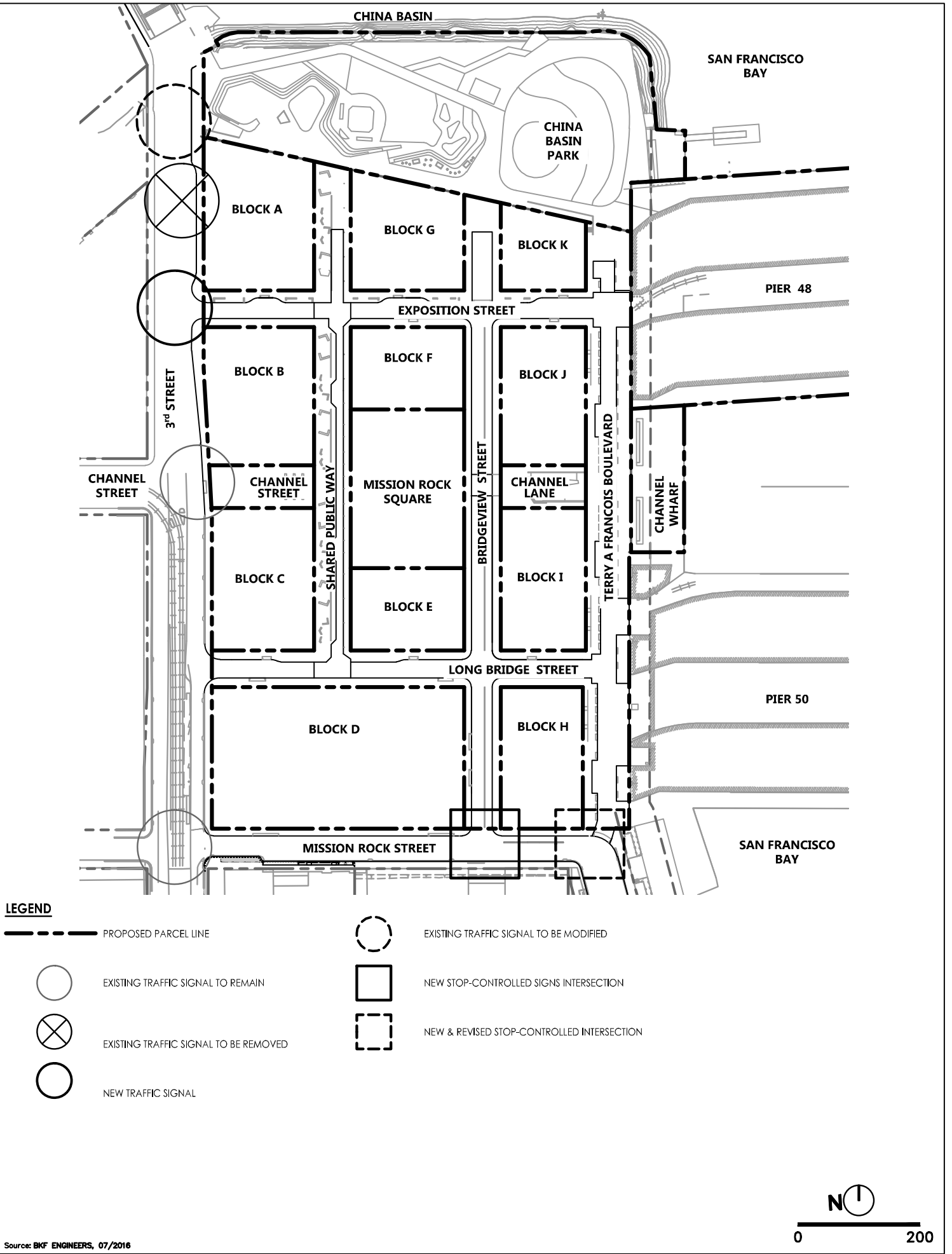
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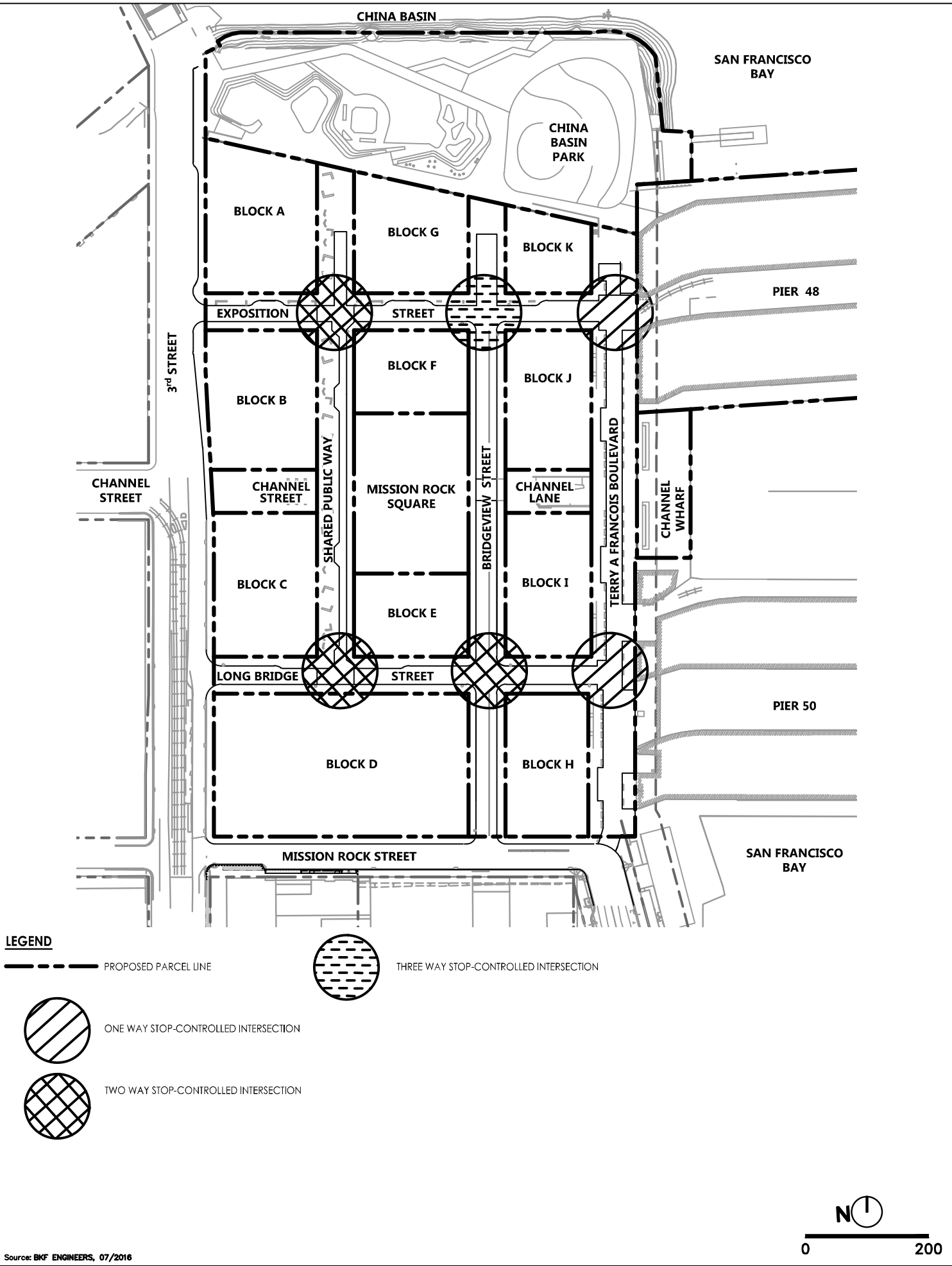
DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.59 Typical Raised Crossing & Bulb-Out Details.dwg
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 PLOTTED BY: FELI



DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 8.60 Off-Site Traffic Mitigations.dwg
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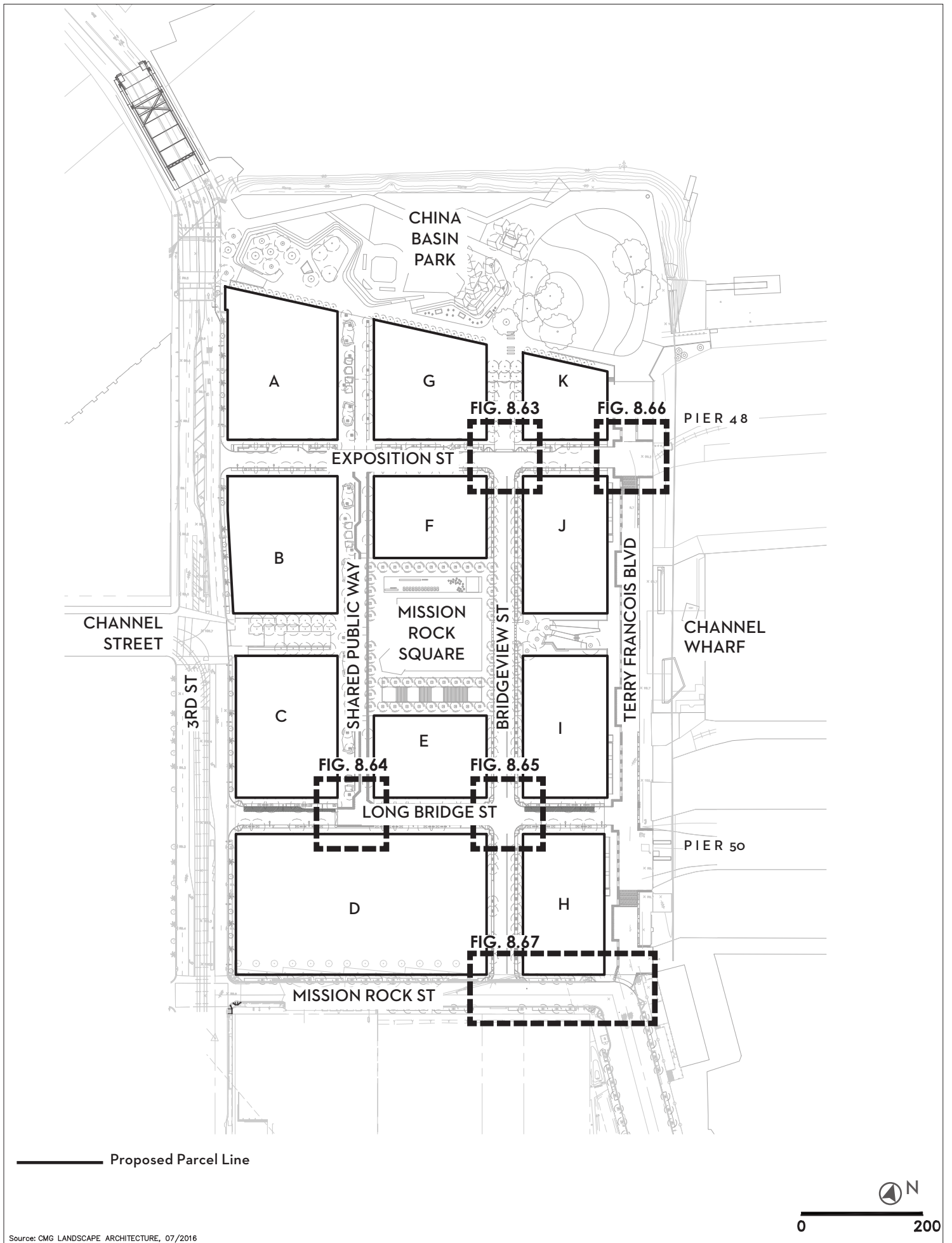


DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission_Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 8.61 On-site Traffic Mitigations.dwg
 PLOT DATE: 07/13/17
 PLOTTED BY: boyo

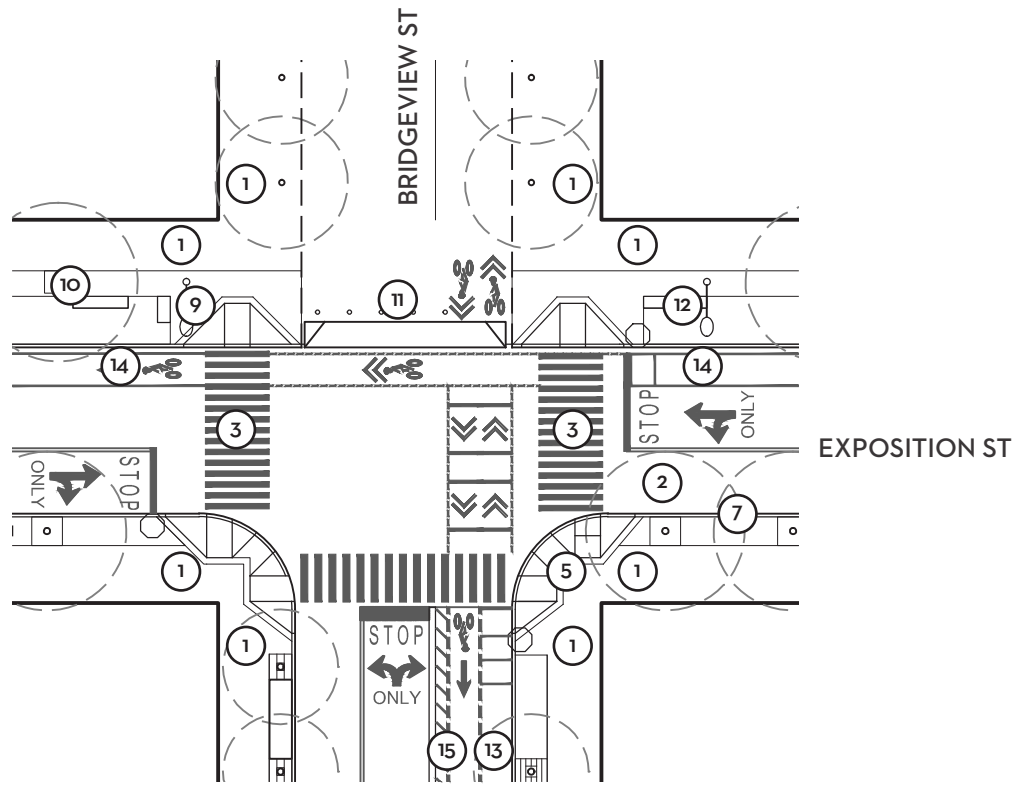


MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 8.61 - ON-SITE TRAFFIC MITIGATIONS



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

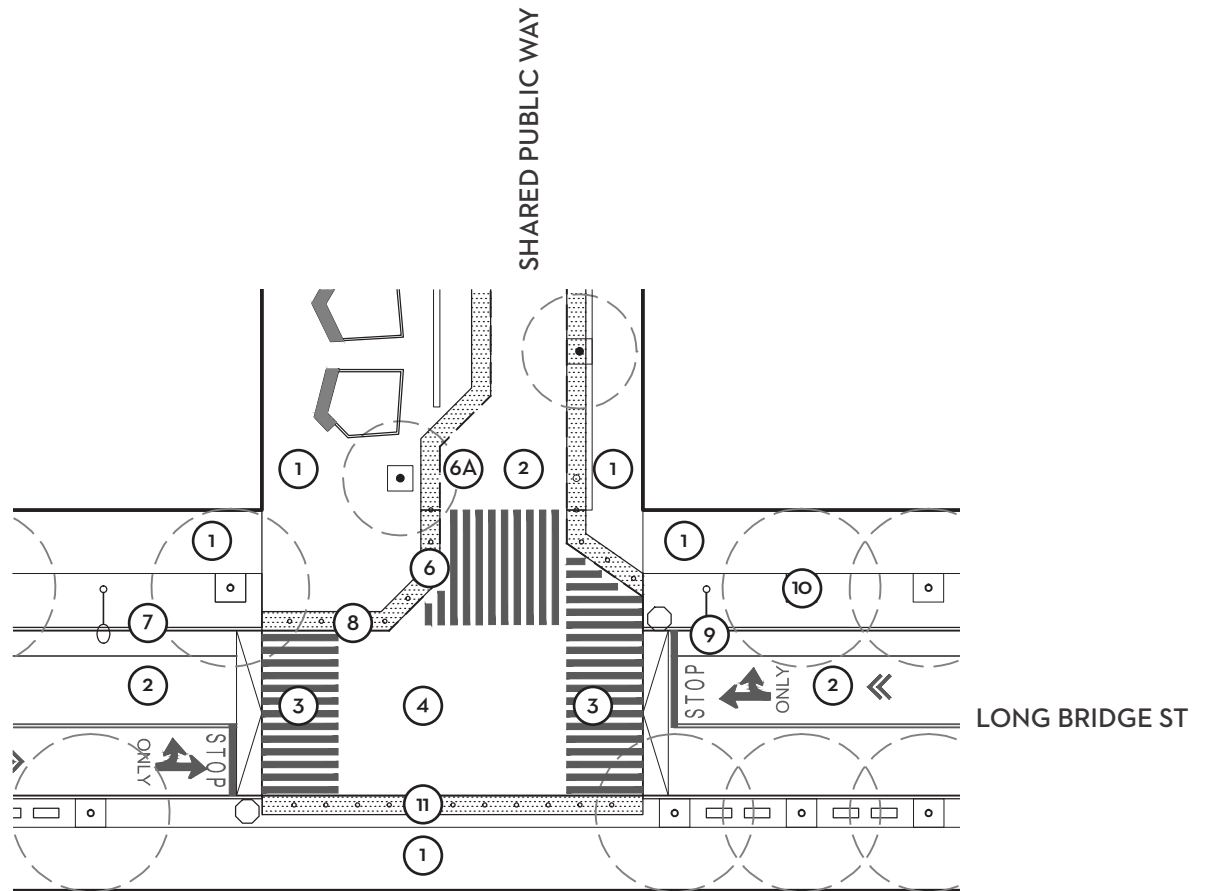


TYPICAL INTERSECTION ALL-WAY STOP: EXPOSITION STREET AT BRIDGEVIEW STREET

- | | |
|--|------------------------------|
| ① Pedestrian Throughway | ⑧ Flush Curb |
| ② Vehicular Travelway | ⑨ Streetlight |
| ③ Crosswalk | ⑩ Street Tree |
| ④ Raised Intersection | ⑪ Bollards |
| ⑤ DPW Standard Curb Ramp | ⑫ Street Furnishing |
| ⑥ DPW Standard Detectable Surface Paving | ⑬ Cycle Track (Raised) |
| ⑦ DPW Standard Curb | ⑭ Bike Lane at Roadway Grade |
| | ⑮ Cycle Track Buffer |



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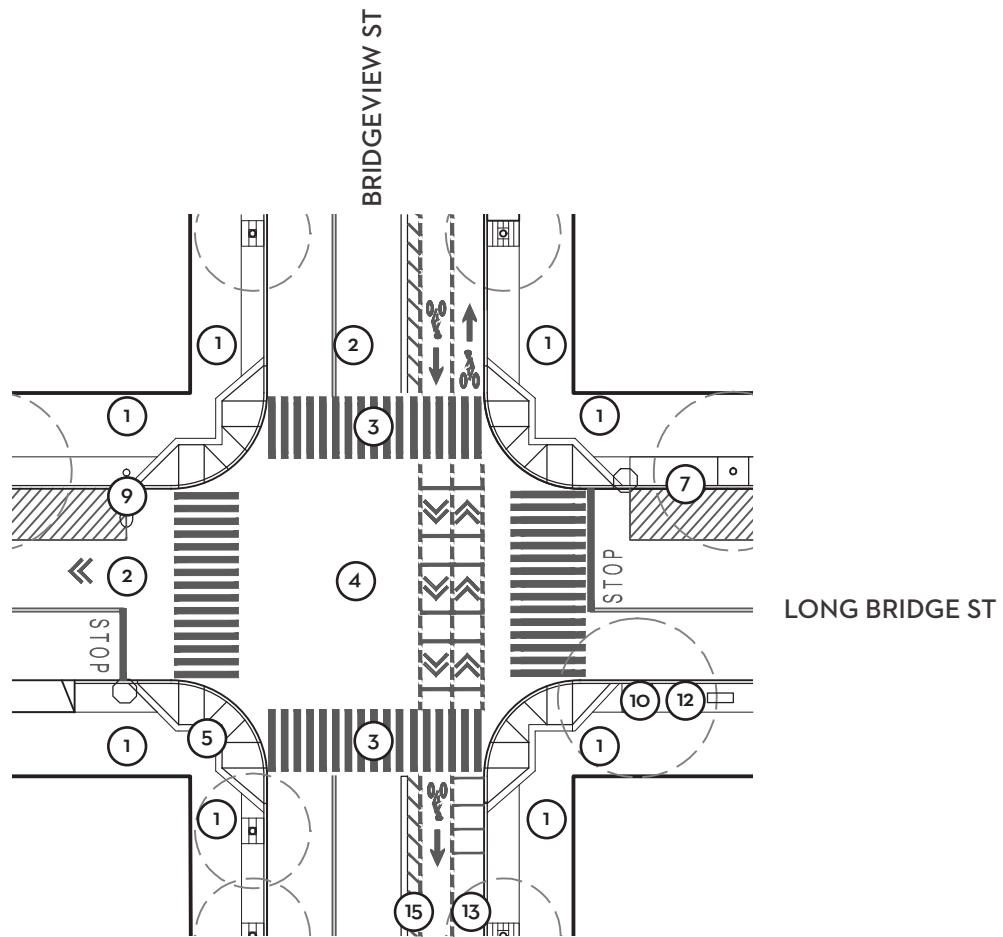


RAISED INTERSECTION: SHARED PUBLIC WAY AT LONG BRIDGE STREET

- | | |
|---|------------------------------|
| ① Pedestrian Thoroughway | ⑦ DPW Standard Curb |
| ② Vehicular Travelway | ⑧ Flush Curb |
| ③ Crosswalk | ⑨ Streetlight |
| ④ Raised Intersection | ⑩ Street Tree |
| ⑤ DPW Standard Curb Ramp | ⑪ Bollards |
| ⑥ DPW Standard Detectable Surface Paving | ⑫ Street Furnishing |
| ⑥A Detectable Surface Paving: Alternative | ⑬ Cycle Track (Raised) |
| | ⑭ Bike Lane at Roadway Grade |



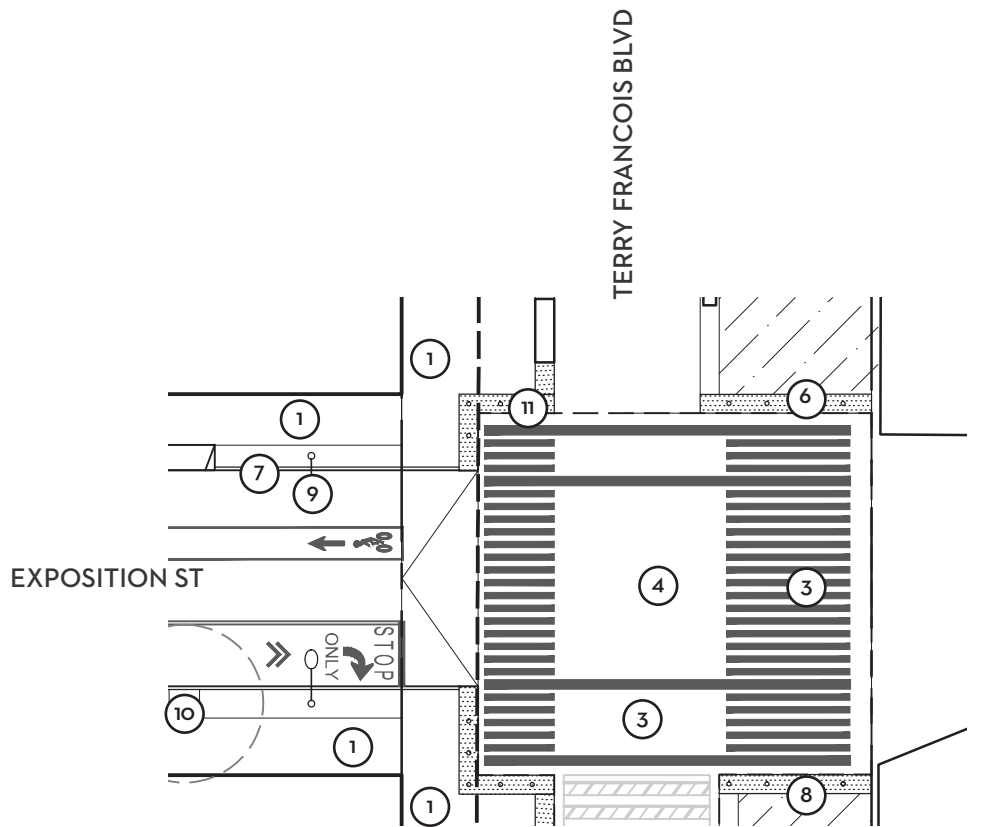
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RAISED INTERSECTION / 2-WAY STOP: BRIDGEVIEW STREET AT LONG BRIDGE STREET

- | | |
|--|------------------------------|
| ① Pedestrian Throughway | ⑧ Flush Curb |
| ② Vehicular Travelway | ⑨ Streetlight |
| ③ Crosswalk | ⑩ Street Tree |
| ④ Raised Intersection | ⑪ Bollards |
| ⑤ DPW Standard Curb Ramp | ⑫ Street Furnishing |
| ⑥ DPW Standard Detectable Surface Paving | ⑬ Cycle Track (Raised) |
| ⑦ DPW Standard Curb | ⑭ Bike Lane at Roadway Grade |
| | ⑮ Cycle Track Buffer |





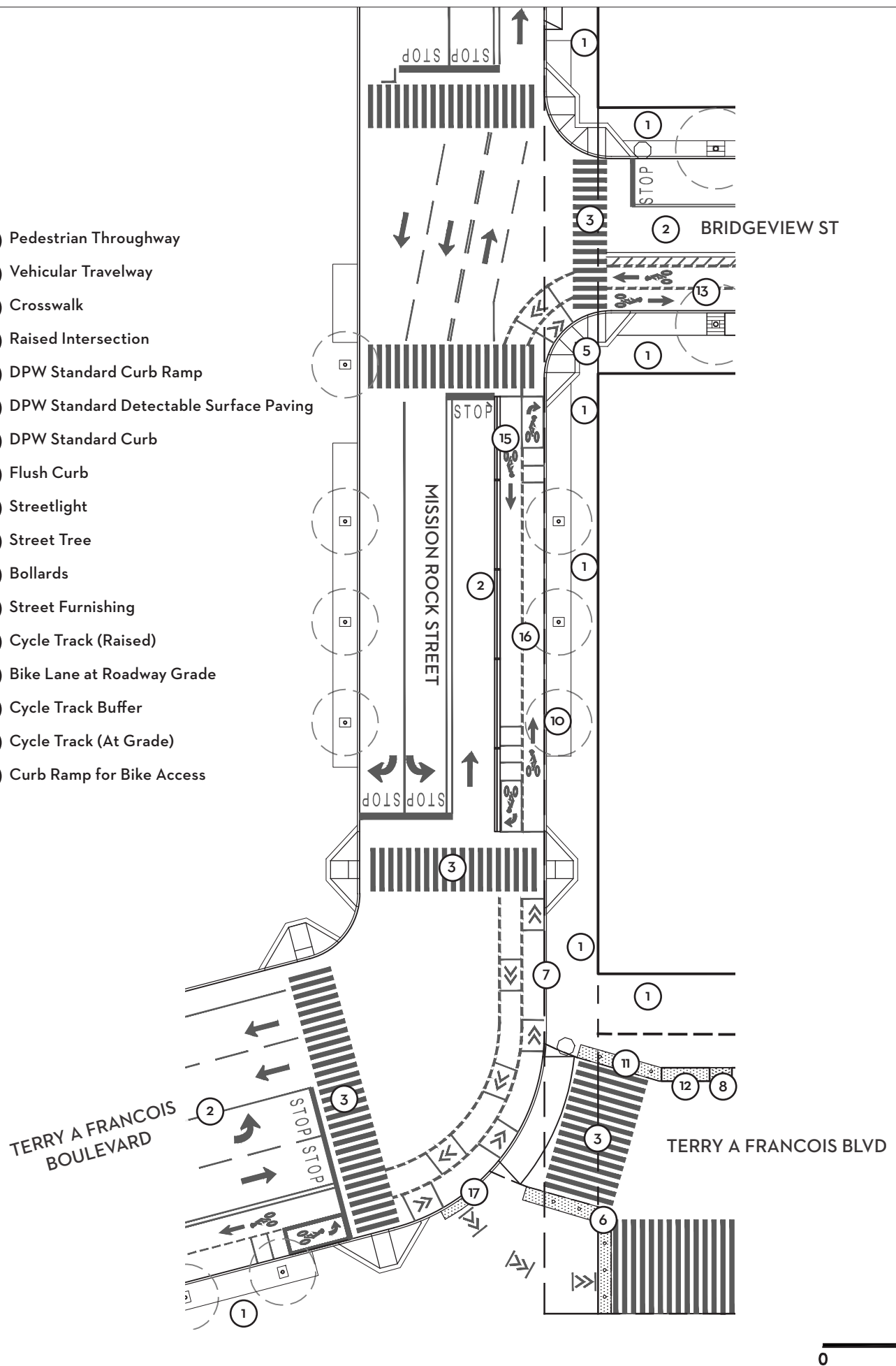
FLUSH INTERSECTION: TERRY FRANCOIS BOULEVARD AT PIER 48

- | | |
|--|------------------------------|
| ① Pedestrian Throughway | ⑧ Flush Curb |
| ② Vehicular Travelway | ⑨ Streetlight |
| ③ Crosswalk | ⑩ Street Tree |
| ④ Raised Intersection | ⑪ Bollards |
| ⑤ DPW Standard Curb Ramp | ⑫ Street Furnishing |
| ⑥ DPW Standard Detectable Surface Paving | ⑬ Cycle Track (Raised) |
| ⑦ DPW Standard Curb | ⑭ Bike Lane at Roadway Grade |



0 30

- ① Pedestrian Throughway
- ② Vehicular Travelway
- ③ Crosswalk
- ④ Raised Intersection
- ⑤ DPW Standard Curb Ramp
- ⑥ DPW Standard Detectable Surface Paving
- ⑦ DPW Standard Curb
- ⑧ Flush Curb
- ⑨ Streetlight
- ⑩ Street Tree
- ⑪ Bollards
- ⑫ Street Furnishing
- ⑬ Cycle Track (Raised)
- ⑭ Bike Lane at Roadway Grade
- ⑮ Cycle Track Buffer
- ⑯ Cycle Track (At Grade)
- ⑰ Curb Ramp for Bike Access



Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

9. OPEN SPACE AND PARKS

The following describes the phasing of construction of open space and parks in connection with the development of Development Parcels. Unless specifically identified otherwise in the Section, ownership, maintenance, and acceptance of the open space and park areas will be by the Master Developer or Port, subject to the terms of the DDA.

9.1 Open Space

Open space shall be substantially Completed consistent with the following schedule:

9.1.1 China Basin Park

China Basin Park will be constructed in connection with the adjacent Development Parcels, A, G and K, as further described in the associated public improvement agreement(s) for such Development Parcels. Construction of China Basin Park, including, without limitation, the portions of the park located between and adjacent to Development Parcels A and G and Development Parcels G and K, may be sequenced in relation to the phasing of such adjacent Development Parcels or to accommodate the need for construction staging or likelihood of site disturbances associated with construction of the adjacent Development Parcels.

9.1.2 Mission Rock Square

Mission Rock Square will be constructed in connection with the adjacent Development Parcels (E and F), as further described in the associated public improvement agreement(s) for such Development Parcels. Construction may be sequenced or adjusted as needed to accommodate construction of adjacent Development Parcels.

9.1.3 The Blue Greenway and Channel Wharf

The Blue Greenway and Channel Wharf (as described herein) will be constructed in connection with the construction of the adjacent portion of Terry A Francois Boulevard. The Blue Greenway is within the public street right-of-way of TFB and will be owned and maintained by the Acquiring Agency.

9.1.4 Channel Street

Channel Street will be constructed in connection with the adjacent Development Parcels (B and C) as further described in the associated public improvement agreement(s) for such

Development Parcels. Construction may be sequenced or adjusted as needed to accommodate construction of adjacent Development Parcels.

9.1.5 Channel Lane

Channel Lane will be constructed in connection with the adjacent Development Parcels (I and J) as further described in the associated public improvement agreement(s) for such Development Parcels. Construction may be sequenced or adjusted as needed to accommodate construction of adjacent Development Parcels.

9.1.6 Pier 48 Apron

The Pier 48 apron will be renovated, replaced or constructed in connection with the development of Pier 48. The Pier 48 Apron will be owned, maintained, and accepted by the Port.

FIGURE 9.1: PUBLIC OPEN SPACES

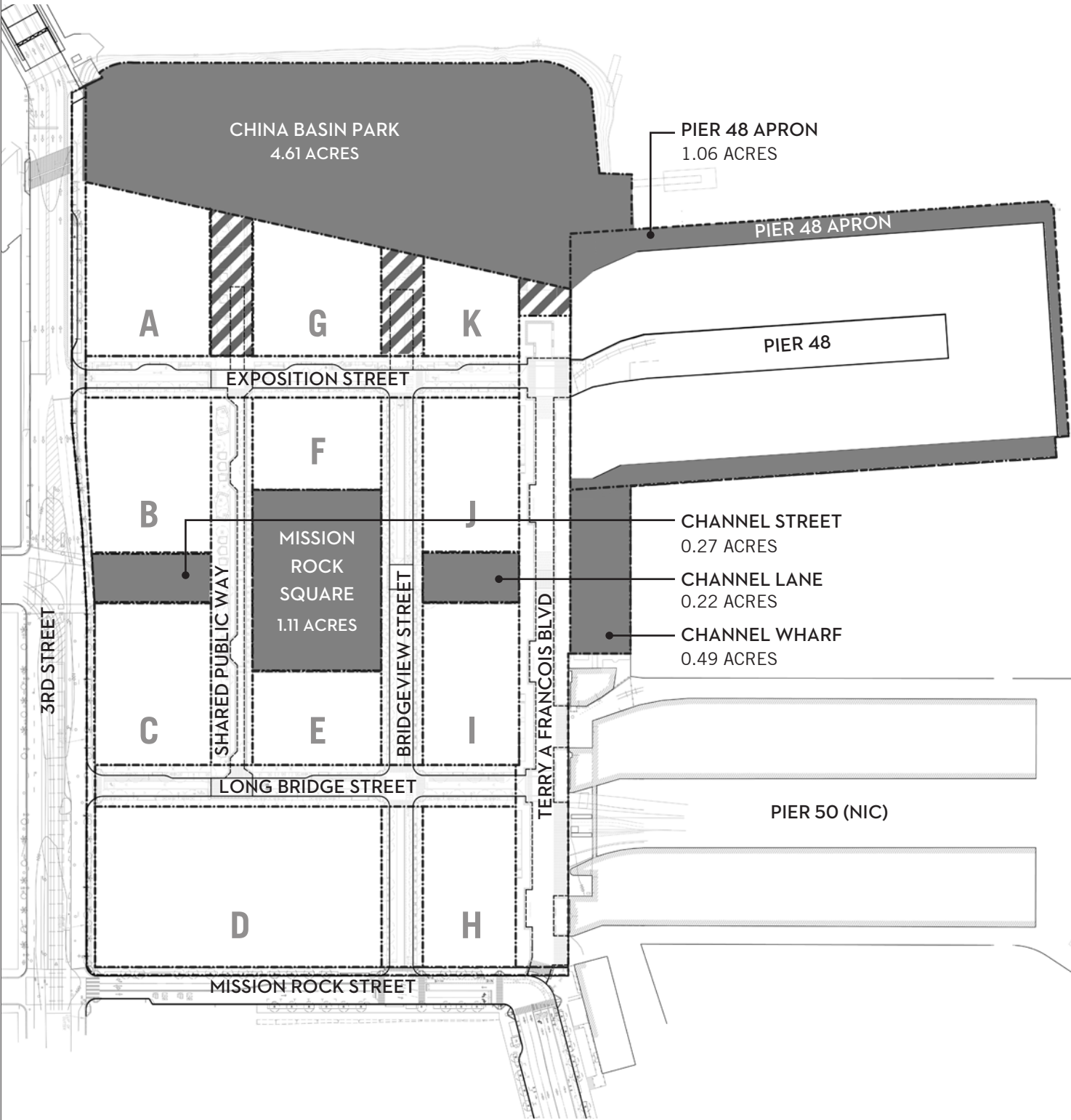


FIGURE 9.1: PUBLIC OPEN SPACES

- Public Open Spaces
- Paseo (Open Space within R.O.W.)
- Non-vehicular street connection; accommodates emergency vehicle access. Refer to Section 8.
- Limit of Work

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

FIGURE 9.2: PHASING

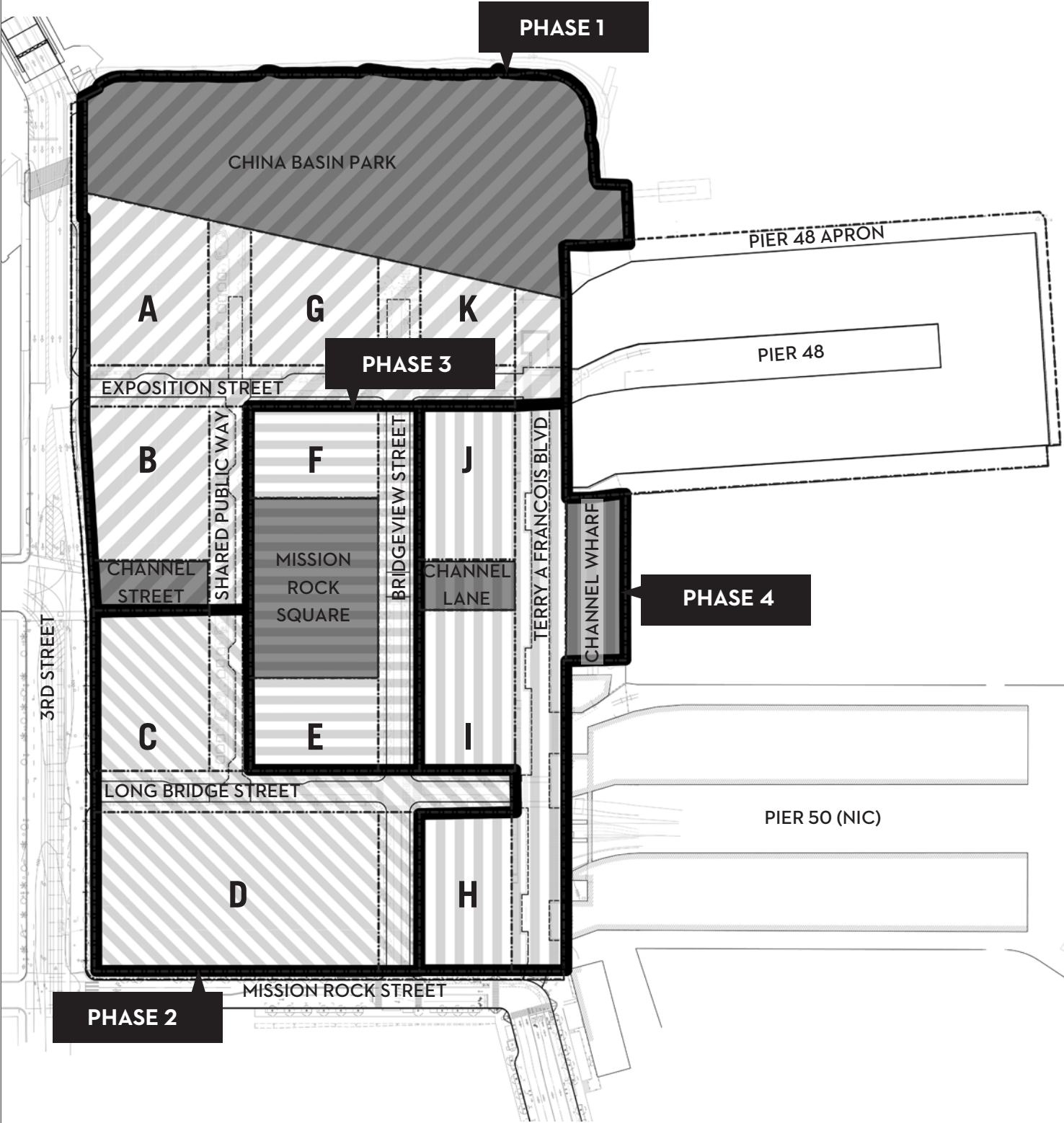


FIGURE 9.2: PHASING



- Public Open Spaces
- Phases of Development

Source: CMG LANDSCAPE ARCHITECTURE, 07/2016

10. UTILITY LAYOUT AND SEPARATIONS

10.1 Utility Systems

The Project proposes to install public utility systems, including the storm drainage system, separated sanitary sewer system, low pressure water (LPW) system, auxiliary water supply system (AWSS), and dry utility systems. Privately owned and maintained systems – district energy, greywater collection– will be installed to promote Project sustainability goals. Non-potable water infrastructure within the street rights-of-way will either be privately or publicly, by the SFPUC, owned or maintained. Ownership, maintenance, and acceptance responsibilities of utility infrastructure will be documented in the DA and DDA.

10.2 Utility Layout and Separation Criteria

Utility main layout and separations will be designed in accordance with the 2015 City of San Francisco Subdivision Regulations (Subdivision Regulations), SFPUC Utility Standards or as noted in this document. The Project proposes district energy cooling, non-potable water, and greywater collection systems which have utility separation requirements based on the Subdivision Regulations Diagram 2 and separation requirements provided by ARUP, shown in Appendix H. Utility main separation requirements are presented in Figure 10.1 Horizontal Utility Main Separation Matrix.

10.3 Conceptual Utility Layout

The Project utility layout is designed to connect the proposed Project utility infrastructure to the existing adjacent public utility infrastructure facilities. The LPW system, shown on Figure 11.1, will be a looped system and have three connections to the existing LPW system on 3rd street and Mission Rock Street. The proposed separated sanitary system, shown on Figure 12.1, will have three connections to the existing sanitary sewer system on both 3rd Street and Mission Rock Street. The proposed storm drainage system, shown on Figure 13.1, will have four connections to the existing storm drain system on 3rd Street, a connection to the existing storm drain system on Mission Rock Street, a connection to the existing Port outfall at China Basin, and a connection to the existing Port outfall at Channel Wharf. The proposed AWSS, shown on Figure 14.1, will be a looped system with two connections to the existing AWSS infrastructure on 3rd Street. The district energy plant and infrastructure layout, shown on Figure 15.1, and greywater collection, shown on Figure 15.2 will be centralized at Block A. The bay source system will be installed in China Basin Park to connect the district energy plant to the Bay. From Block A, District Energy and non-potable water will be provided to all Parcels.

10.4 Utility Layout and Clearance Design Modifications and Exceptions

Due to constraints within the Project site, design modifications and exceptions to standard sizing, spacing, and locations of utilities will be requested. A design modifications and exception request to utility standards and requirements must be approved by the department with authority over each utility. The separated sanitary sewer system, storm drainage system, LPW system, AWSS, and non-potable water system design modifications and exceptions receive authorization per the process outlined in the Subdivision Regulations. Potential locations for the design modifications and exceptions listed in this section are shown in Figure 10.2. Approval of this Infrastructure Plan does not constitute authorization of utility-related design modifications and exceptions.

10.4.1 Utility Main Clearance to Face of Curb

A bulb-out section, approximately 190-feet long, at the intersection of Long Bridge Street and Shared Public Way will be provided for traffic calming purposes. The bulb-out reduces the face-of-curb to face-of-curb width from 30-feet to 26-feet. The Low Pressure Water main separation to the face of curb is given priority which ultimately reduces the Storm Drain structure to face-of-curb separation to 0.3-feet from the required 4-feet clearance.

Shared Public Way and TFB will not have a curb and utilize flush curbs, respectively. The clear street width is 20 feet on Shared Public Way, which does not provide adequate width for the horizontal layout of District Energy pipes, a non-potable water main, a low pressure water main, and a storm drainage main. Thus, the project proposes to locate the storm drainage main underneath the edge of the clear travel way.

10.4.2 Utility Structure Type and Clearance to Face of Curb

Shared Public Way and TFB will not have a curb and utilize flush curbs, respectively, thus construction of City standard curb inlets would be infeasible. To best accommodate this design approach, a linear drainage element that might include, but is not limited to, a valley gutter, drop inlets, or trench drains will be incorporated at or along low points to provide drainage.

10.4.3 Auxiliary Water Supply System Main within Sidewalk

The street width of Terry A Francois Boulevard is inadequate to provide horizontal clearance for all proposed utility mains within the street pavement. The proposed AWSS main will be located underneath the blue greenway on the east side of Terry A Francois Boulevard, as agreed upon

between the developer and the City, SFFD, and SFPUC.

10.4.4 Storm Drain Main and Sanitary Sewer Main Layout Order

Per the Subdivision Regulations, street utility order places the storm drain main closest to the face-of-curb, then the sanitary sewer main closer to the centerline of the street section. In Terry A Francois Boulevard and Exposition Street, the utility order of the storm drain main and the sanitary sewer main is switched to place the sanitary sewer main closest to the face-of-curb instead of the storm drain main. This change in layout order provides better alignment with the storm drain connection on 3rd Street and reduces crossing conflicts between the sanitary sewer and storm drain systems.

Figure 10.1 - HORIZONTAL UTILITY MAIN SEPARATION

Utility Separation	Storm Drain	Sanitary Sewer	Sanitary Sewer Force Main	Potable Water (LPW)	Auxiliary Water Supply System	Recycled Water (Private)	Greywater Collection (Private)	District Energy (Private)
Face of Curb	6.5' min FOC to CL sewer pipe or structure (Ref 1)	6.5' min FOC to CL sewer pipe or structure (Ref 1)	3.5' clear to OD (assumed from Ref 1)	4.5' clear to OD (Ref 4, see Note 1)	4.5' clear to OD (assumed from Ref 4, see Note 1)	4.5' clear to OD (assumed from Ref 4, see Note 1)	6.5' min FOC to CL greywater pipe or structure (Ref 1)	Street w/ CB: 4' clear to OD (assumed from Ref 1) Street w/o CB: 1' clear to OD (assumed from Ref 3)
Catch Basin	6" clear CB to MH, 1' clear to OD (Ref 1)	6" clear CB to MH, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)	6" clear CB to utility structure, 1' clear to OD (Ref 1)
Storm Drain	---	3.5' min clear OD to OD (assumed from Ref 1)	3.5' min clear OD to OD (assumed from Ref 1)	4' clear OD to OD (Ref 2)	3.5' clear to OD (assumed from Ref 1)	3.5' clear to OD (assumed from Ref 1)	3.5' clear to OD (assumed from Ref 1)	3.5' clear to OD (assumed from Ref 1)
Sanitary Sewer	---	---	3.5' min clear OD to OD (assumed from Ref 1)	10' clear OD to OD (Ref 2)	3.5' min clear OD to OD (Ref 1)	3.5' min clear OD to OD (Ref 1)	3.5' min clear OD to OD (assumed from Ref 1)	3.5' min clear OD to OD (assumed from Ref 1)
Sanitary Sewer Force Main	---	---	---	10' min clear OD to OD (Ref 2)	3.5' min clear OD to OD (assumed from Ref 1)	3.5' min clear OD to OD (assumed from Ref 1)	3.5' min clear OD to OD (assumed from Ref 1)	3' min clear OD to OD (assumed from Ref 1)
Potable Water (LPW)	---	---	---	---	4' clear OD to OD (Ref 1 & 2)	4' clear OD to OD (Ref 1 & 2)	10' clear OD to OD (Ref 2)	4' clear OD to OD (assumed from Ref 1 & 2)
Auxiliary Water Supply System	---	---	---	---	---	3' clear to outside pipe (Ref 1)	3' clear to outside pipe (assumed from Ref 1)	3' min clear OD to OD (assumed from Ref 1)
Recycled Water	---	---	---	---	---	---	3' clear to outside pipe (assumed from Ref 1)	3' min clear OD to OD (assumed from Ref 1)
Greywater Collection	---	---	---	---	---	---	---	3' min clear OD to OD (assumed from Ref 1)

References

- 1 SFPUC Subdivision Regulations Diagram No. 2 Minimum Utilities Separation for Wastewater and Water - Separate Sewer System (dated October 2014)
- 2 CA Code of Regulations Title 22 Section 64572
- 3 District Energy Separations Per ARUP Detail Mission Rock Typical Trench Sections District Energy (dated 01/12/2016), see Appendix H of Infrastructure Report
- 4 SFPUC Drawing CDD-001 Standard Layout for Potable and Recycled Water Distribution Main Installation (dated Nov 2015)

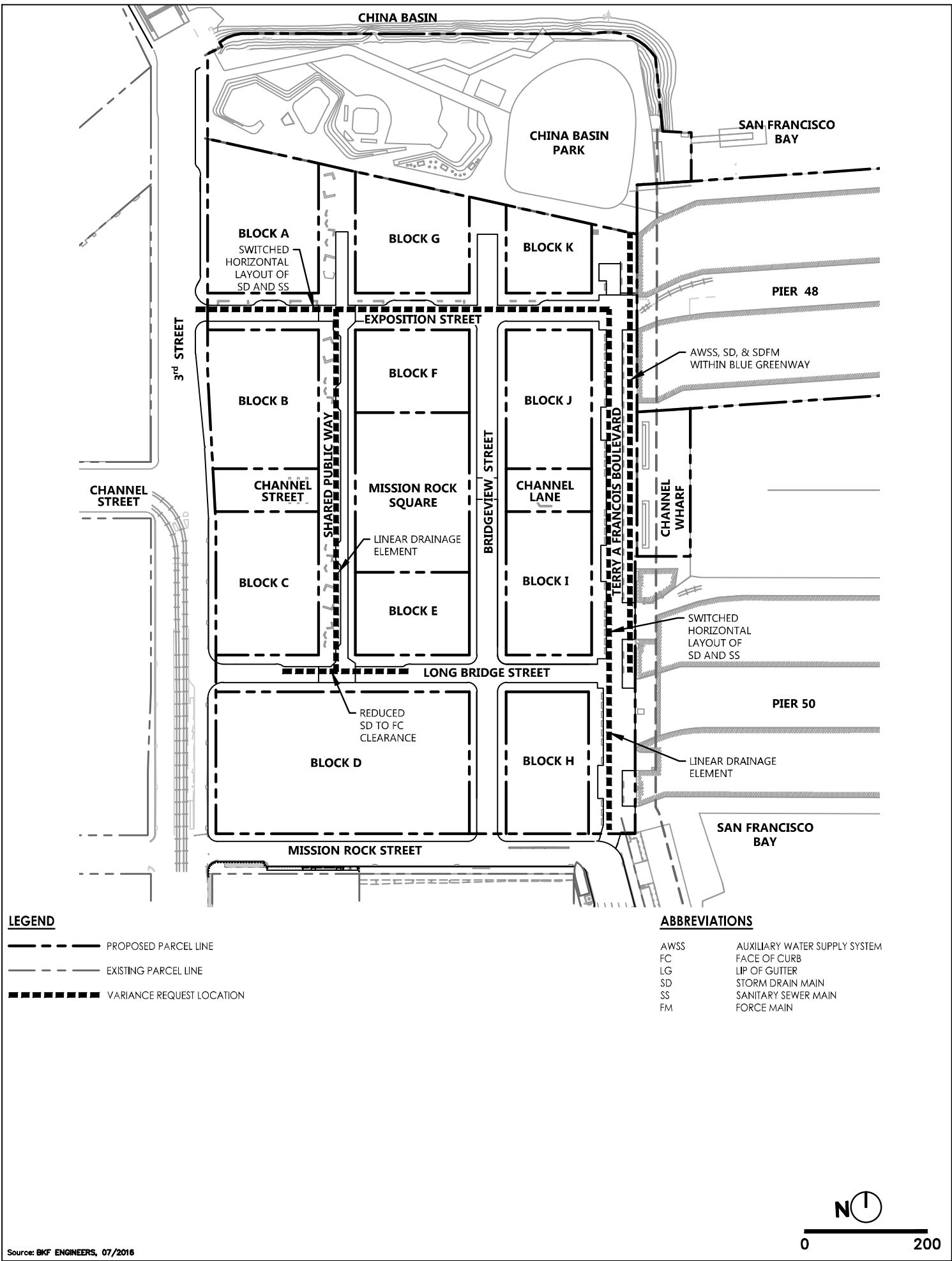
Notes

- 1 Due to street width constraints LPW clearance to Face of Curb reduced but not less than 4' clear (SPW & Long Bridge)

Abbreviations

CB - Catch Basin	MH - Manhole	w/ - with
CL - Centerline	MIN - Minimum	w/o - without
FOC - Face of Curb	OD - Outside Diameter (of Pipe)	

DRAWING NAME: \\b4-sf\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 10.2 Utility Variance Request Locations.dwg
 PLOT DATE: 07-13-17
 PLOTTED BY: FELI



Source: BMF ENGINEERS, 07/2016



MISSION ROCK INFRASTRUCTURE PLAN FIGURE 10.2 - POTENTIAL UTILITY VARIANCE REQUEST LOCATIONS

11. LOW PRESSURE WATER SYSTEM

11.1 Existing Low Pressure Water System

Potable water service is provided by a water supply, storage, and distribution system operated by the SFPUC. Existing LPW system infrastructure surrounds the site on Terry A Francois Boulevard (12-inch), 3rd Street (12-inch), and Mission Rock Street (12-inch). Fire hydrants and Piers 48 and 50 are serviced through the existing waterline in Terry A Francois Boulevard.

11.2 Existing SFPUC System Capacity

Based on the report, "Computer Modeling and Analysis of the Low Pressure Water System, Mission Bay Development" by Winzler & Kelly dated May 2000 (2000 LPW Report), the existing mains along 3rd Street, Mission Rock Street, and Terry A Francois Boulevard will have adequate capacity to support the Development and not require replacement. Fire hydrant pressure and flow data from field tests of existing SFPUC hydrants adjacent to the project site will be used to verify the 2000 LPW report assumptions. This field data will be incorporated into the LPW water model and will be included as part of the Low Pressure Water Master Utility Plan (LPWMP).

11.3 Proposed Low Pressure Water System

11.3.1 Project Water Supply

The Project has been accounted for in the SFPUC's latest City-wide demand projections provided in its 2013 Water Availability Study¹ and the Water Supply Assessment prepared for and approved by the SFPUC in January 2017. As concluded previously, the development would not require major expansions of the existing water system.

11.3.2 Project Water Demands

The Project water demands are identified in Table 11.1 below. The LPWMP will outline the Project's methods used for calculating the flow demands. The Project proposes bay source cooling, which provides significant water savings by reducing the quantity of cooling towers for the Project; however, the WSA assumed that each development parcel would incorporate independent heating and cooling systems, resulting in larger water demands than those assumed in Table 11.1

¹ <http://www.sfwater.org/modules/showdocument.aspx?documentid=4168>

Table 11.1
Project Water Demands

Scenario	Demand (gpm)
Domestic Average Day Demand (ADD)	450
Maximum Day Demand (MDD) (includes peaking factor of 1.6)	721
Peak-Hour Demand (PHD) (includes peaking factor of 2.4)	1,081
Required Fire-Flow	1,875
Maximum Demand (Max Day Demand + Required Fire-Flow)	2,596

11.3.3 Project Water Distribution System

The LPW system will be designed and constructed by the Developer, then owned and operated by the Acquiring Agency upon completion of construction and acceptance of the improvements. The proposed LPW system is identified schematically in Figure 11.1. Along 3rd Street, two new LPW connections are proposed at Exposition Street and Long Bridge Street to provide an on-site looped system. The proposed domestic water supply and fire protection system is anticipated to consist of 12-inch ductile iron pipe mains, low pressure fire hydrants, valves and fittings, and appurtenances. The LPW infrastructure will be located within the paved area of the street such that the outside wall of a potable water pipe is a minimum of 4.5-feet clear from the face-of-curb and a minimum of 5-feet clear from the center of proposed tree trunks. A portion of the existing LPW system in Mission Rock Street between Terry A Francois Boulevard and proposed Bridgeview Street may require relocation to accommodate bicycle infrastructure coordinated with the SFMTA.

Vertical and horizontal separation distances between adjacent separated sewer systems, potable water, and dry utilities will conform to the requirements outlined in Title 22 of the California Code of Regulations, the State of California Department of Health Services Guidance Memorandum 2003-02, and the Subdivision Regulations. Refer to the Typical Utility Section (Figure 11.2) for depth and relationship to other utilities. Required disinfection and connections to new mains will be performed by the SFPUC at the Developer's cost. Cathodic protection to be provided as required by the SFPUC. Based on a cathodic protection analysis, cathodic protection is to be completed during the construction development phase of the project.

11.3.4 Low Pressure Water Design Criteria

The proposed low pressure water system is required to maintain a minimum pressure of 20 psi and a maximum velocity of 12 fps during a Maximum Day Demand and maintain a minimum pressure of 40 psi and a maximum velocity of 8 fps during a Peak Hour Demand. The Project water system will be modeled in the LPWMP to confirm the on-site system infrastructure will meet pressure and flow requirements.

11.3.5 Proposed Fire Hydrant Locations

As shown on Figure 11.3, proposed on-site and off-site fire hydrants have been located at a maximum radial separation of 300-feet between hydrants. In addition, building fire department connections will be located within 100-feet of a fire hydrant. Final hydrant locations are subject to the approval of the SFFD, SFPUC, and will be located outside of the curb returns per DPW Order 175,387. If fire hydrants are required by SFFD within the curb returns to meet SFFD requirements, the Project will work with the SFPUC and SFDPW to request an exception per Sections VI and VII of DPW Order 175,387 to accommodate the SFFD. Fire hydrants shall not be located within landscape or bioretention areas and must have a paved direct path leading to the adjacent access road.

11.4 Phases for Low Pressure Water System Construction

The Developer will design and install the new LPW system based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the proposed LPW systems installed will be the minimum necessary to support the Development Phase. The new Development Phase will connect to the existing systems as close to the edge of the Development Phase area as possible while maintaining the integrity of the existing system for the remainder of the Project. Repairs and/or replacement of the existing facilities necessary to support the proposed Development Phase will be designed and constructed by the Developer. Interim LPW systems will be owned, constructed, and maintained by the Developer, as necessary to maintain existing LPW facilities impacted by proposed Development Phases.

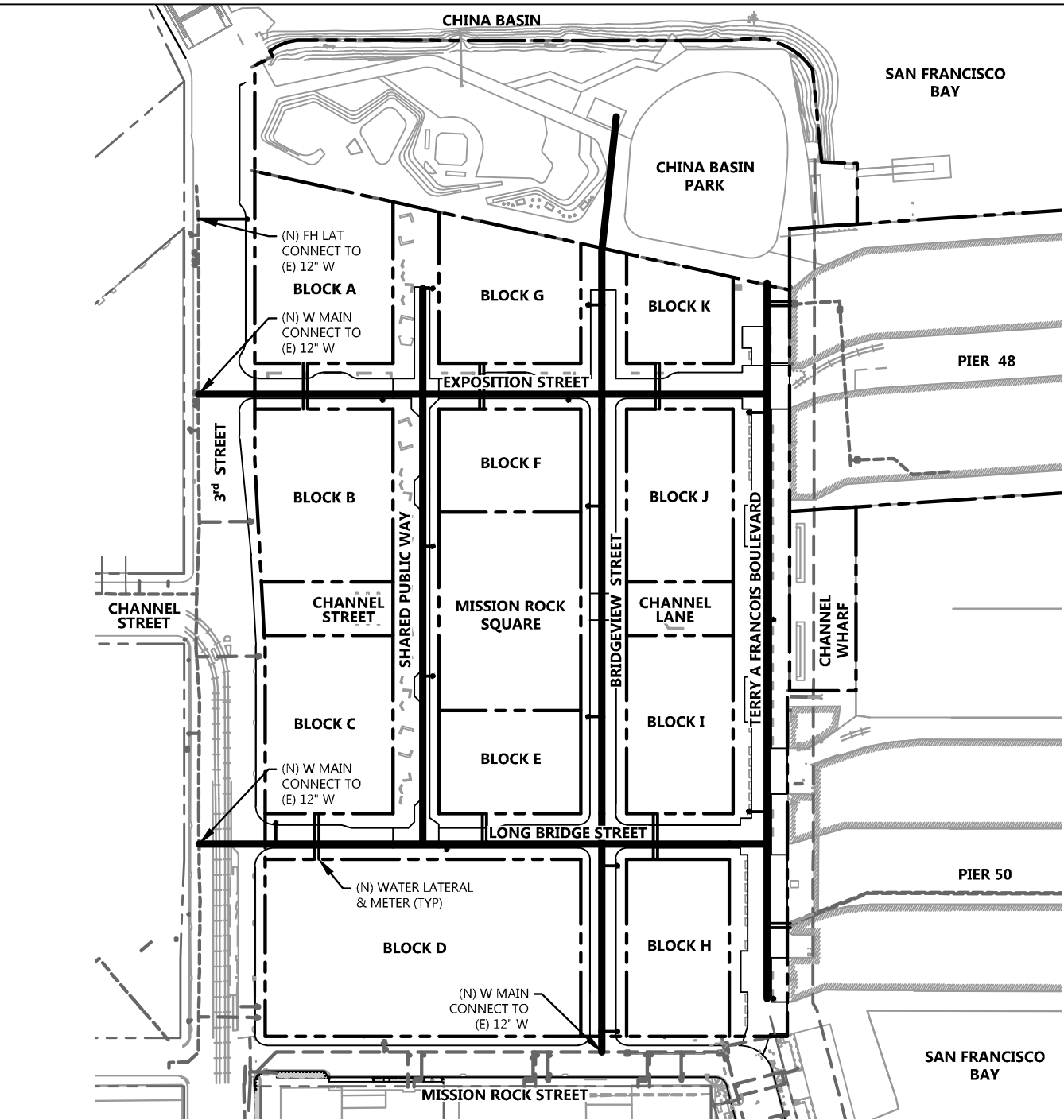
The Acquiring Agency will be responsible for ownership and maintenance of existing SFPUC-owned LPW facilities. The Acquiring Agency will own and maintain the proposed LPW facilities once construction of the horizontal improvements required for a Development Phase or a new LPW facility is

complete and accepted by the Acquiring Agency subject to DA/DDA/ICA. Impacts to improvements installed with previous Development Phases of the Project due to the designs of new Development Phases will be the responsibility of the Developer and addressed prior to approval of the construction drawings for the new Development Phase. For each Development Phase and concomitant with the submittal of Improvement Plans, the Developer will provide a phase-specific Low Pressure Water Utility Report describing and depicting all existing LPW infrastructure to remain and demonstrates the Development Phase will provide the required pressures and flow of an anticipated MDD plus fire-flow.

11.4.1 Existing Low Pressure Water System Demolition Phasing

The existing SFPUC-owned LPW system adjacent to the site along 3rd Street and Mission Rock Street will remain. The existing on-site 12-inch LPW main loops through Terry A Francois Boulevard connecting 3rd Street at the Lefty O'Doul Bridge to Mission Rock Street. The portion of this main along the frontage of Pier 48 and Pier 50 will remain to provide the piers service. This main will then be replaced with a 12-inch main connected to the Mission Rock LPW system during the redevelopment of Terry A Francois Boulevard. New connections will be made to Pier 48 and Pier 50 branching from the new main.

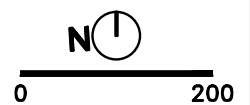
DRAWING NAME: \\bak-sf\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 11.1 Conceptual Low Pressure Water System.dwg
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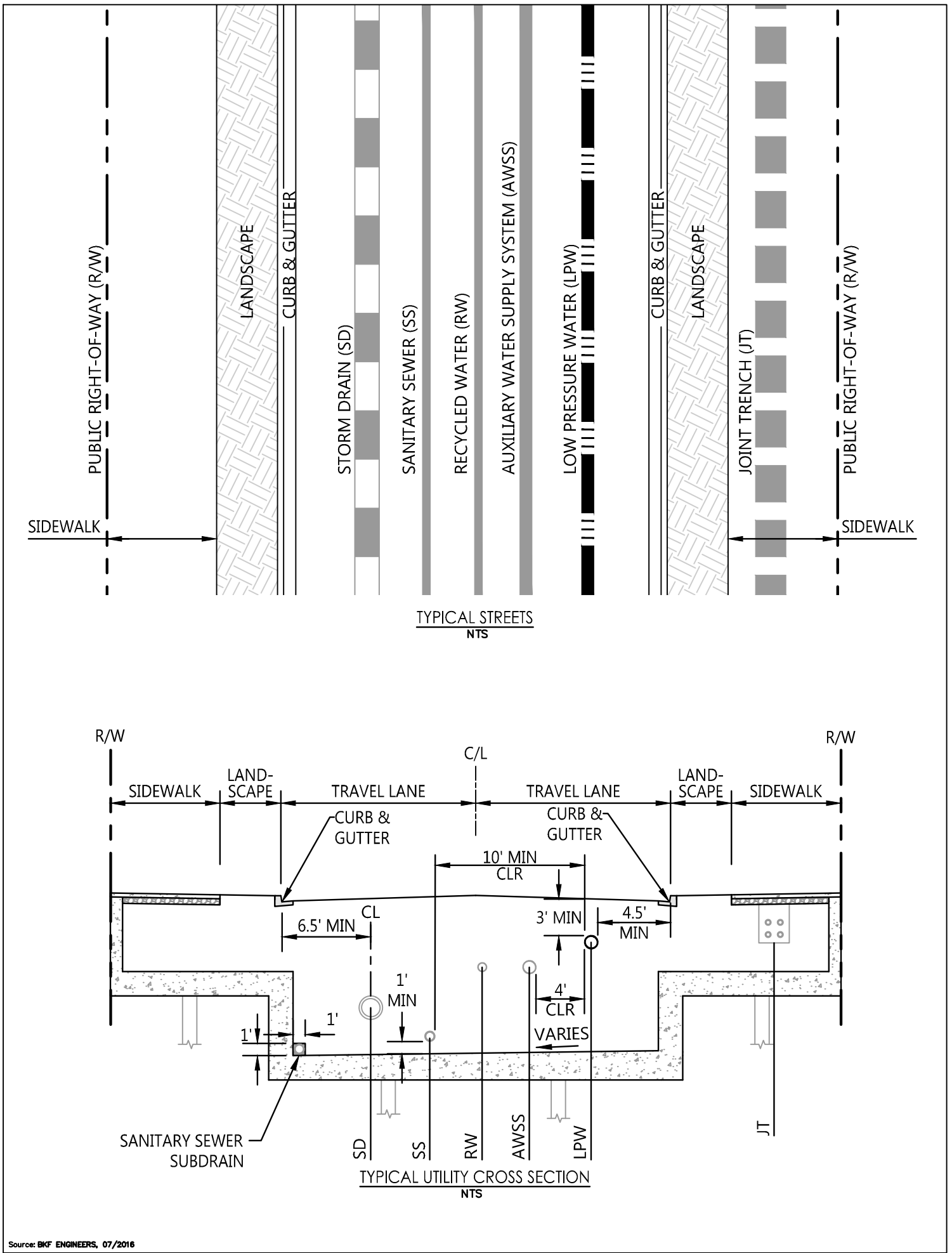
LEGEND

- PROPOSED PARCEL LINE
- - - EXISTING PARCEL LINE
- - - EXISTING WATER LINE
- PROPOSED WATER LINE (12" DIP)
- PROPOSED WATER LATERAL

Source: BKF ENGINEERS, 07/2016

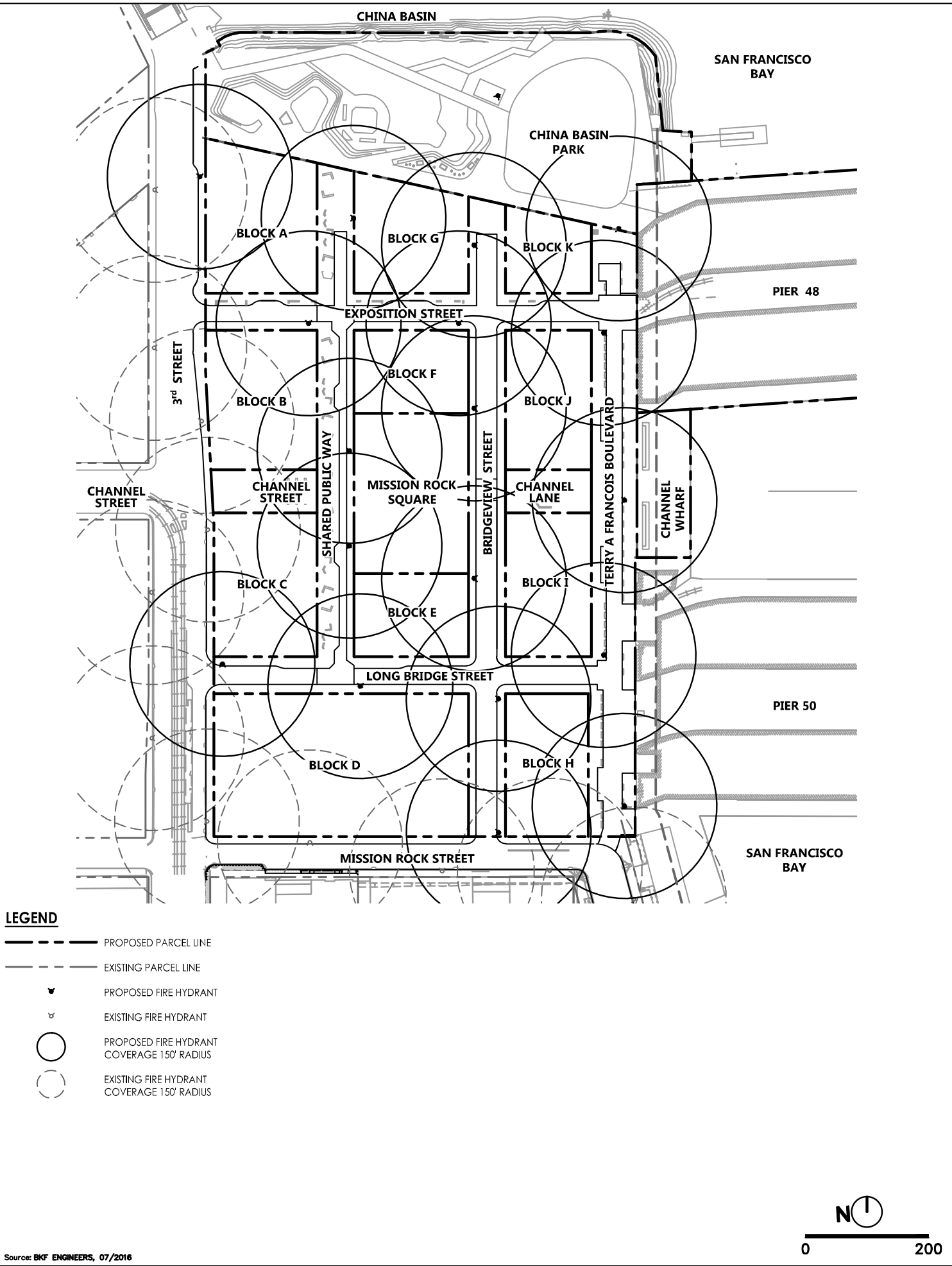


DRAWING NAME: \\net-ss\vol14\2008\060008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 11.2_14.2 Typical Util Section.dwg
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DRAWING NAME: \\bkt-sf\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 11.3 Conceptual Fire Hydrant Locations.dwg
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MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 11.3 - CONCEPTUAL FIRE HYDRANT LOCATIONS

12. SANITARY SEWER SYSTEM

12.1 Existing Sanitary Sewer System

The existing uses of the site include a parking lot and China Basin Park. Although the site does not have existing sanitary sewer facilities, an existing sewer lateral off of Channel Street and 3rd Street was capped after two existing industrial building were demolished to build the parking lot.

The existing sanitary sewer infrastructure along the south and west side of the Project site has a separated sewer system. On the east side of the Project, Pier 48 and Pier 50 are served by a 15-inch sanitary storm sewer main that drains to the south within Terry A Francois Boulevard. Sanitary flows within Terry A Francois Boulevard are conveyed to a low spot in the main just south of the intersection at Mission Rock Street where there is an existing pump station (Port SSPS) owned and maintained by the Port. A 6-inch force main from the Port SSPS at this location lifts sanitary flows into a 12-inch gravity sewer main within Mission Rock Street and is conveyed west into a 15-inch main as it reaches 3rd Street.

Existing separated sanitary sewer facilities within 3rd Street include an 8-inch main north of Channel Street which connects into a 21-inch main in between Channel Street and Mission Rock Street. The flows from the 21-inch main in 3rd Street and the 15-inch main in Mission Rock Street converge at the intersection of 3rd Street and Mission Rock Street and are conveyed through gravity sewer mains to Sanitary Sewer Pump Station #3 at Park 15 and ultimately conveyed to the San Francisco Southeast Treatment Plant prior to treatment and discharge to the Bay.

12.2 Proposed Sanitary Sewer System

12.2.1 Proposed Sanitary Sewer Demands

The Project sanitary sewer demands conservatively assume 95% return on potable water demands and 100% return on recycled water demands for Average Day Demands resulting in an Average Daily Dry Weather Flow (ADWF) of approximately 380,000 gallons per day (gpd). Applying a peaking factor of 3 to ADWF and including an infiltration rate of 0.003 cubic feet per second per acre, the Project is anticipated to generate a Peak Wet Weather Flow (PWWF) of 1,195,000 gallons per day or 1,621 gallons per minute (gpm). The Project's methods for calculating the flow demands will be outlined in the Sanitary Sewer Master Plan (SSMP).

12.2.2 Proposed Sanitary Sewer Capacity

Sanitary sewer models for the Project have been developed to confirm the sanitary sewer system designs and capacity and will be included in the SSMP. Capacity of the existing 21-inch sanitary sewer main in 3rd Street is adequate to serve the Project. An analysis of the impacts of the proposed development demands on the existing upstream and downstream infrastructure will be reviewed as part of the SSMP approval process.

The project proposes to utilize the existing Port SSPS at the corner of Terry A Francois Boulevard to convey proposed demands from Piers 48 and 50, similar to the existing condition, as well as development parcels fronting Terry A Francois Boulevard to the existing SFPUC sewer system within Mission Bay. Although the Mission Bay Sanitary Sewer Master Plan includes increased loads on the Port SSPS, the Port is unsure of the ability of the aging pump station to handle additional loads and is in the process of reviewing the capacity of the SSPS. Subject to the results of the analysis, the project may be required to fund upgrades to or replacement of the existing facility to support the anticipated tributary demands from the Project and acceptance of the facilities by the Acquiring Agency.

12.2.3 Proposed Sanitary Sewer Design Basis

The proposed sanitary sewer system will be designed in accordance with the City of San Francisco Subdivision Regulations (Subdivision Regulations) and SFPUC wastewater utility standards. The design basis will be described in greater detail as part of the SSMP.

12.2.4 Proposed Sanitary Sewer Design Criteria

The proposed separated sewer system is intended to convey sanitary sewer flow from the Project. The physical and capacity design criteria for the sanitary sewer system are presented in Table 12.1.

Table 12.1

Mission Rock Separated Sewer Main Design Criteria

Parameter	Criteria/Value
Pipe material for pipe sizes 6-inch to 21-inch inside diameter	VCP (ASTM C-700 Extra Strength) HDPE with special approval from SFDPW and SFPUC
Manhole spacing	300-feet preferred 350-feet maximum (subject to approval of SFPUC)

Minimum depth of cover for mains	6-feet minimum unless otherwise approved by the SFPUC on a case-by-case basis
Minimum flow velocity (<i>average dry weather</i>)	2 fps
Minimum infiltration intensity	0.003 second feet per acre
Manning's n (roughness coefficient) for proposed pipes	VCP: 0.013 HDPE: 0.010
Maximum Pipe Flow Depth Ratio, d/D (<i>average dry weather sanitary flow</i>)	0.50
Sewer Generation	100 GPD / capita

TABLE 12.1 NOTES:

VCP = Vitrified Clay Pipe

fps = feet per second

 d/D = ratio of the depth of flow (d) to the pipe inside diameter (D)**12.2.5 Proposed Sanitary Sewer Collection System**

The proposed sanitary sewer system is identified schematically on Figure 12.1. The sanitary sewer system will be designed and constructed by the Developer. Sanitary sewer designs will be reviewed and approved by the Acquiring Agency. Upon construction completion and improvement acceptance by the Acquiring Agency, the new sanitary sewer system will be maintained and owned by the Acquiring Agency. The proposed system will include sanitary sewer laterals connected to a new system of 8-inch to 12-inch gravity sanitary sewer mains.

The development will connect to the existing sanitary sewer main on 3rd Street at two locations. At the intersection of Channel Street and 3rd Street and the intersection of Long Bridge Street and 3rd Street, the on-site sanitary sewer system will connect to existing sanitary sewer main at new SFPUC manhole structures.

The remainder of the development sanitary sewer flows, in addition to the flows from Pier 48 and Pier 50, will connect to the new sanitary sewer main in Terry A Francois Boulevard.

See Figure 12.2 for a typical utility cross-section identifying the approximate sanitary sewer system depth and its horizontal relationship to other adjacent utilities.

12.2.6 Structured Street Drainage

Due to geotechnical constraints, the Project will provide structured street sections which will require subdrains to prevent accumulation of water on the structured street. Subdrains will be installed on all structured streets and be sloped to sanitary sewer connection locations. Sump pumps may be required where the structured street connects to Terry A Francois Boulevard, Mission Rock Street, and 3rd Street, if required for drainage at the low points. Ownership, maintenance and acceptance of the subdrains will be by the Acquiring Agency subject to the DA and DDA.

12.3 Design Modifications and Exceptions

Proposed pipe slopes and cover are constrained within the Project by the existing adjacent sanitary sewer system infrastructure. The existing adjacent sanitary sewer system does not have adequate depth or cover to provide compliant pipe covers. A minimum cover of 6-feet will be provided on top of mains within public streets, where less than 6-ft of cover is provided, a design modification and exception request for a reduced cover depth of up to 4-feet will be submitted for approval by the Director of Public Works with the consent of the SFPUC during the construction document approval process. Anticipated locations where a design modification and exception requests for reduced pipe cover are shown on Figure 12.3.

With the cover and slope constraints, VCP sanitary sewer mains will not provide adequate flow velocities or capacities. To provide the minimum flow velocity of 2 ft/sec and sufficient flow capacity with the limited available pipe slopes, the Project proposes to install fusion-welded high density polyethylene (HDPE) pipe SDR-17 or better. The HDPE pipe has less friction than VCP and will provide adequate flow velocities and flow capacities. HDPE pipe will be flex tested using Mandrel test. Design modification and exception requests to allow HDPE pipe are subject to the approval of the Director of Public Works with the consent of the SFPUC.

Vertical and horizontal separation distances between adjacent sanitary sewer system, storm drain system, potable water, and dry utilities will conform to the requirements outlined in Title 22 of the California Code of Regulations and the State of California Department of Health Services Guidance Memorandum 2003-02 and subdivision regulations. As shown in Figure 12.2 and described in Section

10, the sanitary sewer mains are proposed to be offset from the center of the street to ensure that adjacent water lines can be placed outside of the proposed bulb-outs while maintaining the required health code separation clearances. Horizontal clearances for proposed sanitary sewer infrastructure are provided in the Section 10 Utility Layouts and Separations. Design modification and exception requests to allow for alternative pipe locations are subject to the approval of the Director of Public Works with the consent of the SFPUC.

12.4 Phases for Sanitary Sewer System Construction

The Developer will design and install the new sanitary sewer system based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the proposed sanitary sewer systems installed will be the minimum necessary to support the Development Phase. The new Development Phase will connect to the existing systems as close to the edge of the Development Phase area as possible while maintaining the integrity of the existing system for the remainder of the Project. Repairs and/or replacement of the existing facilities necessary to support the proposed Development Phase will be designed and constructed by the Developer. Interim sanitary sewer systems connecting to SFPUC or Port owned infrastructure will be owned, constructed and maintained by the Developer as necessary to maintain existing sanitary sewer facilities impacted by proposed Development Phases. The Developer will own and maintain interim facilities, as required, until completion of the Development Phase.

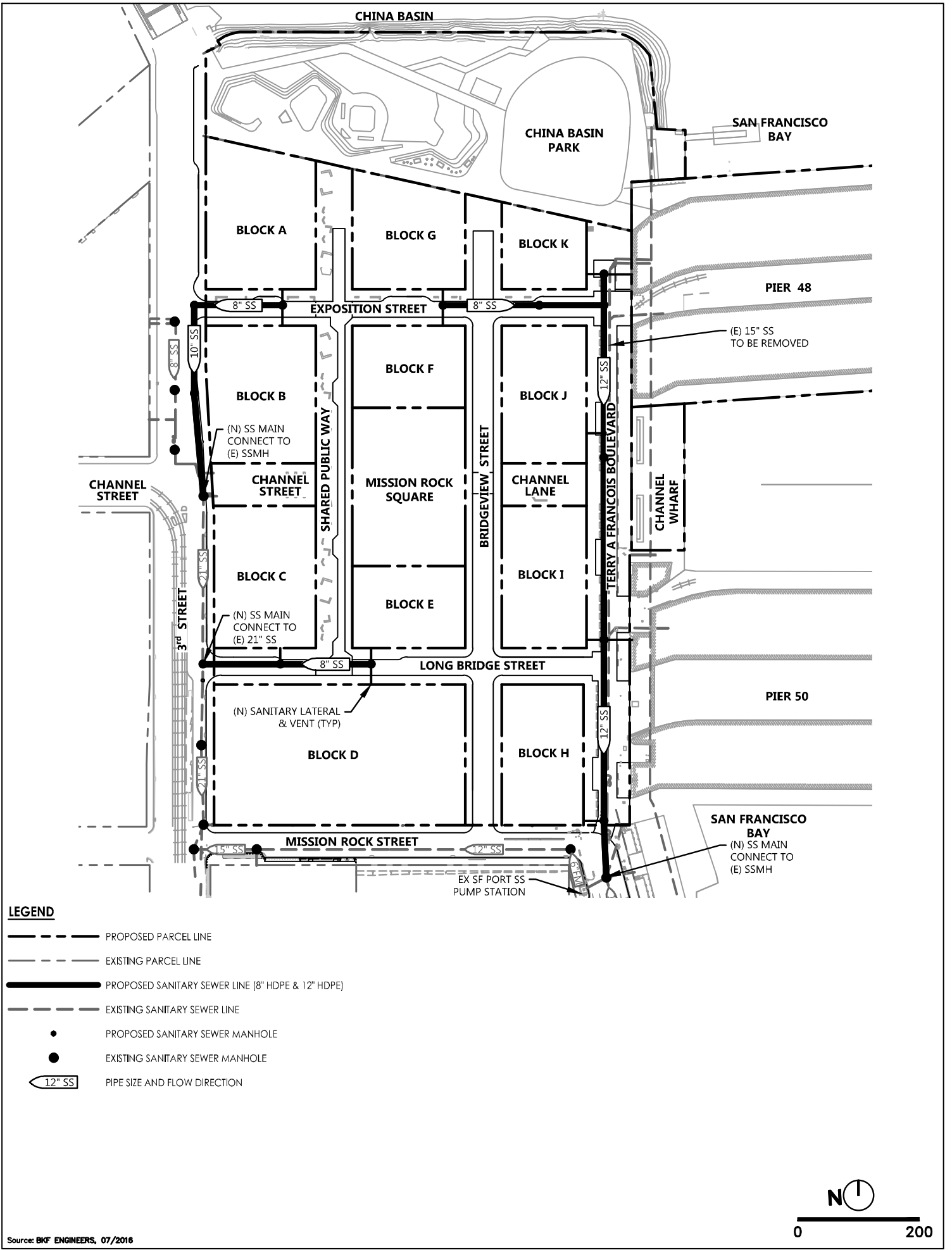
The Port and City are responsible for maintenance of the existing Port and City sanitary sewer facilities, respectively. The Acquiring Agency will be responsible for the proposed sanitary sewer system once construction of the horizontal improvements for Development Phase or new sanitary sewer system is complete and accepted by the Acquiring Agency. The Developer will be responsible for mitigating impacts to improvement installed with previous Development Phases of the Project due to the designs or construction of new Development Phases and will be addressed prior to approval of the construction drawings for the new Development Phase. Pipes and manholes adjacent to a new Development Phase must undergo inspection before and after construction of the new Development Phase. For each Development Phase and concomitant with the submittal of construction documents, the Developer will provide a phase-specific Sanitary Sewer System Utility Report describing and depicting the existing and

proposed storm drain infrastructure, and demonstrating the that Development Phase will provide drainage infrastructure capable of serving the Development Phase to the standards of the Acquiring Agency.

12.4.1 Existing Sanitary Sewer System Demolition Phasing

The existing sanitary sewer system adjacent to the site along 3rd Street and Mission Rock Street will remain. The existing on-site 15-inch combined sewer main is located in Terry A Francois Boulevard east of Seawall Lot 337 and connects to the existing sanitary sewer manhole at the intersection of Mission Rock Street and Terry A Francois Boulevard. The portion of this main that along the frontage of Pier 48 and Pier 50 will remain to provide service to the Piers. This main is proposed to be replaced with a 12-inch separated sanitary sewer system during the redevelopment of Terry A Francois Boulevard. New connections will be provided to Pier 48 and Pier 50 branching from the new main.

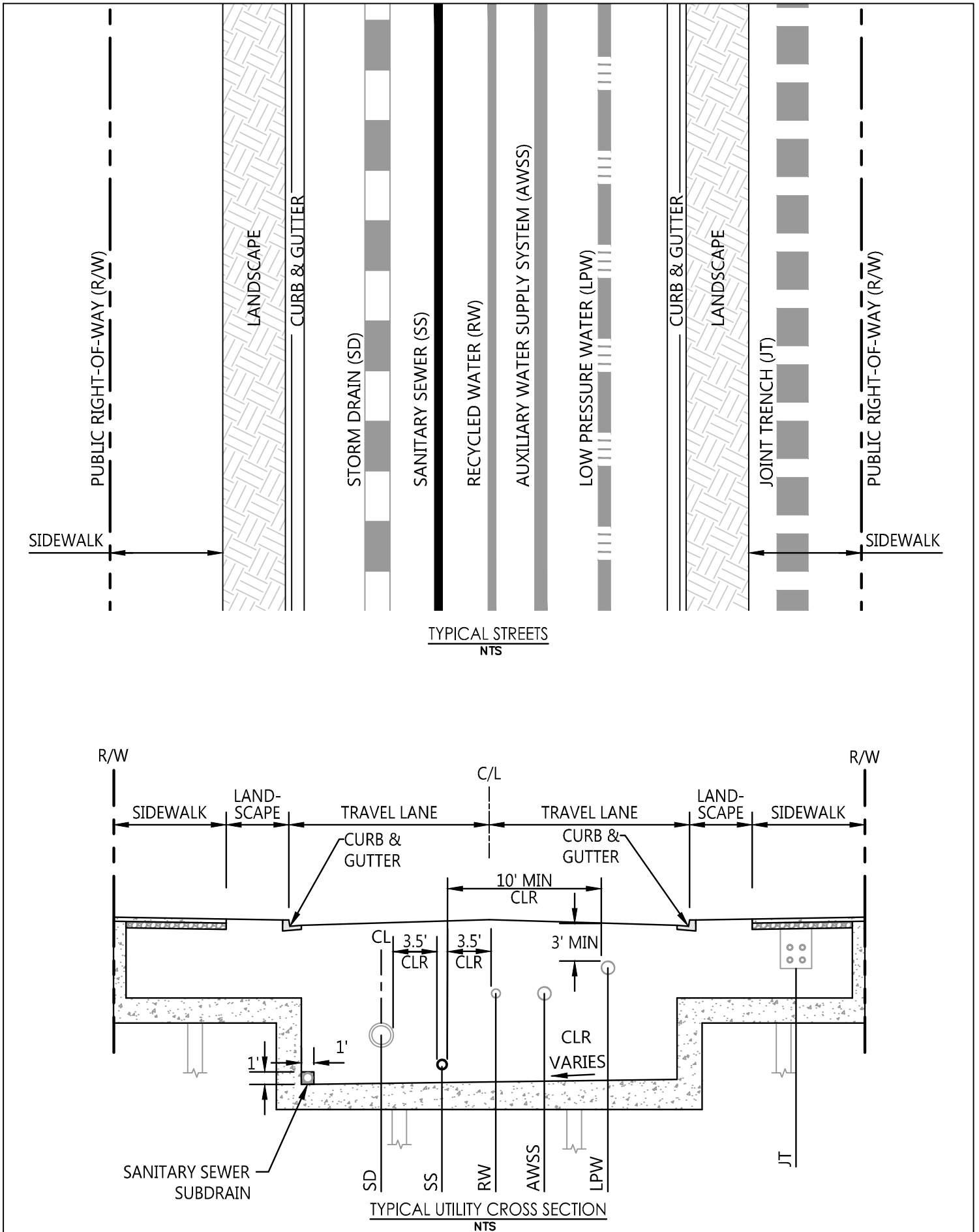
DRAWING NAME: \\net-sf\vol14\2008\080808_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 12.1 Conceptual Sanitary Sewer System.dwg
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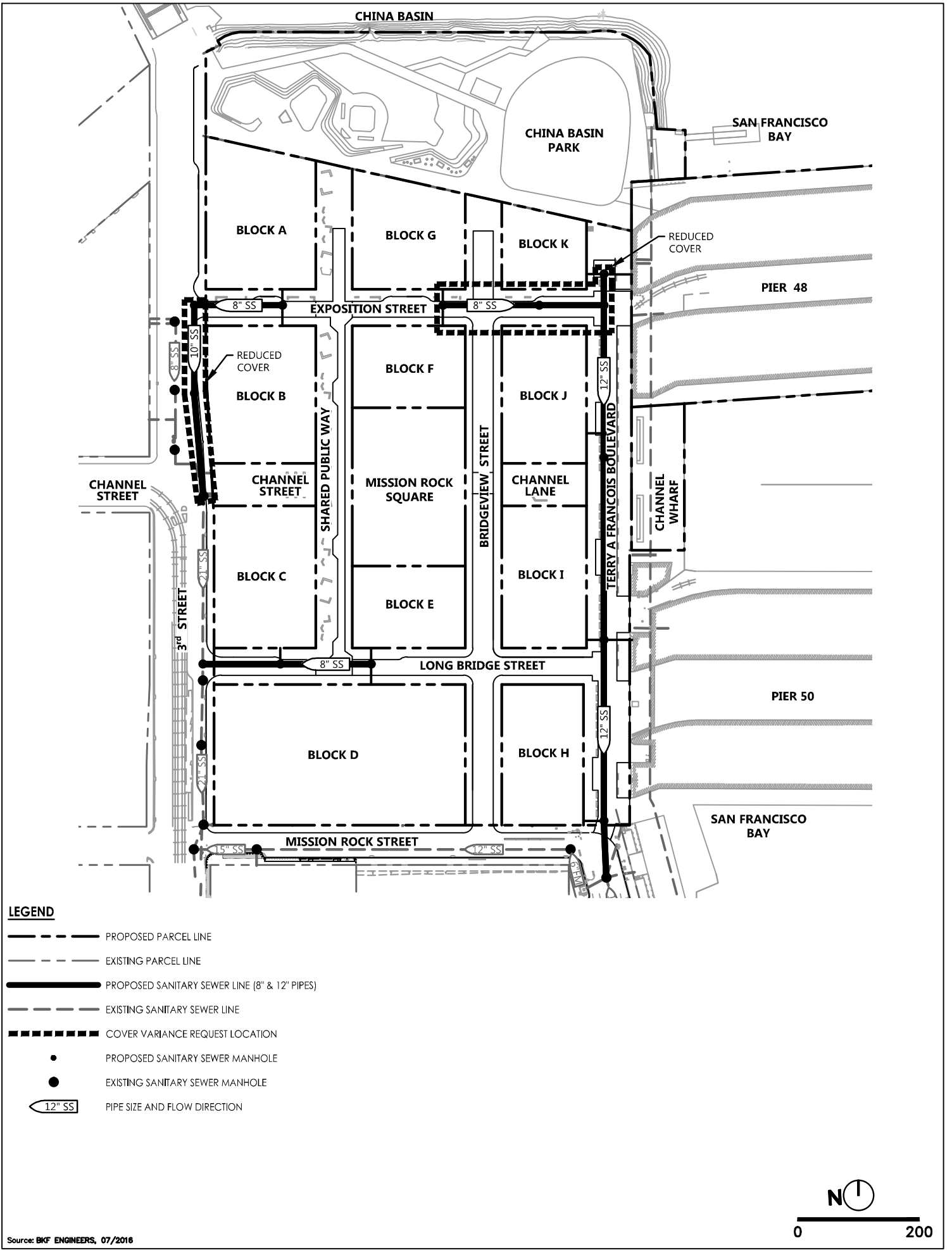
FIGURE 12.1 - CONCEPTUAL SANITARY SEWER SYSTEM

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MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 12.3 - SANITARY SEWER VARIANCE REQUEST LOCATIONS

13. STORM DRAIN SYSTEM

13.1 Existing Storm Drain System

The existing storm drain infrastructure within the vicinity of the Project site has a separated storm sewer system to the west, south, and east, and two separate Port-owned outfalls that drain to the San Francisco Bay. The west side of the Project is served by an existing separated storm drain system within 3rd Street that is routed to the future Mission Bay Stormwater Pump Station (SWPS) #3 for discharge to Mission Creek. Until SWPS #3 is constructed, stormwater flows continue past SWPS #3 into an existing 11' x 11' combined sewer box that drains to the existing Channel Street Pump Station. The re-aligned Mission Rock Street to the south has a new separated storm drain system that conveys stormwater to Mission Bay SWPS #6 to the south that discharges to the San Francisco Bay adjacent to the Radiance Development and Block P18. Both China Basin Park and Terry A Francois Boulevard (TFB) have storm drain systems that discharge directly to the San Francisco Bay through Port-owned existing Port-owned outfalls. The existing Pier 48 and Pier 50 structures have a separated storm drain system that discharge directly to the Bay from the piers.

Storm drain system capacities within the existing 42 inch storm drain system in 3rd Street and the 21 inch storm drain main in Mission Rock Street are adequate to serve the tributary drainage areas from the Project. As described in the Draft Drainage Report for Mission Bay Drainage Area D (September, 2012), the existing storm drain system provides the minimum freeboard requirement for a 5-year storm event. Pump station designs have also been sized to meet the 5-year storm event requirements and are summarized in The Basis of Design Mission Bay Stormwater Pump Station #3 Draft Report (May, 2009).

13.2 Conceptual Storm Drain System Design

13.2.1 Overview

The Project will replace the existing on-site storm drain system with new storm drain systems connecting into the existing separated storm drain systems serving the site. The proposed separated storm drain system will be designed in accordance with the Subdivision Regulations and the Stormwater Management Requirements and Design Guidelines (SMR) and other SFPUC wastewater standards, where applicable. The on-site storm drain system will be designed to convey the stormwater runoff from the 5-year storm event from the development parcels and streets. For the 100-year storm and overland release, the storm drain system, street section, and

street grading will be designed to convey the stormwater runoff from the Development Parcels and streets. The proposed street grading and storm drain infrastructure has been designed to accommodate the 5-year storm event, 100-year storm event, and overland release. A more detailed analysis will be included in the Grading and Storm Drain System Master Plan.

13.2.2 Storm Drain Design Criteria

As documented in the Subdivision Regulations and San Francisco Public Utility Commission (SFPUC) utility standards, as appropriate, proposed 6-inch to 21-inch pipes will be constructed from ASTM C-700 Extra Strength Vitrified Clay Pipe (VCP). Main extensions for 36-inch pipes or larger shall require monolithic reinforced concrete or reinforced concrete pipe subject to approval by the Director with consent of the SFPUC.

Proposed Acquiring Agencies' storm drain mains within the Project will be constructed on approved crush rock bedding. The minimum residential and commercial service lateral size is 6-inches and 8-inches, respectively. Manhole covers will be solid with manhole spacing set at a maximum distance of 300-feet and at changes in size, grade or alignment. Stormwater inlets will be installed per the Subdivision Regulations or SFPUC wastewater utility standards and outside of the curb returns crosswalks, accessible passenger loading zones and accessible parking spaces, where feasible. Trench drains within the bike and pedestrian zones of TFB and SPW will be installed to be American with Disabilities Act (ADA) compliant. For the curbless street of TFB, this street was modeled to confirm that a 4-foot wide accessible path is maintained while overland release from the 100-year storm event occurs within the street. While Share Public Way (SPW) is also curbless, the analysis found the storm drain system was sized adequately prevent the HGL of the 100-year storm design from reaching the surface. The starting HGL for the model has assumed the top of curb elevation at adjacent street conforms along 3rd Street.

Storm drain system capacities within the existing 42-inch storm drain system in 3rd Street and the 21-inch storm drain main in Mission Rock Street are adequate to serve the entire buildout of the project. A minimum depth of cover of 6-feet will be required on top of storm drain mains within public streets. A freeboard of 4-feet below pavement or ground will be required to conform to the Subdivision Regulations or SFPUC utility standards. If necessary, an alternative minimum cover of 4-feet and/or minimum freeboard of 2-feet below pavement or ground may

be permitted by the Acquiring Agency, or if accepted by the City, the DPW Director with the consent of the SFPUC or Port.

Vertical and horizontal separation distances between adjacent sanitary sewer system, storm drain system, potable water, district utilities, and dry utilities will conform to the requirements outlined in Section 10 and the Subdivision Regulations.

13.2.3 Conceptual Storm Drain System Layout

The conceptual storm drain system is identified schematically on Figure 13.1. The storm drain system will be designed and constructed by the Developer. Street storm drains including street drainage within the new public rights-of-way will be reviewed and approved by the Acquiring Agency. The new storm drain system will be maintained and owned by the Acquiring Agency, upon construction completion and improvement acceptance by the Acquiring Agency. The proposed system will include storm drain laterals connected to a system of 12-inch to 42-inch publicly-owned gravity storm drain mains.

The conceptual storm drain system will connect to the existing storm drain systems at up to seven locations. Along 3rd Street, the on-site storm drain system will connect to existing 42-inch main through proposed manhole structures at Exposition Street, Channel Street, Long Bridge Street, China Basin Park, and the west half of Block D. The storm drain system within TFB will drain to a sump to pump low flows to China Basin Park for treatment. For larger storm events, TFB will connect into an existing 30-inch culvert draining to the San Francisco Bay between Pier 48 and Pier 50. China Basin Park storm drain system will connect into an existing 12-inch culvert draining to China Basin for discharge of treated stormwater or to the proposed connection to 3rd Street for larger storm events.

See Figure 13.2 for the approximate storm drain system depth and its relationship to other adjacent utilities. The storm drain infrastructure layout and locations will be approved during the Project construction document review process.

13.3 Storm Drain System Design Modifications and Exceptions

13.3.1 Pipe Material

The Project proposes to install High density polyethylene (HDPE) pipe SDR-17 or better and associated trenching requirements in place of RCP. The HDPE pipe has less friction than VCP, is more flexible and can better accommodate minor amounts of settlement, and will provide adequate flow velocities and capacities. In addition, HDPE pipe will be flex tested using Mandrel test. Design modification and exception requests to allow HDPE pipe will be subject to the approval of the Director of Public Works with the consent of the SFPUC, or other Acquiring Agency.

13.3.2 Freeboard and Cover

Due to existing conditions and constraints within the Project site, exceptions to the standard layout of utilities will be requested. A design modifications and exception will be requested to allow for a reduced minimum cover of 4-feet on top of the storm drain system infrastructure. As a result, the 5-year storm design analysis showed that the conceptual storm drain system was only able to provide a minimum hydraulic grade line (HGL) of 2-feet of freeboard below the pavement or ground surface due to existing high starting HGL elevations at existing storm drain connections. Design modification and exception requests to all for reduced pipe cover are subject to the approval of the Director of Public Works with the consent of the SFPUC, or other Acquiring Agency.

13.3.3 Linear Drainage Infrastructure on Curbless and Flush Curb Streets

For TFB, SPW, and the northern segment of Bridgeview Street, a design modification and exception will be requested for the curbless or flush curb conditions. Linear drainage elements are proposed along the theoretical face of curb of the curbless streets, which represents the location in which a curb would typically be installed if included as part of the street design, and along flush curbs. In addition, linear drainage elements, will also be rated to handle heavy vehicle (H20) traffic loading. While analysis of SPW for the 100-year storm event showed stormwater remained within the storm drain system below the surface, TFB was able to maintain a minimum 4-feet wide accessible path during overland release within the flush curb conditions. Design modification and exception requests to allow for alternative pipe locations are subject to

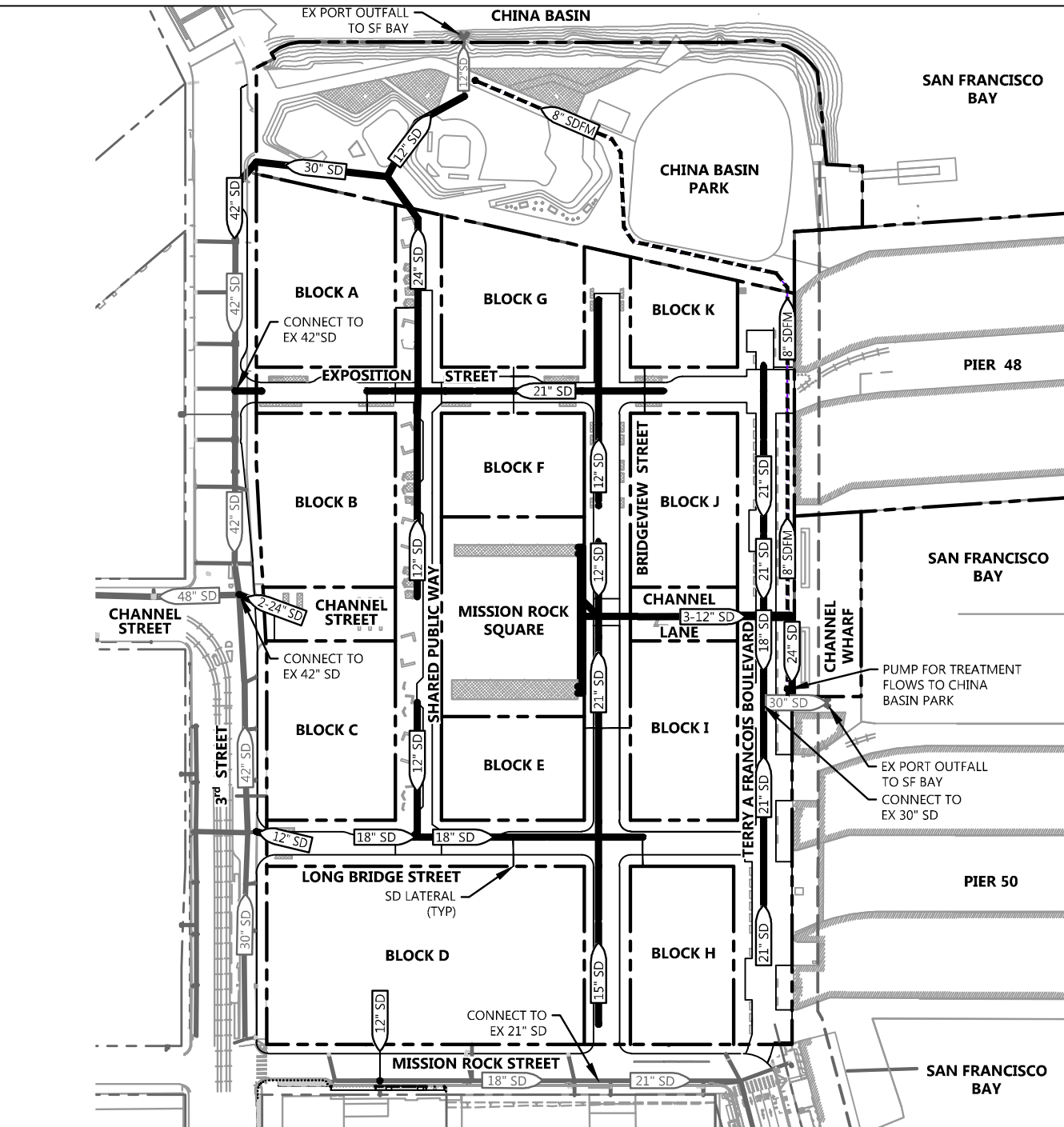
the approval of the Director of Public Works with the consent of the SFPUC, or other Acquiring Agency.

13.4 Phases for Storm Drain System Construction

The Developer will design and install the new storm drain system based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the proposed storm drain systems installed will be the minimum necessary to support the Development Phase. The new Development Phase will connect to the existing systems as close to the edge of the Development Phase area as possible while maintaining the integrity of the existing system for the remainder of the Project. Repairs and/or replacement of the existing facilities necessary to support the proposed Development Phase will be designed and constructed by the Developer. Interim storm drain systems will be constructed and maintained by the Developer as necessary to maintain existing drainage facilities impacted by proposed Development Phases.

The Port and City will be responsible for ownership and maintenance of existing Port or City owned storm drain facilities, respectively. The Acquiring Agency will own and maintain the proposed storm drainage facilities once construction of the horizontal improvements required for a Development Phase or a new storm drain facility is complete and accepted by the Acquiring Agency subject to the DA and DDA. The Developer will be responsible for mitigating impacts to improvement installed with previous Development Phases of the Project due to the designs or construction of new Development Phases and will be addressed prior to approval of the construction drawings for the new Development Phase. For each Development Phase and concomitant with the submittal of construction documents, the Developer will provide a phase-specific Storm Drain System Utility Report describing and depicting the existing and proposed storm drain infrastructure, and demonstrating that the Development Phase will provide drainage infrastructure capable of serving the Development Phase to the standards of the Acquiring Agency.

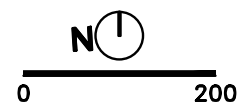
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LEGEND

- PROPOSED PARCEL LINE
- EXISTING PARCEL LINE
- EXISTING STORM DRAIN MAIN (12" SD)
- PROPOSED STORM DRAIN MAIN (12" SD)
- PROPOSED STORM FORCE MAIN (8" SDFM)
- EXISTING STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN MANHOLE
- BIORETENTION AREA

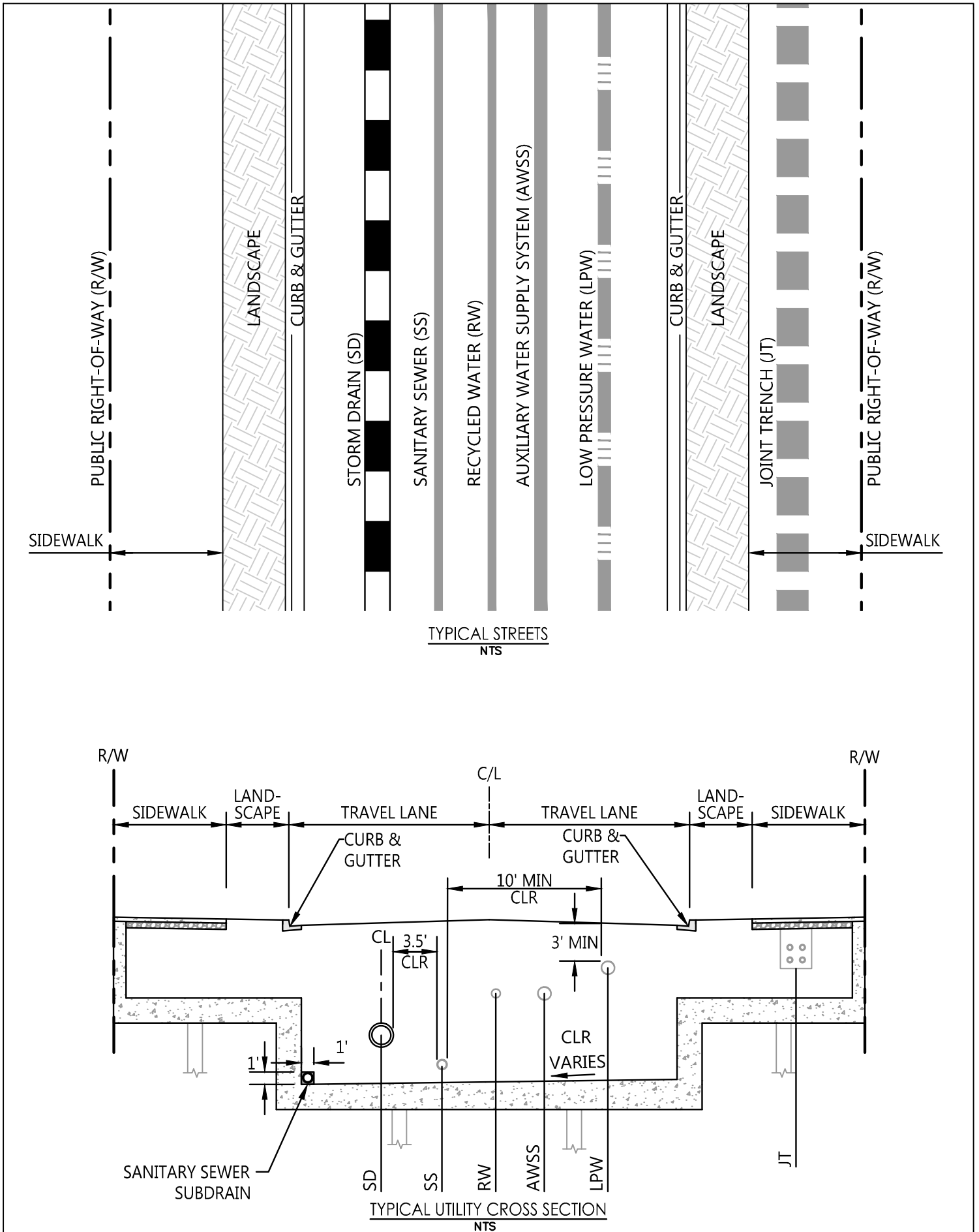
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MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 13.1 - CONCEPTUAL STORM DRAINAGE SYSTEM

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14. AUXILIARY WATER SUPPLY SYSTEM (AWSS)

14.1 Existing AWSS Infrastructure

The San Francisco Public Utilities Commission (SFPUC), in cooperation with the San Francisco Fire Department (SFFD), owns and operates the Auxiliary Water Supply System (AWSS), a high-pressure non-potable water distribution system dedicated to fire suppression that is particularly designed for reliability after a major seismic event. Currently, a 12-inch AWSS main exists adjacent to the Project site on 3rd Street between Channel Street and Mission Rock Street.

14.2 AWSS Regulations and Requirements

New developments must meet the fire suppression objectives that were developed by the SFPUC and SFFD. The SFPUC and SFFD will work with the Developer to determine post-seismic fire suppression requirements during the planning phases of the Project. Requirements will be determined based on building density, fire flow and pressure requirements, City-wide objectives for fire suppression following a seismic event, and proximity of new facilities to existing AWSS facilities. AWSS improvements will be located in public rights-of-way or on City property, as approved by SFPUC. Easements required to place AWSS infrastructure on Port property are subject to the approval of the Port and SFPUC.

14.3 Conceptual AWSS Infrastructure

To meet the SFPUC and SFFD AWSS requirements, the development may be required to incorporate infrastructure and facilities that may include, but are not limited to:

- Seismically reliable 12-inch high-pressure water piping and hydrants with connection to existing AWSS distribution system;
- Independent network of seismically reliable low-pressure piping and hydrants with connection to existing potable water distribution system at location that is determined to be seismically upgraded by SFPUC;
- Saltwater pump station that supplies saltwater to AWSS distribution piping following a major seismic event;
- Piping manifolds along waterfront that allow fire trucks to access and pump sea or bay water for fire suppression; and/or
- Portable water supply system (PWSS), including long reaches of hose and equipment mounted on dedicated trailers or trucks.
- Cisterns

The proposed locations and types of AWSS infrastructure are identified schematically on Figure 14.1 and approximate AWSS main depths and its relationship to other adjacent utilities are shown on Figure 14.2. AWSS fire hydrants are provide at each street intersection within the Project site. The Project proposes a piping manifold in the Channel Wharf to allow fire trucks access to pump sea or bay water for fire suppression. A conceptual manifold detail is included in Appendix M. Final designs of the AWSS solution for the Project site will be determined by the SFPUC and SFFD in consultation with the Developer.

14.4 Phases for AWSS Construction

The Developer will design and install the new AWSS based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the proposed AWSS installed will be the minimum necessary to support the Development Phase. The new Development Phase will connect to the existing systems as close to the edge of the Development Phase area as possible while maintaining the integrity of the existing system for the remainder of the Project. Repairs and/or replacement of the existing facilities necessary to support the proposed Development Phase will be designed and constructed by the Developer. Interim AWSS will be constructed and maintained by the Developer as necessary to maintain existing AWSS facilities impacted by proposed Development Phases.

The SFPUC will be responsible for the new AWSS facilities once construction of the improvements is complete, and they are accepted by the City. Impacts to improvements installed with previously constructed portions of the development due to the designs of other phases will be the responsibility of the Developer and addressed prior to approval of the construction drawings for the new phase.

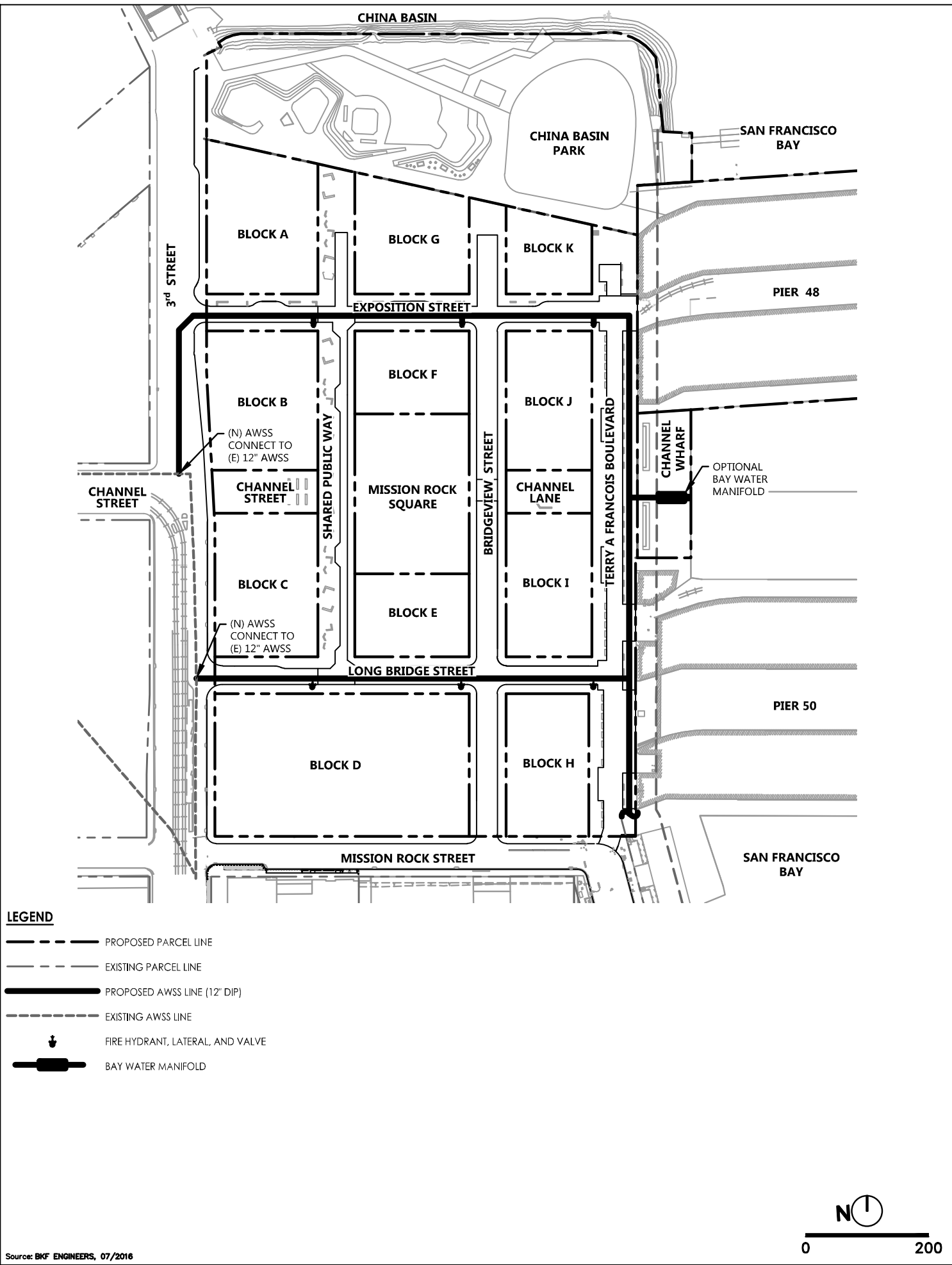
14.4.1 AWSS Phased Installation

The Mission Rock AWSS will be installed within the phased structured streets, 3rd Street and Terry A Francois Boulevard. The existing AWSS adjacent to the site along 3rd Street will remain in place. The new system will connect to the existing system at the adjacent existing AWSS main along 3rd Street.

For each Development Phase, the SFPUC, in conjunction with its consultants, will provide an AWSS Report describing and depicting the pressures and flows the AWSS provides with the

Phase. The construction documents and installation of AWSS infrastructure will be completed by the Developer in coordination with the SFPUC.

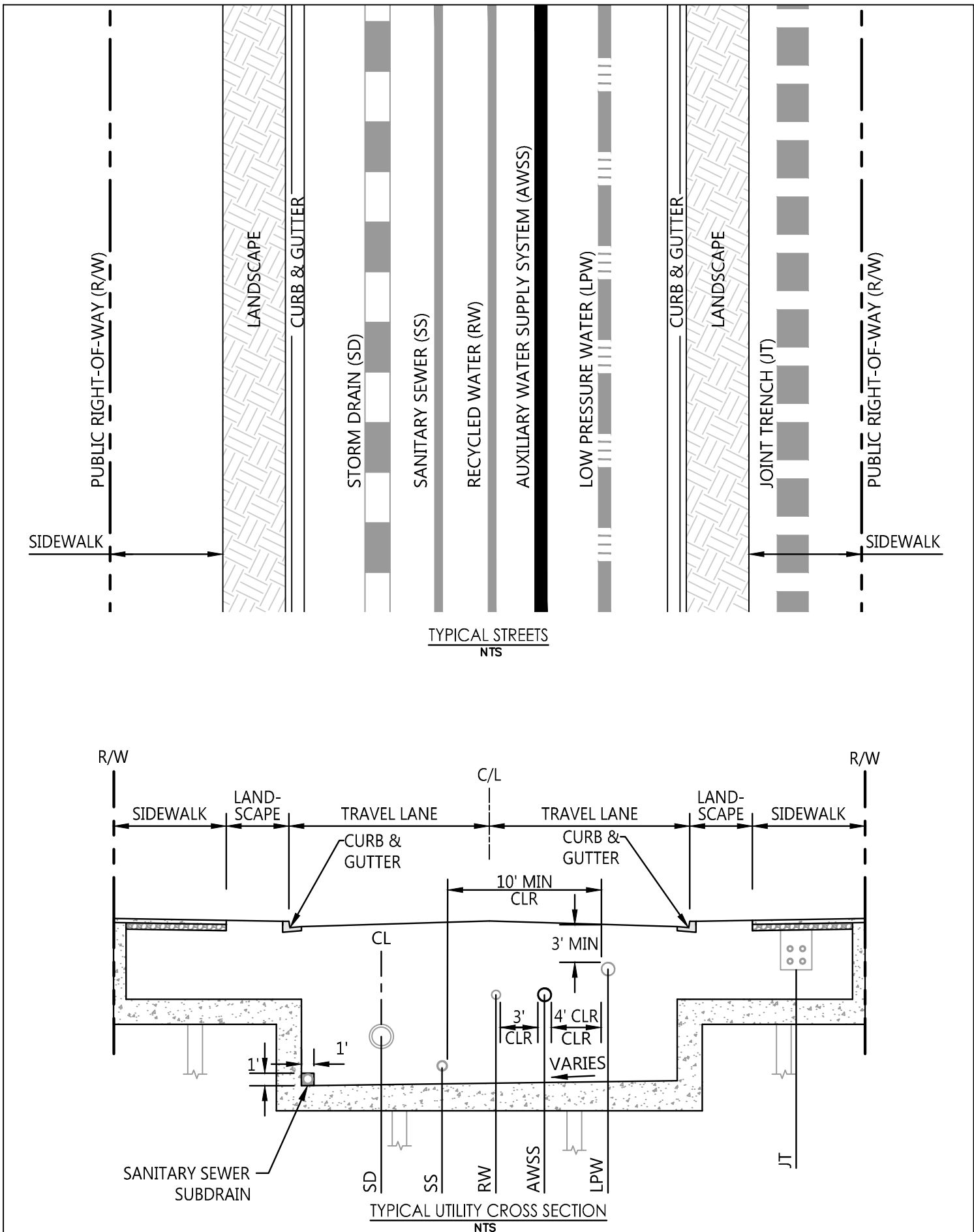
DRAWING NAME: \\bak-sf\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 14.1 Conceptual Auxiliary Water Supply System.dwg
PLOT DATE: 07/13/17
PLOT BY: FELI



MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 14.1 - CONCEPTUAL AUXILIARY WATER SUPPLY SYSTEM

DRAWING NAME: \\n4-sr\vol4\2008\060008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 11.2_14.2 Typical Util Section.dwg
 PLOT DATE: 07-13-17 PLOTTED BY: FELI



Source: BMF ENGINEERS, 07/2016

15. DISTRICT UTILITY INFRASTRUCTURE

15.1 Central Utility Plant

The Mission Rock development will utilize a central utility plant (CUP) in Block A for heating and cooling, greywater collection treatment, and non-potable water distribution infrastructure required to achieve the sustainability goals of the Project. The heating and cooling may be provided by a bay sourced cooling loop that will connect the Bay to the chillers at the CUP, or through an approved, alternative heat exchange method. Greywater, which refers to wastewater collected from building systems without fecal contamination, will be collected and directed to the CUP for treatment before distribution throughout the Project for non-potable uses. The development is considered a Type-I Eco-District. The infrastructure maximizes efficiencies by providing budget certainty for thermal services. In addition to providing a sustainable district energy system throughout the site, the Type-I Eco-District development will also meet the San Francisco Eco-District guidelines. For additional information, refer to the District Heating and Cooling Services at Mission Rock prepared by Arup, dated May 13, 2016 in Appendix M and the latest edition of the Sustainability Strategy prepared by Atelier Ten.

15.1.1 Central Utility Plant Components

The CUP comprises a central district energy distribution plant, bay source cooling, and a greywater treatment and distribution plant at Block A. The central energy plant will provide chilled and hot water to each Development Parcel to support mechanical system demands. The greywater treatment plant will supply non-potable water to each Development Parcel. The distribution system will be developed with consideration to other site utilities, but is anticipated to be predominately routed through Shared Public Way, Bridgeview Street, and China Basin Park. Considerations for this utility routing include limiting the amount of district utilities that are parallel to the main public utilities in Exposition Street and Long Bridge Street and development phasing. Locations for each Development Parcel's heating hot water and chilled water connections, greywater collection point of connection, and non-potable water distribution point of connection will be determined during the vertical design for each Development Parcel.

15.1.2 Central Energy Plant

The Project has a goal to use renewable energy for 100% of its building energy demands, thereby offsetting its projected greenhouse emissions. The central energy plant will be powered by 100% renewable energy. The renewable energy may be purchased from an off-site renewable

power provider and delivered to the site via the power provider. Chilled water and hot water supply and return lines will distribute heating and cooling energy from the central energy plant at Block A to each Development Parcel. Each Development Parcel will be required to connect to this system, which also significantly reduces the volume of water required by cooling towers. Chilled water and heating hot water supply lines are distributed to the Development Parcels from the central energy plant at Block A through Shared Public Way, Bridgeview Street, and China Basin Park.

15.1.3 Heat Rejection and Cooling

Bay water may be used for heat rejection and cooling in the district energy system to minimize the energy demand for cooling and provide significant water savings by reducing the need for cooling towers. Cooling will be provided by the bay source cooling loop that rejects heat from the chillers at the central plant to the Bay. This heat exchange requires very little energy. The HDPE Intake and outfall pipes will be placed within the Pier 48 footprint, at or slightly below the seabed elevation and on top of plastic lumber. The inlet screens will be in deep water, protected by the pier and accessible for maintenance. Secondary screening may also be provided at the pump station on-shore or near the bulkhead. The bay source heat rejection infrastructure will likely consist of two 24-inch pipes located in China Basin Park that provide a connection between the intake/outfall at Pier 48 and the central plant at Block A, shown on Figure 15.1. Backup cooling towers may be required for emergency or maintenance operations when the bay source cooling system is offline.

15.1.4 Greywater Collection and Treatment Infrastructure

The Project has established a goal to use non-potable water for 100% of the non-potable water demand. Non-potable water demands include irrigation, toilet flushing, and cooling towers. However, the demand for cooling towers is minimized by the bay source cooling and heat rejection system; thus, the non-potable demands for the purposes of this section include only irrigation and toilet flushing. Greywater will only be collected from the largest greywater-producing buildings, which includes Blocks A and K in Phase 1 and Block F in Phase 3. Greywater is conveyed to the greywater treatment plant in Block A, as shown on Figure 15.2. Non-potable water (treated greywater) is then distributed to the Development Parcels from the central greywater treatment plant at Block A through Shared Public Way, Bridgeview Street, and China

Basin Park, as shown on Figure 15.3. The centralized approach optimizes the collection, treatment, and distribution systems by producing enough non-potable water to meet 100% of the site's flushing and irrigation demands, while minimizing the amount of infrastructure. A backup connection to the City's non-potable water main at 3rd Street will be required for emergency or maintenance operations when the greywater collection and non-potable water distribution system is offline. An interim connection to the low pressure potable water main for the greywater treatment plant may be required by the SFPUC until the SFPUC non-potable water distribution system becomes fully functional.

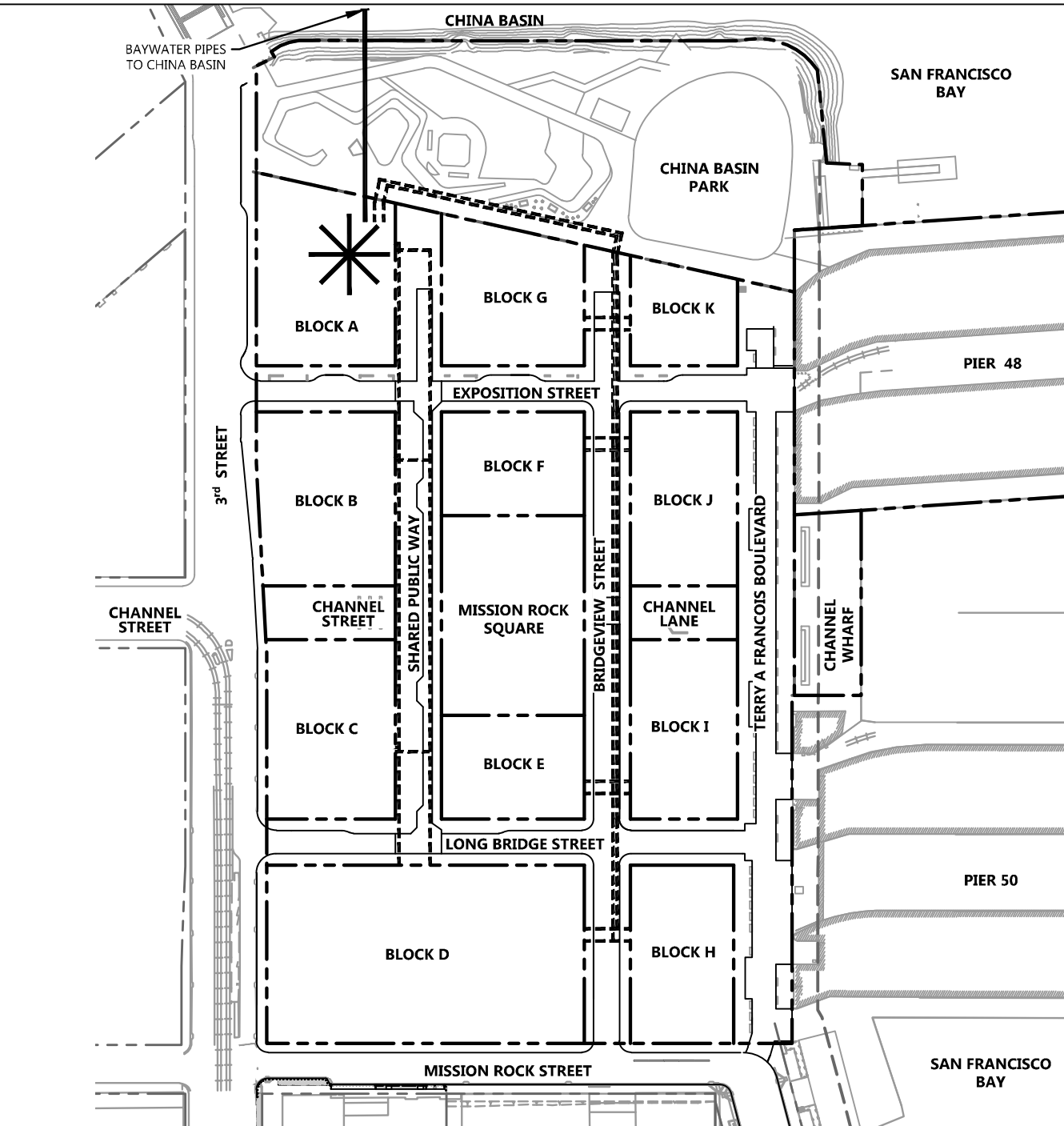
Greywater and non-potable water system designs will comply with Article 12C of the San Francisco Health Code. Required SFPUC water budget application materials will be submitted to the City as part of the phase applications and construction document submittals.

15.2 Phases for District Utility Infrastructure Construction

The Developer will design and install the new central utility district infrastructure based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount and location of the proposed central utility district infrastructure installed will be the minimum necessary to support the Development Phase.

The Private Entity, other Agent, or the Acquiring Agency will be responsible for ownership and maintenance and permitting of new privately owned district utility infrastructure. Ownership, maintenance, and acceptance responsibilities for district utility infrastructure will be documented in the Project DA and DAA. Impacts to central utility district infrastructure installed with previous Development Phases of the Project due to the designs of new Development Phases will be the responsibility of the Developer and addressed prior to approval of the construction drawings for the new Development Phase.

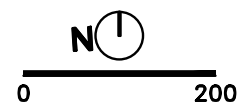
DRAWING NAME: \\sf-sf\4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 15.1 Conceptual Utility District Infrastructure.dwg
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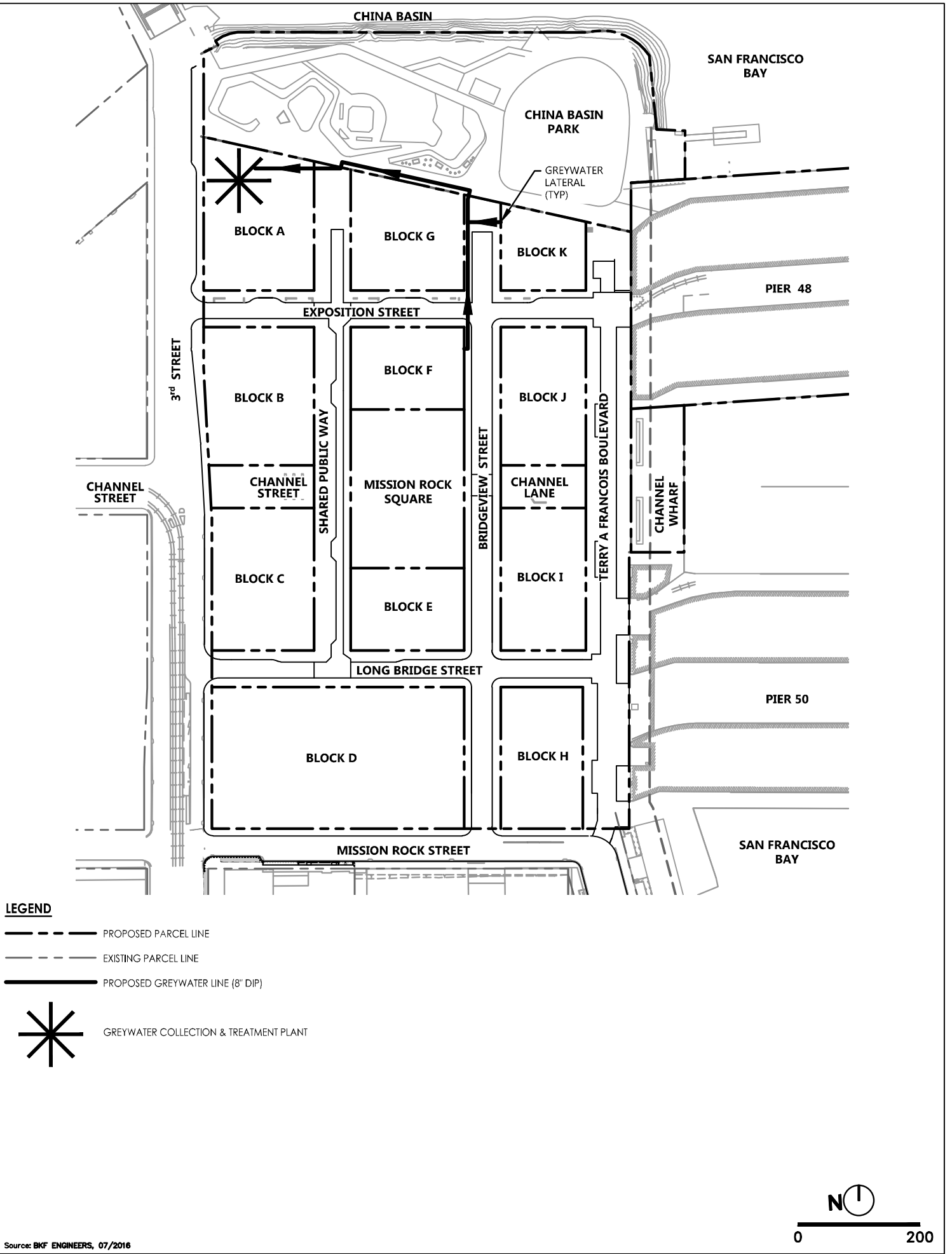
LEGEND

- PROPOSED PARCEL LINE
- - - EXISTING PARCEL LINE
- ==== DISTRICT ENERGY (12" CHW & 8" HHW)
- BAYWATER COOLING (24" HDPE)
- * CENTRAL PLANT
DISTRICT ENERGY DISTRIBUTION

Source: BKF ENGINEERS, 07/2016



DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibits\Plotted Sheets\Figure 15.2 Conceptual Greywater Infrastructure.dwg
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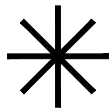
MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 15.2 - CONCEPTUAL GREYWATER INFRASTRUCTURE

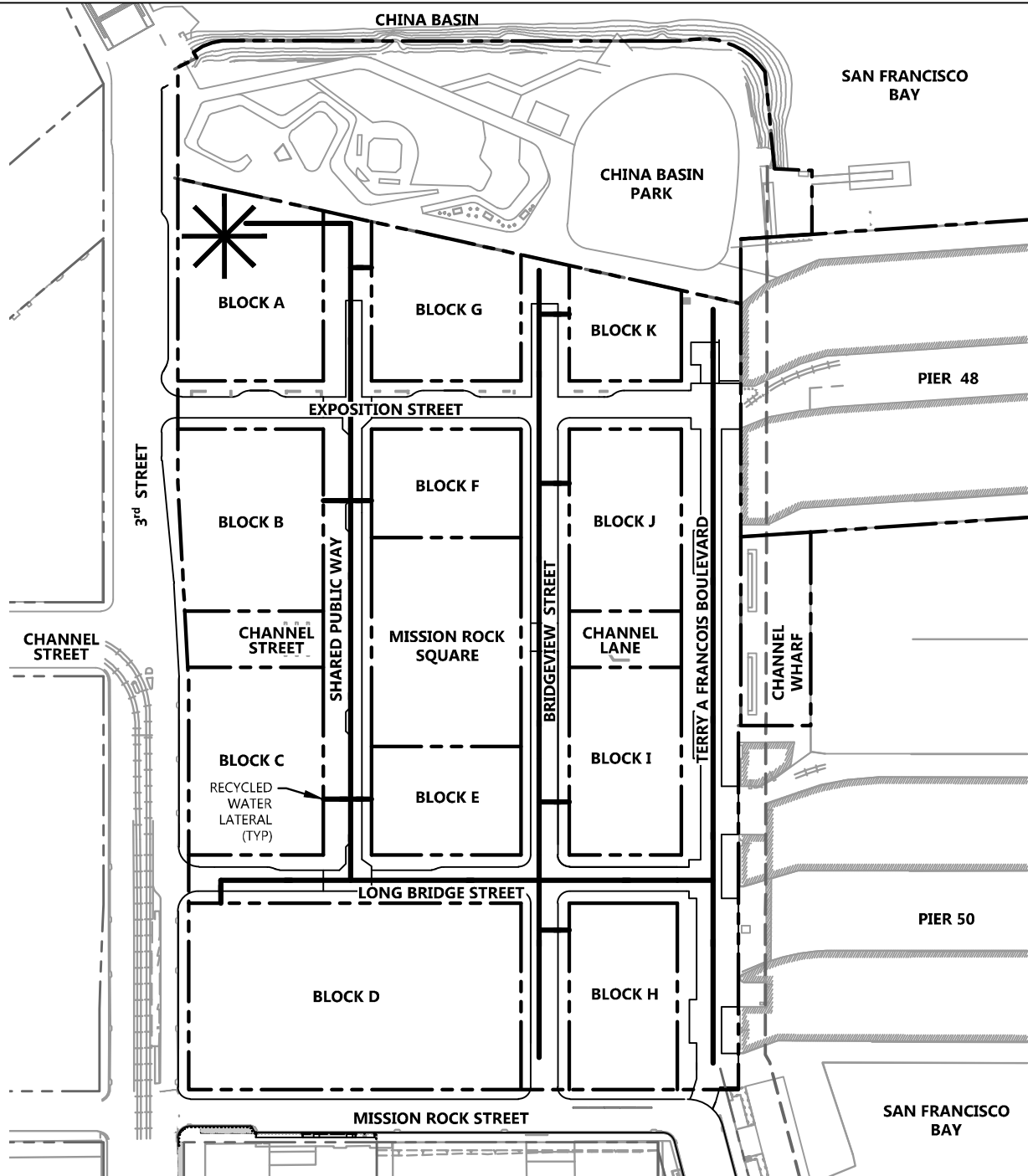
DRAWING NAME: \\pkl-sf\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 15.3 Conceptual Recycled Water Infrastructure.dwg
PLOT DATE: 07/13/17
PLOT BY: FELI

LEGEND

- PROPOSED PARCEL LINE
- EXISTING PARCEL LINE
- PROPOSED NON-POTABLE WATER DISTRIBUTION LINE (8" DIP)



GREYWATER COLLECTION & TREATMENT PLANT



Source: BKF ENGINEERS, 07/2016

16. STORMWATER MANAGEMENT SYSTEM

16.1 Existing Stormwater Management System

The existing site is approximately 96.6 percent impervious, mostly covered in pavement with a park to the north. The existing site drains to storm drain systems that discharged directly or indirectly to the San Francisco Bay. The west side of the Project is served by an existing storm drain system within 3rd Street that is routed to the future Mission Bay Stormwater Pump Station (SWPS) #3 for discharge to Mission Creek. Until SWPS #3 is constructed portions of the run-off discharge to an existing 11'x11' combined sewer. The re-aligned Mission Rock Street has a new storm drain system that conveys stormwater to Mission Bay SWPS #6 to the south that discharges to the San Francisco Bay adjacent to the Radiance Development and Block P18. Both China Basin Park and Terry A Francois Boulevard (TFB) have storm drain systems that discharge directly to the San Francisco Bay through existing outfalls. The existing site did not include any stormwater management systems to either treat or reduce runoff volumes.

16.2 Proposed Stormwater Management System

16.2.1 San Francisco Stormwater Management Requirements & Design Guidelines

The City of San Francisco Stormwater Management Requirements and Design Guidelines (SMR) is the regulatory guidance document describing requirements for post-construction stormwater management. Stormwater management performance requirements are determined based on the storm drain system available to connect into as well as the jurisdiction of the storm drain system. For Project areas that will connect into the City's existing separated storm drain system in 3rd Street and/or Mission Rock Street, the SMR requires the Project to implement a stormwater management plan that results in capture and treatment of all stormwater runoff from the 90th-percentile storm event prior to discharge to the separated storm sewer system. For Project areas that will be served by the Port's separated storm drain system outfalling directly to the San Francisco Bay, the SMR requires the Project to implement a stormwater management plan that results in capture and treatment of all stormwater runoff from the 85th percentile storm event.

16.2.2 Proposed Site Conditions and Baseline Assumptions

The Project includes public streets, parks and plaza open space areas, and private development parcels. The Project will be designed to integrate Low Impact Development (LID) elements with

stormwater best management practices (BMPs) to create a sustainable environment at the site and achieve compliance with the SMR. LID elements include landscaping, permeable paving materials, and vegetated roofs to reduce stormwater runoff from hardscape surfaces. Stormwater treatment BMPs considered for the Project include street flow-through planters, bioretention areas, rain gardens, and green roofs to treat stormwater runoff prior to discharging to the public separated storm drain system.

Public streets will consist of at-grade streets or pile-supported structured streets with a combination of landscape strips, tree wells, permeable pavers, and street flow-through planters. China Basin Park will be elevated by a combination of planting soil and geofoam within the park and structured streets within the promenade. Mission Rock Square may be a pile-supported podium or constructed on lightweight fill, geofoam, and/or imported fill material. China Basin Park and Mission Rock Square will include landscape strips, tree wells, and centralized bioretention areas. The development parcels will be covered entirely with podium structures consisting of a combination of landscape planters, tree wells, green roofs, and pedestrian pathways.

16.2.3 Stormwater Management Design Concepts and Master Plan

The SMR requires the Project to implement BMPs to capture and treat stormwater runoff from all impervious areas for the design storm event. To be included with the Stormwater Management Master Plan, a process flow diagram illustrating the limits of the drainage management areas (DMAs), location of stormwater discharge to existing storm drain system, and jurisdiction of existing storm drain system will be developed to illustrate compliance with the SMR.

The conceptual stormwater management plan for the Project includes DMAs with either localized treatment or centralized treatment facilities. Localized treatment occurs in DMAs that are able to direct surface runoff to BMPs that are sized to treat stormwater runoff from impervious areas per the given design storm event. Private development parcels located within DMAs with localized treatment will allocate a space to implement BMP measures and treat stormwater for the design storm event prior to discharging into the adjacent storm drain

system. Alternatively, these private development parcels also have the option to collect and reuse stormwater on-site.

For areas that are not able to treat surface runoff prior to entering the storm drain system, untreated runoff is pumped to centralized treatment facility located in either China Basin Park or Mission Rock Square. Private development parcels within DMAs without localized treatment are not required to implement additional BMP measures on-site as runoff will be treated in the centralized treatment areas.

The Conceptual Stormwater Management approach for the Project is presented in Figure 16.1. Stormwater management performance quantities and strategies will be documented as part of the Project Stormwater Management Master Plan to be submitted for review and approval by the SFPUC and Port.

16.3 Stormwater Control Plan

Based on the designs to be reviewed and approved by the SFPUC and Port as part of the Stormwater Management Master Plan, the stormwater management strategies for the Mission Rock Redevelopment Site will be documented in a Stormwater Control Plan (SCP) in compliance with SFPUC and Port stormwater management regulations and the requirements of the SMR. The selected modeling methodology will be per the SFPUC and Port Accepted Hydrologic calculation methods. The Preliminary SCP for the public improvements will be submitted for review and approval before the 60% Improvement Plan for each phase of the project, and the Final SCP will be submitted with the 95% Improvement Plan for that phase or Development Parcel and prior to construction. For private development parcels, a Preliminary SCP and Final SCP shall be submitted for approval per SFPUC and Port stormwater management requirements.

16.4 Phases for Stormwater Management System Construction

The Developer will design and install the new stormwater management system based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan included in the DA and DDA. The amount and location of the proposed stormwater management systems installed will be the minimum necessary to support the Development Phase. The new Development Phase will connect to the existing systems as close to the

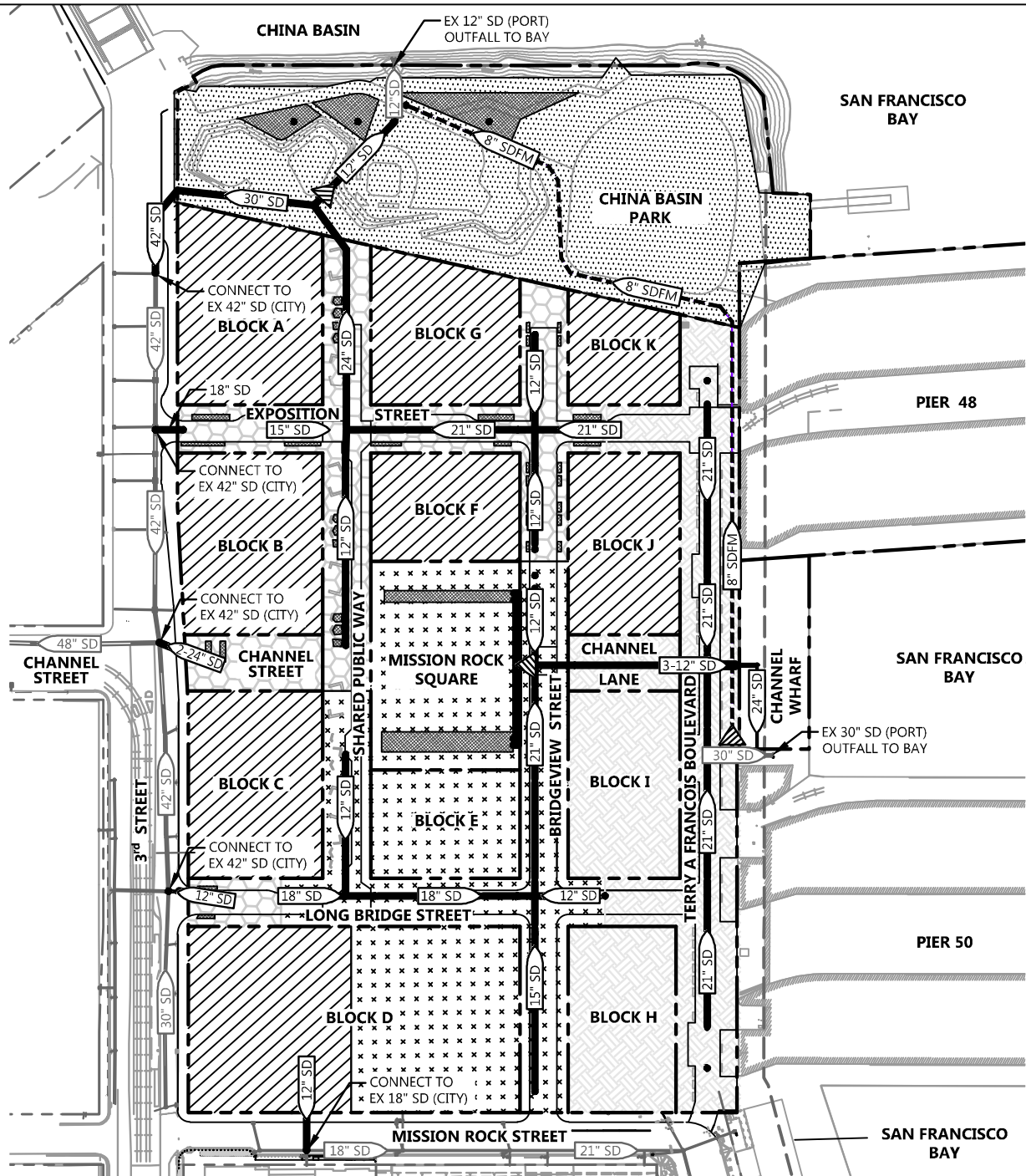
edge of the Development Phase area as possible while maintaining the integrity of the existing system for the remainder of the Project.

At all phases of the development, the Developer must provide functioning and adequate stormwater management in compliance with the SFPUC and Port's post-construction stormwater management requirements and the SMR. The Developer will be required to complete the review process with SFPUC and Port to seek approval for the Preliminary SCP and Final SCP for each Development Phase. In addition, the Developer must complete the construction of the approved stormwater management improvements required for each development phase prior to receiving a temporary certification of occupancy for the development phase.

Permanent or interim centralized stormwater management facilities necessary to achieve stormwater management compliance within a development phase will be constructed and operational prior to or in conjunction with that phase. Interim stormwater BMPs implemented as part of the on-site remediation will be preserved on undeveloped parcels. The Developer will be responsible for constructing and maintaining interim Stormwater management infrastructure.

Stormwater management systems, which may include bioretention areas, street flow-through planters, pump stations, and storage areas located on public or private property within the Project, will be constructed and maintained by the Acquiring Agency, Developer, or its Assignees, where applicable, per the terms of the DA and DDA.

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 PLOT DATE: 07-13-17
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LEGEND

- PROPOSED PARCEL LINE
- - - EXISTING PARCEL LINE
- 30" SD EXISTING STORM DRAIN LINE
- 12" SD PROPOSED STORM DRAIN MAIN
- 8" SDFM PROPOSED STORM DRAIN FORCE MAIN
- PROPOSED STORM DRAIN MANHOLE
- LOCALIZED STORMWATER TREATMENT AT DEVELOPMENT
- LOCALIZED STORMWATER TREATMENT AT STREETS
- PUMPED TO MISSION ROCK SQUARE FOR CENTRALIZED STORMWATER TREATMENT
- PUMPED TO CHINA BASIN PARK FOR CENTRALIZED STORMWATER TREATMENT
- DRAINED TO CHINA BASIN PARK FOR CENTRALIZED STORMWATER TREATMENT
- BIORETENTION AREA



0 200

17. DRY UTILITY SYSTEMS

17.1 Existing Electrical, Gas, and Communication Systems

The existing parking lot is bordered by overhead PG&E electrical lines on Terry A Francois Blvd, 3rd Street and Mission Rock Street. The SFPUC provides electrical service to existing facilities at Piers 48 and 50 using existing rights to the overhead PG&E lines serving Piers 48 and 50 and is responsible for invoicing the existing facilities. Existing street lighting and telecom infrastructure are also located along 3rd Street and Mission Rock Street. Site lighting is also located within the SWL Lot 337 property. 3rd Street serves as a municipal transportation route and contains multiple Overhead Contact System (OCS) lines, owned by SFMTA, which will be maintained during and after construction. Existing PG&E gas and AT&T, or other fiber providers, telecom lines, serving Piers 48 and 50 are located on Terry A Francois Blvd as well.

17.2 Project Power Providers and Requirements

Pursuant to Chapter 99.3 of the San Francisco Administrative Code, all leases and subleases on City property shall receive electric service from the SFPUC unless the SFPUC determines that such service is not feasible. In September 2016, the SFPUC notified the Port and the Developer of its intention to continue to be the electricity provider for the Project and the other Port properties in the vicinity, including Piers 48 and 50. The SFPUC shall prepare an assessment of the feasibility of the City providing electric service to the development (the "Feasibility Study"). The Developer will cooperate with SFPUC in SFPUC's preparation of the Feasibility Study. The Feasibility Study shall include, but not be limited to, the following: 1) electric load projection and schedule; 2) evaluation of existing electric infrastructure and new infrastructure that will be needed; 3) analysis of purchase and delivery costs for electric commodity as well as transmission and distribution services that will be needed to deliver power to the development; 4) the potential for load reduction through energy efficiency and demand response; 5) business structure cost analysis; and 6) financial and cost recovery period analysis. Should the City elect to provide electric service to the Project, such service shall be provided by the City on terms and conditions generally comparable to, or better than, the electric service otherwise available to the Project. If the City determines that providing power services to the Project is infeasible at a cost equal to or less than, the developer will pursue PG&E or other power providers to serve the site.

17.3 Proposed Joint Trench

The proposed Joint Trench is identified schematically on Figures 17.1 and 17.2. Services and lighting will also be provided as required to China Basin Park and Mission Rock Square. Work necessary to provide the joint trench for dry utilities, typically installed within public streets and adjacent sidewalk area, consists of trench excavation and installation of conduit ducts for electrical, gas, and communication lines. In locations where public streets will be built upon structural piles, the joint trench utilities will be installed within the structured street section. Utility vaults, splice boxes, street lights and bases, wire and transformer allowance, and backfill will be included within the structured street section. Gas, Electric and power systems will be constructed per the applicable standards of the agency or company with controlling ownership of said facilities with street lighting infrastructure constructed per City standards. The utility owner/franchisee (such as SFPUC, PG&E, AT&T, Comcast and/or other communication companies) will be responsible for installing facilities such as transformers and wire. Necessary and properly authorized public utility improvements for which franchises are authorized by the City shall be designed and installed in the public right-of way in accordance with permits approved by SFDPW and SFPUC. Proposed dry utility infrastructure location and separation from parallel wet utilities shall comply with the utility owner's regulations. Joint trenches or utility corridors will be utilized wherever allowed. The location and design of joint trenches or utility corridors in the public right-of way must be approved by SFDPW and the SFPUC during the subdivision review process. The precise location of the joint trench in the right-of-way will be determined prior to recording the applicable Final Map and identified in the Project construction documents. Nothing in this Infrastructure Plan shall be deemed to preclude the Developer from seeking reimbursement for or causing others to obtain consent for the utilization of such joint trench facilities where such reimbursement or consent requirement is otherwise permitted by law.

17.4 Phases for Dry Utility Systems Construction

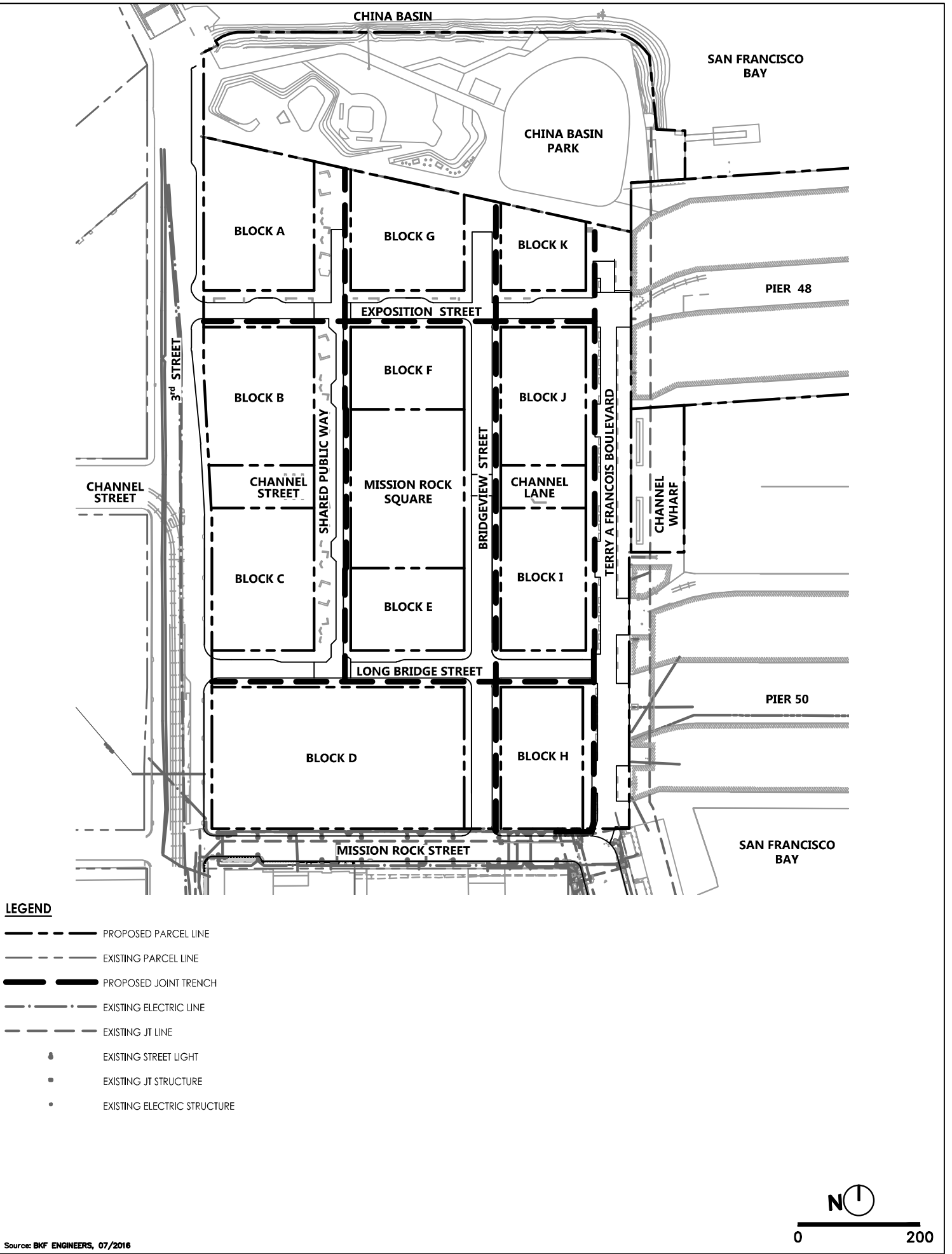
Joint trench design and installation will occur in phases based on the principle of adjacency and as-needed to facilitate a specific proposed Development Phase and consistent with the requirements of the Project Phasing Plan. The amount of existing system replaced and new infrastructure installed along Terry A Francois Blvd, 3rd Street and Mission Rock Street will be the minimum necessary to support the Development Phase and piers. The new infrastructure will connect to the existing systems as close to the proposed development as possible while maintaining the integrity of the existing

system. Repairs and/or replacement of the existing facilities necessary to serve the Development Phase will be designed and constructed by the Developer. Such phased dry utility installation will allow the existing utility services to remain in place as long as possible and reduce disruption of existing uses on the site and adjacent facilities. Temporary or interim electric or dry utility infrastructure may be constructed and maintained as necessary to support service to existing buildings.

The service providers will be responsible for maintenance of existing facilities until replaced by the Developer and will be responsible for the new power facilities once the horizontal improvements for Development Phase or new power facility is complete and accepted by the Acquiring Agency.

Impacts to improvements installed with previous phases of development due to the designs of the new phase will be the responsibility of the Developer and addressed prior to approval of the construction drawings for the new Development Phase.

DRAWING NAME: \\BKF-SF\vol4\2008\080008_Mission Rock\ENG\Exhibits\Infrastructure Plan Exhibit\Plotted Sheets\Figure 17.1 Conceptual Dry Utility Systems.dwg
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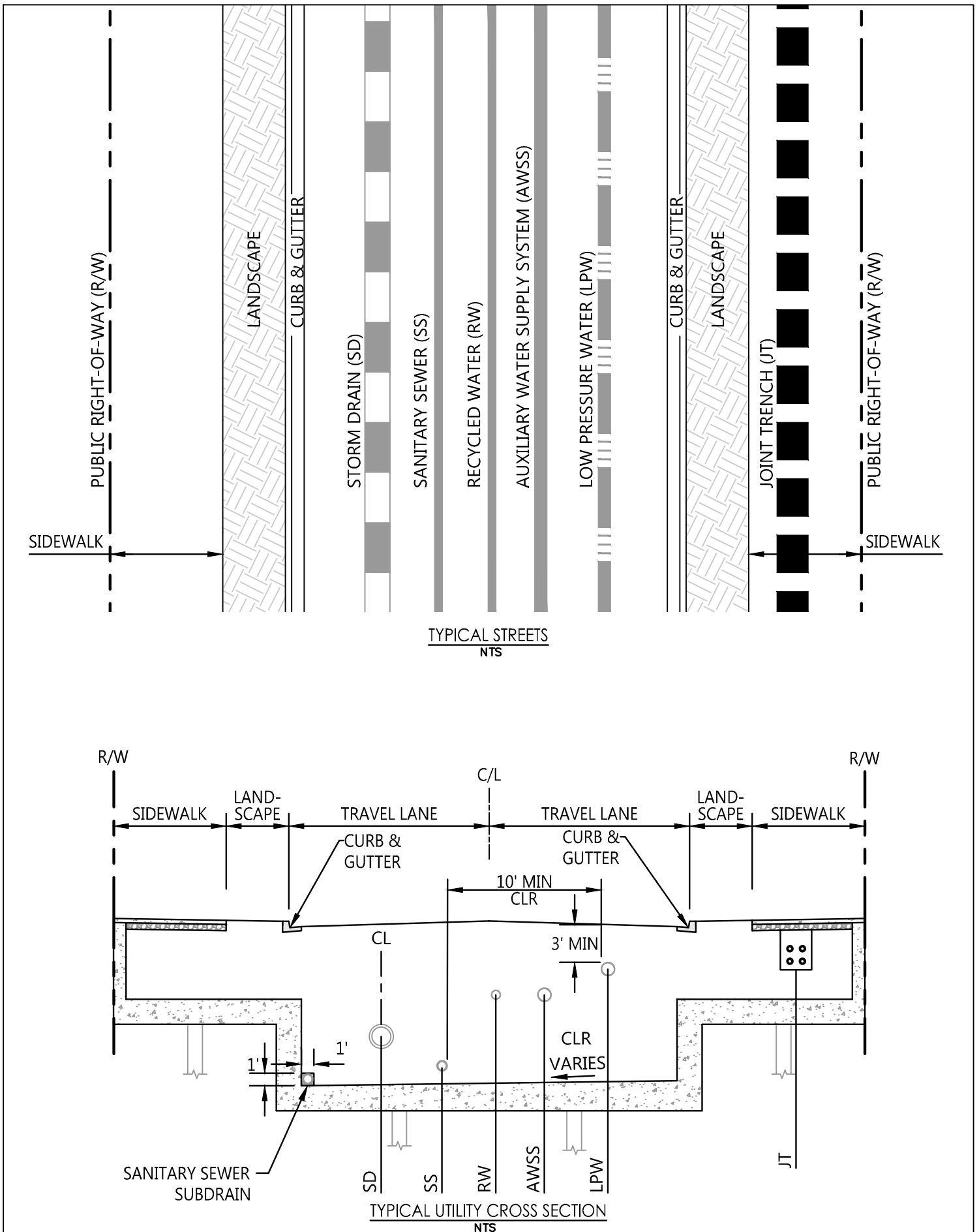


Source: BKF ENGINEERS, 07/2016

MISSION ROCK INFRASTRUCTURE PLAN

FIGURE 17.1 - CONCEPTUAL DRY UTILITY SYSTEMS

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 PLOT DATE: 07-13-17 PLOTTED BY: FELI



Source: BKF ENGINEERS, 07/2016

APPENDIX A (Not Used)

APPENDIX B
Hazardous Soil Remediation Plan Letter
September 12, 2011



Ash Creek Associates, Inc.

Environmental and Geotechnical Consultants

September 12, 2011

Jon Knorpp
Seawall Lot 337 Assoc., LLC
24 Willie Mays Plaza
San Francisco, CA 94107

Re: Mission Rock Development – Seawall Lot 337
San Francisco, California
1868-00

Dear Mr. Knorpp:

As requested, this letter outlines the anticipated steps to complete the environmental program related to potential hazardous substances in soil and groundwater at the subject site. Mission Rock Development is planning a mixed use development at Lot 337 in San Francisco, California (the Site). Figure 1 provides a Site Location Map. The Site is a former industrial property within the area subject to the requirements of Article 20 of the City and County of San Francisco Public Health Department Ordinance 253-86 (the Maher Ordinance). In addition, Covenant to Restrict Use of Property (Use Restrictions) were recorded in agreements between the City and County of San Francisco (City) and the California Department of Toxic Substance Control (DTSC) as a part of previous development of the Site. As described herein, these documents outline certain requirements that will need to be met prior to initiating the proposed site development.

BACKGROUND

Environmental investigations were performed at the Site in the 1990s when the Site was redeveloped for use as a parking lot and park. The scope of the investigations performed was developed to satisfy the requirements of the Maher Ordinance and to achieve site closure from the City and DTSC. Several documents were prepared documenting the scope and results of these investigations, including:

- Site Use History and Proposed Article 20 Sampling Program, Proposed Imperial Weitz Parking Lots South of China Basin Channel, San Francisco California prepared by Geomatrix Consultants, Inc. dated March 1999;
- Results of Article 20 Sampling Program and Health Risk Assessment, Proposed Imperial Weitz Parking Lots for the Giants Pacific Bell Ball Park Area e – Port of San Francisco, San Francisco California prepared by Geomatrix Consultants, Inc. dated June 1999;
- Preliminary Screening Evaluation, H&H Ship Service Company, San Francisco, California, prepared by Harding Lawson Associates dated September 14, 1995; and

- RCRA Closure Certification Report, Former H&H Ship Service Company, San Francisco, California, prepared by Harding Lawson Associates dated February 4, 1999.

Copies of these reports can be obtained at the Port of San Francisco website at the following link:

<http://www.sf-port.org/index.aspx?page=44>

As part of the cleanup requirements to achieve site closure, a Soil Management Plan was prepared to detail methods and procedures for soil handling, stockpiling, disposal, and accessing to be used during and after site development. A copy of the Soil Management Plan is included as Attachment A to this letter. In addition, land use restrictions were described in the Use Restrictions and recorded in two agreements between the City and DTSC (one for the part of the Site that is South of Terry Francois Blvd and currently used as a parking lot and the second that is north of Terry Francois Blvd and is currently used as a park). A copy of each of the Use Restrictions are included as Attachment B to this letter. The Use Restrictions require, amongst other items, that Maher Ordinance assessments be performed if more than 50 cubic yards of soil are to be disturbed and a variance be obtained if the Site is to be developed for any of the uses listed as "restricted" in the Use Restriction.

ANTICIPATED ACTIVITIES TO ACHIEVE ENVIRONMENTAL CLEARANCES

Based on a review of the available documents and the Use Restrictions for the Site, the following actions are anticipated to achieve environmental clearances of potentially hazardous substances in soil or groundwater necessary to complete the site development.

- 1) Use Variance. The current Use Restrictions do not allow residential development at the Site. It is our understanding that some of the Site may be developed for high-density housing as a part of the proposed development. The intent of the Use Restrictions is to preclude single family home development and it appears that high-density housing is an acceptable use of the Site. However, a variance to the Use Restrictions may be needed. A meeting with the DTSC and the Port of San Francisco (Port) will be conducted to discuss the proposed development and identify whether a variance will be needed from the provisions in the Use Restrictions. If a variance is required, the variance will be developed and written in conjunction with the DTSC and the Port.
- 2) Maher Ordinance. The Use Restrictions and City regulations require that the Maher Ordinance requirements be met prior to initiation of site development. Investigations satisfying the Maher Ordinance were performed in support of the previous development of the Site as a parking area and park. The investigations performed for the Maher Ordinance provided an understanding of both the soil and groundwater quality at the Site. A risk assessment was performed and did not identify unacceptable risk to construction workers or other receptors for that development. The scopes of the previous assessments are consistent with currently proposed site development and appear to be sufficient to meet the requirements of the Maher Ordinance. A meeting with the City and County of San Francisco Department of Public Health (DPH) will be conducted to discuss site conditions and the proposed development to illustrate how the previous investigations have collected the needed data to meet Maher Ordinance requirements for the new development.

If the DPH agrees that sufficient data has been collected to meet the Maher requirements for the Site, a report will be prepared that summarizes the proposed development and existing data for DPH review and approval to document that the Maher Ordinance requirements have been met. If the DPH does not agree and requests additional site data, a work plan will be prepared identifying the work scope and procedures to collect the data the DPH is requesting to meet the Maher Ordinance requirements. The work plan will be submitted to the DPH for review. Upon DPH approval of the work plan, the work scope will be completed and a results report prepared for submittal to DPH to achieve closure on the Maher Ordinance requirements. The DTSC will be kept apprised of the activities being performed to meet the Maher Ordinance to satisfy the requirements of the Use Restrictions.

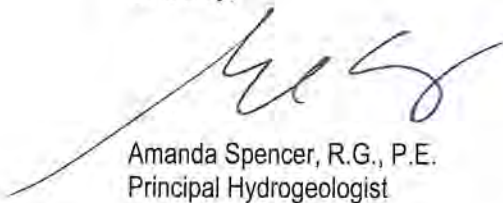


REMEDIATION PLAN

Based on our understanding of the Site, it is anticipated that site remediation will consist of implementation of a Soil Management Plan consistent to that previously developed for the Site (see Attachment A). The Soil Management Plan describes the methods and procedures for soil management during site construction and following site development, and maintenance of a site cover. Soil management during site construction will consist of dust control, erosion control, stockpile management, and appropriate soil disposal should excess soil be excavated during construction activities. If excess soil is generated, the excess soil would need to be profiled to determine appropriate disposal options. Based on chemical analysis results of soil samples collected from the Site, total metal and organic concentrations are less than the Total Threshold Limit Concentrations (TTLCs) for designation as California Hazardous Waste. However, additional solubility testing of some of the metals (e.g., lead) would likely be required by disposal facilities to better assess the waste profile for the soil. It is possible that the solubility of the lead using the Waste Extraction Test would exceed the Solubility Threshold Limit Concentrations (STLCs) of the state. The excess soil would then be profiled as California Hazardous waste and would need to be disposed of at the appropriately licensed landfill facility.

Please do not hesitate to contact me should you have any questions.

Sincerely,



Amanda Spencer, R.G., P.E.
Principal Hydrogeologist

ATTACHMENTS

Figure 1 – Site Location Map

Attachment A – Soil Management Plan

Attachment B – Use Restriction





Note: Base map prepared from USGS 7.5-minute quadrangle of San Francisco North, CA, dated 1993 as provided by usgs.gov.



CALIFORNIA



0 2,000 4,000
Approximate Scale in Feet

Site Location Map

Mission Rock Development - Seawall Lot 337
San Francisco, California



Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number **1868-00**

September 2011

Figure

1

Attachment A

Soil Management Plan



SOIL MANAGEMENT PLAN

**Imperial Weitz Parking Lots for the
Giants Pacific Bell Ball Park
Area E - Port of San Francisco Property
San Francisco, California**

Prepared for:

Imperial Weitz, LLC
800 Second Avenue, Suite 300
Des Moines, Iowa 50309

Prepared by:

Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
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June 1999

Project No. 4952

Geomatrix Consultants

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SOIL MANAGEMENT PLAN
Imperial Weitz Parking Lots for the
Giants Pacific Bell Ball Park
Area E - Port of San Francisco Property
San Francisco, California

1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix) has prepared this Soil Management Plan (SMP) on behalf of Imperial Weitz, LLC for the proposed 14-acre parking lot for the Giants' Pacific Bell Ball Park. The proposed parking lot site is located south of China Basin Channel and east of Third Street in San Francisco, California (the site; Figure 1). The site is part of a total of approximately 36 acres of parking to be developed by Imperial Weitz south of China Basin Channel and has been referred to as Area E in previous environmental documents prepared by Geomatrix on behalf of Imperial Weitz.

2.0 BACKGROUND

Imperial Weitz is proposing to construct a paved parking lot on the site. A site history review, environmental investigation and risk evaluation were performed to meet Article 20 requirements and assess potential risks to construction worker and site visitor health associated with soil and groundwater quality at the site. The following summarizes the results of the site history review, environmental investigations, and risk assessment, and describes the proposed parking lot development.

2.1 SITE SETTING AND HISTORICAL USAGE

The approximately 19 acre site is currently owned by the Port of San Francisco (the Port). The subject area was originally marshlands and shallow tidal flats bordering San Francisco Bay. It was filled between 1877 and 1913; the source of the fill is unknown but likely included construction debris and rubble from the 1906 earthquake and cut material from nearby hills and construction areas.

Historical site uses include: railroad trackage and support structures for rail-related activities, parking and shipping, and truck maintenance. H&H Shipping Service Company, Inc. (H&H) occupied the northeastern corner of the site from 1950 to 1996. H&H used the area for vehicle parking and offices, and maintained a tank cleaning area and drum storage unit. No known underground storage tanks (USTs) have been identified on the site. Recently, the site has been

leased by multiple tenants. Tenant uses consist of a recycling center, an automobile sales center, the Mission Rock Recovery Center, a moving company, maritime offices, and automobile storage.

2.2 SITE INVESTIGATIONS

2.2.1 Previous Site Investigations

Burlington Northern Santa Fe Railway Company ("the Railroad") conducted Phase I and Phase II Environmental Assessments of property formerly operated by the Railroad located east of Third Street, between Sixteenth Street and China Basin Channel; this property included the western half of the site. The scope of the Railroad's investigations included one soil boring in the southern portion of the site. Soil samples were collected at depths of 0.5, 5, and 8 feet bgs and analyzed for total petroleum hydrocarbons as gasoline (TPHg), TPH as motor oil (TPHmo), lead, nickel, arsenic, chromium, cadmium, and zinc. Results of chemical analyses on these soil samples indicated that several metals were present at concentrations exceeding typical regional background concentrations (Geomatrix, March 1999).

In addition, HLA has performed an investigation of the former H&H Shipping parcel located in the northeast corner of the site (HLA; 1999). Seventeen soil samples were collected and analyzed for metals, TPH as diesel (TPHd), TPHg, oil and grease, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and polynuclear aromatic hydrocarbons (PNAs). Five groundwater samples were collected and one or more samples were analyzed for metals, TPHd, TPHg, benzene, toluene, ethylbenzene, xylenes [BTEX], PCBs, and PNAs. Several soil samples contained PNAs and metals; very low concentrations of some aromatic hydrocarbons and PCBs were detected in a few soil samples. The groundwater samples contained low to trace concentrations of several metals. Filtered groundwater samples did not contain PNAs; however, unfiltered samples contained low concentrations of several PNA compounds. PCBs and BTEX were not detected in the groundwater samples. Summary tables for the soil and groundwater analysis results of the H&H investigation are contained in Appendix A.

2.2.2 Recent Site Investigation

In April 1999, Geomatrix installed 8 soil borings and collected 16 soil samples (two soil samples per boring) and 2 groundwater samples (from 2 of the 8 locations) for chemical analysis. Sampling locations are illustrated on Figure 2. Primary chemicals detected in soil were PNAs and some metals (i.e., antimony, arsenic, copper, lead, nickel, and mercury). Soil sample results from the recent investigation are summarized in Tables 1 through 5. Several

metals were detected in groundwater; however, chemical concentrations were generally low to non-detect (Table 6). PNAs were not detected in the groundwater samples.

2.3 PROPOSED DEVELOPMENT

The proposed development for the subject area is asphalt paved parking. Two alternatives for storm drainage are being considered, as described below. Figures illustrating the two alternatives for the storm drainage system are contained in Appendix B.

Alternative 1

This alternative for the drainage system consists of a series of storm drainage lines and catch basins to collect and transport storm water from the parking lot site to the main City box culvert located on Channel Street, west of Fourth Street. During a 5 year storm event, the City system could reach capacity and overflows would result. Overflows from the parking lot site would be diverted to a small treatment plant to be located east of Fourth Street, near China Basin Channel. Under this alternative, Area E will be entirely paved with asphalt and surrounded by a 3- to 4-foot fence.

The catch basins will be installed in excavations with aerial dimensions of approximately 4 feet by 4 feet and extending to depths of 4 to 6 feet. Trenches will be excavated to install the piping; the trenches are anticipated to be approximately 2 to 3 feet wide and will extend between 4 to 6 feet below grade. Estimated maximum excavation depth for the piping system is 6 feet bgs. The parking area will be graded and bermed to enhance flow to each of the catch basins, and paved with asphaltic concrete.

Alternative 2

This alternative includes perimeter grassy drainage swales to collect and drain storm water overflows.

The parking area will contain a storm drain system to collect surface water runoff. The storm drain system will consist of a network of catch basins and drainage swales to collect storm water on the parking lot. The storm water will be conveyed through a series of pipes and the drainage swales to one point of discharge. The discharge pipe will collect into one main and flow into the City box sewer in Channel Street near Fourth Street.

The catch basins will be installed in excavations with aerial dimensions of approximately 4 feet by 4 feet and extending to depths of 4 to 6 feet. Trenches will be excavated to install the

pipings; the trenches are anticipated to be approximately 2 to 3 feet wide and will extend between 4 to 6 feet below grade. Estimated maximum excavation depth for the piping system is 6 feet bgs. The swales will be approximately 32 feet in width and 2 to 3 feet in depth. The swales will be covered with a geotextile fabric and grass. The parking area will be graded and bermed to enhance flow to each of the catch basins, and paved with asphaltic concrete.

2.4 RISK ASSESSMENT

A health risk assessment (HRA) was conducted to evaluate the potential human health risks associated with the presence of chemicals in soil and groundwater assuming future use of the site as a parking lot with grassy swales (Geomatrix, May 1999). Potential noncarcinogenic hazard indexes and theoretical lifetime excess cancer risks were estimated for future on-site construction workers and future on-site visitors assuming conservative estimates of human exposure. Future on-site construction workers may be exposed to chemicals in soil across the site to the depth required for installation of the storm drain system or in groundwater if encountered in excavation areas. Following construction, potential exposure to future on-site visitors would be limited to exposed soil in the grass-covered swale areas.

The results of the HRA indicate that the presence of chemicals in soil and groundwater at the site should not pose an unacceptable noncarcinogenic or carcinogenic risk to future on-site construction workers and visitors. A summary table for the HRA results is provided as Table 7. Based on these results, it was also concluded that potential risks to nearby residents during construction and future on-site maintenance workers and trespassers after construction would also not be of concern.

3.0 OBJECTIVES

As described above, the results of the HRA indicate that chemicals in site soil do not present an unacceptable human health risk. However, dust from a construction site can present a nuisance if not controlled. Likewise, erosion of on-site soil during construction activities can increase the turbidity of surface water run-off.

Therefore, the objectives of the SMP are to:

- provide guidelines for soil handling, stockpiling, dust and erosion minimization and, if needed, soil disposal during site construction activities for the proposed parking lot; and

- describe procedures for soil management following site construction for the duration of the use of the Site as a parking lot.

4.0 PROPOSED SOIL MANAGEMENT PROCEDURES

The following two sections describe the soil management procedures that will be implemented during and following site construction.

4.1 SOIL MANAGEMENT PROCEDURES FOR SITE CONSTRUCTION

The following procedures will be implemented during site construction activities to minimize dust and control erosion.

4.1.1 Dust Control

The dust control measures to be implemented at the site correspond to the PM₁₀ control measures recommended by the Bay Area Air Quality Management District (BAAQMD) in their California Environmental Quality Act Guidelines. These measures consist of:

- Water all active construction areas at least twice daily or as necessary to prevent visible dust plumes from migrating outside of the site limits.
- Mist or spray water while loading transportation vehicles.
- Minimize drop heights while loading transportation vehicles.
- Use tarpaulins or other effective covers for trucks carrying soils that travel on public streets.
- Pave, apply water 3 times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas.
- Sweep all paved access routes parking areas and staging areas daily, if visibly soiled.
- Sweep street daily if visible soil material is carried onto public streets from the site.

4.1.2 Erosion Control

A Stormwater Pollution Prevention Plan (SWPPP) will be developed by the site contractor prior to initiation of Site work that details procedures for minimizing erosion. The SWPPP will include elements such as silt traps and hay bales to minimize surface water runoff from the Site into storm drains or the San Francisco Bay, berms to control Site runoff, and covering soil stockpiles during the rainy season (November through March) to minimize sediment runoff.

4.1.3 Soil Stockpile Management

Temporary stockpiling of excavated soil may be necessary throughout site construction. Soil stockpiled at the Site will be lightly sprayed with water as needed to minimize dust. To the extent practical, the soil stockpiles will be covered with plastic sheeting or other similar material at times when not in active use. When a soil stockpile is uncovered during the rainy season, it will be surrounded by hay bales and/or silt traps to minimize sediment runoff.

4.1.4 Soil Disposal

Site development has been designed to minimize the generation of excess soil; therefore, soil requiring off-site disposal is not anticipated. Although not anticipated at this time, if excess soil is generated from the site, the excess soil will be profiled to determine appropriate disposal options. Handling and disposal of the soil will be conducted in accordance with all applicable state and federal laws.

Based on chemical analysis results of soil samples collected from the site, total metal and organic concentrations are less than the Total Threshold Limit Concentrations (TTLCs) for designation as California Hazardous Waste. However, additional solubility testing of some of the metals (e.g., lead) would likely be required by disposal facilities to better assess the waste profile for the soil.

4.1.5 Site Access Control

The construction site will be fenced to control pedestrian or vehicular entry, except at controlled points (i.e., gates). Gates will be closed and locked during non-construction hours. "No-trespassing" signs will be posted every 500 feet along the fencing.

4.2 SOIL MANAGEMENT FOLLOWING SITE DEVELOPMENT

Following site development, the soil will be covered by asphalt pavement or grass (in the swale areas) and it is unlikely that the soil will be accessed, with the exception of future maintenance work on subsurface utilities. The HRA assessed possible health risks to future maintenance workers at the parking lot and concluded that chemicals in soil at the site should not pose an unacceptable carcinogenic or noncarcinogenic risk (Geomatrix, May 1999). Soil management procedures during future site maintenance work requiring soil excavation will be as described in Section 4.1 of this SMP; if waste soil is generated, the soil will be disposed in accordance with the procedures described in Section 4.1.4.

5.0 MAINTENANCE OF SITE COVER

Procedures in this section are applicable only if Alternative 2 is selected for the storm drainage system.

Although the HRA concluded that soil in the grass-covered swale area would not present an unacceptable risk to human health for parking lot visitors or trespassers, it is prudent that the grass-covered swale areas be well maintained. Therefore, the swale areas will be inspected monthly during the baseball season, and quarterly during the off-season to visually observe the condition of the grass cover. Large areas of exposed soil (e.g., areas larger than several feet in diameter) should be reseeded as quickly as practical. A log of the parking area inspections ("Inspection Log") will be maintained at the site and will include written comments on the condition of the grass cover, areas requiring repairs, and repair dates.

Annual inspections of the paved parking areas will be performed to observe whether breaches in the pavement that may allow prolonged access to site soil are visible. If observed, the breach would be repaired such that the soil cover is maintained. Results of the annual inspections of the paved parking areas will be documented in the Inspection Log, described above.

6.0 CONTINGENCY PLAN

A Contingency Plan for this site is not warranted. The purpose of a Contingency Plan is to present response actions to an emergency situation. The results of the HRA indicate that exposure to site soil or groundwater while breaches in the pavement or grassy areas are being repaired would not present a situation requiring an emergency response.

7.0 HEALTH AND SAFETY GUIDELINES

A health and safety plan for site construction will be developed by the site contractor before initiation of the development activities. The results of the HRA indicate that the presence of chemicals in soil and groundwater at the site should not pose an unacceptable health risk to future construction workers or nearby receptors during construction or future maintenance workers, visitors or trespassers after construction. Therefore, a health and safety plan for known chemical hazards at the Site is not warranted, and the health and safety plan will focus on physical hazards. Additionally, contingency actions for encountering unanticipated buried hazards (e.g., drums, or other containers) will also be included in the health and safety plan.

8.0 FACILITY MAP

The final construction plan for the Site development is not complete. A copy of this plan will be forwarded to the SFDPH as an addendum to this SMP once it has been finalized.

9.0 REFERENCES

Geomatrix Consultants, Inc., 1999, Site Use History and Article 20 Sampling Program, March.

Harding Lawson Associates, 1999, RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California, February 4.

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
METALS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California
Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
GMX-1-1.0	0.5 - 1.0	<5.0	<0.35	27	<5.0	<5.0	120	16	9.6	8.7	<0.1	<5.0	220	<5.0	<5.0	<5.0	36	37
GMX-1-4.5	4.5 - 5.0	<5.0	2.5	35	<5.0	<5.0	200	24	12	13	<0.1	<5.0	370	<5.0	<5.0	<5.0	20	32
GMX-2-1.0	0.5 - 1.0	<5.0	<0.35	170	<5.0	<5.0	62	15	50	220	0.13	<5.0	71	<5.0	<5.0	<5.0	49	150
GMX-2-4.5	4.5 - 5.0	<5.0	<0.35	160	<5.0	<5.0	91	17	31	54	<0.1	18	110	<5.0	<5.0	<5.0	40	83
GMX-3-1.0	0.5 - 1.0	33	64	84	<5.0	<5.0	35	12	93	250	0.28	<5.0	140	<5.0	<5.0	<5.0	20	250
GMX-3-4.5	4.5 - 5.0	15	7.7	76	<5.0	<5.0	110	14	44	98	0.23	<5.0	240	<5.0	<5.0	<5.0	24	130
GMX-4-1.0	0.5 - 1.0	<5.0	1.8	170	<5.0	<5.0	42	16	40	110	0.16	<5.0	100	<5.0	<5.0	<5.0	31	94
GMX-4-4.5	4.5 - 5.0	<5.0	<0.35	100	<5.0	<5.0	36	8.7	26	53	<0.1	<5.0	40	<5.0	<5.0	<5.0	27	60
GMX-5-1.0	0.5 - 1.0	<5.0	0.47	26	<5.0	<5.0	21	<5.0	7.1	42	<0.1	<5.0	20	<5.0	<5.0	<5.0	17	69
GMX-5-7.0	4.5 - 5.0	<5.0	2.5	47	<5.0	<5.0	11	<5.0	13	60	0.57	<5.0	12	<5.0	<5.0	<5.0	12	35
GMX-6-1.0	0.5 - 1.0	<5.0	<0.35	360	<5.0	<5.0	17	12	66	17	<0.1	<5.0	21	<5.0	<5.0	<5.0	28	40
GMX-6-4.5	4.5 - 5.0	<5.0	<0.35	210	<5.0	<5.0	43	14	46	62	0.18	<5.0	59	<5.0	<5.0	<5.0	29	55
GMX-7-1.0	0.5 - 1.0	<5.0	10	160	<5.0	<5.0	21	5.3	93	290	5.7	<5.0	28	<5.0	<5.0	<5.0	17	320
GMX-7-5.0	4.5 - 5.0	<5.0	<0.35	180	<5.0	<5.0	87	21	35	750	<0.1	<5.0	250	<5.0	<5.0	<5.0	29	160
GMX-8-1.0	0.5 - 1.0	<5.0	<0.35	680	<5.0	<5.0	21	32	130	18	<0.1	<5.0	34	<5.0	<5.0	<5.0	40	49
GMX-8-4.5	4.5 - 5.0	<5.0	5	100	<5.0	<5.0	6.8	<5.0	21	61	<0.1	<5.0	9.1	<5.0	<5.0	<5.0	12	41
Background ²		5.5	19.1	323	1	2.7	99	22	69	16	0.4	7.4	120	5.6	1.8	27	74	106
95% UTL		25.7	45.7	572.3	5.0	5.0	190.0	32.8	133.1	602.0	4.0	14.0	379.8	5.0	5.0	5.0	53.7	311.7
95% UTL > Background?		Yes	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	NA	No	Yes

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories of Sunnyvale, California, for Title 22 metals using EPA Methods 6000/7000 Series.

² Background = Lawrence Berkeley National Laboratory, 1995.

Abbreviations:

feet bgs = feet below ground surface.

< = analyte not detected at or above method detection limit shown.

NA = not applicable; sample results below detection limit reported by the analytical laboratory.

95% UTL = 95 percent upper tolerance limit.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
 Area E - Port of San Francisco Property
 South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Toluene	Ethyl-benzene	Xylenes	1,2,4-Trimethyl-benzene
GMX-1-1.0	0.5 - 1.0	0.030	<0.005	0.029	0.010
GMX-1-4.5	4.5 - 5.0	0.008	<0.005	<0.005	<0.005
GMX-2-1.0	0.5 - 1.0	0.013	<0.005	0.009	0.005
GMX-2-4.5	4.5 - 5.0	0.007	<0.005	<0.005	<0.005
GMX-3-1.0	0.5 - 1.0	0.014	<0.005	0.006	<0.005
GMX-3-4.5	4.5 - 5.0	0.023	<0.005	0.018	0.014
GMX-4-1.0	0.5 - 1.0	0.020	<0.005	0.030	<0.005
GMX-4-4.5	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-5-1.0	0.5 - 1.0	0.027	<0.005	0.014	0.008
GMX-5-7.0	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-6-1.0	0.5 - 1.0	0.037	<0.005	0.056	0.036
GMX-6-4.5	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-7-1.0	0.5 - 1.0	0.008	<0.005	0.009	<0.005
GMX-7-5.0	4.5 - 5.0	0.021	<0.005	0.009	<0.005
GMX-8-1.0	0.5 - 1.0	<0.005	0.023	0.046	<0.005
GMX-8-4.5	4.5 - 5.0	0.008	<0.005	0.010	<0.005

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories of Sunnyvale, California, for VOCs using EPA Method 8260B.

Abbreviations:

feet bgs = feet below ground surface.

< = indicates result less than the laboratory detection limit indicated.

VOCs = volatile organic compounds.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
POLYNUCLEAR AROMATIC COMPOUNDS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo(a) anthra-cene	Benzo(b) fluor-anthene	Benzo(k) fluor-anthene	Benzo (g,h,i) perylene	Benzo(a) pyrene	Chrysene	Dibenzo (a,h) anthra-cene	Fluor-anthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph-thalene ²	Phenan-threne	Pyrene
GMX-1-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	<0.04	<0.002	<0.04	<0.04	<0.04	0.089	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.058
GMX-1-4.5	4.5 - 5.0	<0.01	<0.01	0.023	<0.01	0.029	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01	<0.01	<0.01	0.024	0.029
GMX-2-1.0	0.5 - 1.0	<0.02	0.024	0.103	0.141	<0.002	<0.02	<0.02	<0.02	0.08	<0.02	0.363 ³	<0.02	<0.02	<0.02	0.105	0.415 ³
GMX-2-4.5	4.5 - 5.0	<0.002	0.0024	0.0066	0.022	0.022	0.0048	<0.002	<0.002	0.011	<0.002	0.023	<0.002	<0.002	0.0058	0.0068	0.025
GMX-3-1.0	0.5 - 1.0	<0.02	<0.02	0.078	0.114	<0.002	<0.02	<0.02	<0.02	0.064	<0.02	0.169	<0.02	<0.02	<0.02	0.08	0.16
GMX-3-4.5	4.5 - 5.0	<0.01	<0.01	<0.01	0.025	0.04	<0.01	<0.01	<0.01	0.014	<0.01	0.036	<0.01	<0.01	<0.01	0.024	0.045
GMX-4-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	0.072	<0.04	<0.04	<0.04	<0.04	0.061	<0.04	0.142	<0.04	<0.04	<0.04	0.071	0.183
GMX-4-4.5	4.5 - 5.0	0.053	0.107	0.129	<0.02	<0.2	<0.2	<0.2	0.295	0.18	<0.2	0.628 ⁴	<0.02	<0.2	0.057	0.668 ⁴	0.777 ⁴
GMX-5-1.0	0.5 - 1.0	<0.02	<0.02	<0.02	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.032	<0.02	<0.02	<0.02	0.02	0.034
GMX-5-7.0	4.5 - 5.0	<0.002	<0.002	0.026	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.011	<0.002	<0.002	<0.002	0.026	0.013
GMX-6-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	0.205	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.046	<0.04	<0.04	<0.04	0.06	0.107
GMX-6-4.5	4.5 - 5.0	<0.01	<0.01	0.029	0.122	0.1	0.023	0.038	0.072	0.056	<0.01	0.11	<0.01	0.042	<0.01	0.029	0.111
GMX-7-1.0	0.5 - 1.0	<0.02	<0.02	0.024	0.187	<0.02	<0.02	<0.02	<0.02	0.098	<0.02	0.196	<0.02	<0.02	<0.02	0.194	0.224
GMX-7-5.0	4.5 - 5.0	<0.01	<0.01	<0.01	0.031	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.04	0.072	<0.01
GMX-8-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.288	<0.04	<0.04	0.095	0.156	0.374
GMX-8-4.5	4.5 - 5.0	0.019	0.078	<0.01	0.314 ⁴	0.457 ⁴	<0.01	<0.01	<0.01	0.323 ⁴	<0.01	0.772 ⁴	<0.01	<0.01	<0.01	0.288 ⁴	0.680 ⁴

Notes:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Advanced Technology Laboratories of Signal Hill, California, for PNAs using EPA Method 8270 SIMS.

² Detected concentration reported as part of EPA Method 8260.

³ Results reported from a 1:100 dilution.

⁴ Results reported from a 1:50 dilution.

Abbreviations:

feet bgs = feet below ground surface.

< = indicates result less than the laboratory detection limit indicated.

PNAs = polynuclear aromatic hydrocarbons.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
OTHER MAHER PARAMETERS¹

Proposed Imperial Parking Area
 Area E - Port of San Francisco Property
 South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg) unless noted

Sample I.D.	Sample Interval (feet bgs)	Asbestos	Cyanide	Fluoride	Total Sulfide	pH (no units)	FID (ppmv)
GMX-1-1.0	0.5 - 1.0	<1%	<0.5	<0.5	<0.5	8.4	0
GMX-1-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-2-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	100
GMX-2-4.5	4.5 - 5.0	<1%	NA	NA	NA	9.4	
GMX-3-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	0
GMX-3-4.5	4.5 - 5.0	<1%	<0.5	<0.5	<0.5	8.8	
GMX-4-1.0	0.5 - 1.0	<1%	NA	NA	NA	9.4	100
GMX-4-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-5-1.0	0.5 - 1.0	<1%	<0.5	<0.5	<0.5	9.1	100
GMX-5-7.0	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-6-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	1100
GMX-6-4.5	4.5 - 5.0	<1%	NA	NA	NA	9.2	
GMX-7-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	10
GMX-7-5.0	4.5 - 5.0	<1%	<0.5	<0.5	<0.5	9.2	
GMX-8-1.0	0.5 - 1.0	<1%	NA	NA	NA	7.7	150
GMX-8-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed for pH, cyanide, total sulfide, fluoride, and asbestos using EPA Methods 9045, 9010, 9030, and 340.2M, and polarized light microscopy. Analyses performed by Entech Analytical Laboratories, Inc. of Sunnyvale, California (pH and fluoride), Advanced Technology Laboratories of Signal Hill, California (cyanide and total sulfide), and EMSL Analytical, Inc. of Milpitas, California (asbestos).

Abbreviations:

feet bgs = feet below ground surface.

< = analyte not detected at or above method detection limit shown.

NA = not analyzed.

FID = flame ionization detector.

ppmv = parts per million vapor.

TABLE 5
SUMMARY OF ANALYTICAL RESULTS
METALS DETECTED IN GRAB GROUNDWATER SAMPLES¹
Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per liter (mg/l)

Sample I.D.	Sb	Ar	Ba	Be	Cd	Cr Total	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
GMX-1 ²	0.092/ 0.1	<0.005	0.1	<0.004	<0.005	<0.005	<0.005	<0.005	<0.015	<0.0005	0.018/ 0.02	0.010/ 0.011	<0.015	<0.005	<0.002	<0.010	0.014
GMX-5	<0.005	<0.005	1.7	<0.004	<0.005	0.006	0.008	<0.005	<0.015	<0.0005	0.051	0.006	<0.015	0.034	<0.002	<0.010	0.025

Notes:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories, of Sunnyvale, California for Title 22 metals using EPA Methods 6000/7000 Series.

² Second result from duplicate sample GMX-11.

Abbreviation:

< = indicates result less than the laboratory detection limit indicated.

Sb = Antimony	Hg = Mercury
Ar = Arsenic	Mo = Molybdenum
Ba = Barium	Ni = Nickel
Be = Beryllium	Se = Selenium
Cd = Cadmium	Ag = Silver
Cr Total = Total Chromium	Tl = Thallium
Co = Cobalt	V = Vanadium
Cu = Copper	Zn = Zinc
Pb = Lead	

TABLE 6

SUMMARY OF HEALTH RISK ASSESSMENT RESULTS

Proposed Imperial Weitz Parking Lot Areas

Area E - Port of San Francisco Property

South of China Basin Channel, San Francisco, California

Noncancer Hazard Indexes

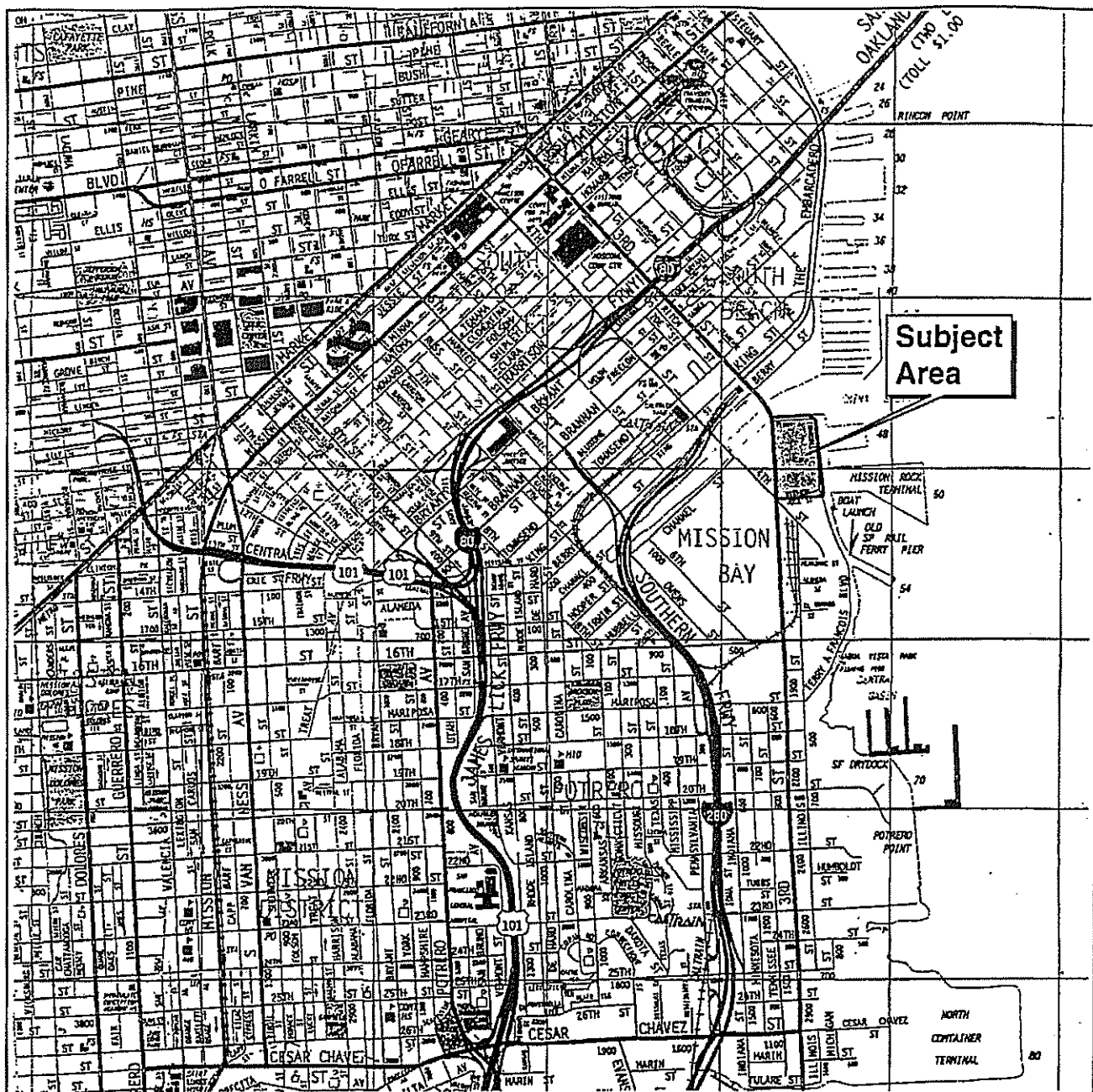
Scenario	Incidental Ingestion of Soil	Dermal Contact with Soil	Inhalation of Particulates	Dermal Contact with Groundwater	Hazard Index
Future On-site Construction Worker	6E-02	2E-03	8E-04	7E-03	7E-02
Future On-site Visitor	1E-02	5E-03	7E-07	NA	1E-02

Theoretical Lifetime Excess Cancer Risks

Scenario	Incidental Ingestion of Soil	Dermal Contact with Soil	Inhalation of Particulates	Dermal Contact with Groundwater	Excess Cancer Risk
Future On-site Construction Worker	3E-07	1E-08	7E-08	4E-06	4E-06
Future On-site Visitor	5E-07	3E-07	9E-10	NA	8E-07

Note:

NA = Not applicable



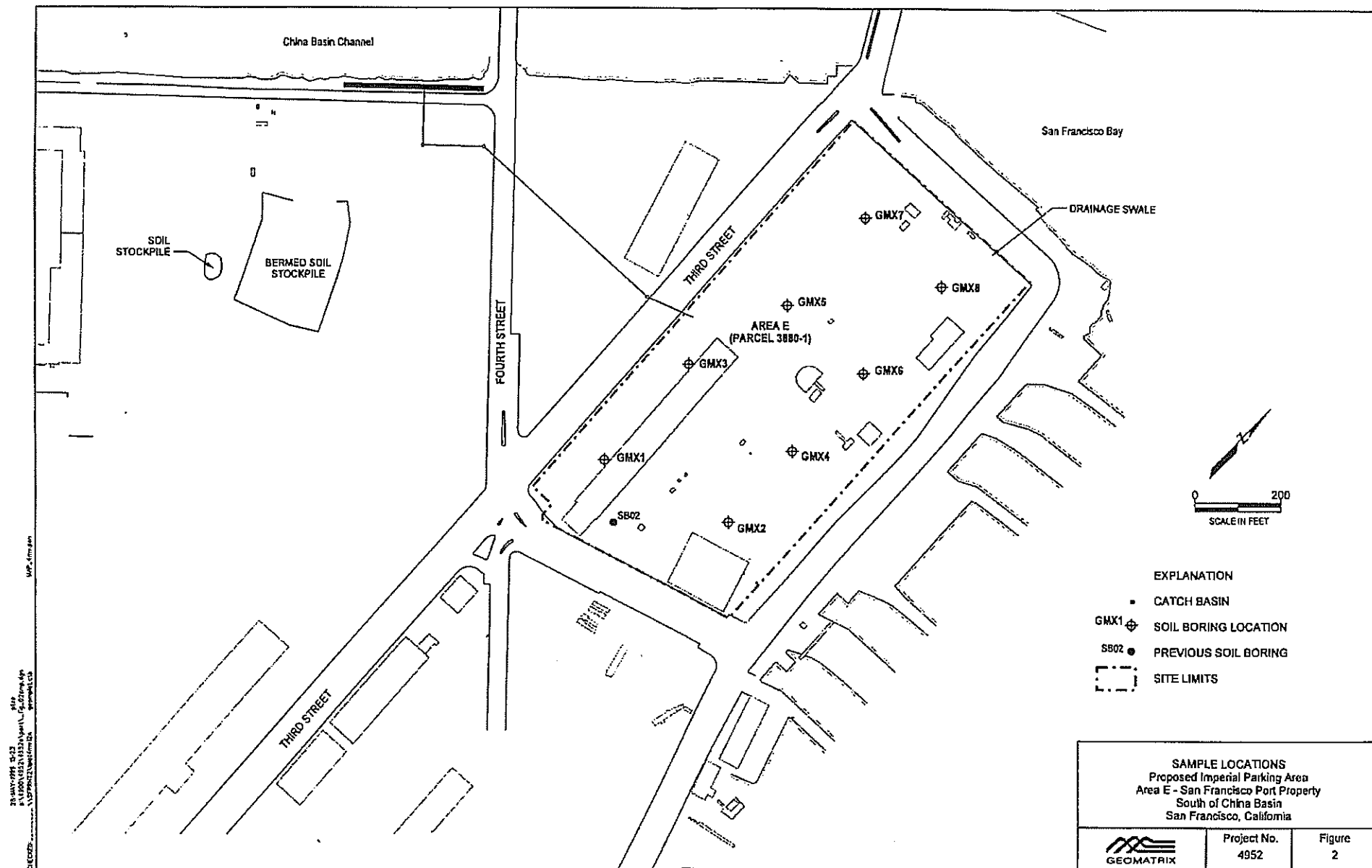
Base map from *The Thomas Guide, 1997 Golden Gate Street Guide and Directory*. Reproduced with permission granted by THOMAS BROS. MAPS. This map is copyrighted by THOMAS BROS. MAPS. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.



SITE LOCATION MAP
 Proposed Imperial Parking Area
 Area E - San Francisco Port Property
 South of China Basin
 San Francisco, California

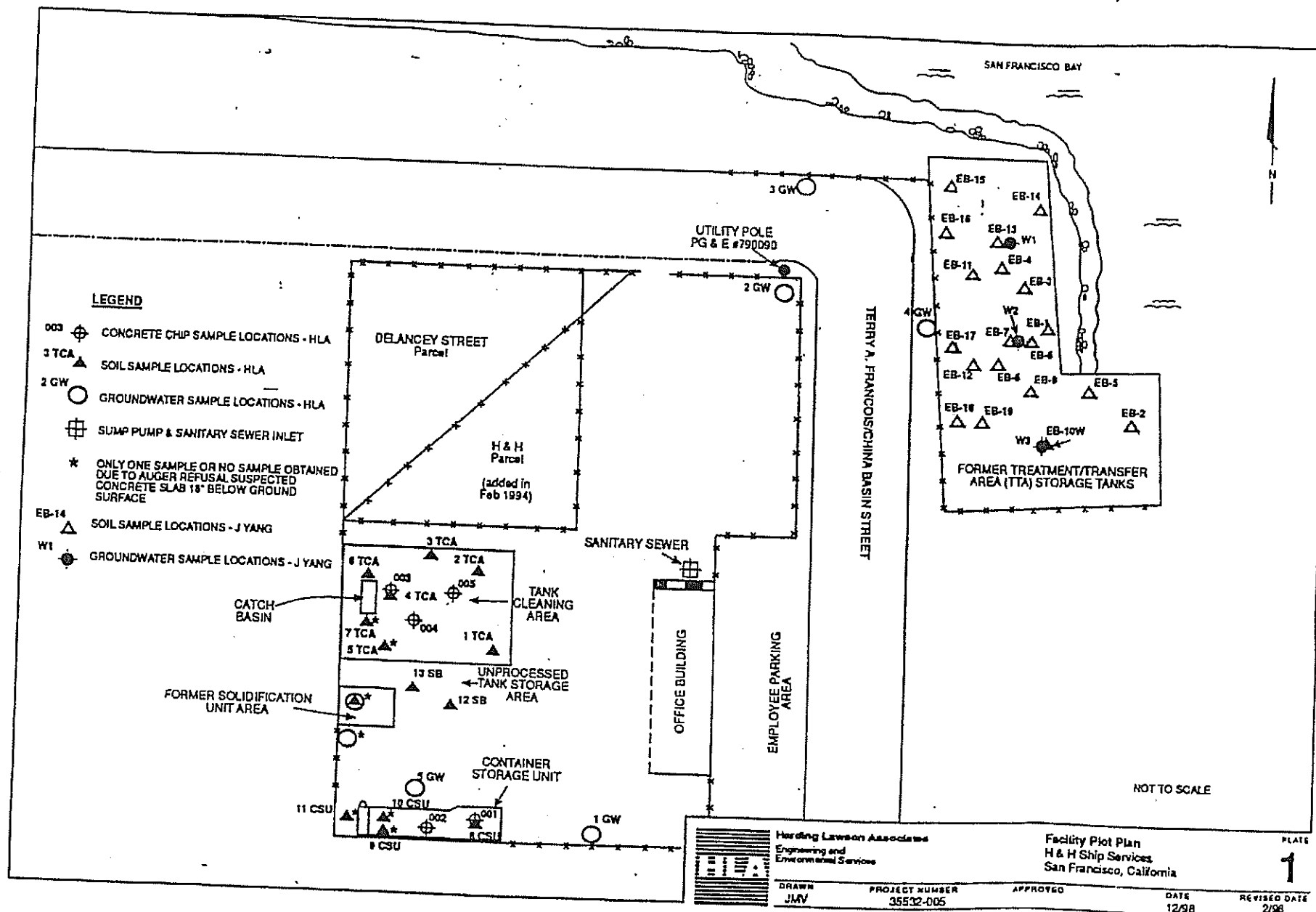
Figure
1

Project No.
4952



APPENDIX A

Data Summaries from Previous Investigations



**Table 4. Summary of Chemicals Detected In Soil
Tank Cleaning Area, Container Storage Unit, and Solidification Unit
H & H Ship Service Company
San Francisco, California**

Analyte	Units	Number of Detections	Number of Analyses	Frequency of Detection	Minimum Detected Conc.	Maximum Detected Conc.	Location of Maximum Conc.
Inorganics							
Arsenic	mg/kg	16	17	94%	ND	9.2E+01	3TCA-008
Barium	mg/kg	17	17	100%	3.8E+01	6.5E+02	12SB-023
Cadmium	mg/kg	1	17	6%	ND	5.3E-01	3TCA-008
Chromium	mg/kg	17	17	100%	7.3E+00	7.0E+01	1TCA-001
Cobalt	mg/kg	17	17	100%	3.8E+00	4.0E+01	3TCA-007
Copper	mg/kg	17	17	100%	8.9E+00	1.4E+02	10CSU-021
Lead	mg/kg	16	17	94%	ND	2.1E+02	1TCA-001
Mercury	mg/kg	16	17	94%	ND	4.8E-01	2TCA-005
Nickel	mg/kg	17	17	100%	1.3E+01	3.2E+02	6TCA-014
Silver	mg/kg	3	17	18%	ND	3.0E+00	3TCA-007
Thallium	mg/kg	11	17	65%	ND	1.1E+01	1TCA-001
Vanadium	mg/kg	17	17	100%	1.8E+01	4.8E+01	5TCA-013
Zinc	mg/kg	17	17	100%	3.2E+01	2.5E+02	4TCA-011
Petroleum							
Oil and Grease (Total)	mg/kg	17	17	100%	1.1E+02	6.4E+03	4TCA-011
Oil and Grease (Non-Polar)	mg/kg	16	17	94%	ND	5.0E+03	3TCA-007
TPH-Diesel	mg/kg	17	17	100%	5.0E+00	2.1E+03	4TCA-011
TPH-Gasoline	mg/kg	4	17	24%	ND	1.0E+02	4TCA-011
Toluene	mg/kg	17	17	100%	1.2E-02	1.3E+00	3TCA-007
Ethylbenzene	mg/kg	3	17	18%	ND	6.3E-01	4TCA-011
Xylene	mg/kg	6	17	35%	ND	9.3E+00	4TCA-011
PCBs							
Aroclor 1016	mg/kg	2	17	12%	ND	1.0E-01	5TCA-013
Aroclor 1254	mg/kg	7	17	41%	ND	2.4E-01	5TCA-013
Aroclor 1260	mg/kg	3	17	18%	ND	5.5E-01	5TCA-013
PAHs							
Acenaphthene	mg/kg	2	17	12%	ND	9.3E-01	8CSU-018
Acenaphthylene	mg/kg	3	17	18%	ND	1.5E+00	8CSU-018
Anthracene	mg/kg	5	17	29%	ND	3.1E+00	8CSU-018
Benz(a)anthracene	mg/kg	11	17	65%	ND	2.4E+00	8CSU-018
Benzo(b,k)fluoranthene	mg/kg	11	17	65%	ND	2.6E+00	8CSU-018
Benzo(a)pyrene	mg/kg	10	17	59%	ND	1.8E+00	8CSU-018
Benzo(g,h,i)perylene	mg/kg	10	17	59%	ND	6.6E-01	8CSU-018
Chrysene	mg/kg	11	17	65%	ND	2.3E+00	8CSU-018
Dibenz(a,h)anthracene	mg/kg	7	17	41%	ND	3.7E-01	8CSU-018
Fluoranthene	mg/kg	14	17	82%	ND	4.3E+00	8CSU-018
Fluorene	mg/kg	5	17	29%	ND	3.7E+00	8CSU-018
Indeno(1,2,3-cd)pyrene	mg/kg	9	17	53%	ND	7.0E-01	8CSU-018
Naphthalene	mg/kg	5	17	29%	ND	2.5E+00	4TCA-011
Phenanthrene	mg/kg	15	17	88%	ND	6.3E+00	8CSU-018
Pyrene	mg/kg	15	17	88%	ND	4.7E+00	8CSU-018

mg/kg Milligrams per kilogram.
Note: Only detected compounds are listed.

**Table 8. Summary of Chemicals Detected in Groundwater
Tank Cleaning Area, Container Storage Unit, and Solidification Unit
H & H Ship Service Company
San Francisco, California**

Chemical	Units	Number of Detections	Number of Analyses	Frequency of Detection	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Concentration
Inorganics (filtered)							
Arsenic	mg/L	1	5	20%	0.812	0.812	3GW
Barium	mg/L	5	5	100%	0.0847	0.748	3GW
Cobalt	mg/L	1	5	20%	0.0185	0.0185	2GW
Molybdenum	mg/L	1	5	20%	0.0207	0.0207	4GW
Nickel	mg/L	2	5	40%	0.0419	0.0883	2GW
Zinc	mg/L	1	5	20%	0.128	0.128	4GW
Inorganics (unfiltered)							
Arsenic	mg/L	2	4	50%	0.3	9.2	1GW
Barium	mg/L	4	4	100%	0.27	5.1	1GW
Cadmium	mg/L	3	4	75%	0.012	0.026	1GW
Chromium	mg/L	4	4	100%	0.048	1.1	3GW
Cobalt	mg/L	4	4	100%	0.31	2.5	3GW
Copper	mg/L	4	4	100%	0.058	2	2GW
Lead	mg/L	4	4	100%	0.88	5.8	2GW
Mercury	mg/L	4	4	100%	0.0017	2	4GW
Nickel	mg/L	4	4	100%	0.32	12	3GW
Thallium	mg/L	1	4	25%	0.15	0.15	1GW
Vanadium	mg/L	3	4	75%	0.081	0.47	1GW
Zinc	mg/L	4	4	100%	1	7.2	1GW
Petroleum (unfiltered)							
TPH-Diesel	mg/L	1	4	25%	2.4	2.4	1GW
PCBs (unfiltered) None Detected							
PAHs (unfiltered)							
Acenaphthylene	µg/L	1	5	20%	0.5	0.5	1GW
Anthracene	µg/L	1	5	20%	1.1	1.1	1GW
Benzo(a)anthracene	µg/L	3	5	80%	0.14	5.1	1GW
Benzo(b)fluoranthene	µg/L	1	1	100%	0.58	0.58	5GW
Benzo(k)fluoranthene	µg/L	1	1	100%	0.12	0.12	5GW
Benzo(b,k)fluoranthene	µg/L	3	4	75%	0.8	10	1GW
Benzo(a)pyrene	µg/L	3	5	80%	0.34	8.8	1GW
Benzo(g,h,i)perylene	µg/L	3	5	80%	0.5	5.5	1GW
Chrysene	µg/L	2	5	40%	7	7	1GW
Dibenz(a,h)anthracene	µg/L	1	5	20%	1.2	1.2	1GW
Fluoranthene	µg/L	3	5	80%	0.7	10	1GW
Fluorene	µg/L	1	5	20%	1.5	1.5	5GW
Indeno(1,2,3-cd)pyrene	µg/L	1	5	20%	4.2	4.2	1GW
Naphthalene	µg/L	3	5	80%	0.5	1.1	5GW
Phenanthrene	µg/L	4	5	80%	0.5	4.8	1GW
Pyrene	µg/L	4	5	80%	0.8	10	1GW

PAHs (filtered) None Detected

mg/L Milligrams per liter.

µg/L Micrograms per liter.

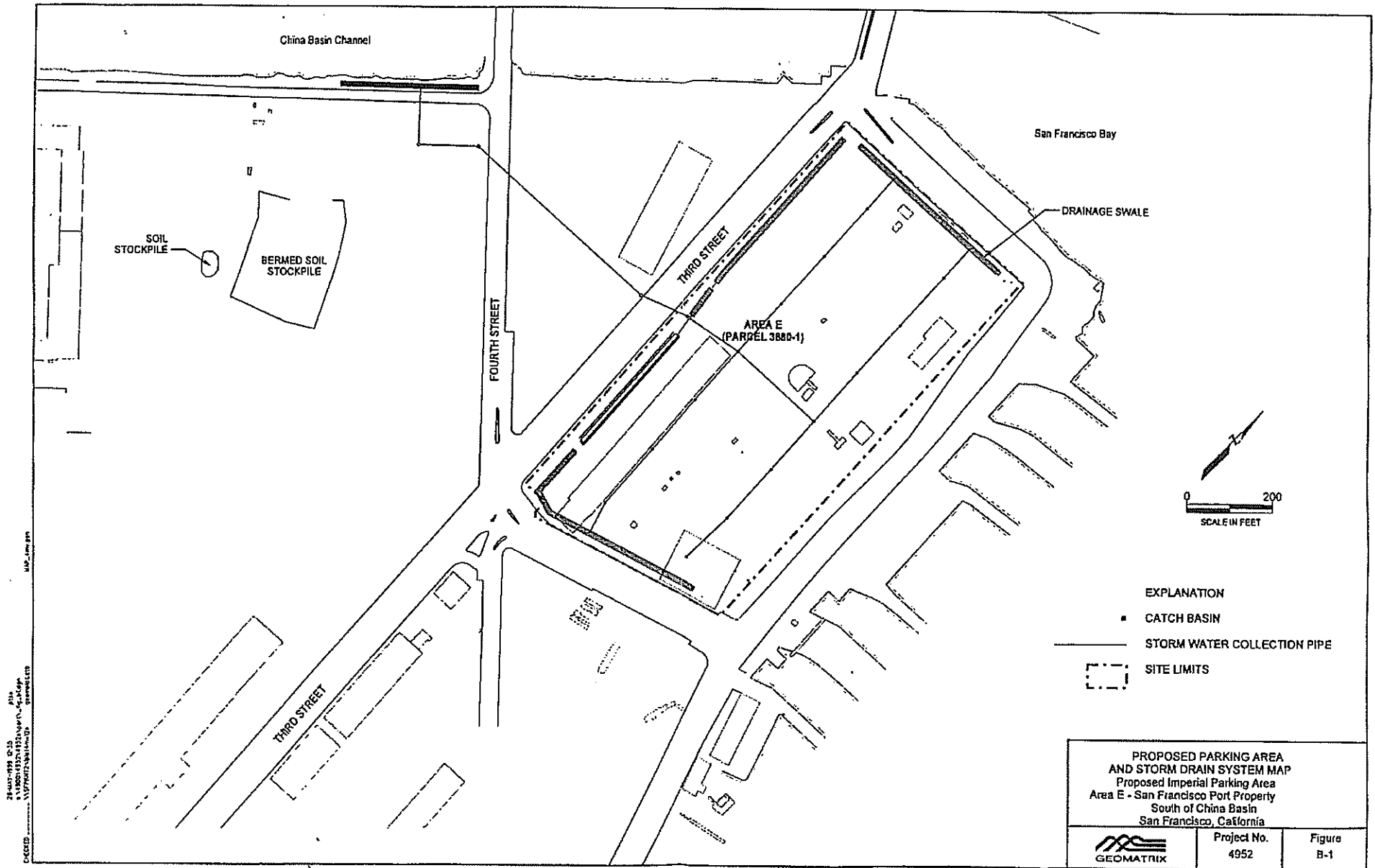
ND Not detected.

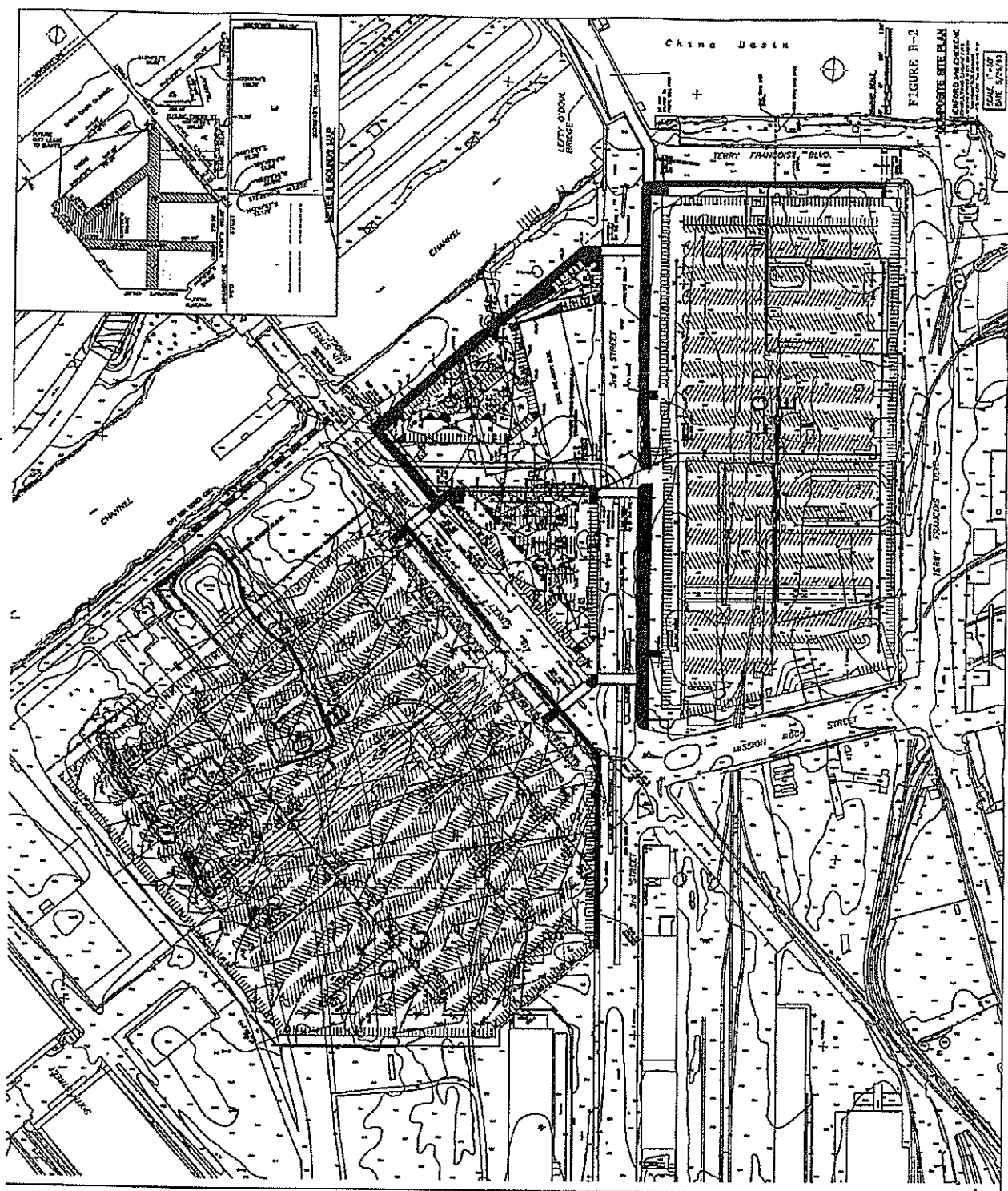
NA Not available.

Note: Only detected analytes are listed.

APPENDIX B

Site Plans Illustrating Alternative Storm Drainage Systems






Attachment B

Use Restriction

RECORDING REQUESTED BY:
The Port of San Francisco
Ferry Building
San Francisco, California 94111


San Francisco Assessor-Recorder
Doris M. Ward, Assessor-Recorder
DOC- 2000-G723986-00
Acct 25-NO CHARGE DOCUMENT
Thursday, JAN 27, 2000 10:47:55
FRE \$0.00
Ttl Pd \$0.00 Nbr-0001346614
REEL H561 IMAGE 0199 oed/ER/1-16

WHEN RECORDED, MAIL TO:

Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, California 94710
Attention: Mohinder S. Sandhu, P.E., Chief
Standardized Permits and Corrective
Action Branch

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: H&H Site located at Seawall Lot 337, City and County of San Francisco)

**This Covenant and Agreement ("Covenant") is made by and between COVENANT
TO RESTRICT USE OF PROPERTY**

ENVIRONMENTAL RESTRICTION

Re: H&H Site located at Seawall Lot 337, City and County of San Francisco

This Covenant and Agreement ("Covenant") is made by and between the City and County of San Francisco, a charter city and county in trust (the "Covenantor"), the current owner, of certain property situated in the City and County of San Francisco, State of California, described in Exhibit "A", attached hereto and incorporated herein by this reference (the "Property"), and the Department of Toxic Substances Control (the

N/c
16

"Department"). Pursuant to Civil Code section 1471(c), the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code ("H&SC") section 25260. The Covenantor and the Department, collectively referred to as the "Parties", therefore intend that the use of the Property be restricted as set forth in this Covenant, in order to protect human health, safety and the environment.

ARTICLE I STATEMENT OF FACTS

1.01. The Property, totaling approximately 14 acres, is more particularly described in Exhibit "A" and depicted in Exhibit "A-1", attached hereto and incorporated herein by this reference. The Property is located in the area now generally bounded by Terry Francois Boulevard on the North and East, in the City and County of San Francisco, California.

1.02. The site was created by filling marshlands and shallow tidal flats bordering San Francisco Bay between 1877 and 1913. Sources of fill are unknown, but likely included construction/demolition debris and rubble, and rock and dirt cut from nearby hills. Historical uses of the Site include railroad tracks and related support structures, parking and shipping by truck, and truck maintenance. From 1950 to 1996 H&H Ship Service operated a hazardous waste treatment facility, including a tank cleaning area and drum storage unit, and used portions of the Property for vehicle parking and offices.

In 1978 several of the wastes managed at the H&H Ship Service facility were determined to be hazardous wastes subject to federal and state hazardous waste management regulations. Since that time, the Department of Toxic Substances Control (or its predecessor in interest, the Department of Health Services) authorized H&H Ship Service's operations pursuant to an interim status document. Under this authorization the property was a hazardous waste facility (Facility), regulated by the Department, subject to the requirements of the California Hazardous Waste Control Law ("HWCL"), at Health and Safety Code ("H&S Code") section 25100 et seq., and the federal Resource Conservation and Recovery Act ("RCRA"), at 42 U.S.C. section 6901 et seq.

The Department is requiring this Covenant pursuant to the closure requirements of the HWCL, including H&S Code section 25246 and post-closure notices provisions of Title 22 California Code of Regulations [section 66265.119(b) for interim status hazardous waste facilities], as part of the facility closure. The Department circulated a closure plan, dated August 30, 1996 and a draft Categorical Exemption pursuant to the California Environmental Quality Act, Public Resources Code section 21000 et seq for

public review and comment from December 23, 1999 to January 24, 2000. The Department approved the closure plan, closure certification report titled, *RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California*, dated February 4, 1999, containing a health risk assessment, and the Categorical Exemption on January 26, 2000. Hazardous wastes, which are also hazardous materials as defined in Health and Safety Code sections 25117 and 25260, including petroleum hydrocarbons, polynuclear aromatic hydrocarbons, metals and arsenic, remain in the soil and groundwater at the Site at concentrations below those which would pose a significant human health risk under proposed reuse scenarios. The health risk assessment did not evaluate an unrestricted land use scenario, recreational use involving direct contact with soil, or potential impacts from use of groundwater. Therefore a deed restriction to limit use of the property to those exposure scenarios evaluated and found to be below acceptable risk limits is required as part of the facility closure.

1.03. As detailed in the health risk assessment within the *RCRA Closure Certification Report*, as approved by the Department on January 26, 2000, portions of the surface and subsurface soils on the Site contain hazardous wastes and hazardous materials, as defined in H&S Code section 25117 and 25260, including the following contaminants of concern: arsenic (up to 92 mg/kg) and benzo(a)pyrene (up to 2.5 mg/kg). Groundwater beneath the Property is found within 10 to 20 feet below ground surface. Dissolved arsenic was found in groundwater at up to 812 ug/l. California drinking water standards are arsenic at 50 ug/l. Because the health risk assessment did not evaluate an unrestricted land use scenario, recreational use involving direct contact with soil, or potential impacts from use of groundwater, the Department concluded that use of the Property as a residence, hospital, school for persons under the age of 21, day care center, or recreational use involving direct contact with soil would entail an unacceptable potential human health risk. The Department further concluded that the Property, subject to the restrictions of this Covenant, does not present an unacceptable threat to human safety or the environment.

ARTICLE II DEFINITIONS

2.01. Department. "Department" shall mean the California Department of Toxic Substances Control and shall include its successor agencies, if any.

2.02. Owner. "Owner" shall mean the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to all or any portion of the Property.

2.03. Occupant. "Occupant" shall mean Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

ARTICLE III
GENERAL PROVISIONS

3.01. Restrictions to Run With the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), upon and subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and every one of the Restrictions: (a) shall run with the land pursuant to H&SC sections 25202.5, and 25202.6 and Civil Code section 1471; (b) shall inure to the benefit of and pass with each and every portion of the Property, (c) shall apply to and bind the respective successors in interest to the Property, (d) are for the benefit of, and shall be enforceable by the Department, and (e) are imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding Upon Owners/Occupants. Pursuant to Health and Safety Code section 25202.5(b), this Covenant shall be binding upon all of the owners of the land, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees. Pursuant to Civil Code section 1471(b), all successive owners of the Property are expressly bound hereby for the benefit of the covenantee(s) herein. "Owner" shall include "Covenantor".

3.04. Written Notice of Hazardous Substance Release. The Owner shall, prior to the sale, lease, or rental of the Property, give written notice that a release of hazardous substances has come to be located on or beneath the Property, pursuant to Health and Safety Code section 25359.7. Such written notice shall include a copy of this Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes:

- (a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;
- (b) A hospital for humans;
- (c) A public or private school for persons under 21 years of age;
- (d) A day care center for children; or
- (e) Recreational use involving direct contact with soil.

4.02. Soil Management

- (a) Any contaminated soils brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with all applicable provisions of state and federal law.
- (b) If more than 50 cubic yards of any surface or subsurface soil will be disturbed, including excavation and grading, then the soil shall be evaluated for potential human health risks in compliance with Article 20 of the SF Municipal Code ("the Maher Ordinance"), and managed accordingly.

4.03. Prohibited Activities. The following activities shall not be conducted at the Property:

- (a) No raising of food (e.g., cattle, food crops, cotton, etc.) shall be permitted on the property.
- (b) No groundwater shall be extracted on the Property for purposes other than site remediation or construction dewatering without prior written approval by the Department.

4.04. Access for Department. Covenantor agrees that the Department shall have reasonable right of entry and access to the Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health and safety.

ARTICLE V
ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor and/or Owner to comply with any of the Restrictions specifically applicable to it shall be grounds for the Department, by reason of this Covenant, to require that the Covenantor and/or Owner modify or remove any improvements ("Improvements" herein shall mean all buildings, roads, driveways, and paved parking areas, constructed or placed upon any portion of the Property constructed in violation of the Restrictions.) Violation of this Covenant shall be grounds for the Department to file civil and/or criminal actions against the Covenantor and/or Owner as provided by law.

ARTICLE VI
VARIANCE, TERMINATION, AND TERM

6.01. Variance. Any Owner or, with the Owner's written consent, any Occupant of the Property or any portion thereof may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with H&S Code section 25202.6.

6.02. Termination. Any Owner, and/or, with the Owner's written consent, any Occupant of the Property, or any portion thereof, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with H&S Code section 25202.6.

6.03. Term. Unless ended in accordance with the Termination Paragraph above, by law, or by the Department in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VII
MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever.

7.02. Department References. All references to the Department include successor agencies/departments or other successor entity.

7.03. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of San Francisco within ten (10) days of the Covenantor's receipt of a fully executed original.

7.04. Notices. Whenever any person gives or serves any notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:

G723986

On or Before 12/31/00:

Port of San Francisco
3100 Ferry Building
San Francisco, CA 94111
Attention: Carol Bach,

With a copy to

Noreen Ambrose
Port General Counsel
Port of San Francisco
3100 Ferry Building
San Francisco, CA 94111.

After 12/31/00:

Port of San Francisco
Pier 1
San Francisco, CA 94111
Attention: Carol Bach,

With a copy to:
Noreen Ambrose
Port General Counsel
Port of San Francisco
Pier 1
San Francisco, CA 94111.

To Department:

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, CA 94710-2737
Attention: Branch Chief
Standardized Permits and Corrective Action Branch

Any party may change its address or the individual to whose attention a notice is to be sent by giving written notice in compliance with this paragraph.

7.05. Partial Invalidity. If any portion of the Restrictions or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.


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IN WITNESS WHEREOF, the Parties execute this Covenant.

"Covenantor"

CITY & COUNTY OF SAN FRANCISCO

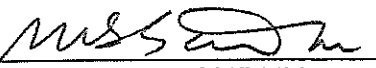
Date: 1/26/2000

By: 
DOUGLAS F. WONG
Its: Executive Director
PORT OF SAN FRANCISCO

"Department"

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Date: 1/26/00

By: 
MOHINDER S. SANDHU
Its: Chief, Standardized Permits and Corrective Action
Branch

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

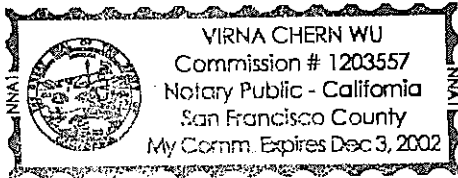
County of

San Francisco

} ss.

On January 26, 2000, before me, Virna C. Wu, "Notary Public",
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")personally appeared Douglas Farrell Wong,
Name(s) of Signer(s)☒ personally known to me☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Environmental RestrictionDocument Date: 1 / 26 / 2000 Number of Pages: 8 + 6 (Parcel M, C, D)Signer(s) Other Than Named Above: None

Capacity(ies) Claimed by Signer

Signer's Name: Douglas Farrell Wong☐ Individual☐ Corporate Officer — Title(s): _____☐ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☐ Other: Port Executive DirectorSigner Is Representing: Port of San Francisco

RIGHT THUMBPRINT
OF SIGNER
Top of thumb here

G723986

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On January 26, 2000, before me, Virna C. Wu, "Notary Public"

Date

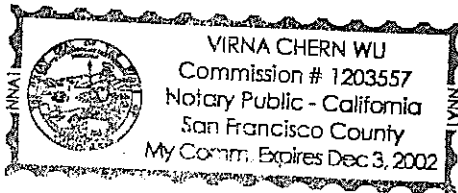
Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Mohinder Singh Sandhu

Name(s) of Signer(s)

☐ personally known to me☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Virna C Wu

Place Notary Seal Above

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

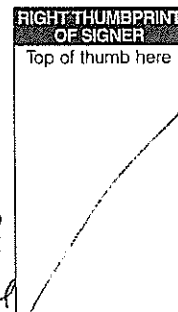
Description of Attached Document

Title or Type of Document: Environmental RestrictionDocument Date: 01/26/2000 Number of Pages: 8+6 (Parcel A, C, D)Signer(s) Other Than Named Above: None

Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu

- ☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator

☒ Other: Chief, Standardized Permits & Corrective Action BranchSigner Is Representing: Dept. of Toxic Substances Control

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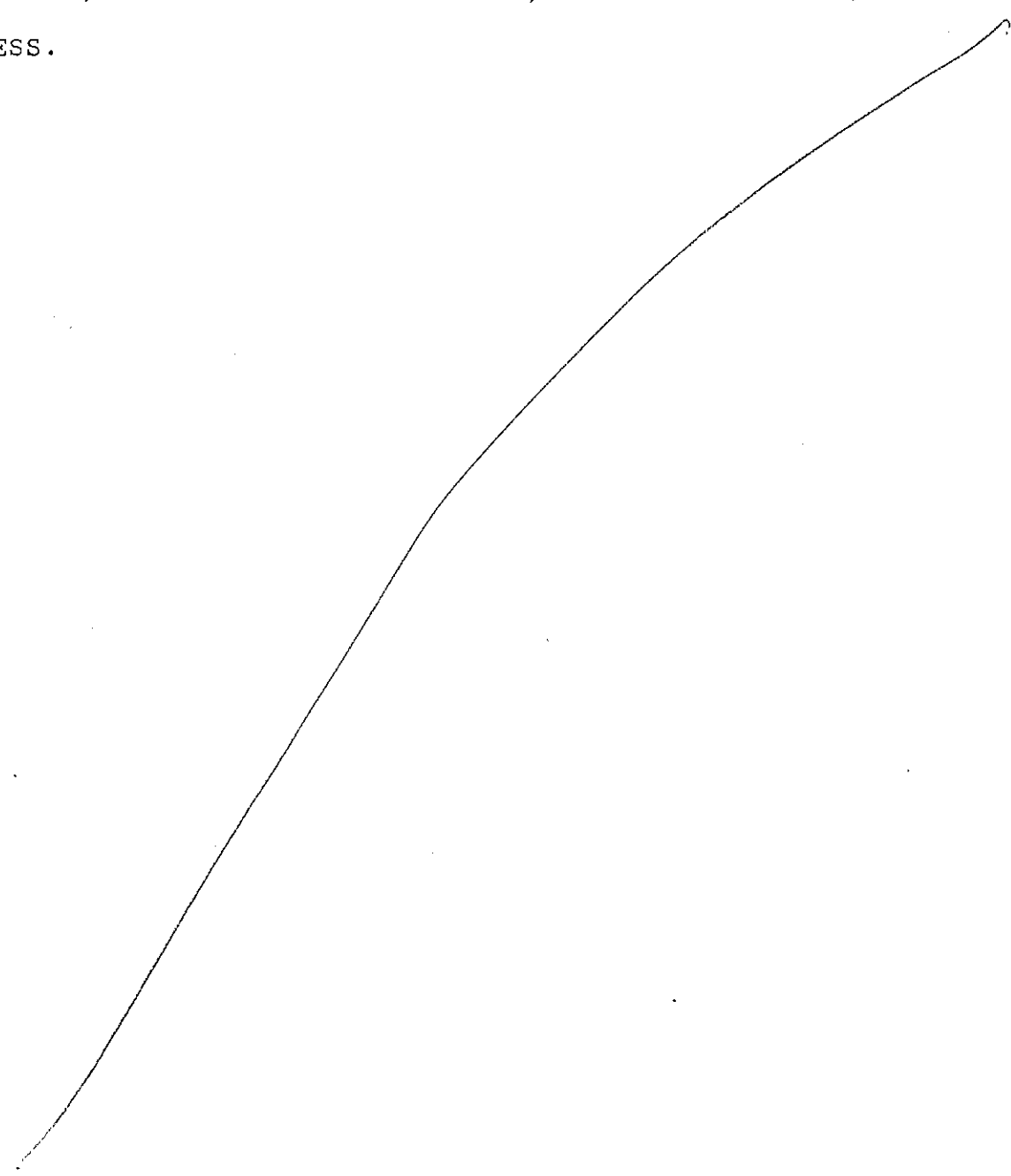
SEAWALL LOT 337

.PARCEL A

ALL THAT CERTAIN REAL PROPERTY SITUATED AT THE CITY AND COUNTY OF SAN FRANCISCO, BEING A PORTION OF SEAWALL LOT 337 OF THE SAN FRANCISCO PORT AUTHORITY, DESCRIBED AS FOLLOWS; COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID CORNER BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG SAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,217.59 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG THE LAST AFOREMENTIONED COURSE A DISTANCE OF 149.77 FEET; THENCE AT S 86DEG 57'33" W A DISTANCE OF 38.12 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 31.51 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 55.69 FEET; THENCE AT S 3DEG 02'27" E A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 55.27 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 40.17 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 120.00 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 40.17 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 48.20 FEET; THENCE AT S 86DEG 57'33" W A DISTANCE OF 142.25 FEET; THENCE AT

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S 86DEG 50'57" W A DISTANCE OF 111.99 FEET; THENCE AT
N 3DEG 10'55" W A DISTANCE OF 200.00 FEET; THENCE AT
N 86DEG 57'33" E A DISTANCE OF 171.00 FEET; THENCE AT
N 3DEG 02'27" W A DISTANCE OF 149.48 FEET; THENCE AT
N 86DEG 49'20" E A DISTANCE OF 121.29 FEET TO THE TRUE POINT OF
BEGINNING, CONTAINING AN AREA OF 70,765.20 SQUARE FEET, MORE
OR LESS.

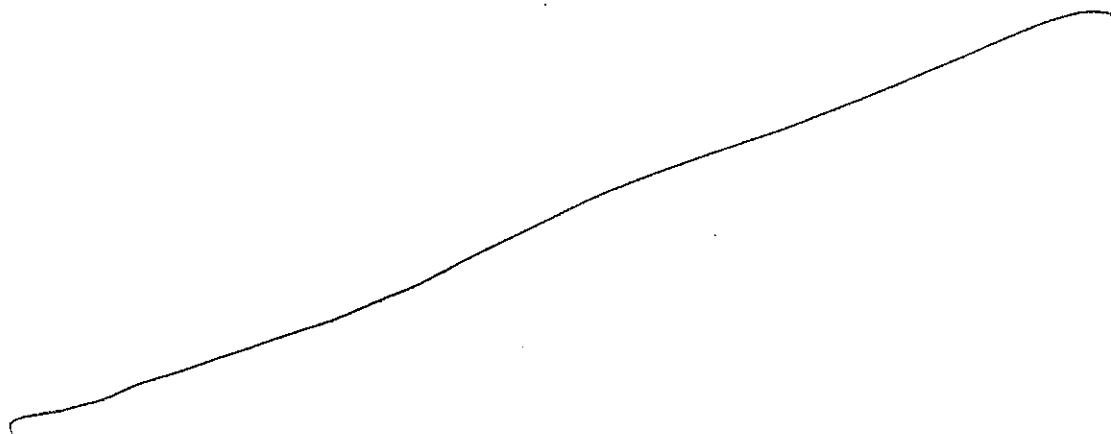


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SEAWALL LOT 337

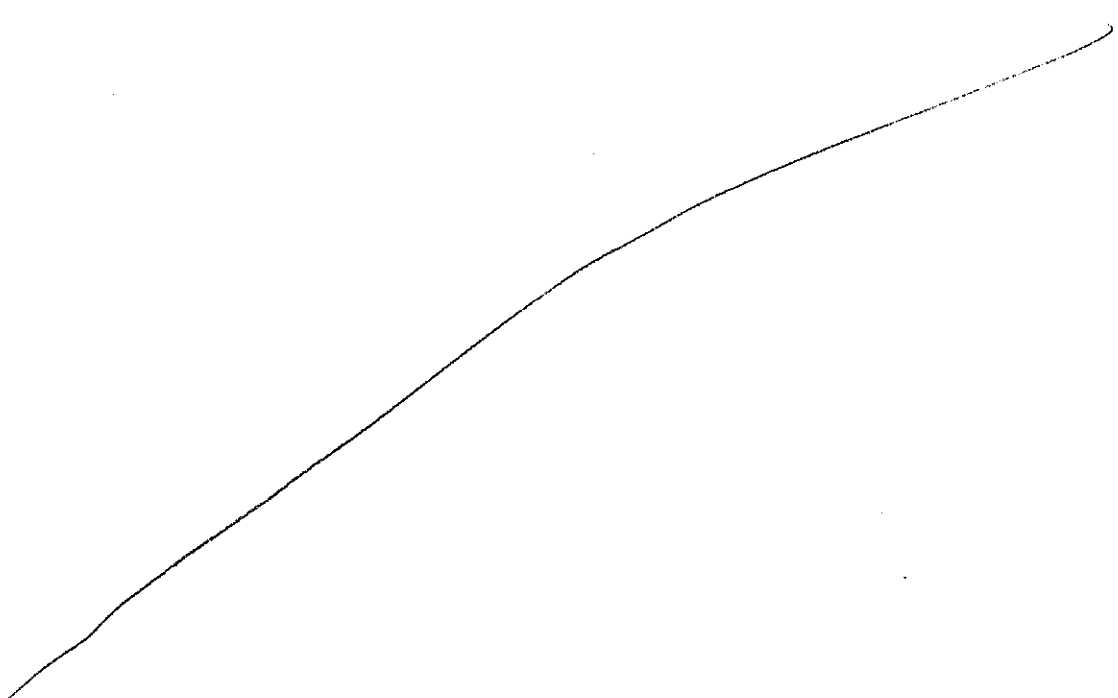
PARCEL C

BEING A PORTION OF SEAWALL LOT 337 OF THE SAN FRANCISCO PORT AUTHORITY ,CITY AND COUNTY OF SAN FRANCISCO, BRIEFLY DESCRIBED AS FOLLOWS; COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID CORNER BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG THE AFORESAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,367.36 FEET TO THE TRUE POINT OF BEGINNING; THENCE AT S 48DEG 02'27" E A DISTANCE OF 25.00 FEET; THENCE AT S 3DEG 02'27" E A DISTANCE OF 13.64 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 55.69 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 31.51 FEET; THENCE AT N 86DEG 57'33" E A DISTANCE OF 38.12 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING AN AREA OF 1,594.90 SQUARE FEET, MORE OR LESS.



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ALSO INCLUDED IN THIS PARCEL IS A PORTION OF SEAWALL
LOT 337 BRIEFLY DESCRIBED AS FOLLOWS;
COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF
TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET)
SAID POINT BEING INNER 14 OF THE INNER WATERFRONT LINE AS
DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING
OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG THE
AFORESAID INNER WATERFRONT LINE A DISTANCE OF 2,518.74 FEET;
THENCE AT N 86DEG 45'38" E A DISTANCE OF 17.66 FEET TO THE
TRUE POINT OF BEGINNING; THENCE AT S 3DEG 02'27" E DISTANCE OF
30.72 FEET; THENCE AT S 41DEG 57'33" W A DISTANCE OF 25.00
FEET; THENCE S 86DEG 57'33" W A DISTANCE OF 37.43 FEET; THENCE
AT N 3DEG 14'22" W A DISTANCE OF 48.20 FEET; THENCE AT
N 86DEG 45'38" E DISTANCE OF 55.27 FEET TO THE TRUE POINT
OF BEGINNING, CONTAINING AN AREA OF 2,509.60 SQUARE FEET, MORE
OR LESS.



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SEAWALL LOT 337

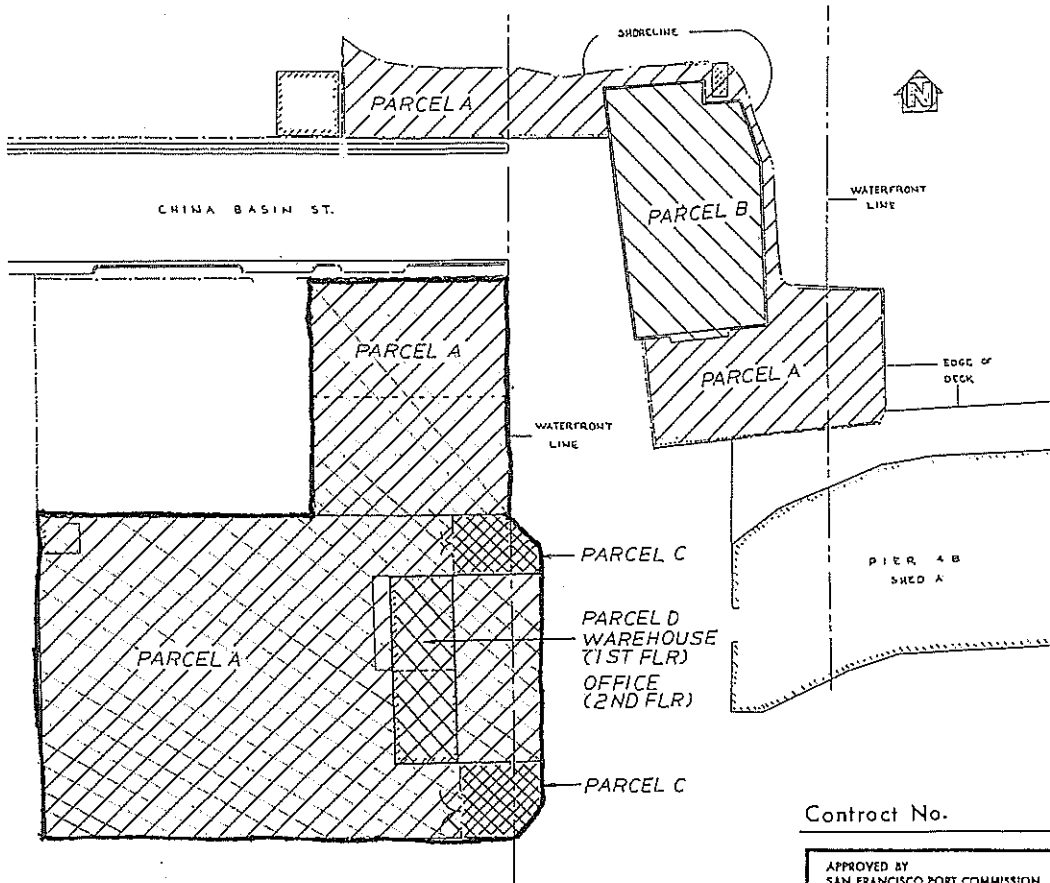
PARCEL D

PARCEL D IS A TWO-STORY WAREHOUSE AND OFFICE BUILDING LOCATED AT CHINA BASIN STREET WHOSE FOOTPRINT IS BRIEFLY DESCRIBED AS FOLLOWS;

COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID POINT BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE SOUTHERLY ALONG THE AFORESAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,398.74 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 38.02 FEET TO THE TRUE POINT OF BEGINNING; THENCE AT S 3DEG 14'22" E A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 40.17 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 120.00 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 40.17 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING AN AREA OF 4,820.00 SQUARE FEET, MORE OR LESS.

ALSO INCLUDED IN THIS PARCEL IS THE SECOND FLOOR OFFICE SPACE OF THE AFOREMENTIONED TWO- STORY BUILDING WITH AN AREA OF 2,414.00 SQUARE FEET, MORE OR LESS.

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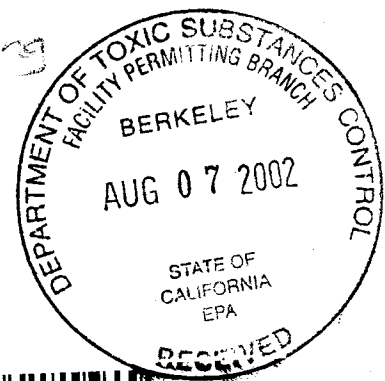
PARCEL A	91,844 SF
PARCEL B	14,071 SF
SUB TOTAL	105,915 SF
PARCEL C	4,105 SF
PARCEL D	
WAREHOUSE	4,820 SF
OFFICE	2,414 SF
TOTAL	117,254 SF

Contract No.

APPROVED BY
SAN FRANCISCO PORT COMMISSION
DATE July 21, 1982
Chief Engineer
CHIEF ENGINEER

NO.	DATE	DESCRIPTION
REVISIONS		
PORT OF SAN FRANCISCO SAN FRANCISCO PORT COMMISSION DEPARTMENT OF ENGINEERING		
EXHIBIT A-1		
H & H SHIP SERVICE CO. LEASE NO. L-11679		
DRAWN BY	E.C.C.	CHECKED BY
DESIGNED BY		DATE
SECTION HEAD		SCALE
DRAWING NO.		SHEET NO.
		OF SHEETS

20020807-0-Wong



RECORDING REQUESTED BY:
The Port of San Francisco
Ferry Building
San Francisco, California 94111

WHEN RECORDED, MAIL TO

Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, California 94710
Attention: Mohinder S. Sandhu, P.E., Chief
Standardized Permits and Corrective Action
Branch

San Francisco Assessor-Recorder
Doris M. Ward, Assessor-Recorder
DOC- 2002-H209674-00
Acct 25-NO CHARGE DOCUMENT
Thursday, JUL 25, 2002 12:45:40
Ttl Pd \$0.00 Nbr-0001906468
REEL I187 IMAGE 0545
0J1/JL/1-14

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

*(Re: H&H Site located at China Basin Channel and Terry Francois Blvd, City and
County of San Francisco)*

This Covenant and Agreement ("Covenant") is made by and between the City and County of San Francisco, a charter city and county in trust (the "Covenantor"), the current owner of certain property situated in the City and County of San Francisco, State of California, described in Exhibit "A", attached hereto and incorporated herein by this reference (the "Property"), and the Department of Toxic Substances Control (the "Department"). Pursuant to Civil Code section 1471(c) and the California Health and Safety Code, Section 25222.1, the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code ("H&SC"), Section 25260. The Covenantor and the Department, collectively referred to as the "Parties", therefore intend that the use of the Property be restricted as set forth in this Covenant, in order to protect human health,

safety and the environment.

ARTICLE I
STATEMENT OF FACTS

1.01. The Property, totaling approximately 0.6 acres, is more particularly described in Exhibit "A" and depicted in Exhibit "A-1", attached hereto and incorporated herein by this reference. The Property is located in the area now generally bounded by Terry Francois Boulevard to the west, China Basin Channel to the north, and San Francisco Bay to the east, in the City and County of San Francisco, California.

1.02. The site was created by filling marshlands and shallow tidal flats bordering San Francisco Bay between 1877 and 1913. Sources of fill are unknown, but likely included construction/demolition debris and rubble, and rock and dirt cut from nearby hills. Historical uses of the Site include railroad tracks and related support structures and parking. From 1950 to 1996 H&H Ship Service occupied the area for wastewater treatment and transfer operations, including aboveground storage tanks for receiving, settling and treating wastewater containing petroleum.

In 1978 several of the wastes managed at the H&H Ship Service facility were determined to be hazardous wastes subject to federal and state hazardous waste management regulations. Since that time, the Department of Toxic Substances Control (or its predecessor in interest, the Department of Health Services) authorized H&H Ship Service's operations pursuant to an interim status document. Under this authorization the property was a hazardous waste facility (Facility), regulated by the Department, subject to the requirements of the California Hazardous Waste Control Law ("HWCL"), at Health and Safety Code ("H&S Code") section 25100 et seq., and the federal Resource Conservation and Recovery Act ("RCRA"), at 42 U.S.C. section 6901 et seq. Under Interim Status, the property was a portion of the Facility that was known as the Treatment/Transfer Area (TTA).

The Department is requiring this Covenant pursuant to the closure requirements of the HWCL, including H&S Code section 25246 and post-closure notices provisions of Title 22 California Code of Regulations [section 66265.119(b) for interim status hazardous waste facilities], as part of the facility closure. In 1994, the Department reviewed H&H's Closure Plan to ensure that the closure of the TTA met the requirements in Title 22, California Code of Regulations, Chapter 15, Article 7. The Department circulated the draft Closure Plan and Proposed Negative Declaration for public review and comment from August 11, 1994 to September 13, 1994. The Department approved the Closure Plan on January 13, 1995 and filed a Notice of Determination for the project with the

State Clearinghouse on February 15, 1995.

The Department reviewed the closure certification report titled, *RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California*, (February 4, 1999), and subsequent submittals titled *Response to Comments, RCRA Closure Certification Report, Former H&H Ship Service Facility*, (November 2, 1999); *Results of Article 20 Sampling Program. Proposed China Basin Park Area* (July 2000); *Site Investigation and Surface Soil Sampling Results, Former H&H Ship Service Company – Treatment Transfer Area Parcel* (February 28, 2002); and *Addendum to the Article 20 Health Risk Assessment* (July 18, 2002). Upon filing of this deed restriction, the Department will approve the closure certification report.

Hazardous wastes, which are also hazardous materials as defined in Health and Safety Code sections 25117 and 25260, including petroleum hydrocarbons, polynuclear aromatic hydrocarbons, metals and arsenic, remain in the soil and groundwater at the Site at concentrations below those which would pose a significant human health risk under proposed reuse scenarios. Therefore a deed restriction to limit use of the property to those exposure scenarios evaluated and found to be below acceptable risk limits is required as part of the facility closure.

1.03. As detailed in the above-referenced reports, portions of the surface and subsurface soils on the Site contain hazardous wastes and hazardous materials, as defined in H&S Code section 25117 and 25260, including the following contaminants of concern: arsenic (up to 96 mg/kg) and benzo(a)pyrene (up to 11 mg/kg). Groundwater beneath the Property is found within 10 to 20 feet below ground surface. Dissolved arsenic was found in groundwater at up to 180 ug/l. The California drinking water standard for arsenic is 50 ug/l.

A review of the analytical results and the chemical distribution suggests that there are "hot spots". Hot spots are areas of affected soil or groundwater having concentrations higher than an empirically determined percentile of the distribution of concentrations in a particular population. 65 soil samples from 20 locations at various depths were collected within the TTA. Elevated concentrations of benzo(a)pyrene equivalent B(a)P EQ were measured in samples collected from two borings locations (EB-1, 19.8 milligrams per kilogram [mg/kg]) and (EB-20, 7.9 mg/kg). One surface soil sample (GMX-08) contained B(a)P EQ concentration of 1.5 mg/kg. All other concentrations of B(a)P EQ were less than 1 mg/kg. Elevated concentrations of arsenic and lead were observed in samples collected from borings EB-1 (3,000 mg/kg lead), EB-5 (96 mg/kg arsenic and 1,300 mg/kg lead), and EB-18 (2,400 mg/kg lead). Borings EB-1 and EB-5 are located in the eastern section of the TTA; GMX-08 is located near the northern perimeter; and borings EB-18 and EB-20 are located in the southwest section.

Based on these observations, borings EB-1, EB-5, GMX-08, EB-18, and EB-20 can be considered hot spots. However, each of borings is located under a concrete/asphalt

foundation or a compacted aggregate/crushed rock/roadbase material. The concrete/asphalt foundation or compacted aggregate/crushed rock/roadbase material serves as a physical barrier preventing direct contact with chemicals in soil; thus, there are no potential direct exposure pathways to chemicals at these hot spots by future receptors. If in the unlikely event that the concrete/asphalt foundation is removed, the excess cancer risk to a receptor from the hot spots would range from 9×10^{-5} to 3×10^{-6} .

Imported topsoil at least 18 inches thick followed by a layer of sod will be placed over the existing asphalt-concrete foundation. The concrete is present at one foot thick to at least 3 feet thick across approximately two-third of the TTA. The remaining one-third of the TTA is currently overlain with an aggregate/crushed rock/roadbase material. The concrete/asphalt foundation and compacted aggregate/crushed rock/roadbase layer precludes a complete exposure pathway. Additional of the 18 inches of topsoil and sod layer will eliminate potential direct exposures to soil in fill material within the TTA.

In order to ensure that no complete pathways are established, the Department will require that the existing concrete/asphalt foundation remain undisturbed so long as the intended use of the Property is to be a recreational park. Additionally, the Department will require that the site be covered (capped) with at least eighteen (18) inches of imported topsoil on top of an indicator lining material to denote the separation of the topsoil from native fill. Because the health risk assessment also did not evaluate an unrestricted land use scenario or potential impacts from use of groundwater, the Department concluded that use of the Property as a residence, hospital, school for persons under the age of 21, or day care center would entail an unacceptable use. The Department further concluded that the Property, subject to the restrictions of this Covenant, does not present an unacceptable threat to human safety or the environment.

ARTICLE II DEFINITIONS

2.01. Department. "Department" shall mean the California Department of Toxic Substances Control and shall include its successor agencies, if any.

2.02. Owner. "Owner" shall mean the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to all or any portion of the Property.

2.03. Occupant. "Occupant" shall mean Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.04. Cap. "Cap" shall mean eighteen (18) inches of imported topsoil on top of

an indicator lining material which is used to denote the separation of the imported topsoil from native fill.

2.05 Concrete/Asphalt Foundation. "Concrete/Asphalt Foundation" shall mean the existing concrete/asphalt surface which is overlain approximately two-third of the Property.

2.03. ARTICLE III GENERAL PROVISIONS

3.01. Restrictions to Run With the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), upon and subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and every one of the Restrictions: (a) shall run with the land pursuant to H&SC sections 25202.5, and 25202.6 and Civil Code section 1471; (b) shall inure to the benefit of and pass with each and every portion of the Property, (c) shall apply to and bind the respective successors in interest to the Property, (d) are for the benefit of, and shall be enforceable by the Department, and (e) are imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding Upon Owners/Occupants. Pursuant to Health and Safety Code section 25202.5(b), this Covenant shall be binding upon all of the owners of the land, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees. Pursuant to Civil Code section 1471(b), all successive owners of the Property are expressly bound hereby for the benefit of the covenantee(s) herein. "Owner" shall include "Covenantor".

3.03. Written Notice of Hazardous Substance Release. The Owner shall, prior to the sale, lease, or rental of the Property, give written notice that a release of hazardous substances has come to be located on or beneath the Property, pursuant to Health and Safety Code section 25359.7. Such written notice shall include a copy of this Covenant.

3.04. Incorporation into Deeds and Leases. The Restrictions set forth herein shall be incorporated by reference in each and all deeds and leases for any portion of the Property.

3.05. Conveyance of Property. Covenantor agrees that the Owner shall provide notice to the Department not later than thirty (30) days after any conveyance of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect such proposed conveyance, except as otherwise provided by law, by administrative order, or specific provision of this Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes:

- (a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;
- (b) A public or private school for persons under 21 years of age; or
- (c) A hospital for humans; or
- (c) A day care center for children.

4.02 Prohibited Activities. The following activities shall not be conducted at the Property:

- (a) No raising of food (e.g., cattle, food crops, cotton, etc.) shall be permitted on the property.
- (b) No groundwater shall be extracted on the Property for purposes other than site remediation or construction dewatering without prior written approval by the Department.

4.03 Non-Interference with the Cap. Covenantor agrees:

- (a) No activities which will disturb the Cap (e.g. excavation, grading, removal, trenching, filling, earth movement, or mining) shall be permitted on the Property without prior review and approval by the Department.
- (b) All uses and development of the Property shall preserve the integrity of the Cap.
- (c) Any proposed alteration of the Cap shall require written approval by the Department.
- (d) Covenantor shall notify the Department of each of the following: (i) The type, cause, location and date of any disturbance to the Cap which could affect the ability of the Cap to contain subsurface hazardous materials in the Property, and (ii) the type and date of repair of such disturbance. Notification to the Department shall be made as provided below within ten (10) working days of both the discovery of any such disturbance(s) and the completion of any repairs. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other

Owners and Occupants.

4.04. Management of Native Fill and Concrete/Asphalt Foundation Material

- (a) All uses and development of the Property shall preserve the integrity of the existing Concrete/Asphalt Foundation.
- (b) No activities (e.g., excavation, grading, removal, trenching, filling, earth movement or mining) which will disturb the native fill and/or the Concrete/Asphalt Foundation material underlying the Cap as indicated in Exhibit B shall be permitted on the Property without a Department-approved Soil Management Plan and Health and Safety Plan.
- (c) Native fill and/or Concrete/Asphalt Foundation material shall not be managed or handled such that it may migrate into the bay.
- (d) Any native fill and/or Concrete/Asphalt Foundation material brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with the applicable state and federal laws and their implementing regulations.
- (e) The Owner shall provide the Department written notice at least fourteen (14) days prior to any building, filling, grading, mining or excavating at the Property.
- (f) If more than 50 cubic yards of any native fill will be disturbed, including excavation and grading, then the soil shall be evaluated for potential human health risks in compliance with Article 20 of the SF Municipal Code ("the Maher Ordinance"), and managed accordingly.
- (g) Covenantor shall notify the Department of each of the following: (i) The type, cause, location and date of any disturbance to the native fill and/or Concrete/Asphalt Foundation which could affect the ability of the Concrete/Asphalt Foundation to contain subsurface hazardous materials in the Property, and (ii) the type and date of repair of such disturbance. Notification to the Department shall be made as provided below within ten (10) working days of both the discovery of any such disturbance(s) and the completion of any repairs. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

4.05. Access for Department. Covenantor agrees that the Department shall

have reasonable right of entry and access to the Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health and safety.

ARTICLE V ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor and/or Owner to comply with any of the Restrictions specifically applicable to it shall be grounds for the Department, by reason of this Covenant, to require that the Covenantor and/or Owner modify or remove any improvements ("Improvements" herein shall mean all buildings, roads, driveways, and paved parking areas, constructed or placed upon any portion of the Property constructed in violation of the Restrictions.) Violation of this Covenant shall be grounds for the Department to file civil and/or criminal actions against the Covenantor and/or Owner as provided by law.

ARTICLE VI VARIANCE, TERMINATION, AND TERM

6.01. Variance. Any Owner or, with the Owner's written consent, any Occupant of the Property or any portion thereof may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with H&S Code section 25202.6.

6.02. Termination. Any Owner, and/or, with the Owner's written consent, any Occupant of the Property, or any portion thereof, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with H&S Code section 25202.6.

6.03. Term. Unless ended in accordance with the Termination Paragraph above, by law, or by the Department in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VII MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever.

7.02. Department References. All references to the Department include successor agencies/departments or other successor entity.

7.03. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of San Francisco within ten (10) days of the Covenantor's receipt of a fully executed original.

7.04. Notices. Whenever any person gives or serves any notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:

Carol Bach
Assist. Deputy Director, Environmental Health and Safety
Port of San Francisco
Pier 1
San Francisco, CA 94111

With a copy to:

Noreen Ambrose
Port General Counsel
Port of San Francisco
Pier 1
San Francisco, CA 94111.

To Department:

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, CA 94710-2737
Attention: Chief, Standardized Permits and Corrective Action
Branch

Any party may change its address or the individual to whose attention a notice is to be sent by giving written notice in compliance with this paragraph.

7.05. Partial Invalidity. If any portion of the Restrictions or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.

H209674

IN WITNESS WHEREOF, the Parties execute this Covenant.

"Covenantor"

Date: 7/24/02

By: //original signed by//
DOUGLAS F. WONG
Its: Executive Director

"Department"

Date: 7/24/02

By: //original signed by//
Mohinder S. Sandhu, P.E.
Its: Chief, Standardized Permits and Corrective Action
Branch

H209674

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On

July 24, 2002

Date

before me,

Virna C. Wu

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

"Notary Public"

personally appeared

Mohinder Singh Sandhu

Name(s) of Signer(s)

☒ personally known to me☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Place Notary Seal Above

//original signed by//

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Covenant to Restrict Use of Property

Document Date:

None

Number of Pages:

10 Pages +

Exhibits A & B

Signer(s) Other Than Named Above:

None

Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu

☒ Individual☐ Corporate Officer — Title(s):☒ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☒ Other: Port Executive Director

Signer Is Representing:

Port of San Francisco

RIGHT THUMBPRINT
OF SIGNER

Top of thumb here

H209674

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On July 24, 2002

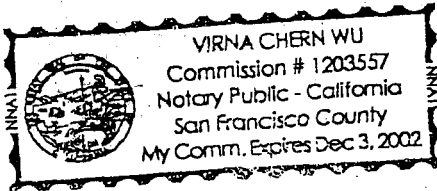
Date

before me, Virna C. Wu

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

"Notary Public"personally appeared Mohinder Singh Sandhu

Name(s) of Signer(s)

☐ personally known to me☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Place Notary Seal Above

//original signed by//

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document:

Covenant to Restrict Use of Property

Document Date:

None

Number of Pages:

10 Pages +

Signer(s) Other Than Named Above:

NoneExhibit A & B

Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu☐ Individual☐ Corporate Officer — Title(s):☐ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☒ Other: Chief, Standardized Permits & Corrective

Signer Is Representing:

Department of Toxic Substances Control

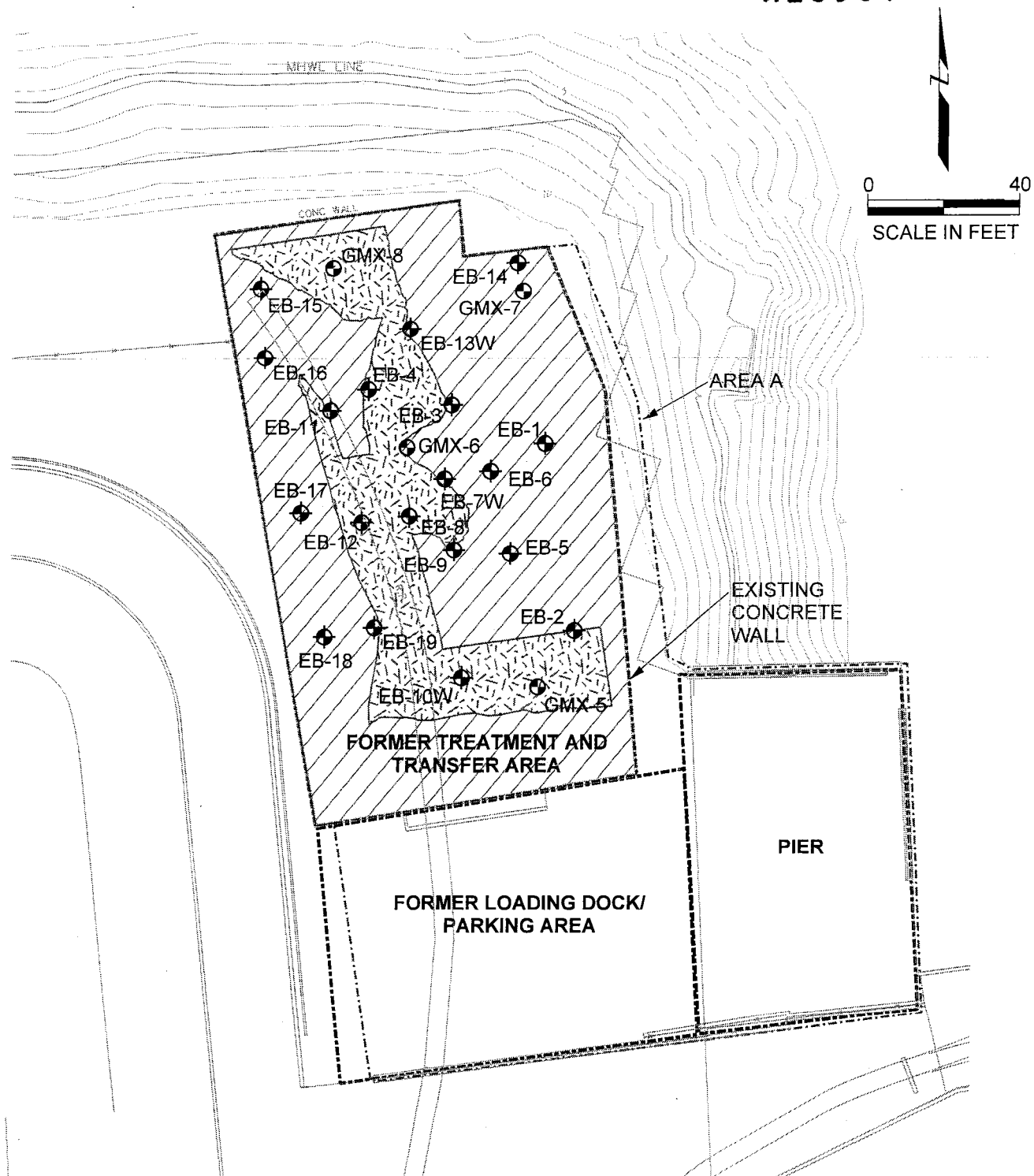
RIGHT THUMBPRINT
OF SIGNER
Top of thumb here

EXHIBIT A

H&H Parcel – Tank Treatment Area

All that certain real property of the San Francisco Port Commission, City and County of San Francisco, State of California, situate at the northeast corner of Terry A. Francois Boulevard (formerly China Basin Street), more particularly described as follows:

Commencing at the point of intersection of the northwesterly line of Townsend Street with the southwesterly line of Delancey Street (formerly First Street), said point being Inner 14 of the Inner Waterfront Line as described in records on file in the office of Engineering of said San Francisco Port Commission; Thence along said Inner Waterfront Line, S 03°02'27" E a distance of 2132.11 feet; Thence N 86°51'14" E a distance of 65.28 feet, to the True Point Of Beginning; Thence S 10°21'36" E a distance of 127.93 feet; Thence N 80°50'39" E a distance of 4.70 feet; Thence S 09°13'14" E a distance of 68.59 feet; Thence N 81°09'11" E a distance of 146.17 feet; Thence N 03°21'24" W a distance of 85.74 feet; Thence S 88°44'14" W a distance of 54.91 feet; Thence N 66°55'27" W a distance of 9.19 feet; Thence N 07°12'31" W a distance of 68.86 feet; Thence N 21°58'29" W a distance of 44.82 feet; Thence S 83°22'07" W a distance of 28.09 feet; Thence N 05°44'30" W a distance of 14.69 feet; Thence S 81°59'17" W a distance of 65.99 feet; Thence S 10°21'36" E a distance of 30.22 feet to the True Point Of Beginning; Containing 26,592 square feet (0.61 acres), more or less.



EXPLANATION

⊕ Soil samples collected at multiple depths
by J. Yang and Assoc. March 15, 1995

⊙ Surface soil samples collected by
Geomatrix, November 16, 2001



Area of aggregate/crushed rock/
road base material



Concrete/asphalt foundation

EXHIBIT B

APPENDIX C
Soil Management Plan
June 1999



SOIL MANAGEMENT PLAN

**Imperial Weitz Parking Lots for the
Giants Pacific Bell Ball Park
Area E - Port of San Francisco Property
San Francisco, California**

Prepared for:

Imperial Weitz, LLC
800 Second Avenue, Suite 300
Des Moines, Iowa 50309

Prepared by:

Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612
(510) 663-4100

June 1999

Project No. 4952

Geomatrix Consultants

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SOIL MANAGEMENT PLAN
Imperial Weitz Parking Lots for the
Giants Pacific Bell Ball Park
Area E - Port of San Francisco Property
San Francisco, California

1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix) has prepared this Soil Management Plan (SMP) on behalf of Imperial Weitz, LLC for the proposed 14-acre parking lot for the Giants' Pacific Bell Ball Park. The proposed parking lot site is located south of China Basin Channel and east of Third Street in San Francisco, California (the site; Figure 1). The site is part of a total of approximately 36 acres of parking to be developed by Imperial Weitz south of China Basin Channel and has been referred to as Area E in previous environmental documents prepared by Geomatrix on behalf of Imperial Weitz.

2.0 BACKGROUND

Imperial Weitz is proposing to construct a paved parking lot on the site. A site history review, environmental investigation and risk evaluation were performed to meet Article 20 requirements and assess potential risks to construction worker and site visitor health associated with soil and groundwater quality at the site. The following summarizes the results of the site history review, environmental investigations, and risk assessment, and describes the proposed parking lot development.

2.1 SITE SETTING AND HISTORICAL USAGE

The approximately 19 acre site is currently owned by the Port of San Francisco (the Port). The subject area was originally marshlands and shallow tidal flats bordering San Francisco Bay. It was filled between 1877 and 1913; the source of the fill is unknown but likely included construction debris and rubble from the 1906 earthquake and cut material from nearby hills and construction areas.

Historical site uses include: railroad trackage and support structures for rail-related activities, parking and shipping, and truck maintenance. H&H Shipping Service Company, Inc. (H&H) occupied the northeastern corner of the site from 1950 to 1996. H&H used the area for vehicle parking and offices, and maintained a tank cleaning area and drum storage unit. No known underground storage tanks (USTs) have been identified on the site. Recently, the site has been

leased by multiple tenants. Tenant uses consist of a recycling center, an automobile sales center, the Mission Rock Recovery Center, a moving company, maritime offices, and automobile storage.

2.2 SITE INVESTIGATIONS

2.2.1 Previous Site Investigations

Burlington Northern Santa Fe Railway Company ("the Railroad") conducted Phase I and Phase II Environmental Assessments of property formerly operated by the Railroad located east of Third Street, between Sixteenth Street and China Basin Channel; this property included the western half of the site. The scope of the Railroad's investigations included one soil boring in the southern portion of the site. Soil samples were collected at depths of 0.5, 5, and 8 feet bgs and analyzed for total petroleum hydrocarbons as gasoline (TPHg), TPH as motor oil (TPHmo), lead, nickel, arsenic, chromium, cadmium, and zinc. Results of chemical analyses on these soil samples indicated that several metals were present at concentrations exceeding typical regional background concentrations (Geomatrix, March 1999).

In addition, HLA has performed an investigation of the former H&H Shipping parcel located in the northeast corner of the site (HLA; 1999). Seventeen soil samples were collected and analyzed for metals, TPH as diesel (TPHd), TPHg, oil and grease, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and polynuclear aromatic hydrocarbons (PNAs). Five groundwater samples were collected and one or more samples were analyzed for metals, TPHd, TPHg, benzene, toluene, ethylbenzene, xylenes [BTEX], PCBs, and PNAs. Several soil samples contained PNAs and metals; very low concentrations of some aromatic hydrocarbons and PCBs were detected in a few soil samples. The groundwater samples contained low to trace concentrations of several metals. Filtered groundwater samples did not contain PNAs; however, unfiltered samples contained low concentrations of several PNA compounds. PCBs and BTEX were not detected in the groundwater samples. Summary tables for the soil and groundwater analysis results of the H&H investigation are contained in Appendix A.

2.2.2 Recent Site Investigation

In April 1999, Geomatrix installed 8 soil borings and collected 16 soil samples (two soil samples per boring) and 2 groundwater samples (from 2 of the 8 locations) for chemical analysis. Sampling locations are illustrated on Figure 2. Primary chemicals detected in soil were PNAs and some metals (i.e., antimony, arsenic, copper, lead, nickel, and mercury). Soil sample results from the recent investigation are summarized in Tables 1 through 5. Several

metals were detected in groundwater; however, chemical concentrations were generally low to non-detect (Table 6). PNAs were not detected in the groundwater samples.

2.3 PROPOSED DEVELOPMENT

The proposed development for the subject area is asphalt paved parking. Two alternatives for storm drainage are being considered, as described below. Figures illustrating the two alternatives for the storm drainage system are contained in Appendix B.

Alternative 1

This alternative for the drainage system consists of a series of storm drainage lines and catch basins to collect and transport storm water from the parking lot site to the main City box culvert located on Channel Street, west of Fourth Street. During a 5 year storm event, the City system could reach capacity and overflows would result. Overflows from the parking lot site would be diverted to a small treatment plant to be located east of Fourth Street, near China Basin Channel. Under this alternative, Area E will be entirely paved with asphalt and surrounded by a 3- to 4-foot fence.

The catch basins will be installed in excavations with aerial dimensions of approximately 4 feet by 4 feet and extending to depths of 4 to 6 feet. Trenches will be excavated to install the piping; the trenches are anticipated to be approximately 2 to 3 feet wide and will extend between 4 to 6 feet below grade. Estimated maximum excavation depth for the piping system is 6 feet bgs. The parking area will be graded and bermed to enhance flow to each of the catch basins, and paved with asphaltic concrete.

Alternative 2

This alternative includes perimeter grassy drainage swales to collect and drain storm water overflows.

The parking area will contain a storm drain system to collect surface water runoff. The storm drain system will consist of a network of catch basins and drainage swales to collect storm water on the parking lot. The storm water will be conveyed through a series of pipes and the drainage swales to one point of discharge. The discharge pipe will collect into one main and flow into the City box sewer in Channel Street near Fourth Street.

The catch basins will be installed in excavations with aerial dimensions of approximately 4 feet by 4 feet and extending to depths of 4 to 6 feet. Trenches will be excavated to install the

pipings; the trenches are anticipated to be approximately 2 to 3 feet wide and will extend between 4 to 6 feet below grade. Estimated maximum excavation depth for the piping system is 6 feet bgs. The swales will be approximately 32 feet in width and 2 to 3 feet in depth. The swales will be covered with a geotextile fabric and grass. The parking area will be graded and bermed to enhance flow to each of the catch basins, and paved with asphaltic concrete.

2.4 RISK ASSESSMENT

A health risk assessment (HRA) was conducted to evaluate the potential human health risks associated with the presence of chemicals in soil and groundwater assuming future use of the site as a parking lot with grassy swales (Geomatrix, May 1999). Potential noncarcinogenic hazard indexes and theoretical lifetime excess cancer risks were estimated for future on-site construction workers and future on-site visitors assuming conservative estimates of human exposure. Future on-site construction workers may be exposed to chemicals in soil across the site to the depth required for installation of the storm drain system or in groundwater if encountered in excavation areas. Following construction, potential exposure to future on-site visitors would be limited to exposed soil in the grass-covered swale areas.

The results of the HRA indicate that the presence of chemicals in soil and groundwater at the site should not pose an unacceptable noncarcinogenic or carcinogenic risk to future on-site construction workers and visitors. A summary table for the HRA results is provided as Table 7. Based on these results, it was also concluded that potential risks to nearby residents during construction and future on-site maintenance workers and trespassers after construction would also not be of concern.

3.0 OBJECTIVES

As described above, the results of the HRA indicate that chemicals in site soil do not present an unacceptable human health risk. However, dust from a construction site can present a nuisance if not controlled. Likewise, erosion of on-site soil during construction activities can increase the turbidity of surface water run-off.

Therefore, the objectives of the SMP are to:

- provide guidelines for soil handling, stockpiling, dust and erosion minimization and, if needed, soil disposal during site construction activities for the proposed parking lot; and

- describe procedures for soil management following site construction for the duration of the use of the Site as a parking lot.

4.0 PROPOSED SOIL MANAGEMENT PROCEDURES

The following two sections describe the soil management procedures that will be implemented during and following site construction.

4.1 SOIL MANAGEMENT PROCEDURES FOR SITE CONSTRUCTION

The following procedures will be implemented during site construction activities to minimize dust and control erosion.

4.1.1 Dust Control

The dust control measures to be implemented at the site correspond to the PM₁₀ control measures recommended by the Bay Area Air Quality Management District (BAAQMD) in their California Environmental Quality Act Guidelines. These measures consist of:

- Water all active construction areas at least twice daily or as necessary to prevent visible dust plumes from migrating outside of the site limits.
- Mist or spray water while loading transportation vehicles.
- Minimize drop heights while loading transportation vehicles.
- Use tarpaulins or other effective covers for trucks carrying soils that travel on public streets.
- Pave, apply water 3 times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas.
- Sweep all paved access routes parking areas and staging areas daily, if visibly soiled.
- Sweep street daily if visible soil material is carried onto public streets from the site.

4.1.2 Erosion Control

A Stormwater Pollution Prevention Plan (SWPPP) will be developed by the site contractor prior to initiation of Site work that details procedures for minimizing erosion. The SWPPP will include elements such as silt traps and hay bales to minimize surface water runoff from the Site into storm drains or the San Francisco Bay, berms to control Site runoff, and covering soil stockpiles during the rainy season (November through March) to minimize sediment runoff.

4.1.3 Soil Stockpile Management

Temporary stockpiling of excavated soil may be necessary throughout site construction. Soil stockpiled at the Site will be lightly sprayed with water as needed to minimize dust. To the extent practical, the soil stockpiles will be covered with plastic sheeting or other similar material at times when not in active use. When a soil stockpile is uncovered during the rainy season, it will be surrounded by hay bales and/or silt traps to minimize sediment runoff.

4.1.4 Soil Disposal

Site development has been designed to minimize the generation of excess soil; therefore, soil requiring off-site disposal is not anticipated. Although not anticipated at this time, if excess soil is generated from the site, the excess soil will be profiled to determine appropriate disposal options. Handling and disposal of the soil will be conducted in accordance with all applicable state and federal laws.

Based on chemical analysis results of soil samples collected from the site, total metal and organic concentrations are less than the Total Threshold Limit Concentrations (TTLCs) for designation as California Hazardous Waste. However, additional solubility testing of some of the metals (e.g., lead) would likely be required by disposal facilities to better assess the waste profile for the soil.

4.1.5 Site Access Control

The construction site will be fenced to control pedestrian or vehicular entry, except at controlled points (i.e., gates). Gates will be closed and locked during non-construction hours. "No-trespassing" signs will be posted every 500 feet along the fencing.

4.2 SOIL MANAGEMENT FOLLOWING SITE DEVELOPMENT

Following site development, the soil will be covered by asphalt pavement or grass (in the swale areas) and it is unlikely that the soil will be accessed, with the exception of future maintenance work on subsurface utilities. The HRA assessed possible health risks to future maintenance workers at the parking lot and concluded that chemicals in soil at the site should not pose an unacceptable carcinogenic or noncarcinogenic risk (Geomatrix, May 1999). Soil management procedures during future site maintenance work requiring soil excavation will be as described in Section 4.1 of this SMP; if waste soil is generated, the soil will be disposed in accordance with the procedures described in Section 4.1.4.

5.0 MAINTENANCE OF SITE COVER

Procedures in this section are applicable only if Alternative 2 is selected for the storm drainage system.

Although the HRA concluded that soil in the grass-covered swale area would not present an unacceptable risk to human health for parking lot visitors or trespassers, it is prudent that the grass-covered swale areas be well maintained. Therefore, the swale areas will be inspected monthly during the baseball season, and quarterly during the off-season to visually observe the condition of the grass cover. Large areas of exposed soil (e.g., areas larger than several feet in diameter) should be reseeded as quickly as practical. A log of the parking area inspections ("Inspection Log") will be maintained at the site and will include written comments on the condition of the grass cover, areas requiring repairs, and repair dates.

Annual inspections of the paved parking areas will be performed to observe whether breaches in the pavement that may allow prolonged access to site soil are visible. If observed, the breach would be repaired such that the soil cover is maintained. Results of the annual inspections of the paved parking areas will be documented in the Inspection Log, described above.

6.0 CONTINGENCY PLAN

A Contingency Plan for this site is not warranted. The purpose of a Contingency Plan is to present response actions to an emergency situation. The results of the HRA indicate that exposure to site soil or groundwater while breaches in the pavement or grassy areas are being repaired would not present a situation requiring an emergency response.

7.0 HEALTH AND SAFETY GUIDELINES

A health and safety plan for site construction will be developed by the site contractor before initiation of the development activities. The results of the HRA indicate that the presence of chemicals in soil and groundwater at the site should not pose an unacceptable health risk to future construction workers or nearby receptors during construction or future maintenance workers, visitors or trespassers after construction. Therefore, a health and safety plan for known chemical hazards at the Site is not warranted, and the health and safety plan will focus on physical hazards. Additionally, contingency actions for encountering unanticipated buried hazards (e.g., drums, or other containers) will also be included in the health and safety plan.

8.0 FACILITY MAP

The final construction plan for the Site development is not complete. A copy of this plan will be forwarded to the SFDPH as an addendum to this SMP once it has been finalized.

9.0 REFERENCES

Geomatrix Consultants, Inc., 1999, Site Use History and Article 20 Sampling Program, March.

Harding Lawson Associates, 1999, RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California, February 4.

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
METALS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California
Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
GMX-1-1.0	0.5 - 1.0	<5.0	<0.35	27	<5.0	<5.0	120	16	9.6	8.7	<0.1	<5.0	220	<5.0	<5.0	<5.0	36	37
GMX-1-4.5	4.5 - 5.0	<5.0	2.5	35	<5.0	<5.0	200	24	12	13	<0.1	<5.0	370	<5.0	<5.0	<5.0	20	32
GMX-2-1.0	0.5 - 1.0	<5.0	<0.35	170	<5.0	<5.0	62	15	50	220	0.13	<5.0	71	<5.0	<5.0	<5.0	49	150
GMX-2-4.5	4.5 - 5.0	<5.0	<0.35	160	<5.0	<5.0	91	17	31	54	<0.1	18	110	<5.0	<5.0	<5.0	40	83
GMX-3-1.0	0.5 - 1.0	33	64	84	<5.0	<5.0	35	12	93	250	0.28	<5.0	140	<5.0	<5.0	<5.0	20	250
GMX-3-4.5	4.5 - 5.0	15	7.7	76	<5.0	<5.0	110	14	44	98	0.23	<5.0	240	<5.0	<5.0	<5.0	24	130
GMX-4-1.0	0.5 - 1.0	<5.0	1.8	170	<5.0	<5.0	42	16	40	110	0.16	<5.0	100	<5.0	<5.0	<5.0	31	94
GMX-4-4.5	4.5 - 5.0	<5.0	<0.35	100	<5.0	<5.0	36	8.7	26	53	<0.1	<5.0	40	<5.0	<5.0	<5.0	27	60
GMX-5-1.0	0.5 - 1.0	<5.0	0.47	26	<5.0	<5.0	21	<5.0	7.1	42	<0.1	<5.0	20	<5.0	<5.0	<5.0	17	69
GMX-5-7.0	4.5 - 5.0	<5.0	2.5	47	<5.0	<5.0	11	<5.0	13	60	0.57	<5.0	12	<5.0	<5.0	<5.0	12	35
GMX-6-1.0	0.5 - 1.0	<5.0	<0.35	360	<5.0	<5.0	17	12	66	17	<0.1	<5.0	21	<5.0	<5.0	<5.0	28	40
GMX-6-4.5	4.5 - 5.0	<5.0	<0.35	210	<5.0	<5.0	43	14	46	62	0.18	<5.0	59	<5.0	<5.0	<5.0	29	55
GMX-7-1.0	0.5 - 1.0	<5.0	10	160	<5.0	<5.0	21	5.3	93	290	5.7	<5.0	28	<5.0	<5.0	<5.0	17	320
GMX-7-5.0	4.5 - 5.0	<5.0	<0.35	180	<5.0	<5.0	87	21	35	750	<0.1	<5.0	250	<5.0	<5.0	<5.0	29	160
GMX-8-1.0	0.5 - 1.0	<5.0	<0.35	680	<5.0	<5.0	21	32	130	18	<0.1	<5.0	34	<5.0	<5.0	<5.0	40	49
GMX-8-4.5	4.5 - 5.0	<5.0	5	100	<5.0	<5.0	6.8	<5.0	21	61	<0.1	<5.0	9.1	<5.0	<5.0	<5.0	12	41
Background ²		5.5	19.1	323	1	2.7	99	22	69	16	0.4	7.4	120	5.6	1.8	27	74	106
95% UTL		25.7	45.7	572.3	5.0	5.0	190.0	32.8	133.1	602.0	4.0	14.0	379.8	5.0	5.0	5.0	53.7	311.7
95% UTL > Background?		Yes	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	NA	No	Yes

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories of Sunnyvale, California, for Title 22 metals using EPA Methods 6000/7000 Series.

² Background = Lawrence Berkeley National Laboratory, 1995.

Abbreviations:

feet bgs = feet below ground surface.

< = analyte not detected at or above method detection limit shown.

NA = not applicable; sample results below detection limit reported by the analytical laboratory.

95% UTL = 95 percent upper tolerance limit.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
 Area E - Port of San Francisco Property
 South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Toluene	Ethyl-benzene	Xylenes	1,2,4-Trimethyl-benzene
GMX-1-1.0	0.5 - 1.0	0.030	<0.005	0.029	0.010
GMX-1-4.5	4.5 - 5.0	0.008	<0.005	<0.005	<0.005
GMX-2-1.0	0.5 - 1.0	0.013	<0.005	0.009	0.005
GMX-2-4.5	4.5 - 5.0	0.007	<0.005	<0.005	<0.005
GMX-3-1.0	0.5 - 1.0	0.014	<0.005	0.006	<0.005
GMX-3-4.5	4.5 - 5.0	0.023	<0.005	0.018	0.014
GMX-4-1.0	0.5 - 1.0	0.020	<0.005	0.030	<0.005
GMX-4-4.5	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-5-1.0	0.5 - 1.0	0.027	<0.005	0.014	0.008
GMX-5-7.0	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-6-1.0	0.5 - 1.0	0.037	<0.005	0.056	0.036
GMX-6-4.5	4.5 - 5.0	<0.005	<0.005	<0.005	<0.005
GMX-7-1.0	0.5 - 1.0	0.008	<0.005	0.009	<0.005
GMX-7-5.0	4.5 - 5.0	0.021	<0.005	0.009	<0.005
GMX-8-1.0	0.5 - 1.0	<0.005	0.023	0.046	<0.005
GMX-8-4.5	4.5 - 5.0	0.008	<0.005	0.010	<0.005

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories of Sunnyvale, California, for VOCs using EPA Method 8260B.

Abbreviations:

feet bgs = feet below ground surface.

< = indicates result less than the laboratory detection limit indicated.

VOCs = volatile organic compounds.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
POLYNUCLEAR AROMATIC COMPOUNDS DETECTED IN SOIL SAMPLES¹

Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Interval (feet bgs)	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo(a) anthra-cene	Benzo(b) fluor-anthene	Benzo(k) fluor-anthene	Benzo (g,h,i) perylene	Benzo(a) pyrene	Chrysene	Dibenzo (a,h) anthra-cene	Fluor-anthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph-thalene ²	Phenan-threne	Pyrene
GMX-1-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	<0.04	<0.002	<0.04	<0.04	<0.04	0.089	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.058
GMX-1-4.5	4.5 - 5.0	<0.01	<0.01	0.023	<0.01	0.029	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01	<0.01	<0.01	0.024	0.029
GMX-2-1.0	0.5 - 1.0	<0.02	0.024	0.103	0.141	<0.002	<0.02	<0.02	<0.02	0.08	<0.02	0.363 ³	<0.02	<0.02	<0.02	0.105	0.415 ³
GMX-2-4.5	4.5 - 5.0	<0.002	0.0024	0.0066	0.022	0.022	0.0048	<0.002	<0.002	0.011	<0.002	0.023	<0.002	<0.002	0.0058	0.0068	0.025
GMX-3-1.0	0.5 - 1.0	<0.02	<0.02	0.078	0.114	<0.002	<0.02	<0.02	<0.02	0.064	<0.02	0.169	<0.02	<0.02	<0.02	0.08	0.16
GMX-3-4.5	4.5 - 5.0	<0.01	<0.01	<0.01	0.025	0.04	<0.01	<0.01	<0.01	0.014	<0.01	0.036	<0.01	<0.01	<0.01	0.024	0.045
GMX-4-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	0.072	<0.04	<0.04	<0.04	<0.04	0.061	<0.04	0.142	<0.04	<0.04	<0.04	0.071	0.183
GMX-4-4.5	4.5 - 5.0	0.053	0.107	0.129	<0.02	<0.2	<0.2	<0.2	0.295	0.18	<0.2	0.628 ⁴	<0.02	<0.2	0.057	0.668 ⁴	0.777 ⁴
GMX-5-1.0	0.5 - 1.0	<0.02	<0.02	<0.02	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.032	<0.02	<0.02	<0.02	0.02	0.034
GMX-5-7.0	4.5 - 5.0	<0.002	<0.002	0.026	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	0.011	<0.002	<0.002	<0.002	0.026	0.013
GMX-6-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	0.205	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.046	<0.04	<0.04	<0.04	0.06	0.107
GMX-6-4.5	4.5 - 5.0	<0.01	<0.01	0.029	0.122	0.1	0.023	0.038	0.072	0.056	<0.01	0.11	<0.01	0.042	<0.01	0.029	0.111
GMX-7-1.0	0.5 - 1.0	<0.02	<0.02	0.024	0.187	<0.02	<0.02	<0.02	<0.02	0.098	<0.02	0.196	<0.02	<0.02	<0.02	0.194	0.224
GMX-7-5.0	4.5 - 5.0	<0.01	<0.01	<0.01	0.031	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.04	0.072	<0.01
GMX-8-1.0	0.5 - 1.0	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.288	<0.04	<0.04	0.095	0.156	0.374
GMX-8-4.5	4.5 - 5.0	0.019	0.078	<0.01	0.314 ⁴	0.457 ⁴	<0.01	<0.01	<0.01	0.323 ⁴	<0.01	0.772 ⁴	<0.01	<0.01	<0.01	0.288 ⁴	0.680 ⁴

Notes:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Advanced Technology Laboratories of Signal Hill, California, for PNAs using EPA Method 8270 SIMS.

² Detected concentration reported as part of EPA Method 8260.

³ Results reported from a 1:100 dilution.

⁴ Results reported from a 1:50 dilution.

Abbreviations:

feet bgs = feet below ground surface.

< = indicates result less than the laboratory detection limit indicated.

PNAs = polynuclear aromatic hydrocarbons.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
OTHER MAHER PARAMETERS¹

Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per kilogram (mg/kg) unless noted

Sample I.D.	Sample Interval (feet bgs)	Asbestos	Cyanide	Fluoride	Total Sulfide	pH (no units)	FID (ppmv)
GMX-1-1.0	0.5 - 1.0	<1%	<0.5	<0.5	<0.5	8.4	0
GMX-1-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-2-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	100
GMX-2-4.5	4.5 - 5.0	<1%	NA	NA	NA	9.4	
GMX-3-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	0
GMX-3-4.5	4.5 - 5.0	<1%	<0.5	<0.5	<0.5	8.8	
GMX-4-1.0	0.5 - 1.0	<1%	NA	NA	NA	9.4	100
GMX-4-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-5-1.0	0.5 - 1.0	<1%	<0.5	<0.5	<0.5	9.1	100
GMX-5-7.0	4.5 - 5.0	NA	NA	NA	NA	NA	
GMX-6-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	1100
GMX-6-4.5	4.5 - 5.0	<1%	NA	NA	NA	9.2	
GMX-7-1.0	0.5 - 1.0	NA	NA	NA	NA	NA	10
GMX-7-5.0	4.5 - 5.0	<1%	<0.5	<0.5	<0.5	9.2	
GMX-8-1.0	0.5 - 1.0	<1%	NA	NA	NA	7.7	150
GMX-8-4.5	4.5 - 5.0	NA	NA	NA	NA	NA	

Note:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed for pH, cyanide, total sulfide, fluoride, and asbestos using EPA Methods 9045, 9010, 9030, and 340.2M, and polarized light microscopy. Analyses performed by Entech Analytical Laboratories, Inc. of Sunnyvale, California (pH and fluoride), Advanced Technology Laboratories of Signal Hill, California (cyanide and total sulfide), and EMSL Analytical, Inc. of Milpitas, California (asbestos).

Abbreviations:

feet bgs = feet below ground surface.

< = analyte not detected at or above method detection limit shown.

NA = not analyzed.

FID = flame ionization detector.

ppmv = parts per million vapor.

TABLE 5
SUMMARY OF ANALYTICAL RESULTS
METALS DETECTED IN GRAB GROUNDWATER SAMPLES¹
Proposed Imperial Parking Area
Area E - Port of San Francisco Property
South of China Basin Channel, San Francisco, California

Concentrations are reported in milligrams per liter (mg/l)

Sample I.D.	Sb	Ar	Ba	Be	Cd	Cr Total	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
GMX-1 ²	0.092/ 0.1	<0.005	0.1	<0.004	<0.005	<0.005	<0.005	<0.005	<0.015	<0.0005	0.018/ 0.02	0.010/ 0.011	<0.015	<0.005	<0.002	<0.010	0.014
GMX-5	<0.005	<0.005	1.7	<0.004	<0.005	0.006	0.008	<0.005	<0.015	<0.0005	0.051	0.006	<0.015	0.034	<0.002	<0.010	0.025

Notes:

¹ Soil samples collected by Geomatrix Consultants, Inc. and analyzed by Entech Analytical Laboratories, of Sunnyvale, California for Title 22 metals using EPA Methods 6000/7000 Series.

² Second result from duplicate sample GMX-11.

Abbreviation:

< = indicates result less than the laboratory detection limit indicated.

Sb = Antimony	Hg = Mercury
Ar = Arsenic	Mo = Molybdenum
Ba = Barium	Ni = Nickel
Be = Beryllium	Se = Selenium
Cd = Cadmium	Ag = Silver
Cr Total = Total Chromium	Tl = Thallium
Co = Cobalt	V = Vanadium
Cu = Copper	Zn = Zinc
Pb = Lead	

TABLE 6

SUMMARY OF HEALTH RISK ASSESSMENT RESULTS

Proposed Imperial Weitz Parking Lot Areas

Area E - Port of San Francisco Property

South of China Basin Channel, San Francisco, California

Noncancer Hazard Indexes

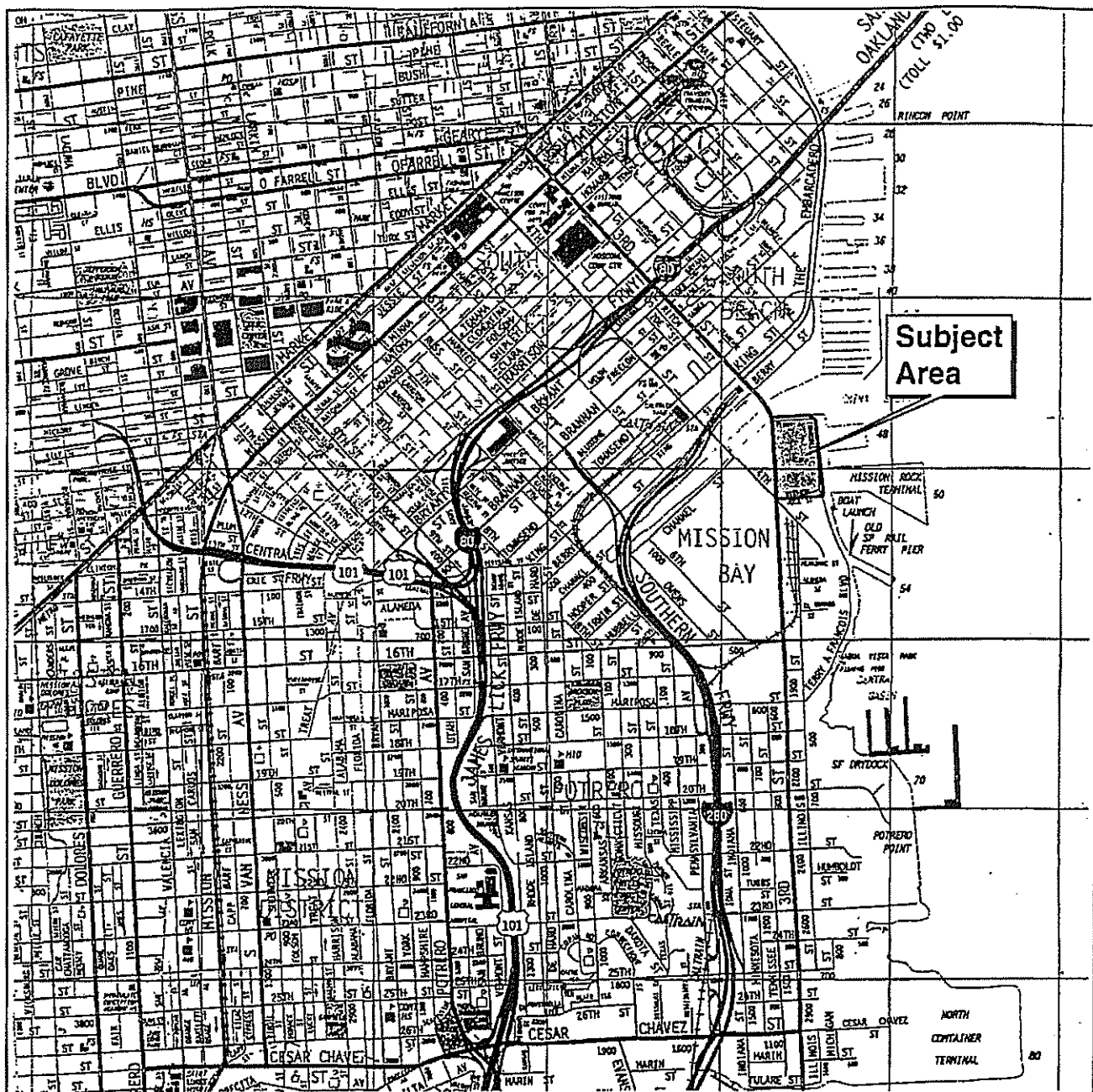
Scenario	Incidental Ingestion of Soil	Dermal Contact with Soil	Inhalation of Particulates	Dermal Contact with Groundwater	Hazard Index
Future On-site Construction Worker	6E-02	2E-03	8E-04	7E-03	7E-02
Future On-site Visitor	1E-02	5E-03	7E-07	NA	1E-02

Theoretical Lifetime Excess Cancer Risks

Scenario	Incidental Ingestion of Soil	Dermal Contact with Soil	Inhalation of Particulates	Dermal Contact with Groundwater	Excess Cancer Risk
Future On-site Construction Worker	3E-07	1E-08	7E-08	4E-06	4E-06
Future On-site Visitor	5E-07	3E-07	9E-10	NA	8E-07

Note:

NA = Not applicable



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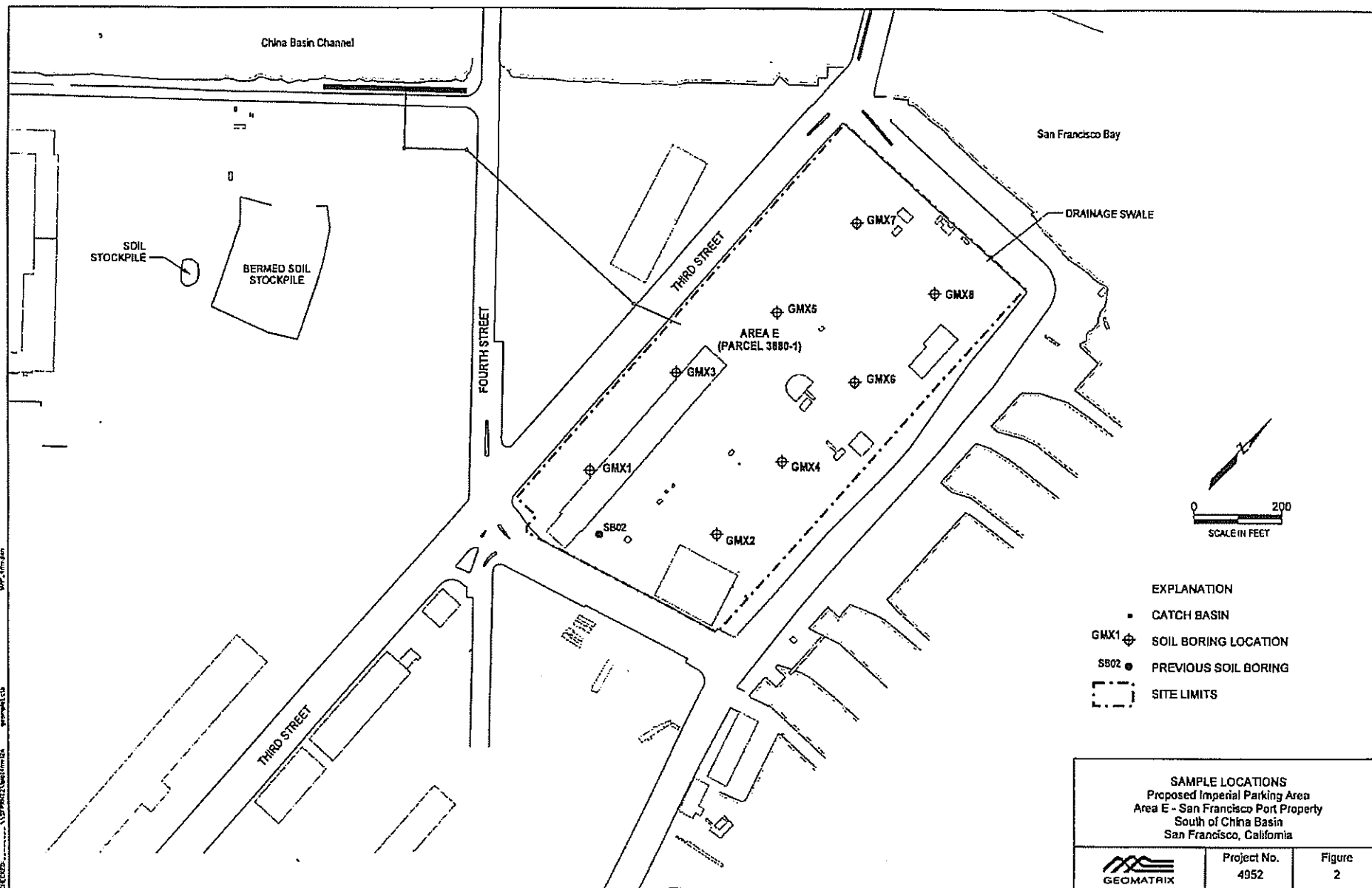


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SITE LOCATION MAP
 Proposed Imperial Parking Area
 Area E - San Francisco Port Property
 South of China Basin
 San Francisco, California

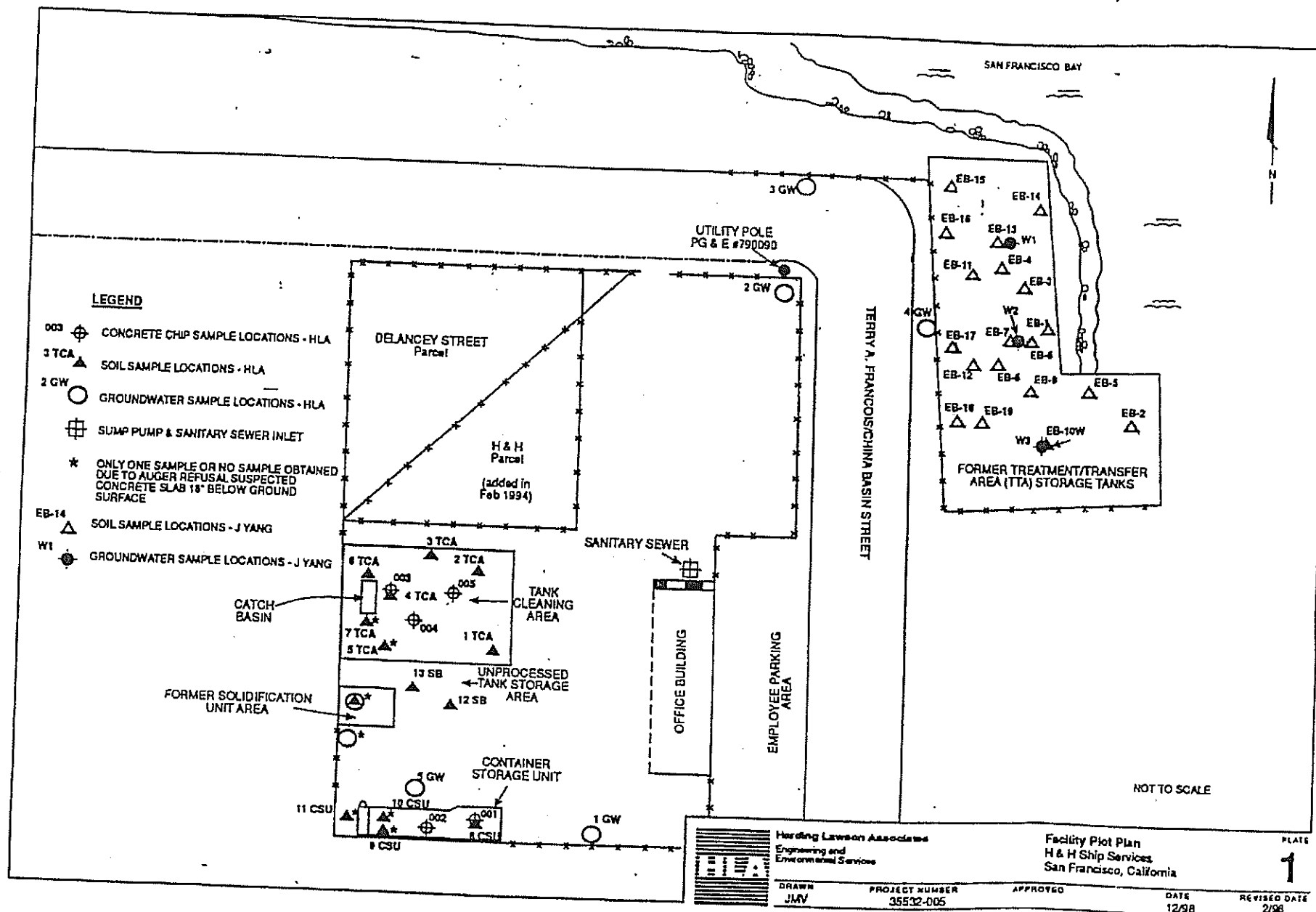
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APPENDIX A

Data Summaries from Previous Investigations



**Table 4. Summary of Chemicals Detected In Soil
Tank Cleaning Area, Container Storage Unit, and Solidification Unit
H & H Ship Service Company
San Francisco, California**

Analyte	Units	Number of Detections	Number of Analyses	Frequency of Detection	Minimum Detected Conc.	Maximum Detected Conc.	Location of Maximum Conc.
Inorganics							
Arsenic	mg/kg	16	17	94%	ND	9.2E+01	3TCA-008
Barium	mg/kg	17	17	100%	3.8E+01	6.5E+02	12SB-023
Cadmium	mg/kg	1	17	6%	ND	5.3E-01	3TCA-008
Chromium	mg/kg	17	17	100%	7.3E+00	7.0E+01	1TCA-001
Cobalt	mg/kg	17	17	100%	3.8E+00	4.0E+01	3TCA-007
Copper	mg/kg	17	17	100%	8.9E+00	1.4E+02	10CSU-021
Lead	mg/kg	16	17	94%	ND	2.1E+02	1TCA-001
Mercury	mg/kg	16	17	94%	ND	4.8E-01	2TCA-005
Nickel	mg/kg	17	17	100%	1.3E+01	3.2E+02	6TCA-014
Silver	mg/kg	3	17	18%	ND	3.0E+00	3TCA-007
Thallium	mg/kg	11	17	65%	ND	1.1E+01	1TCA-001
Vanadium	mg/kg	17	17	100%	1.8E+01	4.8E+01	5TCA-013
Zinc	mg/kg	17	17	100%	3.2E+01	2.5E+02	4TCA-011
Petroleum							
Oil and Grease (Total)	mg/kg	17	17	100%	1.1E+02	6.4E+03	4TCA-011
Oil and Grease (Non-Polar)	mg/kg	16	17	94%	ND	5.0E+03	3TCA-007
TPH-Diesel	mg/kg	17	17	100%	5.0E+00	2.1E+03	4TCA-011
TPH-Gasoline	mg/kg	4	17	24%	ND	1.0E+02	4TCA-011
Toluene	mg/kg	17	17	100%	1.2E-02	1.3E+00	3TCA-007
Ethylbenzene	mg/kg	3	17	18%	ND	6.3E-01	4TCA-011
Xylene	mg/kg	6	17	35%	ND	9.3E+00	4TCA-011
PCBs							
Aroclor 1016	mg/kg	2	17	12%	ND	1.0E-01	5TCA-013
Aroclor 1254	mg/kg	7	17	41%	ND	2.4E-01	5TCA-013
Aroclor 1260	mg/kg	3	17	18%	ND	5.5E-01	5TCA-013
PAHs							
Acenaphthene	mg/kg	2	17	12%	ND	9.3E-01	8CSU-018
Acenaphthylene	mg/kg	3	17	18%	ND	1.5E+00	8CSU-018
Anthracene	mg/kg	5	17	29%	ND	3.1E+00	8CSU-018
Benz(a)anthracene	mg/kg	11	17	65%	ND	2.4E+00	8CSU-018
Benzo(b,k)fluoranthene	mg/kg	11	17	65%	ND	2.6E+00	8CSU-018
Benzo(a)pyrene	mg/kg	10	17	59%	ND	1.8E+00	8CSU-018
Benzo(g,h,i)perylene	mg/kg	10	17	59%	ND	6.6E-01	8CSU-018
Chrysene	mg/kg	11	17	65%	ND	2.3E+00	8CSU-018
Dibenz(a,h)anthracene	mg/kg	7	17	41%	ND	3.7E-01	8CSU-018
Fluoranthene	mg/kg	14	17	82%	ND	4.3E+00	8CSU-018
Fluorene	mg/kg	5	17	29%	ND	3.7E+00	8CSU-018
Indeno(1,2,3-cd)pyrene	mg/kg	9	17	53%	ND	7.0E-01	8CSU-018
Naphthalene	mg/kg	5	17	29%	ND	2.5E+00	4TCA-011
Phenanthrene	mg/kg	15	17	88%	ND	6.3E+00	8CSU-018
Pyrene	mg/kg	15	17	88%	ND	4.7E+00	8CSU-018

mg/kg Milligrams per kilogram.
Note: Only detected compounds are listed.

**Table 8. Summary of Chemicals Detected in Groundwater
Tank Cleaning Area, Container Storage Unit, and Solidification Unit
H & H Ship Service Company
San Francisco, California**

Chemical	Units	Number of Detections	Number of Analyses	Frequency of Detection	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Concentration
Inorganics (filtered)							
Arsenic	mg/L	1	5	20%	0.812	0.812	3GW
Barium	mg/L	5	5	100%	0.0847	0.748	3GW
Cobalt	mg/L	1	5	20%	0.0185	0.0185	2GW
Molybdenum	mg/L	1	5	20%	0.0207	0.0207	4GW
Nickel	mg/L	2	5	40%	0.0419	0.0883	2GW
Zinc	mg/L	1	5	20%	0.128	0.128	4GW
Inorganics (unfiltered)							
Arsenic	mg/L	2	4	50%	0.3	9.2	1GW
Barium	mg/L	4	4	100%	0.27	5.1	1GW
Cadmium	mg/L	3	4	75%	0.012	0.026	1GW
Chromium	mg/L	4	4	100%	0.048	1.1	3GW
Cobalt	mg/L	4	4	100%	0.31	2.5	3GW
Copper	mg/L	4	4	100%	0.058	2	2GW
Lead	mg/L	4	4	100%	0.88	5.8	2GW
Mercury	mg/L	4	4	100%	0.0017	2	4GW
Nickel	mg/L	4	4	100%	0.32	12	3GW
Thallium	mg/L	1	4	25%	0.15	0.15	1GW
Vanadium	mg/L	3	4	75%	0.081	0.47	1GW
Zinc	mg/L	4	4	100%	1	7.2	1GW
Petroleum (unfiltered)							
TPH-Diesel	mg/L	1	4	25%	2.4	2.4	1GW
PCBs (unfiltered) None Detected							
PAHs (unfiltered)							
Acenaphthylene	µg/L	1	5	20%	0.5	0.5	1GW
Anthracene	µg/L	1	5	20%	1.1	1.1	1GW
Benzo(a)anthracene	µg/L	3	5	80%	0.14	5.1	1GW
Benzo(b)fluoranthene	µg/L	1	1	100%	0.58	0.58	5GW
Benzo(k)fluoranthene	µg/L	1	1	100%	0.12	0.12	5GW
Benzo(b,k)fluoranthene	µg/L	3	4	75%	0.8	10	1GW
Benzo(a)pyrene	µg/L	3	5	80%	0.34	8.8	1GW
Benzo(g,h,i)perylene	µg/L	3	5	80%	0.5	5.5	1GW
Chrysene	µg/L	2	5	40%	7	7	1GW
Dibenz(a,h)anthracene	µg/L	1	5	20%	1.2	1.2	1GW
Fluoranthene	µg/L	3	5	80%	0.7	10	1GW
Fluorene	µg/L	1	5	20%	1.5	1.5	5GW
Indeno(1,2,3-cd)pyrene	µg/L	1	5	20%	4.2	4.2	1GW
Naphthalene	µg/L	3	5	80%	0.5	1.1	5GW
Phenanthrene	µg/L	4	5	80%	0.5	4.8	1GW
Pyrene	µg/L	4	5	80%	0.8	10	1GW

PAHs (filtered) None Detected

mg/L Milligrams per liter.

µg/L Micrograms per liter.

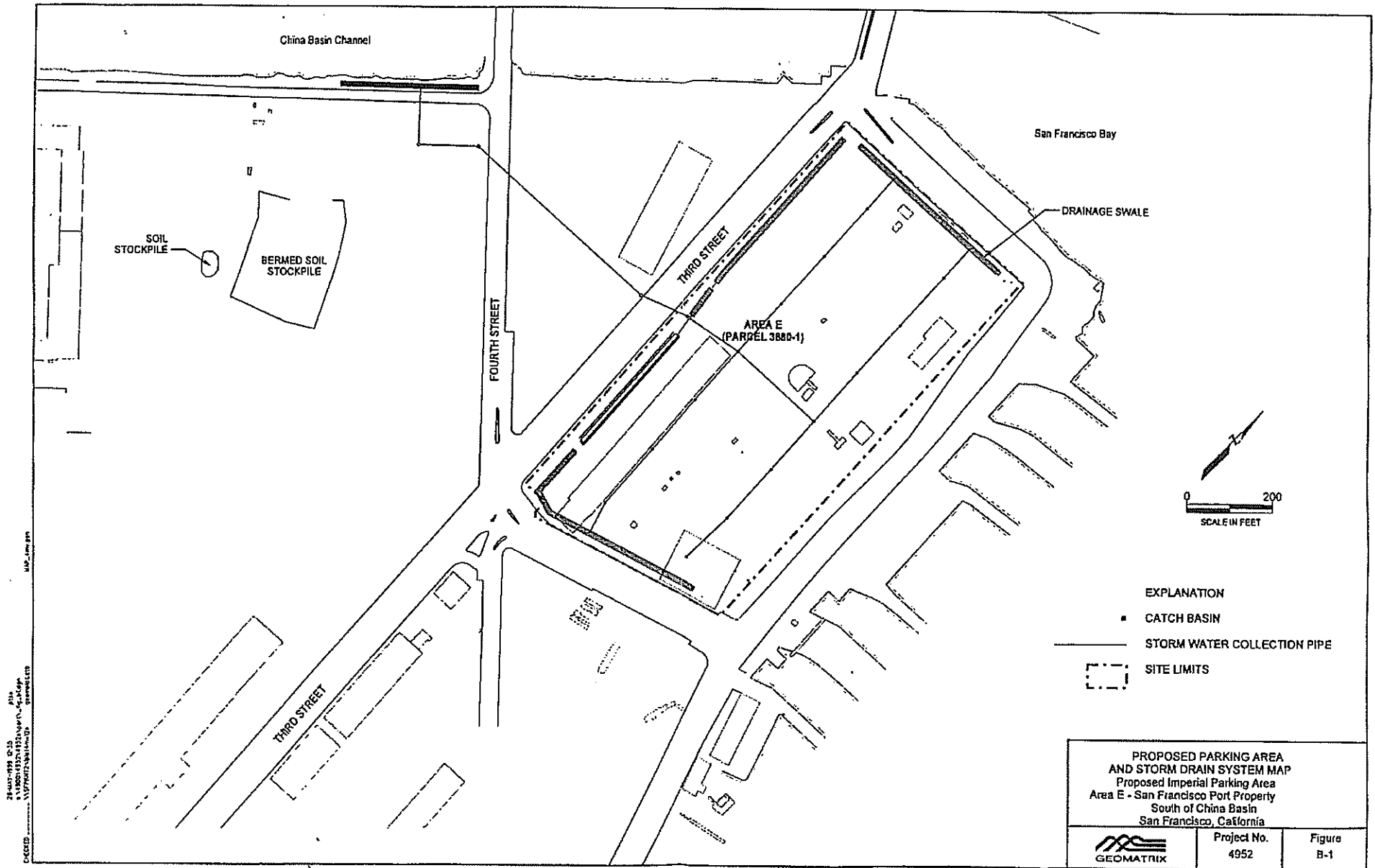
ND Not detected.

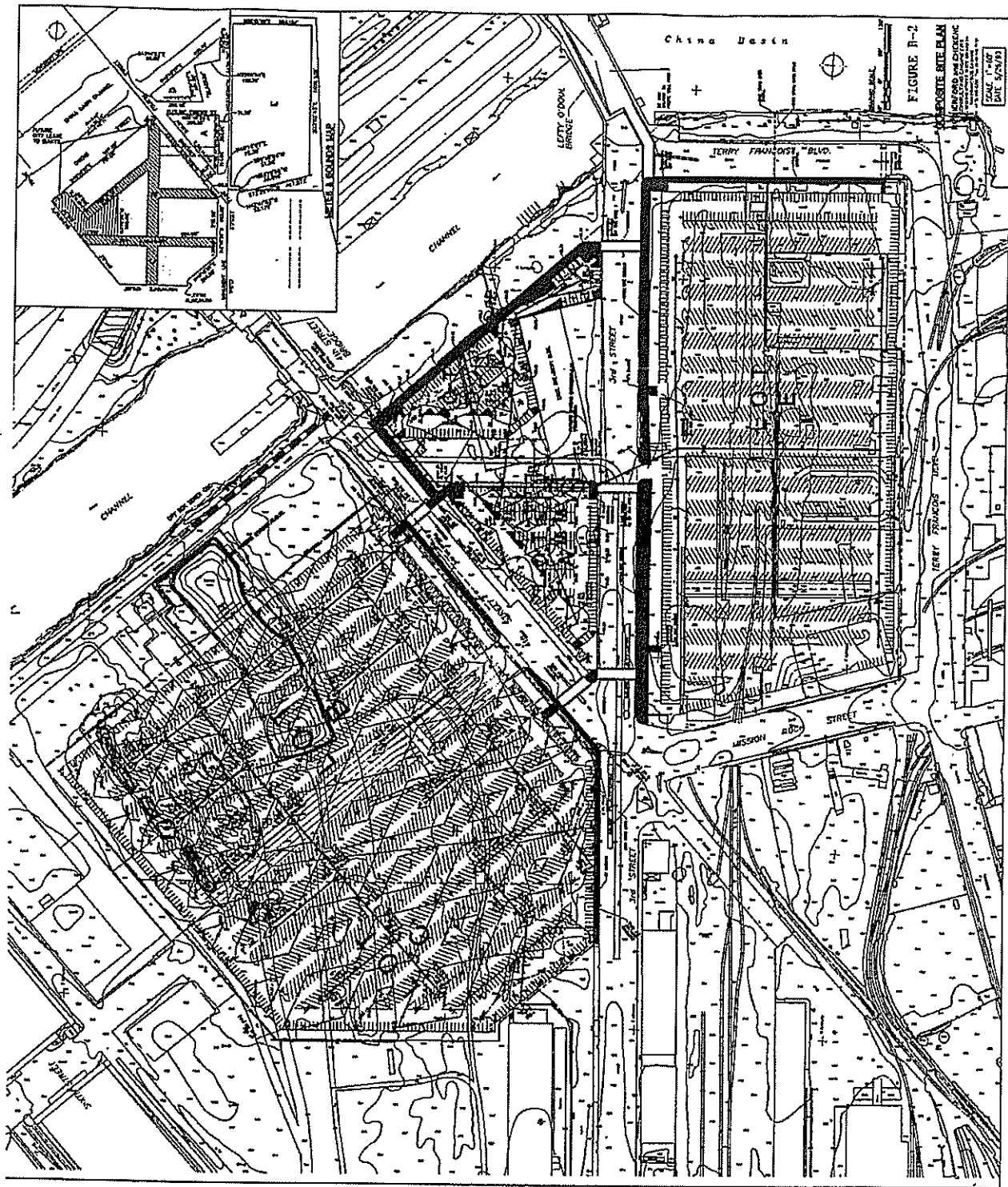
NA Not available.

Note: Only detected analytes are listed.

APPENDIX B


Site Plans Illustrating Alternative Storm Drainage Systems





APPENDIX D
Covenant to Restrict Use of Property
Recorded January 27, 2000

RECORDING REQUESTED BY:
The Port of San Francisco
Ferry Building
San Francisco, California 94111


San Francisco Assessor-Recorder
Doris M. Ward, Assessor-Recorder
DOC- 2000-G723986-00
Acct 25-NO CHARGE DOCUMENT
Thursday, JAN 27, 2000 10:47:55
FRE \$0.00
Ttl Pd \$0.00 Nbr-0001346614
REEL H561 IMAGE 0199 oed/ER/1-16

WHEN RECORDED, MAIL TO:

Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, California 94710
Attention: Mohinder S. Sandhu, P.E., Chief
Standardized Permits and Corrective
Action Branch

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: H&H Site located at Seawall Lot 337, City and County of San Francisco)

**This Covenant and Agreement ("Covenant") is made by and between COVENANT
TO RESTRICT USE OF PROPERTY**

ENVIRONMENTAL RESTRICTION

Re: H&H Site located at Seawall Lot 337, City and County of San Francisco

This Covenant and Agreement ("Covenant") is made by and between the City and County of San Francisco, a charter city and county in trust (the "Covenantor"), the current owner, of certain property situated in the City and County of San Francisco, State of California, described in Exhibit "A", attached hereto and incorporated herein by this reference (the "Property"), and the Department of Toxic Substances Control (the

N/c
16

"Department"). Pursuant to Civil Code section 1471(c), the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code ("H&SC") section 25260. The Covenantor and the Department, collectively referred to as the "Parties", therefore intend that the use of the Property be restricted as set forth in this Covenant, in order to protect human health, safety and the environment.

ARTICLE I
STATEMENT OF FACTS

1.01. The Property, totaling approximately 14 acres, is more particularly described in Exhibit "A" and depicted in Exhibit "A-1", attached hereto and incorporated herein by this reference. The Property is located in the area now generally bounded by Terry Francois Boulevard on the North and East, in the City and County of San Francisco, California.

1.02. The site was created by filling marshlands and shallow tidal flats bordering San Francisco Bay between 1877 and 1913. Sources of fill are unknown, but likely included construction/demolition debris and rubble, and rock and dirt cut from nearby hills. Historical uses of the Site include railroad tracks and related support structures, parking and shipping by truck, and truck maintenance. From 1950 to 1996 H&H Ship Service operated a hazardous waste treatment facility, including a tank cleaning area and drum storage unit, and used portions of the Property for vehicle parking and offices.

In 1978 several of the wastes managed at the H&H Ship Service facility were determined to be hazardous wastes subject to federal and state hazardous waste management regulations. Since that time, the Department of Toxic Substances Control (or its predecessor in interest, the Department of Health Services) authorized H&H Ship Service's operations pursuant to an interim status document. Under this authorization the property was a hazardous waste facility (Facility), regulated by the Department, subject to the requirements of the California Hazardous Waste Control Law ("HWCL"), at Health and Safety Code ("H&S Code") section 25100 et seq., and the federal Resource Conservation and Recovery Act ("RCRA"), at 42 U.S.C. section 6901 et seq.

The Department is requiring this Covenant pursuant to the closure requirements of the HWCL, including H&S Code section 25246 and post-closure notices provisions of Title 22 California Code of Regulations [section 66265.119(b) for interim status hazardous waste facilities], as part of the facility closure. The Department circulated a closure plan, dated August 30, 1996 and a draft Categorical Exemption pursuant to the California Environmental Quality Act, Public Resources Code section 21000 et seq for

public review and comment from December 23, 1999 to January 24, 2000. The Department approved the closure plan, closure certification report titled, *RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California*, dated February 4, 1999, containing a health risk assessment, and the Categorical Exemption on January 26, 2000. Hazardous wastes, which are also hazardous materials as defined in Health and Safety Code sections 25117 and 25260, including petroleum hydrocarbons, polynuclear aromatic hydrocarbons, metals and arsenic, remain in the soil and groundwater at the Site at concentrations below those which would pose a significant human health risk under proposed reuse scenarios. The health risk assessment did not evaluate an unrestricted land use scenario, recreational use involving direct contact with soil, or potential impacts from use of groundwater. Therefore a deed restriction to limit use of the property to those exposure scenarios evaluated and found to be below acceptable risk limits is required as part of the facility closure.

1.03. As detailed in the health risk assessment within the *RCRA Closure Certification Report*, as approved by the Department on January 26, 2000, portions of the surface and subsurface soils on the Site contain hazardous wastes and hazardous materials, as defined in H&S Code section 25117 and 25260, including the following contaminants of concern: arsenic (up to 92 mg/kg) and benzo(a)pyrene (up to 2.5 mg/kg). Groundwater beneath the Property is found within 10 to 20 feet below ground surface. Dissolved arsenic was found in groundwater at up to 812 ug/l. California drinking water standards are arsenic at 50 ug/l. Because the health risk assessment did not evaluate an unrestricted land use scenario, recreational use involving direct contact with soil, or potential impacts from use of groundwater, the Department concluded that use of the Property as a residence, hospital, school for persons under the age of 21, day care center, or recreational use involving direct contact with soil would entail an unacceptable potential human health risk. The Department further concluded that the Property, subject to the restrictions of this Covenant, does not present an unacceptable threat to human safety or the environment.

ARTICLE II DEFINITIONS

2.01. Department. "Department" shall mean the California Department of Toxic Substances Control and shall include its successor agencies, if any.

2.02. Owner. "Owner" shall mean the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to all or any portion of the Property.

2.03. Occupant. "Occupant" shall mean Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

ARTICLE III
GENERAL PROVISIONS

3.01. Restrictions to Run With the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), upon and subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and every one of the Restrictions: (a) shall run with the land pursuant to H&SC sections 25202.5, and 25202.6 and Civil Code section 1471; (b) shall inure to the benefit of and pass with each and every portion of the Property, (c) shall apply to and bind the respective successors in interest to the Property, (d) are for the benefit of, and shall be enforceable by the Department, and (e) are imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding Upon Owners/Occupants. Pursuant to Health and Safety Code section 25202.5(b), this Covenant shall be binding upon all of the owners of the land, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees. Pursuant to Civil Code section 1471(b), all successive owners of the Property are expressly bound hereby for the benefit of the covenantee(s) herein. "Owner" shall include "Covenantor".

3.04. Written Notice of Hazardous Substance Release. The Owner shall, prior to the sale, lease, or rental of the Property, give written notice that a release of hazardous substances has come to be located on or beneath the Property, pursuant to Health and Safety Code section 25359.7. Such written notice shall include a copy of this Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes:

- (a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;
- (b) A hospital for humans;
- (c) A public or private school for persons under 21 years of age;
- (d) A day care center for children; or
- (e) Recreational use involving direct contact with soil.

4.02. Soil Management

- (a) Any contaminated soils brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with all applicable provisions of state and federal law.
- (b) If more than 50 cubic yards of any surface or subsurface soil will be disturbed, including excavation and grading, then the soil shall be evaluated for potential human health risks in compliance with Article 20 of the SF Municipal Code ("the Maher Ordinance"), and managed accordingly.

4.03. Prohibited Activities. The following activities shall not be conducted at the Property:

- (a) No raising of food (e.g., cattle, food crops, cotton, etc.) shall be permitted on the property.
- (b) No groundwater shall be extracted on the Property for purposes other than site remediation or construction dewatering without prior written approval by the Department.

4.04. Access for Department. Covenantor agrees that the Department shall have reasonable right of entry and access to the Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health and safety.

ARTICLE V
ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor and/or Owner to comply with any of the Restrictions specifically applicable to it shall be grounds for the Department, by reason of this Covenant, to require that the Covenantor and/or Owner modify or remove any improvements ("Improvements" herein shall mean all buildings, roads, driveways, and paved parking areas, constructed or placed upon any portion of the Property constructed in violation of the Restrictions.) Violation of this Covenant shall be grounds for the Department to file civil and/or criminal actions against the Covenantor and/or Owner as provided by law.

ARTICLE VI
VARIANCE, TERMINATION, AND TERM

6.01. Variance. Any Owner or, with the Owner's written consent, any Occupant of the Property or any portion thereof may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with H&S Code section 25202.6.

6.02. Termination. Any Owner, and/or, with the Owner's written consent, any Occupant of the Property, or any portion thereof, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with H&S Code section 25202.6.

6.03. Term. Unless ended in accordance with the Termination Paragraph above, by law, or by the Department in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VII
MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever.

7.02. Department References. All references to the Department include successor agencies/departments or other successor entity.

7.03. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of San Francisco within ten (10) days of the Covenantor's receipt of a fully executed original.

7.04. Notices. Whenever any person gives or serves any notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:

G723986

On or Before 12/31/00:

Port of San Francisco
3100 Ferry Building
San Francisco, CA 94111
Attention: Carol Bach,

With a copy to

Noreen Ambrose
Port General Counsel
Port of San Francisco
3100 Ferry Building
San Francisco, CA 94111.

After 12/31/00:

Port of San Francisco
Pier 1
San Francisco, CA 94111
Attention: Carol Bach,

With a copy to:
Noreen Ambrose
Port General Counsel
Port of San Francisco
Pier 1
San Francisco, CA 94111.

To Department:

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, CA 94710-2737
Attention: Branch Chief
Standardized Permits and Corrective Action Branch

Any party may change its address or the individual to whose attention a notice is to be sent by giving written notice in compliance with this paragraph.

7.05. Partial Invalidity. If any portion of the Restrictions or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.


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IN WITNESS WHEREOF, the Parties execute this Covenant.

"Covenantor"

CITY & COUNTY OF SAN FRANCISCO

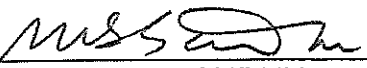
Date: 1/26/2000

By: 
DOUGLAS F. WONG
Its: Executive Director
PORT OF SAN FRANCISCO

"Department"

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Date: 1/26/00

By: 
MOHINDER S. SANDHU
Its: Chief, Standardized Permits and Corrective Action
Branch

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

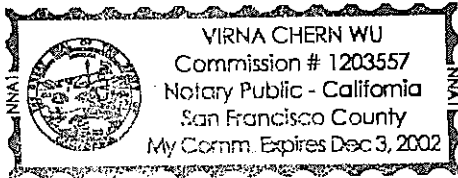
County of

San Francisco

} ss.

On January 26, 2000, before me, Virna C. Wu, "Notary Public",
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")personally appeared Douglas Farrell Wong,
Name(s) of Signer(s)☒ personally known to me☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Environmental RestrictionDocument Date: 1/26/2000 Number of Pages: 8 + 6 (Parcel M, C, D)Signer(s) Other Than Named Above: None

Capacity(ies) Claimed by Signer

Signer's Name: Douglas Farrell Wong☐ Individual☐ Corporate Officer — Title(s): _____☐ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☐ Other: Port Executive DirectorSigner Is Representing: Port of San Francisco

RIGHT THUMBPRINT
OF SIGNER
Top of thumb here

G723986

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On January 26, 2000, before me, Virna C. Wu, "Notary Public"

Date

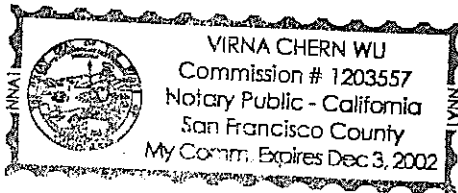
Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Mohinder Singh Sandhu

Name(s) of Signer(s)

☐ personally known to me☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Virna C. Wu

Place Notary Seal Above

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Environmental Restriction

Document Date: 01/26/2000 Number of Pages: 8+6 (Parcel A, C, D)

Signer(s) Other Than Named Above: None

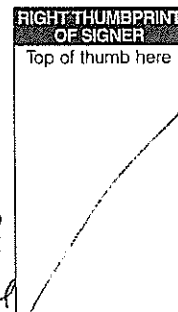
Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu

- ☐ Individual
☐ Corporate Officer — Title(s):
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator

☒ Other: Chief, Standardized Permits & Corrective Action Branch

Signer Is Representing: Dept. of Toxic Substances Control



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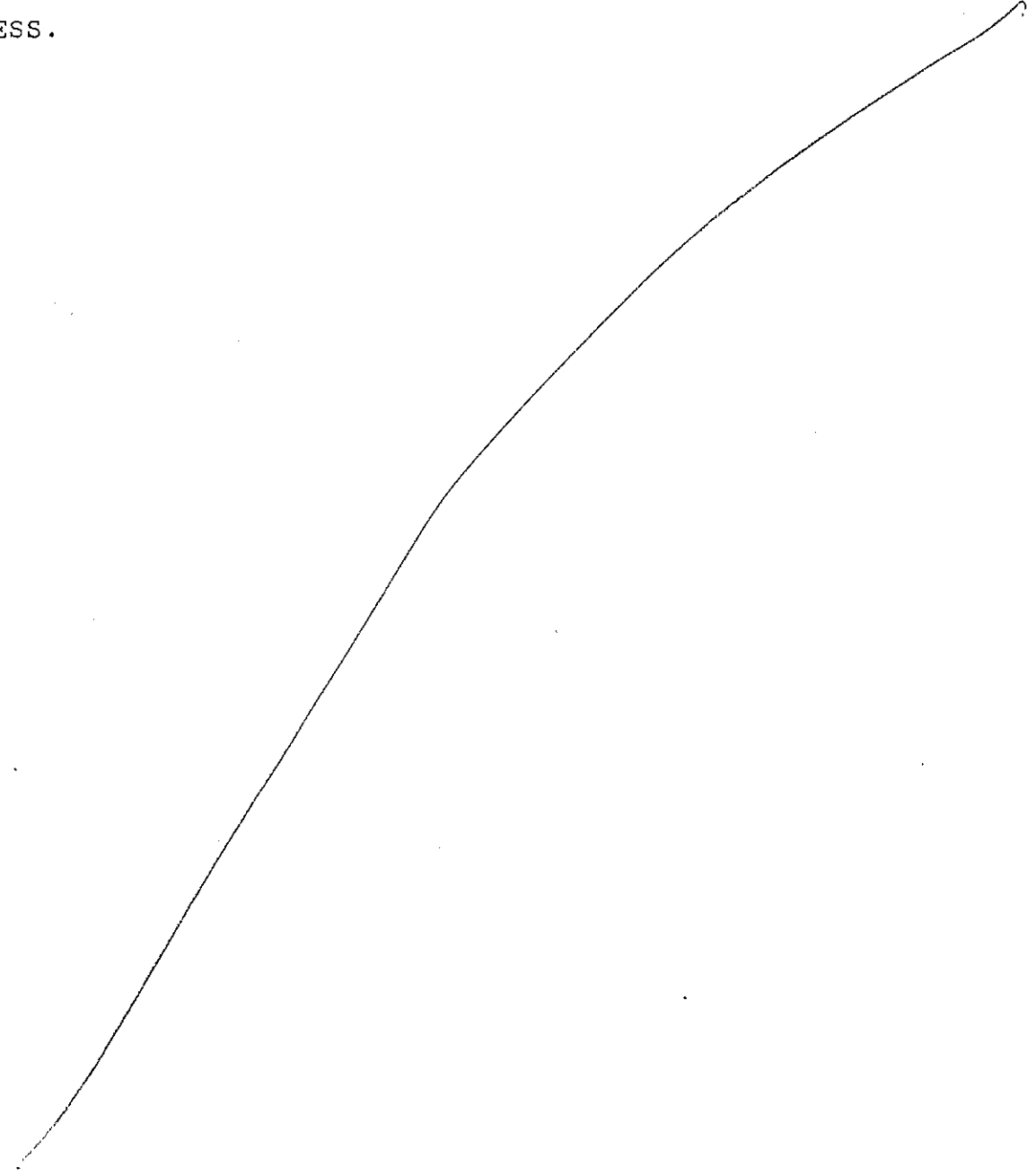
SEAWALL LOT 337

.PARCEL A

ALL THAT CERTAIN REAL PROPERTY SITUATED AT THE CITY AND COUNTY OF SAN FRANCISCO, BEING A PORTION OF SEAWALL LOT 337 OF THE SAN FRANCISCO PORT AUTHORITY, DESCRIBED AS FOLLOWS; COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID CORNER BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG SAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,217.59 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG THE LAST AFOREMENTIONED COURSE A DISTANCE OF 149.77 FEET; THENCE AT S 86DEG 57'33" W A DISTANCE OF 38.12 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 31.51 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 55.69 FEET; THENCE AT S 3DEG 02'27" E A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 55.27 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 40.17 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 120.00 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 40.17 FEET; THENCE AT S 3DEG 14'22" E A DISTANCE OF 48.20 FEET; THENCE AT S 86DEG 57'33" W A DISTANCE OF 142.25 FEET; THENCE AT

G723986

S 86DEG 50'57" W A DISTANCE OF 111.99 FEET; THENCE AT
N 3DEG 10'55" W A DISTANCE OF 200.00 FEET; THENCE AT
N 86DEG 57'33" E A DISTANCE OF 171.00 FEET; THENCE AT
N 3DEG 02'27" W A DISTANCE OF 149.48 FEET; THENCE AT
N 86DEG 49'20" E A DISTANCE OF 121.29 FEET TO THE TRUE POINT OF
BEGINNING, CONTAINING AN AREA OF 70,765.20 SQUARE FEET, MORE
OR LESS.

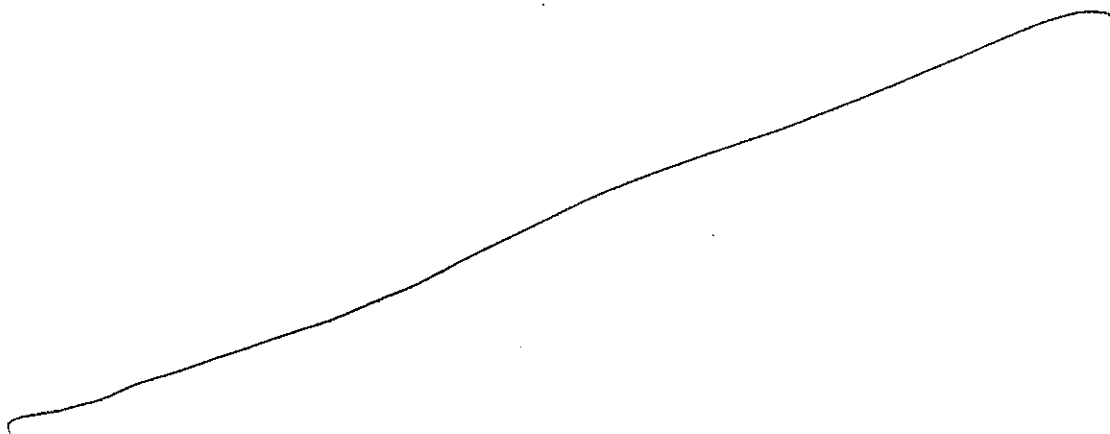


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SEAWALL LOT 337

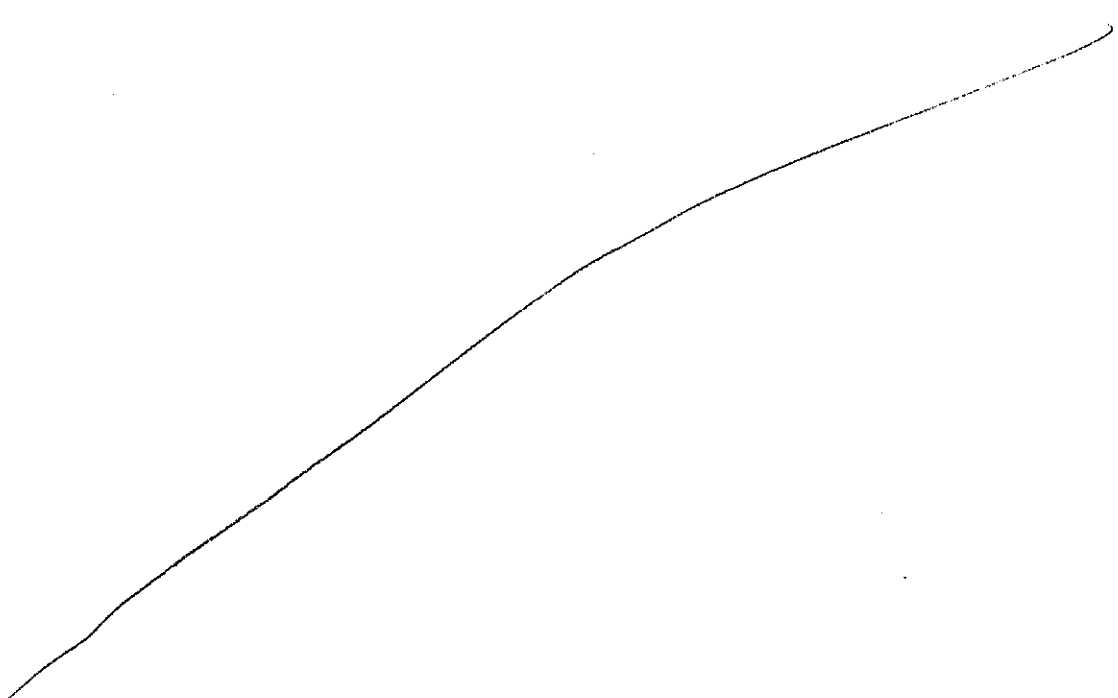
PARCEL C

BEING A PORTION OF SEAWALL LOT 337 OF THE SAN FRANCISCO PORT AUTHORITY ,CITY AND COUNTY OF SAN FRANCISCO, BRIEFLY DESCRIBED AS FOLLOWS; COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID CORNER BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG THE AFORESAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,367.36 FEET TO THE TRUE POINT OF BEGINNING; THENCE AT S 48DEG 02'27" E A DISTANCE OF 25.00 FEET; THENCE AT S 3DEG 02'27" E A DISTANCE OF 13.64 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 55.69 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 31.51 FEET; THENCE AT N 86DEG 57'33" E A DISTANCE OF 38.12 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING AN AREA OF 1,594.90 SQUARE FEET, MORE OR LESS.



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ALSO INCLUDED IN THIS PARCEL IS A PORTION OF SEAWALL
LOT 337 BRIEFLY DESCRIBED AS FOLLOWS;
COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF
TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET)
SAID POINT BEING INNER 14 OF THE INNER WATERFRONT LINE AS
DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING
OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE ALONG THE
AFORESAID INNER WATERFRONT LINE A DISTANCE OF 2,518.74 FEET;
THENCE AT N 86DEG 45'38" E A DISTANCE OF 17.66 FEET TO THE
TRUE POINT OF BEGINNING; THENCE AT S 3DEG 02'27" E DISTANCE OF
30.72 FEET; THENCE AT S 41DEG 57'33" W A DISTANCE OF 25.00
FEET; THENCE S 86DEG 57'33" W A DISTANCE OF 37.43 FEET; THENCE
AT N 3DEG 14'22" W A DISTANCE OF 48.20 FEET; THENCE AT
N 86DEG 45'38" E DISTANCE OF 55.27 FEET TO THE TRUE POINT
OF BEGINNING, CONTAINING AN AREA OF 2,509.60 SQUARE FEET, MORE
OR LESS.



G723986

SEAWALL LOT 337

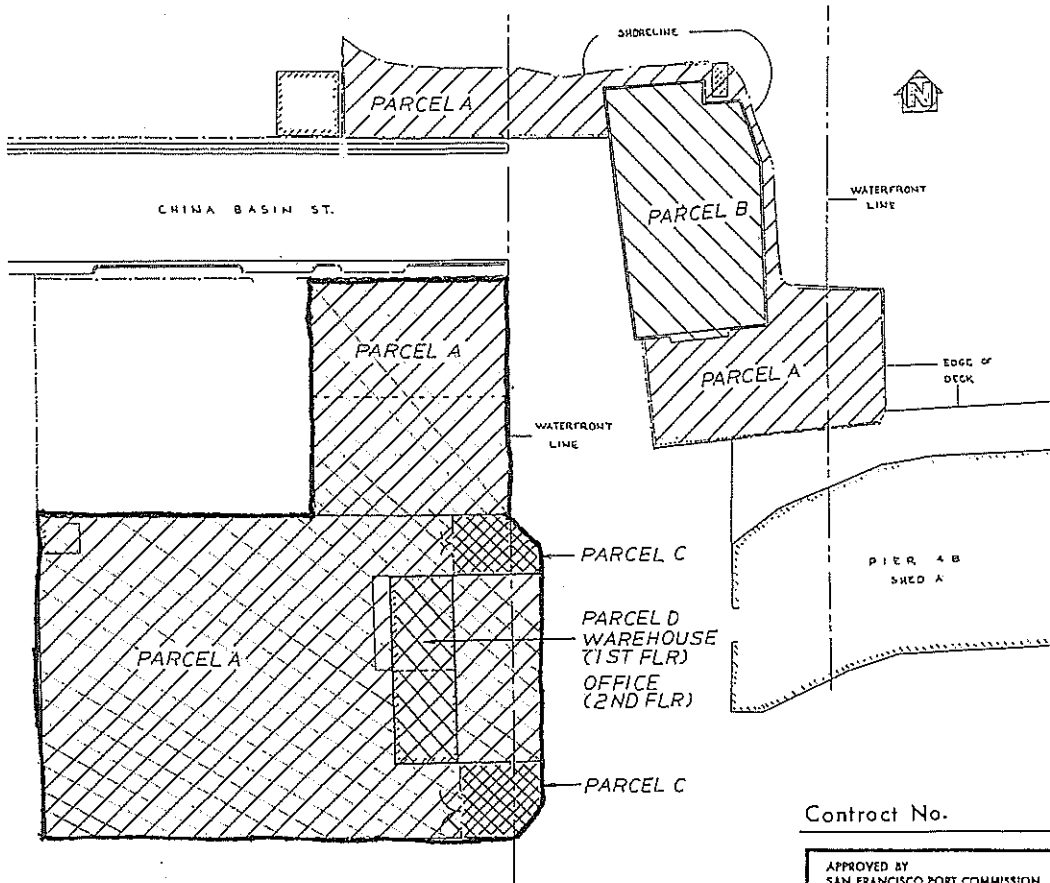
PARCEL D

PARCEL D IS A TWO-STORY WAREHOUSE AND OFFICE BUILDING LOCATED AT CHINA BASIN STREET WHOSE FOOTPRINT IS BRIEFLY DESCRIBED AS FOLLOWS;

COMMENCING AT THE SOUTHWEST CORNER OF THE INTERSECTION OF TOWNSEND STREET AND DELANCEY STREET (FORMERLY FIRST STREET), SAID POINT BEING INNER 14 OF THE INNER WATERFRONT LINE AS DESCRIBED IN THE RECORDS ON FILE AT THE OFFICE OF ENGINEERING OF THE SAN FRANCISCO PORT AUTHORITY; RUNNING THENCE SOUTHERLY ALONG THE AFORESAID INNER WATERFRONT LINE AT S 3DEG 02'27" E A DISTANCE OF 2,398.74 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 38.02 FEET TO THE TRUE POINT OF BEGINNING; THENCE AT S 3DEG 14'22" E A DISTANCE OF 120.00 FEET; THENCE AT S 86DEG 45'38" W A DISTANCE OF 40.17 FEET; THENCE AT N 3DEG 14'22" W A DISTANCE OF 120.00 FEET; THENCE AT N 86DEG 45'38" E A DISTANCE OF 40.17 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING AN AREA OF 4,820.00 SQUARE FEET, MORE OR LESS.

ALSO INCLUDED IN THIS PARCEL IS THE SECOND FLOOR OFFICE SPACE OF THE AFOREMENTIONED TWO- STORY BUILDING WITH AN AREA OF 2,414.00 SQUARE FEET, MORE OR LESS.

G723986



PARCEL A 91,844 SF
 PARCEL B 14,071 SF
 SUB TOTAL 105,915 SF
 PARCEL C 4,105 SF
 PARCEL D
 WAREHOUSE 4,820 SF
 OFFICE 2,414 SF
 TOTAL 117,254 SF

Contract No.

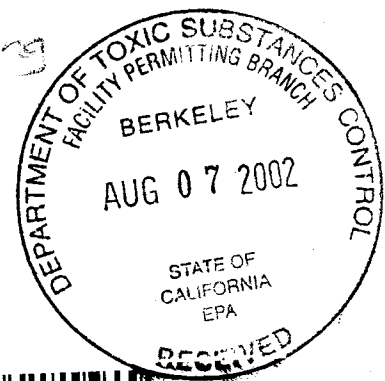
APPROVED BY
 SAN FRANCISCO PORT COMMISSION
 DATE JUL 21 1982

Chief Engineer
 CHIEF ENGINEER

NO.	DATE	DESCRIPTION
REVISIONS		
PORT OF SAN FRANCISCO SAN FRANCISCO PORT COMMISSION DEPARTMENT OF ENGINEERING		
EXHIBIT A-1 H & H SHIP SERVICE CO. LEASE NO. L-11679		
DRAWN BY E.C.C.		CHECKED BY
DESIGNED BY		DATE 4-27-82
SECTION HEAD		SCALE
DRAWING NO.		SHEET NO. OF SHEETS

APPENDIX E
Covenant to Restrict Use of Property
Recorded July 25, 2002

20020807-0-Wong



RECORDING REQUESTED BY:
The Port of San Francisco
Ferry Building
San Francisco, California 94111

WHEN RECORDED, MAIL TO

Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, California 94710
Attention: Mohinder S. Sandhu, P.E., Chief
Standardized Permits and Corrective Action
Branch

San Francisco Assessor-Recorder
Doris M. Ward, Assessor-Recorder
DOC- 2002-H209674-00
Acct 25-NO CHARGE DOCUMENT
Thursday, JUL 25, 2002 12:45:40
Ttl Pd \$0.00 Nbr-0001906468
REEL I187 IMAGE 0545
0J1/JL/1-14

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

*(Re: H&H Site located at China Basin Channel and Terry Francois Blvd, City and
County of San Francisco)*

This Covenant and Agreement ("Covenant") is made by and between the City and County of San Francisco, a charter city and county in trust (the "Covenantor"), the current owner of certain property situated in the City and County of San Francisco, State of California, described in Exhibit "A", attached hereto and incorporated herein by this reference (the "Property"), and the Department of Toxic Substances Control (the "Department"). Pursuant to Civil Code section 1471(c) and the California Health and Safety Code, Section 25222.1, the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code ("H&SC"), Section 25260. The Covenantor and the Department, collectively referred to as the "Parties", therefore intend that the use of the Property be restricted as set forth in this Covenant, in order to protect human health,

safety and the environment.

ARTICLE I
STATEMENT OF FACTS

1.01. The Property, totaling approximately 0.6 acres, is more particularly described in Exhibit "A" and depicted in Exhibit "A-1", attached hereto and incorporated herein by this reference. The Property is located in the area now generally bounded by Terry Francois Boulevard to the west, China Basin Channel to the north, and San Francisco Bay to the east, in the City and County of San Francisco, California.

1.02. The site was created by filling marshlands and shallow tidal flats bordering San Francisco Bay between 1877 and 1913. Sources of fill are unknown, but likely included construction/demolition debris and rubble, and rock and dirt cut from nearby hills. Historical uses of the Site include railroad tracks and related support structures and parking. From 1950 to 1996 H&H Ship Service occupied the area for wastewater treatment and transfer operations, including aboveground storage tanks for receiving, settling and treating wastewater containing petroleum.

In 1978 several of the wastes managed at the H&H Ship Service facility were determined to be hazardous wastes subject to federal and state hazardous waste management regulations. Since that time, the Department of Toxic Substances Control (or its predecessor in interest, the Department of Health Services) authorized H&H Ship Service's operations pursuant to an interim status document. Under this authorization the property was a hazardous waste facility (Facility), regulated by the Department, subject to the requirements of the California Hazardous Waste Control Law ("HWCL"), at Health and Safety Code ("H&S Code") section 25100 et seq., and the federal Resource Conservation and Recovery Act ("RCRA"), at 42 U.S.C. section 6901 et seq. Under Interim Status, the property was a portion of the Facility that was known as the Treatment/Transfer Area (TTA).

The Department is requiring this Covenant pursuant to the closure requirements of the HWCL, including H&S Code section 25246 and post-closure notices provisions of Title 22 California Code of Regulations [section 66265.119(b) for interim status hazardous waste facilities], as part of the facility closure. In 1994, the Department reviewed H&H's Closure Plan to ensure that the closure of the TTA met the requirements in Title 22, California Code of Regulations, Chapter 15, Article 7. The Department circulated the draft Closure Plan and Proposed Negative Declaration for public review and comment from August 11, 1994 to September 13, 1994. The Department approved the Closure Plan on January 13, 1995 and filed a Notice of Determination for the project with the

State Clearinghouse on February 15, 1995.

The Department reviewed the closure certification report titled, *RCRA Closure Certification Report, Former H&H Ship Service Facility, San Francisco, California*, (February 4, 1999), and subsequent submittals titled *Response to Comments, RCRA Closure Certification Report, Former H&H Ship Service Facility*, (November 2, 1999); *Results of Article 20 Sampling Program. Proposed China Basin Park Area* (July 2000); *Site Investigation and Surface Soil Sampling Results, Former H&H Ship Service Company – Treatment Transfer Area Parcel* (February 28, 2002); and *Addendum to the Article 20 Health Risk Assessment* (July 18, 2002). Upon filing of this deed restriction, the Department will approve the closure certification report.

Hazardous wastes, which are also hazardous materials as defined in Health and Safety Code sections 25117 and 25260, including petroleum hydrocarbons, polynuclear aromatic hydrocarbons, metals and arsenic, remain in the soil and groundwater at the Site at concentrations below those which would pose a significant human health risk under proposed reuse scenarios. Therefore a deed restriction to limit use of the property to those exposure scenarios evaluated and found to be below acceptable risk limits is required as part of the facility closure.

1.03. As detailed in the above-referenced reports, portions of the surface and subsurface soils on the Site contain hazardous wastes and hazardous materials, as defined in H&S Code section 25117 and 25260, including the following contaminants of concern: arsenic (up to 96 mg/kg) and benzo(a)pyrene (up to 11 mg/kg). Groundwater beneath the Property is found within 10 to 20 feet below ground surface. Dissolved arsenic was found in groundwater at up to 180 ug/l. The California drinking water standard for arsenic is 50 ug/l.

A review of the analytical results and the chemical distribution suggests that there are "hot spots". Hot spots are areas of affected soil or groundwater having concentrations higher than an empirically determined percentile of the distribution of concentrations in a particular population. 65 soil samples from 20 locations at various depths were collected within the TTA. Elevated concentrations of benzo(a)pyrene equivalent B(a)P EQ were measured in samples collected from two borings locations (EB-1, 19.8 milligrams per kilogram [mg/kg]) and (EB-20, 7.9 mg/kg). One surface soil sample (GMX-08) contained B(a)P EQ concentration of 1.5 mg/kg. All other concentrations of B(a)P EQ were less than 1 mg/kg. Elevated concentrations of arsenic and lead were observed in samples collected from borings EB-1 (3,000 mg/kg lead), EB-5 (96 mg/kg arsenic and 1,300 mg/kg lead), and EB-18 (2,400 mg/kg lead). Borings EB-1 and EB-5 are located in the eastern section of the TTA; GMX-08 is located near the northern perimeter; and borings EB-18 and EB-20 are located in the southwest section.

Based on these observations, borings EB-1, EB-5, GMX-08, EB-18, and EB-20 can be considered hot spots. However, each of borings is located under a concrete/asphalt

foundation or a compacted aggregate/crushed rock/roadbase material. The concrete/asphalt foundation or compacted aggregate/crushed rock/roadbase material serves as a physical barrier preventing direct contact with chemicals in soil; thus, there are no potential direct exposure pathways to chemicals at these hot spots by future receptors. If in the unlikely event that the concrete/asphalt foundation is removed, the excess cancer risk to a receptor from the hot spots would range from 9×10^{-5} to 3×10^{-6} .

Imported topsoil at least 18 inches thick followed by a layer of sod will be placed over the existing asphalt-concrete foundation. The concrete is present at one foot thick to at least 3 feet thick across approximately two-third of the TTA. The remaining one-third of the TTA is currently overlain with an aggregate/crushed rock/roadbase material. The concrete/asphalt foundation and compacted aggregate/crushed rock/roadbase layer precludes a complete exposure pathway. Additional of the 18 inches of topsoil and sod layer will eliminate potential direct exposures to soil in fill material within the TTA.

In order to ensure that no complete pathways are established, the Department will require that the existing concrete/asphalt foundation remain undisturbed so long as the intended use of the Property is to be a recreational park. Additionally, the Department will require that the site be covered (capped) with at least eighteen (18) inches of imported topsoil on top of an indicator lining material to denote the separation of the topsoil from native fill. Because the health risk assessment also did not evaluate an unrestricted land use scenario or potential impacts from use of groundwater, the Department concluded that use of the Property as a residence, hospital, school for persons under the age of 21, or day care center would entail an unacceptable use. The Department further concluded that the Property, subject to the restrictions of this Covenant, does not present an unacceptable threat to human safety or the environment.

ARTICLE II DEFINITIONS

2.01. Department. "Department" shall mean the California Department of Toxic Substances Control and shall include its successor agencies, if any.

2.02. Owner. "Owner" shall mean the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to all or any portion of the Property.

2.03. Occupant. "Occupant" shall mean Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.04. Cap. "Cap" shall mean eighteen (18) inches of imported topsoil on top of

an indicator lining material which is used to denote the separation of the imported topsoil from native fill.

2.05 Concrete/Asphalt Foundation. "Concrete/Asphalt Foundation" shall mean the existing concrete/asphalt surface which is overlain approximately two-third of the Property.

2.03. ARTICLE III GENERAL PROVISIONS

3.01. Restrictions to Run With the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), upon and subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and every one of the Restrictions: (a) shall run with the land pursuant to H&SC sections 25202.5, and 25202.6 and Civil Code section 1471; (b) shall inure to the benefit of and pass with each and every portion of the Property, (c) shall apply to and bind the respective successors in interest to the Property, (d) are for the benefit of, and shall be enforceable by the Department, and (e) are imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding Upon Owners/Occupants. Pursuant to Health and Safety Code section 25202.5(b), this Covenant shall be binding upon all of the owners of the land, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees. Pursuant to Civil Code section 1471(b), all successive owners of the Property are expressly bound hereby for the benefit of the covenantee(s) herein. "Owner" shall include "Covenantor".

3.03. Written Notice of Hazardous Substance Release. The Owner shall, prior to the sale, lease, or rental of the Property, give written notice that a release of hazardous substances has come to be located on or beneath the Property, pursuant to Health and Safety Code section 25359.7. Such written notice shall include a copy of this Covenant.

3.04. Incorporation into Deeds and Leases. The Restrictions set forth herein shall be incorporated by reference in each and all deeds and leases for any portion of the Property.

3.05. Conveyance of Property. Covenantor agrees that the Owner shall provide notice to the Department not later than thirty (30) days after any conveyance of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect such proposed conveyance, except as otherwise provided by law, by administrative order, or specific provision of this Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes:

- (a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation;
- (b) A public or private school for persons under 21 years of age; or
- (c) A hospital for humans; or
- (c) A day care center for children.

4.02 Prohibited Activities. The following activities shall not be conducted at the Property:

- (a) No raising of food (e.g., cattle, food crops, cotton, etc.) shall be permitted on the property.
- (b) No groundwater shall be extracted on the Property for purposes other than site remediation or construction dewatering without prior written approval by the Department.

4.03 Non-Interference with the Cap. Covenantor agrees:

- (a) No activities which will disturb the Cap (e.g. excavation, grading, removal, trenching, filling, earth movement, or mining) shall be permitted on the Property without prior review and approval by the Department.
- (b) All uses and development of the Property shall preserve the integrity of the Cap.
- (c) Any proposed alteration of the Cap shall require written approval by the Department.
- (d) Covenantor shall notify the Department of each of the following: (i) The type, cause, location and date of any disturbance to the Cap which could affect the ability of the Cap to contain subsurface hazardous materials in the Property, and (ii) the type and date of repair of such disturbance. Notification to the Department shall be made as provided below within ten (10) working days of both the discovery of any such disturbance(s) and the completion of any repairs. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other

Owners and Occupants.

4.04. Management of Native Fill and Concrete/Asphalt Foundation Material

- (a) All uses and development of the Property shall preserve the integrity of the existing Concrete/Asphalt Foundation.
- (b) No activities (e.g., excavation, grading, removal, trenching, filling, earth movement or mining) which will disturb the native fill and/or the Concrete/Asphalt Foundation material underlying the Cap as indicated in Exhibit B shall be permitted on the Property without a Department-approved Soil Management Plan and Health and Safety Plan.
- (c) Native fill and/or Concrete/Asphalt Foundation material shall not be managed or handled such that it may migrate into the bay.
- (d) Any native fill and/or Concrete/Asphalt Foundation material brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with the applicable state and federal laws and their implementing regulations.
- (e) The Owner shall provide the Department written notice at least fourteen (14) days prior to any building, filling, grading, mining or excavating at the Property.
- (f) If more than 50 cubic yards of any native fill will be disturbed, including excavation and grading, then the soil shall be evaluated for potential human health risks in compliance with Article 20 of the SF Municipal Code ("the Maher Ordinance"), and managed accordingly.
- (g) Covenantor shall notify the Department of each of the following: (i) The type, cause, location and date of any disturbance to the native fill and/or Concrete/Asphalt Foundation which could affect the ability of the Concrete/Asphalt Foundation to contain subsurface hazardous materials in the Property, and (ii) the type and date of repair of such disturbance. Notification to the Department shall be made as provided below within ten (10) working days of both the discovery of any such disturbance(s) and the completion of any repairs. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

4.05. Access for Department. Covenantor agrees that the Department shall

have reasonable right of entry and access to the Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health and safety.

ARTICLE V ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor and/or Owner to comply with any of the Restrictions specifically applicable to it shall be grounds for the Department, by reason of this Covenant, to require that the Covenantor and/or Owner modify or remove any improvements ("Improvements" herein shall mean all buildings, roads, driveways, and paved parking areas, constructed or placed upon any portion of the Property constructed in violation of the Restrictions.) Violation of this Covenant shall be grounds for the Department to file civil and/or criminal actions against the Covenantor and/or Owner as provided by law.

ARTICLE VI VARIANCE, TERMINATION, AND TERM

6.01. Variance. Any Owner or, with the Owner's written consent, any Occupant of the Property or any portion thereof may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with H&S Code section 25202.6.

6.02. Termination. Any Owner, and/or, with the Owner's written consent, any Occupant of the Property, or any portion thereof, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with H&S Code section 25202.6.

6.03. Term. Unless ended in accordance with the Termination Paragraph above, by law, or by the Department in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VII MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever.

7.02. Department References. All references to the Department include successor agencies/departments or other successor entity.

7.03. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of San Francisco within ten (10) days of the Covenantor's receipt of a fully executed original.

7.04. Notices. Whenever any person gives or serves any notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:

Carol Bach
Assist. Deputy Director, Environmental Health and Safety
Port of San Francisco
Pier 1
San Francisco, CA 94111

With a copy to:

Noreen Ambrose
Port General Counsel
Port of San Francisco
Pier 1
San Francisco, CA 94111.

To Department:

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 300
Berkeley, CA 94710-2737
Attention: Chief, Standardized Permits and Corrective Action
Branch

Any party may change its address or the individual to whose attention a notice is to be sent by giving written notice in compliance with this paragraph.

7.05. Partial Invalidity. If any portion of the Restrictions or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.

H209674

IN WITNESS WHEREOF, the Parties execute this Covenant.

"Covenantor"

Date: 7/24/02

By: //original signed by//
DOUGLAS F. WONG
Its: Executive Director

"Department"

Date: 7/24/02

By: //original signed by//
Mohinder S. Sandhu, P.E.
Its: Chief, Standardized Permits and Corrective Action
Branch

H209674

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On

July 24, 2002

Date

before me,

Virna C. Wu

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

"Notary Public"

personally appeared

Mohinder Singh Sandhu

Name(s) of Signer(s)

☒ personally known to me☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Place Notary Seal Above

//original signed by//

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document:

Covenant to Restrict Use of Property

Document Date:

None

Number of Pages:

10 Pages +

Exhibits A & B

Signer(s) Other Than Named Above:

None

Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu

☒ Individual☐ Corporate Officer — Title(s):☒ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☒ Other: Port Executive Director

Signer Is Representing:

Port of San Francisco

RIGHT THUMBPRINT

OF SIGNER

Top of thumb here

H209674

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

San Francisco

} ss.

On July 24, 2002

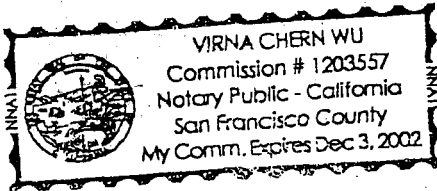
Date

before me, Virna C. Wu

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

"Notary Public"personally appeared Mohinder Singh Sandhu

Name(s) of Signer(s)

☐ personally known to me☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Place Notary Seal Above

//original signed by//

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document:

Covenant to Restrict Use of Property

Document Date:

None

Number of Pages:

10 Pages +

Signer(s) Other Than Named Above:

NoneExhibit A & B

Capacity(ies) Claimed by Signer

Signer's Name: Mohinder Singh Sandhu☐ Individual☐ Corporate Officer — Title(s):☐ Partner — ☐ Limited ☐ General☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator☒ Other: Chief, Standardized Permits & Corrective

Signer Is Representing:

Department of Toxic Substances Control

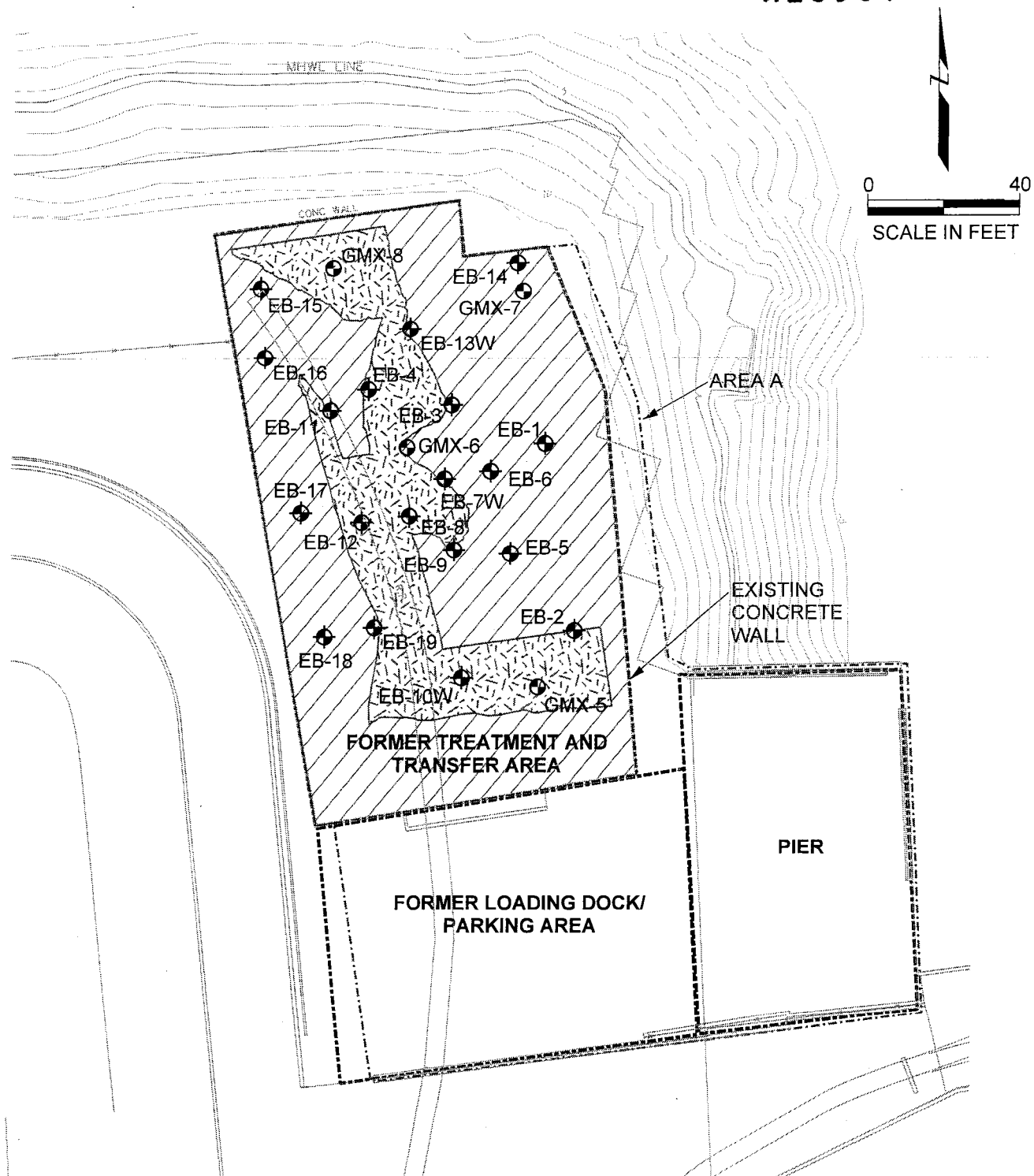
RIGHT THUMBPRINT
OF SIGNER
Top of thumb here

EXHIBIT A

H&H Parcel – Tank Treatment Area

All that certain real property of the San Francisco Port Commission, City and County of San Francisco, State of California, situate at the northeast corner of Terry A. Francois Boulevard (formerly China Basin Street), more particularly described as follows:

Commencing at the point of intersection of the northwesterly line of Townsend Street with the southwesterly line of Delancey Street (formerly First Street), said point being Inner 14 of the Inner Waterfront Line as described in records on file in the office of Engineering of said San Francisco Port Commission; Thence along said Inner Waterfront Line, S 03°02'27" E a distance of 2132.11 feet; Thence N 86°51'14" E a distance of 65.28 feet, to the True Point Of Beginning; Thence S 10°21'36" E a distance of 127.93 feet; Thence N 80°50'39" E a distance of 4.70 feet; Thence S 09°13'14" E a distance of 68.59 feet; Thence N 81°09'11" E a distance of 146.17 feet; Thence N 03°21'24" W a distance of 85.74 feet; Thence S 88°44'14" W a distance of 54.91 feet; Thence N 66°55'27" W a distance of 9.19 feet; Thence N 07°12'31" W a distance of 68.86 feet; Thence N 21°58'29" W a distance of 44.82 feet; Thence S 83°22'07" W a distance of 28.09 feet; Thence N 05°44'30" W a distance of 14.69 feet; Thence S 81°59'17" W a distance of 65.99 feet; Thence S 10°21'36" E a distance of 30.22 feet to the True Point Of Beginning; Containing 26,592 square feet (0.61 acres), more or less.

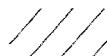


EXPLANATION

- ⊕ Soil samples collected at multiple depths by J. Yang and Assoc. March 15, 1995
- ⊙ Surface soil samples collected by Geomatrix, November 16, 2001



Area of aggregate/crushed rock/
road base material



Concrete/asphalt foundation

EXHIBIT B

APPENDIX F
Preliminary Geotechnical Recommendations and Summary
Memorandum No. 1
(Langan Treadwell & Rollo - January 26, 2016)

555 Montgomery Street, Suite 1300 San Francisco, CA 94111 T: 415.955.5200 F: 415.955.5201

To: Ms. Fran Weld – San Francisco Giants
Mr. Jon Knorpp – San Francisco Giants

From: Cary E. Ronan, GE 2741
Lori A. Simpson, GE 2396

cc: Mr. Gerry Tierney – Perkins + Will Architects
Mr. Marc Press – KPFF Structural Engineers
Mr. Darin Peterson – Hathaway Dinwiddie General Contractors
Mr. Joe Olla – Nibbi Brothers

Date: 26 January 2016

PROJECT: Mission Rock Development
Seawall Lot 337
San Francisco, California
Langan Project No. 750604203

Subject: Preliminary Geotechnical Recommendations and
Summary Memorandum No. 1

This memorandum is in fulfillment of our proposal dated 20 January 2016. It presents preliminary geotechnical design recommendations and a summary of geotechnical issues and concepts regarding development at SWL337 that have not been formally memorialized, in addition to an overview summary of some geotechnical issues that have been discussed in the previously published documents listed above. The topics addressed in this memorandum include:

- 1) axial capacity of piles bearing above bedrock, including friction-only piles in clay and friction plus end-bearing piles bearing in dense sand
- 2) impacts of raising site and surrounding street grades, including settlement and downdrag, and measures to mitigate adverse impacts, including discussion of surcharge/wick drains, Geofoam, ground improvement/deep soil mixing beneath streets, and pile-supported streets
- 3) preliminary geotechnical recommendations for design of the Mission Rock Square garage (MRSG)
- 4) liquefaction mitigation considerations, including discussion of deep dynamic compaction (DDC), compaction grouting, rapid impact compaction (RIC), and stone columns

We have previously studied the Mission Rock development site by performing: 1) a preliminary geotechnical investigation at Seawall Lot 337 (SWL337), 2) a liquefaction and lateral spreading evaluation for SWL337 and Pier 48 shoreline, and 3) a geotechnical evaluation of the shoreline conditions at Pier 48. The results of these evaluations were presented in reports dated 8 September 2011, 23 December 2013, and 5 March 2014 (draft), respectively.

MEMO

Mission Rock Development-Seawall Lot 337
San Francisco, California
Preliminary Geotechnical Recommendations and
Summary Memorandum No. 1
Langan Project No. 750604203
26 January 2016 - Page 2 of 9

PROPOSED DEVELOPMENT

Plans for the SWL337 site, which is bound by Terry A. Francois Boulevard on the north and east, Third Street on the west, and Mission Rock Street on the south, include constructing 12 structures between 90 and 240 feet in height (Blocks A through K, mixed residential and commercial), a large open park in the central portion of the site (Mission Rock Square), another large open park at the northern portion of the site (China Basin Park), a three-level, below-grade parking garage beneath Mission Rock Square (MRSG), and associated infrastructure, including streets, sidewalks, and utilities, as shown on Figure 1. We understand site grades will be raised to accommodate future sea level rise; the high point will be at the middle of the site at Mission Rock Square and may be about four to six feet above existing and surrounding Third Street and Terry Francois Boulevard grades. We further understand up to 1-1/2 and 4-1/2 feet of fill was placed recently (since 1997) to raise grades along the southern approximately 750 to 800 feet of Third Street adjacent to SWL337 and Mission Rock Street, respectively, and no new fill is planned along either of these streets or along Terry Francois Boulevard. On the basis of a review of drawings by Perkins + Will (Option 1 – Channel Street/Channel Plaza Entry/Exit Ramp Plan, dated 17 December 2013), it appears the lowest finished floor of the garage will be approximately 30 feet below the proposed finished grade of Mission Rock Square Park. Pier 48 will also be upgraded and be part of the Mission Rock Development.

SUBSURFACE CONDITIONS

Originally, the site was below water in a shallow bay known as Mission Bay. Starting in the 1880s, the bay was reclaimed by placing fill. Based on historic maps, we believe the majority of the site was reclaimed between 1880 and 1906. Some of the material used to reclaim the site is likely building rubble and debris from the 1906 San Francisco earthquake.

Boring logs from investigations of the site and the site vicinity indicate the site is underlain by approximately 13 to 37 feet of heterogeneous fill which varies in density and, in some areas, contains rubble comprised of brick, rock and debris. The fill is underlain by approximately 46 to 72 feet of weak, soft to medium stiff, compressible clay, locally referred to as Bay Mud. Where tested, the Bay Mud at the site appears to be slightly overconsolidated, which indicates that settlement of the Bay Mud is complete under the weight of existing fill. The deeper fill material (below a depth of about 20 to 25 feet) adjacent to thin fill (thinner than about 15 feet) is indicative of a "Bay Mud wave". A Bay Mud wave can occur when heavy fill loads are placed on the Bay Mud and cause a bearing capacity failure of the Bay Mud. As the Bay Mud fails, the gravel sinks into the soil and the Bay Mud pushes up around the failure zone, causing the thick and thin fill soil profile. The Bay Mud wave fill material encountered at this site is generally comprised of clayey gravel and gravelly clay.

The borings drilled at the site indicate the Bay Mud is generally underlain by an older marine clay, known as Old Bay Clay that is 68 to 74 feet thick where explored. Old Bay Clay is typically stiff to very stiff and overconsolidated. In one area of the site, a 28-foot-thick layer of dense to

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very dense clayey sand was encountered below the Bay Mud, which was, in turn, underlain by Old Bay Clay. Sand may be present beneath the Bay Mud in other unexplored areas of the site, as well.

Alluvial sand and clay layers are typically encountered below the Old Bay Clay. Dense to very dense sand layers with varying fines contents are present below the Old Bay Clay in some of the borings around the site. The top of this sand layer was encountered at approximately 165 to 180 feet below the existing ground surface and, where present, the sand is about 10 to 15 feet thick near the project site. Based on available borings this sand layer is not present across the entire site and, where present, varies in thickness, fines content, and density.

The top of the bedrock surface has been encountered in borings around the site at depths of about 160 feet (near the northwest corner of the site) to 260 feet (in the northeast corner of the site) below the ground surface. The bedrock surface appears to be steeply sloping down from west to east in the northern portion of the site and more gently sloping up along the eastern side of the site from a depth of 260 feet at the northeast corner to 220 feet at the southeast corner. The bedrock surface and quality are expected to vary significantly across the site.

Groundwater was encountered at the site and in the site vicinity approximately 7 to 9 feet below the existing ground surface (bgs), corresponding to approximate Elevations 91 to 93 feet¹, but has been found within five feet of the ground surface at some sites in Mission Bay. No springs or seepages were observed on site.

AXIAL PILE CAPACITY FOR PILES BEARING ABOVE BEDROCK

We provided estimates of axial and lateral capacities of 14-inch steel H-piles driven to bedrock in our preliminary geotechnical investigation report, dated 8 September 2011. Since then, the design team has requested preliminary axial capacities for piles bearing above bedrock, i.e. friction-only piles in clay and friction plus end-bearing piles bearing in dense sand. Preliminary pile capacities for all of these cases are presented below.

End-Bearing Piles

Piles can typically encounter refusal in very dense, relatively clean sand layers (typically less than 10 percent fines, passing the No. 200 sieve), at least 10 feet thick. If significant fines are present, the pile will generally continue driving through the layer. Although some borings encountered a relatively dense sand at depth, a continuous sand layer does not appear to be present across the site. However, as described in the subsurface section above, there may be

¹ Elevations reference Mission Bay datum, which is based on San Francisco City datum (SFCD) plus 100 feet.

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a dense, end-bearing sand layer present below the Bay Mud in a few areas of the site; it should be noted that this condition is not typical across Mission Bay sites. Additionally, dense sand may be present below the Old Bay Clay in some areas of the site. The capacities provided in our preliminary report are for piles with downdrag loads on them. We have been requested to provide capacities of piles without downdrag loads imposed on them. For completeness, we are including end-bearing pile capacities for piles bearing in dense sand or bedrock for driven 14-inch steel H-piles or 14-inch-square precast prestressed concrete piles with no downdrag in Table 1.

TABLE 1
Preliminary Estimated Single Pile Axial Capacity
End-Bearing Driven 14-Inch Steel H-Piles or 14-Inch-Square Precast Prestressed Concrete
Piles (No Downdrag)

Estimated Pile Tip Elevation (feet, SFCD + 100 feet)	Anticipated End-Bearing Condition	$Q_{ultimate}$ Axial Capacity (kips)	$Q_{allowable}$ Dead plus Live (kips)	$Q_{allowable}$ Total Design Load (kips)
Average of -150	Bedrock	960	480	640
30 (representative of conditions in the vicinity of Boring BSWL337-2)	Dense Sand just below Bay Mud	500	175	230
-60	Dense Sand below Old Bay Clay	860	430	570

Notes:

- 1) Capacities of piles presented in Table 1 represent the capacity of the soil and bedrock only; the structural capacity of the pile should be checked and should govern if less.
- 2) For the bedrock and deeper sand (tip at Elevation -60 feet) end-bearing piles, $Q_{allowable}$ includes a factor of safety of 2 (these capacities are based on nearby pile load tests).
- 3) $Q_{allowable}$ for the shallower sand end-bearing piles (tip at Elevation 30 feet), dead plus live loads represents a factor of safety of 2 for friction and 3 for end-bearing.
- 4) $Q_{allowable}$ for total design loads (including earthquake loads) represents a 1/3 increase over $Q_{allowable}$ for dead plus live loads.

Friction-Only Piles Bearing in Clay

We developed preliminary friction-only capacity for piles extending below the Bay Mud and gaining friction in the sand and clay below the Bay Mud; these capacities are presented on Figure 2. The capacities shown on Figure 2 consider:

- capacity starting at the bottom of the Bay Mud (see Figure 1 for estimated contours of the bottom of Bay Mud elevations)
- piles do not gain capacity in the fill and Bay Mud
- a factor of safety of 2

IMPACTS OF RAISING SITE AND SURROUNDING STREET GRADES

As previously described, site grades will be raised to accommodate future sea level rise; the high point will be at the middle of the site at Mission Rock Square and may be about four to six feet above surrounding Third Street and Terry Francois Boulevard grades. We further understand up to 1-1/2 and 4-1/2 feet of fill was recently placed to raise grades along the southern portion of Third Street and Mission Rock Street, respectively, and no additional fill is planned along either of these streets or along Terry Francois Boulevard.

Using soil fill to raise grades will create a new cycle of consolidation settlement of the Bay Mud beneath the site, causing ground settlement of up to several feet. This settlement will create differential settlement between pile-supported buildings, where there will be little to no settlement, and surrounding streets, sidewalks, and other improvements. The differential settlement will affect utility connections and building entrances. The settlement will also cause an additional load (downdrag) to act on piles on the order of 200 to 225 kips, as the fill and Bay Mud move downward relative to the pile, thus reducing the pile capacity.

Where site grades have been raised in the public right-of-way around the site, the design team will need to accommodate the effects of settlement. Within the site, however, there are a variety of ways the site grades can be raised. The design team has explored several alternatives to adding soil fill loads to the site, including:

- preloading the site with soil mound surcharge and wick drains to “pre-settle” the Bay Mud, such that adding new fill would not cause new settlement of the Bay Mud (Surcharge and Wick Drains)
 - Because of the Giants’ baseball operations and parking needs and the time required for the surcharge program, this option was deemed to be infeasible; the mounds would need to be at least ten feet tall, making parking access impractical.

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- improving the ground through the bottom of the Bay Mud using deep soil mixing (DSM) (Ground Improvement)
 - We understand that for DSM to be a cost-effective alternative over piles, the depth of the soil to improve should be less than about 30 to 40 feet. With the thickness of fill and Bay Mud at this site averaging on the order of 90 feet, it would be cost prohibitive and impractical to try to improve the ground to support new fill loads.
- using lightweight foam (geofoam, or similar) to raise site grades (geofoam)
 - Utilities and streets would need to be supported on and within geofoam; when they needed to be repaired, the geofoam would need to be cut through and replaced in kind. We anticipate on-going maintenance of the geofoam would be required, which could be difficult.
 - Several of the gravity-fed utilities require that trenches be on the order of 10 to 12 feet deep; this would put Geofoam below groundwater, which renders installation and maintenance difficult and impractical.
- supporting the streets and utility corridors on piles (Pile-Supported Streets)
 - This option was deemed to be the most practical, economical, and feasible for the site because:
 - relatively little street and utility settlement would occur and, thus, relatively little to no differential settlement between pile-supported streets and adjacent pile-supported buildings would occur
 - by pile supporting the streets, no new fill would be required; therefore, no downdrag loads would be induced on new piles supporting adjacent buildings (except where the streets surrounding the site have been raised)

Therefore, on a preliminary basis, the Mission Rock design team is moving forward with evaluating pile-supported streets and utility corridors for the proposed development.

We estimate that, due to the relatively recent placement of new fill along the southern portion of Third Street and along Mission Rock Street, new piles along the western and southern edges of SWL337 will be subjected to downdrag. We estimate this will affect piles for the southern 50 feet of planned structures at Parcels D and H and the proposed Bridgeview Street and for the western 25 feet of Parcels B, C, and D and the proposed Channel and Bosque Streets.

PRELIMINARY RECOMMENDATIONS FOR MISSION ROCK SQUARE GARAGE

Plans are to construct a three-level below-grade garage below the Mission Rock Square park and surrounding streets that will abut proposed Parcels B, C, E, F, I, and J, as shown on Figure 2. Preliminary plans show that the proposed lowest garage finished floor will be at approximate Elevation 73 feet. We are currently planning a geotechnical investigation in the

MEMO

MRSO footprint to develop site-specific preliminary geotechnical recommendations for design; however, we have performed preliminary analyses based on the existing data at the site, and have the following preliminary conclusions:

- We are anticipating that the structural loads of the MRSO plus some new soil atop the garage may be nearly balanced by the weight of soil removed for the excavation of the MRSO, such that the new loads may be nearly a “net zero” addition.
- Although there may be a nearly “net zero” new load addition, there will be some rebound/heave of Bay Mud below the garage due to removal of soil load and some recompression of the Bay Mud as the new loads are applied.
- We anticipate it may be difficult logistically to add the same amount of fill at the proposed street and ramp areas as can be added in the park area, such that there may be some differential settlement between these structures.
- We are anticipating that a pile-supported mat or “raft” foundation system may be appropriate for support of the MRSO; piles will likely be required mainly for settlement and uplift/heave control rather than actual structural load support.
- The shoring system should consist of a relatively rigid soil-cement-mixed, secant pile, soldier pile tremie concrete (SPTC) or diaphragm cutoff wall to resist earth and water pressures
- With a cutoff shoring wall extending into relatively impermeable Bay Mud, only the interior of the excavation will require dewatering.
- A concrete working pad with steel reinforcement should be constructed at the base of the excavation to reduce the potential for base heave and provide a relatively stable working pad for construction activities.
- On a preliminary basis, we estimate the allowable bearing capacity of the Bay Mud at Elevation 73 feet is on the order of 1,400 pounds per square foot (psf) for the temporary construction condition; this value includes a factor of safety of 2. For the permanent condition, we estimate the allowable bearing capacity of the Bay Mud at Elevation 73 feet is on the order of 1,900 psf; this value includes a factor of safety of 3. Care should be taken to minimize disturbance of the Bay Mud during construction. Disturbed Bay Mud will have lower strength and lower bearing capacity.

LIQUEFACTION MITIGATION CONSIDERATIONS

As discussed in our 23 December 2013 letter, *Liquefaction and Lateral Spread Potential at Seawall Lot 337*, there is a potential for the fill across the majority of the site to liquefy² and settle during a major earthquake. Additionally, we estimate there are localized areas within the site that are susceptible to lateral spreading³ as a result of liquefaction.

If liquefaction occurs, the ability of piles to resist lateral loads will be reduced, induced moments in the piles will be increased, and passive resistance at basement walls, pile caps and grade beams will be reduced. Where lateral spreading occurs, additional loading on piles and basement walls will occur due to the soil movement, which could cause significant foundation damage.

The Mission Rock design team is currently undergoing a study of the comparison of effects on design with and without liquefaction at the site. However, based on our experience, it may not be practical to design a foundation system to accommodate the loss of lateral capacity due to liquefaction and the lateral movement from lateral spreading. Deep foundation elements such as piles would need to be designed to resist large lateral deflections and associated moments.

Should it be decided to improve the ground against liquefaction, on the basis of our experience with different methods of improvement, we judge that the most appropriate methods to mitigate the potential for liquefaction and lateral spreading to occur at the site are:

- deep dynamic compaction⁴ (DDC)
- stone columns⁵

² Liquefaction is a transformation of soil from a solid to a liquefied state during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits.

³ Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. The surficial blocks are transported downslope or in the direction of a free face, such as a bay, by earthquake and gravitational forces. Lateral spreading is generally the most pervasive and damaging type of liquefaction-induced ground failure generated by earthquakes.

⁴ Deep dynamic compaction (DDC) consists of the systematic dropping of a 10- to 20-ton weight or tamper from heights as high as 40 to 80 feet. The weight or tamper typically drops about 5 to 15 times per location at a rate of one to three drops per minute. Depending on the total energy input into the ground and subsurface conditions, deep dynamic compaction can generally be effective at densifying granular soils up to 20 to 30 feet deep.

⁵ Stone columns are a ground improvement technique that results in in-situ densification of granular soil. Stone column installation is accomplished using vibrating probes that are inserted to the desired depth of improvement and withdrawn. The voids created through densification are backfilled with gravel or crushed rock and compacted while withdrawing the probe, leaving a dense stone column typically 3 to 4 feet in diameter surrounded by densified soil.

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Mission Rock Development-Seawall Lot 337
San Francisco, California
Preliminary Geotechnical Recommendations and
Summary Memorandum No. 1
Langan Project No. 750604203
26 January 2016 - Page 9 of 9

Compaction grouting⁶ and rapid impact compaction⁷ (RIC) were also considered; however, both of these ground improvement methods were rejected for this site. Because of the grout injection pressures required for compaction grouting, we believe there is insufficient overburden (soil weight) to resist heave and properly improve the fill. Additionally, it has been our experience across Mission Bay that RIC has been only moderately successful in improving the ground and mitigating the potential for liquefaction and lateral spreading and, when successful on recent projects, the ground improvement was evident only in the upper about 10 feet. There are potentially liquefiable layers at the site that extend deeper than 10 feet below ground.

Further details regarding the use of DDC and stone columns at the site are provided in our 23 December 2013 letter.

PLANNED INVESTIGATION AND EVALUATIONS

We are planning additional subsurface investigation at the site, including drilling four borings at the four corners of the proposed MRSG footprint and three additional borings in the western portion of the site to fill in data gaps from previous investigations. Drilling for the additional investigation is currently scheduled to begin on 16 February 2016. The results of our investigation will be presented in a data report, which will present all of the previous borings and cone penetration tests (CPTs) performed at the site and the laboratory test results. We will also perform additional engineering analyses for the MRSG and will present those results and preliminary recommendations in a separate letter report. Other on-going analyses include evaluating the impacts on design with and without liquefaction, including site-specific seismic ground response analysis.

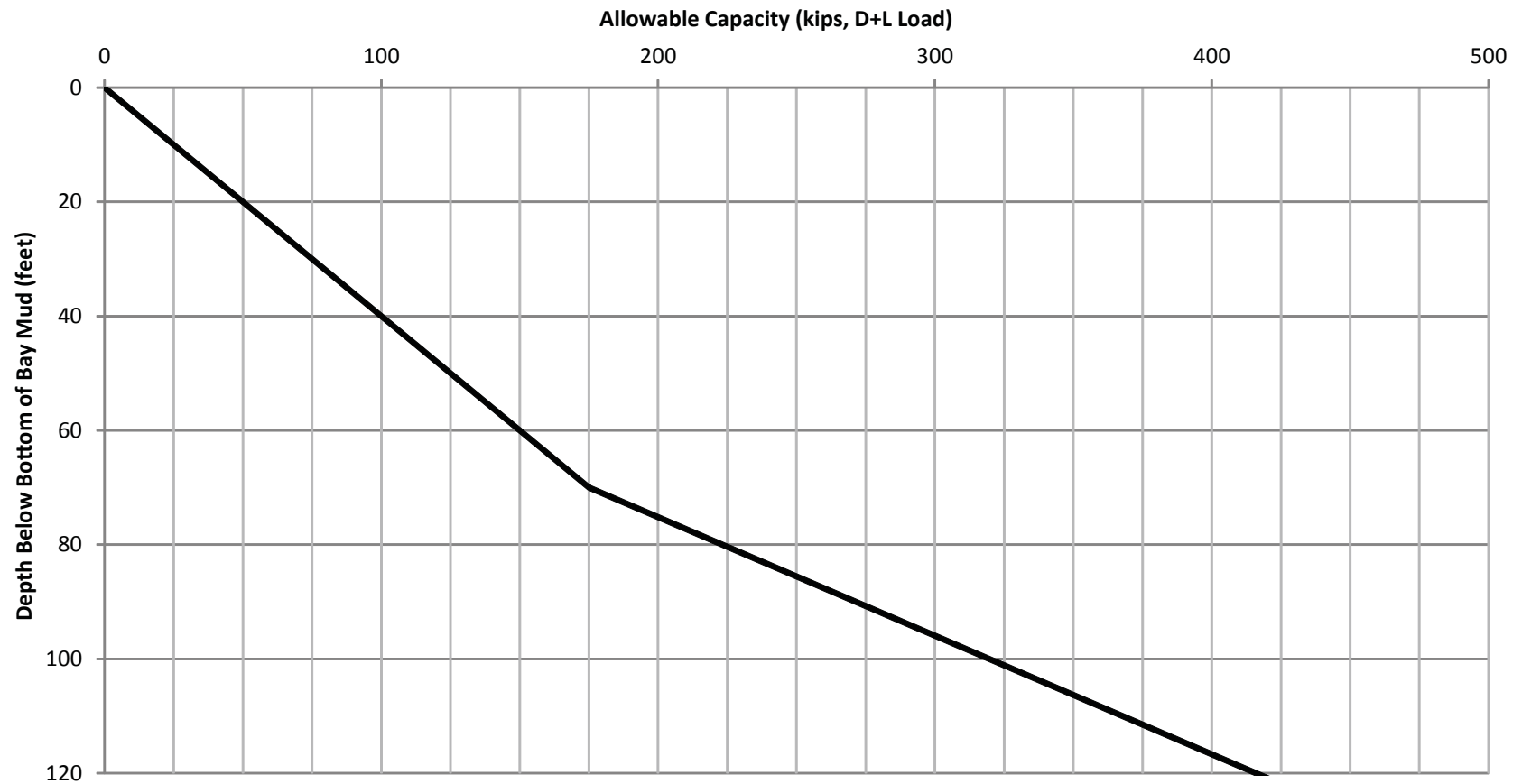
We trust that the foregoing is sufficient for the design team's needs at this time. If you have any questions, please call.

750604203.05B_CER_SWL 337_GTK Preliminary Design and Summary Memo_R1

Attachments: Figure 1 – Proposed Site Plan
Figure 2 – Allowable Friction Capacity, Driven 14-Inch Steel H-Pile and
14-Inch Square Precast Prestressed Concrete Piles

⁶ Compaction grouting is a ground improvement technique in which cement grout is injected under high pressure to increase the density of the soil, thereby reducing the liquefaction potential.

⁷ The rapid impact compaction method uses a Rapid Impact Compactor (RIC) to impart energy by dropping a 7.5 ton weight from a controlled height of about 1 m onto a patented foot. Applications include compaction of loose soils to improve bearing capacity and mitigation of liquefaction potential.



Notes:

- 1) Where refusal in dense sand or bedrock is encountered, the pile capacities in Table 1 will apply. Bedrock depths are expected to range between 100 to 160 feet below the bottom of Bay Mud.
- 2) Pile capacities do not include downdrag.
- 3) Pile capacities include a factor of safety of 2.

**MISSION ROCK DEVELOPMENT
SEAWALL LOT 337**

San Francisco, California

**ALLOWABLE FRICTION CAPACITY, DRIVEN
14-INCH STEEL H-PILE AND 14-INCH-SQUARE
PRECAST PRESTRESSED CONCRETE PILES**

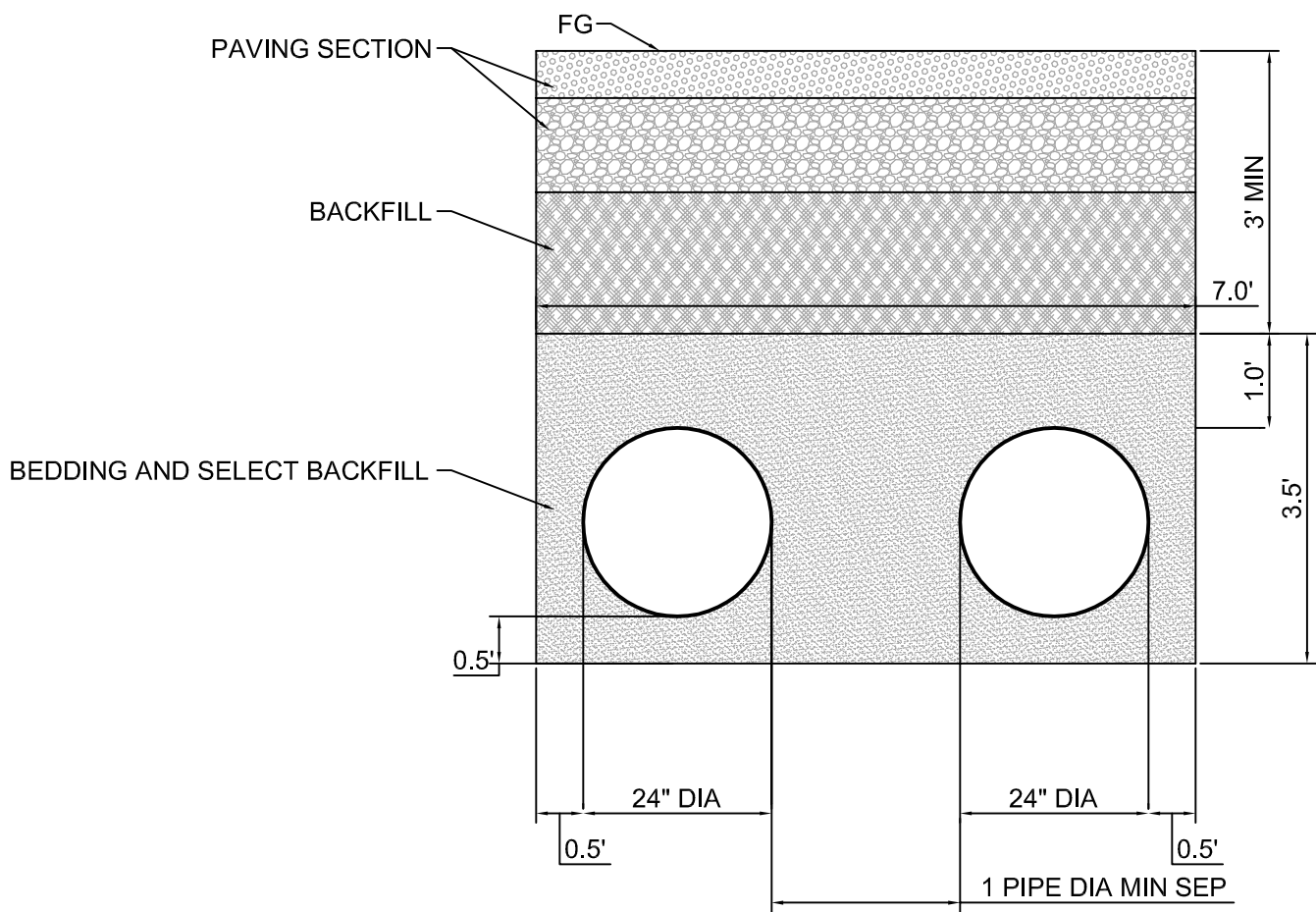
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LANGAN TREADWELL ROLLO

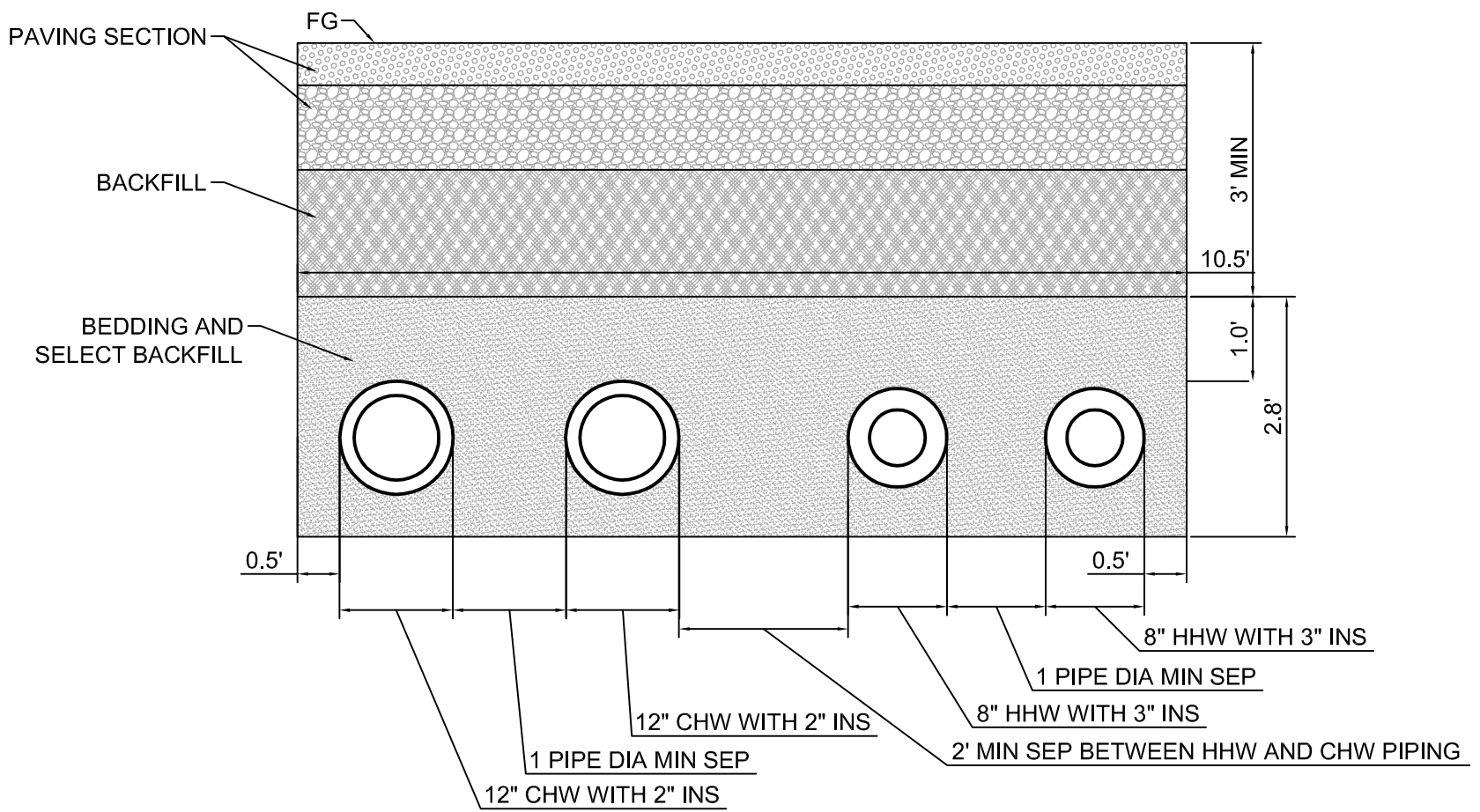
APPENDIX G
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APPENDIX H

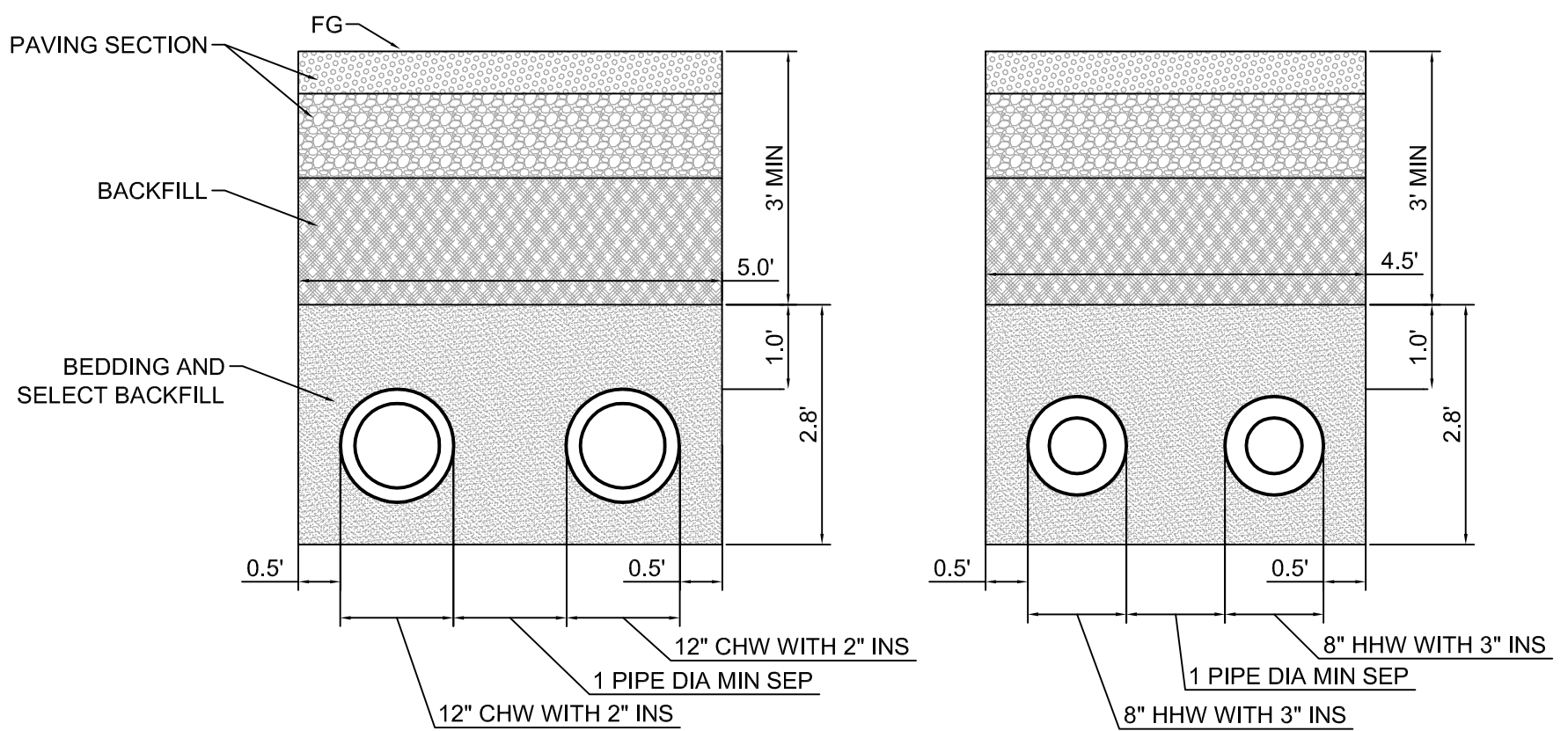
District Energy Typical Trench Section



TYP BAY WATER COOLING TRENCH SECTION



TYP DIST ENERGY TRENCH SECTION - SINGLE TRENCH



TYP DIST ENERGY TRENCH SECTION - SPLIT TRENCH

SCALE 1" = 2'

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MISSION ROCK
TYPICAL TRENCH SECTIONS
DISTRICT ENERGY
2016-01-12

Drawing Number:

APPENDIX I
Sea Level Rise Adaptation Strategy
September 6, 2016

MEMORANDUM

To: Jon Knorpp, Managing Director

From: Christopher Devick P.E. and Dilip Trivedi P.E.

Date: September 06, 2016

Subject: Mission Rock Development Seawall Lot 337
Sea Level Rise Adaptation Strategy

M&N Job No.: 7530-02

This memorandum serves to summarize the present understanding of sea level rise projections being used by regulatory agencies, flood elevations proposed by Federal Emergency Management Agency (FEMA), minimum proposed grades and a proposed adaptation strategy for the Mission Rock Development Project in San Francisco, CA.

Sea Level Rise Projections

In March 2013, the Sea-Level Rise Task Force of the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) released their State of California Sea-Level Rise Guidance Document based on the recently published (June 2012) National Academy of Sciences (NAS) Sea-Level Rise for the Coasts of California, Oregon, and Washington. Table 1 summarizes the sea level rise (SLR) projections, including the low and high range values, for the San Francisco Bay area. Further, the CO-CAT guidance recommends that sea level rise values for planning be selected based on risk tolerance and adaptive capacity.

Table 1 Sea Level Rise Projections for San Francisco, California (feet; NAS 2012 Report)

Year	Projections	Ranges
2030	6 ± 2 in	2 to 12 in
2050	11 ± 4 in	5 to 24 in
2100	36 ± 10 in	17 to 66 in

Reference Water levels

Water levels used in developing the sea level rise strategy included the Base Flood Elevation for the development areas, and King Tide for China Basin Park as described below.

The *Base Flood Elevation* (BFE) is a regulatory standard for insurance purposes. The definition of the BFE, per FEMA, is “*The flood having a one percent chance of being equaled or exceeded in any given year.*” Since development areas with building structures are subject to flood plain ordinance review by City building permit officials, the BFE is an appropriate reference water level to use for establishing finish floor elevations. The BFE can be represented by the 1% still water level, which was estimated based on

work conducted by BakerAECOM¹ for a flood study of the Central Bay region that included the vicinity of the proposed project.

King tide is a colloquial term for an especially high tide, such as a perigean spring tide that occur when the gravitational pull of the sun and the moon are in alignment. They occur only a few times a year and therefore are a good indicator for the potential disruption of use for areas such as open space and park areas. The elevation representative of a king tide was estimated based on a review of tidal elevation observations at the National Oceanographic and Atmospheric Administration Alameda, CA tide gauge. The estimated BFE and King Tide for the Project site are provided in Table 2.

Table 2: King Tide and Base Flood Elevations

Water Level	NAVD88, feet	Old City Datum, feet	Mission Bay Datum, feet
King Tide	7.3	-4.0	96.0
Base Flood Elevation (1% Still Water Level)	9.8	-1.5	98.5

Proposed Minimum Grades

The proposed minimum grades were developed for the project based on the following criteria:

- Reserve the entire 100-foot shoreline band for public access;
- Elevate buildings and immovable facilities high enough such that adaptations would not be necessary even for conservative estimates of SLR;
- Rather than elevate the zone between the development area and the shoreline for flood protection, maximize access opportunities to the water.

Based on these criteria, the following design elements have been adopted:

1. For the development area, the proposed strategy will raise existing grades to a minimum elevation of 104 feet Mission Bay Datum (MBD), which will provide a minimum of 5.5 feet (66 inches) of freeboard above present day BFE. Streets placed on fill would be pile supported within the raised development grade. This is necessitated by geotechnical considerations.
2. For the China Basin Park area, the promenade and Bay Trail are proposed to be raised to elevation 102 feet MBD which will provide approximately 6 feet of freeboard above the King Tide (or 3.5 feet of freeboard above present day BFE). Proposed grading for the Park includes transitioning from BayTrail/Promenade elevations of 102 MBD to development grade elevations of 104 feet MBD.

¹ BakerAECOM. 2012. A Central San Francisco Bay Coastal Flood Hazard Study San Francisco County, California Study Report. November 2, 2012.

3. The shoreline, Pier 48, Pier 50, Terry A. Francois Boulevard, 3rd Street and Mission Rock Street will remain at current elevations; proposed grading includes transitioning from these locations to Bay Trail/Promenade elevations of 102 feet MBD.

The above set of criteria and proposed grades are based on the principles of 'living with the Bay' and 'managed retreat' rather than elevating shoreline spaces now against future SLR. It also implies that the proposed improvements along the shoreline are for the purpose of flood protection for the open space area and do not serve as a levee or flood protection element for the developed area.

Shoreline Adaptation Strategy

In the development footprint, the proposed minimum grades (104 MBD) provide an elevation which will address potential flooding for even the highest estimates of sea level rise in 2100 for the San Francisco Bay Area by the NRC. Therefore, based on current sea level rise projections, the earliest when adaptations for the development area may be needed is 2100.

For the space between the development area and the Bay Trail/Promenade, proposed minimum grades (102 MBD) will address potential flooding beyond 2080 for even the highest estimates of sea level rise. From a functional perspective, the proposed grades (102 MBD, or 6 feet above King Tide) will address potential future flooding from King Tide events even beyond 2100. For higher estimates of sea level rise, the China Basin Park area functions as the space where future adaptations could be creatively implemented to maintain flood protection for the constructed public access features. Strategies to address larger amounts of sea level rise may include modifications to raise the promenade and reconfiguring the shoreline protection to provide flatter slopes and wave breaks. This will ensure continued protection of the public access open space areas from flooding.

In general, adaptation actions at the shoreline would be implemented when published information from NOAA indicate that flooding to the public access areas will occur during king tides. To implement future adaptations for sea level rise for the Park Area, a fund from an infrastructure financing district or community facilities district could be established now for the improvements needed to address sea level rise greater than the 3.5 feet (42 inches) allowance that is included in the proposed grades.

APPENDIX J
(Not Used)

APPENDIX K (Not Used)

APPENDIX L
(Not Used)

APPENDIX M
District Heating and Cooling Services at Mission Rock
May 13, 2016



REQUEST FOR QUALIFICATIONS

District Heating and Cooling Services
At Mission Rock

San Francisco, California

Submission Date: **May 13, 2016**

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1 INTRODUCTION

Through this Request for Qualifications (“RFQ”), Seawall Lot 337 Associates LLC (“Master Developer”) is soliciting Statements of Qualifications (“SOQs”) from energy services companies (“Respondent” or “DES Developer”) that describe their proposal and capabilities to build, own, and operate (“BOO”) a district scale heating and cooling plant as well as operate and maintain a district scale distribution system (the “Project”) in the Mission Rock development (“Project Site”), which is a private real estate development located on public land that will be ground leased from the Port of San Francisco for a period not to exceed 75 years.

The intention is for the Project to be developed through a private-to-private partnership between the Master Developer and DES Developer. The Master Developer is open to a variety of business models and commercial structures and is input from the DES Developer to this end.

Master Developer is interested in selecting a firm that has direct experience in developing, designing, building, financing, operating and maintaining projects similar to the Project, and that will deliver the Project to meet the goals, standards, performance requirements, and schedule outlined this RFQ.

2 PROCUREMENT INFORMATION

2.1 Procurement Process

This RFQ provides the information necessary for Respondents to prepare and submit SOQs for consideration by Master Developer. The following describes the general procurement process:

- Collecting SOQs in response to this RFQ is the first step in selecting a firm.
- Once SOQs are received, Master Developer will choose a shortlist of Respondents for in depth site visits and interviews.
- After interviews, a DES Developer will be selected and enter into a Memorandum of Understanding (MOU), under which Master Developer and DES Developer will negotiate the final terms and conditions of an Energy Service Agreement (ESA).

This RFQ is not an offer to enter into an agreement with any Respondent; it is a request to receive SOQs from companies interested in developing the Project. The Master Developer reserves the right to reject all SOQs, in whole or in part, and/or enter into negotiations with any party to provide such services, whether or not a SOQ has been submitted. Master Developer will not have any obligation to any Respondent unless and until it has entered into a written agreement with terms and conditions agreed to by to Master Developer. Master Developer may enter into discussions or negotiations with a Respondent with respect to any SOQ or otherwise, which shall not be deemed to be an acceptance of such SOQ or an agreement with the Respondent.

The City and County of San Francisco (“City”), the Port of San Francisco (“Port”), and various other agencies are aware of the Project and have been involved in the process to date; however, it should be noted that this is a private RFQ that does not fall under the City’s Public Procurement Policies or any other competitive bidding requirements. During the RFQ process, no Public Agency may be contacted in regards to the Project.

2.1.1 Procurement Schedule

- Release: March 28, 2016
- Onsite Project Presentation and Q&A: Week of April 11th
Location:
Arup Office
560 Mission St, Floor 7
San Francisco, CA 94105
- Submission Due Date: May 13, 2016
- Anticipated Selection Date: June 15, 2016
- MOU Execution: no later than June 30, 2016
- ESA Substantially Complete: November 1, 2016 (estimated)

2.2 Submission of Qualifications

Statements of Qualifications must be submitted via internet link only, which is provided below. No hard copies will be accepted.

[Internet link to be provided]

SOQs must use a minimum of 11 point font and be no more than 25 pages not including attachments. Attachments should be limited to items such as resumes, information on requested projects, and other materials pertinent to the evaluation but not suitable for including in written response.

Materials submitted as part of the SOQ will be subject to provisions in the NDA executed by the Respondents prior to receiving this RFQ. However, Master Developer may wish to use ideas or concepts presented by Respondents in the SOQ and reserves the right to do so subject to confidentiality.

2.3 Questions

Respondents shall direct all questions regarding this RFQ in writing to the Point of Contact. The Point-of-Contact may or may not choose to answer questions and may share questions and answers with all responding parties unless it is clearly marked as confidential information by the submitting Respondent.

2.3.1 Point of Contact

The below individuals are designated as Point-of-Contact for this RFQ:

Fran Weld, Vice President Development, San Francisco Giants
fweld@sfgiants.com

Orion Fulton, Sr. Manager, Arup
Orion.fulton@arup.com

2.4 Evaluation of Qualifications

Master Developer reserves the right to select the best Respondent for its partnership requirements; however, in general, the evaluation of the Qualifications shall be based on, but not limited to:

- Prior project experience with developing and operating similar scale systems;
- History of partnerships with other organizations, experience with urban systems with multiple off-takers;
- Ability to vertically integrate the development process; and
- Compatibility with Master Developer's stated goals and requirements in this RFQ.

Master Developer intends to evaluate SOQs submitted in response to this RFQ based on the completeness of the information provided, the business and technical merits as they address the goal of the Project, and any other factors that the Master Developer determines.

Following the submission of SOQs, Master Developer may request supplemental information from Respondents on an individual or group basis and may elect to meet with certain Respondents in person. Master Developer intends to select a Respondent that will serve the best interests of the Project as determined by Master Developer in its sole discretion.

2.5 No Reimbursement for Costs

In submitting an SOQ, Respondent acknowledges and accepts that any costs incurred from the participation in this RFQ procurement process shall be at the sole risk and responsibility of the Respondent, and the Master Developer will not compensate Respondents for any expenses incurred in qualifications preparation or for any presentations that may be made.

2.6 Representations

Master Developer makes no representations of any kind that an award will be made as a result of this RFQ. Master Developer reserves the right to accept or reject any or all SOQs, delete any item/requirements from this RFQ when deemed to be in Master Developer's best interest, consider factors not included in this RFQ, or select a DES Developer that did not respond to the RFQ.

2.7 Eligible Respondents

Only individual firms or lawfully formed business organizations may apply. The Master Developer intends to contract only with a Prime Firm. This does not preclude a Respondent from using subcontractors or consultants, but a Prime Firm must be identified and be the entity submitting the SOQ. The Prime Firm must demonstrate in the SOQ it has the ability to represent any and all subcontractors or members of its team. Joint Ventures are not encouraged.

2.8 Additional Contract Requirements

Under its agreement with the Port, Master Developer, as well as The Prime Firm and all other members of the Project Team, are obligated to comply with all applicable City and Port requirements in effect at the time that Master Developer's Development Agreement with the Port is executed. In submitting an SOQ, a Respondent acknowledges and accepts that if selected, it will be obligated to comply with all City and Port requirements, including without limitation, Non-Discrimination in Contracts and Property Contracts (Admin. Code Chapters 12B and 1C) and Health Care Accountability Ordinance (Admin. Code Chapter 12Q). DES Developers are obligated to become familiar with all applicable local, state, and Federal requirements and to comply with them fully as they are amended from time to time. City ordinances are currently available on the web at www.sfgov.org. It is a stated goal of Master Developer to promote and encourage contracting and subcontracting opportunities for Local Business Enterprises ("LBE") in all contracts. The target goals for each phase of development are:

- Entitlements 10%
- Horizontal Infrastructure Development 20%

3 GLOSSARY OF DEFINITIONS

The following terms and acronyms are used within this RFQ:

Arup	Master Developer's procurement advisor
BOO	Build Own Operate
BTU or btu	British Thermal Unit
CHP	Combined heat and power system
City	City and County of San Francisco
CUP	Central Utility Plant
DES	District Energy System
DES Developer	The entity selected as the preferred contracting entity via the RFQ evaluation process, that once selected, that will perform the works described in this RFQ and its SOQ
Project	The district scale heating and cooling plant and related O&M functions
EIR	Environmental Impact Report
ESA	Energy Service Agreement
ETS	Energy Transfer Stations
GAAP	Generally accepted accounting principles
gsf	Gross square feet
HUB	Historically underutilized business
IFRS	International financial reporting standards
kW	Kilowatt
kWh	Kilowatt-hour
Lead A/E Firm	Lead architecture and/or design engineering firm
Lead Contractor(s)	Contractor(s) in the Project Team who are responsible for engineering, procurement and construction ("EPC") and Operation and Maintenance ("O&M") functions
Master Developer	Seawall Lot 337 Associates LLC
MMBTH	One million BTUs per hour
Mission Rock	The name for the development of Seawall Lot 337 and Pier 48, for the purposes of this RFQ, see "Project Site" below
MOU	Memorandum of Understanding
MW	Megawatt
O&M	Operation and Maintenance
PA	Project Agreement
PG&E	Pacific Gas & Electric
psig	Pounds per square inch gauge
Prime Firm	The organization considered to be lead Respondent/DES Developer entity (if not a joint venture)
Port	Port of San Francisco
Project Site	Seawall Lot 337 and Pier 48; the area that the DES serves
Project Team	All key entities that comprise the DES Developer organization

Public Agency	Port, City, SFPUC, PG&E, or other agency representing the public interest
Respondent	The contracting organization/entity that submits the SOQ, on behalf of the Project Team.
RFQ	Request for Qualifications
SEC	Security and Exchange Commission
SFPUC	San Francisco Public Utilities Commission
SOQ	Statement of Qualifications
T&C's	Terms and conditions
Vertical Developers	Future holders of individual ground leases within the Project Site to build commercial real estate

4 DESCRIPTION OF THE PROJECT SITE

4.1 Background

In 2008, the San Francisco Giants won a public bid for the exclusive development rights to this property. Over the last eight years, the Giants, which formed Sea Wall Lot 337 Associates LLC to act as master developer, have worked with the community to develop a comprehensive land use plan, and in November of 2015, this plan was voted on and passed by the voters of San Francisco.

A key element of the future neighborhood is a robust sustainability plan. This plan will outline topics such as material selection, climate change resiliency, water re-use, and energy; and the DES is expected to play a central role in achieving some of the sustainability goals.

4.1.1 Urban context

Given its size and location, SWL 337 is one of the Port's most desirable development sites. Consistent with the Port's land use policy document, the Waterfront Land Use Plan, the Port engaged in a multi-year public planning process culminating in the following vision statement for development of the parcel:

Create a vibrant and unique mixed-use urban neighborhood focused on a major new public open space at the water's edge. This new neighborhood should demonstrate the highest quality of design and architecture, and the best in sustainable development with a mix of public and economic uses that creates a public destination which enlivens the Central Waterfront, celebrates the San Francisco Bay shoreline, and energizes development at Mission Bay.

The Project Site also includes Pier 48, a pile-supported 212,500 square-foot facility containing about 181,200 square feet of enclosed warehouse space and a 31,300 square-foot valley. Pier 48 is bounded by China Basin on the north, Pier 50 on the south, and Terry Francois Boulevard to the west. Pier 48 was originally constructed in 1928 and is the southernmost pier structure in the Port of San Francisco Embarcadero Waterfront Historic District, which is listed in the National Register of Historic Places.

Through the planning process, the Port identified the following objective for Pier 48, if included in any development proposal for SWL 337:

Propose a use program for Pier 48 that is publicly-oriented and water-related to the extent possible, and which complements and enhances the public use and enjoyment of the major new open space at China Basin. The Pier 48 use program must be consistent with the public trust, and any improvements must comply with the Secretary of the Interior Standards for Rehabilitation.

4.2 Project Site

Seawall Lot 337 and Pier 48 are owned by the Port of San Francisco, and together form the Project Site. Seawall Lot 337 is a rectangular parcel bound by Terry A. Francois Boulevard to

the north and east, Third Street to the west, Mission Rock Street to the south. Seawall Lot 337 is currently a surface parking lot just south of AT&T Park known as Parking Lot A.

The Project Site will include 8 acres of parks and open space, approximately 3.5 million square feet of development with a mix of housing, offices, parking, and neighborhood serving retail, as well as historic Pier 48 which may become home for a new brewery by Anchor Brewing. More information can be found at <http://missionrock.org/index.html#>.

See Attachment B for a site plan showing land uses and phasing.

4.2.1 Relationship of Parties

- Port of San Francisco: Owners of Project Site
- The City of San Francisco: land use and development regulation,
- Seawall Lot 337 Associates LLC: Master Developer, holds the exclusive rights to develop Mission Rock
- Anchor Brewery: Intended tenant for Pier 48
- Arup: Master Developer's DES concept designer & procurement advisor

4.2.2 Land Use Program and Phasing

Phasing

The Project Site is divided into 12 buildable Parcels not including Pier 48, 11 of which will be developed in Phases of Parcels. The 11th parcel (parcel D2) would hold the structured parking. The table below shows the draft phasing program, including the Mission Rock ground-level parking and Pier 48:

Table 1: Phasing Program and Land use details

Phase	Parcel	Land Use	Building Height	Building Stories	Gross SF (a)
1	A	Residential	240 ft.	23 Stories	413,900
	B	Office	118 ft.	8 Stories	274,750
	G	Office	188 ft.	13 Stories	303,064
	K	Residential	120 ft.	11 Stories	130,469
	Pier 48	Industrial	n/a	n/a	263,000
2	C	Office	188 ft.	13 Stories	354,826
	D1	Residential	240 ft.	23 Stories	240,494
	D2	Parking	100 ft.	10 Stories	851,130
3	E	Office	90 ft.	6 Stories	141,330

Phase	Parcel	Land Use	Building Height	Building Stories	Gross SF (a)
	F	Residential	240 ft.	23 Stories	323,775
	Mission Rock Square	Parking	0 ft.	0 Stories	227,180
4	H (Flex)	Office	90 ft.	6 Stories	151,932
	I (Flex)	Residential	120 ft.	11 Stories	200,315
	J (Flex)	Office	90 ft.	6 Stories	151,982
TOTAL	-	-	1824 ft.	153 Stories	3,977,647

Land Use Program

A key element of the Master Developer's land use program is the ability to respond to future market demands through flexible zoning. To this end, eight parcels are proposed to be designated as either predominantly residential (Parcels A, D, F, and K) or commercial/office (Parcels B, C, E, and G) above the lower-floor active uses, while three parcels would be flexible to allow either type of land use (Parcels H, I, and J) above the lower floor.

On the flexible parcels, the land uses (i.e., residential or office/commercial), would be determined at the time of filing for design approvals for block development proposals. Parcels designated for flexible zoning would ultimately be developed for either predominantly residential or pre-dominantly commercial/office uses above the lower floor. In all circumstances, ground floor retail and restaurant uses would be included in the flexible zoning parcels. The square footage for the flex option by land use is as follows:

- Commercial: 1,377,884 gsf
- Parking: 1,078,310 gsf
- Production: 263,000 gsf

For more information, the following describes in general terms the type of land uses proposed at the Project Site.

- **Retail, Restaurant, and Ground Floor Spaces.** 241,038 gsf to 244,777 gsf of retail and restaurant space located on the ground floor of residential and commercial buildings throughout the site. These totals do not include development at Pier 48.
- **Housing.** Housing will be located throughout the site, between 1,048 and 1,579 residential units predominantly consisting of one and two bedroom apartments. Housing would be provided on Parcel A, D, F, K and potentially on flexible Parcels H, I, and/or J.
- **Office.** Office space would primarily be located along Third Street and the south end of the proposed Mission Rock Square and at China Basin Park. Between 972,175 gross sq. ft. to 1,361,181 gsf of office space would be developed on Seawall Lot 337. Office uses would be provided on Parcels B, C, E, and G and potentially on the flexible Parcels H, I, and/or J.
- **Open Spaces and Parks.** Approximately eight acres of new and expanded public open spaces would be included: expanded China Basin Park totaling 5.12 acres, Mission Rock

Square totaling 1.1 acres and located in the center of the Project Site. Channel Wharf would be a 0.5-acre, hardscaped plaza, located between Pier 48 and Pier 50. Lastly, the Pier 48 Aprons, totaling 1.1 acres, would be preserved and improved for public access, waterfront promenade, and maritime operations.

- **Parking.** Included in the proposed parking structure on Parcel D at the southwest corner of the Project Site would be 2,300 parking spaces for use by the Project and for the ballpark games and events, and other public parking, including commuter parking/park-and-ride. In addition to the above-grade structural garage parking on Parcel D, 700 parking stalls would be located under Mission Rock Square and adjacent streets. During game days, approximately 2,000 of the parking structure stalls in the two proposed garages would be available for use to the patrons of AT&T Park. An additional approximately 100 parking stalls would be provided within residential and commercial buildings, for a maximum of 3,100 off-street parking spaces.
- **Pier 48.** Pier 48 would be rehabilitated in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, with a mix of uses in the 240,000-sf rehabilitated pier, including light industrial/manufacturing, barging, ancillary office, storage, retail, restaurants, tours, events, and continued maritime operations on the east and south side and along Channel Plaza.

It is currently anticipated that the Anchor Brewing Company would occupy all of the interior usable space of Pier 48 under a 30-year Port interim lease. The retail/restaurant spaces provided at Pier 48 would include 11,000 gsf of brewery retail/exhibition space, 11,000 gsf of brewery restaurant space, and 10,000 gsf of other retail space. An additional 7,875 gsf of office space would be provided on Pier 48. The brewery/distillery would be up to 190,500 gsf and a separate production area would consist of 9,625 gsf.

4.2.3 Site Utilities

Utility provider contracts are still being developed. The Master Developer is currently undecided between Pacific Gas & Electric (PG&E) and San Francisco Public Utilities Commission (SFPUC) as the power utility. Input on this decision may be solicited from the DES Developer once the MOU is signed.

The opportunity to provide electricity into the development from the DES is described further in Section 5.2.4.

4.2.4 Project Site Entitlement Schedule

Key milestones in the Mission Rock entitlements are as follows:

- Publish Public Draft EIR July/Aug 2016
- Financial Negotiations with City through September 2016
- EIR Certification January 2017
- Port and City Approvals January 2017
- Regional (BCDC) and State (SLC) Approvals February 2017
- Begin Design of Phase 1 March 2017
- Complete construction of first building in Phase 1 Q1 2019 [approximate]

5 DESCRIPTION OF THE PROJECT

5.1 Project Goals and Objectives

5.1.1 Project Goal

The Project goal is to develop a district scale solution to heating and cooling buildings at the Project Site that meets the stated performance and sustainability objectives.

5.1.2 Project Objectives

The following are the primary project objectives (described without any order of importance or preference):

- Enter into a long-term contract(s) that provides vertical developers with budget certainty and economic value for thermal services;
- Leverage the creative problem solving capacity of the energy marketplace;
- Be a good steward of natural resources, including water resources; utilize reclaimed water service for cooling tower fill (assuming a source is available);
- Achieve a resilient utility infrastructure (with appropriate redundancy) that will deliver critical energy requirements during normal and emergency conditions;
- Fit proposed CUP or CUPs within allocated parcel space(s) and heights;
- Review, comment, and provide concurrence for DES distribution design;
- Meet Minimum Performance Requirements (see Section 5.1.3); and
- Help achieve the sustainability objectives (see Section 5.1.4).

5.1.3 Minimum Performance Standards

Though not yet formalized, the Master Developer will set energy efficiency and environmental performance thresholds that the DES Developer will need to meet. For purposes of the RFQ, indicative performance thresholds are provided in Table 2 below.

Table 2: Indicative Performance Thresholds

Annual Average Efficiency				
Chilled water plant	Maximum	0.45	kW/Ton	Inclusive of chillers, all primary & secondary distribution pumps, and heat rejection
Heat recovery chiller plant	Maximum	0.68	kW/Ton	Inclusive of chillers, all primary & secondary distribution pumps, and heat rejection
Boiler combustion	Minimum	86.5 0%	%	Per individual boiler fuel & btu meter trend data
Chilled water distribution	Minimum	98.7 5%	%	Per plant leaving chilled water btu meter & aggregate of customer chilled water btu meter trend data
Hot water distribution	Minimum	98.2 5%	%	Per plant leaving hot water btu meter & aggregate of customer hot water btu meter trend data

5.1.4 Sustainability Objectives for Vertical Development

The Master Developer has sustainability performance requirements and targets for both horizontal and vertical development.¹ These sustainability performance requirements and targets for Mission Rock, shown in Table 3, are consistent with San Francisco Eco-Districts guidelines, of which Mission Rock is a Type-1 Eco-District.² The DES Developer will assist in achieving these by delivering energy that is highly efficient and environmentally friendly.

Table 3: Project Site Performance Requirements and Sustainability Targets

Performance requirements	Sustainability targets
<ul style="list-style-type: none">• Up to 26% better than ASHRAE 90.1-2010• Net zero potable water use for non-potable uses• LEED Gold for commercial buildings• LEED Gold for residential buildings	<ul style="list-style-type: none">• Each building type can exceed future code and achieve an exceptional level of energy performance.• The Mission Rock development looks to improve upon the city's leading emissions performance by further reducing annual carbon emissions associated with energy use by up to 19%.• 100% renewable energy by 2030• Water conservation and reuse strategies with a target of up to 47% reduction in annual carbon emissions associated with water.• Municipal solid waste diversion in San Francisco is about twice the national average, significantly decreasing the GHG emissions associated with landfill waste disposal. As there is still room for improvement in waste diversion, Mission Rock is targeting a further 25% reduction in annual carbon emissions associated with waste, compared to current San Francisco performance.

5.2 Project Technical Opportunity

The main technical scope is to offer central combined heating and cooling with bay heat rejection and cooling (if permissible). However, there are a number of enhancement opportunities on the technical delivery discussed in this section.

The chosen DES Developer will be required to satisfy themselves of the peak design loads for the Site after the MOU is executed. However, for purposes of this RFQ, Arup's reference design and load calculation shall be used.

The DES is comprised of three major components:

¹ The sustainability plan is currently in draft form and may change during this procurement, with possible input from the DES Developer

² <http://www.sf-planning.org/index.aspx?page=3051>

- One or more central utility plants (CUP or CUPs)
- A thermal utility distribution system
- The energy transfer stations (ETS) within each building/parcel

Table 4 summarizes reference design information and further information is provided in subsequent sections and in Attachments D and E:

Table 4: DES conceptual design basic information

Design and Construction Stage	
CUP	Central Combined Heating & Cooling + Bay Heat Rejection & Cooling
CUP System	<ul style="list-style-type: none"> • Centralized heat recovery chillers • Centralized electric water cooled chillers • Centralized low/medium temperature hot water boilers • Plate-and-frame “free-cooling” heat exchangers (bay-water) • Plate-and-frame “heat-rejection” heat exchangers (bay-water) • Balance of bay-water heat rejection and cooling plant • Minimal cooling towers
Distribution System	<ul style="list-style-type: none"> • The planning basis for the distribution portion of the DES has assumed a 6-pipe system comprising of: • Chilled water (CHW) supply and return pipes • Heating hot water (HHW) supply and return pipes • Bay water intake and outflow pipes • Parcel level electrical infrastructure

5.2.1 Estimated Heating and Cooling by Phase

Non-concurrent Peak Loads

The land-use heating and cooling peak load density assumptions (see Attachment E) yield the following peak non-concurrent loads in the tables below.

Table 5: Estimated Non-Concurrent Peak Heating and Cooling – By Parcel

PARCEL	PRIMARY USE	PARCEL AREA (sqft)	TOTAL GFA (sqft)	Cooling (Tons)	Heating (MMBH)
A	Residential	42,150	413,900	591.3	4.1
B	Commercial	40,209	274,750	686.9	4.1
C	Commercial	39,124	354,826	887.1	5.3
D1	Residential	9,745	240,494	343.6	2.4
D2	Parking	86,161	851,130	n/a	n/a
E	Commercial	25,110	141,330	353.3	2.1
F	Residential	25,110	323,775	462.5	3.2
G	Commercial	33,057	303,064	757.7	4.5
H	Commercial	31,144	151,932	379.8	2.3
I	Residential	32,543	200,315	286.2	2.0

PARCEL	PRIMARY USE	PARCEL AREA (sqft)	TOTAL GFA (sqft)	Cooling (Tons)	Heating (MMBH)
J	Commercial	31,515	151,982	380.0	2.3
K	Residential	17,857	130,469	186.4	1.3
P48	Production	259,328	263,000	657.5	1.3

TOTAL, without P48

5,315

33.8

TOTAL, with P48

5,972

35.1

Table 6: Estimated Non-Concurrent Peak Heating and Cooling, without P48 – By Phase

Assumed Phase	Parcel	Heating (MMBH)	Cooling (Tons)
1	A, B, G, K	14.1	2,222
2	C, D1, D2	7.7	1,231
3	E, F	5.4	816
4	H, I, J	6.6	1,046
Total:	-	33.8	5,315

Concurrent Peak Loads

Arup estimates that the concurrent load diversities for the mix of uses in the flex parcel option are:

Table 7: Load diversities

	Cooling	Heating
w/out P48	10%	2%
w/P48	8%	2%

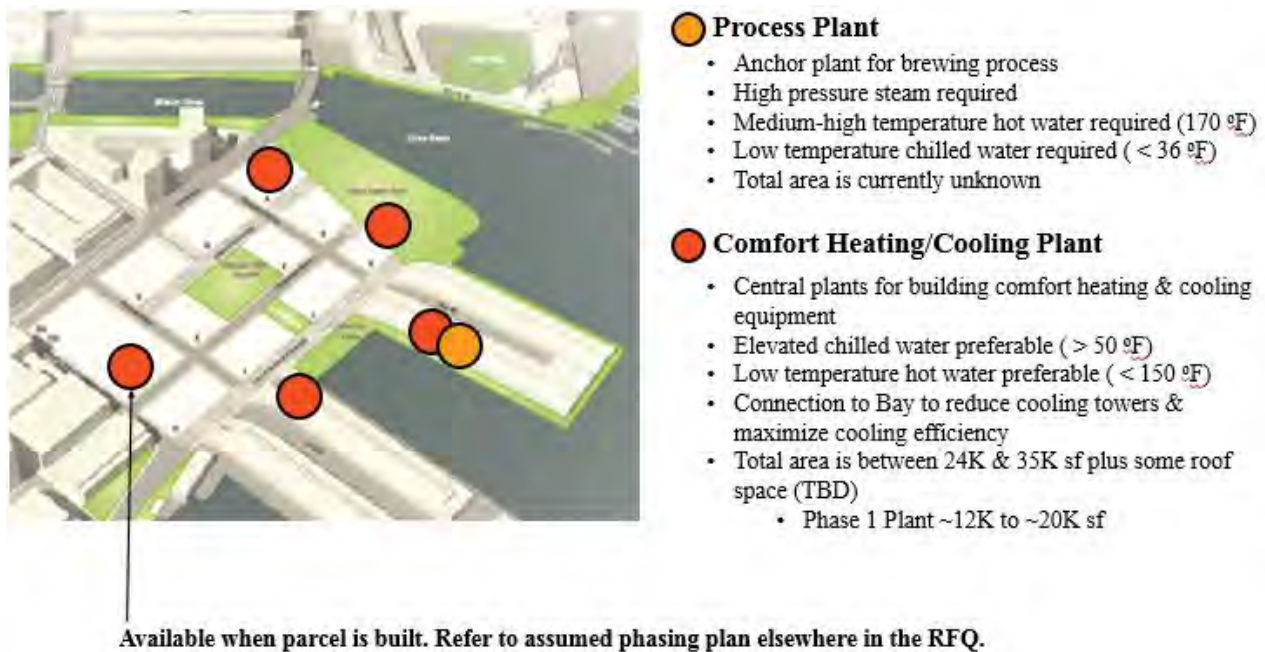
Table 8: Estimated Concurrent Peak Heating and Cooling

	Cooling (Tons)	Heating (MMBH)
w/out P48	4,791	33.1
w/P48	5,517	34.3

5.2.2 Plant Location Considerations

Possible plant locations are constrained by size, phasing, and general location. The potential locations for siting CUP's are illustrated in Figure 1 below.

Figure 1: Potential CUP Siting Locations



A consideration relating to siting the CUP is the nature of Pier 48. It has a limited clear height that roughly ranges between 20 feet at the edges and 35 feet at the core, load bearing limits due to pile foundation and bay muds, and sea level rise considerations.

Potential partners will need to propose solutions that are nimble and flexible so that the complexity and uncertainty introduced by the project phasing can be overcome.

5.2.3 Distribution System Considerations

The distribution system routing options are being planned along with other utilities in the public rights-of-way (ROW). Utilities are generally constrained along Exposition St and Bosque St. Further, utilities will not be placed in the Terry A Francois Blvd ROW until parcels I/J/K are built. A large parking structure is planned at the podium level beneath Mission Rock Square between parcels B and C to the West and parcels I and J to the East and between Exposition St to the North and Bosque St to the South. Rights-of-way for Shared Public Way and Bridgeview Way are currently being considered for the distribution system but this may require running the pipes inside the garage. Finally, the ROW north of parcels A, G, and K and South of China Basin Park is generally free of utilities. Please see Attachment B for a draft schematic of the planned utilities.

The selected DES Developer will be expected to provide input to, and ultimately concur with, the routing and design of the distribution system.

5.2.4 Anchor Brewing

It is currently anticipated that the Anchor Brewing Company would occupy all of the interior usable space of Pier 48 under a 30-year Port interim lease. Anchor Brewing has indicated that it will be developing, as part of the new brewery, a process plant capable of supporting the

production of approximately 200,000 barrels annually. This figure is subject to change by Anchor.

The technical opportunity includes the following heating and cooling loads for the Anchor site. This does not include any heating and cooling loads that Anchor may require for their production needs. See Attachment D section D.5 for more details on Anchor's production loads.

Table 9: Estimated Peak Non-Concurrent Heating and Cooling for Anchor

Assumed Phase	Parcel	Heating (MMBH)	Cooling (Tons)
n/a	P48	1.3	658

Anchor Brewing Enhancement Opportunities:

There may be an opportunity to:

- Pre-heat the Anchor Brewing process hot water using the district heating system and distribution, thereby reducing the required steam boiler capacity in the Anchor Brewing process plant. This might be achievable under a scenario where an extensive distribution run from the closest main branch is not required.
- Operate and Maintain the Anchor Brewing process plant under a performance contract or other form of contract. This will require discussions with Anchor Brewing directly during the RFQ procurement.
- Run microturbines for cogeneration of electricity as part of the Anchor Brewing process plant operation. Again, discussions with Anchor Brewing directly during the RFQ procurement will be required to better understand this opportunity. [The environmental impacts of cogeneration may be addressed as part of the Mission Rock EIR.]

5.2.5 Bay Water Heat Rejection & Cooling

The inclusion of bay water as a means for heat rejection & cooling is an important aspect of the DES design as it relates to sustainability performance. Not only will it save considerable amounts of energy and water, it will also alleviate site design concerns related to cooling towers that would otherwise be needed. Master Developer expects this technology to be pursued as part of the DES design, construction, and operation.

The following is the current proposed approach for installing the bay water system, which was developed for purposes of examining potential environmental impacts in the EIR:

1. Based on the soil conditions at the site (young bay mud & rubble debris), directional drilling is not recommended.
2. The intake and outfall pipelines would be HDPE, placed at or just below the existing seabed, supported on plastic lumber attached the piles with 316SS hardware.
3. The outfall and intake pipelines & structures should be within the footprint of the Pier 48.
4. The inlet manifold should be placed one bent in from the pier head. The inlet screens will be in deep water, protected by the pier, and maintenance will have direct access to the screens.

5. If necessary to extend the pipeline offshore, it would likely be directly buried, which would require minor dredging and placement of rock riprap. Maintenance of the screens will be more costly and may require support piles.
6. The outfall is typically easier to install and the engineer will determine the placement and the number of duckbill diffusers.
7. The Pump Station is recommended to remain onshore or near the bulkhead. At Pier 15, a project precedent, the intake screens, pump station, secondary screens, and outfall are at one location near the outer third of the pier.
8. If secondary screening is required, it should be near the pump station.

5.3 Project Commercial Opportunity

5.3.1 Introduction to Potential Commercial Structure

An “off-balance sheet” approach is the preferred approach of the Master Developer, where the DES Developer builds, owns, and operates the CUP and provides routine and lifecycle operations and maintenance for the distribution system up to the energy transfer station in each building. The Master Developer is interested in feedback on potential commercial structures throughout this section (see Section 6.4).

The anticipated payment structure will:

- Mitigate market risk through a DES connection mandate for all properties and, to the extent feasible, phasing of the real estate development so that annual capital requirements and annual cash flows yield sufficient returns for the DES Developer.
- Obligate DES Developer to (i) design and construct the CUP according to agreed specifications; provide a provide a security package that includes but is not limited to parent company guarantee, warranties, liquidated damages and/or holdbacks of the design and construction work; (ii) provide project financing; (iii) operate and maintain the CUP and distribution system and (iv) provide required reporting and customer service activities, and;
- Grant DES Developer the right to receive payments according to the agreed schedule at agreed rates for a number of years to be determined after substantial completion of the Project (which will include, among other things, that the CUP is available for use), under the terms and conditions negotiated by the parties.

The following table displays the potential commercial roles for the parties involved in the CUP and distribution system:

Table 10: Potential Commercial Allocations

	CUP	Distribution system
Ownership	DES Developer	Port/Nonprofit/DES Developer
Permitting	DES Developer	Master Developer/DES Developer
Site Use	DES Developer will lease from SWL	Franchise agreement/lease within public right of way
Design and construction	DES Developer	Port or Master Developer with support of DES Developer
Commissioning	DES Developer	DES Developer

	CUP	Distribution system
Financing	DES Developer	On-balance sheet taxable from Master Developer with buy-out by the Port using tax exempt CFD
Billing and Customer Service	DES Developer	n/a
Routine O&M	DES Developer	DES Developer
Lifecycle	DES Developer	DES Developer

5.3.2 Off-take Agreement

It is assumed that each individual property owner will have a retail agreement to purchase from the DES Developer, based on rates negotiated under the ESA.

Alternative Off-take Opportunities:

Master Developer is considering an energy non-profit organization to act as the single off-taker for the ESA. The goal is for this organization to help reduce counterparty credit risk for the DES Developer by buying thermal power on behalf of the property owners in Mission Rock. The DES Developer, in turn, would not have to factor the credit risk (including the ongoing costs of billings/collections) of individual customers and could accept a lower rate of return.

Master Developer is interested in discussing with the partner the viability of this option as well as other commercial structures.

5.3.3 Energy Non-Profit

The Master Developer is interested in establishing a non-profit that could perform all or some of the following roles as they relate to the Project:

- Rates Negotiation: The non-profit entity would help to reduce counterparty credit risk for the DES Developer by buying thermal power, and would negotiate rates for Mission Rock property owners.
- Ownership: The non-profit could own the distribution system and contract the O&M to the DES Developer. The nonprofit could also own the full DES System, or to secure a credit enhancement for the full system from the Port.
- Financing: The non-profit could be used to secure conduit financing for the distribution system or the CUP.

The Master Developer would set up this organization, with it or the Port acting as the credit-worthy backer. Establishment and maintenance (reporting, auditing) costs for the nonprofit are expected to be nominal for a non-charity nonprofit.

Running the nonprofit requires the establishment of a board and the election of board members. Possible board seats could include voting and non-voting members, who would meet regularly (quarterly, bi-yearly) and would determine meetings and expenditures. Such board members may include:

- Master Developer

- The Port
- Elected seats for Mission Rock property owners/customers

5.3.4 Financing

The DES Developer will be responsible for the formation of capital necessary to deliver the Project. The Master Developer does not have a preference for a specific financing structure. However, it is expected that financing for the Project will include a combination of equity and debt (bank debt, taxable and/or tax-exempt bonds).

The distribution system is to be financed on Master Developer's balance sheet, which would be eventually bought out by the Port.

Alternative Financing Opportunities:

In addition to the above, Master Developer is interested in feedback on the following possible financing options:

- The DES Developer providing upfront capital for the distribution system and the Port buying out their equity with the CFD tax exempt financing.
- A nonprofit entity providing 63-20 conduit financing (or similar) for the CUP or the distribution system.

5.3.5 Operations and Maintenance

Master Developer will include stipulations for output product availability (up-time) and other performance specifications as part of negotiations under the MOU. The DES Developer will be responsible for all operations and maintenance activities necessary to make sure that availability and performance requirements are met.

Prior to beginning output product sales, and annually thereafter, the DES Developer shall provide independent, certified calibration and operational checks of all revenue meters.

5.3.6 Billing/Customer Service

Master Developer and the DES Developer will negotiate an appropriate means and mechanism for invoicing. The DES Developer will be responsible for providing a negotiated level of customer service, inclusive of response and resolution of issues raised by Master Developer within a contractually agreed time period.

5.3.7 Entitlement and Permitting

Master Developer will be responsible for all entitlements and approvals from authorities having jurisdiction over the Project Site.

The DES Developer will be responsible for all permitting related to the CUP.

The distribution system will be a joint permitting effort between the Master Developer and the DES Developer.

DES Developer will be responsible for all ongoing permitting related to DES operations.

5.3.8 Reporting

The DES Developer will be responsible for providing all routine, periodic, and incident reporting as negotiated between the Master Developer and DES Developer.

6 REQUIREMENTS FOR THE SOQ

The following are the minimum requirements for the SOQ. Please structure your SOQ so that it mirrors the structure of this section, addressing each requirement in order.

In the Technical and Commercial Responses, the Master Developer is seeking to gain an understanding of how your Project Team would approach the Project, not on the final solutions. Technical and Commercial Responses will be subject to further negotiation and refinement post-selection when the DES Developer will be able to conduct full due diligence and determine feasibility, among other things.

Qualifications shall be prepared simply, providing a straightforward description of the Respondent's ability to meet the requirements of this RFQ. Emphasis shall be on the quality, completeness, clarity of content, responsiveness to the requirements, and an understanding of Master Developer's needs.

6.1 Proposed Project Team

- Provide a statement of interest for the Project including a narrative describing the unique qualifications of the Project Team as they pertain to the Project.
- Provide a brief history of the Prime Firm and the Prime Firm's experience in similar projects. In addition, please discuss any known limitations to the Project Team's ability to fulfill the scope as outlined herein.
- Provide resumes (limit one page each) giving the experience and expertise of the key professional members that would be working on this deal from the Prime Firm as well as for the lead for engineering, procurement and construction ("EPC") services and the lead for O&M services (together "Lead Contractor(s)"), including their experience with similar projects, the number of years with the firm, and their city of residence.
- Provide a statement on the availability and commitment of the key professionals in the Prime Firm and Lead Contractor(s) that will be assigned to the Project.

6.2 Previous Experience

- List a maximum of five (5) projects for which the Prime Firm has provided services that are most directly related to the Project. Wherever possible, provide representative projects where the proposed Prime Firm, Lead Contractor(s), lead A/E Firm and other key sub-contractors have worked together. List the projects in order of priority, with the most relevant project listed first. Provide the following information for each project listed:
 - ☐ Project name, location, contract delivery method, and description.
 - ☐ Color images (photographic or machine reproductions).
 - ☐ Final Construction Cost, including Change Orders.
 - ☐ Final Project size in gross square feet; Final Project power and thermal capacity.
 - ☐ Type of construction (new, renovation, or expansion).
 - ☐ Actual start and finish dates for design.
 - ☐ Actual Notice to Proceed and Substantial Completion dates for construction.
 - ☐ Description of professional services Prime Firm and contractors provided for the project.

- ☐ Name of Project Manager (individual responsible to the System/University for the overall success of the project).
 - ☐ Sources of funding/financing.
- Provide references for each project listed above, identify the following:
 - ☐ The Owner's name and representative who served as the day-to-day liaison during the design and construction, and O&M phases of the Project, including name, title, telephone number and email.
 - ☐ Contractor's name and representative who served as the day-to-day liaison during the pre-construction and/or construction phase of the project, including name, title, telephone number and email.
 - ☐ Length of business relationship with the owner.

References shall be considered relevant based on specific project participation and experience with the Prime Firm and/or Lead Contractor(s).

6.3 Technical Response

- Please describe generally the Project Team's suggested technical approach to the Project. In doing so, please describe how your approach would achieve stated goals and requirements of the Project listed in Sections 5.1.3 and 5.1.3 above. Highlight your experience with delivering the proposed technological solutions (e.g. from other projects preferably submitted with your SOQ). Please also include additional ideas or innovations not addressed in this RFQ.
- Describe the Project Team's approach to construction, commissioning and start-up. Please include in the narrative how the approach will take into account the phased nature of the Mission Rock development. Please specifically address the Team's approach to plant locations and any sequencing required to reach the final CUP build-out.
- Please describe the Project Team's approach to O&M. Include discussion and examples of reliability assurance, water and energy conservation practices in operations, energy efficiency practices in operations, safety practices, quality assurances, controls and monitoring approaches.

6.4 Commercial Responses

- Please describe generally the commercial structure you envisage for the Project. Provide a deal structure diagram showing key parties and major agreements. Please also address the Alternative Off-taker Opportunity and Nonprofit Opportunity mentioned in Sections 5.3.2 and 5.3.3 above and discuss what benefits and challenges these opportunities may present. Highlight your experience with the proposed commercial structure (e.g. from other projects, preferably projects submitted with your SOQ).
- Please identify the primary risks that the Project Team anticipates for the Project, categorized by Design, Construction and O&M, along with recommended mitigation measures for those risks.
- Please demonstrate the Prime Firm's ability to secure financing for the Project (i.e. as a BOO). In doing so, please state what key debt requirements you might expect given your suggested structure (e.g. gearing requirements). Please also address the Alternative Financing

Opportunities mentioned in Section 5.3.2 above. Highlight your experience with similar financings involved on projects (preferably projects submitted with your SOQ).

- Detail the DES Developer's ability and demonstrated experience in providing financing for:
 - ☐ Similar projects within specified financial closing time parameters;
 - ☐ Projects utilizing offtake agreements for multiple retail customers; and
 - ☐ Projects where you were a counterparty to single, non-profit off-taker.

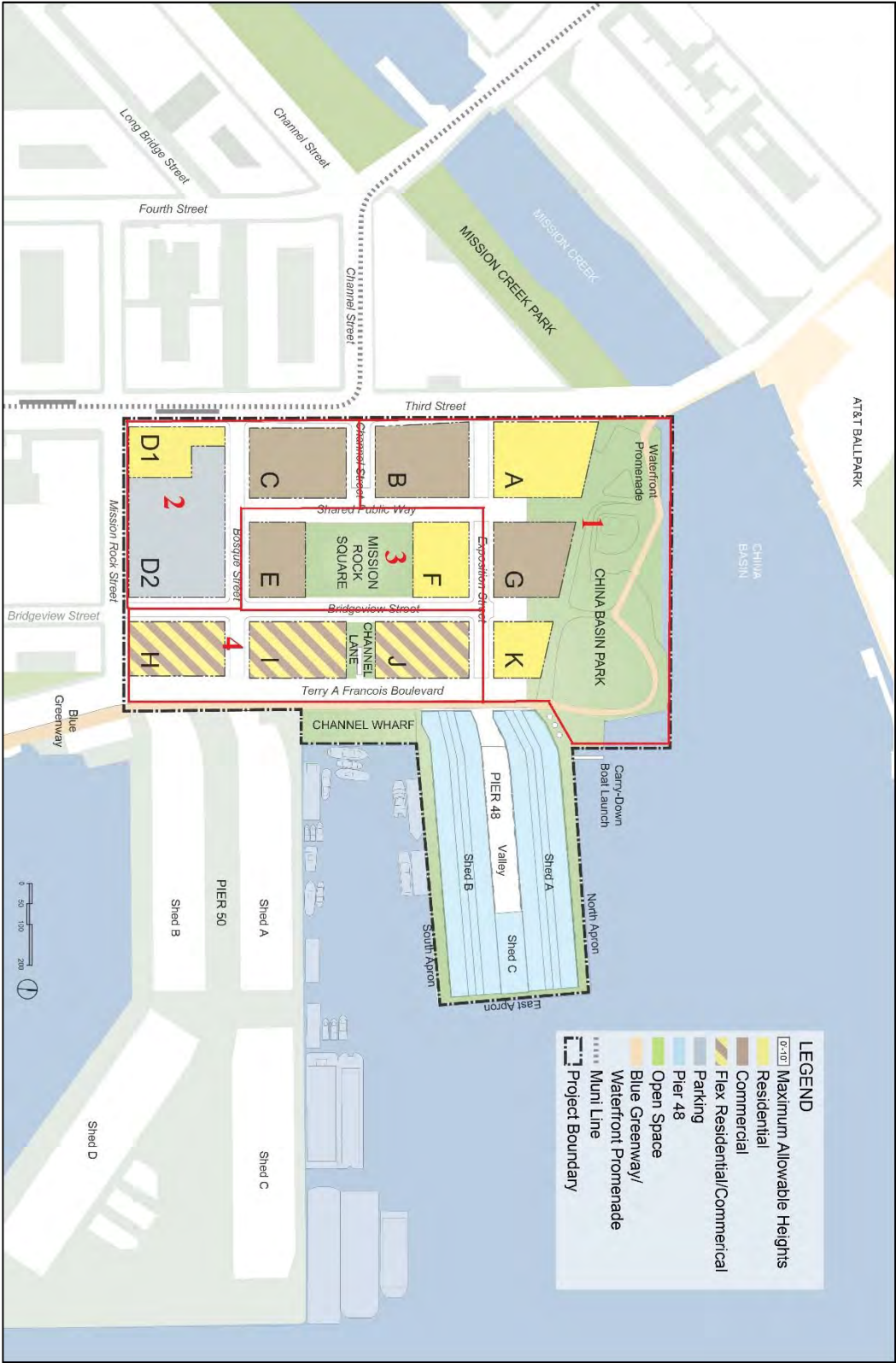
6.5 Blue Sky Discussion

- Please also provide additional ideas or areas for consideration that have not been included in the scope of this RFQ.
- Please note the Master Developer may be running a separate RFQ for a water treatment system for Mission Rock. Please reach out to the Point of Contact if Respondent is interested in similarly designing, building, owning or operating a water treatment system. Respondents that are interested in this opportunity should state in this section of the SOQ the possible benefits the Master Developer and other end users might see as a result of the Project Team delivering and operating both systems jointly.

ATTACHMENT A: Draft Memorandum of Understanding

[To be released]

ATTACHMENT B: Site Plan



ATTACHMENT C: Draft Schematic of Planned Utilities

ATTACHMENT D: Supplementary Technical Information

D.1 Thermal Generation Details

The planning basis for the generation portion of the DES assumes:

- Centralized heat recovery chillers
- Centralized electric water cooled chillers
- Centralized low/medium temperature hot water boilers
- Plate-and-frame “free-cooling” heat exchangers (bay-water)
- Plate-and-frame “heat-rejection” heat exchangers (bay-water)
- Balance of bay-water heat rejection and cooling plant (tanks, screens, etc.)
- Cooling towers³

D.2 Distribution Details

The planning basis for the distribution portion of the DES assumes a 6-pipe system comprising of:

- Chilled water (CHW) supply and return pipes
- Heating hot water (HHW) supply and return pipes
- Bay water intake and outflow pipes

The HHW and CHW systems are assumed to be direct bury, insulated piping systems, steel for HHW and HDPE for CHW. The bay water piping is assumed to be uninsulated, direct bury steel pipe.

Distribution routing and pipe sizing will be driven by CUP location and configuration and project phasing. Right of way corridors within the project site are relatively narrow, and site roadways are pile supported to mitigate differential settlement relative to the buildings, reducing the space available for utility installation. Pipe routing and building points of connection will need to be coordinated with site and building design teams.

Representative trench sections are presented in the figures below:

³ Capacity to be limited by greater of (1) heat rejection capacity needed above 24” bay-water capacity, and (2) heat rejection requirements during scheduled bay-water system down-time

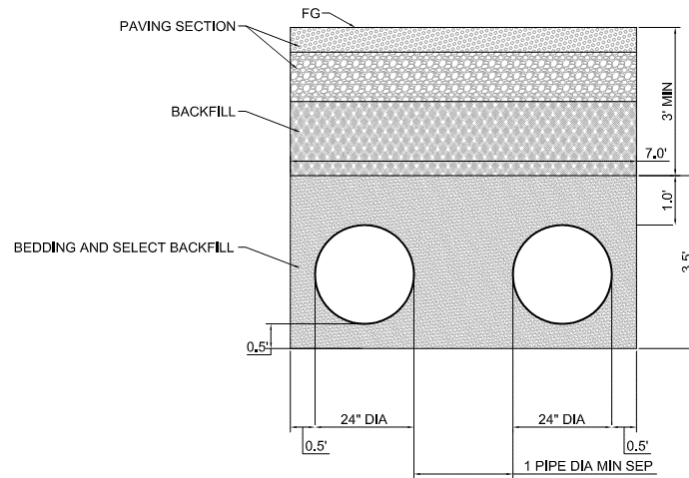


Figure 2: Typical Bay Water Intake/Outflow Section

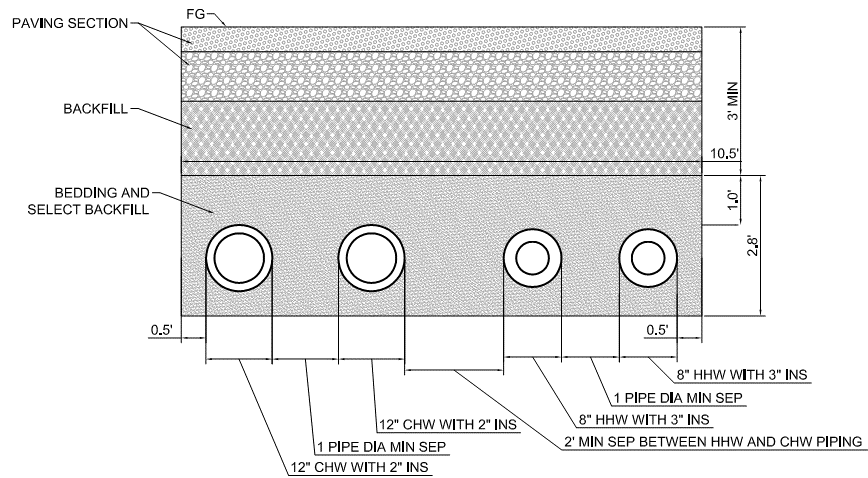


Figure 3: Chilled and Hot Water Combined Trench - Maximum Section

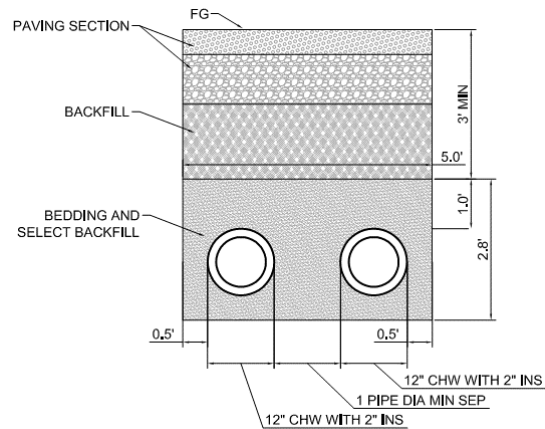


Figure 4: Chilled Water Trench - Maximum Section

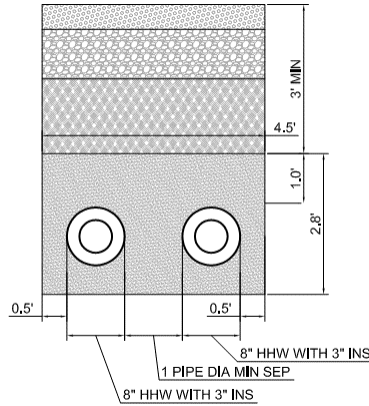


Figure 5: Heat Hot Water Trench - Maximum Section

D.3 Building Interconnections

The planning basis for the building interconnection portion of the DTES has assumed pairs of plate-and-frame heat exchangers for each of the hot water and chilled water services. As part of a partnership, the developer will be taking on the responsibility of collaborating with the vertical development team on the design, coordination, and commissioning of these systems.

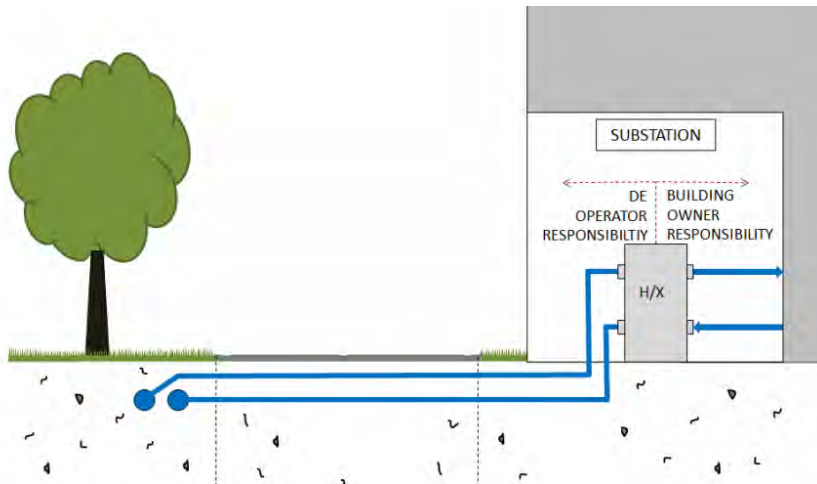


Figure 6: Substation Depiction

D.4 Anchor Brewing Process Loads

Anchor Brewing process loads account for a major portion of the site energy consumption.

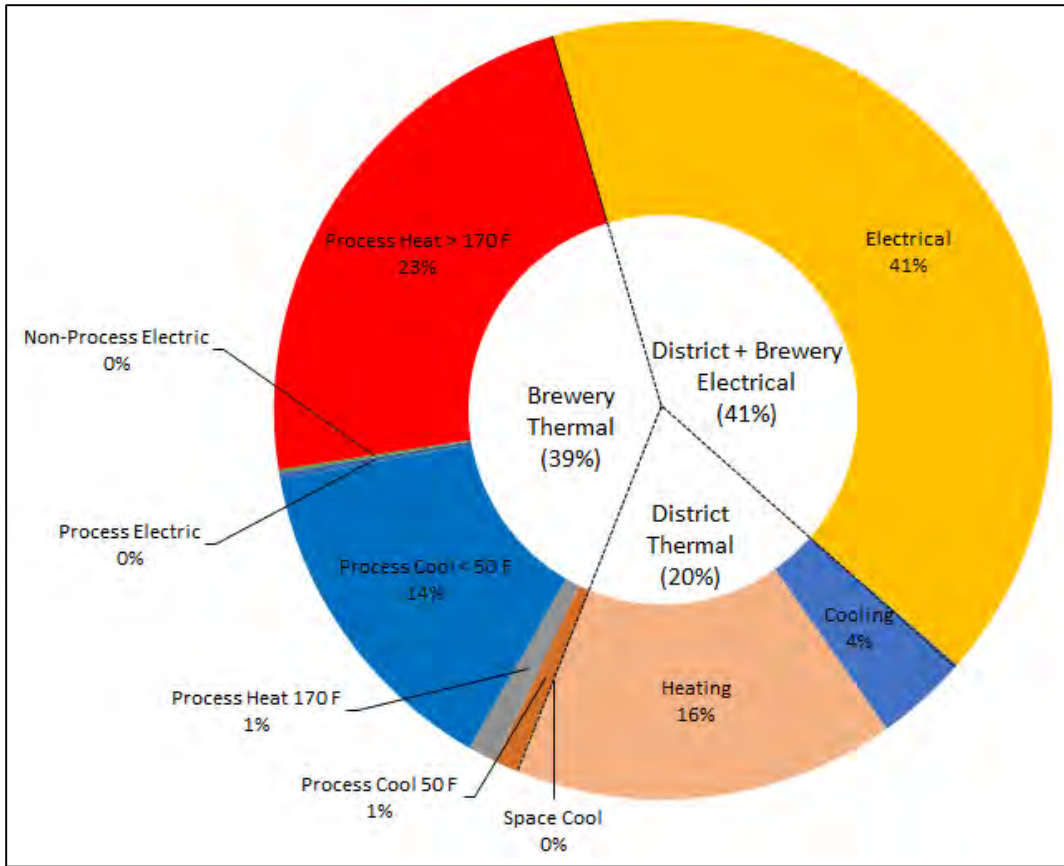


Figure 7: Ultimate Energy Consumption Split (400,000 Barrels/Year, no Brewery Efficiency)

Applying plausible levels of energy efficiency to all brewery end-uses generates the hypothetical energy consumption estimates summarized in Figure 8. This illustrates the sensitivity of the brewery energy efficiency as an input to the load estimation exercise.

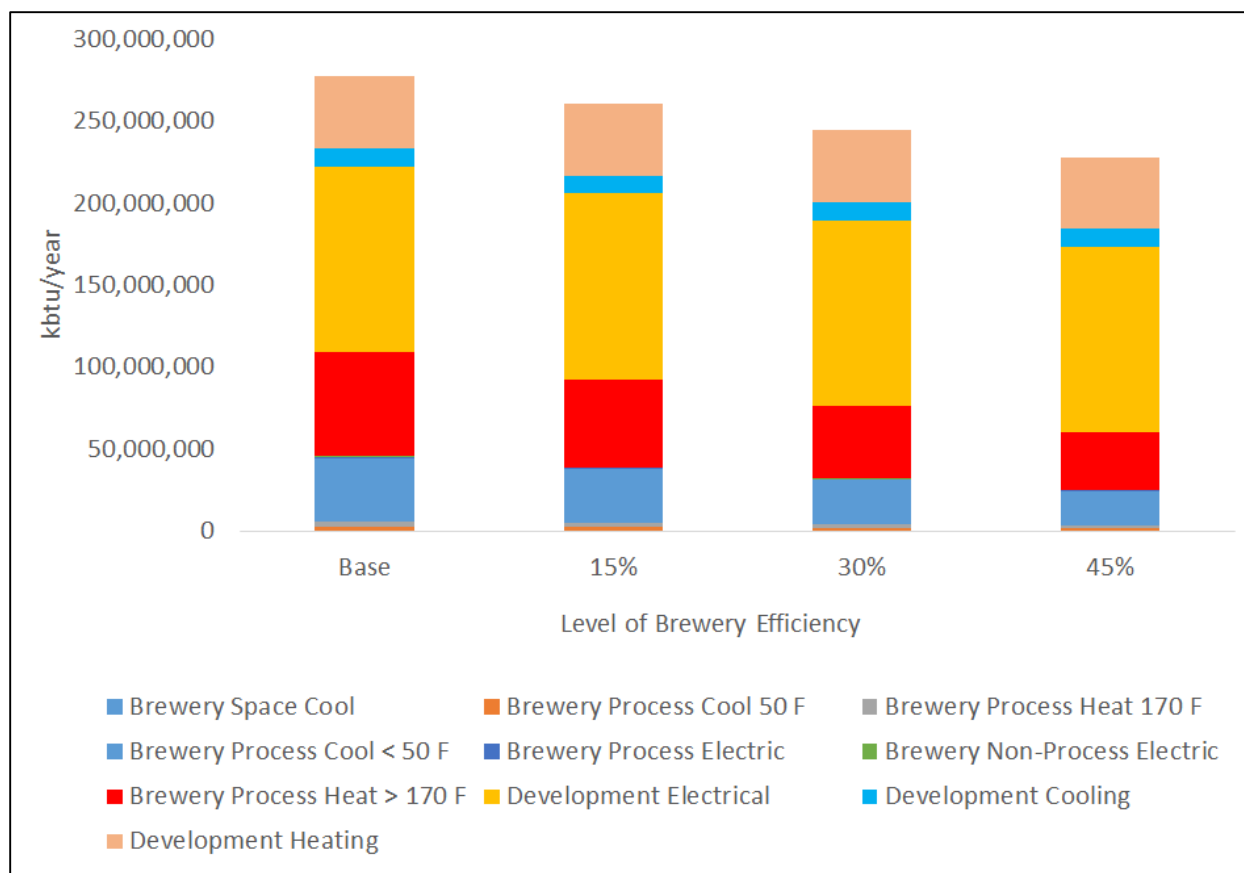


Figure 8: Hypothetical Ultimate Energy Consumption Estimates (400,000 barrels/year)

Unlike the district, the Anchor brewing process entails several high-temperature, steam, and low-temperature chilled water loads as illustrated in **Figure 9**.

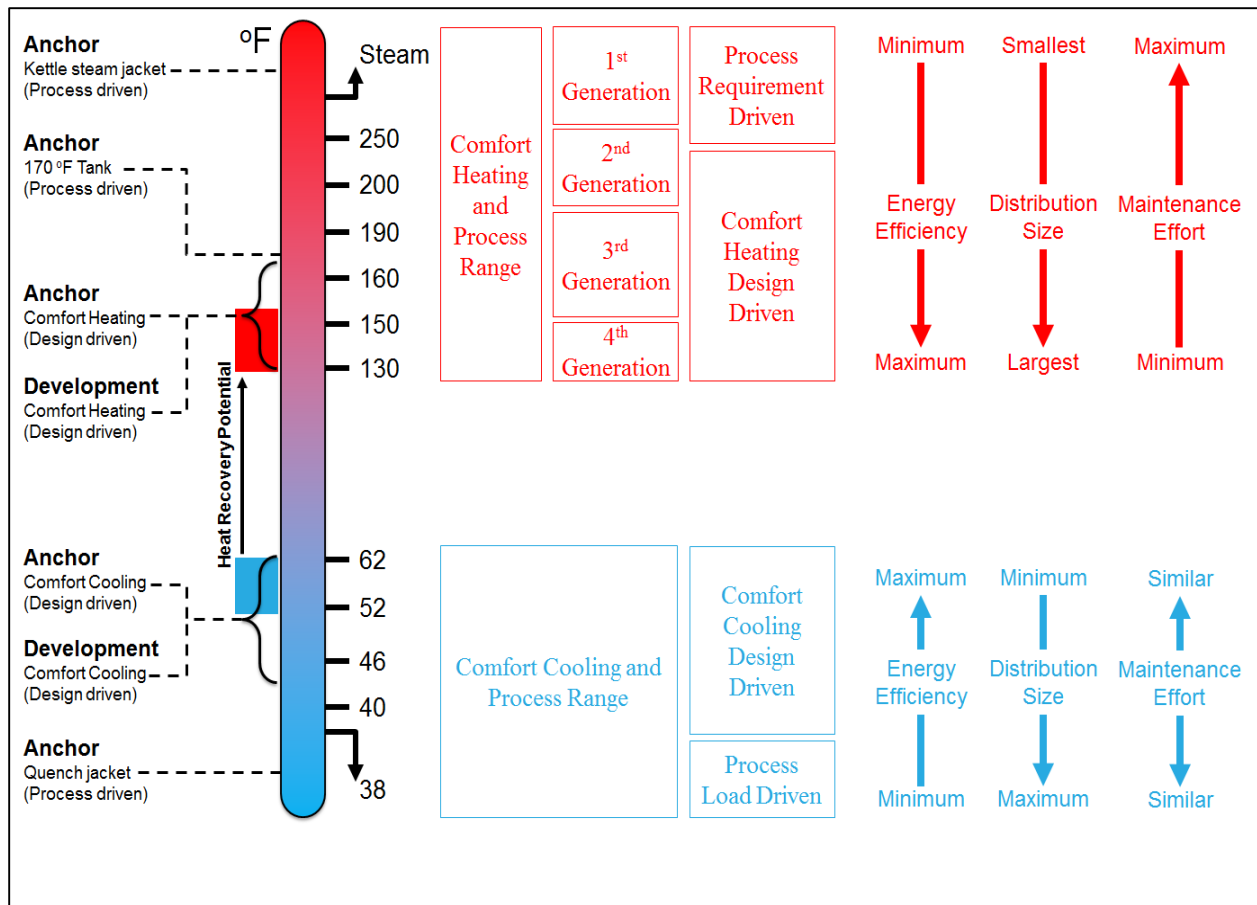


Figure 9: Development Thermal Load Map

It is not thermodynamically efficient to aggregate and supply these significantly different load categories from a single plant, or to overproduce steam or low-temperature chilled water to serve low-temperature heating and elevated chilled water cooling loads respectively.

Anchor Brewing has indicated that the brewing process, loads, and therefore the process plant requirements will continue to be updated as of and after the publication of this RFQ.

For these reasons, the current approach is to site the Anchor Brewing process plant as close as possible to the loads it serves (i.e. on Pier 48), and not over-size it to additionally serve the Project Site (or a portion thereof).

There may be opportunities to pre-heat the Anchor Brewing process hot water using the district heating system and distribution. This might be achievable under a scenario where an extensive distribution run from the closest main branch is not required, and could be beneficial if a significant resulting reduction in the Anchor brewing plant (essentially steam boiler capacity) can be achieved.

ATTACHMENT E: Assumptions

Given the early planning nature of this work, Arup developed and shared a series of technical assumptions during the 2013 feasibility study. These assumptions were approved for planning purposes, and are being carried forward for purposes of a reference design in the RFQ. These assumptions are tabulated below.

Standard Office Cooling EUI	Energy Utilization Intensities	1.3	kbtu/sq.ft./year
Standard Office Heating EUI	Energy Utilization Intensities	9.5	kbtu/sq.ft./year
Standard Office Electric EUI	Energy Utilization Intensities	41.3	kbtu/sq.ft./year
Biotech Office Cooling EUI	Energy Utilization Intensities	15.3	kbtu/sq.ft./year
Biotech Office Heating EUI	Energy Utilization Intensities	10.9	kbtu/sq.ft./year
Biotech Office Electric EUI	Energy Utilization Intensities	89.3	kbtu/sq.ft./year
Residential Cooling EUI	Energy Utilization Intensities	1.4	kbtu/sq.ft./year
Residential Heating EUI	Energy Utilization Intensities	23.2	kbtu/sq.ft./year
Residential Electric EUI	Energy Utilization Intensities	22.20	kbtu/sq.ft./year
Retail Cooling EUI	Energy Utilization Intensities	7.6	kbtu/sq.ft./year
Retail Heating EUI	Energy Utilization Intensities	5.0	kbtu/sq.ft./year
Retail Electric EUI	Energy Utilization Intensities	54.5	kbtu/sq.ft./year
Brewery Space Heating EUI	Energy Utilization Intensities	0.1	kbtu/sq.ft./year
Brewery Space Cool EUI	Energy Utilization Intensities	3.6	kbtu/sq.ft./year
Brewery Process Electric EUI	Energy Utilization Intensities	36	kbtu/barrel/year
Brewery Non-Process Electric EUI	Energy Utilization Intensities	18	kbtu/barrel/year
Brewery Process Heat > 170 F EUI	Energy Utilization Intensities	190	kbtu/barrel/year
Brewery Process Heat 170 F EUI	Energy Utilization Intensities	10	kbtu/barrel/year
Brewery Process Cool > 50 F EUI	Energy Utilization Intensities	26.6	kbtu/barrel/year
Brewery Process cool < 50 F EUI	Energy Utilization Intensities	145	kbtu/barrel/year
BAU Cooling Efficiency	Avg. Annual Equipment Efficiencies	0.55	kW/Ton
BAU Heating Efficiency	Avg. Annual Equipment Efficiencies	80%	%
BAU Electric Efficiency	Avg. Annual Equipment Efficiencies	99%	%
Vapor Compression Chillers	Avg. Annual Equipment Efficiencies	0.364	kW/Ton
Absorption Chillers	Avg. Annual Equipment Efficiencies	1	COP
Organic Refrigerant Chillers	Avg. Annual Equipment Efficiencies	0.70	kW/Ton

Gas Hot Water Boilers	Avg. Annual Equipment Efficiencies	82%	%
CHP/CCHP Thermal Efficiency	Avg. Annual Equipment Efficiencies	41.6%	%
CHP/CCHP Electrical Efficiency	Avg. Annual Equipment Efficiencies	45.1%	%
CHP/CCHP Max Turndown	Avg. Annual Equipment Efficiencies	85%	%
CHP/CCHP Max Heat Dumping	Avg. Annual Equipment Efficiencies	15%	%
Electric Only Fuel Cell Thermal Efficiency	Avg. Annual Equipment Efficiencies	51.7%	%
Electric Only Fuel Cell Electrical Efficiency	Avg. Annual Equipment Efficiencies	20%	%
Heat Recovery Chillers	Avg. Annual Equipment Efficiencies	0.60	kW/Ton
Cooling Towers	Avg. Annual Equipment Efficiencies	0.053	kW/Ton
Heat Dump Radiators	Avg. Annual Equipment Efficiencies	0.106	kW/Ton
Vapor Compression Chiller w/ Deep Lake Condenser Water	Avg. Annual Equipment Efficiencies	0.35	kW/Ton
Heat Recovery Chiller w/ Deep Lake Condenser Water	Avg. Annual Equipment Efficiencies	0.59	kW/Ton
Anchor Steam Existing Steam Boiler Plant	Avg. Annual Equipment Efficiencies	65%	%
New Steam Boiler Plant	Avg. Annual Equipment Efficiencies	78%	%
CHW Network Thermal Efficiency	DE Network Thermal Efficiencies	97.0%	%
HHW Network Thermal Efficiency	DE Network Thermal Efficiencies	95.5%	%
CW Network Thermal Efficiency	DE Network Thermal Efficiencies	98.0%	%
Pump Efficiency	District Pumping Efficiency	80%	%
Motor Efficiency	District Pumping Efficiency	90%	%
Average Network Pressure Head	District Pumping Efficiency	1.75	ft./100 ft.
CHW Design Supply T	Chilled Water Network Parameters	50	F
CHW Design Cooling Delta T	Chilled Water Network Parameters	13	F
CHW Total Network Length	Chilled Water Network Parameters	3,680	ft.
CHW Heat Exchanger Pressure Drop	Chilled Water Network Parameters	15	ft.
CHW Valves, Fittings, Bends Loss	Chilled Water Network Parameters	40%	% of Total Straight Pipe Loss
HHW Design Heating Delta T	Heating Hot Water Network Parameters	35	F
HHW Total Network Length	Heating Hot Water Network Parameters	3,680	ft.
HHW Heat Exchanger Pressure Drop	Heating Hot Water Network Parameters	15	ft.
HHW Valves, Fittings, Bends Loss	Heating Hot Water Network Parameters	40%	% of Total Straight Pipe Loss
CW Design Cooling Delta T	Condenser Water Network Parameters	15	F
CW Total Network Length	Condenser Water Network Parameters	3,680	ft.

CW Heat Exchanger Pressure Drop	Condenser Water Network Parameters	15	ft.
CW Valves, Fittings, Bends Loss	Condenser Water Network Parameters	40%	% of Total Straight Pipe Loss
Reversible Heat Pump Cooling Efficiency	Avg. Annual Equipment Efficiencies	0.711	kW/Ton
Reversible Heat Pump Heating Efficiency	Avg. Annual Equipment Efficiencies	0.708	kW/Ton
Reversible Heat Pump - Cooling with Colder Bay/River Water	Avg. Annual Equipment Efficiencies	0.675	kW/Ton
Bay Water Flow rate (Heat Rejection)	Bay Water Heat Rejection Parameters	3	gpm/ton
Bay Water Pump Efficiency (Heat Rejection)	Bay Water Heat Rejection Parameters	80%	%
Bay Water Pump Motor Efficiency (Heat Rejection)	Bay Water Heat Rejection Parameters	90%	%
Bay Water Network Length (Heat Rejection)	Bay Water Heat Rejection Parameters	4,000	ft.
Bay Water Average Network Pressure Head (Heat Rejection)	Bay Water Heat Rejection Parameters	1.75	ft./100 ft.
Bay Water Design Delta T (Heat Rejection)	Bay Water Heat Rejection Parameters	10	F
Bay Water Heat Exchanger Pressure Drop (Heat Rejection)	Bay Water Heat Rejection Parameters	15	ft.
Bay Water Valves, Fittings, Bends Loss (Heat Rejection)	Bay Water Heat Rejection Parameters	40%	% of Total Straight Pipe Loss
Bay Water Flow rate (Cooling)	Bay Water Cooling Parameters	2	gpm/ton
Bay Water Pump Efficiency (Cooling)	Bay Water Cooling Parameters	80%	%
Bay Water Pump Motor Efficiency (Cooling)	Bay Water Cooling Parameters	90%	%
Bay Water Network Length (Cooling)	Bay Water Cooling Parameters	8,000	ft.
Bay Water Average Network Pressure Head (Cooling)	Bay Water Cooling Parameters	1.75	ft./100 ft.
Bay Water Design Delta T (Cooling)	Bay Water Cooling Parameters	13	F
Bay Water Heat Exchanger Pressure Drop (Cooling)	Bay Water Cooling Parameters	15	ft.
Bay Water Valves, Fittings, Bends Loss (Cooling)	Bay Water Cooling Parameters	40%	% of Total Straight Pipe Loss
Residential Cooling Load Density	Space Cooling Load Densities	700	sq.ft./Ton
Retail Cooling Load Density	Space Cooling Load Densities	350	sq.ft./Ton
Commercial Cooling Load Density	Space Cooling Load Densities	400	sq.ft./Ton
Brewery Cooling Load Density	Space Cooling Load Densities	400	sq.ft./Ton
Residential Heating Load Density	Space Heating Load Densities	10	btu/h/sq.ft.
Retail Heating Load Density	Space Heating Load Densities	20	btu/h/sq.ft.
Commercial Heating Load Density	Space Heating Load Densities	15	btu/h/sq.ft.
Brewery Heating Load Density	Space Heating Load Densities	5	btu/h/sq.ft.

Nominal Heating Plant Efficiency (Sizing)	Nominal Equipment Efficiencies	85%	%
Bay Minimum Winter Temperature	Bay Water Cooling Parameters	48	F
Bay Maximum Summer Temperature	Bay Water Cooling Parameters	70	F
Parking Structure Conditioning		Unconditioned	Conditioned/ Unconditioned
Branch Pipe Sizing Criteria	Chilled Water Network Parameters	7	fps
Main Pipe Sizing Criteria	Chilled Water Network Parameters	10	fps

APPENDIX N
(Not Used)