



# PORT OF SAN FRANCISCO WATERFRONT PLAN UPDATE



4/27/2016

Port Historic Resources and Stewardship



*Belt Railroad Locomotive*

Images: San Francisco Public Library, SFGate

*Waterfront labor struggles at Pier 38*

# PORT HISTORIC RESOURCES AND STEWARDSHIP

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# Port Historic Resources and Stewardship

## 1 | INTRODUCTION

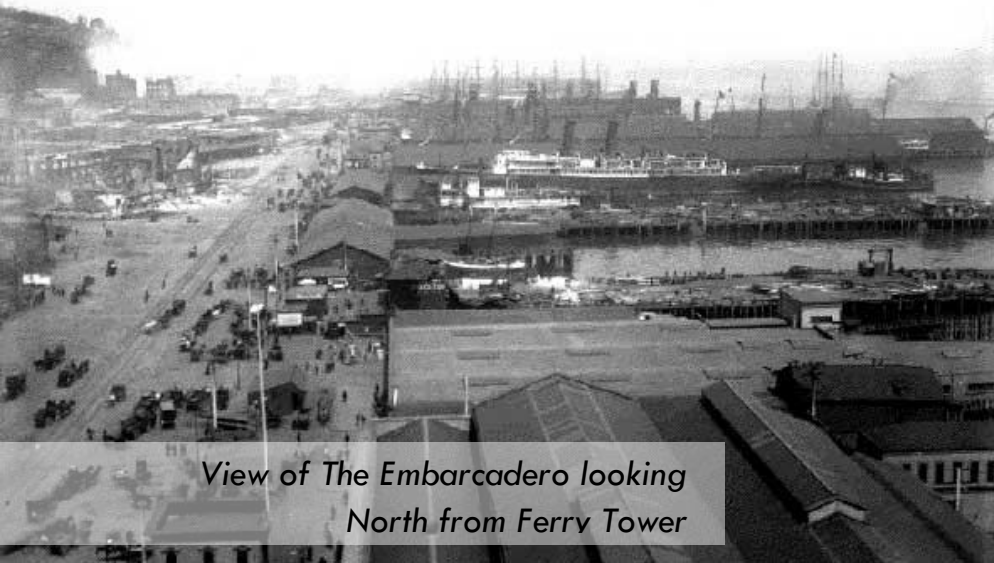
The Port waterfront has played an important role in San Francisco's development since the 1850's, from the Gold Rush, maritime commerce and industrialization, and through two world wars. The bulkhead buildings and finger piers along The Embarcadero, the shipyard warehouses and facilities at Pier 70, and other Port waterfront landmarks and historic structures have come to represent many of San Francisco's social and cultural values. While the first response may be to appreciate their architecture, many of the Port's historic resources also represent inventive engineering and construction design, evolution of shipping, navigation and transportation, the history of work and rise of organized labor. Each contributed to building the economic foundation that gave rise to the development of this city as we enjoy it today.

Because so many survive and establish a rich architectural and cultural landscape, Port historic resources have set the urban form and frame for the Waterfront Land Use Plan (Waterfront Plan). The arrangement of the finger piers radiating out into the Bay from the gently curving edge created by the Embarcadero Seawall are a defining feature of San Francisco. The collective profile of the Embarcadero finger piers and the Bethlehem and Union Iron Works complex in Pier 70 provide the foundation for transformational improvements that are unique to San Francisco's waterfront, guided by the Waterfront Plan. The work to preserve and rehabilitate maritime historic resources is recognized by the State Lands Commission and San Francisco Bay Conservation and Development Commission (BCDC) as an act in support of the public trust doctrine, enabling the inclusion of revenue-generating non-trust uses that have been essential to the economic feasibility of Port historic rehabilitation projects.

This briefing report provides a high level overview of the Port's historic resources, and the dedicated stewardship efforts to maintain, operate and improve them in support of the Port's mission and responsibilities. All repairs, alterations and improvements to Port historic resources are managed to comply with U.S. Secretary of Interior Historic Rehabilitation Standards (Secretary Standards) while also meeting life safety, access and structural requirements of the Port Building Code, Americans with Disabilities Act (ADA) and other applicable building regulations, as well as improving the environmental sustainability of these facilities. Several reports and documents are footnoted to access further details, many of which also are available on the Port's website at [www.sfport.com](http://www.sfport.com).

## 2 | PORT HISTORIC RESOURCES

**Map 1** identifies all of the Port’s historic structures and facilities, from Fisherman’s Wharf to the Southern Waterfront. The Port has two historic districts listed on the National Register of Historic Places (National Register); one City-designated historic district; individual structures that are listed on the National Register and/or designated as City Landmarks; and certain structures that are older than 45 years old and eligible for historic designation. They are summarized below.



*View of The Embarcadero looking North from Ferry Tower*

### 2.1 Embarcadero Historic District<sup>1</sup>

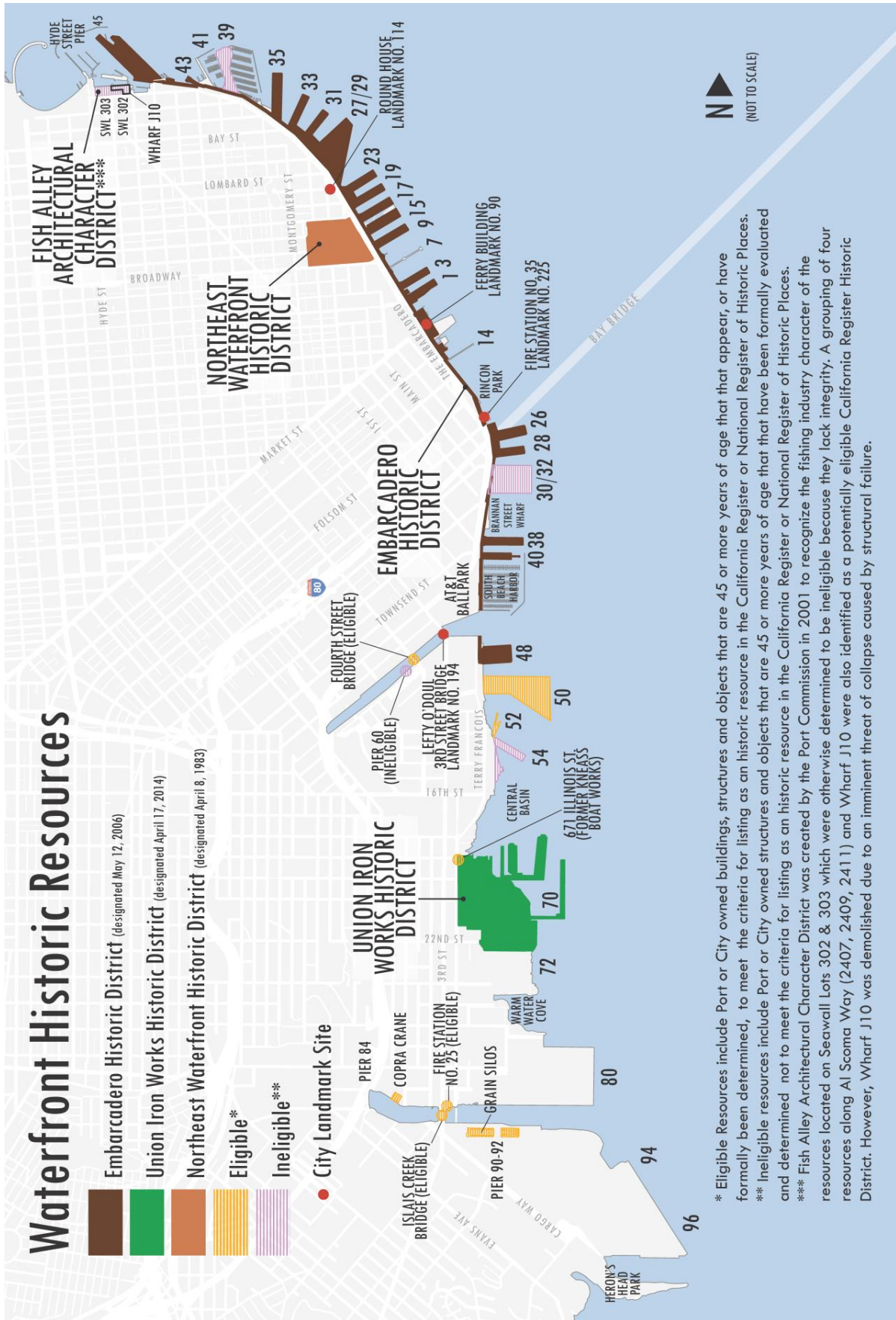
In 2006, the Port of San Francisco Embarcadero Historic District was listed in the National Register of Historic Places. The Embarcadero Historic District includes contributing historic resources from Pier 45 in Fisherman’s Wharf to Pier 48 south of China Basin Channel, including multiple segments that make up the Great Seawall and adjoining bulkhead wharves, bulkhead buildings, finger piers and waterfront structures in between. These historic resources were developed from 1878 to 1945 as a break bulk port

facility and their design was inspired by the City Beautiful Movement, with classical and monumental architectural treatments to match the significance of the maritime industrial operations they supported.

The Embarcadero Historic District includes three miles of waterfront, 21 sections of seawall and bulkhead wharf, as well as 20 pile supported piers that extend approximately 800 feet into the Bay, and eight pile supported buildings. Five sections of bulkhead wharf and four buildings are physically located within the historic district boundary but are not contributing resources. Piers 30-32 and 39 are connected to the bulkhead wharf but are otherwise outside the boundary of the historic district.

The Embarcadero Historic District is nationally significant as the last surviving break-bulk port in the country. In its heyday, San Francisco competed with break-bulk ports in New York, Boston, Philadelphia, Baltimore, New Orleans, Seattle and Los Angeles in the first half of the 20<sup>th</sup> century, and ranked second to New York in terms of the value of its cargo. The historic district is recognized at the highest level of significance by the National Register in the areas of engineering, transportation, maritime commerce, labor, architecture and community planning and development. The district’s period of significance begins in 1878 with the construction of the Seawall, the earliest of its physical features, and ends in 1946 after the end of World War II, when the port went into significant economic decline as container shipping operations and technologies emerged and became the industry standard.

<sup>1</sup> More details on the Embarcadero Historic District are provided in: the [September 2004 Port Commission report](#) and the [Embarcadero Historic District nomination document](#).



The Embarcadero Historic District is recognized in the area of engineering as a rare example of a property type with the Seawall, bulkhead wharf, piers and the organization of its elements. The construction design, use of reinforced concrete, design details for the functional needs of maritime cargo operations all are recognized, in addition to their maritime architectural character. In addition, the governance and methodical development under the oversight of the State Board of Harbor Commissioners, and evolution of cargo working conditions leading to the emergence of organized labor under the International Longshore Warehouse Union were elements that earned National Register recognition of the Embarcadero Historic District.

While the Waterfront Plan laid the initial foundation, the creation of the Embarcadero Historic District required the engagement and cooperation of multiple partners, including the Port Commission, BCDC, Waterfront Plan Advisory Board, and the historic preservation community, including the City's Landmarks Preservation Advisory Board. Part of BCDC's core mission and policies are to reduce fill and, prior to 2000, BCDC policies conflicted with the requirements for historic preservation rehabilitation and development. As detailed in other referenced reports<sup>2</sup>, the parties worked together to develop a new approach to create the Embarcadero Historic District to support preservation of the majority of historic resources, and fill removal in selected locations to create a planned system of permanent Open Water Basins and waterfront parks and public access to support BCDC and Waterfront Plan goals.

## 2.2 Pier 70 Union Iron Works Historic District

In addition to Embarcadero historic resources, the Waterfront Plan recognized the richness and need to preserve and rehabilitate monuments to the ship building industry at Pier 70. Waterfront Plan policies called for preservation of Bethlehem and Union Iron Works historic resources at Illinois and 20th Streets. After two unsuccessful rehabilitation project efforts, the Port came to the conclusion that a master planning effort for the entirety of Pier 70 was needed to develop a comprehensive approach and development strategy that would address all of Pier 70's historic resources. The Port Commission authorized a community planning process that led to creation of the Pier 70 Preferred Master Plan, produced in 2010, which included land use, urban design, environmental and economic feasibility analyses. The Pier 70 Plan studied and inventoried all of the historic resources and produced development and financing strategies to harmonize future rehabilitation of the majority of the historic resources with development of a new neighborhood. The Plan led to further Port efforts to nominate the Union Iron Works (UIW) Historic District at Pier 70, which was listed on the National Register in 2014.<sup>3</sup>



The UIW District encompasses 65 acres of land and approximately 15 acres of the shoreline and Bay. The district includes 44 contributing resources, two contributing sites and a significant amount of vacant land that once supported shipyard buildings that were removed after World War II. Together all of these elements comprise the Union Iron Works/Bethlehem Steel Historic District. The Port became the owner of the shipyard in 1982 when Bethlehem Steel closed and the property was transferred to the Port. A 15 acre portion of the site is the oldest continuously operating ship repair facility in the country and is leased to BAE Systems to operate the Port's two floating drydocks and repair military and civilian vessels ranging in size from ferries and excursion vessels to very large cruise ships.

<sup>2</sup> [September 2004 Port Commission report](#)

<sup>3</sup> [Pier 70 nomination report](#)

UIW was established during the Gold Rush. In 1853, they constructed engines and boilers for iron ships, locomotive equipment for California's first trains and the majority of mining equipment used in the Comstock silver mines. UIW was an industry leader and technological pioneer from the late 19th through the turn of the 20th century. The UIW is nationally significant for the American steel hull ship building industry from the late 19th through World War II having opened the first steel shipyard and fabricated the first steel hull ship on the West Coast and as a pioneering iron works. The UIW built its first ship, the coal carrier Arago, in 1885. It was the first steel hulled ship built on the Pacific Rim.

The UIW Historic District is also significant as a physical record of industrial architecture and design from 1884 to 1945 with buildings that represent all periods of the steel ship building industry in the United States. The shipyard played an integral role in government efforts to increase naval resources and bolster the nation's image as an international military power and was the center of the shipbuilding industry on the West Coast, responsible for fabricating dozens of warships and submarines. The site retains a high degree of integrity of materials and feeling as the extant resources have experienced little alteration or adaptive reuse since the end of the period of significance in 1945 and the continued presence of ship repair activity along the north shore continues to express the district's historic function.

The UIW historic resources set the foundation for Pier 70 Plan approach and subsequent efforts to secure funding and development partners for historic rehabilitation and the development of neighborhood, economic and waterfront park improvements. The Port's current efforts to develop Crane Cove Park, partnership with Orton Development Inc. for the rehabilitation of the Bethlehem and UIW historic buildings on 20th Street, and Forest City partnership for historic rehabilitation, new development, open space and infrastructure on a 28 acre Waterfront Site in Pier 70 flow from the direction set in the Pier 70 Plan. All of these improvement efforts have been planned in conjunction with supporting new improvements to maintain the integrity and operation of the historic Pier 70 ship repair yard managed by BAE Systems.

### 2.3 Port Landmark Sites and Other Historic Resources

**Map 1** includes Port historic resources, many located outside of the above historic districts, that are recognized as individual City landmarks or City landmark or architectural districts. They include:

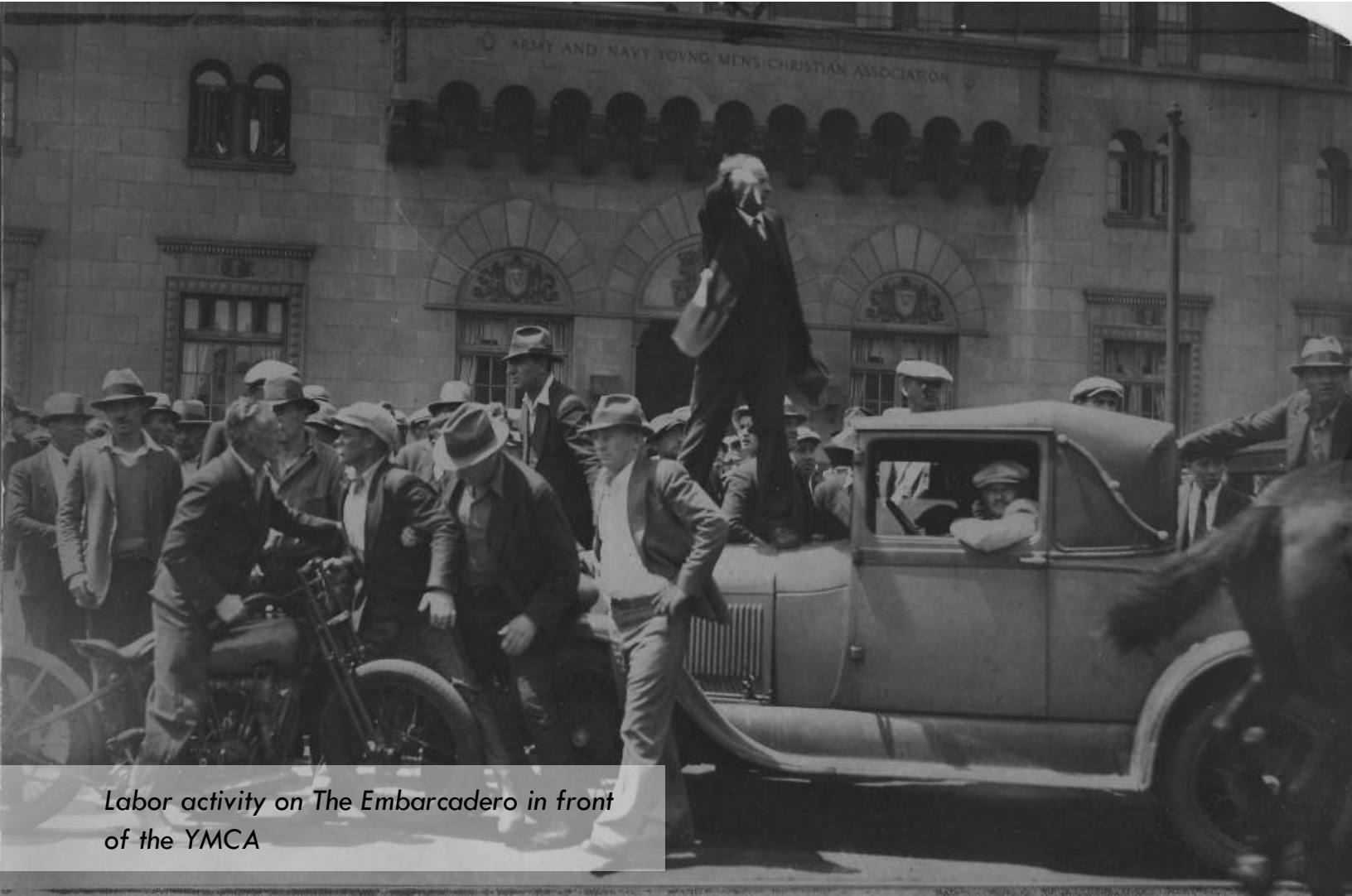
- Ferry Building City landmark, on The Embarcadero at the foot of Market Street
- Belt Railroad Round House City landmark, located on the west side of the Embarcadero across from Pier 29
- Pier 22½ Fireboat Station 35 City landmark, on The Embarcadero at the foot of Harrison Street
- Six Port Seawall lots between Broadway and Union Street on the west side of The Embarcadero that are within the City-designated Northeast Waterfront Historic District

Other Port properties that have been determined eligible for listing in the California or National Registers because of their historic or architectural significance:

- Fish Alley Architectural Character District - Wood frame buildings at 2907, 2909 and 2911 Al Scoma Way (the foot of Jones Street in Fisherman's Wharf) that date from the 1920's and determined significant for their association with the development of San Francisco's fishing industry.
- Kneass Boat Works Building at 671 Illinois Street between Mariposa and 18<sup>th</sup> Streets, south of Mission Bay. The Kneass Building is a survivor of the Central Waterfront's former small boat building and repair industry. Although we do not know the exact date of construction the Kneass Boat Works first appears in historic documents as early as 1900.

For information on the location and historic significance of these Port properties refer to the Historic resources Map on the Port's website: <http://sfport.com/historic-preservation>.





*Labor activity on The Embarcadero in front of the YMCA*

### 3 | HISTORIC REHABILITATION DEVELOPMENT PROJECTS

During its development in the 1990's, the Waterfront Plan's vision to "Reunite the Waterfront with the City" was fueled by the opportunity to meet maritime needs alongside an expanded open space network, and repurpose the Ferry Building, bulkheads and finger piers for maritime mixed use developments. When the Waterfront Plan was approved in 1997, most of The Embarcadero transportation improvements were in place, awaiting new public-oriented uses and activities to bring people to the edge of San Francisco Bay. The Port published a comprehensive review<sup>4</sup> of the transformation that has occurred and continues, in large part realized through historic rehabilitation projects at the Ferry Building, Pier 1, Piers 1 ½, 3 & 5, and the Exploratorium at Piers 15-17. Over \$900 million has been invested in waterfront development, mostly in historic rehabilitation projects. All of these projects were improved consistent with Secretary Standards.<sup>5</sup> These projects demonstrate how the waterfront continues to evolve and how Port historic structures are readily adapted to new uses to create a vibrant urban public waterfront with broad appeal to residents, workers, families and visitors from near and far. **Figure 1** provides a timeline to reflect on the evolution of the San Francisco waterfront.

The success of these projects relies on a strong, collaborative relationship with the State Lands Commission and BCDC, which both make public trust findings as part of their review of major Port development projects. As promoted in the Waterfront Plan, Port development efforts to date have sought a diversity of uses and activities. The work of rehabilitating Port maritime historic resources is recognized by State Lands and BCDC as beneficial to the public trust, which affords use flexibility for the Port and developer partners to include non-trust uses in a carefully designed development program that must comply with Secretary Standards. The inclusion of non-trust uses is essential to make these projects financially feasible, given the high cost of waterfront development.

Another essential development financing tool is the Federal Rehabilitation Tax Credit program administered by the State Historic Preservation Office (SHPO) and National Park Service (NPS). Port historic resources that are listed on the National Register may be eligible for Federal tax credits which can be approved to cover up to 20% of the project development costs. Yet, as historic piers and resources continue to deteriorate, the viability of waterfront development has become more challenging even with these tax credits. Not all Port projects qualify for tax credits due to the eligibility requirements. The Port continues to explore other funding sources including State Historic Tax Credits and Transfer of Development Rights, but more work needs to be done with preservation advocacy organizations and regulatory agencies to determine the feasibility of these initiatives and to fully understand how much they could contribute to of historic resource rehabilitation projects. Higher revenue uses also will be considered, which would require continued consultation and coordination with State Lands and BCDC regarding public trust use requirements.

### 4 | PORT STEWARDSHIP

Port staff has become experienced working on a variety of large and small projects and has developed best practices for the treatment of pier and bulkhead facilities. The Port has learned how adaptable the piers are to supporting new uses while retaining their historic character. The maritime industrial pier sheds support a wide range of uses for short and long-term leasing, which flexibility is very important to keep

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<sup>4</sup> Port of San Francisco Waterfront Land Use Plan Review, 1997-2014; June 2015.

<sup>5</sup> The Secretary Standards define rehabilitation as: "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."

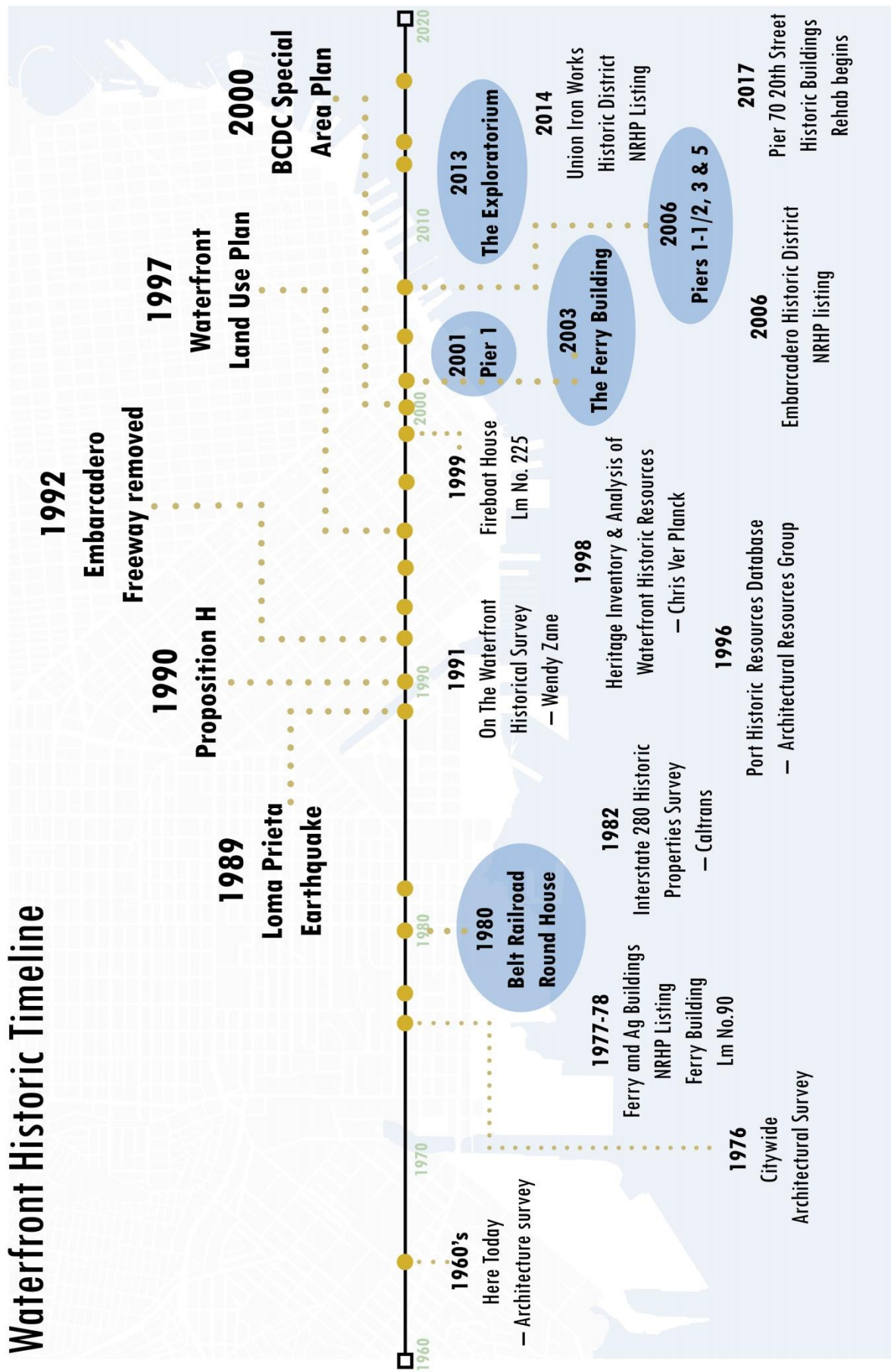


Figure 1. Waterfront Historic Preservation Timeline

facilities in active use, generating revenues for Port operations and capital improvements. Port staff in all divisions --Engineering, Maritime, Home Land Security, Real Estate, Maintenance the Planning & Development-- work collaboratively to define and coordinate leasing, maintenance and repairs in a manner that is consistent with the Secretary's Standards to the greatest extent possible.

Port staff also closely coordinate with historic preservation professionals at the San Francisco Planning Department and Historic Preservation Commission, and San Francisco Heritage to review and advise project design. In addition to the project reviews discussed above, Port projects affecting historic resources are subject to review under the California Environmental Quality Act (CEQA).

Port stewardship also includes the interpretation of its historic resources, which benefits from collaborative partnerships with Port development partners, the San Francisco Maritime National Park and local historians, community stakeholders and preservation advocates. Port improvement and public access projects have created venues for historic interpretation to enhance the public's knowledge and understanding of the history and significance of San Francisco's waterfront historic resources. The physical access created through expansion of the waterfront open space system itself enhances the public's experience and understanding of the Port's rich history. Temporary and permanent interpretive exhibits, including "Bayside History Walk" historic photo and content installations inside Piers 1-5, in public access areas along the perimeter of the piers, in Brannan Street Wharf, and the Port history kiosks along The Embarcadero Promenade and Blue Greenway all inform about different facets of Port history. The Port is planning for a site wide historic interpretation program as part of improving Pier 70, including the proposed nine acre Crane Cove Park to increase understanding of the ship building and repair industrial history.

## 5 | MAINTAINING AND IMPROVING PORT HISTORIC RESOURCES

The Port's Engineering Division which consists of licensed architects, structural, civil, mechanical and electrical engineers, construction managers and building inspectors are responsible for implementing the Port Building Code and related regulations to protect public health, safety and welfare for all facilities under Port jurisdiction. Engineering staff works with construction contractors and the Port Maintenance Division to direct repairs and maintenance of Port facilities, including its numerous historic resources.

Under the guidance of the Waterfront Plan goals, the Port has developed and improved programs and guidelines and a systematic approach to identifying and addressing deferred maintenance of Port facilities. In some cases, Port historic sheds and structures have not received major maintenance work since as far back as the late 1940's. Repair and maintenance work today now must also comply with current Port Building Code requirements, including fire exiting and ADA regulations. The Port devotes a lot of attention to designing or advising approach and methods to comply with these multiple requirements in a manner that is consistent with Secretary Standards. Key programs, guidelines and procedures are highlighted below.

### 5.1 Facility Assessment Program

In 2002, the Port created new procedures and protocols to administer a Facility Assessment Program to establish systematic methods for inspecting, categorizing and recording the condition of over 350 structures within the Port's jurisdiction, including piers, wharves, buildings and bridges. The Seawall, bulkhead wharf and the piers are generally consistent in appearance but close examination of the engineering and design details reveals differences that make each of these components of the district unique.

Port engineering staff and consultants are responsible for performing periodic inspections of buildings (“superstructure”) and pier deck and piles (“substructure”) to identify structural safety issues consistent the Port’s duty to keep the Port Commission, tenants and the public informed about status of facilities and findings.<sup>6</sup> The Facility Assessment Team makes recommendations which may include actions to post affected sites with load restrictions or warning signs, and/or placement of barricades to limit access.

**Map 2** shows the composite conditions rating of all Port facilities. Inspection findings are summarized in Rapid Structural Assessment reports which indicate structural rating using a universal color coding system:

- Green - good structural condition with unrestricted use, no live load reductions/restrictions;
- Yellow (with green hatching) - further structural review and structural repairs are required, use is restricted by reduced live load limits
- Red - unsafe and poor structural conditions with restricted access

The Facility Assessment Program has provided proactive direction to help prioritize and improve management of the Port facilities. The condition assessments describe which structures should be repaired in the near future, (within approximately 5 +/- year timeframe) to avoid having to shut-down or “red-tag” facilities. Port staff provides regular reports to the Port Commission on the Facility Assessment Program, and was pleased to report in February 2016 that no properties have been red-tagged since 2013. This information supported the development and inventory of facility repair needs in the Port’s 10 Year Capital Plan. The Facilities Assessment Program rating criteria also have been integrated into the Port’s capital budget process, to prioritize selection of Port capital projects for Port funding.

## 5.2 Port Repair Projects and Guidance

Port repair projects are executed through three primary methods: 1) development partnerships or tenant repairs; 2) Port capital projects through construction contracts; and 3) Port capital and ongoing repair projects conducted by pile drivers, roofers, iron workers, plumbers, and laborer staff within the Port Maintenance Division. Port capital projects are designed using in-house resources and as-needed consultants in specific areas as needed, including historic preservation professionals. Those projects that require in-water marine construction are constrained by tidal cycles and also must navigate a myriad of conditions to protect environmental resources (e.g. no pile or marine work during fish spawning season; Migratory Bird Treaty Act protections of western gull nesting season).

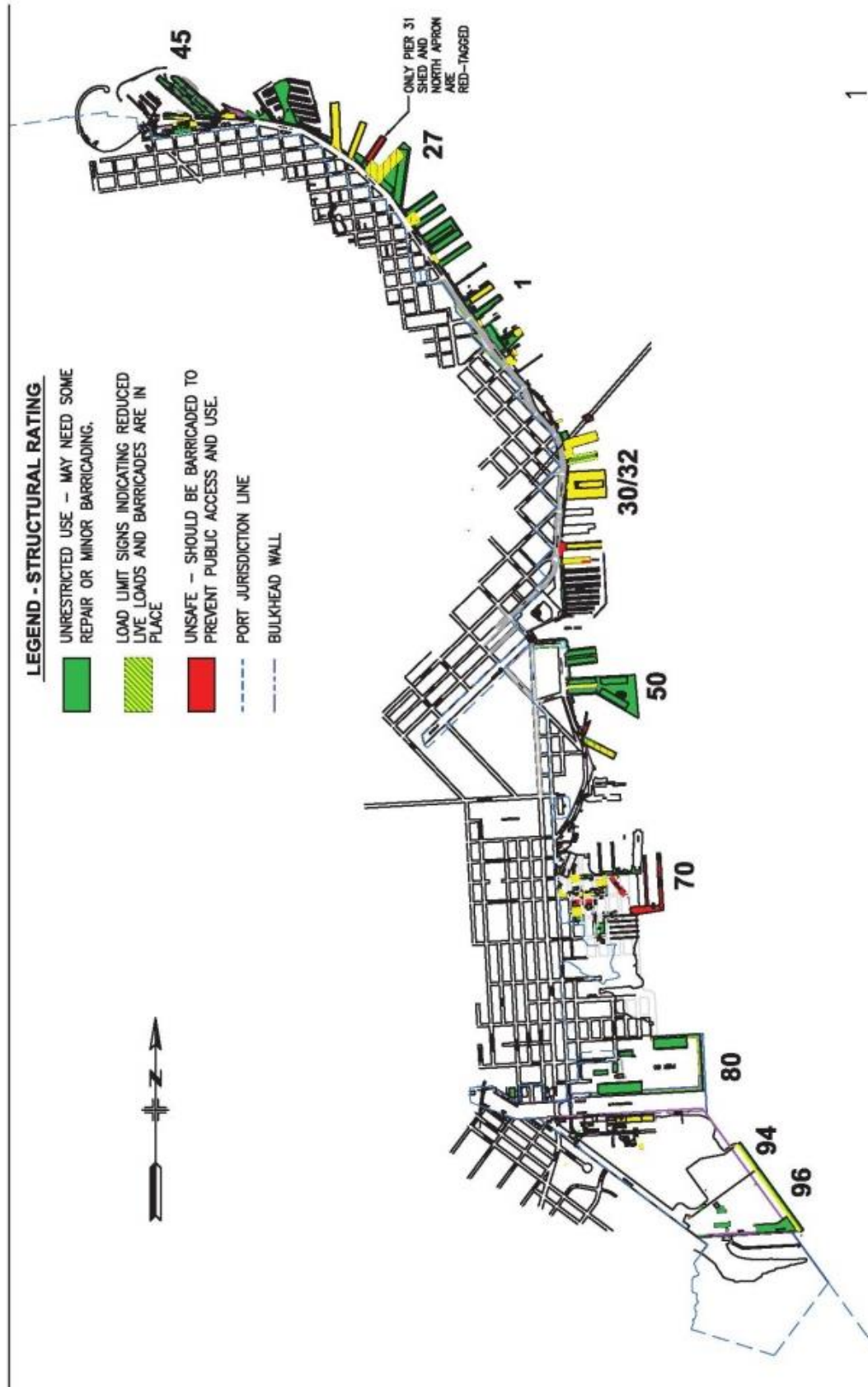
Because repair and maintenance needs exceed available capital resources, the Port has established a process with involvement of all Port divisions to identify needs and priorities, shown in **Figure 2**. The capital budget criteria are:

- Public Safety (addresses code & regulatory issues)
- Asset Management (addresses Port liability issues, creates or maintains revenue)
- Port Mission (promotes maritime commerce, protects resources, improves environmental sustainability, and attracts people to waterfront)

Port Planning and Engineering staff, including the Port Fire Marshal’s history and experience in addressing rehabilitation and repairs of Embarcadero Historic District pier facilities led to development of repair and safety guidelines to provide focused attention for these resources, including treatments to facilitate compliance with Secretary Standards.

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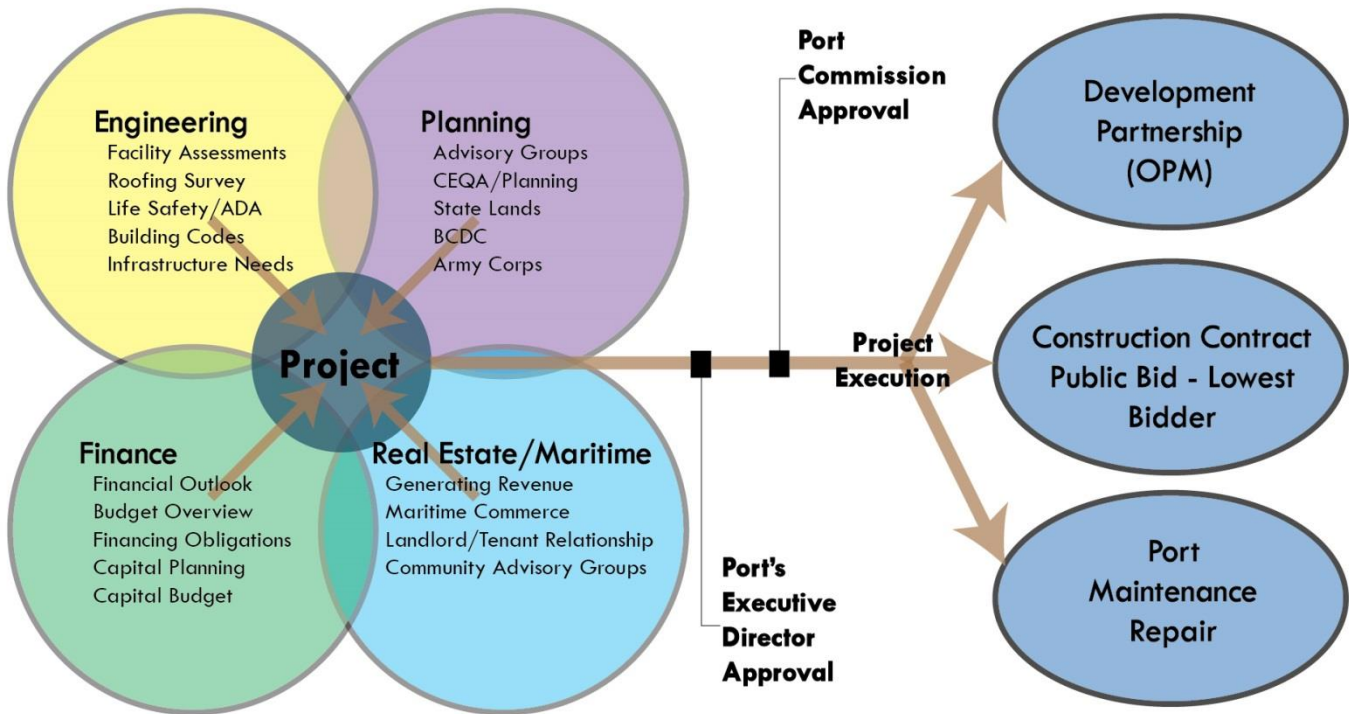
<sup>6</sup> [Port Commission Pier Condition Staff Report and Exhibits](#)



Map 2. Rapid Structural Assessment Rating

Figure 2. Project Collaboration & Process.

# Historic Rehabilitation & Maintenance Project Collaboration



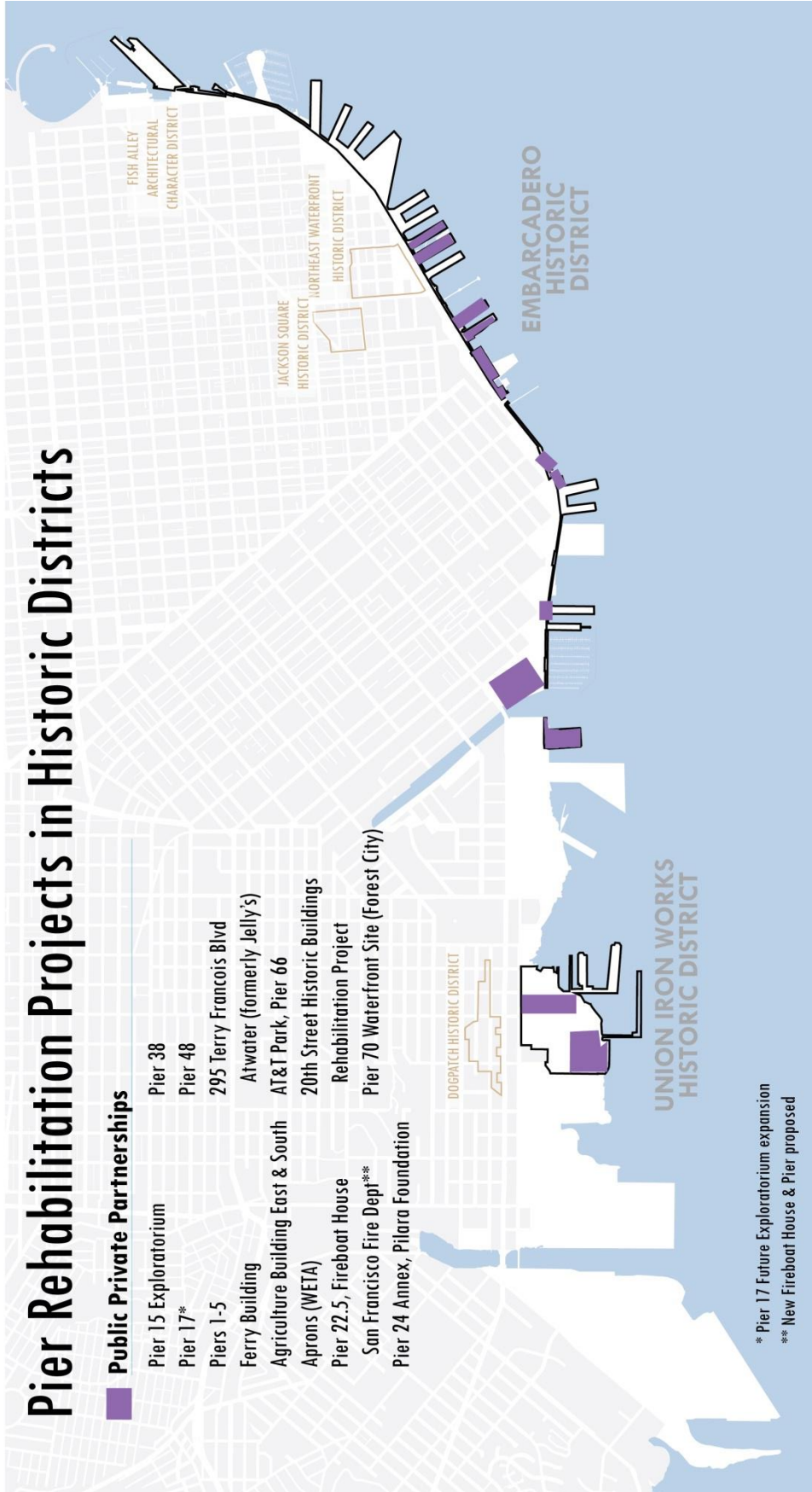
Finger Pier Exiting Guidelines. The Finger Pier Guidelines integrate Port Building Code and Historic Building Code criteria with acceptable alternative design practices for treatments specifically designed for Embarcadero Historic District finger piers to comply with life safety and fire exiting requirements that comply with Secretary Standards. Additionally, the Finger Pier Guidelines incorporate requirements of the Port’s ADA Transition Plan, adopted in 2004, which satisfy a mandated barrier removal plan in a manner also consistent with Secretary Standards.

Pier and Bulkhead Wharf Substructure Repair Historic Guidelines (Substructure Historic Guidelines). The Substructure Historic Guidelines were developed to facilitate the Port’s on-going pier and bulkhead wharf substructure maintenance, and include criteria for repairs, materials and construction to protect the integrity of the Embarcadero Historic District.

## CONCLUSION

The Port’s waterfront historic resources represent an important chapter in the creation and development of San Francisco, and establish a unique urban design context for improvements under the Waterfront Plan. The Port’s commitment to historic preservation is demonstrated by the care it has taken to integrate historic resource stewardship into its development, leasing, maintenance, and capital planning operations. However, with passing time and new conditions posed by sea level rise and need for seismic improvement of the Seawall, waterfront improvement and historic rehabilitation efforts will require more resources and dedicated effort by the Port and City, which is being addressed in the Waterfront Plan Update planning process.

6 | APPENDIX

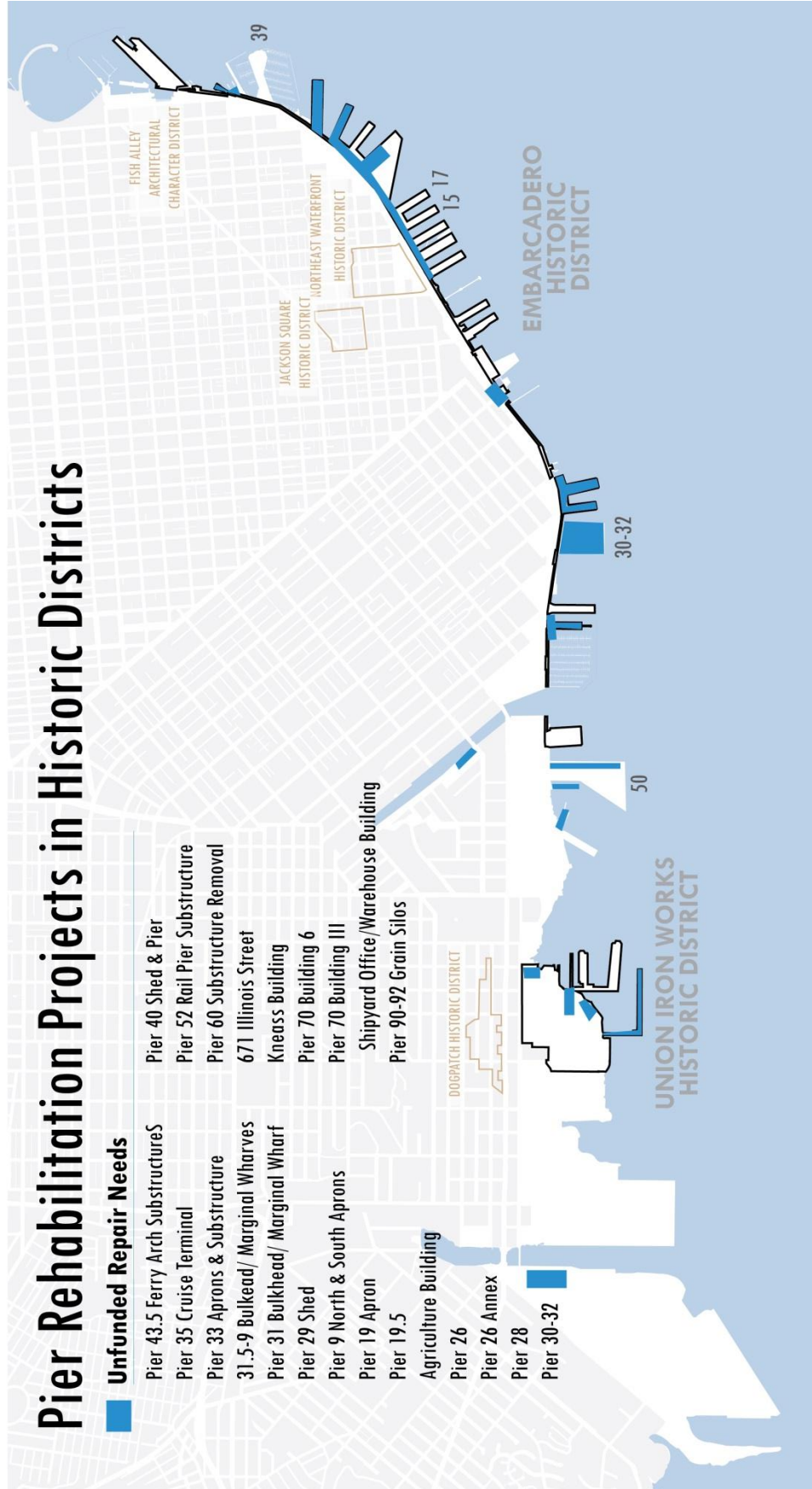


**Map 3.** Pier Rehabilitation Projects in Historic Districts

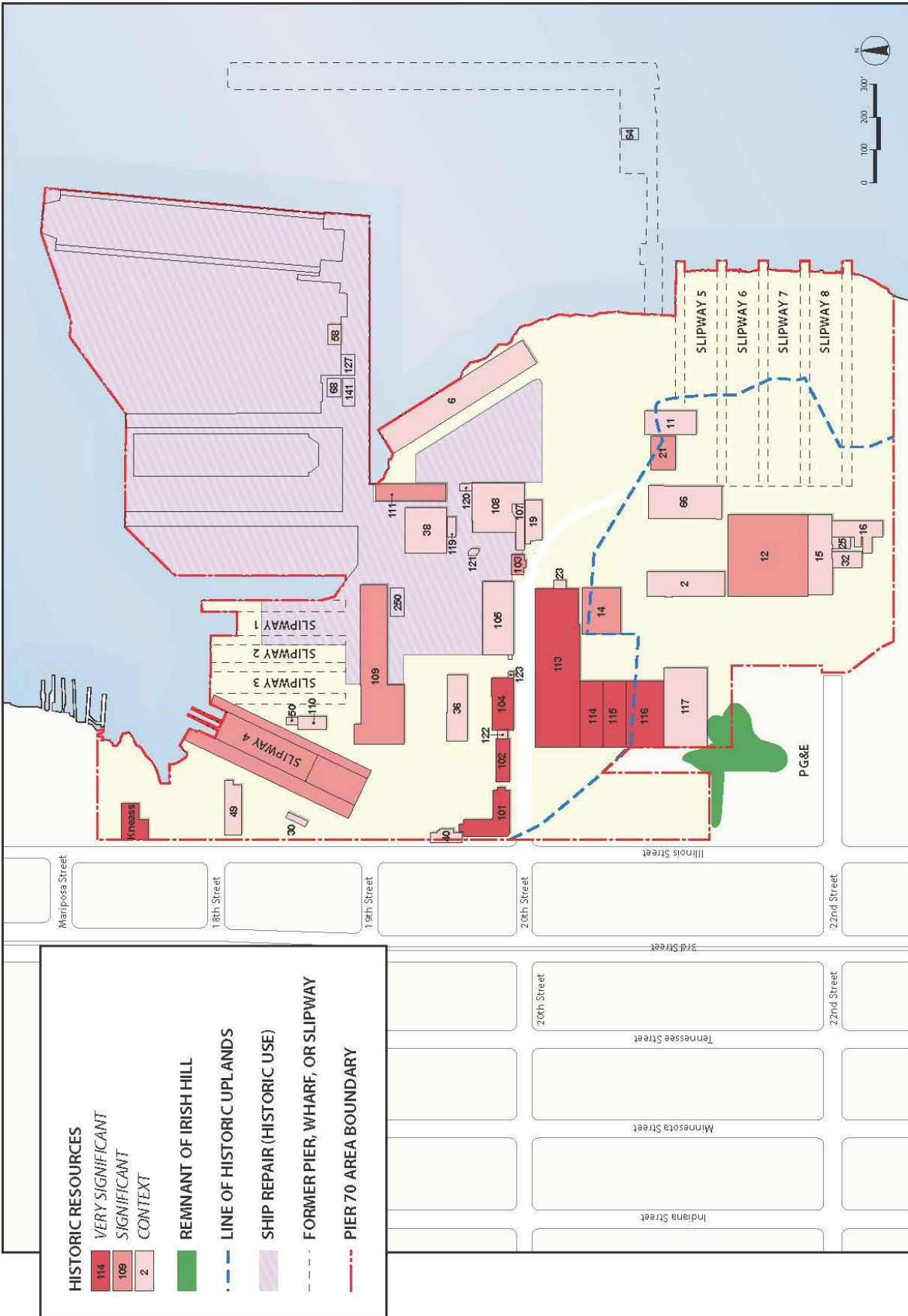




**Map 4.** Pier Rehabilitation Projects in Historic Districts



**Map 5.** Pier Rehabilitation Project Needs in Historic Districts



Map 6. Pier 70 Union Iron Works Historic District

**BULKHEAD WHARF AND SEAWALL LOCATION BY SECTION**  
**Embarcadero National Register Historic District (Pier 45 - 48 at China Basin)**

Source: Board of State Harbor Commissioners 1924 Biennial Report

**Legend**

- Section B - 1000' between Taylor and Powell Streets - Constructed 1914.
- Section A - 561' between Powell and Stockton Streets - Constructed in two parts in 1914.
- Section 1 - 1000' between Stockton and Kearny Streets - Constructed in two parts in 1913-14 & 1914-15.
- Section 2 - 1000' between North Point and Francisco Streets - Constructed in two parts in 1914-16 & 1917-19.
- Section 3 - 1000' between Francisco and Lombard Streets - Constructed in three parts in 1915-16, 1917-18 & 1918-19.
- Section 4 - 1000' between Lombard and Union Streets - Constructed in two parts in 1920 and 1921-22.
- Section 5 - 1000' between Union and Vallejo Streets - Constructed in four parts in 1912-13, 1914-15, 1921-22 & 1930-31.
- Section 6 - 800' between Vallejo and Pacific Streets - Constructed in three parts in 1916-17, 1917 & 1920.
- Section 7 - 980' between Pacific and Clay Streets - Constructed in six parts in 1894-95, 1909, 1916, 1920, 1921-22 & 1929-30.
- Section 8a - 392' between Clay and Market Streets - Constructed 1894-95.

- Section 8b - 450' between Market and Mission Streets - Constructed 1915.
- Section 8 - 300' between Mission and point north of Howard Streets - Constructed 1915.
- Section 9a - 990' south of Mission to Folsom Street - Constructed 1913 and demolished in 1975 and 1983.
- Section 9b - 788' between Folsom and Harrison Streets - Constructed 1913, all but 60' was demolished in 1983.
- Section 9 - 990' south of Mission to Folsom Street - Constructed in two parts in 1909-10.
- Section 10 - 537' north of Beale to Main Street - Constructed 1910-11.
- Section 11a - 287' south of Main to Beale Street - Constructed 1912-14.
- Section 11 - 353' north of Beale to Fremont Street - Constructed 1909-10.
- Section 12 - 1167' between Fremont and King Streets - Constructed in two parts in 1909.
- Section 13 - 600' between King and Berry Streets - Constructed in two parts in 1917-18 & 1935-36.
- Pier 46 Section - 236' between Berry Street and China Basin Channel - Constructed in 1914.
- Pier 48 Section - 500' north side of Pier 50 to China Basin Channel - Constructed 1926-29.



**Map 7. . Bulkhead Wharf and Seawall Location by Section**