D. CULTURAL RESOURCES

Section 4.D, Cultural Resources, considers both archeological resources, tribal cultural resources, and historic architectural resources. Archeological resources are discussed first, followed by a separate discussion of historic architectural resources that begins on p. 4.D.33.

ARCHEOLOGICAL RESOURCES

This subsection assesses the potential for the presence of archeological resources within the project site, provides a context for evaluating the significance of archeological resources that may be encountered, evaluates the potential impacts (project and cumulative) of the Proposed Project on archeological resources, and provides mitigation measures that would avoid or reduce potential impacts on archeological resources.

An independent consultant has prepared an Archeological Research Design and Treatment Plan (ARDTP) for the project site.[1] The research and recommendations of the ARDTP are the basis for the information and conclusions of this EIR section with respect to archeological resources.

The information in the ARDTP used in the preparation of this subsection was obtained from regional databases, plans, and reports relevant to the Proposed Project, including the San Francisco Maritime National Historical Park photographic collection; the San Francisco History Center at the San Francisco Public Library; Sanborn Fire Insurance maps;[2] San Francisco newspapers; the California Digital Newspaper Collection, sponsored by the University of California, Riverside; the Online Archive of California; the Union Iron Works Historic District National Register Nomination Form; the Library of Congress; and the David Rumsey Map Collection, which also provided useful sources of online maps, including those from the U.S. Coast and Geodetic Survey, U.S. Geological Survey, and official City and County survey maps. Other relevant primary references include (but are not limited to) historic photographs and aerial images, City directories, U.S. Census data, and municipal reports.

[1] ESA, *Pier 70 Mixed-Use District Project, City and County of San Francisco, Archaeological Research Design and Treatment Plan,* June 2015.

[2] Sanborn Maps is an American publisher of maps of U.S. cities and towns. The maps were initially created to estimate fire insurance risks, and are now used as a record of roads and structures extant at the time.

ENVIRONMENTAL SETTING

PREHISTORIC AND HISTORIC CONTEXTS

The following discussion outlines the prehistoric context of the project site, based on relevant chronological prehistoric archeological sites on the San Francisco peninsula and in the San Francisco Bay Area.

Prehistoric Context

The oldest evidence of human occupation in San Francisco includes two isolated human skeletons discovered 45 years apart deep below City streets in marine deposits. In October 1969, fragmentary human bones were encountered during construction of the BART Civic Center Station in downtown San Francisco. Radiocarbon dating of associated organic material indicated the remains were nearly 5,000 years old. The skeleton was discovered 75 feet below ground surface within a 40-foot-thick clayey silt stratum (bay deposits), approximately 26 feet below mean sea level. More recently, an intact human skeleton was found during construction of the Transbay Transit Center in February 2014. The human remains were encountered at a depth of 58 feet below ground surface within a compressible marine clay known as Bay Mud deposits, and are estimated to be between 5,000 to 7,000 years old. The majority of known prehistoric sites in San Francisco are no more than 2,000 years old and were found buried at depths of approximately 10 to 20 feet below ground surface.

Near the southeastern shoreline of San Francisco, most of the prehistoric sites are shell midden sites, which have their greatest known concentrations in the South of Market neighborhood (north of the project site) and the Hunters Point-Bayview-Candlestick Point-Visitacion Valley area (south of the project site). A National Register-eligible district that incorporates several prehistoric sites is within sand dunes formed along the north side of historic Mission Bay, within the South of Market neighborhood approximately 1.5 miles north of the project site. These sites are considered to represent elements of a large prehistoric multi-village community. No prehistoric archeological sites have yet been encountered on the project site.

California prehistory consists of following periods: the Terminal Pleistocene period (11,500-9,600 B.C.), characterized by small and highly mobile populations of hunter-gatherers; the Early Holocene period (9600-5700 B.C.), characterized by semi-mobile hunter-gatherers who used flaked stone tools and ground stone implements; the Middle Holocene period (5700-1800 B.C.), characterized by substantial settlements, isolated burials, distinct cemeteries, milling slabs, mortars and pestles, and the fabrication and use of shell beads and other ornaments; and the late Holocene period (1800 B.C.-A.D. 1780), characterized by establishment of large shellmounds, exploitation of deer, sea otter, mussels, and clams (by the Yelamu Ohlone tribe in the San

Francisco peninsula), and brought to a close by disruption of the Mission system, disease, and displacement with European contact.

Historic Context

Spanish Period (1776-1820)

The historic period begins with the first European expedition into the San Francisco Bay Area in 1772 by Pedro Fages and his party. During the Spanish Period (1776-1820), the Spanish established Mission San Francisco de Asís (also known as Mission Dolores) in 1776 on land occupied seasonally by the Yelamu Ohlone. No permanent Ohlone or Spanish settlements were present in the vicinity of the project site during the Spanish Period. The Spanish missionaries used portions of what are now the Potrero Hill and Dogpatch neighborhoods, including the territory around the project site, as pasture for livestock known as Potrero Nuevo, or "new pasture."

Mexican Period (1821-1848)

During the Mexican Period (1821-1848), following the ceding of Spain's North American colonial outposts to the newly independent Republic of Mexico in 1822, Upper California became a province of the Republic of Mexico. In 1833–1834, the Mexican government secularized the Spanish missions, and many mission lands were also subsequently granted to wealthy and politically influential individuals who established vast cattle raising estates, or ranchos. During the Mexican period, Potrero Hill, including Potrero Point, became part of a large rancho known as Rancho Potrero de San Francisco, which was granted by the Mexican government to the sons of Francisco de Haro. Potrero Point is the geographical name for the eastern arm of the Potrero Hill natural landmass extending into San Francisco Bay. It includes those portions of the project site that are not on filled land, the Illinois Parcels and the southeastern area of the 28-Acre Site. The project site remained undeveloped throughout the 1840s. War between the United States and Mexico broke out in 1846. American attempts to seize control of California quickly ensued, and within two months California was taken by the United States. Skirmishes between the two sides continued until California was officially annexed to the United States on February 2, 1848.

Gold Rush Period (1849-1959)

The discovery of gold in the Sierra Nevada in 1848 began the Gold Rush Period (1849-1959). During this period, immigrants poured into the California territory seeking gold or associated opportunities. To accommodate the growing population, the City soon spread out in all directions. During the early Gold Rush period, the project site was located far beyond the sparsely populated southern edge of development that was concentrated to the north. The project site remained undeveloped throughout the 1850s, with the exception of a single structure in the

northern portion of the project site and a dirt track that traversed the southwestern corner. A powder magazine (a place used for artillery storage) along with several other structures and piers were present just south of the project site in 1859. In addition, the Tubbs Cordage Company's rope-making facility, which was established in the mid-1850s and included a 1,000-foot-long rope walk, was approximately 0.25 mile south of the project site. Historic maps and charts of San Francisco indicate that at the time of the Gold Rush and in the decade following, land reclamation off Potrero Point had not yet begun, and the eastern and northern portions of the project site were within San Francisco Bay.

Late Nineteenth Century (1860-1899)

In the late nineteenth century, development of the project site occurred at a steady pace. Industrial complexes were established in the northern and eastern portions of the project site, and residential and commercial neighborhoods were founded on Irish Hill in the southern and western portions, as described below.

INDUSTRIAL COMPLEXES

Little development took place around Mission Bay and San Francisco's southern waterfront before the mid-1860s, with only a limited amount of filling along the northern shores of Mission Bay. Further south, Potrero Point made an ideal manufacturing area for hazardous materials. The E. I. du Pont de Nemours Company was one of the first manufacturers to exploit this region, setting up a facility to manufacture black powder in 1854. Over the following decades, the Tubbs Cordage Company/San Francisco Cordage Manufactory, Pacific Rolling Mills, and City Gas Company Works moved to the Potrero district.

By the early 1860s, the City's early wooden shipbuilders abandoned the crowded shoreline along Steamboat Point in San Francisco's South of Market district for the deep waters and vacant lands around Potrero Point. In 1862, John North moved his shipbuilding operation from Steamboat Point to a location in Potrero Point immediately south of the Pacific Rolling Mills facility at the foot of present-day 22nd Street. This was the first shipyard established on Potrero Point. North's shipyard built a wide variety of vessels, but focused mostly on building wooden-hulled steamers for use in San Francisco Bay and inland waterways. The shipyard continued to operate at the same location until the 1890s.

Following the establishment of shipyards on Potrero Point in the early 1860s, development of the Pacific Rolling Mills Company began in 1866, and it operated at Potrero Point from 1868 until around 1900. The Pacific Rolling Mills, the first significant iron and steel mill in the West, produced machinery and specialized steel parts for the mining industry, construction, shipbuilding, and rail equipment.

By 1869, a network of roads crisscrossed the project site, with numerous structures dotting Potrero Point and several piers and a large wharf associated with Pacific Rolling Mills present on the waterfront along the eastern edge of the project site. Although some infilling along the shoreline had begun during the 1860s, the eastern and northern portions of the project site were still within San Francisco Bay at the end of the decade.

The Union Iron Works shipyard opened at Potrero Point in 1884 with a machine shop (Building 113), plate shop, pattern shop, foundry, smith shops, and slipways. The next year the yard launched the *Arago*, the first steel hull ship produced by Union Iron Works and launched on the West Coast, and one of the first steel hull ships completed in the country. In 1885, after the yard's success with the *Arago*, Union Iron Works secured naval contracts, initiating a relationship between the U.S. Navy and the yard that lasted through World War II. During the late nineteenth century, the shipyard completed some of the most famous warships of the Spanish-American War, including the USS *Oregon* and the USS *Olympia*.

The 1886 Sanborn map shows North's shipyard in the southeast corner of the project site; by that time North had sold his shipyard to new owners. The Sanborn map also shows the layout of the Pacific Rolling Mills in the northeast portion of the project site and a single "old" structure and two marine railways extending offshore from the base of the bluff. In addition, the map indicates that the former location of Henry Ewing's shipyard, near the present-day intersection of Illinois and 20th streets, had been filled between 1883 and 1886. By 1886, this location was covered with boardinghouses and other businesses that had proliferated on Irish Hill since the late 1860s.

IRISH HILL NEIGHBORHOOD, 1860-1885

When shipbuilders began to move from Steamboat Point to Potrero Point in the early 1860s, a significant residential labor force was attracted to the area. A large number of these workers were Irish immigrants, and the residential neighborhood that grew up around the industrial complex on Potrero Point became known as Irish Hill.

As industrial development of Potrero Point expanded, the number of boardinghouses and other businesses focused on serving working-class residents expanded as well. A large number of boardinghouses, cottages, and saloons were located along Illinois Street south of 20th Street as early as 1869. Although only sparse topographic information is included on the 1886 Sanborn map, it gives a detailed impression of the stark difference between the industrial complexes that occupied the level ground just above sea level and the residential and commercial neighborhood that surrounded them on the higher-elevation uplands of Irish Hill.

The 1870 census data confirms that residents of the project site included a high percentage of working-class immigrants whose jobs covered a wide range of primarily blue-collar occupations.

Although the area historically came to be known as Irish Hill, there were residents originating from countries other than Ireland as well, including the United States, England, Wales, various regions of what was to become Germany, Canada, Norway, Denmark, Sweden, and Australia. There were five Chinese residents who were young single males, aged 17-29, following that group's immigration pattern. Accounts of the North shipyard suggest that Chinese laborers may have been employed by the Potrero Point shipbuilders during the 1860s. Many of the area's residents were born in other parts of the U.S. and came west following the Gold Rush. The 1880 census did not list any Chinese residents. None of the residents from the 1869 directory still lived in the area by 1880.

Twentieth Century (1900-Present)

INDUSTRIAL COMPLEXES

The 1886 and 1900 Sanborn Maps indicate that, physically, relatively minor changes occurred in Potrero Point during that 14-year period. The 1900 Sanborn map indicates that the Pacific Rolling Mills facility expanded slightly to the west and included a machine shop, punching sheds, horseshoe storage, and offices. The Union Iron Works expanded its facility south between Michigan and Georgia streets for the extension of a spur rail line. In the southeast corner of the project site, North's shipyard, present on the 1886 Sanborn map, is no longer present on the 1900 Sanborn map; presumably, it had been removed by the expansion of the Pacific Rolling Mills facility. In 1900, the Risdon Iron & Locomotive Company acquired the Pacific Rolling Mills facility, and it operated on the same property from 1900 until 1911. Risdon produced mining equipment and developed some of the first and most successful gold dredgers.

In 1905, Charles Schwab purchased the shipyard on behalf of the Bethlehem Steel Corporation, the second largest steel manufacturer in the country. In the spring of 1908, Schwab personally oversaw upgrades to the yard's repair facilities, which allowed the yard to repair the Great White Fleet, the naval fleet that President Theodore Roosevelt ordered to sail around the world from 1907 to 1909 as a display of the country's growing military power.

By World War I, the Bethlehem Shipyard served as the headquarters of a West Coast shipbuilding complex, which included the Hunters Point Drydock, the Alameda Yard, and the U.S. Navy Destroyer Plant. New buildings designed by renowned San Francisco architects were constructed along 20th Street (outside of the project site), creating a grand entrance to the yard. The shipyard was expanded and modernized during the 1910s to include expanded infrastructure, a new plate shop (Building 109), and new foundries (Building 115/116). The 66 submarine destroyers produced by the yard made a substantial contribution to the World War I naval effort.

The yard survived the lean years after World War I on commercial ship construction and ship repair contracts. United States Maritime Commission contracts, starting in 1936, resulted in a new wave of modernization at the yard. Upgrades included a new boiler house (Building 103), a new steel warehouse (Building 117, located on the 28-Acre Site), and a yard-wide transformation from riveting to welding, which helped the yard adapt to standardized mass production that typified World War II ship production.

During the start of World War II, the shipyard was expanded to include new buildings and new and expanded slipways and wet basins along the waterfront. The shipyard was managed primarily by the U.S. Navy during the war. The most substantial development was the expansion of the southeastern slipways (Slipways 5 through 8, located on the waterfront on the 28-Acre Site) and construction of the New Yard shipbuilding facility (the Building 12 complex, also located on the 28-Acre Site), which was built by the Navy on the former destroyer plant in 1941. Building use became more specialized, with buildings designated and equipped for specific outfitting and ship repair activities. The repair yard, which contained structures and even equipment that dated back to the origins of steel shipbuilding in this country, was one of the best and the largest commercial repair yards in the country. During the war years, the yard built over 70 ships and repaired 2,500 others.

After World War II, the yard continued to build government and commercial ships into the 1970s. In the early 1980s, the Bethlehem Steel Company went bankrupt and sold the shipyard to the Port of San Francisco. Todd Shipyards purchased much of the machinery and leased portions of the yard for ship repair. Today, BAE Systems Ship Repair leases portions of the yard from the Port of San Francisco and continues to operate a ship repair facility on site, making the yard the longest operating steel hull ship repair yard in the country.

In 2014, the Potrero Point industrial complexes on Pier 70 were listed on the National Register Historic District as the Union Iron Works Historic District (see “Union Iron Works Historic District” in Chapter 2, Project Description, pp. 2.9-2.10). The Union Iron Works Historic District is a maritime industrial district that is historically significant at the national level for its association with the development of steel hull shipbuilding in the United States, including its pioneering technological developments in shipbuilding, and the production of significant wartime vessels. The Union Iron Works Historic District is also significant at the local level because it is a physical record of the trends in industrial architecture from the late nineteenth century through World War II.

IRISH HILL NEIGHBORHOOD, 1900-1914

The 1900 Federal census shows the working-class neighborhood of Irish Hill was not only in place at the turn of the century, but continued to attract new immigrants to the area. The dates of

immigration for the residents show that many of them had arrived between 1880 and 1900. San Francisco, including the Irish Hill neighborhood, which was dominated by industry as noted above, was a place of employment and possibility. Although there is a spattering of surnames, "Irish Hill" was just that, a place of work and residence for families from Ireland and other countries, as well as single boarders and servants.

Although the overall outline of Irish Hill did not change dramatically between 1900 and 1914, all residential housing between the Georgia and Maryland street alignments had been eradicated by 1914. The density of residential housing between the Illinois and Georgia street alignments had also decreased substantially. In addition, in the southwest corner of the project site, on much of the Illinois Parcels and the southwestern area of the 28-Acre Site, Irish Hill had been cut back between Illinois and Michigan streets and the boardinghouses there replaced by a large steel fuel oil tank operated by the Western Sugar Refining Company. Just a few years later, by the end of World War I, all residential housing on Irish Hill had been removed.

PRIOR GROUND DISTURBANCE WITHIN THE PROJECT SITE

Establishing industrial operations within the project site involved extensive alteration of the native Potrero Point landform, including substantial cutting and filling. The gently sloping hillside of Irish Hill depicted on the 1859 U.S. Coast Survey chart was gradually leveled and the shoreline was altered through land reclamation. This process of cutting and filling to expand the industrial facilities continued throughout the late nineteenth century and into the twentieth century up to World War II.

The northwest portion of the project site (the northern part of 20th/Illinois Parcel in the Illinois Parcel site) once straddled the Potrero Point shoreline where it transitioned from an east-west to a north-south orientation. The area became reclaimed land when the shoreline and offshore tidelands were artificially filled beginning in the late 1860s, a process that was complete by 1886. After land reclamation, this location became a vibrant and thriving part of the Irish Hill community, and it remained so through the 1910s. Bethlehem Steel established offices there in the 1920s (Buildings 39 and 54, at the southeast corner of Illinois and 20th streets).

Although no precise nineteenth century topographic data are available for Irish Hill, early topographic renderings of the project site indicate that it originally extended to a height of approximately 100 feet above sea level. Gradual expansion of the adjacent industrial complexes reduced the overall footprint of Irish Hill over the course of the late nineteenth and early twentieth centuries.

Sometime between production of the 1914 Sanborn map and the 1938 Ryker aerial image, major excavations removed the majority of the upper surface of Irish Hill, reducing it to its current

elevation of 35 feet above sea level. A more severe geographic truncation of Irish Hill occurred during construction of the New Yard/Building 12 complex in 1941. Approximately 550 linear feet of Irish Hill were removed, including the entire eastern portion of the hill, west to its current extent. This construction event brought the entire eastern portion of Irish Hill down to the same grade as the remainder of the industrial complex, approximately 12 feet above sea level. Geotechnical investigation confirms that the area immediately east of the Building 12 complex and west of the slipways is shallow (2 to 3 feet) fill over bedrock. In addition to the construction of the Building 12 complex, the construction of Slipways 5 through 8 in 1941 was also a destructive process that severely impacted the landform on the 28-Acre Site.

Today, the project site's eastern portion (comprising a majority of the 28-Acre Site) and northwestern portion (roughly, the northern portion of the 20th/Illinois Parcel) are underlain by fill, consisting of locally quarried rock, sand, and clay with wood, slag, concrete, and brick debris. The fill layer is shallower upland to the west and becomes deeper towards the Bay to the east (up to 37 feet below ground surface). The fill layer is underlain by Bay Mud (from 2 to 40 feet thick), which is underlain by stiff clay and dense sand over bedrock. The southwestern portion of the project site (roughly, the southern portion of the 20th/Illinois Parcel and the Hoedown Yard) is underlain at grade by serpentine bedrock of the Franciscan Complex with localized pockets of fill. In the northeastern portion of the Illinois Parcels (the northwestern portion of the overall project site), weak Bay Mud is located below the fill, ranging in thickness from 2 to 6 feet; the Bay Mud generally increases in thickness toward the east, and is typically underlain by stiff clay and dense sand over bedrock.

ARCHEOLOGICAL RESOURCES THAT MAY BE PRESENT WITHIN THE PROJECT SITE

No prehistoric archeological sites have been recorded within a one-half-mile radius of the project site. The project site consists of surface or shallow bedrock in the western portion of the project site and fill over Bay Mud in the eastern and northern portions of the project site. As described under "Prior Ground Disturbance within the Project Site" on pp. 4.D.8-4.D.9, the entire project site has undergone massive land transformation during the late nineteenth and early twentieth centuries that is likely to have removed any traces of prehistoric surface deposits on the project site. Artificial fill overlaying Bay Mud and bedrock has a low potential for containing significant prehistoric archeological resources. For this reason, the focus of the remainder of this subsection is on historical property types.[3]

[3] Note, however, that the presence of prehistoric archeological resources within the project site cannot be conclusively ruled out. The ARDTP includes information about prehistoric archeological property types, as well as prehistoric research themes and questions, to provide a basis for study, evaluation and treatment of prehistoric archeological resources in the event that they are encountered during project construction.

Historical archeological sites qualify as CEQA "historical resources" if they are determined to be eligible for listing on the California Register of Historic Resources (CRHR). Archeological resources associated with the Union Iron Works Historic District discovered during project-related ground disturbance may be determined to be historical resources under CEQA. In this case, archeological resources within the project area may be considered eligible for listing on the CRHR and therefore qualify as CEQA historical resources if they are related to contributing elements of the Union Iron Works Historic District even if they are not considered significant for their data potential.

To be considered eligible to the CRHR, resources must possess physical integrity as well as integrity of setting. Historical archeological resources are typically evaluated relative to their ability to meet Criterion 4 of the CRHR, which states that the site has yielded, or may be likely to yield, information important in prehistory or history (California Code of Regulations 15064.6). An archeological resource may also be CRHR-eligible under Criterion 1, association with events that have made a significant contribution to the broad patterns of history; Criterion 2, association with the lives of historically important persons; or Criterion 3, association with the distinctive characteristics of a type, period, region, or method of construction.

Listed below are archeological resources that may be present within the project site based on the known historic activities at the project site. Research themes and questions are also presented to provide the basis for evaluating the information potential of features that may be encountered during construction under CRHR Criterion 4.

Subsurface Architectural Features

Subsurface architectural features include structural remains such as foundations, wall footings, basement walls, and floor remnants. This property type encompasses a wide variety of buildings and other structures. Within the project site, there is the potential to encounter subsurface architectural features from a variety of buildings in the former Union Iron Works/Bethlehem Steel industrial complex that have been demolished or removed over time. Demolition and excavation activities in the southeast portion of the project site will likely encounter the remains of Slipways 5 through 8, which are buried under modern fill and asphalt. Locations on the former, nineteenth century shoreline that have not been severely impacted by later development may contain buried features associated with shipbuilding or other maritime activities.

In many cases, architectural remains correlate with buildings and structures depicted on maps of the City, photographs, and other documents. When that occurs, the ability of those remains to contribute to important research themes may be limited, especially for later nineteenth and early twentieth century features, because it does not reveal any new information not already available in the documentary record.

Landscape Features

Landscape features in the archeological record are often ephemeral resources, such as fence lines and ditches, but they may give evidence of historic land uses. More substantial landscape features may include elements such as stone walls and aqueducts. While historic maps are critical to an understanding of landscape evolution, the research potential for landscape features varies and often depends on what is understood about historic land use from the documentary record. There is an unknown potential for encountering landscape features in the project site.

Infrastructure Features

Infrastructure includes those features related to development and maintenance of the City of San Francisco, such as roads, cisterns, sewer lines, drain pipes, power lines, water lines, and hydrants. Infrastructure features often correlate to utility maps and the locations of architectural features such as buildings. Identification of these physical features is critical for anticipating potential project impacts on archeological resources, although the documentary record may already convey much historic information about the City's infrastructural development.

Infrastructure features most likely to be encountered within the project site would be associated with the former Union Iron Works/Bethlehem Steel industrial complex and the industrial activities that took place on the property. Utilities such as electrical lines, and hydraulic and pneumatic systems associated with steel shipbuilding, may be encountered throughout the former industrial complexes in the project site. In addition, a variety of rail spurs were installed throughout the complexes, and the location and configuration of these spurs has changed over the decades. Remnants of rail spurs from a number of different eras may be encountered during implementation of the Proposed Project. Finally, paving stones from streets within the complex may be encountered archeologically. The Union Iron Works Historic District National Register Nomination Form specifies that 20th Street paving stones are a non-contributing resource; however, additional paving stones encountered during project implementation should be evaluated separately.

Refuse Features

Refuse features that result from domestic and economic use of an area have proven to be one of the most useful sources of historical archeological investigation in urban settings. Two primary types of refuse features are recognized in archeological practice. Hollow-filled refuse features include refuse pits, privies, and wells. Discrete refuse features provide archeologists with a glimpse of the day-to-day practices of the occupants who used them. As such, these features frequently have the ability to address important research themes. Hollow-filled refuse features are commonly associated with late nineteenth century dwellings that were present in San

Francisco neighborhoods before later structures were built, and they are often the target of archeological testing programs.

Sheet refuse features (i.e., a layer or scatter of artifacts deposited on the ground's surface rather than in a hollow feature such as a pit, privy, or well) include broad artifact scatters as well as more ephemeral surface scatters that are often indicative of more extensive archeological deposits located beneath the surface. Sheet refuse often accumulates over a period of time. It may also be introduced as fill to raise low ground. The long time it may take to accumulate sheet refuse features can be problematic for archeologists, depending on the occupation history of the location under review. It may be difficult to draw conclusions from a sparse sheet refuse layer deposited over many years by several occupants.

The project site has the potential to contain refuse features associated with residences in the former areas of Irish Hill, as well as industrial refuse associated with the Union Iron Works/Bethlehem Steel complex or former shipyards. Refuse features could provide insights into the domestic and economic use of the project area and would be a useful archeological source.

Industrial Features

Industrial features are unique to industrial and manufacturing sectors such as the Pier 70 project site. Diverse industrial activities have taken place in the project site since development began there in the 1860s, including wooden shipbuilding; iron and steel manufacturing; engine, boiler, locomotive, and mining equipment construction; and steel-hull shipbuilding and repair. These industries may have left subsurface traces as each phase of expansion, modernization, and revitalization that took place on the project site. These features may be in primary or secondary contexts, and the significance of individual features would depend on integrity and potentially their relationship with contributing elements of the Union Iron Works Historic District.

HISTORICAL RESEARCH THEMES

The ARDTP identifies questions that may be addressed by the types of resources and kinds of data that the project site has the potential to contain. The research themes discussed below – consumer behavior, social status and identity, wharf and pier construction, land reclamation, and industrialization and technology – can be addressed only by using data from the archeological record (often in conjunction with the documentary record) rather than data from other sources such as archival records. The purpose of identifying the relevant research themes here is to help predict areas of special concern within the project site, given the property types that might reasonably be present. The significance of archeological remains encountered during testing or implementation of the Proposed Project would be considered in light of these themes.

Consumer Behavior

Historical material culture located within discrete hollow or sheet refuse features in former residential areas of Irish Hill may indicate the consumer behavior of residents of the project site. Objects discarded or lost in refuse deposits may illustrate the changes in both choice and utility of various nineteenth and twentieth century consumer goods. Discarded objects are an indicator of the availability of particular goods to residents of a household or neighborhood, or to business owners or employees. Consumer choice goes beyond simple availability of goods; consumer behavior can be linked to the expression of identity by both socioeconomic and ethnic groups. San Francisco's immigrant neighborhoods and the households comprising them had access to a wide array of consumer goods, and the choices individual residents or business owners or employees made in selecting goods can give insight into a variety of cultural processes that influence consumer choice.

There may be sheet refuse or hollow features associated with residential use of the project site. A variety of working class occupants lived in the boardinghouses and flats on the project site. Refuse features located in the project site would likely reflect consumption patterns of the residents and may augment current understanding of their cultural practices and daily lives. Refuse features may also represent broader consumption patterns about the community or society as a whole.

Social Status and Identity

Immigrant neighborhoods, such as San Francisco's late nineteenth century Irish Hill neighborhood, provide a unique opportunity for examining how individuals and families represent and portray their social identity and socioeconomic status. Using the historical record, including City directories and census data, researchers can identify basic information about an individual or family's identity and socioeconomic status; using the archeological record, researchers can investigate how an individual or family materially expressed their identity. Material remains on the project site would likely reflect the particular social and ethnic backgrounds of former residents of Irish Hill. Archeological deposits from households with mixed socioeconomic classes may indicate that different families experienced the neighborhood in different ways. In addition, boardinghouses, such as those on Irish Hill, can leave different signatures than family-related deposits in the archeological record.

Wharf and Pier Construction

Remnants of wharf and pier construction may be found on the project site. After the City's economic involvement with the Gold Rush faded, City residents began to explore other means of economic growth. Transportation, especially by water, became critical. Construction of wharves

and associated docks was an early competition in the rapidly growing San Francisco shoreline areas. Historic maps of the project site indicate that shipyards in the northwest and southeast portions of the project site had wharfs, which may be preserved within or beneath artificial fill.

If wharf, pier, or dock resources exist within the project site, their primary research value is likely related to the technology involved in their construction. Themes of potential research would include construction of the wharf (pilings, cribs, or other features), techniques used in the construction typical of their time and locale, and the potential for local (unique to San Francisco) innovation in wharf construction.

Land Reclamation

Local environmental, economic, and historical developments led to the creation of new land in the project site. In order to create this land, the overall landscape had to first be envisioned and then reworked to meet local needs over time. During the twentieth century, when mechanization and technology allowed for more expansive reclamation, filling events were more deliberate and covered a larger area. Within the project site, systematic removal of most of Irish Hill resulted in spoil used to create new lands to the east; beginning in 1941, the U.S. Navy used these lands to expand the shipyard. Encountering archeological features related to the land reclamation process, such as landfill retaining structures, during implementation of the Proposed Project may lead to a more comprehensive understanding of how land reclamation was accomplished and developed over time.

Industrialization and Technology

The archeological record is an important source of information on technological development that is often absent from the documentary record. Archeological remains associated with any of the various industrial facilities that operated within the project site may be encountered during implementation of the Proposed Project (including shipyards operated by John North and Henry Ewing in the early 1860's; the Pacific Rolling Mills Company, which operated from 1868, and its successors; and the Union Iron Works, which operated from around 1884, and its successors). It is likely that foundries, boiler shops, and shipbuilding activities left deposits that may give insight into industrial processes and technologies. These could include evidence of what production activities were carried out in relation to other activities, workplace conditions, what materials and products were consumed, and what waste products were produced. The potential also exists for specific features to be historically significant and therefore qualify as a CEQA historical resource based on their association with the Union Iron Works Historic District.

REGULATORY FRAMEWORK

Under CEQA, archeological resources are considered to be part of the physical environment; thus, CEQA requires that projects be analyzed for their potential to adversely affect archeological resources (CEQA Section 21083.2). For projects that may have an adverse effect on a significant archeological resource, CEQA requires preparation of an EIR (CEQA Section 21083.2 and CEQA Guidelines Section 15065). CEQA recognizes two different categories of significant archeological resources: "unique" archeological resources (CEQA Section 21083.2) and archeological resources that qualify as "historical resources" under CEQA (CEQA Section 21084.1; CEQA Guidelines Section 15064.5). Assembly Bill 52 (AB 52) (Chapter 532, Statutes of 2014), effective July 1, 2015, amends CEQA by adding Public Resources Code Section 21704, which establishes a new category of cultural resources to be considered under CEQA, called "tribal cultural resources." AB 52 also amends CEQA by adding Section 21080.3.1, which establishes a new procedure for notification and consultation with California Native American tribes that are culturally affiliated with the geographic area of the proposed project.

DEFINING ARCHEOLOGICAL RESOURCES

An archeological resource can be significant as either a "unique" archeological resource or an "historical resource" or both, but the process by which the resource is identified under CEQA as one or the other is distinct (CEQA Section 21083.2(g); CEQA Guidelines 15064.5(a)).

An archeological resource is an historical resource under CEQA if the resource is:

- Listed on or determined eligible for listing on the CRHR; this includes archeological properties listed or eligible for the NRHP;
- Listed in a "local register of historical resources";[4] or
- Listed in an "historical resource survey."

Generally, an archeological resource is determined to be an historical resource due to its eligibility for listing to the CRHR or the NRHP under Criterion 4 because of its potential scientific value; that is, it "has yielded, or may be likely to yield, information important in prehistory or history" (CEQA Guidelines Section 15064.5(a)(3)). An archeological resource may also be CRHR-eligible under other evaluation criteria, such as Criterion 1, association with events that have made a significant contribution to the broad patterns of history; Criterion 2, association with the lives of historically important persons; or Criterion 3, association with the distinctive characteristics of a type, period, region, or method of construction. Appropriate treatment for archeological properties that are CRHR-eligible under criteria other than Criterion 4 may be

[4] A local register of historical resources is a list of historical or archeological properties officially adopted by ordinance or resolution by a local government (Public Resources Code 5020.1(k)).

different than treatment for a resource that is significant exclusively for its scientific value. Appropriate treatment for archeological resources significant under Criterion 1 (Events), Criterion 2 (Persons), and Criterion 3 (Design/Construction) may include an interpretive program to preserve and enhance the ability of an archeological resource to convey its association with historic events and persons and to convey its distinctive design/construction characteristics.

Failure of an archeological resource to be listed in any of these historical inventories is not sufficient to conclude that the archeological resource is not an historical resource. When the lead agency believes there may be grounds for a determination that an archeological resource is an historical resource, then the lead agency should evaluate the resource for eligibility for listing on the CRHR (CEQA Guidelines Section 15064.5(a)(4)).

"Unique archaeological resource" is a category of archeological resources created by the CEQA statutes (CEQA Section 21083.2(g)). An archeological resource is a unique archeological resource if it meets any one of the following three criteria:

- Contains information needed to answer important scientific research questions (and there is a demonstrable public interest in that information);
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Under CEQA, evaluation of an archeological resource as an historical resource is privileged over the evaluation of the resource as a unique archeological resource in that CEQA requires that "when a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5(c)(l)).

Evaluation of an Archeological Resource as Scientifically Significant

In requiring that a potentially affected archeological resource be evaluated as an historical resource – that is, as an archeological site of sufficient scientific value to be CRHR-eligible – CEQA presupposes that the published guidance of the California Office of Historic Preservation (OHP) for CEQA providers will serve as the methodological standard by which the scientific, and thus the CRHR eligibility, of an archeological resource is to be evaluated. As guidance for the evaluation of the scientific value of an archeological resource, the OHP has issued two guidelines: *Archaeological Resource Management Reports* (1989) and the *Guidelines for Archaeological Research Designs* (1991).

Integrity of Archeological Resource

Integrity is an essential criterion in determining if a potential resource, including an archeological resource, is an historical resource. In terms of CEQA, "integrity" can, in part, be expressed in the requirement that an historical resource must retain "the physical characteristics that convey its historical significance" (CEQA Guidelines Section 15064.5(b)).

For an archeological resource that is evaluated for CRHR eligibility under Evaluation Criterion 4, "has yielded or may be likely to yield information important to prehistory or history," the word "integrity" has a different meaning from the way in which it usually applies to the built environment. For an historic building, possessing integrity means that the building retains the defining characteristics from the period of significance of the building. In archeology, an archeological deposit or feature may have undergone substantial physical change from the time of its deposition, but it may yet have sufficient integrity to qualify as a historical resource. The integrity test for an archeological resource is whether the resource can yield sufficient data (in type, quantity, quality, or diagnosticity) to address significant research questions. Thus, in archeology "integrity" is often closely associated with the development of a research design that identifies the types of physical characteristics ("data needs") that must be present in the archeological resource and its physical context to adequately address research questions appropriate to the archeological resource.

Significant Adverse Effect on an Archeological Resource

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource significant. For an archeological resource that is an historical resource because of its prehistoric or historical information value, that is, its scientific data, a significant effect is impairment of the potential information value of the resource.

The depositional context of an archeological resource, especially soils stratigraphy (the characteristics of soil layers), can be contextually important to the resource in terms of dating and reconstructing its characteristics at the time of deposition and to interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible to the CRHR under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on the artifactual material but may include effects on the soils matrix in which the artifactual material is situated.

Mitigation of Adverse Effect on Archeological Resources

Preservation in place is the preferred treatment of an archeological resource (CEQA Section 21083.2(b); CEQA Guidelines Section 15126.4(b)(3)(a)). When preservation in place of an

archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation (CEQA Guidelines Section 15126.4(b)(3)(C)). In addition to data recovery, under CEQA, the mitigation of effects to an archeological resource that is significant for its scientific value requires curation of the recovered scientifically significant data in an appropriate curation facility (CEQA Guidelines Section 15126.4(b)(3)(C)) that is compliant with the OHP's *Guidelines for the Curation of Archaeological Collections* (1993).

To the extent that the significance of archeological resources encountered within the project site may be premised on CRHR Criterion 1 (Events), and/or 3 (Design/Construction) (archeological resources significant under Criterion 2 (Persons) are not anticipated), a program for interpretation and display of such artifacts would preserve and enhance the ability of such resources to convey their association with the site and to their significance under these criteria.

Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are to be deposited in the California Historical Resources Regional Information Center (CEQA Guidelines Section 15126.4(b)(3)(C)).

Effects on Human Remains

Under State law, human remains and associated burial items may be significant resources in two ways. They may be significant to descendent communities for patrimonial, cultural, lineage, and religious reasons. Human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendent groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines Section 15064.5(d); Public Resources Code Section 5097.98). CEQA and other State regulations concerning Native American human remains provide the procedural requirements to assist in avoiding potential adverse effects to human remains within the contexts of their value to both descendent communities and the scientific community.

Effects on Tribal Cultural Resources

AB 52, effective July 1, 2105, amends the CEQA statute to identify a new category of resource to be considered under CEQA, called "tribal cultural resources." It amends the Public Resources Code to add Section 21074, which defines "tribal cultural resources," as follows:

(a) "Tribal cultural resources" are either of the following:

  (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    A) Included or determined to be eligible for inclusion in the CRHR.

B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 adds Public Resource Code Section 21080.3.1, which establishes a new procedure for notification and consultation with a California Native American tribes that are culturally affiliated with the geographic area of the Proposed Project:

(d) Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

(e) The lead agency shall begin the consultation process within 30 days of receiving a California Native American tribe's request for consultation.

AB 52 adds Public Resource Code Section 21080.3.2(a), which provides,

> As a part of the consultation the parties may propose mitigation measures capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource. If the California Native American tribe requests consultation regarding alternatives to the project, recommended mitigation measures, or significant effects, the consultation shall include those topics. The consultation may include discussion concerning the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and, if necessary, project alternatives or the appropriate measures for preservation or mitigation that the California Native American tribe may recommended to the lead agency.

AB 52 Section 11(c) states, "This act shall apply only to a project that has a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015." As such, AB 52 does not apply to the Proposed Project, for which a Notice of Preparation was filed with the State Clearinghouse on May 6, 2015. Note, however, that the San Francisco Planning Department, in response to AB 52, has recently updated its CEQA Checklist to require evaluation of impacts on Tribal Cultural Resources. This updated San Francisco Planning Department CEQA Checklist has been used to evaluate impacts on Tribal Cultural Resources in this EIR.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE THRESHOLDS

The thresholds for determining the significance of impacts in this analysis are consistent with the environmental checklist in Appendix G of the State CEQA Guidelines, which has been modified by the San Francisco Planning Department. For the purpose of this analysis, the following applicable thresholds were used to determine whether implementing the Proposed Project would result in a significant impact related to archeological resources. Implementation of the Proposed Project would have a significant effect related to archeological resources if the project would:

D.1 Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code;

D.2 Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5;

D.3 Disturb any human remains, including those interred outside of formal cemeteries; or

D.4 Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.

Project impacts related to the potential for substantial adverse change in the significance of historic architectural resources (Significance Threshold D.1) are discussed below, under "Historic Architectural Resources," beginning on p. 4.D.33.

APPROACH TO ANALYSIS

This Archeological Resources section is based on background information provided in the ARDTP.

Archival Research

The ARDTP compiled a list of primary (especially historic-era maps) and secondary source material to research the historical context and the land use history for the project site. The historic data compiled in the site history and general context provide information in support of possible mitigation measures.

Historic maps were used to identify the changing Pier 70 landscape over time. Nautical charts from the U.S. Coast Survey (later the U.S. Coast and Geodetic Survey) and topographic maps from the U.S. Geological Survey were used to plot the changing Potrero Point shoreline and topography over the decades. Sanborn Fire Insurance maps and the high-resolution 1938 aerial photographs by Harrison Ryker were used to trace the expansion of the Potrero Point industrial

complexes, including the Union Iron Works, Pacific Rolling Mills, and, later, Bethlehem Steel. These sources were also consulted in regard to the topographic changes to Irish Hill over time.

Secondary sources, including the Union Iron Works Historic District National Register Nomination, provided a framework for targeted research and an understanding of past historic-era land use.

Geotechnical Data

Geotechnical investigations conducted within the project site were studied to determine the presence or absence of subsurface strata with the potential to preserve buried prehistoric and historical archeological resources.[5]

Native American Consultation

On March 19, 2015, Native American Heritage Commission (NAHC) letters were sent to request information on known Native American sacred lands within the project site and a listing of individuals or groups with a cultural affiliation to the project site. A response was received from the NAHC on April 27, 2015, noting, "A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area." The NAHC letter also provided a list of Native American individuals who may have knowledge about such cultural resources. On May 13, 2015, letters were sent to the nine individuals on the list. The letters provided a description of the project and project site maps, and solicited input and comment regarding their knowledge about sacred sites or traditional lands within the project site; no responses were received.[6]

As discussed above in "Effects on Tribal Cultural Resources" on pp. 4.D.18-4.D.19, the noticing and tribal consultation requirements of AB 52 (codified in Public Resources Code Section 21080.3) do not apply to the Proposed Project, for which a Notice of Preparation was filed with the State Clearinghouse on May 6, 2015, before enactment of AB 52.

Analysis of Scenarios

Those features of the Pier 70 Mixed-Use District Project that could have an effect on archeological resources, particularly the location, depth, and area of ground disturbance within the project site, as described below under "Project Features," are the same or substantially similar

[5] Treadwell & Rollo, *Preliminary Geotechnical Investigation, Pier 70, San Francisco, California*. Prepared for Forest City Development, 2012; and Treadwell & Rollo, *Preliminary Geotechnical Evaluation, Pier 70-Illinois/20th Street and Hoe Down Yard, San Francisco, California*, February 23, 2015.

[6] Matthew A. Russell, ESA, letter to Allison Vanderslice, San Francisco Planning Department, Re: Pier 70 Mixed-Use Project Native American Heritage Commission Contacts, November 5, 2015.

under the Maximum Commercial Scenario and the Maximum Residential Scenario, the three options for sewer/wastewater treatment, and the three options for grading around Building 12 that are analyzed in this EIR. To the extent that these features may differ somewhat from one to another, they are generally included and accounted for in an analysis of maximum ground disturbance within the project site. The same archeological regulatory requirements and mitigation measures applicable to the Proposed Project are equally applicable under the Proposed Project's scenarios and options. Therefore, this analysis of impacts on archeological resources applies to both scenarios and no separate analysis of impacts under each scenario or option is necessary.

PROJECT FEATURES

This section describes aspects of the Proposed Project that would cause ground disturbance within the project site under both scenarios.

Demolition

Buildings 11, 15, 16, 19, 25, 32, and 66, and portions of Slipways 5 through 8 would be demolished to construct the Proposed Project.[7] Demolition of the buildings would entail some ground disturbance to remove subsurface foundations. Partial demolition of Slipways 5 through 8, which are currently buried beneath approximately 6 to 7 feet of modern fill and asphalt, would involve substantial ground disturbance.

Grading and Excavation

The Proposed Project would involve excavation of soils for grading and construction of the 15- to 27-foot-deep basements planned on most of the parcels. The excavation plan indicates a total of nine separate areas of the Proposed Project (mostly in the 28-Acre Site) that would be excavated to a depth of 15 feet below ground surface, and two areas, closer to the Illinois Parcels, that would be excavated to a depth of 27 feet below ground surface. Construction of the anticipated new 20th Street pump station northeast of the project site, adjacent to Building 6 on the BAE Systems Ship Repair site, would also result in excavation to a depth of approximately 20 feet below ground surface. In addition, grading to open the new 21st Street alignment, extending east from Illinois Street, would potentially involve grading through the northernmost extent of the 35-foot-tall remnant of Irish Hill. The Proposed Project would raise the grade of the 28-Acre Site and low-lying portions of the Illinois Parcels by adding up to 5 feet of fill in order to help protect

[7] While Building 117 is located within the project site boundary, the Port has decided to demolish Building 117 prior to approval of the Proposed Project. The Port filed an application to demolish Building 117 on January 7, 2016, Case No. 2016-000346ENV. Any approval of demolition of Building 117 would undergo appropriate environmental review, as required by CEQA, and its demolition is analyzed as a cumulative project in this EIR.

against flooding and projected future sea level rise. The rehabilitation of existing Building 12 would be done under one of three grading options: raising the exterior grade, raising the exterior and interior grade, or raising the structural frame.

Geotechnical Stabilization

To address the potential hazard of liquefaction and lateral spreading that may occur during a major earthquake, the Proposed Project would include measures to reinforce the existing slope with a structural wall or ground improvements along the northeastern and southeastern portions of the project site (north and south of the Slipway structures). Structural wall solutions may include, but are not limited to, tied-back sheet pile walls (interlocking sheets of steel), rows of secant piles (interlocking piles), and king-pile walls (wider piles connected by sheeting). Ground improvements may consist of treatments such as deep soil mixing to add a cement slurry to strengthen the existing soil or vibratory methods such as vibro-compaction, vibro-replacement, and dynamic compaction to densify and strengthen the existing soil.

Utilities

Potable and Recycled Water

Potable and recycled water distribution piping would be constructed in trenches under the planned streets to carry water for drinking and firefighting needs. Connections to the existing water mains underneath 20th Street, Illinois Street, and 22nd Street would be made at the intersections of Illinois Street/22nd Street, Illinois Street/21st Street (a new street), and approximately midway along the project boundary at 20th Street.[8] If necessary, the water main underneath the western portion of 20th Street would be replaced.

Proposed Wastewater (Sewer) and Stormwater Treatment

The project sponsors anticipate retaining much of the existing combined sewer system that serves areas outside of the project site, where such continued use is acceptable to the SFPUC. The SFPUC's 20th Street pump station would be replaced as part of the Proposed Project. To handle increased sewage and wastewater flows from the Proposed Project's anticipated development, the project sponsors propose to construct new wastewater and stormwater infrastructure in trenches under the Proposed Project's roadway and open space network and connect it to an outfall structure, under one of three sewer and wastewater options.

[8] BKF, Pier 70, Proposed Utilities, Low Pressure Water System diagram, February 26, 2015.

Electricity and Natural Gas

The Proposed Project would replace overhead electrical distribution with a joint trench distribution system following the proposed roadway layout. The existing natural gas distribution system would be extended to cover the entire project site, and the piping would be realigned within the proposed roadway network to serve the project site.

IMPACT EVALUATION

Impact CR-1: Construction activities for the Proposed Project would cause a substantial adverse change in the significance of archeological resources, if such resources are present within the project site. ***(Less than Significant with Mitigation)***

Under the Proposed Project, soils would be excavated for grading and construction of the 15- to 27-foot-deep basements planned on most of the parcels. In addition, construction of the anticipated new 20th Street pump station northeast of the project site, adjacent to Building 6 on the BAE Systems Ship Repair site, would also result in excavation to a depth of approximately 20 feet below ground surface. The Proposed Project would result in a net export total of about 340,000 cubic yards of soil. Construction activities, in particular grading and excavation, could disturb archeological resources potentially located at the project site.

As described under "Prior Ground Disturbance within the Project Site" on pp. 4.D.8-4.D.9, the entire project site has undergone massive land transformation during the late nineteenth and early twentieth centuries that would likely have removed any traces of prehistoric surface deposits. Artificial fill overlaying Bay Mud and bedrock has a low potential to contain significant prehistoric archeological resources; however, the presence of prehistoric archeological resources within the project site cannot be conclusively ruled out. Historical archeological sites relating to former industrial and residential activities that could be encountered at the project site include subsurface architectural features, landscape features, infrastructure features, refuse features, and industrial features, as described above on pp. 4.D.10-4.D.12.

To the extent that archeological resources potentially present within the project site may be associated with the Union Iron Works National Register Historic District, their significance would also be premised on NRHP Criteria A (Events) and C (Architecture/Construction) and the corresponding CRHR Criterion 1 (Events) and Criterion 3 (Architecture/Construction). Data recovery or documentation alone would be inadequate to mitigate such impacts. Additional mitigation measures, such as an interpretive program, would need to be implemented. The definition of an interpretive program can be found in Mitigation Measure M-CR-1b: Interpretation, on pp. 4.D.29-4.D.30.

Unless mitigated, ground-disturbing construction activity within the project site, particularly within previously undisturbed soils, could adversely affect the significance of archeological resources under CRHR Criterion 4 (Information Potential) by impairing the ability of such resources to convey important scientific and historical information. This effect would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

Mitigation Measure M-CR-1a: Archeological Testing, Monitoring, Data Recovery and Reporting, presented below, calls for a qualified archeological consultant to prepare and submit a plan for pre-construction archeological testing, construction monitoring, and data recovery for approval by the San Francisco Environmental Review Officer (ERO).

Mitigation Measure M-CR-1b: Interpretation, pp. 4.D.29-4.D.30, calls for a qualified archeological consultant to prepare and submit a plan for post-recovery interpretation of resources. Implementation of an approved program of interpretation under Mitigation Measure M-CR-1b would preserve and enhance the ability of the resource to convey its significance under CRHR Criterion 1 (Events), Criterion 2 (People), and Criterion 3 (Architecture/Construction).

Mitigation Measure M-CR-1a: Archeological Testing, Monitoring, Data Recovery and Reporting

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 sponsors shall retain the services of an archeological consultant from rotational Department Qualified Archeological Consultants List (QACL) maintained by the Planning Department archeologist. The project sponsor shall contact the 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 four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a) and (c).

Consultation with Descendant Communities

On discovery of an archeological site[9] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative[10] 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 to consult with the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any 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.

Archeological Testing Program

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 potentially 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 to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

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. 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 sponsors either:

A) The Proposed Project shall be redesigned so as to avoid any adverse effect on the significant archeological resource; or

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.

Archeological Monitoring Program

If the ERO in consultation with the archeological consultant determines that an archeological monitoring program (AMP) shall be implemented, the AMP would minimally include the following provisions:

[9] The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

[10] 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 California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America.

- The archeological consultant, project sponsors, and ERO shall meet and consult on the scope of the AMP prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. A single AMP or multiple AMPs may be produced to address project phasing. In most cases, any soils-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to 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), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a 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 soils-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, pile driving activity that may affect the archeological resource shall be suspended 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. 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 sponsors either:

A) The Proposed Project shall be redesigned so as to avoid any adverse effect on the significant archeological resource; or

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.

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.

Archeological Data Recovery Program

If the ERO, in consultation with the archeological consultant, determines that an archeological data recovery programs shall be implemented based on the presence of a significant resource, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. The archeological consultant, project sponsors, 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 address the applicable research questions. Data recovery, in general, shall 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 portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing 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 on-site/off-site 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 non-intentionally 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.

Human Remains and Associated or Unassociated Funerary Objects

The treatment of human remains and of associated or unassociated funerary objects discovered during any soils 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 California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsors, ERO, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated

funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report

The archeological consultant shall submit a 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. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report. The FARR may be submitted at the conclusion of all construction activities associated with the Proposed Project or on a parcel-by-parcel basis.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. 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 the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure M-CR-1b: Interpretation

Based on a reasonable presumption that archeological resources may be present within the project site, and to the extent that the potential significance of some such resources is premised on CRHR Criteria 1 (Events), 2 (Persons), and/or 3 (Design/Construction), the following measure shall be undertaken to avoid any potentially significant adverse effect from the Proposed Project on buried or submerged historical resources if significant archeological resources are discovered.

The project sponsors shall implement an approved program for interpretation of significant archeological resources. The interpretive program may be combined with the program required under Mitigation Measure M-CR-4b: Public Interpretation. The project sponsors shall retain the services of a qualified archeological consultant from the rotational Department Qualified Archeological Consultants List (QACL) maintained by the Planning Department archeologist having expertise in California urban historical and marine archeology. The archeological consultant shall develop a feasible, resource-specific program for post-recovery interpretation of resources. The particular program for interpretation of artifacts that are encountered within the project site will depend upon the results of the data recovery program and will be the subject of continued discussion between the ERO, consulting archeologist, and the project sponsors. Such a program may include, but is not limited to, any of the following (as outlined in the ARDTP): surface commemoration of the original location of resources; display of resources and associated artifacts (which may offer an underground view to the public); display of interpretive materials such as graphics, photographs, video, models, and public art; and

academic and popular publication of the results of the data recovery. The interpretive program shall include an on-site component.

The archeological consultant's work shall be conducted at the direction of the ERO, and in consultation with the project sponsors. All plans and recommendations for interpretation by the consultant 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.

Implementation of the approved plan described in Mitigation Measure M-CR-1a would ensure that the significance of any CRHR-eligible archeological resource would be preserved and/or retained in place. If significant cultural resources are discovered, impacts would be mitigated through Mitigation Measure M-CR-1b.[11] With the implementation of Mitigation Measures M-CR-1a and M-CR-1b, the Proposed Project would not cause a substantial adverse change to the significance of an archeological resource, if present within the project site. Therefore, this impact would be less than significant with mitigation.

Impact CR-2: Construction activities for the Proposed Project would cause a substantial adverse change in the significance of human remains, if such resources are present within the project site. ***(Less than Significant with Mitigation)***

Because the project site has been substantially disturbed over the last two centuries, the possibility of discovering human remains is considered low. Although unlikely, it is possible human remains may be encountered during project implementation. Mitigation Measure M-CR-1a: Archeological Testing, Monitoring, Data Recovery and Reporting, presented on pp. 4.D.25-4.D.29, calls for compliance with applicable State and Federal laws regarding the treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity. This shall include immediate notification of the coroner of the City and County of San Francisco and the ERO and, in the event of the coroner's determination that the human remains are Native American remains, notification of the NAHC, who shall appoint an MLD (Public Resources Code Section 5097.98). The archeological consultant, project sponsors, ERO, and MLD shall make reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (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.

With implementation of Mitigation Measure M-CR-1a, the Proposed Project would not cause a substantial adverse change to the scientific significance of an archeological resource resulting

[11] ESA, *Pier 70 Mixed-Use District Project, City and County of San Francisco, Archaeological Research Design and Treatment Plan,* June 2015, p. 111 and pp. 125-126.

from the disturbance of human remains. Therefore, this impact would be less than significant with mitigation.

Impact CR-3: Construction activities for the Proposed Project would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code Section 21074, if such resources are present within the project site. ***(Less than Significant)***

As discussed above in "Native American Consultation" on p. 4.D.21, the NAHC was contacted by letter on March 19, 2015, to request information on known Native American sacred lands within the project site and to request a listing of individuals or groups with a cultural affiliation to the project area. A response was received from the NAHC on April 27, 2015, noting a records search indicated that no Native American cultural resources are known to be in the immediate vicinity of the project site. The letter also provided a list of Native American individuals who may have knowledge of cultural resources in the project site. On May 13, 2015, letters were sent to the nine individuals on the list, and to date no responses have been received.[12]

As discussed above in "Effects on Tribal Cultural Resources" on pp. 4.D.18-4.D.19, the particular noticing and tribal consultation requirements of AB 52 (codified in Public Resources Code Section 21080.3) do not apply to the Proposed Project for which a Notice of Preparation was filed with the State Clearinghouse on May 6, 2015, before enactment of AB 52.

A records search with the NAHC and outreach to individuals and groups with a cultural affiliation to the project site has yielded no evidence that any tribal cultural resources are present on the project site or that implementation of the Proposed Project would cause a substantial adverse change to the significance of any tribal cultural resources. For this reason, this impact would be considered less than significant.

Cumulative Impacts

Impact C-CR-1: Disturbance of archeological resources, if encountered during construction of the Proposed Project, in combination with other past, present, and future reasonably foreseeable projects, would make a cumulatively considerable contribution to a significant cumulative impact on archeological resources. ***(Less than Significant with Mitigation)***

Ground-disturbing activities of foreseeable projects, in particular (but not limited to) those along San Francisco's Central Waterfront, have the potential to disturb previously unidentified archeological resources that could yield information pertaining to common research themes identified for the Proposed Project in the ARDTP (consumer behavior, social status and identity,

[12] Matthew Russell, ESA, letter to Allison Vanderslice, San Francisco Planning Department, Re: Pier 70 Mixed-Use Project Native American Heritage Commission Contacts, November 5, 2015.

wharf and pier construction, land reclamation, and industrialization and technology). As such, the potential disturbance of archeological resources within the project site could make a cumulatively considerable contribution to a loss of significant historic and scientific information about California, Bay Area, and San Francisco history.[13]

As discussed above, implementation of the approved plans for testing, monitoring, and data recovery would preserve and realize the information potential of archeological resources. The recovery, documentation, and interpretation of information about archeological resources that may be encountered within the project site would enhance knowledge of prehistory and history. This information would be available to future archeological studies, contributing to the collective body of scientific and historic knowledge. With implementation of Mitigation Measure M-CR-1a: Archeological Testing, Monitoring, Data Recovery and Reporting, pp. 4.D.25-4.D.29, and Mitigation Measure M-CR-1b: Interpretation, pp. 4.D.29-4.D.30, the Proposed Project's contribution to cumulative impacts would not be cumulatively considerable.

As discussed under Impact CR-3, p. 4.D.31, there is no evidence that the Proposed Project would cause a substantial adverse change in the significance of a tribal cultural resource. For this reason, the Proposed Project in combination with past, present, and future reasonably foreseeable projects would not make a cumulatively considerable contribution to a significant cumulative impact on tribal cultural resources.

[13] As discussed above on p. 4.D.9, massive land transformation within the project site during the late nineteenth and early twentieth centuries is likely to have removed any traces of prehistoric surface deposits on the project site. Artificial fill overlaying Bay Mud and bedrock has a low potential to contain significant prehistoric archeological resources.

HISTORIC ARCHITECTURAL RESOURCES

The assessment of project impacts on "historical resources," as defined by CEQA Guidelines Section 15064.5, is a two-step analysis: first, the project site is analyzed to determine if it contains a "historical resource(s)" as defined under CEQA; second, if the site is found to contain historical resources, an analysis is carried out to determine whether the project could cause a substantial adverse change to the resource. A project that may cause a substantial adverse change in the significance of a historical resource is a project that may have significant effect on the environment (CEQA Section 21084.1).

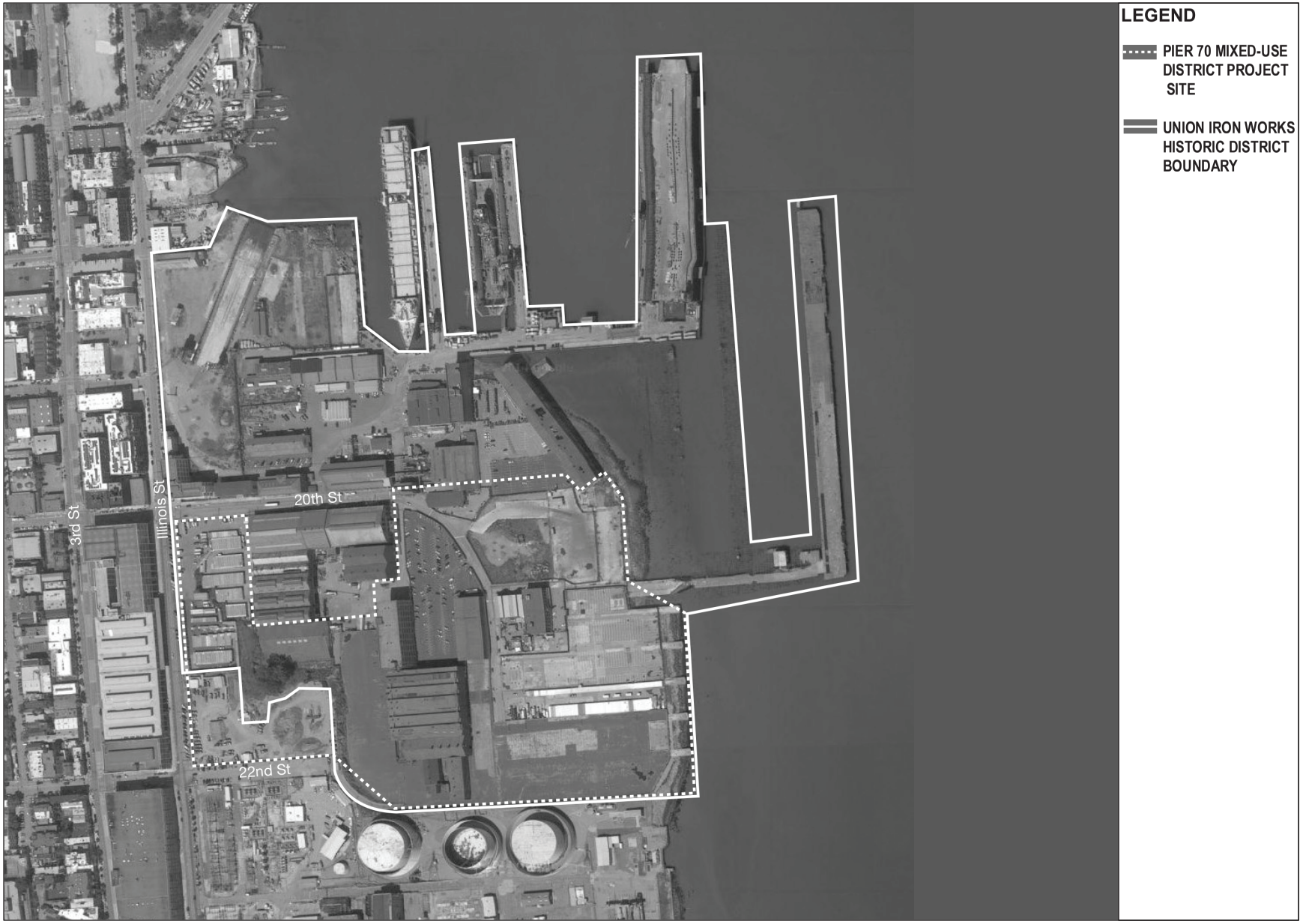
This section has two component subsections. The Environmental Setting discussion identifies the presence of historical resources in the project site. The Impacts and Mitigation Measures discussion evaluates the direct, indirect, and cumulative impacts of the Proposed Project on the historical resources identified in the Environmental Setting subsection.

ENVIRONMENTAL SETTING

The project site is located in a portion of the Pier 70 National Register Historic District, also known as the Union Iron Works (UIW) Historic District, which was listed in the National Register of Historic Places (NRHP or National Register) in 2014.[14] The UIW Historic District and project site boundaries are shown in Figure 4.D.1: Union Iron Works Historic District Boundary. The UIW Historic District is a maritime industrial district historically significant at the national level for its association with the development of steel shipbuilding in the United States, including its pioneering technological developments in shipbuilding, and the production of significant wartime vessels (NRHP Criterion A [association with important historical events]). The UIW Historic District is also significant at the local level because it is a physical record of the trends in industrial architecture from the late nineteenth century through World War II (NRHP Criterion C [architecture/design/construction]). The period of significance begins in 1884, with the construction of the shipyard, and ends in 1945 at the close of World War II.

The District contains 44 contributing buildings/structures/features that contribute to the significance of the District (collectively "contributing features") and 10 non-contributing features. Contributing features are those which were constructed during the period of significance, contribute to the historical significance of the UIW Historic District under NRHP Criteria A or C, and retain sufficient physical integrity to convey their significance. Non-contributing features of

[14] United States Department of the Interior, National Park Service, National Register of Historic Places Registration Form, *Union Iron Works Historic District*, April 17, 2014.



Source: Port of San Francisco; Google (2015)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.1: UNION IRON WORKS HISTORIC DISTRICT BOUNDARY

the UIW Historic District are defined as those which have either lost integrity due to substantial alterations, or were constructed after the period of significance, or both. None of the contributing features of the UIW Historic District have been previously identified as eligible for listing in the NRHP based on individual significance in their own right, but they are collectively significant as contributing constituents of the UIW Historic District.[15]

Based upon an assessment of historic significance of each building and structure located in the project site and in the UIW Historic District that was undertaken as part of this review under CEQA, the Port of San Francisco, with Planning Department concurrence, determined that Building 21 is also individually eligible for listing in the California Register. This building is, therefore, considered to be a historical resource for the purposes of CEQA. None of the other features on the project site were determined to be individually eligible for listing in the California Register.

The project site encompasses approximately 32 acres[16] of the 66-acre District, and contains 12 contributing features within the District boundaries. Table 4.D.1: Contributing UIW Historic District Features on the Project Site, provides a list of the contributing features on the project site.

Table 4.D.1: Contributing UIW Historic District Features on the Project Site

Building Number (Name)	Date Constructed	Contributing	Individually Significant
Building 2 (Warehouse No. 2)	1941, 1944	Yes	No
Building 11 (Tool Room and Navy Office)	1941	Yes	No
Building 12 (Plate Shop No. 2)	1941	Yes	No
Building 15 (Layout Yard)	1941	Yes	No
Building 16 (Stress Relieving Building)	1941	Yes	No
Building 19 (Garage No. 1)	1941	Yes	No
Building 21 (Substation No. 5)	c. 1900	Yes	Yes
Building 25 (Washroom and Locker Room)	1941	Yes	No
Building 32 (Template Waterhouse)	1941	Yes	No
Building 66 (Welding Shed)	1945	Yes	No
Building 117 (Warehouse No. 9/Shipyard Training Center)[a]	1937-1941	Yes	No
Irish Hill (remnant) landscape feature	N/A	Yes	No

Note:

[a] Building 117 is within the project site but is part of the adjacent 20th Street Historic Core Building 40 and 117 project, as described on p. 4.A.14.

Source: United States Department of the Interior, National Park Service, NRHP Registration Form, *Union Iron Works Historic District*, April 17, 2014.

[15] Port of San Francisco, *Union Iron Works Historic District Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area, May 16, 2016*.

[16] Inclusive of the 3.4-acre 20th/Illinois Street parcel.

These contributing features are shown in Figure 4.D.2, Contributing and Non-Contributing Features on the Project Site, on p. 4.D.37.

There are 32 other contributing features within the UIW Historic District located immediately north and outside of the project site, primarily centered on 20th Street. Many of the buildings and structures in this area date from the District's earliest period of construction, and they are considered exceptionally rare examples of industrial Victorian-era architecture. See Table 4.D.2: Contributing UIW Historic District Features Outside of the Project Site.

As a property listed on the National Register, the UIW Historic District, including its contributing features, is automatically listed in the California Register of Historical Resources (CRHR). The Historic District is not listed in Article 10 or 11 of the San Francisco Planning Code as either individual landmarks or a local landmark site.

Under CEQA Guidelines Section 15064.5(a)(3), the UIW Historic District is defined as a "historical resource" because it is listed in the CRHR due to its listing in the NRHP.

Provided below is a historic context of the UIW Historic District, including descriptions of the contributing and non-contributing features within the project site. This historic context has been excerpted and summarized from the UIW Historic District National Register Nomination Form.[17]

HISTORIC CONTEXT

Nineteenth Century

The UIW Historic District can trace its origins to California's first iron works, opened by Peter and James Donahue at Jackson and Montgomery streets in San Francisco during the Gold Rush. In the early 1850s, the works moved to First and Mission streets, and in 1853 was renamed the UIW. The works constructed engines and boilers for iron ships, locomotive equipment for California's first trains, and most of the mining equipment used in the Comstock silver mines. Irving M. Scott managed the works starting in 1865, after Donahue retired, and was responsible for transforming it into one of the country's leading steel hull shipbuilding and repair companies.

By the early 1860s, the City's early wood shipbuilders abandoned the crowded shoreline along Steamboat Point in San Francisco's South of Market district for the deep waters and vacant lands around Potrero Point. John North was the first shipbuilder to relocate in 1862, followed by Henry Owens, William E. Colllye, and Patrick Tiernan. The 1867 completion of the Long Bridge from

[17] United States Department of the Interior, National Park Service, National Register of Historic Places Registration Form, *Union Iron Works Historic District*, April 17, 2014.

Source: Sitelab Urban Studio, Turnstone Consulting/SWCA (2015)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.2: CONTRIBUTING AND NON-CONTRIBUTING FEATURES ON THE PROJECT SITE

Table 4.D.2: Contributing UIW Historic District Features Outside of the Project Site

Building Number (Name)	Date Constructed
Building 6 (Light Warehouse No. 6)	1941
Building 14 (Heavy Warehouse)	1941
Building 30 (Template Warehouse)	1941
Building 36 (Welding Shop)	1941
Building 38 (Pipe and Electric Shop)	1915, 1941
Building 40 (Employment Office Annex)	1941
Building 49 (Galvanizing Warehouse)	1941
Building 50 (Pier 68 Substation No.2)	1941
Building 101 (Bethlehem Steel Administration Building)	1917
Building 102 (Powerhouse)	1912
Building 103 (Steam Powerhouse No. 2)	1937
Building 104 (UIW Office Building/Industrial Relations Building)	1896, 1941
Building 105 (Forge Shop)	1896, 1937
Building 107 (Lumber Storage)	1937
Building 108 (Planning Mill and Joinery Shop)	1911, 1913
Building 109 (Plate Shop No. 1)	1912, 1936
Building 110 (Yard Washroom and Locker Room)	1936
Building 111 (Main Office and Substation No. 3)	1917
Building 113 (UIW Machine Shop)	1885
Building 114 (Blacksmith Shop)	1886
Building 115 (Concrete Warehouse)	1916-1917
Building 116 (Concrete Warehouse)	1916-1917
Building 119 (Yard Washroom)	1936
Building 120 (Pipe Rack/Women ‘s Washroom and Locker Room)	1936, 1942
Building 121 (Drydock Office)	1941
Building 122 (Check House No. 1)	1937
Building 123 (Check House No. 2)	1914. 1941
Slipways 1-3 (site of Slipways 1, 2, and 3)	ca. 1890, 1915, 1959-1964
Slip 4, and Cranes 14 and 30	1941, 1943
Whirley Crane 27	1942
Pier 68 (Highwater Platform)	ca. 1920, 1941, 1944
Iron Fence (at 20th and Illinois streets)	1941, 1943

Source: United States Department of the Interior, National Park Service, NRHP Registration Form, *Union Iron Works Historic District,* April 17, 2014.

South of Market over the waters of Mission Bay, and the extension of Third Street, improved access and eased transportation to this developing manufacturing center in the Potrero district. The Irish Hill and Dogpatch neighborhoods emerged as workers moved to the area. The Irish Hill neighborhood consisted of two settlements of cottages, lodging houses, and saloons clinging to the hillside north of the Pacific Rolling Mills and around the intersection of 20th and Illinois streets.

The deep waters around Potrero Point facilitated easy loading and unloading of cargo, making it an excellent location for the new UIW shipyard. Located in the outskirts of the City, Potrero Point also made an ideal manufacturing area for hazardous materials. The E. I. du Pont de Nemours Company was one of the first manufacturers to exploit this region in 1854 to manufacture black powder. Over the following decades, the Tubbs Cordage Company/San Francisco Cordage Manufactory, Pacific Rolling Mills, and City Gas Company Works moved to the area. Pacific Rolling Mills, whose property would eventually be managed by UIW under Bethlehem Steel ownership, was the first manufacturer of steel on the West Coast, starting in the 1860s.

The UIW shipyard opened at Potrero Point in 1884 with a machine shop (Building 113), plate shop, pattern shop, foundry, smith shops, and slipways. The next year the yard launched the *Arago*, the first steel hull ship produced by UIW and launched on the West Coast, and one of the first steel hull ships completed in the country. In 1885, after the yard's success with the *Arago*, Scott and UIW secured naval contracts, initiating a relationship between the U.S. Navy and the yard that lasted through World War II. During the late nineteenth century, the shipyard completed some of the most famous warships of the Spanish-American War, including the *USS Oregon* and the *USS Olympia*.

Early Twentieth Century

In 1902, the United States Shipbuilding Company (USSC) acquired UIW along with other yards and steel mills across the country. Two years later, the USSC collapsed, allowing Charles Schwab to purchase the shipyard in 1905 on behalf of the Bethlehem Steel Company, the second largest steel manufacturer in the country. In the spring of 1908, Schwab personally oversaw upgrades to the yard's repair facilities, which allowed the yard to repair the Great White Fleet, the naval fleet that President Theodore Roosevelt ordered to sail around the world from 1907 to 1909 as a display of the country's growing military power.

By World War I, the shipyard served as the headquarters of a West Coast shipbuilding complex, which included the Hunters Point Drydock, the Alameda Yard, and the U.S. Navy Destroyer Plant. Renowned San Francisco architects such as George Percy and Frederick Hamilton designed the UIW office building (Building 104) at the corner of 20th and Illinois streets, creating a grand entrance to the yard. The shipyard was expanded and modernized in the 1910s to include

infrastructure expansion, a new plate shop (Building 109), and new foundries (Building 115/116). The destroyer plant run by UIW used some of the new prefabrication methods of the period to produce three destroyers per month. The Navy prioritized submarine destroyers as the primary fleet defense against torpedo attacks from submarines, and the 66 destroyers produced by the yard made a substantial contribution to the World War I naval effort.

The yard survived the lean years after World War I on commercial ship construction and ship repair contracts. United States Maritime Commission contracts, starting in 1936, resulted in a new wave of modernization at the yard. Upgrades included a new boiler house (Building 103), a new steel warehouse (Building 117), and a yardwide transformation from riveting to welding, which helped the yard adapt to standardized mass production that typified World War II ship production. During the war, the yard was primarily under naval management. The New Yard shipbuilding facility (Building 12 complex) built by the Navy stands on the former destroyer plant. The yard also significantly contributed to World War II in the repair of 2,500 ships.

After World War II, the yard continued to build government and commercial ships into the 1970s. In the early 1980s, the Bethlehem Steel Company went bankrupt and sold the shipyard for one dollar to the Port of San Francisco. Todd Shipyards purchased much of the machinery and leased portions of the yard for ship repair. BAE Systems Ship Repair leases portions of the yard from the Port of San Francisco and continues to operate a repair facility on-site, making the yard the longest operating steel hull ship repair yard in the country.

World War II

General expansion of the shipyard occurred during the start of World War II, including new buildings and further construction and expansion of slipways and wet basins along the waterfront. Much of this work was designed, owned, and paid for by the U.S. Navy. The most substantial development was the expansion of the southeastern slipways and construction of the New Yard, also known as the Building 12 complex, comprising Buildings 12, 15, 16, 25, 32, and 66 (see discussion below). UIW also saw increased specialization of buildings during this period, specifically buildings for outfitting and ship repair.

The New Yard/Building 12 Complex

The New Yard consisted of four slipways, a plate shop, a machine shop, a warehouse, a layout yard, welding platforms, and additional smaller support buildings. The shift toward welding required welding platforms and layout areas around the slipways. The slipways for the New Yard were completed in 1941, replacing the World War I–era destroyer yard slipways and associated plate shop. Building 2 replaced a warehouse dating to the Risdon period. This portion of UIW was developed with buildings and structures ranging from 80 feet (Building 2) to 120 feet high (scaffolding for Slipways 5, 6, 7 and 8).

The New Yard optimized its layout for pre-assembly and welding following the turning flow design. Since the beginning of steel shipbuilding, the goal of shipyards was to keep parts moving forward, from the arrival of raw materials through the final assembly of vessels. By World War II, the use of a linear or straight flow of materials was considered optimal, and a straight line flow was a noted accomplishment of the new World War II yards. However, shipyards with limited space often implemented the turning flow design. Instead of the optimal strictly linear movement from the storage areas to the slipways, the turning flow design allowed for materials to enter the yard parallel to the shoreline, move through the shops in a straight line, and then turn to be assembled on the shipways.

At the New Yard, the working plans for a ship were drafted in the administration office (Building 101) or the naval office (Building 104). Plans were laid down in the mold loft, and templates were made and moved downstairs to the plate shop. Following the turning flow process, raw steel entered by rail at the top end of the yard and was held in storage yards to the west of the plate shop (Building 12) until needed. The steel was then formed in the plate shop and, as required, joined into sub-assemblies. Cranes carried the sub-assemblies to the welding platforms where the parts were joined into even larger sections, such as deck houses and bow and stern assemblies. Completed sub-assemblies were then moved by cranes to the slipways. At the New Yard, pre-assembly was also completed on welding platforms adjacent to the slipways. When the hull was completed, it was launched and moved to outfitting piers.

During World War II, specialized engineering and outfitting buildings were constructed or repurposed between the New Yard and the outfitting wharves. These buildings corresponded with specific outfitting and engineering divisions, including pipe, rigging, electrical, carpentry and joinery, sheet metal, and paint shops. Most of the engine and boiler work remained at Building 105 and Buildings 113/114. Material was moved by rail and cranes from these buildings to the outfitting wharves and installed in the hulls.

Ship repair was the main contribution of UIW to the World War II effort. During this period, the yard built over 70 ships and repaired 2,500 ships. The repair yard, which contained structures and even equipment that dated back to the origins of steel shipbuilding in this country, was one of the best and the largest commercial repair yards in the country. Provided below is a summary of the historical significance of the UIW Historic District under NRHP Criteria A and C.

NATIONAL REGISTER OF HISTORIC PLACES SIGNIFICANCE SUMMARY

The following is a summary of the historical significance of the UIW Historic District, excerpted from the National Register Nomination Form[18], with a focus on the District's historic and architectural significance associated with World War II.

Criterion A (Events)

UIW Historic District is significant under Criterion A. The District was one of the first steel hull shipyards in the country, and the first on the West Coast. It actively participated in every trend in steel shipbuilding, and the yard embodies each of those trends. UIW was an industry leader and technological pioneer during the late nineteenth century through the turn of the twentieth century, influencing shipyards in other parts of the country. It continued successfully to adopt emerging practices in prefabrication and design standardization, while retaining its original capacity to fabricate all ship components on site. The yard made significant contributions to every war effort from the Spanish-American War through World War II. It produced hundreds of ships and repaired thousands, including each of the most influential types of vessels in each war. UIW furthermore originated steel shipbuilding on the West Coast, and for most of its history, it served as the headquarters of domestic shipbuilding and ship repair for the Pacific. The yard was able to balance emerging technology with older shipbuilding and repair practices, enabling it to convey its national level of significance over each phase of development, rather than just one single period.

Criterion C (Architecture)

UIW Historic District is also historically significant under Criterion C at the local level as a District that represents a distinctive and exceptional entity. It illustrates national trends in industrial, and especially shipyard, architecture, from 1884 to 1945. Functional and aesthetic forces determined the appearance of the buildings and the layout of the yard, forces that relate to the larger national context of factory design from the early 1880s to 1945. The UIW Historic District's built environment is subdivided into four periods, each corresponding to larger national trends in industrial architecture. The World War II period is described below because it is within this context that most of the buildings on the project site were constructed.

World War II created an emergency situation requiring the construction of new ships, and, therefore, new shipbuilding facilities, as quickly as possible. Most new buildings from this period, similar to other World War II shipyards, were steel frame construction with corrugated metal cladding, relatively quick to erect. Buildings constructed in the 1930s have a brick base;

[18] United States Department of the Interior, National Park Service, National Register of Historic Places Registration Form, *Union Iron Works Historic District*, April 17, 2014.

those constructed after 1940 do not. Steel frame buildings, including pre-fabricated buildings, became especially popular during World War II for both military and civilian industrial uses because of their relative ease and speed of construction.

In 1940, UIW was contracted, along with only five other private shipyards nationwide, to perform Navy work exclusively. To promote this contractual arrangement, the Federal government made further investments in UIW. Most notable was the New Yard, now known as the Building 12 complex, located at the District's southeast quadrant where Risdon Iron Works once stood. A major upgrade to the rail system united the new facility with the rest of the shipyard.

The Building 12 complex, comprising Buildings 12, 15, 16, 25, 32, and 66, was largely built in 1941 to construct anti-aircraft cruisers. Building 12, which housed the plate shop and mold loft, comprised steel frame construction with corrugated steel cladding, which was typical of this period. The complex lacks a stylistic veneer, but displays a visual power derived from its massing and the rhythm of its openings and roof monitors.

The Building 12 complex and other developments at UIW from this period reflect the concept of functional specificity in several ways. Most important was the rationalization of the workflow process by establishing a straight or turning flow pattern. The desire for efficient work flow affected building placement and adjacencies, as well as the material handling system connecting the buildings. Other examples of functional specificity include the establishment and strategic placement of welding platforms and assembly layout areas, and proximity to slipways, where final assembly and fitting out occurred.

Buildings 12, 15, 32, and 16 connect on at least one elevation. Within, they form a single interior space. Although the compact Building 12 complex approaches the industrial ideal of containing an entire production process within one space, much of the assembly took place on open platforms or in adjacent slipways. Spatial constraints most likely dictated the compact form, as well as the turning, rather than the straight flow process.

Concrete buildings, such as Warehouse 2 (1941), continued to be built during World War II, as did many smaller wood frame buildings, most providing worker amenities. Although the buildings from this period were similar in size, design, and layout to those at other shipyards, they were not necessarily typical of other industrial buildings during this period. This is because building design was centered on the functionality of the building and not a particular aesthetic or style.

CHARACTER-DEFINING FEATURES OF UIW HISTORIC DISTRICT

Character-defining features of the UIW Historic District include those buildings, structures, and landscapes which contribute to the significance of the District and convey its importance under

NRHP Criteria A and C. For example, the buildings located along 20th Street – Buildings 113, 101, 102, 103, and 104 – and the south wall of Building 105, function to create an architectural promenade and entrance to the yard and, as a group, define the strong architectural and industrial character of this portion of the District. The fencing installed during World War I along Illinois and 20th streets is largely intact, and the entrance to the shipyard has remained at the same location since the 1890s.

The density of this urban industrial center and the variation in materials, styles, rooflines, cranes, chimneys, and waterfront features convey its historic evolution and distinguish it from other shipyard and industrial sites built or heavily remodeled during a single period. The materials used within the District are a physical record of the evolution of UIW Historic District and include unreinforced masonry, wood, concrete, and sheet metal construction. All of these features and materials are considered character-defining features of the District.

Buildings that create visual landmarks by their prominence, location, and size can be considered character-defining features of the District, as well as other contributing features. Since the 1930s, Building 103 and its large smokestack have dominated the view of the UIW Historic District from its entrance and have defined the end of 20th Street.

In addition to the 44 contributing features that comprise the UIW Historic District, the District also possesses the following character-defining features:

- Waterfront location/shoreline;
- Minimal planted vegetation;
- Open areas that are either paved with asphalt or covered with gravel;
- Streets that are improved without curbs and gutters, except for 20th Street, which has granite curbs;
- Dense urban-industrial character;
- Variation in materials, styles, rooflines, and window types;
- Variation in height and scale, with resources that range from one to six stories (80 feet) in height, some with large footprints of 60,000-100,000 square feet;
- Certain groupings of buildings, such as the entry promenade along 20th Street and the Building 12 complex;
- Features such as cranes;
- Ship repair activities; and
- Yard layout and plan.[19]

[19] United States Department of the Interior, National Park Service, National Register of Historic Places Registration Form, *Union Iron Works Historic District*, April 17, 2014.

District Integrity

The end of World War II represented the maximum build-out of the District. Since 1945, few new buildings have been added, and buildings of primary importance from all periods of growth and modernization remain. The most notable modifications to the Historic District since World War II include the following:

- Removal of above-grade features of Slipways 1 through 3 and 5 through 8;
- Removal or rebuilding of wharves and piers including Wharves 1, 3, 4, and 5 at Pier 68 and Wharf 8 at Pier 70 (includes Building 64). Wharf 8 was altered in 1941, 1942, and 1944, and completely rebuilt after 1980;
- The loss of support buildings on deteriorating wharves;
- Removal or paving over of paving stones and rail lines;
- Removal of the large gantry cranes associated with Buildings 12 and 109;
- The installation of modular buildings and construction of new buildings including the BAE Systems office and a Butler Building (Building 251) to accommodate sandblasting functions north of Building 105;
- Removal of a row of buildings between Building 6 and the New Yard. The following buildings were removed from this area after the period of significance and all but the first two date from the World War II expansion:
    - Building 4 - Sheet Metal Shop (built in 1900 with World War I and World War II additions);
    - Building 5 - Copper Shop (built in 1900 with World War I and World War II additions);
    - Building 7 - Light Warehouse;
    - Building 8 - Riggers, Carpenters, and Painters Shop;
    - Building 9 - Pipe Shop No. 2;
    - Building 10 - Pipe Rack and Locker Room;
    - Building 22 - Washroom;
    - Building 56 - Sheet Metal Shop;
    - Building 57 - Central Kitchen;
    - Building 61 - Scale House.

Despite the loss of some contributing features, the UIW Historic District forms a contiguous district with a variety of conditions. The Historic District includes examples from all periods of construction and expansion, from the opening of the yard in the early 1880s to the end of World War II. It retains sufficient historic integrity to convey its role in the birth and expansion of the U.S. steel hull shipbuilding industry and reflects the development of industrial architecture from the 1880s to 1945.

DESCRIPTION OF CONTRIBUTING AND NON-CONTRIBUTING FEATURES ON THE PROJECT SITE

Provided below are detailed descriptions of all 12 contributing features on the project site, comprising the 11 contributing buildings and 1 contributing landscape feature. Also included below are descriptions of non-contributing features within the District. These descriptions have been excerpted and summarized from the National Register Nomination Form.[20] Table 4.D.1, p. 4.D.35, identifies all of these by building number, name, and date constructed (where applicable).

Contributing Features

Building 2 (Warehouse No. 2)

Building 2 stands east of the complex formed by Buildings 113/114, 115/116, and 117. The land was formerly occupied by a portion of Irish Hill. The architect and builder of this industrial-vernacular building are unknown. It was likely designed and built by government personnel as part of the joint public-private World War II shipbuilding effort.

DESCRIPTION

Building 2 is a six-story, board-formed, concrete warehouse, rectangular in plan with a flat roof. Constructed in 1941 and 1944, it measures 256 feet long, 76 feet 9 inches wide, and 79 feet 6 inches high. Containing a total of 98,804 square feet, it is one of the tallest extant buildings in the UIW Historic District. It runs north to south, with one loading door at the north façade and three at the north end of the west façade. Also on the north façade is a personnel entrance protected by a flat awning and accessed by three stairs. The windows are steel, multi-pane, and fixed sash, and most contain operable, four-lite, central vent sashes.

The top floor, dating to 1944, has wood sash windows, which match the style of the steel sash on the lower floors. An elevator and stair tower project slightly from the west façade. Painted signage on the north end designates the building as "Warehouse 2." As on the exterior, concrete is the primary interior building material. The walls and ceiling of each floor are of board-formed concrete, and the floor is exposed concrete slab, except at the sixth floor, which has wood boards over the original concrete roof slab. Columns on a 20-foot grid divide the interior into bays; columns located on floors one through four are round with flared capitals, and those on floors five and six are square. Except for the columns, each level consists primarily of open space used for storage. The large freight elevator and stairwell stand along the west wall near the north end of the building.

[20] Ibid.

HISTORIC/CURRENT USE

Building 2, constructed during World War II, originally functioned as a warehouse to support hull construction at the Building 12 complex and outfitting. The sixth floor of the building contained a drafting room, and offices were located on the first and second floors. A bridge connects the fourth floor to the mold loft in Building 12, located south of Building 2. This building is currently used for commercial storage. Along with Building 111, Building 2 is one of two multi-story warehouses extant in the District.

INTEGRITY

Building 2 has undergone few alterations since its construction, with the exception of the sixth floor addition in 1944 that falls within the period of significance for the District. Therefore, the building retains a high degree of integrity and is a contributor to the UIW Historic District for its associations with World War II shipbuilding. It is one of the few concrete buildings from the World War II period and adds to the diversity of materials used within the District.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Because Building 2 is one of several warehouse buildings within the district that collectively played a support role in the ship building process, it is not considered to possess individual significance or to be individually eligible for listing in the California or National Registers.[21]

Building 11 (Tool Room and Navy Office/Noonan Building)

Building 11 stands just east of Building 21 and west of a paved parking lot, accessed by a road to the north. The infilled Slipways 5 through 8 are to the southeast, and the Building 12 complex (see discussion below) is to the southwest. Located on the site of the Pacific Rolling Mills former sheet and tin plate warehouse, Building 11 was built in 1941 by the Navy as part of the New Yard to aid in production related to World War II.

DESCRIPTION

This three-story, rectangular wood frame building is 156 feet long by 72 feet wide by 38 feet high and contains 32,664 square feet. It has a flat tar and gravel roof and is clad with horizontal wood siding. Two stair towers project one story above the roof. Windows are wood double-hung with simple wood surrounds, often paired. Exterior open staircases at the west and north elevations

[21] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

lead to small landings and doors at the second story. Doors include single metal units at each elevation, a wood freight door centered in the east elevation, and a sliding metal door at the north.

The interior currently includes artist studios and office space. First floor spaces open directly to the exterior, without internal circulation. Exterior stairs access the second floor double-loaded corridor, whereas interior winding stairs connect the second and third floors.

HISTORIC/CURRENT USE

Building 11 provided support for hull construction at the Building 12 complex. The first floor originally contained a tool room, temporary lights department, and burner department, as well as three small offices. The two upper floors were devoted to office space. Interior signage indicates that the offices were used by the U.S. Navy. The building contained a cafeteria as well. Currently, artist studios and offices occupy the building.

INTEGRITY

Although the building has sustained minor alterations, mostly on the interior related to change of use, it maintains a high degree of integrity of location, setting, feeling, and association; and a moderate degree of integrity of design, materials, and workmanship. Therefore, it is a contributor to the UIW Historic District for its association with World War II.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 11 does not possess individual significance because it was a support office to the "New Yard," and the loss of the above-ground portions of related Slipways 5, 6, 7, and 8 has compromised this building's ability to convey its role in the larger ship-building process. Therefore Building 11 does not qualify for listing under the National or California Registers as an individual historical resource.[22]

Building 12 (Plate Shop No.2)

Building 12 was constructed in 1941 as the central building of the New Yard. The building was designed and built by government (Navy) personnel as part of the joint public-private World War II shipbuilding effort.

[22] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)"; December 6, 2016.

DESCRIPTION

Building 12 measures 248 feet 2 inches by 242 feet two inches in plan by 59 feet 6 inches tall, and contains 118,890 square feet spread across two floors. Construction is steel and wood with corrugated steel cladding. The roofline is an Aiken configuration, with five raised, glazed monitors running east to west for the width of the building. Clerestory multi-lite steel sash awning windows extend the length of the monitors on the north and south sides. The central monitor measures twice the width of the others. Twelve vertical bays divide the east and west elevations into 24-foot sections. Three bands of multi-lite steel sash awning windows, with a double-height bottom band, line the north and east elevations. Below the topmost band of windows, the south elevation directly connects to Building 15. Four bands of multi-lite steel sash awning windows run the length of the east elevation, and the top band on all four sides provides light into the mold loft. A shallow ridge runs north to south along the center of the building, over the monitors, and the roof gently slopes at 4 inches per 1 foot to the east and west. The west elevation has three vehicle roll-up doors, whereas the north has two.

On the ground floor, two rows of columns running north to south divide the interior into three bays. Exposed square Howe trusses support the second floor 38 feet 4 inches above the ground. Lighting consists of standard factory lights with glass reflectors. On the north end of the building, two steel staircases with concrete treads provide access to the upper level. Asphalt paves the ground floor.

The 360 degree band of windows and the clerestory monitor windows give the second story mold loft superlative light qualities. The mold loft has a wood plank floor, and wood cladding lines the walls up to window height. The ground-floor columns penetrate through the mold loft floor to divide the space into three separate bays, with 9-foot 7-inch ceilings that rise to 17 feet 4 inches in the monitors. The mold loft has industrial light fixtures similar to those on the first floor. Two personnel doors open onto the roof of Building 15 on the south elevation, and on the north elevation, an enclosed walkway connects to Building 2. A dumbwaiter shaft opens near the walkway. In the northeast corner, partitions enclose an office, game room, and bathroom.

HISTORIC/CURRENT USE

Building 12 housed the plate shop and mold loft for the Building 12 complex and was central to hull construction at Slipways 5 through 8 to the east. The building was constructed on newly leveled ground where most of Irish Hill once stood. It was one of a number of buildings constructed for the large enterprise of shipbuilding specifically for World War II. In the process of producing a ship from blueprint to hull, the construction plans were first transferred to a life-size model in the mold loft. This pattern was then taken to the mold makers who made a template out of wood, used for the guidance of marking the steel plates. Steel plates were stored in the

adjacent yard to the west. The marked plates were then cut and shaped into the desired hull shapes. The finished plates were then transferred to the adjacent layout yard (Building 15) where the plates were checked against the molds and plans before welding. The plates were moved from the yard to Building 12 and from Building 15 to the welding platforms and slipways via U.S. Navy–owned rail lines. A rail line connecting Building 12 to the rest of the shipyard also ran next to the east elevation of Building 2. Building 12 stood adjacent to Machine Shop 2 (now demolished) and the layout yard (Building 15) as the center of this World War II–era complex. Welding platforms adjoined these buildings to the south, linking the complex with Slipways 5 through 8. The building is currently vacant and is periodically used for temporary events.

INTEGRITY

Building 12 has experienced few alterations and retains integrity of location, design, setting, materials, workmanship, feeling, and association. The main alteration to the building is the removal of machinery and equipment, including cranes, from the first floor. Building 12 contributes to the UIW Historic District because of its association with the World War II shipbuilding historic context. It is also a representative example of industrial architecture from World War II. It forms the core of the Building 12 complex, which also includes Buildings 15, 16, 25, 32, and 66 (see description of each, below).

EVALUATION OF INDIVIDUAL SIGNIFICANCE

While Building 12 is historically important as the central feature of the Building 12 complex that provides continuity with the World War II-era last phase of shipyard development known as the "New Yard" and helps convey the significance of the UIW Historic District, the building does not possess sufficient significance to qualify individually for listing in the California or National Registers.[23]

Building 15 (Layout Yard)

Building 15 stands at the south end of the District and is part of the Building 12 complex. The group, including Buildings 12, 15, 16, 25, 32, and 66, was constructed in 1941-1944 specifically for World War II. The architect/engineer and builder are unknown. The building was likely designed and built by government personnel as part of the joint World War II effort.

[23] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

DESCRIPTION

This east-west oriented warehouse is immediately adjacent to Building 12 and measures approximately 242 feet 8 inches by 71 feet 7 inches, with an interior area of 17,134 square feet. A Fink truss with a king post supports the gabled roof, with the peak approximately 53 feet off the ground. Nine columns along the interior walls subdivide the space into eight distinct bays. The gabled roof covers the seven eastern bays; a flat roof of wood joists and decking covers the eighth, westernmost bay. A steel staircase on the south exterior wall leads to the flat roof, and a personnel platform on the roof rises slightly above the steel parapet.

Building 15 attaches to four other buildings, three to the south (Buildings 32, 25, and 16) and one to the north (Building 12), leaving only the eastern and western ends exposed. On the interior, no significant walls or partitions separate Building 15 from Buildings 12 or 32, creating a unified interior space between the three buildings, although at the northeast corner of Building 15, a corrugated steel wall with multi-lite steel sash windows partially divides the easternmost bay from Building 12. The southern interior wall features a cut-out through the corrugated steel that reveals the exterior north elevation of Building 25. Short wood planking serves as a roof over the approximately 1-foot gap between the two buildings. Two wood personnel doors on either side of the Building 25 cut-out provided access between the two buildings. Where Building 16 and Building 15 meet, newer corrugated steel covers the wall, and non-corrugated steel panels cover the wall at ground level. Standard industrial light fixtures, apparently original, remain.

On the exterior, the upper portion of the western façade features a corrugated steel parapet above a continuous band of multi-lite, steel sash pivot windows spanning the entire façade width. A similar band of windows glazes the ground level, interrupted by a large vehicle door in the central bay. Most of the southern elevation attaches to smaller buildings, but the western end of this elevation features a band of multi-lite windows above a vehicle door large enough for rail cars. The eastern elevation includes a band of multi-lite steel sash pivot windows at the upper level, and a roll-up steel door at the ground level. The northern façade of Building 15 attaches to Building 12.

HISTORIC/CURRENT USE

The layout yard served as an intermediate staging area for the steel plates of a vessel's hull used for hull construction in Slipways 5 through 8. As the plates left the plate shop (Building 12) adjacent and to the north, they were arranged, numbered, and checked against the molds and plans. This process assured that the welders had the correct panels lined up for welding. This occurred on either one of the welding platforms, if pre-assembled, or directly on the hull of the ship in one of the slipways to the east. U.S. Navy–owned rail lines transported the steel plates to the welding platforms and slipways of the New Yard. The personnel platform and stairs leading

up to the flat roof on the western edge of the building indicate a potential use as a viewing platform to oversee activities in the plate storage yard to the west. These former staging areas remain between Building 12 and the remnant of Irish Hill to the west. The building is currently vacant and is periodically used for temporary events.

INTEGRITY

Building 15 contributes to the UIW Historic District because of its association with the World War II steel shipbuilding effort undertaken at the New Yard. Building 15, the layout yard, has experienced few alterations and retains integrity of location, design, setting, materials, workmanship, feeling, and association.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 15 is a contributor to the UIW Historic District, but does not possess individual significance. Together with Buildings 16, 25, and 32, Building 15 functioned as a support building to Building 12: these other buildings are experienced as smaller additions rather than as separate resources. For these reasons, and because it lacks individual distinction, Building 15 does not qualify for listing under the National or California Registers as an individual historical resource.[24]

Building 16 (Stress Relieving Building)

Building 16, at the south end of the District, is part of the Building 12 complex, comprising Buildings 12, 15, 16, 25, 32, and 66. The actual architect and builder are unknown, but it was designed and built by government personnel in 1941 as part of the joint World War II effort.

DESCRIPTION

This two-story gabled warehouse measures 50 feet 10 inches by 152 feet 2 inches in plan and 45 feet 7 inches in height. It contains a total of 7,588 square feet, and corrugated steel panels cover the steel frame. Five prominent vents run along the gable ridge. The upper portion of all exposed façades features a band of multi-lite, steel sash awning windows with operable vents near the top of the building.

The eastern façade has five bays and two roll-up steel doors that interrupt a lower band of windows. The southern façade, divided into three bays, is almost entirely covered with steel sash windows, and has a single steel personnel door. The western façade, visible from a courtyard

[24] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

formed by neighboring Buildings 15 and 32, reveals more multi-lite, steel sash windows and two metal personnel doors with windows.

The interior consists of one open bay, with a concrete foundation and a double-height ceiling approximately 33 feet 7 inches from the ground. An exposed steel compound Fink truss with a king post top forms the gable, rising an additional 12 feet. The former entrance from Building 16 into Building 15 now appears covered with metal panels. Some standard factory light fixtures remain.

Along the western façade, a large industrial furnace with a gable roof approximately 20 feet tall attaches to Building 16. The furnace features steel framed doors at the east and west elevations, with the eastern door opening directly into Building 16. The doors slide vertically into a protected compartment, and fire brick appears through holes in the doors. Four hydraulic actuators tightly seal the furnace wrap around the door's perimeter. A chimney stands along the southern side, and numerous exposed mechanical components envelop the north and south elevations of the furnace.

HISTORIC/CURRENT USE

The Stress Relieving Building was used for hull construction at the Building 12 complex. Related to quality control, pre-assembled welded components for ship hulls in Slipways 5, 6, 7, or 8 would have joints relieved of the stress inherent in the bond from imperfect welds. Stress relieving involved re-heating the bond juncture, burning the ridge and inserting a splint or "strong back" mechanically, and re-welding the joint in a controlled environment. The building is currently vacant and is periodically used for temporary events.

INTEGRITY

Building 16, the Stress Relieving Building, has experienced few alterations and retains integrity of location, design, setting, materials, workmanship, feeling, and association. Building 16 contributes to the UIW Historic District for its association to the World War II steel shipbuilding effort at the New Yard. The industrial furnace connected to this building is also a character-defining feature and is the only example of this type of furnace in the District.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 16 is a contributor to the UIW Historic District, but does not possess individual significance. Together with Buildings 15, 25, and 32, Building 16 functioned as a support building to Building 12 and, as in the case of Building 15, these other buildings are experienced as smaller additions rather than as separate resources. Additionally, like Building 15, Building 16

lacks individual distinction. For these reasons, Building 16 does not qualify for listing under the National or California Registers as an individual historical resource.[25]

Building 19 (Garage No. 1)

Building 19, just south of Building 108, is surrounded by open space on the east, west, and south elevations. This building stands at the end of 21st Street, which was closed during World War II. The architect and builder of this simple, industrial building, built in 1941, are unknown.

DESCRIPTION

This is a one-story, rectangular-plan gable-roofed warehouse with corrugated, galvanized steel roofing and cladding. It measures 50 feet 8 inches by 24 feet 6 inches in plan and 31 feet 6 inches tall, and contains a total of 6,152 square feet. Windows are fixed, multi-lite steel sash with central ventilators; many lites[26] are boarded or painted over. Rolling metal doors appear on the west, east, and south elevations.

The north elevation is board-formed concrete and stands higher than the adjacent east and west elevations. A small metal shed attaches to the west elevation. The interior is a single open space. Walls are corrugated metal, except for the concrete north wall. Modified Howe trusses form the roof structure and the floor is concrete slab. Freestanding machinery includes a sifter/conveyor, and the building stores sandblast grit, used to sandblast ships prior to painting.

HISTORIC/CURRENT USE

Listed as Garage No. 1 and owned by the government on the Bethlehem 1945 plan, this building was used as a garage and housed a small office during World War II. It adjoins Building 108, a planing mill and joiner shop. Building 19 is currently used by BAE Systems for storage of sandblasting grit.

INTEGRITY

Despite minor alterations, such as the attached metal shed at the west elevation, the building retains a high degree of integrity and therefore is a contributing resource. Building 19 is a contributor for its association with the World War II shipbuilding effort at the yard.

[25] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

[26] "Lites" is an architectural term for individual window panes.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 19 is a contributor to the District, but it does not possess individual significance because it is an undistinguished utilitarian warehouse/garage building that functioned as a minor support building in the World War II-era of ship building and repair; therefore, it does not qualify for listing under the National or California Registers as an individual historical resource.[27]

Building 21 (Substation No. 5)

Building 21 stands just west of the tool room (Building 11), surrounded by two paved roads to the north and west, and a paved lot to the south and southeast, the site of infilled Slipways 5 through 8. The architect/engineer and builder of this industrial-vernacular building, constructed ca. 1900, are unknown.

DESCRIPTION

This two-story rectangular-plan building measures 101 feet 2 inches long by 75 feet 6 inches wide by 44 feet high, and contains 10,172 square feet. It has a steel frame, with corrugated metal cladding. The roof, also corrugated metal-clad, is double gable, and each gable has a wide roof monitor. The glazing consists primarily of multi-lite, double hung wood or horizontal steel sash windows, many with an operable vent sash. Many windows are covered with plywood or metal security grates; the monitor windows have been covered with corrugated metal.

The primary elevation is north; the west half features two sets of personnel doors. Two glazed metal doors at the center of the elevation lead to the Port of San Francisco's electrical storage area, and a pair of metal doors east of center leads to the radio tower control room. The east half of the north elevation features two pairs of steel freight loading doors, glazed with twelve lites per door. Two additional personnel doors open at the second level, the easternmost accessed by a metal stairway. The south elevation has two freight doors, each centered on the east and west half of the wall. A shed-roofed utility building attaches to this elevation at the southeast corner. The west elevation features a set of five hanging steel freight doors, now soldered shut. Each door is glazed with twenty-four lites.

HISTORIC/CURRENT USE

This building dates to the Risdon Iron Works period and is the only building left from that iron works. In 1911, the Risdon Yard shut down, and a subsidiary of the U.S. Steel Company purchased the yard. During World War I, the UIW Company built and operated a United States

[27] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

destroyer plant on the site of the former Risdon Yard for the Emergency Fleet Corporation. The destroyer plant was commonly known as the Risdon Plant. In 1940, during the buildup to World War II, the Navy purchased the land and built an entirely new shipyard on the site of the old Risdon Yard.

Both the 1914 and 1936 Sanborn maps show Building 21 to be a machine shop and transformer house. A 1945 Bethlehem Steel Company plan describes Building 21 as Substation No. 5 and Electric Shop No. 2. In 1945, the first floor had a compressor room in the northwest corner, and a small electric parts room east of the compressor room. Adjoining the compressor room and electrical parts room to the south was an area used for housing large equipment, including transformers. Most of eastern portion of the first floor was used as an electrical shop, with a small office in the northeast part of the floor. The second floor housed a shop in the north portion and a store room in the south. Building 21 now functions as a substation for the area and for storage. The roof was replaced in kind in 2008.

INTEGRITY

The building retains its integrity. Building 21 is a District contributor because of its association with the development and expansion of power distribution at the yard, a key component in the advancement of shipbuilding processes during the late nineteenth and early twentieth centuries.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Because Building 21 is the earliest example of steel clad construction at UIW and is the only extant example of the turn-of-the-century buildings constructed by Risdon Iron Works, and because it is the only surviving resource associated with this pioneering West Coast steel fabricator, Building 21 qualifies for individual listing in the California and National Registers under Criterion 1 and A, respectively (events that have made significant contributions to local and regional history).[28]

Building 25 (Washroom and Locker Room)

DESCRIPTION

This single-story, steel frame, gable-roofed industrial building with corrugated metal-clad walls measures 51 feet 6 inches long by 29 feet wide by 19 feet tall, and contains 1,493 square feet. Built in 1941, it stands in a courtyard created by four other buildings: 15, 16, an unnumbered mechanical building addition to 16, and 32. The northern end of Building 25 attaches to

[28] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

Building 15. A band of multi-lite, steel sash pivot and awning windows runs continuously on three exposed elevations, approximately 8 feet from the ground. Metal double doors with four-lite glazed upper panels open on the western façade. The steel Howe truss supports the gable roof.

No alterations to the plan or external materials are evident. The toilets, sinks, and urinals still line the walls, although all fittings have been removed. Most stall partitions have also been removed, as have the shower stalls near the center of the room.

HISTORIC/CURRENT USE

This building contains shower, bathroom, and locker facilities for the workers who labored in the adjacent buildings. Building 25 is one of the seven washroom and locker room facilities installed in 1941. It is the only example of a corrugated metal-clad washroom from that period, but is similar in style to the two washrooms, Buildings 110 and 119, constructed during the late 1930s. Washrooms, lockers, and lunch rooms were scattered throughout the yard as a means of providing needed amenities to the workers where they worked, a more efficient means of running a business with hundreds of workers.

INTEGRITY

Building 25 has experienced few alterations and retains integrity of location, design, setting, materials, workmanship, feeling, and association. Building 25 is a District contributor for its association with the improvement of worker amenities during World War II.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 25 is a contributor to the UIW Historic District, but does not possess individual significance. Building 25 is one of three architecturally similar World War II-era restroom facilities within the District. Together with Buildings 15, 16, and 32, Building 25 functioned as a support building to Building 12. The other buildings in the Building 12 complex are experienced as smaller additions rather than as separate resources. For these reasons, Building 25 does not qualify for listing under the National or California Registers as an individual historical resource.[29]

Building 32 (Template Warehouse)

Building 32 stands at the south end of the District and is part of the Building 12 complex (Buildings 12, 15, 16, 25, 32, and 66). The complex was constructed in 1941-1944, specifically for World War II as part of the New Yard. The architect and builder of this 1941 building are

[29] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

unknown. It was likely designed and built by government personnel as part of the joint World War II effort.

DESCRIPTION

This single-story, semi-attached, rectangular warehouse with a gable roof is of steel frame construction with corrugated metal-clad walls. It measures 100 feet long by 50 feet wide by 32 feet high, and contains 4,900 square feet. Its northern end attaches to Building 15. Exposed steel compound Fink trusses with a king post form the gable and create a clear interior space with no support columns. The western façade features two rows of four, evenly spaced rectangular multi-lite steel sash awning windows with steel sills. The southern façade contains vents and a metal personnel door with four window panes. Multi-lite steel sash windows can be seen on the eastern façade from the courtyard formed by the neighboring Buildings 15 and 16. Wood planking, exposed on the interior and covered with roll roofing at the exterior, clads the roof. Two prominent vents sit on the gable ridge. The interior ground floor has been repaved with asphalt, and any mechanical and/or template storage racks have been removed. Many small standard factory light fixtures remain intact.

HISTORIC/CURRENT USE

The template warehouse, Building 32, stored wooden templates used in shaping steel hull plates at the Building 12 complex. It is one of two extant template warehouses at the yard. Used in the production of multiple hulls of the same design, the templates could be reused several times. The building is currently vacant and is periodically used for temporary events.

INTEGRITY

Building 32, the template warehouse, has experienced few alterations and retains integrity of location, design, setting, materials, workmanship, feeling, and association. It contributes to the UIW Historic District for its association with the World War II shipbuilding effort at the New Yard.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 32 is a contributor to the UIW Historic District, but does not possess individual significance. Together with Buildings 15, 16, and 25, they functioned as support buildings to Building 12 and are experienced as smaller additions rather than as separate resources. For these

reasons, as with the other supporting resources in the Building 12 complex, Building 32 does not qualify for listing under the National or California Registers as an individual historical resource.[30]

Building 66 (Welding Shed)

Located northeast of Building 12, Building 66 marks the northern end of the Building 12 complex, a series of six buildings constructed specifically for the World War II effort (Buildings 12, 15, 16, 25, 32, and 66). The Bethlehem Steel Company's 1945 architectural plans indicate that the Federal government erected a welding platform in 1941, but the plans do not show a shed. The shed first appears in a 1945 aerial photograph. Its architect and builder are unknown.

DESCRIPTION

This large, rectangular plan, two-story, steel frame shed with corrugated metal siding measures approximately 220 feet long by 105 feet wide and covers 23,100 square feet. It is almost completely open on the north and south ends, providing an unobstructed north-south view through the building. Columns divide the space into eleven vertical bays, and Pratt trusses support the roof gable. Along the west elevation, an attached men's locker room, measuring approximately 15 feet by 60 feet, sits outside the main bay of Building 66. At some point following the period of significance, the locker room's north end sustained significant damage, with the roof torn off and the interior exposed to the elements. Two personnel doors from the locker room opened to the west and one opened to the east, into the main Welding Shed bay. Almost all interior fixtures have disappeared. Large, angled support columns for Building 66 penetrate the locker room, dividing the space into distinct bays. The locker room roof, approximately 15 feet high along the western wall, slopes down and eastward at an approximately 15 degree angle. Translucent roof panels provided interior lighting. At the east corner of the northern elevation, a sliding vehicle door on an overhead track remains, supported by horizontal beams. No other steel panels surround the door, although a personnel door opens through the vehicle door.

HISTORIC/CURRENT USE

Building 66 was used for welding pre-assemblies and other hull components during hull construction at the Building 12 complex and Slipways 5 through 8. When Building 66 was constructed in 1945 on land that was formerly part of the Pacific Rolling Mills site, most of the yard was used for the production of war vessels. This open building sheltered outdoor activities

[30] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)," December 6, 2016.

so that the welding work would not have to depend on good weather. Building 66 is currently used for vehicle storage.

INTEGRITY

Building 66 has experienced few major alterations and retains its original spatial qualities. Therefore, it retains integrity of location, design, setting, materials, workmanship, feeling, and association, and contributes to the UIW Historic District for its association with the World War II shipbuilding effort at the New Yard.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Building 66 is a contributor to the District and is one of the buildings that made up the "New Yard," but it does not possess individual significance because it functioned as a support facility for the former Slipways 5, 6, 7, and 8, and the loss of these related features has reduced the building's ability to convey its former historic function. Moreover, the building lacks individual distinction. Therefore, Building 66 does not qualify for listing under the National or California Registers as an individual historical resource.[31]

Irish Hill Remnant

DESCRIPTION

Irish Hill was originally a 70- to 100-foot-tall geological landform that once extended from the San Francisco Bay to Potrero Hill. The hillside of Irish Hill was gradually leveled with cutting and filling to expand the industrial facilities throughout the late nineteenth century. During the late nineteenth century, the hill towered over the shipyard, visually separating it from the adjacent Pacific Rolling Mills to the east. A small enclave that housed the unskilled labor force of UIW and other factories occupied the western slope. Around 1917, much of what remained of the hill was flattened and dumped into the Bay as landfill. All that remains today (the Irish Hill Remnant) is an approximately 35-foot-tall serpentine outcropping with a small stand of trees on its eastern slope in the undeveloped southwestern portion of the project site near the corner of Illinois and 22nd streets. The Irish Hill remnant is about 1.4 acres in size, representing approximately 4 percent of the entire 32-acre project site, or about 2 percent of the entire 66-acre UIW Historic District.

[31] Port of San Francisco, "Union Iron Works Historic District: Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area (includes contributing resources proposed for rehabilitation)"; December 6, 2016.

HISTORIC/CURRENT USE

By the 1880s, Irish Hill, originally Scottish Hill, was a compact neighborhood of mostly lodging houses, restaurants, and saloons that occupied the once much larger hill. Most residents were Scottish or Irish immigrant industrial workers who, despite the noise and pollution of the factories nearby, were drawn to the area because of its proximity to their places of work. Irish Hill remained a favored residential enclave for Irish immigrants until the early twentieth century, when most of the hill was flattened and used as landfill to make way for shipyard expansion.

INTEGRITY

What was once Irish Hill is represented by the remaining peak east of Illinois and 22nd streets and south of Building 117. The topography of Irish Hill was modified during the District's period of significance and expresses the struggle between lower income, worker communities, and the shipyard's desire to expand and promote itself. Because the remaining portion of Irish Hill is the last vestige of a residential enclave that served early Irish immigrant workers who were mostly employed by waterfront industry, Irish Hill contributes to the UIW Historic District. Irish Hill, in its modified form, qualifies as a contributing landscape feature that resulted from the World War I expansion of UIW, retaining all seven aspects of integrity: location, design, materials, workmanship, setting, association, and feeling.

EVALUATION OF INDIVIDUAL SIGNIFICANCE

Although the Irish Hill Remnant is associated with the UIW Historic District, of which it is a contributing feature, the remnant no longer includes any buildings, street infrastructure, or other features that are connected to the Irish Hill neighborhood, which was home to many workers at the former Union Iron Works and Pacific Rolling Mills. Moreover, the Irish Hill Remnant, while it maintains integrity of location and setting, no longer possesses integrity of material, workmanship, or feeling, nor does it have integrity of design. Accordingly, the Irish Hill Remnant is not individually eligible for the National Register of Historic Places or the California Register of Historical Resources, and is thus not an individual historical resource under CEQA.[32]

Non-Contributing Features on the Project Site

Non-contributing features of the UIW Historic District are defined as those which have either lost integrity due to substantial alterations or were constructed after the period of significance, or both.

[32] RHAA Landscape Architects, *Irish Hill Remnant: Determination of Individual Eligibility for the National Register of Historic Places and the California Register of Historic Resources*, December 8, 2016.

Slipways 5, 6, 7, and 8 were designed and built by the U.S. Navy in 1941 as part of the New Yard (Building 12 complex). Slipways 5 and 8 were 400 feet long and Slipways 6 and 7 were 660 feet long descending from the shoreline into San Francisco Bay. All are oriented east to west, and are longer than the Pier 68 slipways, allowing for the construction of larger ships. All slipways were infilled after 1964 and the associated platforms and cranes were removed. It is assumed that the subsurface portions of the craneways remain under an asphalt parking lot. The craneways and the edge of the slipways are visible along the shoreline.

Slipways 5 through 8 were installed in 1941 when the U.S. Navy constructed the Building 12 complex. The hulls were constructed in the ways before they were launched and moved over to the adjacent wet basins for outfitting. These slipways were designed to accommodate one 6,000-ton cruiser or two 2,100-ton destroyers. Welding and prefabrication were the primary methods of steel hull construction during World War II. Welding platforms were placed on all available sides of the slipways, including a larger platform at the head of Slip 8. Two head house buildings, Buildings 34 and 35, no longer extant, sat at the head of the longer slipways, Slipways 6 and 7. Instead of the 70-foot crane track towers found at Slipways 1 through 3, single Colby cranes ran on crane tracks only slightly raised above the slip ways. Rail lines and a semi-gantry crane moved plates and materials from the Building 12 complex to the slipways. This area is currently used to store self-storage lockers and new automobiles.

Slipways 5 through 8 were integral to the World War II shipbuilding process at the New Yard and were a defining feature of the layout of the Building 12 complex. These slipways were infilled and paved over in 1964, and they have lost their integrity of design, materials, workmanship, and feeling. Because of this loss of integrity, they are non-contributing features within the UIW Historic District.

HISTORIC RESOURCES OUTSIDE OF UIW DISTRICT

Other historical resources near the project site, but outside of the UIW Historic District, are located to the west and to the south.

2301 Third Street

Opposite Illinois Street to the west of the project site is the former American Can Company Building (the American Industrial Center) at 2301 Third Street. Built originally in 1920 and occupying the two city blocks bound by Third Street on the west, Illinois Street on the east, 20th Street on the north, and 22nd Street on the south, the building was determined eligible for the NRHP for its historical and architectural significance (NRHP status code “2S2”). This building is a contributor to the Central Waterfront Historic District (see discussion below).

Central Waterfront Historic District

Located directly west of the project site, on the west side of Illinois Street and centered on Third Street from 18th Street on the north to 24th Street on the south, is the Central Waterfront Historic District, which was determined eligible for the California Register of Historical Resources. This district was identified during the Central Waterfront Survey, which found that the area contains a significant concentration of mixed-use industrial properties, associated residential and commercial properties, and civic infrastructure oriented to water, railroad, and road transportation. The Central Waterfront Survey was adopted by the Landmark Preservation Advisory Board (now Historic Preservation Commission) in 2001, and later amended in 2008. The district was the epicenter of major industrial production beginning in the late 1850s, and continuing through the end of World War II. The district contains 26 contributing resources eligible for the NRHP under Criterion 1 (Events) for association with the industrial development of San Francisco from 1872 to 1958.[33]

1201 Illinois Street

Located immediately south of and adjacent to the project site is the site containing the former PG&E Station A Potrero Power Plant at 1201 Illinois Street (the PG&E Potrero Substation). Beginning in 1899, the San Francisco Gas Light Company (predecessor to today's PG&E) expanded its physical presence in Potrero Point by constructing a large power house (Station A), pump house, meter house, compressor house, and gate house on Humboldt Street to the southeast of the UIW Shipyard. Completed between 1905 and 1930, these five brick industrial structures still stand, although they are abandoned and in greatly dilapidated condition. The structures were identified in the Central Waterfront Survey and are contributors to the Central Waterfront Historic District[34] and are considered historical resources as defined by CEQA. The cluster of brick structures is located approximately 300-500 feet south from the southern boundaries of the project site. Between the project site and the five structures associated with the former PG&E Station A Potrero Power Plant are a number of intervening buildings and structures, including three modern steel former fuel storage tanks, a modern electrical substation, and modern modular buildings and trailers, none of which would be considered historical resources under CEQA.

Dogpatch Historic District

Located two blocks to the west of the project site, opposite Third Street, is the Dogpatch Historic District. Listed in Article 10 of the Planning Code as a designated San Francisco Historic District,

[33] California Department of Parks and Recreation (DPR) District Record Form, *Central Waterfront*, prepared by Kelley & VerPlanck and Page & Turnbull, Inc., March 2008.
[34] Ibid.

the Dogpatch Historic District contains approximately 75 contributing resources centered primarily on Tennessee Street. The boundaries of the district are Mariposa Street on the north, Third Street on the east, 23rd Street on the south, and Indiana Street to the west. The western boundary of the UIW Historic District, including the western boundary of the project site, is approximately 400 feet east of the Dogpatch Historic District, with numerous intervening buildings and structures, such as the former American Can Company Building and the width of Third Street. One contributor to the Dogpatch Historic District is the Irving Murray Scott School located at 1060 Tennessee Street. This two-story, wood frame schoolhouse constructed in 1895 is individually listed in the NRHP (status code "1S"), and is located approximately 650 feet west of the project site with numerous intervening buildings and streets. Aside from the UIW Historic District, the Irving Murray Scott School is the only NRHP-listed resource in the project vicinity. Dogpatch Historic District is a historical resource as defined by CEQA.

671 Illinois Street

Located to the north of the project site and immediately adjacent to the UIW Historic District is 671 Illinois Street, the historic Kneass Boatworks Building. This building is the oldest surviving wood frame boatworks building on the waterfront and dates from the 1870's. This property was determined to be individually eligible for the National Register of Historic Places by the San Francisco Planning Department in their 2001 Central Waterfront Cultural Resources Survey.

REGULATORY FRAMEWORK

This subsection describes the pertinent Federal, State, and local laws and regulations that pertain to the identification and regulation of historic architectural resources.

FEDERAL

National Register of Historic Places

The NRHP is the nation's master inventory of cultural resources worthy of preservation. It is administered by the National Park Service, which is represented at the State level by the State Historic Preservation Officer. The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the Federal, State, or local level. Resources that are listed on or have been found by the State Historic Preservation Officer to be eligible for the NRHP are called historic properties. The NRHP provides four evaluative criteria to determine eligibility of a resource:

> The quality of significance in American history, architecture, archaeology and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:

a. that are associated with events that have made a significant contribution to the broad patterns of history; or

b. that are associated with the lives of persons significant in our past; or

c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. that have yielded or may likely yield information important in prehistory or history. [35]

Although there are exceptions, certain kinds of resources are not usually considered for listing in the NRHP. These include religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

Integrity

In addition to qualifying for listing under at least one of the NRHP criteria, a property must possess sufficient integrity to be considered eligible for the NRHP. According to the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The *National Register Bulletin* defines seven characteristics of integrity as follows:

Location is the place where the historic property was constructed.

Design is the combination of elements that create the form, plans, space, structure, and style of the property.

Setting addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the buildings.

Materials refer to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history.

Feeling is the property's expression of the aesthetic or historic sense of a particular period of time.

[35] 36 CFR Section 60.4.

Association is the direct link between an important historic event or person and an historic property.

STATE

Definition of Historical Resources under CEQA

CEQA Guidelines Section 15064.5(a), in Title 14 of the California Code of Regulations, defines a "historical resource" as:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

Therefore, under the CEQA Guidelines, even if a resource is not included on any local, State, or Federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR.

California Register of Historical Resources Criteria

The CRHR is the authoritative guide to historical and archaeological resources that are significant within the context of California's history. Criteria for eligibility for inclusion in the CRHR are based on, and therefore correspond to, NRHP criteria for listing. A resource that meets at least

one of the eligibility criteria for inclusion in the CRHR is considered a historical resource for the purposes of CEQA. A resource is eligible for listing in the CRHR if it:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Events);

(2) Is associated with the lives of persons important in our past (Persons);

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values (Design/Construction); or

(4) Has yielded, or may be likely to yield, information important in prehistory or history (Information Potential).[36]

National Park Service guidance on evaluating the integrity of resources often informs the determination of eligibility under the CRHR.

LOCAL

San Francisco Planning Code Section 101.1: Master Plan Priority Policies

Planning Code Section 101.1 is generally applicable to the Proposed Project. It requires that the City find that the Proposed Project is consistent with eight master plan priority policies. Priority Policy 7 is relevant to historical resources and establishes a priority policy "that landmarks and historic buildings be preserved."

San Francisco General Plan

The Urban Design Element of the *San Francisco General Plan* includes the following policy related to historic preservation:

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.

Planning Department, CEQA Review Procedures for Historical Resources

The San Francisco Planning Department prepared the *CEQA Review Procedures for Historic Resources* to provide guidance in determining whether a resource is considered a historical resource as defined by CEQA.[37] Three categories of properties are defined:

[36] Public Resources Code Section 5024.1.

[37] San Francisco Planning Department, *Preservation Bulletin No. 16, CEQA Review Procedures for Historic Resources*, Draft, March 31, 2008.

- Category A. Category A has two subcategories:
    - Category A.1. Resources listed in or formally determined to be eligible for the CRHR.
    - Category A.2. Resources listed in adopted local registers, or properties that appear eligible, or may become eligible, for the CRHR.
- Category B. Properties requiring further consultation and review.
- Category C. Properties determined not to be historical resources, or properties for which the City has no information indicating that the property is an historical resource.

To determine if a property is eligible as a historical resource for the purposes of CEQA, the San Francisco Planning Department (lead agency) requires an evaluation of a property's individual significance for listing in the California Register of Historical Resources, as well as an examination of a property's relationship to any eligible historic district.

To assess impacts within historic districts, the Planning Department examines several factors including, but not limited to, size and significance of a historic district, number and location of contributing features/non-contributing features, district integrity, district boundaries, and the proposed project. Assessments within historic districts are examined on a case-by-case basis, due to the wide variety and unique nature of historical resources.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE THRESHOLDS

The thresholds for determining the significance of impacts in this analysis are consistent with the environmental checklist in Appendix G of the State CEQA Guidelines, which has been modified by the San Francisco Planning Department. For the purpose of this analysis, the following applicable thresholds were used to determine whether implementing the Proposed Project would result in a significant impact related to historic architectural resources. Implementation of the Proposed Project would have a significant effect related to historic architectural resources if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code.

The CEQA Guidelines (Section 15064.5(b)) establish the criteria for assessing a significant environmental impact on historical resources. They state, "[a] project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." The CEQA Guidelines define "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or

its immediate surroundings such that the significance of an historical resource would be materially impaired" (Section 15064.5(b)(1)).

For the purposes of this EIR, significance of a historic architectural resource is considered to be "materially impaired" and could have a potentially significant impact related to historic architectural resource if the project were to demolish or materially alter the physical characteristics that justify the inclusion of the resource in the CRHR, or that justify the inclusion of the resource in a local register, or that justify its eligibility for inclusion in the CRHR as determined by the lead agency (Section 15064.5(b)(2)).

APPROACH TO ANALYSIS

This section is based on the UIW Historic District NRHP Registration Form, an *Analysis of Proposed Demolitions Within the Union Iron Works Historic District at Pier 70*,[38] an analysis by the Port of San Francisco entitled, *Union Iron Works Historic District Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area*,[39] and certificates of determination for exemptions from environmental review and associated historical resources evaluation reports for the 20th Street Historic Core Project, Crane Cove Park, and BAE Systems Lease Renewal Projects, as well as policies and procedures undertaken by the San Francisco Planning Department. As summarized in the Environmental Setting section above, these studies included extensive background research to identify historical resources, field review, and analysis by qualified architectural historians.

As described in Chapter 2, Project Description, pp. 2.25-2.33, two project scenarios are considered in the EIR: (1) a Maximum Residential Scenario and (2) a Maximum Commercial Scenario. The Proposed Project's total gsf would range between a maximum of 4,212,230 gsf, under the Maximum Residential Scenario, to 4,179,300 gsf, under the Maximum Commercial Scenario, inclusive of new construction and rehabilitated historic buildings on the 32-acre project site inclusive of the Illinois Parcels. Under both scenarios, the Proposed Project would result in the construction of new office space, residential dwelling units, retail/restaurant/arts/light-industrial uses, and open space. Associated infrastructure, grading, and vehicle and bicycle parking would also be developed to support these uses. The two scenarios would result in new buildings that are similar in massing throughout the 32-acre project site inclusive of the Illinois Parcels; would retain and renovate the historic Buildings 2, 12, and 21; and would demolish contributing features 11, 15, 16, 19, 25, 32, and 66 and the Slipways 5 through 8 non-contributing

[38] Carey & Co., Inc., *Analysis of Proposed Demolitions Within the Union Iron Works Historic District at Pier 70.* Prepared for the Port of San Francisco, May 20, 2016.
[39] Port of San Francisco, *Union Iron Works Historic District Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area, May 16, 2016.*

features that are within the UIW Historic District. The overall gsf would be substantially the same between the two scenarios, with a difference of only approximately 32,000 gsf. The historical resources impacts and mitigations described below apply to both the Maximum Residential Scenario and the Maximum Commercial Scenario. The impacts to historical resources would be identical for the two scenarios because (1) the two scenarios would result in the rehabilitation and demolition of the same buildings (including historic buildings); (2) the building massing of the two scenarios would differ only slightly, and would create no substantial differences in the ways that the historic district and historic buildings on the site are seen or experienced; and (3) construction under both scenarios is expected to begin in 2018 and would involve five development phases over an approximately 11-year period, concluding in 2029. Construction vibration impacts on adjacent historic buildings are discussed in Section 4.F, Noise and Vibration, on pp. 4.F.41-4.F.45.

PROJECT FEATURES

Demolition, Retention, Rehabilitation, and Relocation of Existing Contributors to the UIW Historic District

The project site is within the southern portion of the UIW Historic District (south of the 20th Street alignment) and surrounds the southern portion of the adjacent 20th Street Historic Core (occupied by contributing Buildings 113, 114, 115, 116, and 14). Although the project site represents almost half of the UIW Historic District area (approximately 32 acres out of 66 total acres), it includes only 11 of the 44 contributing features within the District.

The Proposed Project would result in the demolition of seven contributing buildings on the project site that contribute to the UIW Historic District: Buildings 11, 15, 16, 19, 25, 32, and 66. These seven buildings (Buildings 11, 15, 16, 19, 25, 32, and 66) are not individually eligible for listing in the California Register of National Register.[40] The Proposed Project would retain and rehabilitate three buildings on the project site that are contributors to the UIW Historic District: Buildings 2, 12, and 21. Of these three buildings, one—Building 21—has been found to be individually eligible for listing in the California Register. Building 21would be raised approximately 4 feet, equivalent to the rest of the site, to address future sea level rise, and relocated about 75 feet from its current location. The Proposed Project would involve a minor alteration of the remnant of Irish Hill, which is a contributor to the UIW Historic District, but not individually eligible. See Figure 2.6: Proposed Rehabilitation, Retention, and Demolition Plan, in Chapter 2, Project Description, on p. 2.24. The disposition of existing buildings is summarized below in Table 4.D.3: Disposition of Contributing Features on the Project Site.

[40] Port of San Francisco, *Union Iron Works Historic District Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area, May 16, 2016.*

Table 4.D.3: Disposition of Contributing Features on the Project Site[41]

Building Number (Name)	Retain, Rehabilitate, or Demolish?
Building 2 (Warehouse No. 2)	Retain and rehabilitate
Building 11 (Tool Room and Navy Office)	Demolish
Building 12 (Plate Shop No. 2)	Retain and rehabilitate
Building 15 (Layout Yard)	Demolish[42]
Building 16 (Stress Relieving Building)	Demolish
Building 19 (Garage No. 1)	Demolish
Building 21 (Substation No. 5)	Retain, re-locate, and rehabilitate
Building 25 (Washroom and Locker Room)	Demolish
Building 32 (Template Waterhouse)	Demolish
Building 66 (Welding Shed)	Demolish
Irish Hill (remnant)	Mostly Retain

Source: ESA 2015

Infill Construction and Design for Development

The Proposed Project calls for the establishment of new infill construction zones within the project site on large expanses of existing asphalt storage areas within the UIW Historic District to the east, west, and south of the retained contributing buildings within the project site (Buildings 2, 12, and 21) and the southern portion of 20th Street Historic Core (Buildings 113, 114, 115, 116, and 14).

New construction within allowable development zones would be restricted to the total height limits by parcel name/number, as shown in Table 4.D.4: Maximum Heights of New Construction by Parcel Name/Number. The overall heights of new construction would range from 50 feet to 90 feet, responding to the variety of building heights found in the project site, which range from 44 feet (Building 21) to 60 feet (Building 12) and 82 feet (Building 2). See Figure 2.13: Proposed Height Limits Plan, on p. 2.40, which identifies the allowable new construction zones and each developable parcel. No height increase or substantial new exterior additions would be permitted at historic Buildings 2, 12, and 21.

[41] Building 117 is within the project site but is part of the adjacent 20th Street Historic Core Building 40 and 117 project, as described on p. 4.A.14. That project includes demolition of Building 117.

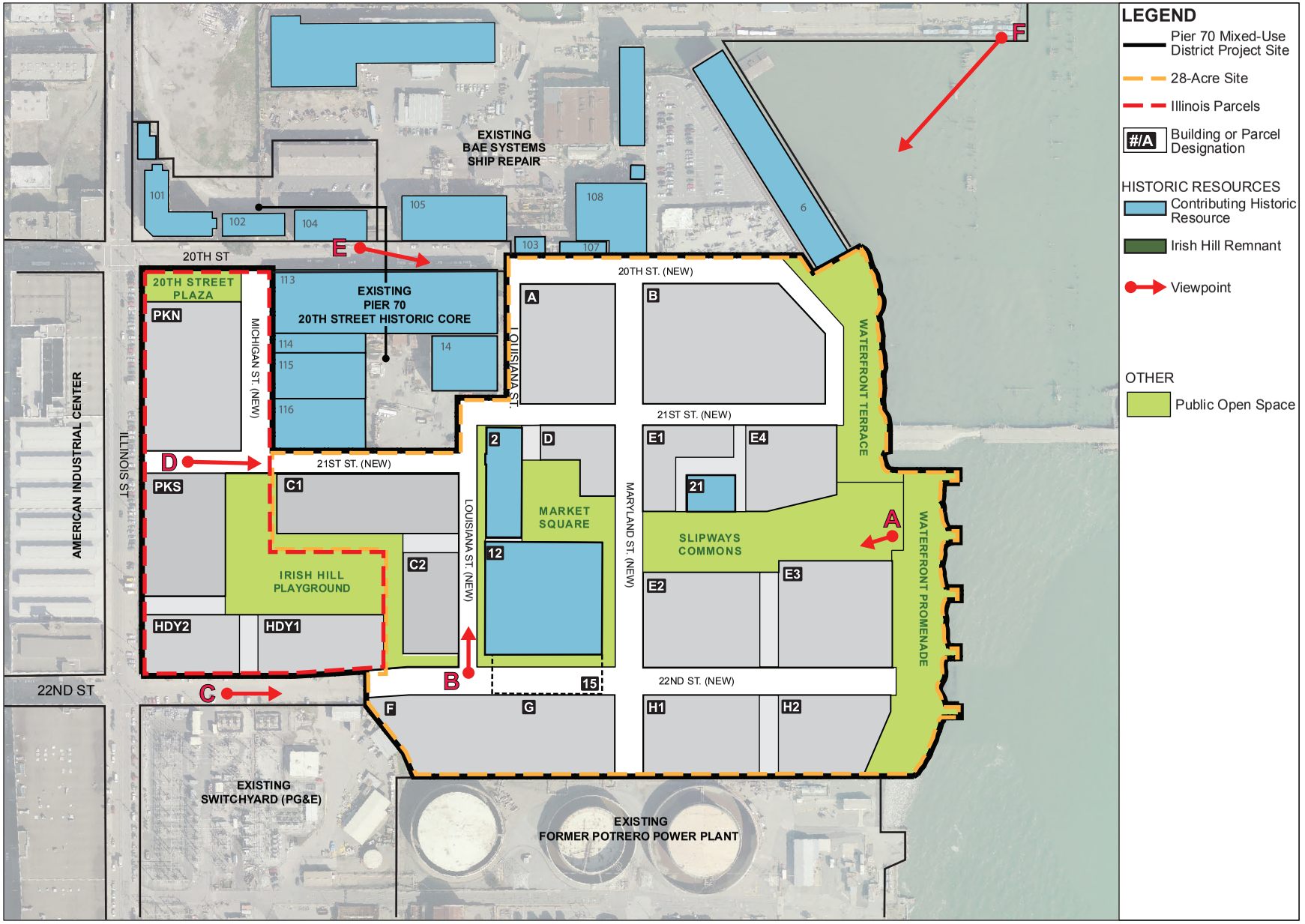
[42] The structural frame of Building 15 may be retained as part of the Proposed Project. However, for purposes of this analysis, the building is assumed to be demolished.

Table 4.D.4: Maximum Heights of New Construction by Parcel Name/Number

Parcel Name/Number	Maximum Height (feet)
A, B, D, E1 (along Maryland), C1, C2, F/G, and H1/H2	90
E2 and E3	70
E1 (along 21st), PKN, PKS, and HDY	65
E4	50

Source: ESA 2014

The following pages present a viewpoint location map (see Figure 4.D.3: Viewpoint Location Map) and six simulated views illustrating the maximum potential volume of infill construction on the project site under the proposed maximum height within the context of photographic views of the project site (see Figure 4.D.4: Maximum Height of New Infill Construction (View A); Figure 4.D.5: Maximum Height of New Infill Construction (View B); Figure 4.D.6: Maximum Height of New Infill Construction (View C); Figure 4.D.7: Maximum Height of New Infill Construction (View D); Figure 4.D.8: Maximum Height of New Infill Construction (View E); and Figure 4.D.9: Maximum Height of New Infill Construction (View F)). Note that these simulations do not depict any architectural massing, features, or materials. These simulations do not represent buildings that would be constructed. Such buildings would be sculpted and articulated, as called for under the proposed Pier 70 SUD and proposed *Pier 70 SUD Design for Development.* Architectural plans for new infill buildings in the project site would be submitted to the San Francisco Planning Department and the Port of San Francisco in future implementation of the Proposed Project, if approved, and would be reviewed for conformity with the proposed height districts and the design guidance presented in the proposed *Pier 70 SUD Design for Development*.

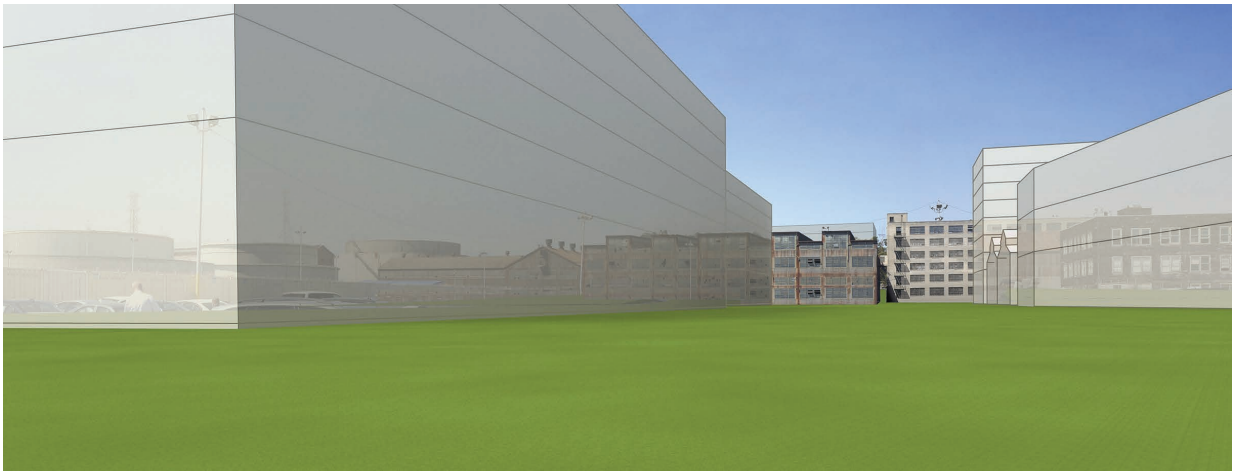


Source: Sitelab Studio, Turnstone Consulting/SWCA (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.3: VIEWPOINT LOCATION MAP

Existing



Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.4: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW A)

Existing

Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.5: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW B)

Existing

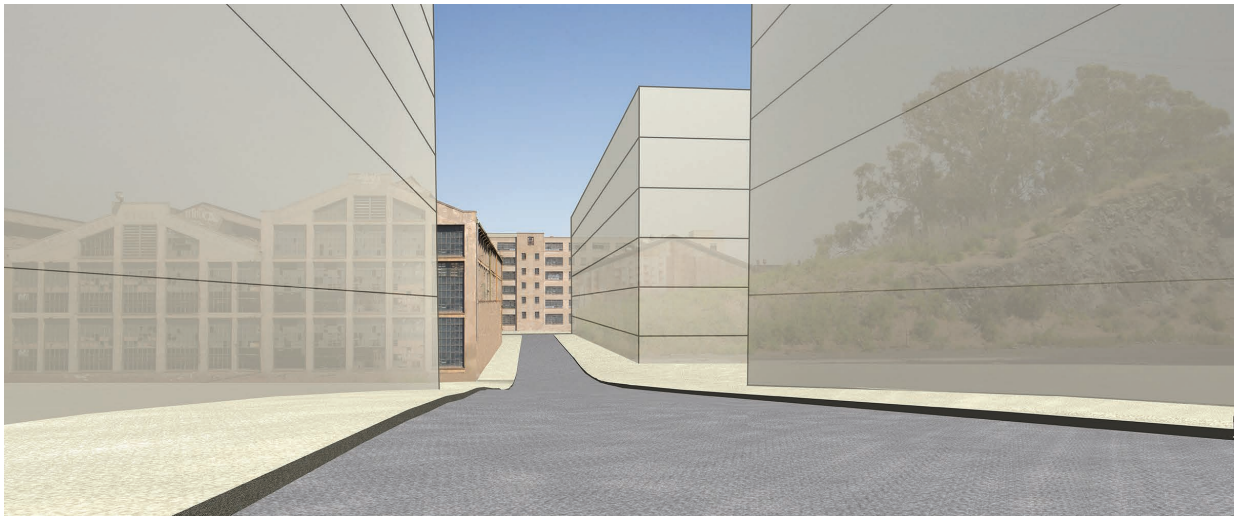
Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.6: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW C)

Existing



Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.7: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW D)

Existing

Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.8: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW E)

Existing

Proposed Representative Massing

Source: Square One (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.9: MAXIMUM HEIGHT OF NEW INFILL CONSTRUCTION (VIEW F)

In addition to the standards and guidelines for the rehabilitation of historic buildings, as well as the establishment of maximum building heights and buildable zones for infill construction discussed above, the *Pier 70 SUD Design for Development* also contains project-wide as well as location-specific massing and architecture requirements that would influence the design of infill construction within the Pier 70 Special Use District. Project-wide standards in the proposed *Design for Development* apply to all new construction and are intended to encourage building variety and a pedestrian scale that meets the needs of a mixed-use neighborhood. Location-specific requirements in the *Design for Development* call for increased attention to the design of the building envelope at key locations. Where new construction is located adjacent to a historic building, location-specific controls ensure architectural compatibility with historic buildings within the UIW Historic District.

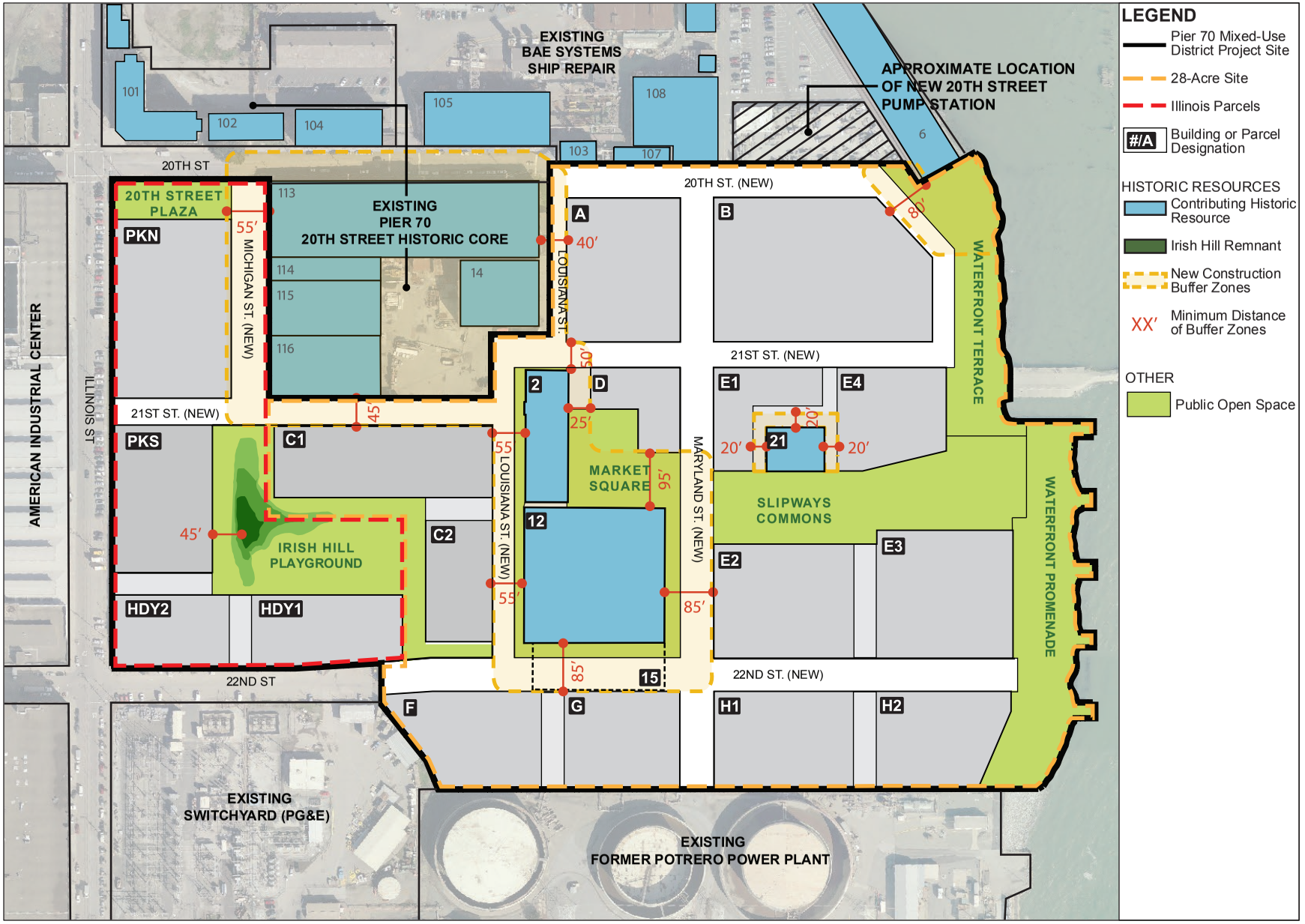
Application of the following key design features of the *Design for Development* are intended to enhance the compatibility of new infill construction with adjacent historical resources in the UIW Historic District: (1) buffer zones, (2) façades and materiality, (3) and adjacency to historical resources. Each of these project features is summarized below.

Buffer Zones

New construction would occur adjacent to historic buildings with minimum distances of separation to provide both visual and physical buffer zones, allowing the remaining historic buildings to be viewed separately from the proposed new buildings. These minimum buffer zones would range in distance from 20 to 85 feet, and would typically span the 45- to 55-foot width of existing and proposed new streets or pedestrian passageways. These buffer zones are intended to accentuate prominent views of the remaining historic Buildings 2, 12, and 21 on the project site, and historic buildings within the adjacent Historic Core site. These buffer zones also establish a minimum of 45 feet between new construction and the peak of Irish Hill. (See Figure 4.D.10: New Construction Buffer.)

Façades and Materiality

A selection of architectural strategies with regard to new building façades and materiality would draw on the District's existing forms and historic materials to enhance compatibility. Standards would prohibit false historicism, encourage building variety, and encourage façade articulation and depth. These standards would be achieved through the application of guidelines that encourage the use of historic rhythms and patterns, regional and District character, material grain, and material and color palette.



Source: Sitelab Urban Studio, Turnstone Consulting/SWCA (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.10: NEW CONSTRUCTION BUFFER

With regard to historic rhythms and patterns, new construction would incorporate, through contemporary interpretation, one or more of the following features that draw from the District's historic character:

- Horizontal banding
- Shifted patterns/glazing
- Articulated rooflines;
- Repetitive patterns (e.g., Building 12 roofline, Building 113 windows)
- Gridded windows
- Weathered materials

(See Figure 4.D.11: Pier 70 Historic Rhythms and Patterns.)

With regard to material grain, new construction would draw on the District's use of long façades comprised of small units, such as brick and corrugated metal, as well as the District's historic use of textured and weathered materials palette (see Figure 4.D.12: Recommended Material Palette). Building façades entirely finished with smooth stucco would not be permitted. Smooth stucco would only be permitted if used in combination with other permitted building materials described in Figure 4.D.12.

Adjacency to Historic Buildings.

To enhance compatibility of new construction with adjacent historic buildings, new buildings would reference adjacent historic buildings through a range of strategies in keeping with the inherent qualities of the District, respecting its character-defining features and unique views. The design of new construction would respond to adjacent historic buildings and important views in specific locations through the use of setbacks and massing standards for view of historic Building 113; height referencing and dimensional quality; related treatment to specific historic façades; and limited or prohibited façade materials.

- *Setback and Massing Standards of Parcel A for Views of Historic Building 113*. To reflect the 60-foot height of adjacent Building 113, the massing at the northwest corner of Parcel A would be set back above 60 feet (the remainder of new construction on Parcel A would be 90 feet in height). (See Figure 4.D.13: Example Relationship of Parcel A to Historic Building 113.)

Gridded Windows

Horizontal Banding

Articulated Roofline

Repetitive Pattern

Source: Sitelab Urban Studio, Pier 70 Design for Development, Figure 6.8.4

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.11: PIER 70 HISTORIC RHYTHMS AND PATTERNS

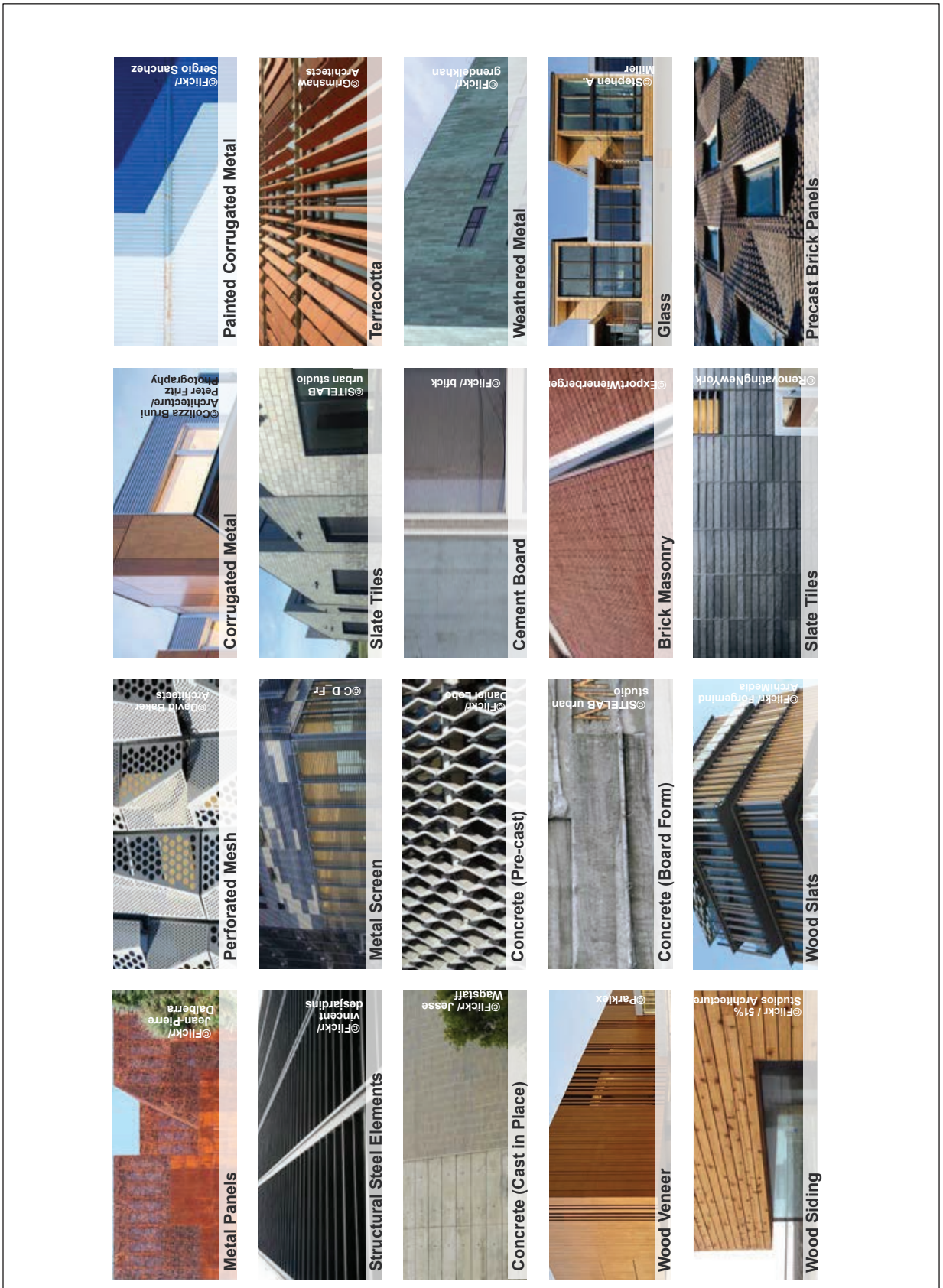


FIGURE 4.D.12: RECOMMENDED MATERIAL PALETTE

PIER 70 MIXED-USE DISTRICT PROJECT

Source: Sitelab Urban Studios, Pier 70 Design for Development, Figure 6.8.5

Source: Sitelab Urban Studios, Pier 70 Design for Development, Figure 6.14.3

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.13: EXAMPLE RELATIONSHIP OF PARCEL A TO HISTORIC BUILDING 113

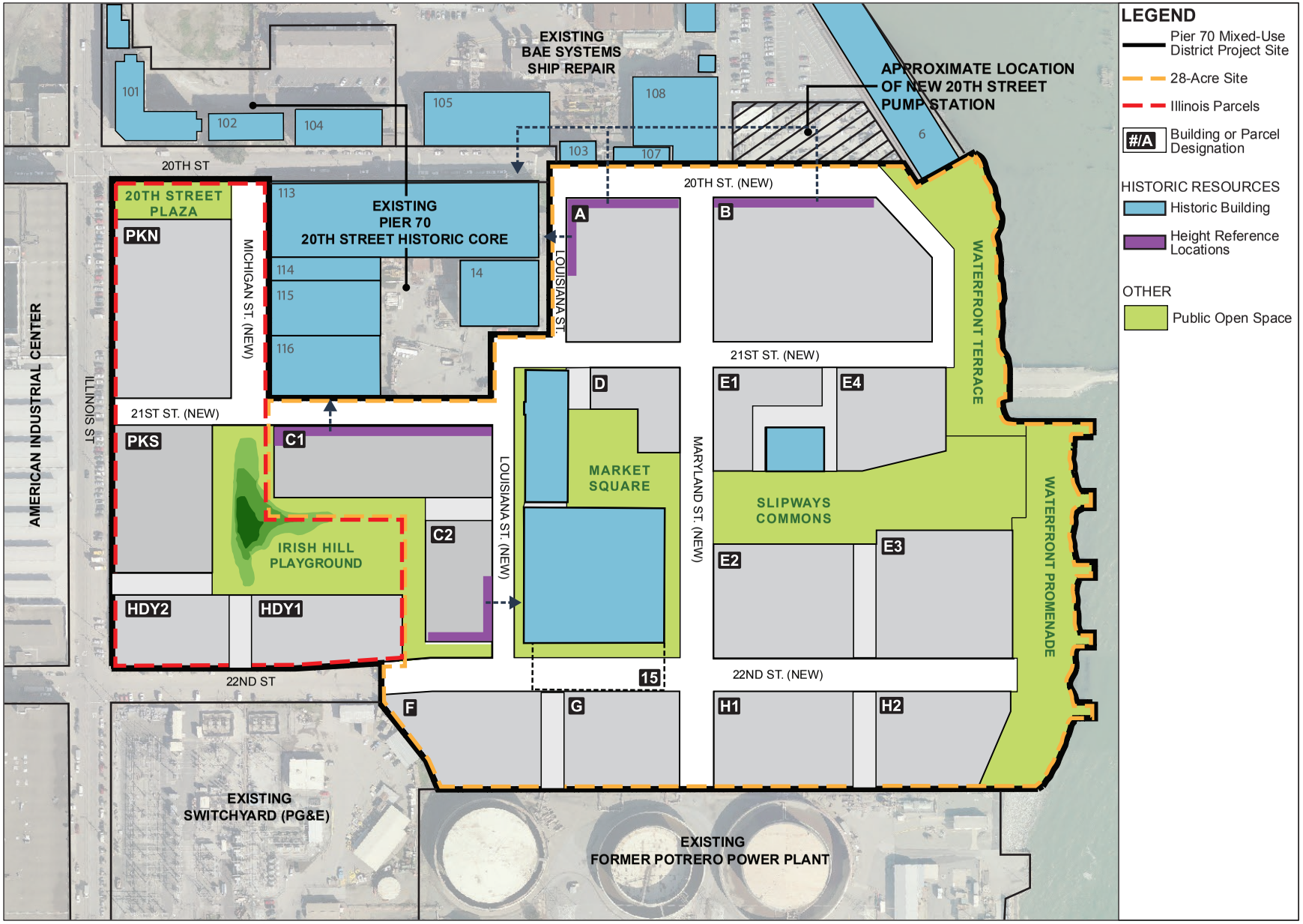
- *Height Referencing with Dimensional Quality*. To enhance compatibility of new construction with adjacent historic buildings, façades of new construction across the street from, or immediately adjacent to, historic buildings would distinctly reference the height of the adjacent building within a 5-foot height range, in order to align with the finished floors of new buildings. In order to be clearly visible, the height reference would have a dimensional quality, such that the massing would project or recess from the vertical plane through the use of distinct fenestration lines, massing, setback, or volumetric shifts, in addition to changes in the façade material or color. (See Figure 4.D.14: Height Reference Locations.)
- *Related Treatment to Adjacent Historic Buildings*. To enhance the compatibility of new construction with adjacent historic buildings, select façades of new construction would incorporate elements that relate to the adjacent historic building, in keeping with contemporary design and construction methods, including one or more of the following elements: (1) height, (2) bay rhythm/vertical modulation, (3) glazing proportions and/or pattern, (4) horizontal banding, (5) material grain, and (6) alignments with key edges or openings. This concept is visually depicted in Figure 4.D.15: Related Treatment to Adjacent Historic Resource.
- *Limited and Prohibited Façade Materials.* To enhance compatibility of new construction with adjacent historic buildings, the following materials would be limited on façades of new construction immediately adjacent to historic buildings: (1) bamboo wood, (2) smooth, flat glass curtain walls, (3) coarse-sand finished stucco, (4) highly reflective glass, and (5) wood resin panels. The following materials would be prohibited on façades of new construction immediately adjacent to historic buildings: (1) vinyl planks and siding, and (2) artificial stone or fiberglass. In addition, building façades finished entirely with solid stucco would not be permitted. Stucco could only be used in combination with other permitted building materials.

IMPACT EVALUATION

Impact CR-4: The proposed demolition of contributing buildings would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. *(Less than Significant)*

The Proposed Project would result in the demolition of seven buildings that contribute to the significance of the UIW Historic District. These are Buildings 11, 15, 16, 19, 25, 32, and 66.

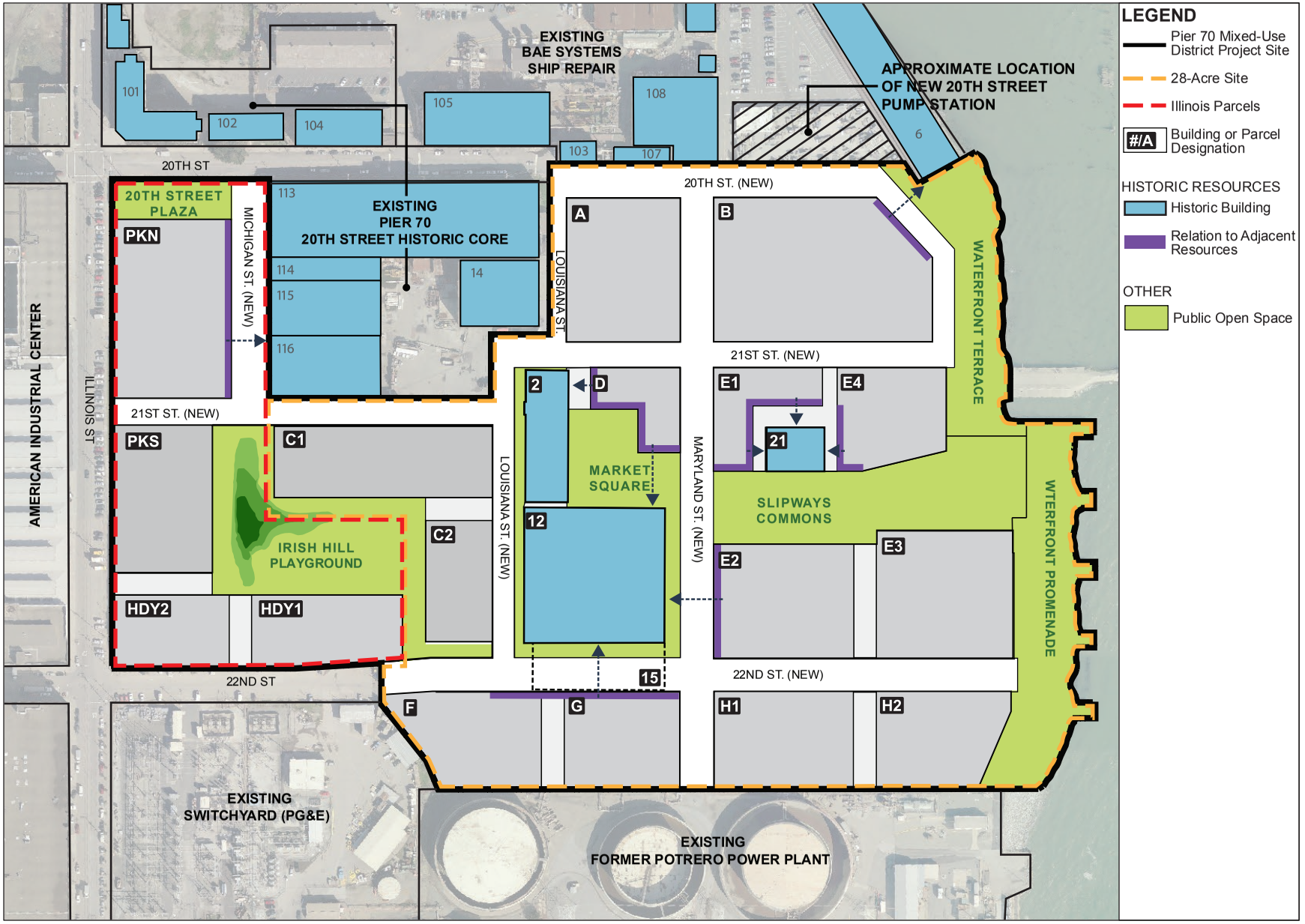
The demolition of these buildings and its effects on the integrity of the UIW Historic District were analyzed in reports prepared by Carey & Co., Inc., for the Port of San Francisco in August 2015 and by the Port of San Francisco in May 2016. The Planning Department has reviewed and concurred with the reports' findings, and the results of the analyses are presented below.



Source: Sitelab Urban Studio, Turnstone Consulting/SWCA (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.14: HEIGHT REFERENCE LOCATIONS



Source: Sitelab Urban Studio, Turnstone Consulting/SWCA (2016)

PIER 70 MIXED-USE DISTRICT PROJECT

FIGURE 4.D.15: RELATED TREATMENT TO ADJACENT HISTORIC RESOURCES

Building 11 (Tool Room and Navy Office)

Although the loss of Building 11 would affect the District's integrity, Buildings 2, 6, 12 and 21 would remain within the UIW Historic District, and the District would maintain a solid representation of this period of historical development and use (Building 6 is outside of the project site but within the UIW Historic District boundary). For these reasons, the Planning Department and the Port of San Francisco found that the proposed demolition of Building 11 would have a less-than-significant impact on the integrity of the UIW Historic District.

Building 15 (Layout Yard), Building 16 (Stress Relieving Building), Building 25 (Washroom and Locker Room), and Building 32 (Template Warehouse)

Because Buildings 15, 16, 25, and 32 are experienced as one structure, they were examined collectively within the Building 12 complex rather than individually to determine the impact of demolition on the integrity of the UIW Historic District. The proposed demolition of these buildings is in part necessitated by the proposed rehabilitation of Building 12, the center of this building complex and its most significant and dominant structure, which was determined to be individually eligible for listing in the California Register. The Proposed Project would remove the abutting buildings so that Building 12 becomes freestanding (see the discussion of the impacts of rehabilitation efforts, below). Demolition of Buildings 15, 16, 25, and 32 is also proposed in order to extend 22nd Street eastward toward the Bay to improve vehicular and pedestrian access to this area of the Historic District and shoreline as well as to serve the needs of existing activities and proposed new infill development. A project option would retain the structural frame of Building 15; however, the removal of all other portions of this building would be treated as a *de facto* demolition.

Although the loss of these contributing buildings would diminish the integrity of the southern portion of the UIW Historic District, the loss would not be significant when considered on a District-wide basis because Buildings 6, 14, 49, and 110 (outside of the project site but within the UIW District) would be retained and would provide a significant concentration of better examples of these World War II resource types. For these reasons, the Planning Department and the Port of San Francisco found that the proposed demolition of Buildings 15, 16, 25, and 32 would have a less-than-significant impact on the integrity of the UIW Historic District.

Building 19 (Garage No. 1)

Building 19, a modest-scale steel frame corrugated metal garage/warehouse structure, would be demolished due to the proposed extension of 20th Street eastward toward the Bay. This proposed vehicular and pedestrian access would be required to serve the needs of the existing activities in the northeast portion of the project site, as well as to support future infill development. The Port's

development strategy directed new infill development to this largely open and vacant area of the UIW Historic District to minimize the loss of contributing features to maintain the District's historic character to the north and west where significant groupings of resources are located.

The integrity of the UIW Historic District would not be significantly impacted by the loss of this contributor because the UIW Historic District would continue to convey its significance and association with utilitarian steel frame and corrugated metal warehouse development from World War II. Similar modest to large warehouses would remain, including Buildings 6, 12, and 14 (Buildings 6 and 14 are outside of the project site but within the UIW Historic District boundary). For these reasons, the Planning Department and the Port of San Francisco found that the proposed demolition of Building 19 would have a less-than-significant impact on the integrity of the UIW Historic District.

Building 66 (Welding Shed)

Building 66 is a simple utilitarian facility that provided weather protection for welding pre-assemblies and other hull components associated with hull construction at the Building 12 complex. The proposed street network to serve the existing activities and proposed new infill development necessitates the removal of Building 66.

Although the building supports the UIW Historic District's ability to convey activities associated with the production of war vessels during World War II, other remaining buildings of this construction type would continue to convey the UIW Historic District's significance associated with World War II, including Buildings 6 and 14 (outside of the project site but within the UIW Historic District boundary). For these reasons, the Planning Department and the Port of San Francisco found that the proposed demolition of Building 66 would have a less-than-significant impact on the integrity of the UIW Historic District.

Conclusion

In summary, Carey & Co., Inc. found, and the Planning Department and Port of San Francisco (in its capacity as the proponent of the UIW National Register Historic District nomination) concur, that a significant concentration of World War II-era contributing features would remain in the Historic District. They would continue to provide strong visual and physical examples of the World War II era of the UIW Historic District. In many instances, the structures to be demolished are repeated elsewhere in the Historic District, as is the case with World War II warehouses, restrooms, and electrical power substations. Additionally, the proposed loss of these resources would not result in the need to adjust the boundary, because the boundary represents the historic ownership and maximum development of the District at its peak operation during World War II.

The boundary for the UIW Historic District, as with most historic districts, includes areas with non-contributing features.

The Proposed Project would result in the demolition of contributors to the UIW Historic District. For the reasons stated above, the proposed demolitions would not result in a substantial adverse change in the historic significance of the UIW Historic District, nor would they result in a deleterious effect on most of the District's character-defining features. The UIW Historic District would retain sufficient contributing features, character-defining features, and overall integrity to continue its listing in the NRHP and the CRHR. As such, the demolition of contributing Buildings 11, 15, 16, 19, 25, 32, and 66 would not materially impair the physical characteristics that justify the UIW Historic District's inclusion in the NRHP or the CRHR.

None of the seven contributing buildings proposed for demolition were found to be individually eligible for listing in the NRHP or CRHR because they either functioned as support facilities to the primary shipbuilding or repair processes, are viewed as smaller additions to the primary buildings or functions, have compromised integrity because the understanding of their role in the shipbuilding process was reduced from the loss of other related facilities, or represent utilitarian buildings that are repeated elsewhere in the District.

Although demolition of contributing Buildings 11, 15, 16, 19, 25, 32, and 66 would have a less-than-significant impact on individual historical resources identified in this EIR and the UIW Historic District as a whole, implementation of Improvement Measure I-CR-1a: Documentation and I-CR-b: Public Interpretation, which call for the documentation and interpretation of the UIW Historic District for the general public, would further reduce the less-than-significant impact resulting from the proposed demolition of contributing features.

Improvement Measure I-CR-4a: Documentation

Before any demolition, rehabilitation, or relocation activities within the UIW Historic District, the project sponsors should retain a professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of all contributing buildings proposed for demolition within the UIW Historic District. The documentation for the property should be prepared based on the National Park Service's Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) Historical Report Guidelines. This type of documentation is based on a combination of both HABS/HAER standards and National Park Service's policy for photographic documentation, as outlined in the NRHP and National Historic Landmarks Survey Photo Policy Expansion.

The written historical data for this documentation should follow HABS/HAER standards. The written data should be accompanied by a sketch plan of the property. Efforts should also be made to locate original construction drawings or plans of the property during the period of significance. If located, these drawings should be photographed, reproduced,

and included in the dataset. If construction drawings or plans cannot be located, as-built drawings should be produced.

Either HABS/HAER-standard large format or digital photography should be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NR-NHL Photo Policy Expansion and have a permanency rating of approximately 115 years. Digital photographs should be taken as uncompressed, TIFF file format. The size of each image should be 1,600 by 1,200 pixels at 330 pixels per inch or larger, color format, and printed in black and white. The file name for each electronic image should correspond with the index of photographs and photograph label. Photograph views for the dataset should include (a) contextual views; (b) views of each side of each building and interior views, where possible; (c) oblique views of buildings; and (d) detail views of character-defining features, including features on the interiors of some buildings. All views should be referenced on a photographic key. This photographic key should be on a map of the property and should show the photograph number with an arrow to indicate the direction of the view. Historic photographs should also be collected, reproduced, and included in the dataset.

The project sponsors should transmit such documentation to the History Room of the San Francisco Public Library, and to the Northwest Information Center of the California Historical Information Resource System. The project sponsors should scope the documentation measures with Planning Department Preservation staff. Department Preservation staff should also review and approve the submitted documentation for adequacy.

Improvement Measure I-CR-4b: Public Interpretation

Following any demolition, rehabilitation, or relocation activities within the project site, the project sponsors should provide a permanent display(s) of interpretive materials concerning the history and architectural features of the District within publicly accessible areas of the project site. The content of the interpretive display(s) should be coordinated and consistent with the sitewide interpretive plan prepared for the 28-Acre Site in coordination with the Port. The specific location, media, and other characteristics of such interpretive display(s) should be presented to Planning Department preservation planning staff for review and comment and to Port preservation staff for approval prior to any demolition or removal activities.

Impact CR-5: The proposed rehabilitation of Buildings 2, 12, and 21 would materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources and would materially alter the physical characteristics of Building 21 that justify its individual eligibility for inclusion in the California Register of Historical Resources. *(Less than Significant with Mitigation)*

Buildings 2, 12, and 21 would be rehabilitated under the Proposed Project for a range of possible reuse purposes. Prior to Port issuance of building permits, the City and the Port of San Francisco would require the project sponsors to rehabilitate Buildings 2, 12, and 21 in accordance with the Secretary of the Interior's Standards for Rehabilitation (Secretary's Standards). As noted in

CEQA Section 15064.5(a)(3), "a project that follows the Secretary of the Interior's Standards for the Rehabilitation and Guidelines for Rehabilitating Historic Buildings … shall be considered as mitigated to a level of less-than-significant impact on the historical resource."

As the rehabilitation efforts for these buildings are still in the design phase, the Planning Department conservatively finds that the impact of the proposed rehabilitation to Buildings 2, 12, and 21 to be significant. Implementation of Mitigation Measure M-CR-5: Preparation of Historic Resource Evaluation Reports, Review, and Performance Criteria, shown below, would reduce the impacts of rehabilitation on the UIW Historic District to a less-than-significant level.

Implementation of Mitigation Measure M-CR-5 would also ensure that the rehabilitation of Building 21 would not materially impair the physical characteristics of Building 21 that justify its individual eligibility for the California Register of Historical Resources.

Mitigation Measure M-CR-5: Preparation of Historic Resource Evaluation Reports, Review, and Performance Criteria.

Prior to Port issuance of building permits associated with Buildings 2, 12 and 21, Port of San Francisco Preservation staff shall review and approve future rehabilitation design proposals for Buildings 2, 12, and 21. Submitted rehabilitation design proposals for Buildings 2 and 12 shall include, in addition to proposed building design, detail on the proposed landscaping treatment within a 20-foot-wide perimeter of each building. The Port's review and analysis would be informed by Historic Resource Evaluation(s) provided by the project sponsors. The Historic Resource Evaluation(s) shall be prepared by a qualified consultant who meets or exceeds the Secretary of the Interior's Professional Qualification Standards in historic architecture or architectural history. The scope of the Historic Resource Evaluation(s) shall be reviewed and approved by Port Preservation and Planning Department Preservation staff prior to the start of work. Following review of the completed Historic Resource Evaluation(s), Planning Department preservation staff would prepare one or more Historic Resource Evaluation Response(s) that would contain the Department's determination as to the effects, if any, on historical resources of the proposed renovation. The Port shall not issue building permits associated with Buildings 2, 12, and 21 until Planning Department and Port preservation staff concur that the design (1) conforms with the Secretary of the Interior's Standards for Rehabilitation; (2) is compatible with the UIW Historic District; and (3) preserves the building's historic materials and character-defining features, and repairs instead of replaces deteriorated features, where feasible. Should alternative materials be proposed for replacement of historic materials, they shall be in keeping with the size, scale, color, texture, and general appearance. The performance criteria shall ensure retention of the following character-defining features of each historic building:

- **Building 2**: (1) board-formed concrete construction; (2) six-story height; (3) flat roof; (4) rectangular plan and north-south orientation; (5) regular pattern of window openings on east and west elevations; (6) steel, multi-pane, fixed sash windows (floors 1-5); (7) wood sash windows (floor 6); (8) elevator/stair tower that rises above roofline and projects slightly from west façade.

- **Building 12**: (1) steel and wood construction; (2) corrugated steel cladding (except the as-built south elevation, which was always open to Building 15); (3) 60-foot height; (4) Aiken roof configuration with five raised, glazed monitors; (5) clerestory multi-lite steel sash awning windows along the north and south sides of the monitors; (6) multi-lite, steel sash awning widows, arranged in three bands (with a double-height bottom band) on the north and west elevations, and in four bands on the east elevation; (7) 12-bay configuration of east and west elevations; (8) north-south roof ridge from which roof slopes gently (1/4 inch per foot) to the east and west.
- **Building 21:** (1) steel frame construction; (2) corrugated metal cladding; (3) double-gable roof clad in corrugated metal, with wide roof monitor at each gable; (4) multi-lite, double hung wood or horizontal steel sash windows[43]; and (5) two pairs of steel freight loading doors on the north elevation, glazed with 12 lites per door.

Planning Department staff and Port staff shall not approve any proposal for rehabilitation of Buildings 2, 12, and 21 unless they find that such a scheme conforms to the Secretary's Standards as specified for each building.

Impact CR-6: The proposed relocation of contributing Building 21 would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources, nor the physical characteristics of Building 21 that justify its eligibility for individual inclusion in the California Register of Historical Resources. ***(Less than Significant)***

In addition to being rehabilitated, Building 21 would be relocated approximately 75 feet to the southeast to accommodate the proposed extension and rationalization of new streets, to provide sufficient room for new infill construction in the immediate vicinity, to front the new public park, and to accommodate the proposed increase in the elevation grade. Building 21 would also be raised approximately 4 feet, equivalent to the rest of the site, to accommodate the potential for sea level rise.

Relocated buildings can remain eligible for the NRHP if they satisfy NRHP Criteria Consideration B, which states that "A property removed from its original or historically significant location can be eligible if it is significant primarily for architectural value or it is the surviving property most importantly associated with a historic person or event."[44] Building 21 appears to qualify on both fronts, because it is significant for its industrial architecture and it would be considered the building "most importantly associated" with Risdon Iron Works' presence on the site. In addition to these requirements, to satisfy Criteria Consideration B, moved

[43] Many of the building's windows have been covered with plywood or metal security grates; the monitor windows have been covered with corrugated metal.

[44] U.S. Department of the Interior, National Park Service, Interagency Resources Division, How to Apply the National Register Criteria for Evaluation, Washington, D.C.: 1991, p. 29.

properties must retain an "orientation, setting, and general environment that are comparable to those of the historic location and that are compatible with the property's significance."[45]

Building 21's relocation would preserve its orientation. More generally, its context and spatial relationship to Buildings 2 and 12 would be maintained. Relocating Building 21 to the south would enable all three historic buildings to be viewed simultaneously from proposed future open space. The proposed relocation would emphasize the south wall of the building (historically the building's rear elevation), which would front the new open space, whereas the building's historic front (north) façade would be separated from proposed new Building E1 by a narrow pedestrian alley. The proximity of the north façade to other buildings, however, is in keeping with the building's historic condition. As a result, the proposed relocation of Building 21 would satisfy NRHP Criteria Consideration B and the building would remain a contributor to the UIW Historic District.

The relocation of Building 21 would not substantially affect this building's integrity of setting as a contributor to the UIW Historic District, and as a resource that is eligible for individual inclusion in the California Register of Historical Resources, because it would be within the same general location as its historic context and the spatial relationship of Buildings 2, 12 and 21 would be largely maintained. For these reasons, the proposed relocation of Building 21 would have a less-than-significant impact on historical resources. No mitigation measures are necessary.

Impact CR-7: The proposed demolition of non-contributing slipways would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. *(Less than Significant)*

The Proposed Project would demolish or substantially alter Slipways 5, 6, 7, and 8 (remnant slipways), which are non-contributors to the UIW Historic District. Because Slipways 5 through 8 do not contribute to the UIW Historic District and are not otherwise considered historical resources as defined by CEQA, their removal or substantial alteration would have a less-than-significant impact on historical resources. No mitigation measures are necessary.

Impact CR-8: The proposed site grading work associated with contributing Buildings 2 and 12 would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. *(Less than Significant)*

The grade around Buildings 2 and 12 would be raised approximately 4 feet to protect these buildings from potential sea level rise, according to the Proposed Project's site grading plan. The

[45] How to Apply the National Register Criteria for Evaluation, p. 30.

effects of the grading plan relative to historic Buildings 2 and 12, as well as the UIW Historic District as a whole, are discussed below.

Building 2

The first floor of Building 2 has a podium level approximately 5 feet above the ground to accommodate the loading docks that encircle the building. The placement of up to 4 feet of new soil surrounding this building, thereby raising the ground level to approximately 1 foot below the top of the loading docks, would not substantially change the building's character-defining features (identified in Mitigation Measure M-CR-5, pp. 4.D.93-4.D.94, above). While the new grade would result in a relatively minor change in building height relative to the overall height of this building, and would have a minor impact on the property's integrity, it would not materially impair the significance of Building 2 as a contributor to the UIW Historic District. For these reasons, the proposed grading plan would have a less-than-significant impact on this contributor to the UIW Historic District. No mitigation measures are necessary.

Building 12

Three options for the grading treatment of Building 12 relative to the proposed grading plan are included in the Proposed Project. The final grading treatment would ultimately be decided on before the Port issues building permits, subject to review and approval of the San Francisco Planning Department.[46] Each of these options is described below, including overall impacts on the significance of the building and consistency with the Secretary of the Interior's Standards.

Grading Option 1: Raise the Exterior Grade Only

Under Grading Option 1, Building 12 would remain at the current finished floor elevation. A grade differential of no more than 4 feet between the finished floor elevation of Building 12 and the surrounding street elevation would be bridged by stepped or sloped treatment of the area adjacent to the building, allowing the exterior wall to remain fully exposed. No changes to the interior floor elevation would occur under this option. While the new grade would have a minor impact on the property's integrity of setting, as all exterior, character-defining features of Building 12 would remain visible and unchanged from current conditions, this option would not materially impair the significance of Buildings 12 to the extent that it would no longer be a contributor to the UIW Historic District. Grading Option 1 would meet the Secretary of the Interior's Standards for Rehabilitation because it would retain and preserve the building's

[46] The frame of Building 15, which is included in the Building 12 complex, would remain in place as part of the Proposed Project. Because the impacts to Building 15 are analyzed separately under Impact CR-1, only the impacts of the grading plan on Building 12 are analyzed in this subsection.

character-defining features. For these reasons, Option 1 of the proposed grading plan would have a less-than-significant impact on Building 12. No mitigation measures are necessary.

Grading Option 2: Raise the Interior Slab on Grade of Building 12 Structural Frame and Raise the Exterior Grade

Under Grading Option 2, the interior slab would be raised up to a maximum of 3 feet and the adjacent exterior would be raised an additional 4 feet, while leaving the existing structure at the current elevation. The new slab on grade would be placed over compacted fill, and a thickened edge of slab would be placed around the building perimeter. Up to 4 feet of differential grading between the street elevation and the new floor slab would be bridged by stepped or sloped treatments. This option would cover some currently exposed steel column-to-foundation connections, shorten the height of pedestrian and vehicular openings, and lower the sill heights of ground-floor windows, as viewed from the interior. Although the first 4 feet of the exterior elevations of Building 12 could be obscured from view due to the raised interior grade, this would represent a relatively minor loss of historic fabric, or approximately 6 percent, of the overall 60-foot-tall elevation of Building 12, and would be minimally perceptible given the building's relatively massive (60,000-square-foot) floor plate. While the new grade would have a minor impact on the property's integrity of setting, Grading Option 2 would meet the Secretary of the Interior's Standards for Rehabilitation because it would retain and preserve the vast majority of the building's character-defining features. For these reasons, Option 2 of the proposed grading plan would have a less-than-significant impact on Building 12. No mitigation measures are necessary.

Grading Option 3: Raise Building 12 Structural Frame

Under Grading Option 3, Building 12 would be raised approximately 3 feet and placed on new slab foundations at the new grade elevation. The surrounding grade would gradually slope away from the buildings as needed for drainage purposes. This option would entail disconnecting the structural steel columns from the foundations by unbolting the existing anchor bolts, then incrementally jacking up the building columns to the desired elevation. Although the building would be higher than under current conditions, all exterior, character-defining features of Building 12 would remain visible and generally unchanged from current conditions. This option would not materially impair the significance of Building 12 as a contributor to the UIW Historic District. While the new grade would have a minor impact on the property's integrity of setting, Grading Option 3 would meet the Secretary of the Interior's Standards for Rehabilitation because it would retain and preserve the vast majority of the building's character-defining features. For these reasons, Option 3 of the proposed grading plan would have a less-than-significant impact on Building 12. No mitigation measures are necessary.

Impacts of the Grading Plan on the UIW Historic District

The grading plan indicates that portions of the project site within the UIW Historic District would be raised up to approximately 5 feet to accommodate the potential for future sea level rise, while still meeting existing grade at 20th Street and in areas adjacent to the 20th Street Historic Core. Because most of the District is currently a relatively flat, paved, and developed area, the increase in elevation of up to approximately 5 feet under the grading plan would retain its generally flat and developed appearance. The increased elevation would be a relatively minor alteration that would be nearly imperceptible from a District-wide perspective. While the new grade would have a minor impact on the District's integrity of setting, implementation of the grading plan would meet the Secretary of the Interior's Standards for Rehabilitation because it would retain and preserve the vast majority of the District's character-defining features. As such, implementation of the grading plan would result in a less-than-significant impact to the UIW Historic District as a whole. No mitigation measures are necessary.

Impact CR-9: The proposed alteration of Irish Hill, a contributing landscape feature, would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. ***(Less than Significant)***

The 35-foot-tall remnant[47] of Irish Hill is a contributing landscape feature of the UIW Historic District. All but a small portion of the remnant of Irish Hill would be retained, and the adjacent areas to the south and east would be improved as a public open space (Irish Hill Playground). It would become a central landscape feature surrounded by proposed new streets and infill construction (see Figure 2.15: Proposed Open Space Plan, in Chapter 2, Project Description, p. 2.46). A minimum buffer zone of 45 feet would be established between the peak of Irish Hill and new development to the west (Parcel PKS). New benches and plantings and a playground area would be installed south of the hill's edges, but no changes would occur to the side slopes or top of the hill. Approximately 0.04 acre, or 1,900 square feet, out of the hill's total 1.4 acres, or 60,984 square feet (representing 3 percent of the total area), would be removed to accommodate the proposed extension of 21st Street. Further, the area proposed for removal is of relatively low elevation (as compared to other areas of the hill) and therefore would not significantly alter perception of the remnant of Irish Hill's height and mass. Irish Hill appears as a lightly vegetated serpentine outcropping, with distinctive rocky exposure on the western and southern faces. The area proposed for removal is of similar aesthetic quality to the area proposed to be retained. The Proposed Project does not propose to alter the distinctive rocky exposure on the western and southern faces. The removal of 3 percent of the hill, at an area of relatively low elevation, is

[47] Only about 1.4 acres of the original 20.6 acres of the original Irish Hill remain today.

considered a relatively minor loss, and because approximately 97 percent of this important landscape feature would be retained, this portion of the Proposed Project would not materially impair the integrity of the resource as a contributing landscape feature of the UIW Historic District. The construction of new public streets and new development adjacent to Irish Hill, as well as new benches and plantings and a playground south of the hill, would alter the feeling and association of the resource, but would not reduce its overall integrity to the extent that the Irish Hill remnant would no longer remain a contributor to the UIW Historic District. Therefore, the removal of a portion of Irish Hill and the construction of adjacent new development would have a less-than-significant impact to the integrity of Irish Hill, and to the UIW Historic District as a whole. No mitigation measures are necessary.

Impact CR-10: The proposed changes and additions to the network of streets and open space would not materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. ***(Less than Significant)***

The proposed street network would extend the existing east-west streets (20th Street and 22nd Street), establish a new east-west street (21st Street) westward through the project site to the shoreline of the Bay, and create north-south internal streets. The Proposed Project would also provide a 9-acre interconnected network of public open spaces through the project site.

As discussed above on p. 4.D.44, the UIW Historic District designation identifies the following character-defining features within existing streets and spaces between buildings: minimal planted vegetation; open areas that are either paved with asphalt or covered with gravel; streets that are improved without curbs and gutters, except for 20th Street, which has granite curbs.[48]

The proposed network of streets and open space is intended to create visual and physical access along proposed streets and open space view corridors to the cluster of historic buildings, located both within the project site and the adjacent 20th Street Historic Core that would become the central historic core for surrounding new infill development within the project site, as well as connecting the core to a new, publicly accessible waterfront.

The proposed network of streets would establish a hierarchy of public rights-of-way to provide access and connectivity throughout the project site, building upon the existing neighborhood street grid and creating continuity through the site and to the waterfront. The proposed open space system would similarly provide enhanced access through the site and connectivity to the waterfront. For example, a continuous waterfront park ("Waterfront Terrace" and "Waterfront

[48] United States Department of the Interior, National Park Service, National Register of Historic Places Registration Form, *Union Iron Works Historic District*, April 17, 2014.

Promenade") would extend the length of the shoreline, with an extension of the park ("Slipways Commons") toward the site's interior, linking the waterfront to the historic Buildings 2, 12, and 21 and a proposed new plaza (Building 12 Market Plaza and Market Square). The waterfront park would incorporate the former slipways and craneways into the design of the Waterfront Promenade as way to reference the former industrial uses in this area of the District. For example, craneways that protrude from the shoreline into the Bay would be preserved as piers, and the craneways would be made accessible to the public. The open space framework would also retain the hilltop remnant of Irish Hill in its current state, while constructing a playground to the west of it and connecting this area to the rest of the open space system through vegetated pathways between new buildings on Parcels PKS, HDY1 and HDY2. Another component of the open space system, the proposed plaza (20th Street Plaza) at Illinois Street and 20th Street, would allow for expansive views of historic Building 113 from the corner of Illinois Street and 20th Street, and would serve as a gateway to the District, further integrating it with the existing neighborhood to the west.

Historically, Pier 70 was characterized by minimal to no vegetation, which is typical for waterfront industrial uses. This condition is a character-defining feature of the UIW District. To facilitate the transition to a new neighborhood, the *Pier 70 SUD Design for Development* calls for street trees to be planted in appropriate locations with grasses and other plantings to create the benefit of new landscape compatible with the historic character of the UIW Historic District. For example, street trees would be installed along the proposed waterfront extension of 20th Street and 22nd Street at the waterfront and southern perimeter of the district, and along some of the proposed interior north-south streets away from contributing features of the district. However, no street trees are proposed along 20th street in the project site. The installation of street trees only in some areas is intended to strike a balance between the limited vegetation currently found in the UIW Historic District and the aesthetic desires for the successful adaptive reuse of the project site. The proposed landscaping within the open space system would also consist of an "enhanced native" palette, reflective of the post-industrial organic wild grasses growing at the site today. The palette would include species native to San Francisco and the Bay Area and non-native, non-invasive, and salt- and drought-tolerant species appropriate for the urban waterfront setting.

The proposed network of streets and open space would reinforce and enhance the visual, historical, and functional connection between contributing buildings and the Bay, which is one of the District's primary character-defining features.

Other character-defining features of the District include streets without curbs and gutters, except for 20th Street, which has granite curbs, as well as open areas that are either paved with asphalt or covered with gravel. The granite curbs along 20th Street would be retained as part of the 20th Street Historic Core Project, although new and/or extended streets within the project site would

be improved with curbs and gutters as required for all new development in San Francisco. The introduction of new streets, sidewalks, and plazas within the project site would retain a sense of the open, paved areas that exist around and between contributing historic buildings. Although the introduction of new and extended streets with improved curbs and gutters would somewhat reduce the integrity of setting of the UIW Historic District, these changes would not demolish or alter in an adverse manner those physical characteristics that justify the District's inclusion in the CRHR, and the District would retain sufficient integrity to continue to convey its historical significance.

For these reasons, the proposed network of streets, street trees, and open space would not result in a material impairment of the physical characteristics of the UIW Historic District that justify its inclusion in the California Register of Historical Resources, and therefore the impact would be less than significant.

Impact CR-11: The proposed infill construction would materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources. *(Less than Significant with Mitigation)*

The Secretary of the Interior's Rehabilitation Standard No. 9 states that "new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the integrity of the property and its environment." The proposed *Design for Development* contains standards and guidelines that are designed to address the required balance between differentiation and compatibility of new construction in the UIW Historic District. The *Design for Development* standards that primarily promote differentiation from historic buildings and visual variety include the following:

- *No Replication of Historic Buildings*. New construction shall not replicate or mimic historic buildings. False historicism is not permitted (S6.8.1).
- *Building Variety*. All new individual buildings within the Pier 70 SUD shall be visually distinct from each other with variations in: building massing, materials, glazing pattern and proportion, color, architectural detail, articulation, roofline modulation. Every building shall vary from its adjacent building in at least two of the above variations, of which one shall not be color (S6.8.2).
- *Façade Articulation*. Material selections shall reflect but not replicate the scale, pattern and rhythm of adjacent contributing buildings' exterior materials. Material selections shall not establish a false sense of historic development (S6.8.3).
- *Rooflines*. Duplication of the adjacent historic roofline is not permitted, unless flat (S6.10.2).

The proposed *Design for Development* also contains a number of standards and guidelines that promote compatibility and continuity with adjacent historic buildings, including the following:

- *Historic Rhythms and Patterns*. New construction buildings should incorporate, through contemporary interpretation, one or more of the following features drawn from Pier 70's historic character: horizontal banding, shifted patterns, articulated rooflines, repetitive patterns, gridded windows, and weathered materials (G6.8.1).
- *Material and Color Palette*. Material and color palette are encouraged to draw from Pier 70's historic texture and utilize the material palette provided (see Figure 4.D.12, p. 4.D.84). Materials that are intended to patina or weather are encouraged (G6.8.4).
- *Relate to Adjacent Resources*: In certain façade locations, new construction shall incorporate elements that relate to the adjacent resource in keeping with contemporary design and construction (S6.14.5).

The application of these *Design for Development* standards and guidelines, including the application of maximum heights, building articulation, material grain and palette, and building-specific responsiveness, would help maintain the integrity of the UIW Historic District by emphasizing the industrial character of the District. This would thereby reduce the impacts of new construction on the integrity of adjacent contributing buildings and the UIW Historic District.

For example, new infill construction adjacent to contributing Buildings 2, 6, 12, 21, 113, and 116 would be specifically designed to respond to the architectural character and qualities of these historic buildings through the use of setbacks, dimensional height referencing, and related treatment on select façades. New infill construction adjacent to the remnant of Irish Hill, also a contributor to the UIW Historic District, would be consistent with the dense, urban-industrial character-defining feature of the District, as well as the District's close groupings of buildings. Although the new construction would be clearly differentiated from the adjacent historic buildings through the use of modern construction materials and contemporary architectural design, the application of these building-specific treatments would also enhance their compatibility with the adjacent historic buildings, in keeping with the guidance provided in the *Design for Development* and the Secretary of the Interior's Standards, which call for a balance between the concepts of differentiation and compatibility.

The Proposed Project would also establish buffer zones surrounding the core of historic buildings and landscapes that specify the minimum distances of separation between historic buildings and landscapes and new construction. The buffer zones are intended to maximize visual and physical access to the District's historic buildings and to minimize visual intrusions into the integrity of contributing buildings. These separations would range in distance from 20 feet to 85 feet, and would typically span the width of existing and proposed new streets or pedestrian passageways The proposed buffer zones surrounding historic Buildings 2, 21, and 12 within the project site, together with the proposed buffer zones surrounding the historic buildings within the adjacent 20th Street Historic Core, are also intended to spatially unite these contributing buildings with each other as a historically and functionally related grouping of contributing buildings. The buffer

zones are also intended to prevent new infill construction from creating visual or physical barriers between the District's contributing buildings, reinforcing the historic visual and functional relationship between contributing features of the UIW Historic District. A buffer zone of 45 feet would be established between the peak of Irish Hill and adjacent new construction at Parcel PKS.

As new construction is expected to begin in 2018, would be phased over an approximately 11-year period, and could be designed and constructed by different development teams responding to varying real estate market conditions, it is possible that new infill development could change the historic significance of the UIW Historic District by introducing a wide variety of new building designs and types that may not be compatible with the historic character of adjacent historical resources. This could incrementally reduce the integrity of the UIW Historic District to the extent it may no longer qualify for the National Register, which would be considered a significant impact on historical resources. Implementation of Mitigation Measure M-CR-11: Performance Criteria and Review Process for New Construction, shown below, would ensure that future new construction would not alter, in an adverse manner, the physical characteristics of the UIW Historic District that justify its inclusion in the California Register of Historical Resources, and would thereby reduce this impact to a less-than-significant level.

Mitigation Measure M-CR-11: Performance Criteria and Review Process for New Construction

In addition to the standards and guidelines established as part of the Pier 70 SUD and *Design for Development*, new construction and site development within the Pier 70 SUD shall be compatible with the character of the UIW Historic District and shall maintain and support the District's character-defining features through the following performance criteria (terminology used has definition as provided in the *Design for Development*):

1. New construction shall comply with the Secretary of the Interior's Rehabilitation Standard No. 9: "New Addition, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the integrity of the property and its environment."
2. New construction shall comply with the Infill Development Design Criteria in the Port of San Francisco's *Pier 70 Preferred Master Plan* (2010) as found in Chapter 8, pp. 57-69 (a policy document endorsed by the Port Commission to guide staff planning at Pier 70).
3. New construction shall be purpose-built structures of varying heights and massing located within close proximity to one another.
4. New construction shall not mimic historic features or architectural details of contributing buildings within the District. New construction may reference, but shall not replicate, historic architectural features or details.

5. New construction shall be contextually appropriate in terms of massing, size, scale, and architectural features, not only with the remaining historic buildings, but with one another.
6. New construction shall reinforce variety through the use of materials, architectural styles, rooflines, building heights, and window types and through a contemporary palette of materials as well as those found within the District.
7. Parcel development shall be limited to the new construction zones identified in *Design for Development* Figure 6.3.1: Allowable New Construction Zones.
8. The maximum height of new construction shall be consistent with the parcel heights identified in *Design for Development* Figure 6.4.1: Building Height Maximum.
9. The use of street trees and landscape materials shall be limited and used judiciously within the Pier 70 SUD. Greater use of trees and landscape materials shall be allowed in designated areas consistent with *Design for Development* Figure 4.7.1: Street Trees and Plantings Plan.
10. New construction shall be permitted adjacent to contributing buildings as identified in *Design for Development* Figure 6.3.2: New Construction Buffers.
11. No substantive exterior additions shall be permitted to contributing Buildings 2, 12, or 21. Building 12 did not historically have a south-facing façade; therefore, rehabilitation will by necessity construct a new south elevation wall. Building 21 shall be relocated approximately 75 feet east of its present placement, to maintain the general historic context of the resource in spatial relationship to other resources. Building 21's orientation shall be maintained.

Building Specific Standards

Each development parcel within the Pier 70 SUD has a different physical proximity and visual relationship to the contributing buildings within the UIW Historic District. For those façades immediately adjacent to or facing contributing buildings, building design shall be responsive to identified character-defining features in the manner described in the *Design for Development* Buildings chapter. All other façades shall have greater freedom in the expression of scale, color, use of material, and overall appearance, and shall be permitted if consistent with Secretary Standard No. 9[49] and the *Design for Development*.

Table M.CR.1: Building-Specific Responsiveness, indicates resources that are located adjacent to, and have the greatest influence on the design of, the noted development parcel façade.

[49] Standard No. 9 states that "New Addition, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the integrity of the property and its environment."

Table M.CR.1: Building-Specific Responsiveness

Façade/Parcel Name-Number	Contributing Building (Building No.)
North and West; A	113
North and Northeast; B	113, 6
North; C1	116
East and South; C2	12
South and West; D	2, 12
East and South; E1	21
West; E2	12
West; E4	21
North; F/G	12
East; PKN	113-116

Source: ESA 2015.

Palette of Materials

In addition to the standards and guidelines pertaining to application of materials in the *Design for Development*, the following material performance standards would apply to the building design on the development parcels (terminology used has definition as provided in the *Design for Development*):

- Masonry panels that replicate traditional nineteenth or twentieth century brick masonry patterns shall not be allowed on the east façade of Parcel PKN, north and west façades of Parcel A or on the north façade of Parcel C1.
- Smooth, flat, minimally detailed glass curtain walls shall not be allowed on the façades listed above. Glass with expressed articulation and visual depth or that expresses underlying structure is an allowable material throughout the entirety of the Pier 70 SUD.
- Coarse-sand finished stucco shall not be allowed as a primary material within the entirety of the UIW Historic District.
- Bamboo wood siding shall not be allowed on façades listed above or as a primary façade material.
- Laminated timber panels shall not be allowed on façades listed above.
- When considering material selection immediately adjacent to contributing building (e.g., 20th Street Historic Core; Buildings 2, 12, and 21; and Buildings 103, 106, 107, and 108 located within or immediately adjacent to the BAE Systems site), characteristics of compatibility and differentiation shall both be taken into account. Material selection shall not duplicate adjacent building primary materials and treatments, nor shall they establish a false sense of historic development.
- Avoid conflict of new materials that appear similar or attempt to replicate historic materials. For example, Building 12 has character-defining corrugated steel cladding. As such, the eastern façade of Parcel C2, the northern façade of Parcels F and G, and the southern façade of Parcel D1 shall not use corrugated steel cladding as a primary material. As another example, Building 113 has character-defining brick-masonry

construction. As such, the northern and western façades of Parcel A and the eastern façade of Parcel K North shall not use brick masonry as a primary material.

- Use of contemporary materials shall reflect the scale and proportions of historic materials used within the UIW Historic District.
- Modern materials shall be designed and detailed in a manner to reflect but not replicate the scale, pattern, and rhythm of adjacent contributing buildings' exterior materials.

Review Process

Prior to Port issuance of building permits associated with new construction, San Francisco Planning Department Preservation staff, in consultation with the San Francisco Port Preservation staff, shall use the Final Pier 70 SUD *Design for Development* Standards, including Secretary Standard No. 9, to evaluate all future development proposals within the project site for proposed new construction within the UIW Historic District. As part of this effort, project sponsors shall also submit a written memorandum for review and approval to San Francisco Planning Department Preservation staff that confirms compliance of all proposed new construction with these guiding plans and policies.

Impact CR-12: The Proposed Project would not materially alter, in an adverse manner, the physical characteristics of other historical resources (outside of the UIW National Register Historic District) that justify inclusion of such resources in a Federal, State or local register of historical resources. *(Less than Significant)*

As discussed under "Historic Resources Outside of UIW District" on pp. 4.D.62-4.D.64, other historical resources (not within the UIW National Register Historic District) are located adjacent to the project site. The former American Can Company Building (the American Industrial Center) at 2301 Third Street, and the Central Waterfront Historic District (which includes the American Can Company Building) are located across Illinois Street west of the project site. The PG&E Station Potrero Power Plant (the PG&E Potrero Substation) at 1201 Illinois Street is located immediately south of the project site, and the historic Kneass Boatworks Building at 671 Illinois Street is located north of the project site.

Although the Proposed Project would have no direct physical impact on these historic architectural resources, the Proposed Project could have an indirect visual impact on these resources by altering their immediate visual setting. However, the integrity and historic significance of adjacent historic architectural resources is not premised on their possessing an intact and cohesive visual relationship with their surroundings. The Proposed Project would not destroy historic features and materials that characterize nearby historic architectural resources. New construction within the project site would be contemporary in design and materials and would not convey a false sense of historic development. The character-defining features and form

of nearby historic architectural resources would continue to be clearly evident from surrounding streets.

For these reasons, the indirect visual impacts of the Proposed Project are not those of a project that "demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by the lead agency for purposes of CEQA." (CEQA Guidelines Section 15064.5(b)(2)(C)). No mitigation measures are necessary.

Cumulative Impacts

Impact C-CR-2: The impacts of the Proposed Project, in consideration of other past, present, and future projects, would materially alter, in an adverse manner, the physical characteristics of the UIW National Register Historic District that justify its inclusion in the California Register of Historical Resources, and would materially alter the physical characteristics of Building 21 that justify its individual eligibility for inclusion in the California Register of Historical Resources. ***(Less than Significant with Mitigation)***

The analysis of cumulative impacts to historic architectural resources addresses all past, present, and reasonably foreseeable future projects within the boundaries of the UIW Historic District, which, in addition to the impacts of the Proposed Project, may have a significant, adverse cumulative impact to the significance of the UIW Historic District. In addition to the Proposed Project, there are three anticipated projects within the UIW Historic District that have the potential to have a significant cumulative impact on the significance of the UIW Historic District: (1) Crane Cove Park project, (2) BAE Systems Lease Renewal project, and (3) revisions to the on-going 20th Street Historic Core project, which would demolish historic Buildings 40 and 117. These projects and their potential impacts to historic architectural resources are described below, followed by an evaluation of the Proposed Project's contribution to these impacts.

Crane Cove Park Project

The Crane Cove Park project is an approximately 11-acre area located at Pier 70, bounded by Illinois Street to the west, San Francisco Bay to the east, Mariposa Street to the north, and 19th Street to the south. The project site is approximately one block north of the Pier 70 SUD project site. The site includes five historic buildings (Buildings 30, 49, 50, 109, 110), Slipways 1 through 4, and Cranes 30 and 14, and the historic iron fencing along Illinois Street all of which contribute to the UIW Historic District, a historical resource under CEQA. The Crane Cove Park project would involve the following actions: (1) construction of a new, approximately 9.8-acre shoreline park (Crane Cove Park); (2) extension of 19th Street for park access and circulation; (3) creation of Georgia Street, which would connect 20th Street to the 19th Street extension; (4)

relocation of the BAE shipyard entrance from 20th Street to the terminus of the 19th Street extension and rerouting of BAE shipyard truck traffic from 20th Street to the 19th Street extension; and (5) street improvements along the eastern side of Illinois Street. The project would involve the renovation of Buildings 49, 109, and 110, whereas Buildings 30 and 50 would be demolished. Slipway 4 would be rehabilitated as a plaza, and Crane 14 would be relocated to the end of Slipway 4. Crane 30 would remain in its current location. Slipways 1-3, a contributing feature within the District, would remain in their present condition, with some removal of fill material to expose the features to tidal action. The iron fence along Illinois Street would be retained in place.[50]

The Planning Department completed the environmental review for the Crane Cove Park project in October 2015. As part of the Crane Cove Park environmental review, Planning Department Preservation staff completed a HRER that evaluated the impacts of the project on historical resources.[51] Department staff found that the demolition of two contributing buildings (Buildings 30 and 50) within the UIW Historic District would not cause a significant adverse impact upon any qualified historical resource. The District would retain a high number of contributing features, and many of the demolished buildings are ancillary and/or repetitive relative to the District's history and significance. The department also found that the rehabilitation of the contributing features, including Buildings 49, 109, and 110; Slip No. 4; and Cranes 14 and 30, would meet the Secretary of the Interior's Standards for Rehabilitation. Further, the new construction anticipated for the project site would have a less-than-significant impact upon the District, because the new construction would be appropriately designed to preserve the District's character-defining features, while also accommodating for new design features.

BAE Systems Lease Renewal Project

The BAE shipyard is an approximately 15-acre area at Pier 70 located at the foot of 20th Street. The shipyard is currently used as a ship repair facility operating under a lease with the Port of San Francisco by BAE Systems. The project site includes piers, drydocks, and 19 buildings that support the maintenance, alteration, and repair of ships. The BAE shipyard is located within the UIW Historic District, to the north and west of the Pier 70 SUD project site. The Port executed a new lease with BAE Systems in 2015 to continue the existing ship repair use without any expansion or intensification of use. The lease includes the following specific tenant obligations within or at the perimeter of the project site: (1) demolition of three contributors (Buildings 38, 119, 121) of the 19 existing buildings to provide for additional laydown space for ship repair; (2)

[50] San Francisco Planning Department, *Certificate of Determination, Exemption from Environmental Review, Crane Cove Park,* Case No. 2015.001314ENV, October 5, 2015.
[51] San Francisco Planning Department, Historic Resource Evaluation Response (HRER), Pier 70 Crane Cove Park, September 15, 2015.

removal of 12 polychlorinated biphenyl electric transformers (PCB); (3) removal of non-historic Cranes 2 and 6; and (4) perimeter landscaping improvements. Buildings 38, 119, and 121 are contributors to the UIW Historic District, a historical resource under CEQA.[52]

The Planning Department completed the environmental review for the BAE Systems Lease Renewal Project in March 2015. As part of the BAE Systems Lease Renewal Project environmental review, Planning Department Preservation staff completed a HRER that evaluated the impacts of project on historical resources.[53] Department staff found that the demolition of Buildings 38, 119, and 121 would not impact the integrity of the UIW Historic District due to the diminished integrity of the three buildings, the size of the District, and the number of other contributing features that are similar in architectural character, history, and date of construction. Building 38, built in 1915, was one of several buildings constructed to support the shipbuilding activities during World War I. Despite its demolition, the District would retain other examples of support structures and World War I-era buildings, such as Buildings 108, 109, and 111 near the shoreline and Pier 68 high water platform, which would allow the District to continue to convey this early era of development and maritime activity. Buildings 119 and 121 are ancillary World War II-era buildings, which were constructed to support the site's shipbuilding activities. Although Building 119 would be demolished, this resource type would continue to be represented within the District by Building 110, which is very similar in size, plan, architectural treatment, and use of materials. Also, despite the demolition of Building 121, other contributing buildings such as Buildings 110, 122, and 123 would provide examples of small-scale facilities development in the shipyard during World War II. Overall, other properties within the UIW Historic District would assist in conveying the significance of these contributors. Therefore, the HRER concluded that the demolition of these three buildings would not materially impair the designation of the UIW Historic District on the NRHP. For the reasons, Planning Department staff found the BAE Systems Lease Renewal project would result in less-than-significant impacts on historical resources.

Demolition of Historic Buildings 40 and 117 as Part of Revisions to the 20th Street Historic Core Project

In 2014, the San Francisco Planning Department issued a CPE for the 20th Street Historic Core Project (Case No. 2013.1168E) to the Port of San Francisco for the rehabilitation of 10 historic buildings at Pier 70. These buildings are contributors that form the core of the UIW Historic District. The rehabilitation project is currently underway. As discussed in Section 4.A,

[52] San Francisco Planning Department, *Certificate of Determination, Exemption from Environmental Review, SF Port – Pier 70 Area – BAE Lease Renewal*, Case No. 2014.0713, March 2, 2015.

[53] San Francisco Planning Department, Historic Resource Evaluation Response (HRER), Pier 70 BAE Ship Repair, February 20, 2015.

Introduction to Chapter 4, pp. 4.A.14, in 2015 the Port added demolition of contributing Buildings 40 and 117, located within the Pier 70 project site. Buildings 40 and 117 are proposed for demolition because they are located in the alignment of the proposed sidewalk along the frontage of the future Crane Cove Park and the extension of 21st Street eastward to provide vehicular and pedestrian access into the Pier 70 site. The following is a summary from information submitted by the Port of San Francisco in connection with environmental review of the proposed demolition of Buildings 40 and 117. [54]

Building 40

Building 40 is a three story, 8,359-square-foot wood frame building that was constructed in 1941 and served as the Shipyard Employment Office Annex. Building 40 is a contributor to the District as a support building that represents the increase in facilities to accommodate the peak labor force during WWII. Although it is a contributor to the District, it has experienced significant deterioration that affects its integrity. The roof of the northern portion of the building has failed and is open to the sky, resulting in water damage that has caused the interior of the building to collapse. Removal of Building 40 as part of the 20th Street Historic Core Building 40 and 117 project would allow the Port to construct a standard width sidewalk along the frontage of the future Crane Cove Park (currently the sidewalk extends just a few hundred feet north of the corner of 20th and Illinois streets) on the east side of Illinois Street between 20th and 18th streets behind (east of) the historic iron fencing, also a contributing feature within the Historic District. Removal of Building 40 would not affect the adjacent historic iron fencing or other contributing buildings and features or the historic significance of the District because it contains other, more significant examples of WWII expansion of the shipyard, including Buildings 2, 6, 12, 14 and 49.[55]

Although Building 40 is a contributor to the District, it was not found to possess individual significance because it is one of many architecturally undistinguished support buildings from World War II and it has lost integrity due to advanced deterioration. Therefore, it would not qualify for listing under the National or California Registers as an individual historical resource.[56]

Building 117

Building 117 is a one story, 31,440-square-foot steel frame warehouse constructed in 1937/41, and is a contributor to the UIW Historic District. Building 117 is attached to the south elevation

[54] Port of San Francisco, *EE Application/Continuation Sheet for 20th Street Historic Building Rehabilitation Project*, Case No. 2013.1168E, December 4, 2015.
[55] Ibid.
[56] Port of San Francisco, *Union Iron Works Historic District Profiles of Contributing and Non-Contributing Resources Proposed for Demolition by Project Area, May 16, 2016.*

of historic Building 116. Building 117 is proposed for demolition as part of the 20th Street Historic Core Building 40 and 117 project because it is located in the alignment of the proposed extension of 21st Street eastward to provide vehicular and pedestrian access into the Pier 70 site. The extension of the street would serve existing activities and future development in the central portion of the site, becoming an extension of the city street network. The loss of Building 117 would impact the integrity of the Historic District, but it would not lose its historic significance because other examples of WWII-era steel frame corrugated metal warehouse buildings would remain throughout the District, including Buildings 6, 12, 14, 49.[57]

Although Building 117 is a contributor to the District, it was not found to possess individual significance because its simple, undistinguished, and utilitarian design lacks architectural distinction, and it had a minor support function as a parts storage warehouse in the shipbuilding and repair process. Therefore, it would not qualify for listing under the National or California Registers as an individual historical resource.[58]

For these reasons, the Planning Department and the Port of San Francisco found that the proposed demolition of Buildings 40 and 117 would have a less-than-significant impact on the integrity of the UIW Historic District. Moreover, neither building is individually eligible for the NRHP or CRHR for the reasons stated above. Therefore, their demolition would not result in a substantial adverse change to historical resources as defined by CEQA.

Evaluation of Cumulative Impacts

The Planning Department concurs that that despite the new construction under the Crane Cove Park project and the loss of two contributing buildings (Buildings 30 and 50), the loss of three contributing buildings (Buildings 38, 119, and 121) from the BAE Systems Lease Renewal project, and the loss of two contributing buildings (Buildings 40 and 117) from the revised 20th Street Historic Core project, these three projects would have a less-than-significant impact on the integrity of the UIW Historic District. As described above, the Proposed Project would result in a less-than-significant impact to historical resources (demolition of seven contributing resources), and would result in significant but mitigable impacts to historical resources resulting from rehabilitation of three contributing features and new infill construction, (with implementation of Mitigation Measures M-CR-5: Preparation of Historic Resource Evaluation Reports, Review, and Performance Criteria, and M-CR-11: Performance Criteria and Review Process for New Construction.) Accordingly, with mitigation, all Project impacts to historical resources would be less than significant.

[57] Ibid.
[58] Ibid.

In summary, all of these projects cumulatively would result in the collective loss of 14 historic buildings that contribute to the significance of the UIW Historic District, as well as the retention and rehabilitation, or no change, to the other 30 contributing features. Table 4.D.5: Cumulative Effects to All Contributing Resources in the UIW Historic District, provides a list of the effects to all contributing features resulting from past, present, and reasonably foreseeable projects within the UIW Historic District. The collective demolition of these buildings and its cumulative impact on the integrity of the UIW Historic District were analyzed in a report prepared by Carey & Co., Inc. for the Port of San Francisco in August 2015.[59] The Planning Department reviewed and concurred with the report findings, which were restated within in the BAE Ship Repair HRER. The results of this analysis include the following:

- The demolitions would enhance the ongoing ship repair activity by allowing for additional space related to ship repair activities. The authenticity of maritime use within a portion of the Historic District would allow the public to experience large-scale heavy industrial ship repair activity, the only such maritime use on San Francisco Bay.
- A significant concentration of World War II-era contributing features and buildings would remain in the Historic District. They would continue to provide strong visual and physical examples of the World War II era of the Historic District. In many instances, the structures to be demolished are repeated elsewhere in the Historic District, as is the case with World War II warehouses, restrooms, and electrical power substations.
- The proposed demolitions would allow the existing ship repair facility to continue into the future by allowing for expanded open staging areas for ship repair and would provide opportunities for new compatible infill development that would help support the adaptive use of the remaining contributors to the UIW Historic District.
- The proposed loss of these contributors would not result in the need to adjust the boundary because it represents the historic ownership and maximum development of the District at its peak operation during World War II. The boundary for the District, as with most historic districts, includes areas with non-contributing features.

[59] Carey & Co., Inc., *Analysis of Proposed Demolitions within the Union Iron Works Historic District at Pier 70,* prepared for the Port of San Francisco, Case No: 201.001272ENV, August 2015.

Table 4.D.5: Cumulative Effects to Contributing Features in the UIW Historic District

Building Number (Name)	Demolish (Project)	Retain/Rehab (Project)
Building 2 (Warehouse No. 2)		(Proposed Project)
Building 6 (Light Warehouse No. 6)		No Change
Building 11 (Tool Room and Navy Office)	(Proposed Project)	
Building 12 (Plate Shop No. 2)		(Proposed Project)
Building 14 (Heavy Warehouse)		(20th Street Historic Core)
Building 15 (Layout Yard)	(Proposed Project)	
Building 16 (Stress Relieving Building)	(Proposed Project)	
Building 19 (Garage No. 1)	(Proposed Project)	
Building 21 (Substation No. 5)		(Proposed Project)
Building 25 (Washroom/Locker Room)	(Proposed Project)	
Building 30 (Template Warehouse)	(Crane Cove)	
Building 32 (Template Waterhouse)	(Proposed Project)	
Building 36 (Welding Shop)		No Change
Building 38 (Pipe and Electric Shop)	(BAE Systems)	
Building 40 (Employment Office Annex)	(20th Street Historic Core)	
Building 49 (Galvanizing Warehouse)		(BAE Systems)
Building 50 (Pier 68 Substation No.2)	(Crane Cove)	
Building 66 (Welding Shed)	(Proposed Project)	
Building 101 (Bethlehem Steel Administration Building)		(20th Street Historic Core)
Building 102 (Powerhouse)		No Change
Building 103 (Steam Powerhouse No. 2)		(20th Street Historic Core)
Building 104 (UIW Office Building)		(20th Street Historic Core)
Building 105 (Forge Shop)		(20th Street Historic Core)
Building 107 (Lumber Storage)		No Change
Building 108 (Planning Mill and Joinery Shop)		No Change
Building 109 (Plate Shop No. 1)		(BAE Systems)
Building 110 (Yard Washroom/Locker Room)		(BAE Systems)
Building 111 (Main Office and Substation No. 3)		No Change
Building 113 (UIW Machine Shop)		(20th Street Historic Core)

Table 4.D.5 Continued

Building Number (Name)	Demolish (Project)	Retain/Rehab (Project)
Building 114 (Blacksmith Shop)		(20th Street Historic Core)
Building 115 (Concrete Warehouse)		(20th Street Historic Core)
Building 116 (Concrete Warehouse)		(20th Street)
Building 117 (Warehouse No. 9/Shipyard Training Center)	(20th Street Historic Core)	
Building 119 (Yard Washroom)	(BAE Systems)	
Building 120 (Pipe Rack/Women's Washroom)		No Change
Building 121 (Drydock Office)	(BAE Systems)	
Building 122 (Check House No. 1)		(20th Street Historic Core)
Building 123 (Check House No. 2)		(20th Street Historic Core)
Slipways 1-3 (site of Slipways 1, 2, and 3)		(BAE Systems)
Slip 4, and Cranes 14 and 30		(BAE Systems)
Whirley Crane 27		No Change
Pier 68 (Highwater Platform)		No Change
Iron Fence (at 20th and Illinois streets)		(BAE Systems)
Irish Hill (remnant)		(Proposed Project)
Total Demolish	**14**	
Total Retain/Rehab/No Change		**30**

Overall, the Planning Department found that the proposed demolitions resulting from the Crane Cove Park project, BAE Systems Lease Renewal project, and changes to the 20th Street Historic Core project, in addition to those of the Proposed Project, would not materially impair the integrity of the UIW Historic District or its listing on the NRHP. The Planning Department also found that rehabilitation and infill construction associated with the Proposed Project would not materially impair the integrity of the UIW Historic District with implementation of the aforementioned mitigation measures. Therefore, the Proposed Project and the other projects described above would, with implementation of Mitigation Measures M-CR-5 and M-CR-11 identified herein, collectively result in a less-than-significant cumulative impact upon historical resources.

Impact C-CR-3: The impacts of the Proposed Project, in consideration of other past, present, and future projects, would not materially alter, in an adverse manner, the physical characteristics of historical resources (outside of the UIW National Register Historic District) that justify its inclusion in the California Register of Historical Resources, resulting in a cumulative impact. ***(Less than Significant)***

As discussed above under Impact CR-12, other historical resources (not within the UIW National Register Historic District) are located in the vicinity of the project site (including the former American Can Company Building, the Central Waterfront Historic District, the PG&E Station Potrero Power Plant, and the historic Kneass Boatworks Building.

The Proposed Project would not contribute to direct physical impacts on historic architectural resources. To the extent it could contribute some indirect visual impact, considered together with reasonably feasible projects in the vicinity by altering their immediate visual setting, the integrity and historic significance of adjacent historic architectural resources is not premised on their possessing an intact and cohesive visual relationship with their surroundings. The Proposed Project, together with reasonably feasible projects in the vicinity, would not destroy historic features and materials that characterize nearby historic architectural resources. The character-defining features and form of nearby historic architectural resources would continue to be clearly evident from surrounding streets.

The physical impacts of the Proposed Project on the significance of the UIW Historic District resource would not combine with that of other projects to make a considerable contribution to a significant cumulative impact on the integrity of other architectural resources in the vicinity, or more broadly in the City, State or nation. The Proposed Project, considered together with reasonably feasible projects, would not contribute to the demolition or material alteration of a historical resource outside of the UIW Historic District. No mitigation measures are necessary.

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