

## SECTION III.J CULTURAL RESOURCES AND PALEONTOLOGICAL RESOURCES

### III.J.1 Introduction

This section examines the potential impacts of the Project on cultural and paleontological resources. Cultural resources consist of prehistoric and historical archaeological resources, and buildings and structures of historic value. Paleontological resources are the fossilized remains or impressions of prehistoric plants and animals used to document the existence of extinct life forms and to reconstruct the environments in which they lived. This section identifies both Project-level and cumulative environmental impacts, as well as feasible mitigation measures that could reduce or avoid the identified impacts.

The cultural resources section is based on the following technical studies: *Historical Context for the Archaeology of the Bayview Waterfront Project*,<sup>225</sup> San Francisco, California, July 2008;<sup>226</sup> *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project*, San Francisco, California, October 2009;<sup>227</sup> *Historic Context for the Bayview Waterfront Plan*, December 2008,<sup>228</sup> and the *Bayview Waterfront Plan Historic Resources Evaluation, Volume II: Historic Resources Survey and Technical Report*, October 2009.<sup>229</sup> The technical studies incorporate archival research, site reconnaissance, and interviews with public agency staff and other informed contacts. The paleontological setting is based on databases searches of the University of California Museum of Paleontology; the American Museum of Natural History, Division of Paleontology; the North American Mammalian Paleofaunal Database in July 2009; and a review by PBSJ of published studies by the US Geological Survey and other agencies and organizations to identify previously reported fossil finds in the vicinity of the Project site or in the same geologic units that occur at the Project site.<sup>230</sup> Ground surface reconnaissance and ground-disturbing activities to identify paleontological resources were deemed inappropriate at this stage of the investigation.

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<sup>225</sup> The prior name of the Project was the Bayview Waterfront Project. Some of the technical studies completed for the Project use the former name if they were prepared prior to August 2009; however, regardless of name, the reports address conditions at the Project site.

<sup>226</sup> Archeo-Tec, *Historical Context for the Archaeology of the Bayview Waterfront Project*, San Francisco, California, July 2008. Archaeological reports are on file with the City, but are not available to the public.

<sup>227</sup> Archeo-Tec, *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project*, San Francisco, California, October 2009. Archaeological reports are on file with the City, but are not available to the public.

<sup>228</sup> Circa Historic Property Development, *Historic Context for the Bayview Waterfront Plan*, December 2008. This report is on file at the City and is available for review upon request.

<sup>229</sup> Circa Historic Property Development, *Bayview Waterfront Plan Historic Resources Evaluation, Volume II: Draft Historic Resource Survey and Technical Report*, July 2009. This report is on file at the City and is available for review upon request.

<sup>230</sup> Websites and publications used in preparation of the paleontological portion of this chapter of the EIR are cited throughout the text of this chapter.

## III.J.2 Setting

### ■ Prehistoric Context

Until the late 1980s, the greatest concentration of documented prehistoric sites in San Francisco was in the Hunters Point-Bayview-Candlestick Point area. Dominant assumptions during this time were that San Francisco had a low prehistoric site density and that this was the result of either sparse prehistoric occupation or of modern destruction of prehistoric deposits. It was also assumed that prehistoric sites in San Francisco were virtually restricted to the Bay littoral with a few temporary food procurement camps along the coast. In the last twenty years, prehistoric sites have been discovered in San Francisco with unexpected frequency and with locations, depths, age, range of types, and an abundance that was not foreseen. New research tools (such as geoarcheology and Geographic Information Systems) have been employed in the study of these recent sites that have resulted in better predictability of vertical and horizontal site locations and new comparative interpretations of shell middens have resulted in a greater understanding of the complexity of construction and site-interrelationships of San Francisco Bay Area shell midden sites. Very little is known of the prehistoric sites in southeast San Francisco as they have been subject to almost no field investigation since Nels Nelsen first surveyed them in the early 1900s. Because of their poor documentation, prehistoric sites of the Hunters Point-Bayview-Candlestick Point area have an unclear relationship to the better-researched, more recently known concentration of San Francisco prehistoric sites in the South of Market Area of San Francisco.

### ***Indigenous Peoples: the Archaeological Record***

There are currently around fifty documented prehistoric sites in San Francisco. These prehistoric sites include several large settlement sites (inhabited up to 1,000 years), cemeteries, food-procurement camps, tool workshops, and historic-period Indigenous sites. One Indigenous site has been dated to nearly 6,000 years before the present and lay 75 feet below the surface. In contrast to prehistoric shell mound sites found elsewhere in the Bay Area, many shell mounds discovered in San Francisco have remarkable integrity because they have been buried for several hundred years beneath native sand dune deposits, enabling the study of their use and significance in the final periods before their abandonment. The high density and number of prehistoric sites in San Francisco provide the opportunity to study them as regional and sub-regional systems. In the light of field investigations and new theoretical approaches, it is now known the prehistory of the Bay Area was not one of slow uniform evolution but, rather, was punctuated by radical large-scale changes. The newer picture of San Francisco Bay Area prehistory indicates:

- Prehistoric sites sometimes occur in clusters with a primarily symbolic association with a focal shellmound of greater size and age
- The importance of the primary shellmound may have been in the form of religious/funerary observances and burials even after its abandonment
- Bay Area prehistoric shellmounds may have been planned, intentionally re-created structures (not merely inadvertent dietary refuse accumulations)
- Prehistoric shellmounds were sometimes constructed over pre-existing cemeteries
- Many Bay Area shell mounds were abandoned over the course of a relatively brief period

It is known that humans have been present within the urban area now known as San Francisco for at least 6,000 years and within the greater Bay Area for a period of time nearly twice as long. As prehistoric sites beneath the Bay and ocean floor or buried beneath late Holocene sand dune deposits are investigated in the future, the advent of local human prehistory may be pushed back even further in time. The earliest peoples currently known to have inhabited the San Francisco Bay Area were comprised of widespread but sparse populations of hunter-gatherers whose subsistence was based on large game, seeds, and nuts as evidenced by the presence of large projectile points and milling stones (*manos* and *metates*). These peoples lived in small nomadic bands that made less use of shoreline and wetlands resources than later prehistoric populations. Soon after 2000 B.P. (years before present), bayshore- and marsh-adapted people who were Utian language (Miwok-Costanoan language family) speaking people began to migrate into the Bay Area from the Central Valley, displacing the earlier Hokan language speaking populations. The new inhabitants were different than the older resident populations in a number of respects, including language; larger and more sedentary settlements; a subsistence based on acorns; shellfish and small game; and mortuary practices; personal ornaments; and perhaps the fabrication of coiled basketry. It is assumed that the Costanoan representatives of this Utian dispersal reached the northern end of the San Francisco peninsula no later than 500 B.C. (before Christ).

### **Early Holocene (11,000–8,000 B.P.)**

There are few human sites in San Francisco Bay Area dating from this period and none have, as yet, been documented in San Francisco. Populations from this time probably lived in small groups that migrated frequently in accord with the annual patterns of preferred game and plants. Early Holocene sites may contain handstones, milling slabs, cutting and scraping tools, bifaces, dietary remains, or human burials.

### **Middle Holocene (8,000–4,000 B.P.)**

The earliest evidence for human occupation in the San Francisco is roughly 6,000 B.P. The earlier focus on big-game hunting shifted to gathering a wider array of food resources, especially plants and seeds, during this period. Groups moved seasonally to different environments to use resources as they became available. The greater reliance on seeds is reflected in the kinds and number of artifacts recovered from sites dating to this period such as relatively large numbers of grinding tools. Investigations at sites located in Santa Clara County, indicate that during this period acorns became increasingly relied upon for food. Sites dating to this period tend to be deeply buried.

### **Late Holocene (4,000–230 B.P.)**

Nearly all the prehistoric sites discovered in San Francisco are Late Holocene sites. Almost no dating, and no definitive dating, of prehistoric sites in the Hunters Point-Bayview-Candlestick Point area has occurred. Some of the prehistoric deposits in the southeast part of San Francisco may prove to be earlier than the Middle Holocene period.

During this period, there was a general trend throughout California for groups to adapt to local environmental conditions. Shellmounds are the dominant type of site in the Bay Area that date to this interval, and over 400 shellmound sites from this period have been recorded in the Bay Area. Shellmounds are typically found near or along the open Bay and next to streams flowing into the Bay. Artifacts often found in shellmound sites include stone net sinkers used to weight nets down, mortars

and pestles for grinding seeds and other plant material, bone tools manufactured from faunal remains, rectangular shell beads, stone arrowheads, and stone knives.

Four prehistoric sites are known or believed to be located within the Project site. All are reported as likely shellmounds or shell midden (an archaeological deposit which may contain copious amounts of mollusk shell in addition to stone debris from tool manufacture, animal bone, plant material, and other artifacts associated with past human occupation). The sites were originally documented in the early 1900s; however, since that time the Project site has been extensively developed. Disturbances to natural and man-made landmarks which were used to locate the sites have vanished, and today the exact site locations are unknown.

Previous archaeological investigations in San Francisco have located large intact cultural deposits likely dating to the 4000 to 230 B.P. period. Those substantial deposits are located deep below the modern surface. It is possible that conditions are similar in the Project site. It is, therefore, likely that some significant portion(s) of the four sites known or thought to be within the Project site are located deep beneath the present ground surface. It is also possible that an undiscovered prehistoric site could be encountered during Project-related construction activities. The last interval (post 230 B.P.) is considered the ethnographic period and is discussed below.

### **Indigenous Peoples: the Ethnohistorical Record**

Attempts to understand indigenous peoples and reconstruct their way of life scientifically and interpretively through the written, cartographic, and pictorial documentary record provides a relatively reliable knowledge of indigenous peoples from the late Holocene Period to the present. To an important extent, this documentary record is based on recorded late nineteenth and early twentieth century “reminiscence” accounts of indigenous existence prior to the late eighteenth century missionization in the Bay Area.

### **Ethnography**

The Project site lies within the traditional territory of the indigenous Ohlone (Costanoan) people. The northern tip of the San Francisco peninsula was once within the *Yelamu* tribal territory.<sup>231</sup> The *Yelamu* were one of a number of smaller tribal groups within the larger Ohlone language family. At the time of European contact, Ohlone lived in extended families which traced descent through the male line. Families were organized into clans, and they in turn essentially divided all members of the social structure into one of two groups—in this case the Bear and the Deer.

The staple food for the Ohlone people in the Bay Area was the acorn. Acorns were pounded into flour using a stone mortar and pestle, leached of tannic acids, and made into a mush or bread. Buckeye was also eaten and prepared similarly to acorns. Other plant species that were used include a variety of berries, roots, shoots, and seeds from wild onion, cattail, wild carrot, tarweed, chia, and many others. Controlled burning of land was practiced to help ensure future wild plant harvests. Clams, ocean and bay mussels, and oysters were also important components of the diet. Other sources of protein included various game birds, waterfowl, and large terrestrial and sea mammals.

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<sup>231</sup> Milliken, Randall T. *A Time of Little Choice: the Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, (Ramona: Ballena Press, 1995), 61.

Tules were used for material to make structures and watercraft. Balsa canoes were used to hunt waterfowl, fishing, and probably hunting sea mammals. Canoes were also used for travel and trade across the Bay and salt marshes. Fiber from plants were used to make a variety of basketry forms including cooking containers, utensils, storage containers, seed beaters, water jugs, cradles, fish traps, and burden baskets. Animal bones were used to make awls, pins, daggers, scrapers, knives, and other tools. Pelts and feathers were used for clothing, sinew for bows, and feather, bone, and shell for several different kinds of ornamentation including beads, pendants, hair bangles, septum inserts, and earrings. Local and imported stone and minerals were used to make a large number of tools. Local commodities used in trade included cinnabar (red mercury sulfide or native vermilion), hematite (the mineral form of an iron oxide), salt, shellfish meat, and shell for ornament manufacture.

As noted above, the Costanoan tribe that occupied the northern end of the San Francisco peninsula in the late eighteenth century is known under the general term *Yelamu*. The *Yelamu* were divided into three semi sedentary village groups. The *Yelamu* were composed of at least five settlements (*Chutchi*, *Sitlintac*, *Amuctac*, *Tubsinte*, and *Petlennuc*) that were located within present day San Francisco. *Yelamu* may have also been the name of an additional settlement within the vicinity of Mission Dolores. *Sitlintac* may have been located on the Bay shore near the large tidal wetlands of the Mission Creek estuary. *Chutchui* was located near the lake (*Laguna de los Dolores*) east of the current Mission Dolores, two to three miles in-land. These two villages were probably the seasonally settlements of one band of the *Yelamu* who used them alternately. Another *Yelamu* band seasonally used the village sites of *Amuctac* and *Tubsinte* that were located in Visitation Valley. *Tubsinte* may prove to be identified with CA-SFR-7, west of Candlestick Point, or the Ralston Mound, in Visitation Valley. No late period deposits have been investigated at CA-SFR-7 and the Ralston Mound has not been scientifically field investigated. A third *Yelamu* band, the *Petlennuc*, may have had a small settlement near the Presidio. The *Yelamu* were allied by marriage to Costanoan groups on the east side of San Francisco Bay.

Within less than two months after the Spanish began construction of the first Mission Dolores in 1776, all of the *Yelamu* villages in San Francisco were attacked and burned by an expedition sent by the *Ssalson* tribe, the Costanoan tribe of the San Mateo area. The *Yelamu* survivors abandoned all of the San Francisco settlements, seeking refuge with other groups in the East Bay and Marin. Until they were missionized in the late eighteenth century, the *Yelamu* only returned to San Francisco for occasional hunting. Prehistoric Costanoan and/or pre-Costanoan peoples may have maintained settlements or specialized activity sites (shellfish processing, hunting blind, ritual, burial sites) within the Project Area.

## ■ Historic Context

### Overview

No occupation or use of the area within the Project site has been documented for the Hispanic and Early American Periods (1776–1848). However with the initiation of the Gold Rush in 1849 and subsequent statehood a year later, San Francisco's population and geographic area grew rapidly over a short period of time. The area around the entrance to San Francisco Bay was planned for more intensive development while the Bayview-Hunters Point area remained primarily pasture land.

Settlement in the Project vicinity during the 1850s and 1860s was primarily limited to the area just north of the Project site in India Basin, where northern European boat builders established small family boatyards. From the 1880s through 1910, this area was the center of design and construction of scow schooners of which the Bay Area scow schooner represents a specialized region type. Drydock development (an uncommon ship construction facility type in San Francisco) also began by the late 1860s and continued until the early 1900s.

On Hunters Point, Italian and Chinese farmers moved into the area to grow vegetables for the growing City center located four miles to the north. Known as “truck farming,” these agriculturalists grew fruit and vegetables on small plots of land and then carted their product to the urban markets to sell. By the turn of the century, the Italians dominated this industry, but as the century progressed agricultural endeavors within the area began to decline. The Chinese also began to establish fish and shrimp farms along the Hunters Point; these will be discussed in more detail in the Historic Context Themes section.

Some progress toward attracting further settlement was achieved with the construction of the Bay View Park racetrack in 1863 and Long Bridge in 1865.<sup>232</sup> Despite this an overall lack of established roads, access to the interior of the Project site remained difficult in the early years of settlement. Nevertheless, favorable weather and fresh water access enticed real estate speculators to the area during the 1860s as well.

One of the earliest real estate partnerships was between Jose Bernal’s family and two land speculators, John Townsend and Corneille de Boom. Townsend and de Boom convinced Bernal to subdivide the land located at Hunters Point into lots and call the new homestead “South San Francisco.”<sup>233</sup> To sell this idea, two brothers Robert Eugene and Philip Schuyler Hunter were brought in from the east coast. Despite the abundance of underground fresh water, well-made plans, and abundant advertising, the area was simply located too far from the city center to be viable. Despite the failure of the real estate venture, The Hunter brothers (for whom the area is named) stayed at Hunters Point as a pioneering family operating dairy and gardening ventures. They also sold spring water to ships from around the world by leasing water rights to the Independent Water Company.<sup>234</sup> The Hunter family occupied the area until they sold it in the 1870s.

Although some further early homesteading attempts in the Project site enjoyed modest success, by the early 1900s most of the area was still fairly open. The population was still predominantly Italian, with a fair number of Irish, Maltese, Portuguese, and Chinese settlers. These ethnic groups formed small enclaves within the larger community, sponsoring their own churches and social clubs. In the aftermath of the 1906 San Francisco earthquake and fire, Hunters Point, which was spared from the worst of the disaster, became an area of respite from smoke, chaos, and debris.

The Southern Pacific Railroad finished the Bayshore Cutoff in 1908, opening a direct rail line to the area. The railroad eventually included a 4,110-foot bridge over Islais Creek north of Custer Streets between Islais and Tulare Streets. While general access to the area had steadily improved, there were still

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<sup>232</sup> Archeo-Tec, *Historical Context for the Archaeology of the Bayview Waterfront Project, San Francisco, California*, p. 49, 2008.

<sup>233</sup> *Ibid*, p. 43.

<sup>234</sup> *Ibid*, p. 44.

impediments to industrial and residential development that had yet to be adequately addressed. The biggest problem was topography.

By the mid-1920s, the character of the Project vicinity started to shift from a mix of industrial and pastoral uses to a more organized urban environment. However, the boatyards, drydocks, greenhouses, and farms in the Project vicinity continued to dominate the landscape and shape where people settled. By the 1930s, City government officially recognized Hunters Point as a separate district. In 1939, after fighting for years for paved streets, parks, sewer-line extensions, and public transportation, residents near the India Basin boatyards formed the Hunters Point Improvement Association to achieve needed community improvements.

Just prior to World War II, the Navy contracted with the drydocks at Hunters Point. The drydocks were expanded twice in response to the Navy's shipyard needs; the drydocks were one of the Navy's primary shipyard resources on the Pacific Coast. This eventually prompted them to purchase the Union Iron Works Dry Docks from Bethlehem Steel (the parent company of Union Iron Works) in 1939.

When the United States entered World War II at the end of 1941, the Navy had just completed its takeover of the drydocks at Hunters Point. From there, construction ensued for the next five years, dramatically increasing the dry landmass around the end of the Hunters Point and changing the topography of the entire area through reclamation efforts. Demands for housing for the defense workers at the shipyard resulted in the construction of over 12,000 housing units in the immediate area. Every portion of the Project site was affected by these housing projects. The population increase transformed the rural Bayview and Hunters Point neighborhoods into an urban center almost overnight. Demographic shifts from Italian to African-American predominance, economic shifts from agriculture to heavy industry, and social shifts from multigenerational families to transient settlers, all occurred during this highly tumultuous time.

After World War II, construction continued at Hunters Point Shipyard, but the number of jobs began to decrease. A sizable peacetime workforce was needed, but not in the around-the-clock fashion that was common during the war. The decrease in work prompted some families to leave the area.

The post-war period in San Francisco was marked by an extreme shortage of quality housing, especially for the low-income segment of population. Many of the temporary housing units built by the Navy around Hunters Point became apartment units managed by the San Francisco Housing Authority, transforming the area into the highest concentration of low-income housing in San Francisco. The history of the post-war period within the Project site is largely a story of the transition of this housing stock and its impact on the more well-established surrounding community. Due to the population shift described above, African-Americans remained the dominant ethnic group in the area and the main residents of area.

## ■ Historic Context Subareas

### ***Candlestick Point***

Candlestick Point was named after the long-billed curlew, a common shorebird locally known as the Candlestick Bird. Past uses in this area have included a quarry, a landfill, and a proposed site for a quarantine hospital.

In 1910, Candlestick Point was proposed as the site of a detention hospital for quarantining people with communicable diseases. The owners of the land opposed the project, and Candlestick Point was dedicated as a public park in 1915. During World War II, housing for families called Candlestick Cove War Dwellings was constructed. In 1954, a bond measure was passed to construct a major league baseball stadium, and by 1958 Candlestick Park Stadium was under construction. It was the first baseball stadium to be constructed entirely of concrete and was designed by John Bolles. John Bolles was a prominent Bay Area modernist architect whose other noteworthy designs include the 1959 Ping Yuen Annex housing project in Chinatown, Embarcadero Park, and the Bayview/Anna C. Waden branch library on Third Street. The stadium was finished in time for the San Francisco Giants 1959 season. The Oakland Raiders played their 1961 American Football League season at the stadium. Candlestick Park has been home to the National Football League's San Francisco 49ers since 1971. Numerous expansions and modifications have been made to the stadium since it was built.

Prior to the construction of the Alice Griffith public housing, that site was occupied by the Double Rock War Dwellings. Constructed in the 1940s to house workers at the Shipyard, the "temporary" Double Rock War Dwellings remained occupied into the 1960s. In 1962, the San Francisco Housing Authority developed the Alice Griffith public housing to replace the war dwellings. At the time, Alice Griffith was one of the few SFHA sites that accepted African-American tenants, due to a neighborhood patterns policy that only allowed those of the predominate ethnicity of the neighborhood. This form of discrimination severely limited the locations where African-Americans could live in San Francisco.

### ***Hunters Point***

#### **Shipyard Development**

In 1885, President Cleveland's administration saw San Francisco Bay as second in importance only to New York Harbor for the nation's security. This view shaped the development in the Hunters Point area for most of the twentieth century. Expansion of military facilities in San Francisco during the first half of the twentieth century included Fort Winfield Scott (1912), Crissy Army Air Station (1921), Treasure Island (1941), and Hunters Point (1941). Many more were established throughout the East Bay and North Bay regions of the San Francisco Bay Area. San Francisco served as a primary shipbuilding and supply center, as well as one of the main westward points of embarkation throughout World Wars I and II.

What would become HPS began in 1864 as the brainchild of A.W. Von Schmidt, a German engineer. He approached the South San Francisco Homestead and Railroad Company, which was formed in 1862, with the idea that a drydock in such close proximity to their land would bring industry (and workers needing housing) to the area. They readily agreed and donated ten acres. However, financing for the

construction was more difficult to secure. Eventually, Von Schmidt partnered with a number of investors, including William Ralston and Lloyd Tevis, to form the California Dry Dock Company. The drydock was largely cut from solid rock at the northeastern tip of Hunters Point. When it was completed in 1868, the California Dry Dock Company was well situated, with deep water and close proximity to the thriving scow schooner boatyards at India Basin.

At Hunters Point, the California Dry Dock Company operated through the end of the nineteenth century with limited government contracts and as a repair facility for Navy ships returning from the Pacific. Around 1901, the company changed its name to the San Francisco Dry Dock Company and commenced construction of a second drydock. Completed in 1903, the facility became the most modern drydock on the Bay.

In the meantime, the Navy further solidified its relationship with the Bethlehem Steel drydocks at Hunters Point. It subsidized construction of new, larger facilities at Hunters Point in exchange for prioritized access to the privately owned site. This arrangement enabled Bethlehem Steel to construct Drydock 3 in 1918, greatly increasing the ship repair capabilities at Hunters Point.

## World War II

In response to escalating hostilities in Europe in the 1930s, the Navy purchased the Bethlehem Steel drydocks at Hunters Point in 1939. Improvements included a new assembly building just south of Drydock 2, a 50-ton crane, and an 800-foot quay wall<sup>235</sup> as well as smaller service- buildings. These projects were still under construction when the government terminated its lease to Bethlehem Steel in October 1941. The Navy took full control of the shipyard on December 18, 1941, just 11 days after the bombing of Pearl Harbor.

HPS was rapidly expanded and developed during the first years of US involvement in World War II. Dozens of buildings were constructed for various purposes for the war effort and beyond. Between 1939 and 1945 the shipyard was expanded from 48 acres to 583 acres. This major expansion included construction of a 1,092-foot drydock (Drydock 4), three 420-foot drydocks for submarines (5, 6, and 7 near India Basin), the leveling of a good portion of Hunters Point Hill, and the construction of dozens of buildings. The resulting 8 million cubic-yards of earth was used to fill in the Bay north and south of Hunters Point to create a submarine service area and a large flat area between Hunters Point and Yosemite Creek for future development, respectively.

The first building built by the Navy in World War II was Building 231 (1942-1945), the Inside Machine Shop. Constructed in 1942 by the San Francisco-based firm of Barrett & Hilp and situated adjacent to Drydock 2, the curtain-wall building was for a brief period the only major functional shop at the Shipyard as the United States headed into the war. Building 211 was also one of the first erected by the Navy. The building was the original Shipfitters Shop and is a good representation of the typical semi-permanent, monitor-roof shop building constructed throughout the Shipyard during the World War II era. Building 224, a concrete air raid/bomb shelter building built in 1944, and later used as an annex for the NRD, is a unique representative of its type at the Shipyard. The only building within the district completed after World War II is the Optical, Electronics and Ordnance Building, Building 253, finished

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<sup>235</sup> A quay wall is a wharf or bank that is constructed to accommodate the loading of ships and other vessels.

in 1947 and attached to the west elevation of Building 211. This concrete frame curtain-wall building, designed for the Navy by local architect Ernest J. Kump, was a highly specific repair and research facility.

All of the construction was centered on the stated mission of HPS: “For all classes of vessels: interim docking, shaft and propeller repairs, repairs of major underwater damage; for carriers: interim overhaul of about three to four weeks comparable to overhaul by repair vessels afloat.”

A numbering system was instituted during the war, and each series of numbers generally referred to a specific functional grouping of buildings (refer to Figure III.J-1 [HPS Phase II Structures]):

- 100s—Chiefly administrative buildings located near the Main Gate.
- 200s—Industrial shops and ancillary buildings
- 300s and 400s—Industrial and warehouse buildings
- 500s and 600s—Primarily residential
- 700s and 800s—Industrial support or storage buildings or Naval Radiological Defense Laboratory-related
- 900s—Officers Mess, greenhouses and garden sheds, a bank and garage facilities

Buildings and docks remaining on HPS include:

- Building 101—Main Administration Building, Civilian Cafeteria
- Building 103—Submarine Barracks, Personnel Decontamination Center for Operation Crossroads
- Building 104—US Naval Reserve Training Center, Naval Reserve Armory, Submarine Barracks
- Building 109—Lincoln Restaurant; HPSY Police Station
- Building 110—Marine Barracks & Mess
- Building 113—Torpedo Storage & Overhaul/Tug Maintenance, non-destructive testing
- Building 115—“US Naval Reserve Drill Hall”; Submarine Training School
- Building 116—Submarine Applied Training School, Submarine Subsistence
- Building 117—Submarine Barracks
- Building 120—Canteen, Enlisted Men’s Club
- Building 121—Submarine Offices, Apprentice School, Submarine Repair Shop, Administration building, Civilian Training Center
- Building 122—Substation “V” and Compressor Plant
- Building 123—Battery Overhaul & Storage; Substation “T”
- Building 125—“Submarine Cafeteria”
- Building 128—Substation “U”, Work Control Center #1, Shop Services, Ship Repair Shop
- Building 129—Administration Building, Substation “U,” Submarine Pier Office
- Building 130—Pipefitter’s Shop, Shipbuilding & Repair Shop
- Building 132—Submarine Pier Office, Substation “U-1,” Tug Crew Barracks
- Building 134—Outside Machine Shop, Diesel Overhaul, Quality Assurance Offices
- Building 135—Substation “G”
- Building 140—Pumphouse #3
- Building 146—Industrial Photo& Laboratory Building, Electronics Repair & Storage
- Building 154—Area time office #1, Administration Building
- Building 156—Rubber Shop, Pipefitters Shop Annex



Candlestick Point — Hunters Point Shipyard Phase II EIR  
**HPS PHASE II STRUCTURES**

**FIGURE III.J-1**

- Building 159—Latrine
- Building 203—Powerplant—Substation “H”, Oil fired heating plant, CROSSROADS ship fuel burn
- Building 204—Gate and Pump House, Salt Water Pumphouse
- Building 205—Drydock 2, Pump House, Compressor House, Substation “C”
- Building 206—Substation “A” & Compressors
- Building 207—Latrine
- Building 208—Self Service Canteen and Tool Room, Shop Service Building & Tug Parts
- Building 211—Electric Shop, Machinery & Electric Test and Repairs
- Building 214—Accounting and Bond Office, Admin. Annex, Radiography, Combat Weapons Systems Office, Cafeteria facilities
- Building 215—Fire Station #1/Hunters Point Fire Department
- Building 217—Sheet Metal Shop & Ship Repair Shop
- Building 218—Latrine
- Building 219—Substation “E”
- Building 224—Air raid shelter, NRDK Annex K
- Building 225—Shop Service Building, Work Control Center #2
- Building 226—Latrine
- Building 228—Central Cafeteria/Civilian Cafeteria
- Building 229—Substation “L”
- Building 230—Shop Service building, Machine Shop
- Building 231—Inside Machine Shop, Ship Repair Shop
- Building 236—Salt Water Pump House
- Building 238—office building on the North Pier
- Building 241—Boilermakers & Blacksmiths’ Shop, Forge Shop, Ship Repair Shop
- Building 251—Storage & Issue Building, Electricians’ Shop, Central Tool Room, Sheet metal shop
- Building 252—Bus Terminal, Golden Anchor Coffee Shop
- Building 253—Optical, Electronics and Ordnance Building; Optical, Ordnance & Radio Shop; Maritime Administration Ships Pars Storage; Radiography; Weapon/Electronics Shop; RADIAC; Instrument Calibration Laboratory; Storage of Parts from OPERATION CROSSROADS Ships
- Building 258—Pipefitter’s Shop
- Building 271—Paint Shop Annex, Equipment Storage, Sandblast Facility, Paint Lab
- Building 272—Riggers & Laborers Shop
- Building 274—Decontamination Training Building, Office Space
- Building 275—Sheet Metal Annex,
- Building 280—Covered Sheet Metal Work Area
- Building 281—Electronics, Weapons, Precision Facility/Antenna Repair
- Building 282—Antenna Abrasive Cleaning Unit
- Building 300—Substation “N”
- Building 301—Latrine
- Building 302—Transportation Shop, Automotive Vehicle Maintenance Facility
- Building 303—Transportation Shop Annex
- Building 304—Service/Gas Station
- Building 306/306A—Substation “I”

- Building 307—Electronic Storage, Public Works Equipment Storage, Electronic Assembly
- Building 308—Salt Water Pump House, Fire Protection Pumping Station
- Building 323—Boat Shop, Shore Activities/Electronics
- Building 324—CO2 Refilling Station
- Building 351/351A—NRDL Annex E, Electronics Shop, Chemical Technical Development Branch, General Research Lab
- Building 360—Test building
- Building 363—Shipwrights & Joiners Shop, Woodworkers Shop
- Building 366—Boat Shop/Plastic Shop, NRDL Electronics Work Area, Radiography Shop, Chemical Research Lab
- Building 367—Work Control Center #3, Administration Building, Field Office
- Building 368—Shop Service Building #1 Ship Repair Shop and Pipefitting Shop
- Building 369—Shop Service Building #2 Ship Repair Shop and Pipefitting Shop
- Building 370—Latrine
- Building 371—Transportation Shop Annex, Automotive Shop Building
- Building 377—Work Shop & Poseidon Systems Test Engineering
- Building 378—Latrine
- Building 379—Instrumentation/Control—Poseidon Engineering
- Building 380—Work Shop & Poseidon Systems Test Engineering
- Building 381—Shock Test Facility
- Building 383—Poseidon Shipping and Receiving
- Building 384—Poseidon Engineering
- Building 385—Poseidon Engineering
- Buildings 400, 402, 404, 405, 406, and 407—Supply storehouses
- Building 401—Building trades shop/general warehouse, Public Works Shop
- Building 409/409A—Welder Motor Generator Building
- Building 410—Welder Motor Generator Building
- Building 411—Shipfitters, Welders & Boilermakers Shop; Ship Repair Shop; Civilian Cafeteria; Radiography
- Building 412—R.R. Scales
- Building 413—Supply storehouse, Cable storage building
- Building 414—Supply storehouse, Mold loft, radium storage area
- Building 415/416—Supply storehouse
- Building 417—Acetylene Manifolding Building
- Building 418—Metal Spray Building
- Building 419—Oxygen Converter
- Building 420—Oxygen Cylinder Charging
- Building 424—Area Time Office #4, Administration Building
- Building 435—Equipment Storage, General Warehouse
- Building 436—Paint & lumber storage
- Building 437—Pipe Storage, General Warehouse
- Building 439—Equipment Storage, Sheet Metal Shop
- Building 500—Barracks, Ship Officers' Bachelors Quarters, Ships Canteen, Laundry, NRDL Admin. Offices
- Building 505—Navy Exchange Building, Gymnasium, bowling alley, and canteen

- Building 521—Power Plant—South Area
- Building 523—Fire Protection Pump Station, Salt Water pump house
- Building 525—Pacific Reserve Fleet Supply Building
- Building 526—Pacific Reserve Fleet Repair Shop
- Building 527—Motor generator building on pier 2
- Building 530—Auto Hobby Shop
- Building 600—Bachelor Enlisted Quarters, E.M. Barracks
- Building 606—Police Station
- Building 704—Equipment holding shed, Radioactive Material Storage Area, Transportation Shop car shelter
- Building 707—Animal hospital medical building, NRDL annex, Animal colony, waste processing
- Building 708—NRDL Bio-med Facility/animal research, Animal psychology study colony
- Building 709—Navy Exchange Gas Station
- Building 710—Latrine
- Building 808—Industrial Storage building
- Building 809—Lumber Storage/Supply Storehouse
- Building 810—Paint & Oil Storage
- Building 813—Supply storehouse & office, general warehouse
- Building 819/823—Sewage Dump Station A (819), Storage Building (823)
- Building 821—NRDL research Animal facility/x-ray lab
- Various sheds
- Docks 2, 3, and 4—Drydock Operation, OPERATION CROSSROADS ship decontamination.
- Docks 5, 6, and 7—Ship repair (Submarine)

### The Atomic Bomb and Nuclear Research

During World War II, HPS was at times used to load and outfit ships prior to embarkation. On July 15, 1945, the USS *Indianapolis* was docked at Hunters Point awaiting orders. On that date, components of the atomic bomb “Little Boy” were loaded aboard the *Indianapolis* for transport to the South Pacific. It was reported to have contained half of the available uranium in the United States. The ship left Hunters Point at 6:30 the next morning but was held in San Francisco, awaiting the results of the first atomic weapons test in New Mexico. The test was a success and the *Indianapolis* sailed out of the Golden Gate at 8:30 A.M. and transported the bomb to Tinian in the Marianas Islands. On August 6, 1945, the bomber Enola Gay dropped “Little Boy” on Hiroshima, essentially ending World War II.

Nuclear weapons development was the impetus for the Navy’s decision to research protection devices to shield soldiers and civilians from exposure to radioactivity. A nuclear research facility was developed at HPS beginning in 1944 due to its advantageous geographic, political, and logistical attributes. Called the Naval Radiological Defense Laboratory (NRDL), it became a leader in nuclear testing. “NRDL personnel were involved in all atomic weapons tests between 1950 and 1958, providing test support, primarily related to radiation safety and monitoring.”<sup>236</sup> After 1951, the NRDL took over many of the buildings on the southern half of the shipyard. The NRDL closed in 1969. Other activities at the Shipyard declined in the 1960s and early 1970s, the Navy officially closed the shipyard in 1974. After 1976, most of the Shipyard was leased to Triple A Machine Shop, a private ship-repair operation. In 1986, the Navy

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<sup>236</sup> Circa Historic Property Development, *Historic Context for the Bayview Waterfront Plan*, p. 114, December 2008.

reclaimed the Shipyard for the purposes of environmental remediation with the eventual goal of removing the property from federal ownership (refer to Section III.K [Hazardous Materials] of this EIR for a detailed discussion of the cleanup activities).

### **Historic Context Themes**

Context themes provide a basis for the evaluation of resources and can be arranged either geographically or thematically. The two context themes below, Chinese Fishing Villages and Maritime History, represent important themes in the history of the Hunters Point related to extant resources.

#### **Chinese Fishing Villages**

The Chinese fishing villages played an important role in the history of Hunters Point and San Francisco Chinese community. Between the 1870s and the 1900s, Chinese fishing camps flourished in San Francisco and elsewhere around the Bay. Most of the fishing camps were started by workers who were out of work after the completion of the transcontinental railroad in 1869. The Chinese developed the shrimp fishing industry, created largely by the presence of shrimp at their fishing locations and the use of bag nets. Before the late 1860s fishermen caught a variety of fish. By the late 1860s, the Chinese shrimp fishing was a fully developed industry. A substantial amount of dried fish, abalone, abalone shells, and shrimp were exported to China.

The amount of San Francisco fish and shrimp exported overseas led fishermen of other ethnicities to petition the State to levy taxes on Chinese commercial fishing. In 1885 and 1886, six hundred Chinese were arrested for tax reasons. The federal government revived old trade-laws and applied them to the dried fish and shrimp trade. Chinese vessels were seized and their captains fined.

The number of Chinese camps around the Bay decreased from 50 in the 1880s to 26 in 1896. The 1900 US Census lists one Chinese fisherman at Hunters Point, but there is no evidence of large-scale fishing camps in the area. The State Legislature outlawed the bag net in 1910, and most of the shrimp fishermen abandoned the industry. A redesign of the bag net, which permitted trolling for shrimp, was introduced in the 1920s. By the 1930s the empty fishing villages were again active. No fewer than twelve fishing camps were observed along Hunters Point shoreline.

In 1939, the San Francisco Health Department, responding to complaints about the pungent smell of the fishing camps, declared the camps unsanitary and ordered several of them burned. The fishing activity declined also because of Bay fill and pollution, and the movement of the Navy to Hunters Point in the 1940s. One camp, the Hunters Point Shrimp Company, closed as late as 1959.

Chinese fishing camps have been recorded at the Project site, primarily at Hunters Point. Although no known Chinese shrimp camps were located in the Candlestick Point area, this does not preclude the possibility that unidentified camps existed within that area. In contrast, fishing camps were widespread in at Hunters Point. Two possible locations for a fishing camp that dates to the 1860s have been identified in HPS.

The presence of Chinese fishing settlements in the Hunters Point area from the late nineteenth century to the mid twentieth century indicates that the Project site is likely to contain potentially significant archaeological resources. The archaeological resources would be the remnant cultural materials that

would provide important information regarding the Chinese inhabitants of the Project site and the role of Chinese fishermen in the greater San Francisco Chinese community.

### **Maritime History**

The Project site's shoreline with access to deep water became an early center for maritime activities. Small shipyards, crowded out of the waterfront closer to the City's center, began operating in and adjacent to the Project site as early as the 1860s. By the end of the nineteenth century, the Project site contained shipyards, a drydock, and other related enterprises along the northern shore of Hunters Point. Most of the boats built and repaired at Hunters Point were scow schooners (a boat with a broad, shallow hull instead of a deep keel), and two boatyards adjacent to the Project site in India Basin are known to have built junks (a boat with a flat bottom, no keel, and a very large rudder) for Chinese fishermen.

The drydock facilities at Hunters Point were the largest enterprise within the Project site in the late nineteenth century. The California Dry Dock Company constructed the first drydock in 1867. A second drydock was built in the early 1900s by the San Francisco Dry Dock Company. After the second dock was constructed, Navy ships came to the area for drydock service. In 1908, the Union Iron Works, a division of the Bethlehem Shipbuilding Company, purchased the operation from the San Francisco Dry Dock Company, which later became the Union Iron Works Dry Docks.

### **■ Paleontological Setting**

The Project site is a rock and soil promontory in southeastern San Francisco extending east into San Francisco Bay. The ground surface in the waterfront area across the entire Project site is relatively flat with elevations ranging from approximately 0 feet to +20 feet San Francisco City Datum (SFCD). Maximum ground surface elevation in the Project vicinity is on Bayview Hill (west of Candlestick Point), approximately +400 feet SFCD. Alluvial, colluvial, and estuarine sediments of the Late Pleistocene and Holocene Epochs (less than one million years old) underlie much of the Project vicinity and were deposited in a structurally controlled basin (San Francisco Bay) as the basin subsided. These sediments consist of estuarine deposits of older Bay mud, undifferentiated sedimentary deposits (interbedded freshwater and marine sand, clayey sand, and very stiff, lean clay containing shell fragments), younger Bay mud, and alluvial/colluvial deposits (slope debris of clay, sandy clay, sandy silt, sand, silty gravel, etc.), all of which rest on a variety of deformed and metamorphosed bedrock types associated with the Franciscan Complex of the Early Cretaceous Period (between 97 million and 113 million years old in the vicinity of the Project site). Section III.L (Geology and Soils) includes detailed descriptions of the soils and rock units.

Fossils are typically found in river, lake, and bog deposits, although they may occur in nearly any type of sedimentary sequence. The predominant rock types at the Project vicinity are chert, shale, and greenstone in the Candlestick Point area adjacent to the Bay and serpentinite, chert, sandstone, and shale in the HPS Phase II site. Although uncommon in the low-grade metamorphic Franciscan rocks, fossils from widely scattered localities have been important in sorting out the depositional history of the Franciscan Complex. A Cretaceous ammonite was found in Franciscan shale in northeastern San Francisco, as were fossil plant remains (usually reported as carbonaceous matter or carbonaceous particles and layers), and

thin shells resembling parts of arthropods. Tiny shark's teeth are the only known vertebrate fossils reported from the Franciscan Complex.

The undifferentiated Late Pleistocene sediments may include deposits of the Colma Formation which contains marine and terrestrial fossils including bones and teeth of mammoth and extinct bison and ground sloth, juniper and red cedar. Holocene pollen, plant, and shell fossils have been reported in the Bay mud. Remains of land mammals (extinct mammoth, bison, and horse) have been reported from localities in younger alluvium along the bay margin south of the Bay Bridge San Francisco Anchorage. No fossils have been reported from artificial fill in the San Francisco Bay area.

## ■ Expected Cultural and Paleontological Resources

### **Prehistoric Resources**

Sixteen prehistoric archaeological sites are located in or within a quarter-mile of the Project site. These include CA-SFR-3, CA-SFR-7, CA-SFR-8, CA-SFR-9, CA-SFR-10, CA-SFR-11, CA-SFR-12, CA-SFR-13, CA-SFR-14, CA-SFR-15, CA-SFR-16, CA-SFR-17, CA-SFR-18, CA-SFR-110, CA-SFR-124, and the Thomas-Hawes Mound.

Site CA-SFR-7 (Bayshore Mound, Johnson Landing Mound) has been determined to be eligible for the National Register of Historic Places (NRHP). Excavations performed in 1910 at CA-SFR-7 yielded several human burials. The site was subsequently heavily disturbed and material from the site used to fill a nearby marsh. Recent auger testing conducted in 2008 indicates that despite the prior disturbance of the site, significant portions of the site still exist underneath fill material. Site CA-SFR-17 was first excavated in 1931 and it also contained several human burials. This site was covered by fill material soon after excavation efforts. The site area was later archaeologically tested in 1987 with auger bores. This testing found that the topmost portion of the site was still intact and was buried 12 to 16 feet below the modern surface. The deposit was in places eight feet thick and extended over an area 650 feet long and 200 feet wide. Site CA-SFR-17 has been determined to be potentially eligible for the NRHP. CA-SFR-110 was located underneath Griffith and Revere Streets. The top portion of the shellmound had been leveled by development, but the remaining deposit was from four to seven feet thick and buried under eight to ten feet of landfill. The site measured approximately 400 feet long and extended halfway between Shafter and Thomas Streets.

One of the sixteen sites, CA-SFR-124, was discovered during monitoring for the Bayview Extension of the Auxiliary Water Supply System in 1990.<sup>237</sup> The site consisted of a shell midden and measured 205 feet long and extended on both sides of Lane Street. The deposit was relatively thin, at most only one foot thick. It was also shallow, on average only six inches below roadbed material. This site may have been re-deposited from another area during historic times. Trench profiles showed the prehistoric deposit overlain old utilities pipes as well as a fill deposit that contained historic-era artifacts. The researchers noted, however, that intact deposits probably were present west of Lane Street.

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<sup>237</sup> Holman & Associates, *Report on Archaeological Monitoring of the Bayview Extension of the Auxiliary Water Supply System and Observations on CA-SFR-124, a Shell Midden Deposit at Lane Street and Shafter Avenue, Bayview District, San Francisco, California*, Rohnert Park, CA: Northwest Information Center, 1991.

Since the bedrock is shallow and close to the surface in the Candlestick Point area resources are also expected to be relatively shallow in areas formerly on land. The northern areas of the site are above sea level (+15 feet above San Francisco City Datum), and the historic and recent prehistoric surface has not been significantly altered. In the early twentieth century, Nels C. Nelson found and excavated prehistoric site CA-SFR-9 at Candlestick Point in the area that is now the stadium; however, the extent of the excavation is unknown. The southern area of the site, which was submerged beneath Bay waters during the historic era, is covered with fill. Before filling, the Bay in this area was relatively shallow, less than 10 feet below sea level. Thus, the highest potential for intact cultural deposits is below the fill and above the original Bay floor. It is also possible that prehistoric resources may have been removed from their original location and may be found within fill deposits in the southern (southeastern) area of the site.

The waters of the San Francisco Bay originally covered all but the northernmost portion of HPS during the later nineteenth and early twentieth centuries. In the northern upland portion of the Shipyard, the bedrock is shallow and is close to the surface. Before filling, the Bay floor was much shallower in the northern portion (near the original Hunters Point peninsula) than in the southern portion. In areas originally underwater, the area of the highest sensitivity ranges from about 20 feet (closer to northern portion) to about 60 feet (southern portion) below present ground surface.

Based on archival research, the following indigenous sites are known or are believed to be located within the boundaries of the Project site. Those sites have not been evaluated for eligibility for listing on the California Register of Historic Resources (CRHR) or National Register of Historic Places, since most are under fill or on areas that have been developed. However, if a site or portion of a site contains intact archaeological deposits it would be considered a significant archaeological resource.<sup>238</sup>

### **CA-SFR-9**

Site CA-SFR-9 has been identified with Nelson's Site # 389.<sup>239</sup> The site record provides no description, but suggests it was probably a shell midden. The San Francisco Major Environmental Analysis (MEA) Shellmound Data Base indicates that it was located at the east end of Candlestick Point approximately 0.375 miles northeast of CA-SFR-7.<sup>240</sup>

### **CA-SFR-12**

Site CA-SFR-12 is a shellmound, recorded by Nelson as Site #391 on the south side of Hunters Point. More recently, Hamusek-McGann et al. identified the likely location of the site in HPS.<sup>241</sup>

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<sup>238</sup> An intact archaeological deposit is one in which the original or stratified association of archaeological remains are retained within an archaeological site.

<sup>239</sup> Nelson, Nels C., Shellmounds of the San Francisco Bay Region, *University of California Publications in American Archaeology and Ethnology*, 7.4 (1909): 310–357.

<sup>240</sup> MEA Shellmound Archeo GIS Project, *Candlestick Point & Hunters Point Shipyard Redevelopment Plan: Locations of Prehistoric and Historical Period Sites*, Unpublished report generated from the MEA Shellmound GIS Project, San Francisco Planning Department: San Francisco, 2007.

<sup>241</sup> Hamusek-McGann, B., Baker, C., & Maniery, M. 1998.

### CA-SFR-13

Recorded by Nelson as Site #392, site CA-SFR-13 may be located at the eastern end of Hunters Point.<sup>242</sup> More recently, Hamusek-McGann et al. have spotted the likely location of the site in HPS.<sup>243</sup> Hamusek-McGann et al. report that based on historical maps the probable location of this site would have placed it at the original shoreline where Drydock 4 was later built. Due to extensive excavations that occurred during construction of the drydock Hamusek-McGann et al. assume that CA-SFR-13 was destroyed; however, as with other sites that were later determined to be wholly or partially intact, such as CA-SFR-7, CA-SFR-17, and CA-SFR-140, this site might also present intact discoveries.

### CA-SFR-14

Site CA-SFR-14 is probably a mound, recorded by Nelson as Site #392a on the northeast end of Hunters Point. More recently, Hamusek-McGann et al. have identified the likely location of the site in HPS.<sup>244</sup>

### CA-SFR-11

Site CA-SFR-11 is a shell midden recorded as Nelson's Site #390 on the south side of Hunters Point.<sup>245</sup> More recently, Hamusek-McGann et al. have identified the likely location of the site inside HPS.<sup>246</sup>

However, the MEA Shellmound Archaeo GIS Project map also places the site at another location—one immediately northeast of the Project boundary<sup>247</sup>. This appears to support Olmsted's original observation that the site Nelson designated as Mound #390 was situated on Palou Avenue near the shoreline.<sup>248</sup> Although these two alternative locations fall outside the Project site, their location and boundaries are not precisely known. Given the vagaries of overlaying historic and modern maps, the latter alternative location lies close to, and may extend into the Project site.

### Chinese Fishing Village Sites

The remains of many Chinese fishing camps may still exist within the Project site. Camps and villages at HPS date from 1853 up to the 1940s. Documents show that at least four camps containing a total of 206 fishermen existed in the 1860s; 2000 fishermen were on the Project site in the 1880s. Records are scant for the period between 1890s and 1910. This reflects a decrease in fishing. By 1910, the fishing industry returned, and five companies were known to exist. The 1920s saw a decrease to possibly three camps on the Project site. By the 1930s, the number of camps in the Project site attained its highest level, with at least 12 camps documented.

Camp locations would have included a range of domestic and work-related structures associated with the shrimp industry. Most camps followed a similar layout, although this would have changed over time as

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<sup>242</sup> Nelson, 1909.

<sup>243</sup> Hamusek-McGann, B., Baker, C., & Maniery, M. 1998.

<sup>244</sup> Hamusek-McGann, B., Baker, C., & Maniery, M. 1998.

<sup>245</sup> Nelson, 1909.

<sup>246</sup> Hamusek-McGann, B., Baker, C., & Maniery, M. 1998.

<sup>247</sup> MEA Shellmound Archaeo GIS Project, 2007.

<sup>248</sup> Olmsted, Roger, et al. Research Design to Locate Nelson Shellmounds Subject to Impact by San Francisco Sewer Route 2 A-1; Olmsted, Roger, et al., *San Francisco Bayside: Historical Cultural Resource Study*, San Francisco: San Francisco Clean Water Program, 85, 1980.

population, technology, and social conditions changed. Typically a camp consisted of several small shacks at the water's edge, a wharf, a processing area with boilers, drying grounds, storehouses, and living quarters. Since Chinese fishing camps were located near the Bay, the original shoreline and adjacent beach should be considered highly sensitive for these types of resources. Chinese fishing village sites at the Project site that contain intact archaeological deposits would be considered significant archaeological resources.

### Maritime Sites

A variety of maritime-related resources are the most likely potential historic archaeological resources within the Project site, including boatbuilding and small craft repair facilities; large ship repair and drydock facilities; buried ships; and maritime-related waterfront infrastructure. Boatbuilding resources may include tools used to build and repair the ship; remnants of wood, metal, textiles, and rope used to build the ship; and discarded items related to the ship carpenter, ship laborers, and apprentices.

The California Dry Dock Company, later the San Francisco Dry Dock Company, operated a drydock facility at the tip of Hunters Point. Boarding houses built near the drydocks were frequented by sailors and passengers. It is possible that refuse from the drydock operations, its employees, ship crew, and passengers may exist beneath the modern fill. Drydock resources may include the dock, hardware related to the construction of the dock, personal items, and refuse associated with boarding houses that were frequented by sailors and passengers while the ship was at dock.

Buried ship resources may include shipwrecks, abandoned hulks, and ships that were converted into residences during the 1930s. Numerous ships have been found buried in San Francisco, most of which were buried as the city's shoreline was extended during land filling operations. A search of the California State Lands Commission's online shipwreck database revealed six ships that wrecked in or in close proximity to Hunters Point. Fragments of these wrecks and their cargo may have washed ashore or used as landfill and may be buried within the Project site as the shoreline was filled in. Few shipwrecks that date to the nineteenth century have been archaeologically studied and documented. Most of the studies have involved only the portion of the wreck that was encountered or the bottom of the hulls. Documentation of complete vessels is extremely rare. Although these deposits may not be complete specimens or in their original location, remains of shipwrecks, abandoned hulks, and ship cargo may be able to answer important research questions relating to maritime trade, ship wrecks, abandonment, or reuse of the wreck.<sup>249</sup>

Waterfront infrastructure resources may include wharves, retaining walls, driven piles, ship-breaking yards, and hardware related to the construction of these resources.

Any sites that contain onshore or offshore maritime archaeological deposits that have the potential to adequately address research questions such as those presented in the Archaeological Research Design and Treatment Plan for the Project<sup>250</sup> would be considered significant archaeological resources.

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<sup>249</sup> Archeo-Tec, *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California*, 2009.

<sup>250</sup> Ibid.

## Historic Resources

### Candlestick Point

The Candlestick Point site does not contain historic resources. In 2007, Jones & Stokes completed a review of Candlestick Park stadium, built in 1960, for potential eligibility in the NRHP.<sup>251</sup> The evaluation determined that the stadium did not meet the criteria to qualify as an exceptional property less than 50 years old. The report noted extensive alterations since its construction, including the expansion and enclosure in 1970 and more recent modifications to convert the stadium into a football-only facility. The stadium, if reviewed at the 50-year mark, would not meet criteria for listing on the NRHP or CRHR due to lack of physical integrity resulting from the extensive alterations discussed above. The Alice Griffith public housing site was evaluated as part of this EIR and determined ineligible for listing on the NRHP, CRHR, or City landmark registers because it was not strongly associated with a significant historical event, was not directly associated with Alice Griffith's productive life, is not distinctive architecturally, and does not have the potential to yield additional important historical information. No other potential historic resources have been identified in the Candlestick Point area.

### Hunters Point Shipyard

The HPS Phase II site contains buildings and structures identified historic significance. Since Shipyard decommissioning in 1974, two studies evaluated historic resource at the Shipyard. In 1988, a report concluded that four properties were eligible for listing on the NRHP: Drydock 4; Building 253; the 450-ton Re-gunning crane, and the Hunters Point Commercial Dry Dock Historic District (including Drydock 2, Drydock 3, remnants of Drydock 1 and Buildings 140, 204, 205, and 207).<sup>252</sup> The Deputy State Historic Preservation Officer (SHPO) concurred with the findings of the 1988 report. In 1997, JRP Historical Consulting Services completed an updated report for HPS and concluded that Drydock 4 and the potential Hunters Point Commercial Dry Dock Historic District appeared eligible for listing in the NRHP. The JRP report concluded that Building 253 and the Re-gunning crane, identified in the 1988 study, were not eligible due to integrity issues. In 1998, the SHPO concurred with findings that the Drydock 4 and the potential Hunters Point Commercial Dry Dock Historic District appeared eligible for inclusion in the NRHP.<sup>253</sup>

The Office of Historic Preservation Directory of Properties in the Historic Property Data File included Drydocks 2 and 3 and associated wharves and seawalls, pump houses (Buildings 205 and 140), the western portion of Drydock 1, the Gatehouse (Building 204), and the Paint and Tool Building (Building 207) as the only structures on HPS considered eligible for listing on the NRHP, consistent with the findings of the 1997 JRP report and the subsequent SHPO concurrence. No other buildings or structures had previously been evaluated for listing on the CRHR.

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<sup>251</sup> Jones and Stokes, *Final Historic Property Survey Report Bayview Traffic Improvements Project Caltrans District 4 San Francisco County, California*. 2007.

<sup>252</sup> Baumberg, Bonnie L., Urban Programmers, *Historical Overview of Hunters Point Annex, Treasure Island Naval Base and Descriptions of Properties that Appear to Qualify for Listing in the National Register of Historic Places*, 1988.

<sup>253</sup> Louis S. Wall, Department of the Navy to Lee Keatinge, Advisory Council on Historic Preservation, October 15, 1998. Findings of May 29, 1998 letter from SHPO to Navy are stated in this letter.

In 2008, Circa Historic Property Development performed another investigation of HPS for this EIR. Circa identified a total of 134 buildings and structures at the HPS Phase II site. Since Circa's initial investigation four of these buildings have been demolished including Buildings 365, 408, 421, and 916. Of the 130 remaining buildings and structures, 11 were identified as part of a CRHR-eligible historic district the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. This district includes buildings, structures, and objects associated with the area's "transition from early commercial drydock operation to high tech naval repair and Radiological research."<sup>254</sup> The proposed expanded historic district is potentially eligible for the CRHR, though it encompasses NRHP eligible properties. The Period of Significance has been identified as 1901-1963. Contributing resources in the district include the first six structures listed below which were initially identified as part of the NRHP eligible Hunters Point Commercial Dry Dock Historic District in 1998, and the five additional structures identified by Circa in 2008. Figure III.J-2 (Potential Historic District) shows the location of the potential historic district:

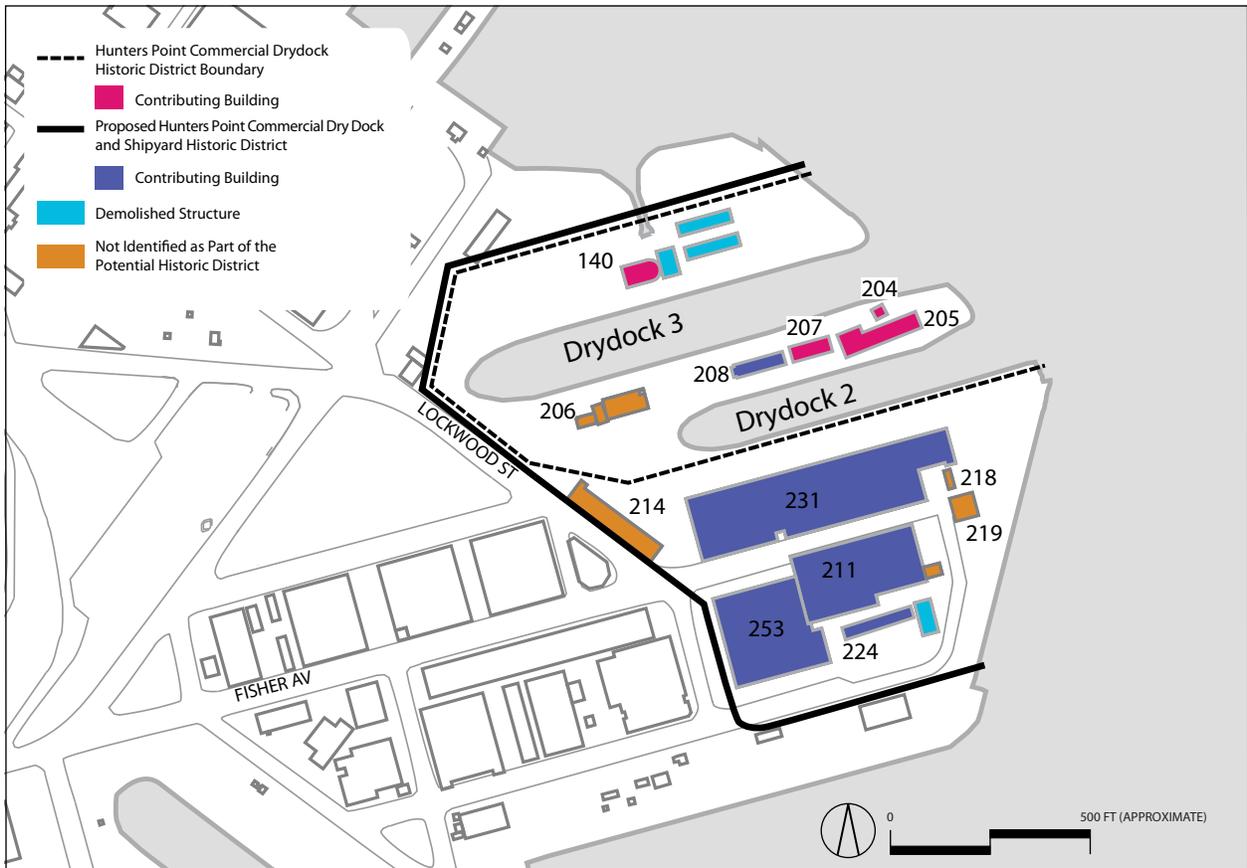
1. Drydock 2 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
2. Drydock 3 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
3. Building 140 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
4. Building 204 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
5. Building 205 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
6. Building 207 (Part of Hunters Point Commercial Dry Docks Historic District determined eligible for the NRHP by SHPO in 1998)
7. Building 208
8. Building 211
9. Building 224
10. Building 231
11. Building 253

Table III.J-1 (Historic Resources Significance Status) provides the NRHP and CRHR status for all of the buildings and structures at Hunters Point.

As noted earlier, Drydock 4, located in the HPS Phase II site, is additionally eligible for individual listing on the NRHP.

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<sup>254</sup> Circa Historic Property Development, *Hunters Point Commercial Dry Dock and Naval Shipyard Historic District DPR form*, October 31, 2008.



SOURCE: City and County of San Francisco, 1993b; Circa, 2009.

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Candlestick Point — Hunters Point Shipyard Phase II EIR  
**POTENTIAL HISTORIC DISTRICT**

**FIGURE III.J-2**

<b>Table III.J-1 Historic Resources Significance Status</b>				
<b>Resource</b>	<b>Year Built</b>	<b>Status</b>	<b>NRHP</b>	<b>CRHR</b>
Building 140	1918	2D2	District Contributor	District Contributor
Building 204	1901	2D2	District Contributor	District Contributor
Building 205	1901	2D2	District Contributor	District Contributor
Building 207	c. 1930 (remod. 1942)	2D2	District Contributor	District Contributor
Building 208	c. 1930 (remod. 1942)	3CD	—	District Contributor
Building 211	1942	3CD	—	District Contributor
Building 224	1944	3CD	—	District Contributor
Building 231	1942–45	3CD	—	District Contributor
Building 253	1947	3CD	—	District Contributor
Drydock 2	1903	2D2	District Contributor	District Contributor
Drydock 3	1918	2D2	District Contributor	District Contributor
Drydock 4	1943	2S2	Individually Eligible	Individually Listed

SOURCE: Circa Historic Property Development, Bayview Waterfront Plan Historic Resources Evaluation, October 2009.

*Potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District*

According to the California Office of Historic Preservation, historic districts “consist of a significant concentration or continuity of associated historical resources. [They] may be recognized and documented at the time a survey is conducted, or they may become apparent only after several survey efforts reveal the historical relationships among the individually recorded resources in a given geographic region.” National Register Bulletin No. 15, How to Apply the National Register Criteria for Evaluation, states that, “A district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties.”

HPS has a long history that began during a period of transition between wood-hulled sailing vessels and steel-hulled motor-driven vessels and ended with modern military craft. It serviced private ships during the height of shipping on San Francisco Bay as well as military ships during four major wars/conflicts (Spanish-American War, World War I, World War II, and the Korean Conflict). Towards the end of this period, it also served as a major radiological research facility that was unique within the United States military. This evaluation includes buildings that individually represent these various areas of significance and collectively demonstrate the broad spectrum of historical development at the Shipyard.

The potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District is comprised of a collection of buildings, structures, and objects associated with the area’s transition from early commercial drydock operation through its period of radiological research. The district encompasses a range of buildings from each of the three primary periods of significance for HPS: early drydocks, Navy use in World War II, and radiological research in the World War II and post-war periods. Related site features associated with the district include light standards, rail spurs, crane tracks, drydock perimeter fencing, bollards, and cleats.

The potential historic district encompasses a cross section of buildings, structures and objects, varying in age and function from the early commercial drydock operations (1903), through the Shipyard's function as a high tech naval ship repair and decontamination facility in World War II, and as a ship repair and radiological research facility in the post-war period (1946-1969). The industrial buildings (140, 204, 205, 207, 208, 211, 231, 224, and 253), Drydocks 2 and 3, and other related site features represent a microcosm of the historical development and context of HPS. The potential district contains previously determined National Register eligible buildings (automatically listed as a district on the CRHR) as well as recommended contributors to an expanded, potential CRHR Historic District (including Drydock 2, Drydock 3, and Buildings 140, 204, 205, 207, 208, 211, 224, 231, and 253). The proposed contributors to the expanded CRHR eligible district include the previously eligible NRHP district contributors plus Buildings 208, 211, 224, 231, and 253. Though the condition of the buildings ranges from good to fair, the potential district as a whole retains a high degree of integrity of location, design, setting, workmanship, materials, association, and feeling.

A district can comprise both features that lack individual distinction and individually distinctive features that serve as focal points. While Buildings 208, 211, 224, 231, and 253 may not be individually eligible for listing on the CRHR, when combined with the historic drydocks and associated buildings, the district is a physical representation of the broad history of HPS. Figure III.J-3 (Potential Historic Structures) illustrates views of buildings 211, 231, and 253.

No buildings remain from the earliest drydock operations within the historic district boundaries. Remnants of Drydock 1 (1868) may or may not exist in the area with sufficient potential to yield information that make the property eligible for the NRHP. Until existence of the remnants of Drydock 1 has been demonstrated, its location should be treated as an archaeologically sensitive area and as a potential contributing element of the district. Refer to the "Archaeological Resources" section below for a discussion of maritime archaeological resources.

### **Paleontological Resources**

Fossils have been reported in Franciscan rocks.<sup>255</sup> Radiolarian chert beds in the Franciscan Complex contain microfossils of radiolarian—the silicon-based skeletons of single-celled planktonic marine organisms—which are important as stratigraphic markers. Limestone nodules and concretions in Franciscan shales, and the shales themselves, often contain radiolaria, foraminifera (another single-celled marine organism), gastropods (snails), pelecypods (clams), and plant microfossils (pollen and spores). Exposures of Franciscan rocks in the vicinity of the Project appear non-fossiliferous.<sup>256</sup> The undifferentiated Pleistocene sediments, which may encompass some of the Colma Formation, contain marine and terrestrial fossils including the bones and teeth of mammoth and extinct bison, a leg bone of a ground sloth, and fossil diatoms (single-celled freshwater and marine algae), pollen, and peat.<sup>257</sup> Fossil mollusk shell fragments were recovered from these sediments at a depth of about 30 feet in a geotechnical borehole near Islais Creek, about 1.5 miles along the shore northwest of the Project site.

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<sup>255</sup> Schlocker, J., 1974.

<sup>256</sup> CH2MHill, 2004, p. 15.

<sup>257</sup> CH2MHill, 2004, p. 16.



East Elevation — Building 231



East Elevation — Building 211



Northwest Elevation — Building 253

SOURCE: Page and Turnbull Feasibility Study, 2009.

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Late Pleistocene and Holocene fossils have been recovered from marine sediments (older Bay mud) near the Bay Bridge San Francisco Anchorage, including remains of petrified wood, marine mollusks and mammals, bony fishes, amphibians, reptiles, birds, a diversity of extinct land mammals such as ground sloths, mammoth, mastodon, deer, horse, camel, and bison, and microfossils such as radiolaria, foraminifera, diatoms, pollen, and spores. Fossil mollusk shells were reported in cores of Holocene younger Bay mud from depths of approximately 20 and 25 feet in the borehole near Islais Creek.<sup>258</sup> No fossils have been reported from artificial fill in the San Francisco Bay area; however, because artificial fill includes sediments from older formations, it is possible that such fossils exist, although fossils transported from their original locations would lack stratigraphic context and be of limited value.<sup>259</sup>

### III.J.3 Regulatory Framework

#### ■ Federal

Federal regulations for cultural resources are primarily governed by Section 106 of the *National Historic Preservation Act of 1966* (NHPA), which applies to actions taken by federal agencies, including projects that take place on federally controlled land or facilities, require federal agency permits, or receive federal funding. The criteria for determining NRHP eligibility are found in 36 *Code of Federal Regulations* (CFR) Part 60. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Section 301(7) of the NHPA defines an undertaking as any project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including:

- Those carried out by or on behalf of the agency
- Those carried out with federal financial assistance
- Those requiring a federal permit, license, or approval
- Those subject to state or local regulation administered pursuant to a delegation of approval by a federal agency<sup>260</sup>

The NHPA also authorizes the Secretary of the Interior to maintain a National Register of Historic Places and directs the Secretary to approve state historic preservation programs that provide for a State Historic Preservation Officer.

The Council's implementing regulations, "Protection of Historic Properties," are found in 36 CFR Part 800. The NRHP criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with NHPA Section 106. Those criteria state that eligible resources comprise districts, sites, buildings,

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<sup>258</sup> CH2MHill, 2004, pp. 13–18; University of California Museum of Paleontology, <http://bscit.berkeley.edu/ucmp/loc.shtml> (online search number 496357 through UCMP Locality Search, July 3, 2009 by G. J. Burwasser, PG 7151); American Museum of Natural History, Division of Paleontology, <http://paleo.amnh.org/fossil/seek.html> (online search through AMNH Advance Search, July 3, 2009 by G. J. Burwasser, PG 7151); North American Mammalian Paleofaunal Database, RanchoLabrean age/stage, [http://paleodb.org/cgi-bin/bridge.pl?action=displayInterval&interval\\_no=237](http://paleodb.org/cgi-bin/bridge.pl?action=displayInterval&interval_no=237) (accessed July 3, 2009 by G. J. Burwasser, PG 7151).

<sup>259</sup> CH2MHill, 2004, pp. 13–18.

<sup>260</sup> 16 USC 470w(7).

structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and any of the following:

- a) Are associated with events that have made a significant contribution to the broad patterns of our history
- b) Are associated with the lives of persons significant in our past
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction
- d) Have yielded or may be likely to yield, information important to history or prehistory

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and records searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

### **Memorandum of Agreement**

In 1999 the Navy entered into a Memorandum of Agreement with the Advisory Council on Historic Preservation and the SHPO regarding the interim lease and disposal and protection of historic properties (Drydock 4 and the Commercial Drydock Historic District) at HPS.<sup>261</sup> Under the MOA the Navy evaluated all building and structures on the Shipyard in consultation with the SHPO, agreed to prepare Registration Forms for the Hunters Point Commercial Drydock Historic and Drydock 2, completed an Archeological Inventory and Assessment, coordinated the disposal of the remaining Shipyard documents, and agreed on the terms of abandonment for Drydock 4. The MOA also laid out the reporting, resolution of objections, and amendment processes for the term of the MOA.

### **Programmatic Agreement**

In 2006/07 a Programmatic Agreement (PA) was signed by the City, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation. The PA specifically addressed historic properties affected by use of revenue from the Department of Housing and Urban Development Part 58 Programs.

## **■ State**

*Public Resources Code* (PRC) Section 5020.5 directs the State Historical Resources Commission to develop criteria and methods for determining the significance of archaeological sites. PRC Section 5024.1 establishes the California Register of Historical Resources and criteria for inclusion of resources on the Register. Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources."

"Historical resource" is a term with a defined statutory meaning (refer to PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) and (b)). The term embraces any resource listed in or determined to be eligible for listing in the CRHR. The CRHR includes resources listed in or formally determined

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<sup>261</sup> *Hunters Point Shipyard Reuse Final Environmental Impact Report, Volume 1*, page 3-159, February 2000.

eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. In addition, properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be “historical resources” for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1 and *California Code of Regulations* (CCR), Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR and as a historical resource under CEQA.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project’s impacts to historical resources (PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a)(3)). In general, an historical resource, under this approach, is defined as any object, building, structure, site, area, place, record, or manuscript that:

- (a) Is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and
- (b) Meets any of the following criteria:
  - 1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
  - 2) Is associated with the lives of persons important in our past;
  - 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; or
  - 4) Has yielded, or may be likely to yield, information important in prehistory or history.

(CEQA Guidelines Section 15064.5(a)(3))

Under CEQA, the significance of an historical resource is materially impaired when a project “demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance” (CEQA Guidelines Section 15064.5(b)(2)(A) and that justify or account for its inclusion in, or eligibility for inclusion in, the CRHR. Thus, a project may cause a substantial change in an historical resource but still not have a significant adverse effect on the environment as defined by CEQA, so long as the historical resource continues to convey its historical significance.

CEQA Guidelines Section 15064.5(b)(3) states that “generally, a project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings shall be considered as mitigated to a level of less than a significant impact on the historical resource.”

CEQA requires that the effects of a project on an archaeological resource shall be taken into consideration and that if a project may affect an archaeological resource that it shall first be determined if the archaeological resource is an “historical resource”, that is, if the archaeological resource meets the

criteria for listing in the California Register of Historical Resources (CRHR). To be eligible for listing to the CRHR under Criterion 1, 2, or 3, an archaeological site must contain artifact assemblages, features, or stratigraphic relationships associated with important events, or important persons, or exemplary of a type, period, or method of construction (CEQA Guidelines Section 15064.5(a)(1) and (3) and (c)(1) and (2)). To be eligible under Criterion 4, an archaeological site need only show the *potential* to yield important information. An archaeological resource that qualifies as a “historical resource” under CEQA, generally, qualifies for listing under Criterion 4 of the CRHR (CEQA Guidelines Section 15064.5(a)(3)(D)). An archaeological resource may qualify for listing under Criterion 4 when it can be demonstrated that the resource has the potential to significantly contribute to questions of scientific/historical importance (CA OHP. *Preservation Planning Bulletin* No. 5).

CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

## ■ Local

### **San Francisco General Plan and Planning Department Procedures**

#### **General Plan**

The Urban Design Element of the City of San Francisco *General Plan* acknowledges the importance of historic structures within the City, and emphasizes the importance of older buildings for the “richness of character, texture, and human scale that is unlikely to be repeated often in new development.” These structures help to characterize many neighborhoods and serve as landmarks and focal points. General Plan policies regarding architectural resources are discussed in Objective 2 of the Urban Design Element:

- Objective 2      Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding.
  - Policy 2.4      Preserve notable landmarks and areas of historic, architectural, or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.
  - Policy 2.5      Use care in remodeling of older buildings, in order to enhance rather than weaken the original character of such buildings.
  - Policy 2.6      Respect the character of older development nearby in the design of new buildings.

#### **The Bayview Hunters Point Area Plan**

The *Bayview Hunters Point Area Plan* of the *San Francisco General Plan* was adopted by the Planning Commission in March 2006 to guide the future development of the Bayview Hunters Point district of

San Francisco. One goal of the *Bayview Hunters Point Area Plan* is to conserve the archaeological and cultural heritage of Bayview's indigenous population.

The *Bayview Hunters Point Area Plan* recognizes the significance of this deep cultural heritage, and accordingly views the entire geographical area covered by the Plan as having potential archaeological significance. Under this view, archaeological investigation and plan remediation are encouraged for any substantial proposed physical development with the potential to encounter buried archaeological resources within the boundaries of Bayview.<sup>262</sup>

#### City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources

The San Francisco Planning Department considers a listing of historical resources approved by ordinance or resolution of the Board of Supervisors or the Planning Commission to be a local register of historical resources for the purposes of CEQA evaluation.<sup>263</sup> San Francisco Preservation Bulletin No. 16 provides guidance for the CEQA review process with regard to historic resources. As a certified local government and the lead agency in CEQA determinations, the City has instituted guidelines and a system for initiating CEQA review of historic resources. The San Francisco Planning Department's "CEQA Review Procedures for Historical Resources" incorporates the CEQA Guidelines into the City's existing regulatory framework. To facilitate the review process, the Planning Department has established the categories to determine the baseline significance of historic properties based on their inclusion within cultural resource surveys and/or historic districts. These categories include Category A.1 (Resources listed on or formally determined to be eligible for the CRHR), Category A.2 (Adopted local registers, and properties that have been determined to appear 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).

### ■ Paleontological Resources

A variety of federal, state, and local regulations and policies protect paleontological resources. These include, NEPA, CEQA, the federal Antiquities Act of 1906, the National Natural Landmarks Program, and the PRC. Under California law, paleontological resources are included in CEQA<sup>264</sup> and are required to be examined as part of the CEQA process. The City has no policies directly protecting paleontological resources, but uses the CEQA process to address potential adverse effects.

CEQA requires that paleontological resources be addressed during the EIR process. CEQA Guidelines, Appendix G, states, in part, that a project will "normally" have a significant effect on the environment if, among other things, it will disrupt or adversely affect a paleontological site, except as part of a scientific study. If paleontological resources are identified during the initial project scoping studies (such as an

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<sup>262</sup> Articles 10 and 11 are in the process of being revised to account for changes that have resulted from the approval of the HPC.

<sup>263</sup> *Public Resources Code* Sec. 5020.1(k) states, "Local register of historical resources' means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution."

<sup>264</sup> *California Administrative Code*, Title 14, Section 4306 et seq., and *Public Resources Code* Section 5097.5.

Initial Study or in a comment on the Notice of Preparation) as being on the project site, the Lead Agency must take those resources into consideration when evaluating the potential effects of the project. In the context of the PRC (Section 5097.5), fossils of vertebrates and evidence of their environment generally are considered important (i.e., “significant”) paleontological resources.

## III.J.4 Impacts

### ■ Significance Criteria

The CCSF and Agency have not formally adopted significance standards for impacts related to cultural or paleontological resources, but generally consider that implementation of the proposed Project would have significant impacts on these resources if it were to:

- J.a Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*
- J.b Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5
- J.c Disturb any human remains, including those interred outside of formal cemeteries
- J.d Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature as defined in CEQA Guidelines Section 15064.5 (3)

### ■ Analytic Method

The impact analysis for cultural resources is based primarily on the information contained in the following reports, *Historical Context for the Archaeology of the Bayview Waterfront Project, San Francisco, California*, July 2008; *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California*, June 2009; *Historic Context for the Bayview Waterfront Plan*, December 2008, and the *Bayview Waterfront Plan Historic Resources Evaluation, Volume II: Draft Historic Resources Survey and Technical Report*, July 2009. The technical studies incorporate archival research, site reconnaissance, and interviews with public agency staff and other informed contacts.

The paleontological resource impact analysis is based on databases searches of the University of California Museum of Paleontology; the American Museum of Natural History, Division of Paleontology; the North American Mammalian Paleofaunal Database in July 2009; and a review of published studies by the United States Geological Survey and other agencies and organizations to identify previously reported fossil finds in the vicinity of the Project site or in the same geologic units that occur at the Project site.

Additionally, the Project's potential contribution to cumulative cultural resource impacts are evaluated in the context of existing, proposed, and reasonably foreseeable future development expected in the Project vicinity. The cumulative context for each type of resource is unique and described in the cumulative impacts section below.

## ■ Construction Impacts

### ***Impact CP-1a: Change in Significance of Historical Architectural Resources***

#### **Impact of Candlestick Point**

**Impact CP-1a**      **Construction at Candlestick Point would not result in a substantial adverse change in the significance of an historical resource. (Less than Significant) [Criterion J.a]**

The Project would demolish Candlestick Park stadium, and would demolish and redevelop the Alice Griffith public housing site. Neither Candlestick Park stadium, nor the Alice Griffith public housing sites are considered eligible for listing on the NRHP, CRHR, or City landmark registers. As discussed above, Jones & Stokes completed a review of Candlestick Park stadium in 2007 and determined that the stadium did not meet the eligibility criteria for the NRHP. At the time the stadium was analyzed, it was less than 50 years old; however, if reviewed at the 50-year mark, it still would not meet criteria for listing on the NRHP or CRHR due to lack of physical integrity resulting from the extensive alterations discussed above. The Alice Griffith public housing site was determined ineligible for listing on the NRHP, CRHR, or City landmark registers because it was not strongly associated with a significant historical event, was not directly associated with Alice Griffith's productive life, is not distinctive architecturally, and does not have the potential to yield additional important historical information. No other potential historic resources have been identified in the Candlestick Point area of the Project site. Therefore, the Project's construction effects on historic resources at Candlestick Point would be less than significant. No mitigation is required.

#### **Impact of Hunters Point Shipyard Phase II**

**Impact CP-1b**      **Construction at HPS Phase II could result in a substantial adverse change in the significance of an historical resource. (Significant and Unavoidable with Mitigation) [Criterion J.a]**

Historical resources at HPS Phase II include the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District, with buildings, structures, and objects associated with the area's "transition from early commercial drydock operation to high-tech naval repair and Radiological research and waste treatment facility."<sup>265</sup> Contributing resources in the potential Hunters Point Historic District include Drydock 2, Drydock 3, and Buildings 140, 204, 205, 207, 208, 211, 224, 231, and 253.

The Project proposes to retain the buildings and structures in the potential Hunters Point Commercial Dry Dock District, identified in 1998 as eligible for listing in the NRHP. Drydocks 2 and 3 and Buildings 140, 204, 205, and 207 would be rehabilitated using the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Page & Turnbull, architects and historic resource consultants, reviewed the proposed treatment and rehabilitation of Drydocks 2, 3, and 4. The treatments would include repair of concrete surfaces of the drydocks and addition of guardrails along their perimeter. Page & Turnbull found that the proposed treatments would provide a

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<sup>265</sup> Circa Historic Property Development, *Hunters Point Commercial Dry Dock and Naval Shipyard Historic District DPR form*, October 31, 2008.

methodology for resolving severe deterioration issues, and ultimately provide for the longevity of the historic resources; the treatments would be consistent with the *Secretary of the Interior's Standards for Rehabilitation*<sup>266</sup> (refer to Appendix J [Drydock Assessment]). Heritage Park is proposed at Drydocks 2 and 3 and would include interpretive display elements related to the history of HPS. Per CEQA Guidelines Section 15064.5(b)(3), these impacts would be mitigated to a less-than-significant level.

Development at HPS Phase II would result in the demolition of Buildings 208, 211, 224, 231, and 253, which have been determined eligible for the CRHR and are contributors to the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. This would be a potentially significant impact because the proposed actions would demolish buildings that contribute to a historic district; the impact would materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR. None of the buildings proposed for demolition has been determined eligible for individual listing on any register; therefore, the loss of these buildings is evaluated based on the impact to the potential Historic District. The potential Historic District includes two docks and nine buildings; therefore, the Project would demolish nearly 50 percent of the contributing resources and could cause the District to be ineligible for inclusion in the CRHR. Implementation of mitigation measures MM CP-1b.1 and MM CP-1b.2 would reduce those impacts; however, the demolition of historic resources would be a significant impact that cannot be reduced to a less-than-significant level. Therefore, the Project would have a significant and unavoidable impact on the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District, because of demolition of Buildings 208, 211, 224, 231, and 253. Chapter VI (Alternatives) analyzes Alternative 4 (Reduced CP-HPS Phase II Development, HPS Phase II Stadium, No State Parks Agreement, and Without the Yosemite Slough Bridge). Alternative 4 would include rehabilitation and reuse of Buildings 211, 231, and 253 in the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District.

To reduce the impact on historic resources at HPS Phase II, the following mitigation measures shall be implemented:

*MM CP-1b.1*      *Mitigation to Minimize Impacts on Historic Resources at HPS Phase II.* *To reduce the adverse effect on historical resources, prior to any structural demolition and removal activities, the Project Applicant shall retain a professional who meets the Secretary of the of the Interior's Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District, as identified in the report titled Bayview Waterfront Plan Historic Resources Evaluation, Volume II: Draft Historic Resources Survey and Technical Report, July 2009, prepared by Circa Historic Property Development.*

*The documentation for the property shall be prepared based on the National Park Services' (NPS) 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 (Levels II and III) and NPS new policy for NR-NHL photographic*

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<sup>266</sup> Page & Turnbull, Memorandum Regarding Secretary's Standards Evaluation of Proposed Treatments for Dry Docks, October 5, 2009. The memorandum and evaluation was undertaken by professionals who meet the Secretary of the Interior's Professional Qualification Standards in Historic Architecture and Architectural History.

*documentation as outlined in the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion (March 2005).*

*The written historical data for this documentation shall follow HABS / HAER Level I standards. The written data shall 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 shall be produced.*

*Either HABS / HAER standard large format or digital photography shall be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NR-NHL photo expansion policy and have a permanency rating of approximately 115 years. Digital photographs will be taken as uncompressed. TIF file format. The size of each image will be 1600x1200 pixels at 300 ppi (pixels per inch) or larger, color format, and printed in black and white. The file name for each electronic image shall correspond with the index of photographs and photograph label.*

*Photograph views for the dataset shall 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 shall be referenced on a photographic key. This photograph key shall be on a map of the property and shall show the photograph number with an arrow indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset.*

*All written and photographic documentation of the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District shall be approved by the potential Historic Preservation Commission prior to any demolition and removal activities.*

MM CP-1b.2 *Interpretive Displays Depicting History of HPS. Interpretive displays related to the history of HPS shall be installed at Heritage Park at Drydocks 2 and 3. The number and type of displays shall be approved by the Historic Preservation Commission.*

These measures would reduce the significant adverse impact of HPS Phase II on the Hunters Point Commercial Dry Dock and Naval Shipyard Historic District, but not to a less-than-significant level.

## **Combined Impact of Candlestick Point and Hunters Point Shipyard Phase II**

**Impact CP-1      Construction activities associated with the Project could result in a substantial adverse change in the significance of a historical resource. (Significant and Unavoidable with Mitigation) [Criterion J.a]**

Refer to discussions of Impact CP-1a and Impact CP-1b and associated discussions, above. As discussed above, potential impacts to Drydocks 2 and 3 and Buildings 140, 204, 205, and 207 would be reduced to a less-than-significant level by retaining the drydocks and by rehabilitating the buildings, in accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

As discussed above, the Project would result in the demolition of Buildings 208, 211, 224, 231, and 253, which are historic resources in the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. This demolition would result in a significant impact because the proposed actions would materially alter in an adverse manner those physical characteristics of an historical resource that

convey its historical significance and that justify its eligibility for inclusion in the CRHR. Implementation of mitigation measures MM CP-1b.1 and MM CP-1b.2 would reduce those impacts; however, the demolition of historic resources would not be reduced to a less-than-significant level. Therefore, Project effects on these historical resources would be a significant unavoidable adverse impact. Chapter VI (Alternatives) analyzes Alternative 4 (Reduced CP-HPS Phase II Development, HPS Phase II Stadium, No State Parks Agreement, and Without the Yosemite Slough Bridge). Alternative 4 would include rehabilitation and reuse of Buildings 211, 231, and 253 in the potential Hunters Point Commercial Dry Dock and Naval Shipyard Historic District.

### **Impact CP-2a: Change in Significance of Archaeological Resources**

#### **Impact of Candlestick Point**

**Impact CP-2a**      **Construction at Candlestick Point would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American, Chinese fishing camp, and maritime-related archaeological remains. (Less than Significant with Mitigation) [Criterion J.b]**

The Project archaeological research has found that archaeological resources expected to be found on the Project site could have important research value and would, therefore, be legally significant under CEQA. Examples of research themes that have been proposed to which expected archaeological resources could contribute significant data include (i) the spatial organization and historical development of Chinese fishing camps; (ii) effects, adaptations, and resistance of the fishing camps to anti-Chinese fishing legislation (1885-1930s); (iii) spatial organization of shipyards and development of local traditions of boat building technology, including that of the scow schooner and Chinese junks; (iv) the development, changing function, and inter-settlement relationships of prehistoric shell mounds; (v) comparative spatial organization of shell mound sites; (vi) changes in prehistoric faunal and biotic exploitation practices; (vii) prehistoric changes in social stratification; and (viii) the relationship between Hunters Point-Bayview and South of Market area prehistoric settlements. Any potential archeological resources, e.g., CA-SFR-9, fishing camps, that are covered by existing development will remain covered and unavailable unless the site is redeveloped.

Mitigation measure MM CP-2a would reduce potential adverse effects of construction-related activities to archaeological resources at Candlestick Point to less-than-significant through implementation of the Project Archaeological Research Design and Treatment Plan.

*MM CP-2a*      Mitigation to Minimize Impacts to Archaeological Resources at Candlestick Point. Based on a reasonable presumption that archaeological resources may be present within the Project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Project on buried or submerged historical resources.

Overview: The Project Applicant shall retain the services of a qualified archaeological consultant having expertise in California prehistoric and urban historical archeology. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the archaeological consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archaeological consultant's work shall be

*conducted in accordance with this measure and with the requirements of the Project Archaeological Research Design and Treatment Plan (Archeo-Tec. Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California, 2009) at the direction of the City's Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the Project Archaeological Research Design and Treatment Plan and of this archaeological mitigation measure, the requirement of this archaeological mitigation measure shall prevail. 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. Archaeological 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 potential effects on a significant archaeological resource as defined in CEQA Guidelines Section 15064.5(a)(c) to a less-than-significant level.*

*Archaeological Testing Program: The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the Project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA.*

*At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings for submittal to the ERO. If, based on the archaeological testing program, the archaeological consultant finds that significant archaeological resources may be present, the ERO (in consultation with the archaeological consultant) shall determine if additional measures are warranted. Additional measures that may be undertaken include, but are not necessarily limited to, additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the Project, the Project Applicant shall either:*

- a. Re-design the Project so as to avoid any adverse effect on the significant archaeological resource; or*
- b. Implement a data recovery program, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.*

*Archaeological Monitoring Program: If the ERO, in consultation with the archaeological consultant, determines that an Archaeological Monitoring Program (AMP) shall be implemented, the AMP shall include the following provisions, at a minimum:*

- *The archaeological consultant, Project Applicant, and ERO shall meet and consult on the scope of the AMP prior to the commencement of any Project-related soils disturbing activities. The ERO, in consultation with the archaeological consultant, shall determine what Project activities shall be archaeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), and site remediation, shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context.*

- *The archaeological consultant shall train all Project construction personnel who could reasonably be expected to encounter archaeological resources of the expected resource(s), how to identify the evidence of the expected resource(s), and the appropriate protocol in the event of apparent discovery of an archaeological resource.*
- *The archaeological monitor(s) shall be present on the Project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the archaeological consultant, determined that Project construction activities could have no effects on significant archaeological deposits.*
- *The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.*
- *If an intact archaeological deposit is encountered, all soil-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be authorized to temporarily halt 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 archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of any encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit and present the findings of this assessment to the ERO as expeditiously as possible.*

*Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO.*

*Archaeological Data Recovery Program: The archaeological data recovery program shall be conducted in accord with an Archaeological Data Recovery Plan (ADRP). The archaeological consultant, Project Applicant, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological 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 archaeological 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, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be pursued 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 archaeological data recovery program.*

- *Security Measures. Recommended security measures to protect the archaeological resource from vandalism, looting, and other potentially 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 associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable state and federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC), which shall appoint a Most Likely Descendant (MLD) (PRC Sec. 5097.98). The archaeological consultant, Project Applicant, and MLD shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines 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 Archaeological Resources Report:* *The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/ monitoring/ data recovery program(s). Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.*

*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 Major Environmental Analysis division of the Planning Department shall receive three copies 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 presented above.*

This measure would reduce the potential Project impacts to CEQA-significant archaeological resources to a less-than-significant level by ensuring that an archaeological testing program is performed and that any discovered archaeological resources are appropriately handled and documented.

## Impact of Hunters Point Shipyard Phase II

**Impact CP-2b**      **Construction at HPS Phase II would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American resources, Chinese fishing camps, and maritime related resources. (Less than Significant with Mitigation) [Criterion J.b]**

As discussed above, records indicate that three, and possibly four, prehistoric archaeological sites are located within the HPS Phase II site, including CA-SFR-11, CA-SFR-12, CA-SFR-13, and CA-SFR-14. All of the sites are reported to be shellmounds or shell midden sites.

Moreover, previous archaeological investigations have shown that prehistoric archaeological sites in the HPS Phase II site tend to be located along the original shoreline. Therefore, it is possible that Project-related construction activities may encounter previously unknown archaeological resources.

Two possible locations for a Chinese fishing camp are identified in HPS. By 1910 five of the nineteen remaining Chinese fishing camps were located at Hunters Point. At least eleven fishing camps were observed along Hunters Point shoreline in the 1930s.

Hunters Point had numerous maritime-related industries, including drydocks and boarding houses. In addition, there were several historically documented large offshore “rocks” that presented navigational hazards. Therefore, it is possible that buried shipwrecks may occur within the HPS Phase II site.

Any potential archeological resources, e.g., fishing camps, that are covered by existing development will remain covered and unavailable unless the site is redeveloped. Mitigation measure MM CP-2a would reduce the potentially significant effects of construction-related activities to the archaeological resources in the HPS Phase II site (described above) to a less-than-significant level by mitigating for the permanent loss of the adversely affected archaeological resources through implementation of the *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California*. This measure would reduce the impact to a less-than-significant level by ensuring that an archaeological testing program is performed and that any discovered resources are appropriately handled, and documented.

## Combined Impact of Candlestick Point and Hunters Point Shipyard Phase II

**Impact CP-2**      **Construction activities associated with the Project would not result in a substantial adverse change in the significance of archaeological resources, including prehistoric Native American resources, Chinese fishing camps, and maritime related resources. (Less than Significant with Mitigation) [Criterion J.b]**

As discussed above, the Project site is expected to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods, including, but not limited to, CA-SFR-9, CA-SFR-11, CA-SFR-12, CA-SFR-13, and CA-SFR-14. Any potential archeological resources, e.g., fishing camps, that are covered by existing development will remain covered and unavailable unless the site is redeveloped. Construction activities associated with the Project could disturb those archaeological resources, and result in potentially significant impacts. Refer to Impact CP-2a and Impact CP-2b and associated discussions, above. Mitigation measure MM CP-2a

would reduce the Project potentially significant effects on archaeological resources to a less-than-significant level through implementation of the *Archaeological Research Design and Treatment Plan for the Bayview Waterfront Project, San Francisco, California*.

### **Impact CP-3a: Change in Significance of Paleontological Resources**

#### **Impact of Candlestick Point**

**Impact CP-3a            Construction at Candlestick Point would not result in a substantial adverse change in the significance of a paleontological resource. (Less than Significant with Mitigation) [Criterion J.d]**

As discussed above, sedimentary rocks of the Franciscan Complex have a low sensitivity to impacts from Project construction. Sedimentary rocks of the Franciscan Complex have produced significant fossils important for understanding the age, depositional environments, and tectonic history of the San Francisco area and additional fossil remains discovered in rocks of the Franciscan Complex during Project construction could be scientifically important and significant. Although no fossils have been reported from the Project site, the presence of Franciscan sedimentary rocks (chert, sandstone, shale, and greenstone) on Candlestick Point in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

Using Society for Vertebrate Paleontology (SVP) criteria, undifferentiated Pleistocene sediments, which may encompass some of the Colma Formation, have a high sensitivity to impacts from Project construction. Fossil fragments from these sediments have been recovered near Islais Creek northwest of the Project site. The presence of these sediments southwest of the stadium on Candlestick Point in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

Using SVP criteria, the colluvium (slope debris, minor landslides), and artificial fill located within the Project site is not expected to have sensitivity to impacts from Project construction because it is not likely that artificial fill would contain paleontological resources; however, the Bay mud underlying portions of the fill at depth is expected to have a high sensitivity because it is possible, and even likely, that those materials would contain paleontological resources. Fossil fragments from the Bay mud have been recovered near Islais Creek northwest of the Project site. The presence of the Bay mud under the fill around Candlestick Point and south of South Basin in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

To reduce a potentially significant impact on paleontological resources to a less-than-significant level, the following mitigation measure shall be implemented:

*MM CP-3a            Paleontological Resources Monitoring and Mitigation Program: The Project Applicant shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program (PRMMP). The PRMMP shall include a description of when and where construction monitoring would be required; emergency discovery procedures; sampling and data recovery procedures; procedures for the preparation, identification, analysis, and curation of fossil specimens and data recovered; preconstruction coordination procedures; and procedures for reporting the results of the monitoring program.*

*The PRMMP shall be consistent with the Society for Vertebrate Paleontology (SVP) Standard Guidelines for the mitigation of construction-related adverse impacts to paleontological resources and the requirements of the designated repository for any fossils collected. During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology in the areas where these activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Monitoring need not be conducted in areas where the ground has been previously disturbed, in areas of artificial fill, in areas underlain by nonsedimentary rocks (serpentinite, greenstone), or in areas where exposed sediment would be buried, but otherwise undisturbed.*

*The consultant's work shall be conducted in accordance with this measure and at the direction of the City's Environmental Review Officer (ERO). Plans and reports prepared 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. Paleontological 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 potential effects on a significant paleontological resource as previously defined to a less-than-significant level.*

The SVP considered scientific recovery, preparation, identification, determination of significance, and curation to mitigate potentially significant impacts to paleontological resources adequately in most circumstances. Mitigation measure MM CP-3a would reduce the effects of construction-related activities to paleontological resources in the Candlestick Point area to a less-than-significant level by mitigating for the permanent loss of the adversely affected resources through implementation of a Paleontological Resources Monitoring and Mitigation Program.

## **Impact of Hunters Point Shipyard Phase II**

**Impact CP-3b      Construction at HPS Phase II would not result in a substantial adverse change in the significance of a paleontological resource. (Less than Significant with Mitigation) [Criterion J.d]**

As discussed above, sedimentary rocks of the Franciscan Complex have a low sensitivity to impacts from Project construction. Sedimentary rocks of the Franciscan Complex have produced significant fossils important for understanding the age, depositional environments, and tectonic history of the San Francisco area and additional fossil remains discovered in rocks of the Franciscan Complex during Project construction could be scientifically important and significant. Although no fossils have been reported from the Project site, the presence of Franciscan sedimentary rocks (shale, chert, and greenstone) on the flanks of Hunters Point in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

Using SVP criteria, the colluvium (slope debris, minor landslides), serpentinite, and artificial fill located within the Project site is not expected to have sensitivity to impacts from Project construction because it is not likely that artificial fill would contain paleontological resources; however, the Bay mud underlying portions of the fill at depth is expected to have a high sensitivity because it is possible, and even likely, that those materials would contain paleontological resources. Fossil fragments from the Bay mud have been recovered near Islais Creek northwest of the Project site. The presence of the Bay mud under the

fill around Hunters Point in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

Mitigation measure MM CP-3a would reduce the effects of construction-related activities to paleontological resources at HPS Phase II to a less-than-significant level by mitigating for the permanent loss of the adversely affected resources through implementation of a Paleontological Resources Monitoring and Mitigation Program.

To reduce any potential significant impact on paleontological resources to a less-than-significant level, mitigation measure MM CP-3a would be implemented. The SVP considered scientific recovery, preparation, identification, determination of significance, and curation to mitigate impacts to paleontological resources adequately in most circumstances. Consequently, the implementation of this measure would reduce the potentially significant adverse environmental impact of Project-related ground disturbance on paleontological resources to a less-than-significant level.

### **Impact of Yosemite Slough Bridge Construction Activities**

**Impact CP-3c**      **Construction of the Yosemite Slough bridge, shoreline improvements, and the marina improvements activities, including in-water activities, would not result in a substantial adverse change in the significance of a paleontological resource. (Less than Significant with Mitigation) [Criterion J.d]**

Using SVP criteria, the artificial fill located within the Project site is not expected to have sensitivity to impacts from Project construction because it is not likely that artificial fill would contain paleontological resources; however, the Bay mud underlying portions of the fill at depth is expected to have a high sensitivity because it is possible, and even likely, that those materials would contain paleontological resources. As discussed above, fossil fragments from the Bay mud have been recovered near Islais Creek northwest of the Project site. The presence of the Bay mud under the fill in the vicinity of Yosemite Slough and the marina in the Project site indicates the possibility of fossils being discovered during construction-related excavation associated with the Yosemite Slough bridge, shoreline improvements, and the marina improvements.

Mitigation measure MM CP-3a, as described previously, would reduce the potentially significant effects of construction-related activities to paleontological resources in in-water and off-site areas to a less-than-significant level by mitigating for the permanent loss of the adversely affected resources through implementation of a Paleontological Resources Monitoring and Mitigation Program.

### **Impact of Yosemite Slough Bridge Pile Driving**

**Impact CP-3d**      **Pile driving associated with construction of the Yosemite Slough bridge, shoreline improvements, and the marina improvements would not result in a substantial adverse change in the significance of a paleontological resource. (Less than Significant with Mitigation) [Criterion J.d]**

Construction of the Yosemite Slough bridge, shoreline improvements, and the marina improvements would involve the installation of about 375 new pilings. Details of the installation program are not yet available, but it is probable that there would be disruption of sediments in the shallow-water portions of

the driving sites. Using SVP criteria, the artificial fill located within the Project site is not expected to have sensitivity to impacts from Project construction because it is not likely that artificial fill would contain paleontological resources; however, the Bay mud underlying portions of the fill at depth is expected to have a high sensitivity because it is possible, and even likely, that those materials would contain paleontological resources. As discussed above, fossil fragments from the Bay mud have been recovered near Islais Creek northwest of the Project site. The presence of the Bay mud under the fill in the vicinity of Yosemite Slough and the marina in the Project site indicates the possibility of fossils being discovered during construction-related excavation.

Mitigation measure MM CP-3a, as described previously, would reduce the potentially significant effects of construction-related activities to paleontological resources in in-water and off-site areas to a less-than-significant level by mitigating for the permanent loss of the adversely affected resources through implementation of a Paleontological Resources Monitoring and Mitigation Program.

### **Combined Impact of Candlestick Point and Hunters Point Shipyard Phase II**

**Impact CP-3**            **Construction activities associated with the Project would not result in a substantial adverse change in the significance of a paleontological resource. (Less than Significant with Mitigation) [Criterion J.d]**

Refer to Impact CP-3a through Impact CP-3d and associated discussions, above. As discussed above, the presence of sedimentary rocks and Bay mud in the Project site indicates the possibility of fossils being discovered during construction-related excavation, or marina, or Yosemite Slough bridge construction.

Mitigation measure MM CP-3a, as described previously, would reduce the potentially significant effects of construction-related activities to paleontological resources throughout the Project site to a less-than-significant level by mitigating for the permanent loss of the adversely affected resources through implementation of a *Paleontological Resources Monitoring and Mitigation Program*.

## **■ Cumulative Impacts**

The cumulative analysis for impacts on cultural and paleontological resources considers a broad regional system of which these resources are a part. The cumulative context for historical resources is the San Francisco Bay Area Peninsula (Peninsula), which contains both San Francisco and San Mateo counties where common patterns of historic-era settlement have occurred. The cumulative context for archaeological resources and human remains is the northern tip of the San Francisco peninsula where Native American archaeological sites, Chinese fishing camps, and maritime activities were concentrated. The cumulative context for paleontological resources is the Quaternary deposits of the Bayside portions of the San Francisco Bay Area and Franciscan Complex bedrock throughout the Bay Area.

### **Historical Resources**

Urban development that has occurred over the past several decades along the Peninsula, specifically along the Bay with regards to marine/port type resources has resulted in the demolition and alteration of significant historical resources, and it is reasonable to assume that present and future development activities will continue to result in impacts on significant historical resources, including residential, commercial, and civic properties, that are listed or eligible for listing on national, state, or local registers.

Federal, state, and local laws protect historical resources in most instances, but it is not always feasible to protect historical resources, particularly when preservation in place would frustrate implementation of projects. For this reason, the cumulative effects of development along the Peninsula on historical resources are considered significant.

San Francisco and other bay-side communities along the Peninsula contain numerous known resources of historic and cultural value. In addition, undocumented buildings or structures of historic age which qualify as historical resources pursuant to CEQA may also exist within the City. Enforcement of existing local codes and policies, including the Urban Design Element of the San Francisco General Plan, aimed at the preservation and protection of historical resources would ensure that development activities resulting from implementation of the Project would undergo rigorous review to determine impacts on historical resources in accordance with CEQA and would encourage the avoidance of significant impacts through explicitly defined actions and development incentives. Nonetheless, because existing and proposed City policies do not explicitly prohibit demolition or alteration of historic-period buildings or structures, it is possible that development activities resulting from implementation of the Project could cause a substantial adverse change in the significance of a historical resource. Because the Project would adversely affect significant historical resources that are unique and non-renewable members of finite classes, even with the implementation of mitigation measures MM CP-1b.1 and MM CP-1b.2, the Project's incremental contribution to these cumulative effects would itself be potentially cumulatively considerable, and thus significant and unavoidable.

### ***Archaeological Resources***

Any potential archeological resources such as fishing camps that are covered by existing development will remain covered and unavailable unless the site is redeveloped. Past urban development that has occurred along the Peninsula has resulted in damage and destruction of archaeological resources. For this reason, the cumulative effects of development along the Peninsula and surrounding the Bay to archaeological resources are considered significant. In recent years, CEQA has required that development projects identify the potential for archaeological resource impacts and mitigate those impacts (CEQA Section 21083.2 and CEQA Guidelines 15064.5). Consequently, development in the recent past has not, and development in the present and the reasonably foreseeable future would not contribute to a significant adverse cumulative archaeological resource impact. Similarly, with implementation of mitigation measure MM CP-2a, the Project would have a less-than-significant impact on archaeological resources that are unique and non-renewable members of finite classes, and the Project's incremental contribution to these cumulative effects would not be cumulatively considerable, as it would not contribute to a loss of valuable resources.

### ***Paleontological Resources***

Urban development that has occurred over the past several decades in Quaternary deposits of the Bayside portions of the San Francisco Bay Area and Franciscan Complex bedrock throughout the Bay Area has damaged paleontologically sensitive rock and sediment formations with the resultant loss of paleontological resources. Federal, state, and local laws protect paleontological resources in many instances, but protection is not always feasible, particularly when preservation in place would frustrate implementation of proposed development. For this reason, the cumulative effects of development in

Quaternary deposits and Franciscan bedrock on paleontological resources are considered significant. In recent years, CEQA has required that development projects identify the potential for paleontological resources and mitigate those impacts. Consequently, many development projects in the recent past have not, and many development projects in the present and reasonably foreseeable future would not contribute to a significant adverse cumulative paleontological resource impact. Similarly, with implementation of mitigation measure MM CP-3a, the Project would have a less-than-significant impact on paleontological resources that are non-renewable members of finite classes, and the Project's incremental contribution to these cumulative effects would not be cumulatively considerable, as it would not contribute to a loss of these valuable resources.

### **Human Remains**

As previously discussed, the Peninsula is known to be rich in subsurface archaeological resources in certain settings, and the archaeological record indicates a high level of habitation/seasonal habitation and resource use by Native Americans. Although past projects have contributed to a significant loss of these resources, in recent years CEQA has required that development projects with the potential to affect human remains must implement procedures in order to ensure their appropriate treatment (CEQA Guidelines Section 15064.5). Consequently, development projects in the recent past have not, and development projects in the present and reasonably foreseeable future would not contribute to a significant adverse cumulative human remains impact. Similarly, with implementation of mitigation measure MM CP-2a, the Project would have a less-than-significant impacts on cultural resources that are unique and non-renewable members of finite classes, and the Project's incremental contribution to these significant cumulative impacts would not be cumulatively considerable, as it would not contribute to a loss of significant resources.