

Appendix CUL

Cultural Resources Supporting Information (revised)

CUL.1 Architectural Resources Technical Memorandum

memorandum

date May 23, 2019; revised November 25, 2019

to Pete Vollmann

from Becky Urbano and Amber Grady, ESA

subject Architectural Resources Technical Memorandum

Introduction

ESA has prepared this technical memorandum in support of the Oakland Waterfront Ballpark District Project (Project) EIR. This memo includes detailed information on the age-eligible architectural resources both within the Project Study Area and the five Project Variant Study Areas. Combined they represent all the age-eligible architectural resources that could be potentially impacted by implementation of the Project and any selected variants.

Historic Resources in the Project Study Area

The Project Study Area contains numerous identified, and several previously unidentified, historic architectural resources. For resources that were previously identified, ESA used prior assessments combined with field verification to identify potential impacts that may result from the proposed Project (see References below). These findings are summarized and presented in Chapter 4.4 to the extent needed to support the impact analysis. Resources within the Project Study Area include:

- Southern Pacific Railroad Industrial Landscape District API¹
 - 93 Linden Street (Standard Underground Cable Company)
 - 110 Linden Street (CalPak / Del Monte Cannery)
 - 101 Myrtle Street (CalPak Label Plant)
 - 737 2nd Street (Phoenix Lofts)
- PG&E Station C API
 - 601 Embarcadero West
 - 101 Jefferson Street
- USS *Potomac* National Historic Landmark

¹ An Area of Primary Importance (API) is a zoning designation used by the City of Oakland. APIs are considered historical resources for the purposes of CEQA.

- Lightship *Relief* National Historic Landmark

Five buildings/structure were also identified and evaluated by ESA for potential eligibility as historical resources per CEQA. These potential resources include:

- 50 Market Street (Former PG&E Gas Load Center/Substation B)
- Crane X-415
- Crane X-416
- Crane X-417
- Crane X-422

Of these potential resources, only Crane X-422 qualifies as a historical resource for the purposes of CEQA.

Historic Resources in the Project Variant Study Areas

Five Project variants are included in the EIR. For each variant, a study area was established based on the unique potential impacts of each variant. The study areas are all approximately one-half of a city block and were used to address potential impacts to age-eligible architectural resources. In some cases, the variant study area is wholly contained within the Project site. In such cases, the resources are presented as part of the Project. Where the study areas differ from and/or expand upon the Project study area, additional resources are presented as such.

The variants under consideration include:

- Variant 1 – Peaker Power Plant Variant
- Variant 2 – Aerial Gondola Variant

The Variant Study Areas contain numerous identified, and several previously unidentified, historic architectural resources. Additional, previously identified, age-eligible architectural resources within the Variant Study Areas, listed north to south, include:

- Old Oakland API
 - 518-524 7th Street
 - 489 8th Street (Buffalo Exchange Building)
 - 509-513 8th Street
 - 512 8th Street (Fa Yun Chan Temple)
 - 483 9th Street (Ross House/Arlington Hotel)
 - 538 9th Street (Swans Market)
 - 493 10th Street (Washington Hotel)
 - 717-719 Washington Street (Evers Building)
 - 718-726 Washington Street (Oriental Block/Oakland Peniel Mission)
 - 725 Washington Street (Dunn Block)

- 727-735 Washington Street (MacKee Drug Co./Brown Building and annex)
- 736 Washington Street
- 801 Washington Street (Liberty Hotel/Richmond Hotel/Alta House)
- 809-815 Washington Street (Reier Block)
- 826 Washington Street/499 9th Street (Snyder Block/LaSalle Hotel)
- 827 Washington Street (Ratto Building/Winsor Hotel/Gooch Block)
- 902 Washington Street (Nicholl Block/Lloyd Building)
- West Waterfront ASI
 - 520 3rd Street
 - 475 4th Street
 - 201 Washington Street/508 2nd Street (Fat Lady Restaurant)
 - 215 Washington Street (Freschi Box Company Warehouse)
 - 221 Washington Street (Parker Electric MFG/Bay City Iron Works machine shop)
 - 301 Washington Street
 - 315 Washington Street
 - 380 Washington Street
- 480 3rd Street (Western Pacific Railroad Depot), (also a contributor to the Lower Broadway ASI)

Areas of Secondary Importance (ASI) are areas of local historical interest that are not automatically considered historical resources for the purposes of CEQA. However, the City of Oakland has chosen, out of an abundance of caution, to treat the West Waterfront ASI and the Lower Broadway ASI as historical resources for the purposes of this CEQA analysis. Only those contributors within the Variant Study Area boundaries are listed above.

The following potential historic resources were also identified and evaluated by ESA for potential eligibility as historical resources per CEQA. These potential resources include:

- Alameda County Health Services Campus
 - 480 4th Street (former Alameda County Morgue and Coroner’s Office)
 - 499 5th Street (Alameda County Health Building)

Of these potential resources, only 480 4th Street qualifies as a historical resource for the purposes of CEQA.

For previously identified resources, ESA used existing assessments combined with field verification to identify potential impacts that may result from the proposed Project variants. As a result of this analysis, the proposed Project, as well as the Project plus the variants has the potential for significant unavoidable impacts to historic resources.

In addition, the Project with the following variants, in combination with the Downtown Oakland Specific Plan (DOSP), has the potential to cumulatively impact historic resources:

- Variant 1 – Peaker Power Plant Variant
- Variant 2 – Aerial Gondola Variant

The following table includes all of the architectural historical resources within the Project and Variant study areas and the resources that could be impacted:

**TABLE 1
IMPACT SUMMARY**

Architectural Resource ^a	Project ^b	With Maritime Reservation Scenario	With Variant 1 – Peaker Power Plant	With Variant 2 – Aerial Gondola Variant
Known Historic Resources				
SPRR Industrial Landscape API	LTS (Vibration) & LTSM (Setting)			
PG&E Station C API	LTSM (Vibration)		SU (Partial Demo), LTS (Views and Setting)	
USS <i>Potomac</i> NHL	LTSM			
Light Ship <i>Relief</i> NHL	LTSM			
Old Oakland API				SU (Setting), SU (Cumulative)
Western Pacific Railroad Depot				LTS
West Waterfront ASI				LTS
Potential Historic Resources				
Crane X-422	LTS (Setting), SU (Removal), SU (Cumulative)	Same as Project		
West Waterfront ASI				LTS
480 4th Street (Alameda Co. Coroner's Office)				LTS

NOTES:

^a API = Area of Primary Interest, ASI = Area of Secondary Interest, NHL = National Historic Landmark

^b LTS = Less than Significant, LTSM = Less than Significant with Mitigation, SU = Significant and Unavoidable

Regulatory Setting

California Environmental Quality Act

CEQA, as codified in PRC Sections 21000 et seq., is the principal statute governing the environmental review of projects in the state. CEQA requires lead agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for or listed in the National Register of Historic Places (National Register).

To be eligible for the California Register, an historical resource must be significant at the local, state, and/or federal level under one or more 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 a master, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1[c]).

Integrity is the authenticity of a historical resource's physical identity as shown by the survival of characteristics that existed during the period of significance. For a resource to be eligible for the California Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the National Register criteria may still be eligible for listing in the California Register.

Known Resources in the Project Study Area

Southern Pacific Railroad Industrial Landscape Area of Primary Importance (API)

The Southern Pacific Railroad Industrial Landscape API is located within the Project Study Area on the north side of Embarcadero West from the Project site. It was recorded in 1990 by the Oakland Cultural Heritage Survey (OCHS).

Physical Description²

The Southern Pacific Railroad Industrial Landscape (SPRR API) consists of a group of four extant industrial plants on six adjacent blocks along the north side of the Southern Pacific main line tracks (which run along Embarcadero, formerly named 1st Street) (**Figure 1**). The district extends from Castro Street on the east to Chestnut Street on the west, where the Western Pacific tracks (which previously ran along 3rd Street) once converged with the Southern Pacific tracks. The district is primarily concentrated near Linden Street. Between the

² This description and context are summarized from the documentation resulting from that survey: Oakland Cultural Heritage Survey, “Historic Resources Inventory Form for the Southern Pacific Railroad Industrial Landscape District,” 1990.



SOURCE: ESA, 2019.

Figure 1
SPRR Landscape District API, Looking West From Market Street

grouping of buildings at Linden Street and the other end of the district on 2nd Street, there exist several open or low-scale blocks. This area once contained an additional contributor (the National Ice and Cold Storage Company at 103-115 Market Street) that has been demolished since the original recordation in 1990.

Buildings contributing to the district include the Standard Underground Cable Company (93 Linden Street), the California Packing Corporation (CalPak or Del Monte) cannery/warehouse (110 Linden Street), the CalPak (or Del Monte) label printing plant (101 Myrtle Street), and the Dalziel Company warehouse (737-412 2nd Street). These buildings range in height from one to four stories and are constructed of brick and reinforced concrete. They are relatively simple in design and rectangular in plan, similar to many industrial buildings constructed in Oakland at the turn of the 19th century. They are similar in size, age, and function, yet varied in materials, color, texture, and roof forms. Three of the four contributing buildings have conspicuous, distinctive, stepped brick parapets. All have been rehabilitated since 1990 and currently house a variety of commercial and residential uses. Additions have been minimal and appropriate, and the district retains excellent integrity overall.

The district is defined visually as a row of full-block industrial buildings forming a conspicuous line of industrial structures along the north side of the railroad tracks. Most cover an entire city block or stretch between two parallel streets / railroad tracks: the Western Pacific tracks (which previously ran along 3rd Street) and the Southern Pacific tracks (which run along Embarcadero). The district includes a small vacant lot between Market and Brush streets, the former site of another National Ice and Cold Storage Company building. To the east, the district boundary is formed by a vacant lot formerly occupied by Phoenix Iron Works (which has left its outline on the east wall of the Dalziel Company warehouse), and a block of parking beyond; to the west, the diagonal route of the Western Pacific tracks past Standard Underground Cable marks the present boundary. The existing railroad tracks and associated rail yards south of the district, and the Western Pacific tracks on the west two blocks, contribute to its significance; the setting to the north, east, and west is similar in general industrial character and scale of buildings, but the buildings are newer and do not add to the distinctive early-20th-century trackside landscape that defines this district.

Significance

The SPRR API consists of four extant contributing structures related to the industrial manufacturing and processing history that defined the Oakland waterfront in the first half of the 20th century. All buildings in the district were constructed between 1899 and 1923, and each shares similar architectural characteristics of what was once a common building type in this area. They represent what was previously a much larger grouping of structures oriented more toward the railroad tracks than to the city street grid.

The blocks between 1st and 3rd streets became prime commercial real estate when the Western Pacific Railroad came to Oakland in the wake of the breakup of the Southern Pacific Railroad's waterfront monopoly. Situated between the Southern Pacific tracks on 1st Street (Embarcadero) and the Western Pacific tracks along 3rd Street, these buildings had ample access to a variety of shipping providers.

Of particular note, the shape and form of this district is a direct result of the railroad and of the other industrial complexes in this area at the beginning of the 20th century. According to the 1990 Oakland Cultural Heritage Survey, "This district is a one-sided landscape, and always was: on the north side of Southern Pacific's main tracks, the side-by-side medium-sized industrial buildings conform to the grid of city blocks and constitute the district, while south of the tracks, the land was owned en masse by the Southern Pacific, and developed with sprawling complexes of PG&E, the Howard Company's shipping terminal and coal yards, and the Boole shipyard and its giant successor, Moore Dry Dock."³

The coal yards, shipyards, and Moore Dry Dock are gone, but the area remains industrial, open, and largely physically defined by the railroad tracks along Embarcadero. This unique character allows the entire district to be viewed in its entirety from the railroad tracks, providing a rare glimpse of the industries and industrial architecture that shaped Oakland during its formative years between the great earthquake in 1906 and the end of World War II in 1945.

The SPRR API has been determined eligible for the National Register under Criterion A as a representative group of early-20th-century industrial buildings in Oakland. According to the 1990 Oakland Cultural Heritage Survey, "Nowhere else in Oakland is an industrial landscape so clearly and compactly related to the railroad, the lifeblood of industry here. Its integrity is strong, both in the individual buildings and in the setting. Seen from the tracks, or from as far away as Broadway, it is a striking and self-contained group. Its setting contributes strongly to its significance on the south side, where the railroad tracks are the reason for the plants' having located here, and the open space around the tracks (including the north part of the Moore Dry Dock and Howard Terminal sites) is true to the period and enhances the visibility of the district."⁴

The character-defining features identified in the 1990 survey include:

- Simplicity of design that includes stepped parapets and regular fenestration;
- Industrial character that includes flat roofs, multi-lite steel-sash windows, and brick and/or concrete construction;
- Large scale with buildings measuring full or half blocks in area;

³ Ibid.

⁴ Ibid.

- Orientation to the railroad tracks;
- Concrete railroad track platforms; and
- Concentration of buildings with enough open space to allow for a long line of sight/highly visible as a grouping (includes views of the historic district from Moore Dry Dock and Howard Terminal).

Pacific Gas and Electric Company Station C API

One of the two extant buildings that comprise the Pacific Gas & Electric (PG&E) Station C API is located at the northeast corner of the Project Site (601 Embarcadero West); the other building (101 Jefferson Street) is outside of the Project Site, but within the Project Study Area.⁵ The following historic context of the PG&E Station C is summarized from the 1985 Oakland Cultural Heritage Survey.⁶

Physical Description

The PG&E Station C API consists of two extant buildings constructed in several sections at various periods from 1888 to 1938. Beaux-Arts stylistic elements unify the exterior of the whole complex through monumental scale, rusticated quoins and pilasters, a large window in each structural bay, and a Classically derived cornice. The overall massing of the complex is horizontal due to its large size (the main building covers more than a square city block) and because of the oversized decorative elements that suggest a one-story interior when they stand closer to five or six stories in height (**Figure 2**). The complex's unity maintained through use of a common paint scheme, although a large, multi-colored mural currently dominates the track-side façade of 101 Jefferson Street. Street trees currently existing along Grove Street and Embarcadero. Their roots are lifting up the sidewalk, and their proximity to 601 Embarcadero West is beginning to contribute to water damage and surface deterioration of the stucco.

601 Embarcadero West is a U-plan building with facades on Martin Luther King, Jr. Way (MLK, Jr. Way), Embarcadero West, and Jefferson Street. The two buildings that form the west wing of the building face MLK Jr. Way. These brick buildings are the two oldest in the complex (sometimes referred to by the separate addresses of 74 and 64 MLK Jr. Way), built in 1888-89 and 1889-90, respectively. The east wing of the building is composed of two buildings facing Jefferson Street. Constructed in 1912-14 and 1928 of reinforced concrete, they are sometimes referred to by the separate addresses of 75 and 51 Jefferson Street, respectively. The entire complex was united in 1938 with construction of the monumental section of the building on Embarcadero. This primary façade is divided into 15 structural bays each containing a single tall, narrow, infilled window opening. Panels are paired between rusticated piers, except for the single easternmost bay, at Jefferson Street, which has a rectangular window.

101 Jefferson (sometimes referred to as 628 Embarcadero, 106 Grove Street, or 106 MLK Jr. Way) is an L-plan building located at the northeast corner of Embarcadero and MLK Jr. Way. The flat-roofed building is constructed of reinforced, board-formed concrete. Its ornamentation echoes that of the main building across the

⁵ Prior historic resource documentation on both DPR 529 forms and on Oakland Cultural History Survey forms used a number of addresses to denote the subject building at 601 Embarcadero West. These stem from a series of construction project between 1888 and 1938, in which smaller buildings were joined or additions made to result in the current U-shaped configuration that remains today. These addresses include: 601, 605, 629, 635, and 645 Embarcadero (also noted as 601-645 Embarcadero), 50, 64, and 74 MLK, Jr. Way (formerly Grove Street), and 51 and 75 Jefferson Street.

⁶ Information is summarized from the Oakland Cultural Heritage Survey, "Historic Resources Inventory Form for the Pacific Gas and Electric Company Station C," 1985.



SOURCE: ESA, 2019.

Figure 2
601 Embarcadero West, Looking West From Jefferson Street

street: rusticated quoins and pilasters, a substantial but simple base, and a Classical entablature emphasizing the horizontal massing. Overall, it is painted similarly to 601 Embarcadero West although a large, colorful mural has been installed on the unarticulated Embarcadero façade.

The complex was surveyed in 1985 as part of the first round of the OCHS. Since then, one building in the complex (50 MLK Jr. Way) has been demolished. The two remaining buildings have been maintained with no apparent major additions or modifications. However, along MLK Jr. Way, the oldest brick sections (sometimes noted as 64 and 74 MLK, Jr. Way) of the 601 Embarcadero West shows signs of water damage, broken windows, and damaged downspouts. In spite of this, the integrity of the resource remains high.

Significance

Early Power Generation

PG&E Station C served as both a supporting power generation facility for the neighboring manufactured gas plant (MGP) known as PG&E Substation B and later as an independent power generation facility. It is important as a monumental Beaux-Arts-style industrial power generation complex. It is associated with several important designers, including architects Walter J. Mathews and Ivan C. Frickstad and engineer Henry C. Vensano. It is the second electrical generation plan ever constructed in the City of Oakland and has been in continual operation since 1889.

It was first constructed by the Oakland Gas Light Company (OGLC), which was incorporated in 1866 by Anthony Chabot, James Freeborn, H.H. Haight, and Joseph G. Eastland. The OGLC acquired the marshy waterfront between Castro and Clay streets in 1870 and began work to fill in the waterfront land for the purposes of establishing their gas utility. When electricity began to gain wider adoption, the company reincorporated as the Oakland Gas Light & Heat Company (1884), and constructed its first electrical plant in 1885. This first plant was

inadequate to meet demand, and a second plant was constructed. It was completed in 1889 and is still extant as one of the brick portions of the building, a section sometimes noted as 74 MLK, Jr. Way.

John A. Britton began working for OGLC in 1875, rising to become president of the company in 1900. He was instrumental in orchestrating a series of mergers and acquisitions that resulted in the formation of PG&E. As the company grew under Britton's leadership, its facilities between Castro and Clay streets also expanded. Substation B stretched from Grove Street (now MLK Jr. Way) to Market Street, and related infrastructure existed on the blocks across the tracks. In 1938, a large addition to the PG&E Station C complex was added at 101 Jefferson Street.

Architects and Engineers⁷

Walter J. Mathews (1850-1947) was a notable local architect who designed structures throughout the Bay Area as well as Southern California. His firm is most noted for his local architecture which includes "the First Unitarian Church (681-85 14th Street, 1890), the Easton or Union Savings Bank Building (1300 Broadway, 1904), the Will Rogers Hotel (371-75 13th Street, 1906), the Metcalf House (1909), and the Central Bank Building (1400-16 Broadway, 1926, in association with George Kelham) [...]. He was consulting architect for the Hotel Oakland and the Oakland Auditorium."⁸ As the designer for the first building in the PG&E Station C complex, the 1889 brick structure is one of the few industrial buildings associated with his prolific career.

Engineer Henry C. Vensano (1881-1960) is responsible for the monumental scale and design of the primary Embarcadero façade of the building at 601 Embarcadero West. He trained at the University of California, Berkeley, and earned a degree in civil engineering in 1903. By 1908, he was employed by the San Francisco Gas & Electric Company, which, shortly thereafter, became part of PG&E. In 10 years with the company, he supervised a number of large power developments, including PG&E Station C in Oakland. After PG&E, Vensano formed a partnership with Edward Cahill. (Their business eventually became Cahill Construction Company, but the later growth was not associated with Vensano's period of involvement.) Aside from design and construction of the reinforced concrete portions of 601 Embarcadero West, he is credited with designing 17 dams, three Sacramento River pumping stations (for PG&E), portions of the 1939 Golden Gate International Exposition, and several San Francisco Department of Public Works (SFDPW) projects completed during his tenure as director of SFDPW from 1942 to 1950.

Ivan C. Frickstad worked for a number of local architects in his early career, including under the notable Albert Farr in 1905 before joining PG&E as a company architect and designer. He was known for expertly blending new work with existing designs by Willis Polk and Frederick Meyer, creating a body of corporate architecture that had a unified appearance and sophistication of design. As his career progressed, he ventured more into his own designs, as evidenced in the simplified Art Moderne-style interpretation used for 101 Jefferson Street that he employed in 1938.

The character-defining features⁹ of PG&E Station C identified in the 1985 survey include:

⁷ Ibid.

⁸ Ibid.

⁹ Character-defining features are those distinctive elements and physical features that comprise the appearance of every historic building. Character-defining aspects of a historic building include its massing, materials, features, craftsmanship, decorative details, interior spaces and features, as well its site and environment.

- Monumental scale of the buildings;
- Visibility of buildings from outside the immediate site;
- Quoined piers;
- Round-headed windows;
- Classical cornices; and
- Open and industrial setting.

Maritime Resources – USS *Potomac* and Lightship *Relief*

The USS *Potomac* is a maritime vessel more popularly known as the “Floating White House” for its use by President Franklin Delano Roosevelt (FDR) during his terms in office. Prior to that, it was known as the Coast Guard Cutter *Electra* (**Figure 3**). The USS *Potomac* was listed on the National Register on February 20, 1987 and is significant under Criteria A (Events) and B (People). Under Criterion A, it is recognized for its “association with critical events in the history of the United States during the crisis years of the Depression and the Second World War. Presidential briefings, meetings, and decisions were made on board *Potomac*, and *Potomac* played an integral part in establishing the crucial agreement between the United States and Great Britain prior to America’s entry in the war, the Atlantic Charter. Finally, the vessel’s significance is enhanced by her brief role in suppressing illegal trade in alcohol after Prohibition as a patrol vessel cruising for ‘rum runners.’”¹⁰ Under Criterion B, the USS *Potomac* is recognized for its association with “Franklin Delano Roosevelt (1882-1945), 32nd President of the United States, between 1936 and 1945. While President Roosevelt also used the yacht *Sequoia* (from 1933 to 1936), *Potomac* was the principal vessel associated with the President during the majority of his four-term tenure in office. *Potomac* is of exceptional national significance because of her major association with the social and official life of the President. During his term of office, *Potomac* was a major symbol of Roosevelt’s presidency.”¹¹ In 1989, the USS *Potomac* was recognized as a National Historic Landmark because of its exceptional, national historical significance. It is currently docked at FDR Pier at the foot of Clay Street.

The Lightship *Relief* was put into service in 1950 as the Coast Guard lightship WAL-605 (**Figure 4**). It was one of the last generation of such ships used to aid navigation around important ports and waterways where installation of stationary, land-based lighthouses was impractical. It was listed on the National Register on December 20, 1989.¹² Built in 1950, “*Relief*,” is one of a small number of only 22 surviving American lightships in the United States; she is one of six surviving U.S. Coast Guard-built lightships. Of these, only two possess a high degree of integrity and are in excellent condition — WLV-6Q4 (the subject of a separate nomination) and WLV-605. Built in 1950, these are the best representatives of the last American lightships, and were a distinct departure in their construction from earlier lightships.”¹³ In 1989, it was also recognized as a National Historic

¹⁰ Delgado, James P. “National Register of Historic Places Registration Form for USS *Potomac* (Presidential Yacht).” June 30, 1987 (rev. June 1, 1990).

¹¹ Ibid.

¹² Delgado, James P. “National Register of Historic Places Registration Form for Lightship WAL-605, *Relief*.” June 30, 1989.

¹³ Ibid.



SOURCE: ESA, 2019.

Figure 3
USS *Potomac*



SOURCE: ESA, 2019.

Figure 4
Light Ship *Relief*

Landmark for its association with maritime safety and security. It is currently docked adjacent to the Oakland Fire Department pier near the foot of Clay Street.

Potential Resources in the Project Study Area

50 Market Street – PG&E Substation B

Historical Context

PG&E operated Substation B (an MGP), on a portion of the project site between Market and Martin Luther King Jr. streets (formerly Grove Street) and at 101 Jefferson Street from the late 1890s through the 1960s. This complex, known as PG&E Substation B, previously contained a number of buildings as well as a series of large, cylindrical fuel tanks spread across the site. According to PG&E, “from 1905 to 1930, [an MGP] operated at the site and produced gas for the lighting, cooking and heating needs of local residents. Between 1930 and 1958, the plant operated on a standby basis producing gas only during emergencies and peak demand periods. PG&E Station C, located nearby (see above), served as a support facility for offsite MGP operations. The main MGP operations were located on the parcels southwest of PG&E Station C, which include the PG&E Gas Load Center and portions of the Port of Oakland Howard Terminal. The former MGP was dismantled in 1961. PG&E Station C subsequently was converted to, and it is still used as, an electric distribution and transmission substation.”¹⁴

The large salt water pumping station, tanks, and most of the above-ground pipes and equipment have been removed. What remains is a small storage shed and the switch building at 50 Market Street.

Eligibility Analysis

The gable-roofed, sheet-metal-clad storage shed and flat-roofed, rectangular-plan Gas Load Center switch building date to at least 1947.¹⁵ According to environmental documents associated with hazardous materials remediation efforts, the site at 50 Market Street was used as a distribution center with gas lines running underground, parallel to Embarcadero and the railroad tracks. The flat-roofed structure once housed electronic controls related to these functions, and it has been vacant since 2003.¹⁶

Criterion 1 (Events)

The local manufacture of gas was necessary in the early part of the 20th century to support domestic functions (cooking, lighting, heating) as well as commercial operations prior to the development of a reliable electrical grid and regional gas pipeline infrastructure. As both electrical power generation and fuel transport systems improved, the need for local manufacture diminished. The facility that operated at 50 Market Street was one of many such facilities scattered throughout the East Bay Area. As such, the plant at 50 Market Street was not unique.

Most of the infrastructure related to the MGP has been removed. The few structures that remain were ancillary to this operation, and, based on construction dates, they are related to the later years of the facility’s operation. Their connection to the peak years of operation is minimal. As the sole vestige of the former MGP, it does not retain a

¹⁴ PG&E, 2010.

¹⁵ Aerial photography taken in 1947 show a number of buildings and structures on this site. The aforementioned tanks and salt water pump house are clearly visible, as are the facilities associated with PG&E Station C on the adjacent parcel. Sanborn maps from 1952 do not accurately correspond to the 1947 photographs. The Sanborn maps do show structures of a similar size on the site but in slightly different locations.

¹⁶ DTSC, 2007.

strong enough connection to warrant individual listing for its connection to the manufacture of gas in Oakland, nor to the larger history of the PG&E Company.

Criterion 2 (People)

The architect for 50 Market Street is unknown. No persons of historical significance are known to be associated with the building or with the operation of the MGP during its years of operation. Therefore, 50 Market Street is not associated with any people known to be historically significant.

Criterion 3 (Architecture)

Historically, 50 Market Street was part of a complex of buildings and structures that were collectively known as the Oakland MGP. The majority of these buildings and structures have been removed, leaving only a small storage shed and a switch building. Today, the switch building operates as an electrical monitoring station for subterranean gas lines passing between the building and the Embarcadero roadway. It lacks sufficient architectural detail to communicate its association with the former, larger facility. Individually, it is utilitarian in design and is not associated with a prominent architect or engineer. Because of the lack of physical context, it no longer conveys a sense of its original purpose. 50 Market Street is not historically significant under Criterion 3.

Criterion 4 (Information Potential)

50 Market Street does not appear to have the potential to yield more information, and it therefore does not appear eligible under Criterion 4.

Container Cranes

Historical Context

Port Development on San Francisco Bay

San Francisco Bay has long been an important shipping center on the West Coast. The advantages of the natural harbor and extensive river delta system were discovered by early European explorers in their first expeditions in the 17th century. With natural protection plentiful in the shallow bay, connections to major rivers such as the Sacramento and San Joaquin and minor rivers such as the Napa, and numerous shallow, protected berths, it has served commercial interests since this early time.

When gold was discovered near Sutter's Mill on the South Fork of the American River in Coloma, California in 1848, San Francisco was already a regular stop for ships coming from South and Central America. The region's subsequent explosion in population only solidified the San Francisco Bay's importance as a transportation and shipping destination. Improvements in technology and expansion of transportation options, such as completion of the Transcontinental Railroad in 1869 and the opening of the Panama Canal in 1914, brought dramatic increases in population and shipping traffic to the entire San Francisco Bay Area.

Initially, this growth was primarily seen along the San Francisco waterfront, although when the Transcontinental Railroad established its western terminus in Oakland, the Port of Oakland was developed to provide a final leg in the shipment of goods from the east coast to points west and south. It served to shuttle goods from the railyards in Oakland to the shipping wharves in San Francisco. This development occurred south and east of the area now occupied by the eastern span of the San Francisco-Oakland Bay Bridge, between the rail yards and the bay waters.

Maritime Industry in Oakland: 1900-62¹⁷

In order to entice the Central Pacific Railroad to locate the terminus of its transcontinental line in Oakland, Horace Carpentier, a prominent figure in the early history and development of Oakland, struck a deal with the railroad that essentially guaranteed control of Oakland's prime waterfront lands to the railroad. As a result, development of the waterfront for commercial and shipping purposes remained slow and mired in legal battles while San Francisco's shipping industry boomed. Indeed, by 1909 only "two wharves and several small freight sheds adjoining the Webster Street Bridge comprised the municipality's total port development."

This began to change as Oakland's population rapidly expanded following the earthquake in 1906, the end of World War I in 1919, and the boom years of the 1920s. During this time, legal victories by the City freed them from the legacy of Carpentier's earlier dealings with the railroads, two more transcontinental rail lines brought goods in and out of the city, and a number of processed food companies located canneries along the East Bay waterfronts. Also during this time, the City invested heavily in the waterfront to develop it into a real competitor with its neighbor to the west.

One of the first and costliest improvements was construction of a quay wall from Myrtle Street to Broadway. Constructed in two phases in 1910-11 and 1912-14, it cost over \$1.4 million and included massive dredging of a deep water shipping channel with the resulting fill used behind the quay wall to extend the city-owned land 150 feet farther into the estuary. Wharves and warehouses followed over the next 20 years, transforming marshland into a modern port.

After the opening of the Panama Canal (1914) and the end of World War I (1919), global shipping became more common. At the time, this consisted primarily of European and transpacific international trade, combined with intercoastal and regional river commercial trade. California was quickly becoming an agricultural powerhouse, shipping fresh and processed foods across the country and around the globe and Oakland was primed to expand with the increased demand.

The Port of Oakland: 1927-62

The Port of Oakland was established on February 27, 1927, with the passing of the Port of Oakland charter amendment. At that time, shipping industries along the Oakland waterfront began transforming from operator-owned, privately held enterprises to a comprehensively managed set of facilities operated by a "self-supporting, autonomous branch" of the City of Oakland.¹⁸ In 1929, the U.S. Treasury Department designated Oakland as a full port of entry with customs service. By the mid-1930s, Oakland was a regular port of call for nearly 30 steamship lines. Between 1928 and 1937, despite the worldwide depression, tonnage handled by Port more than tripled, from 316,377 tons in 1928 to 1,166,664 tons in 1937."¹⁹

In the boom years following World War II, changes in shipping technology necessitated changes in ports around the globe. Technological advances in ship building and goods transportation developed for wartime usage were quickly modified and expanded for use in the private sector. Ships got larger and faster. Ports also had to grow to

¹⁷ The following section is summarized from material presented in the 1994 HABS documentation for the Grove Street Pier as well as *Pacific Gateway: An Illustrated History of the Port of Oakland*, both prepared by Woodruff Minor in cooperation with the Port of Oakland.

¹⁸ Minor, 2000.

¹⁹ Minor, 1994.

accommodate the new ships – deeper channels, more warehouses, more manpower to load and unload the expanding tonnage of cargo.

At this time, Oakland was a typical break-bulk cargo port. All goods came in on ships and were unloaded and stored in warehouses until they could be loaded onto trucks or trains. Goods that arrived in crates were opened and distributed to warehouses, then reloaded for delivery to their final destinations. The work was labor and time intensive. With increasing numbers of ships and amounts of goods being shipped around the globe, the port moved to the more efficient system of containerized shipping.

Containerized shipping was pioneered by the Sea-Land Company in New Jersey in 1956. In this method, goods were placed in large, sealed containers that were carried, unopened from ship to rail to truck. Only upon arrival at their final destination would they be opened up for distribution. As a result, shippers needed to move containers only, rather than individual goods. The containers were heavy and necessitated development of a new type of dockside crane to enable easy transport onto and off from the ships. The first such container crane in the world was developed by the Pacific Coast Engineering Company (PACECO) and first used at the Encinal Terminal in nearby Alameda in 1959.

Era of Transformation: 1962-77

With the advent of containerized shipping, Oakland grew to a world-class shipping center through innovative business relationships, strategic growth and adaptation of new technologies. This came about through a combination of landside development including large-scale reclamation efforts, water-side improvements (dredging), and installation of shore-side cranes to quickly handle the large, standardized shipping containers. The work began in earnest in 1962 with the opening of the Sealand Terminal on the Outer Harbor and accelerated in 1966 with installation of the Port's first landside container shipping cranes: two PACECO A-frame cranes. This area was eventually expanded to 59-acres, three berths, and four cranes.²⁰

The success of the Sealand Terminal was followed by the simultaneous development of the Seventh Street Terminal and the American President Lines Terminals. Between 1965 and 1974, the completion of these terminals added 221 acres, at least seven berths, and at least seven more container cranes.²¹ It was during the expansion of the Seventh Street Terminal out into San Francisco Bay that the Port was required to utilize low-profile cranes to limit interference with air traffic at Naval Air Station (NAS) Alameda. Crane X-422 was part of this terminal development.

The final transformation of the Outer Harbor area from break bulk to containerized shipping occurred with completion of the TransBay and Maersk Terminals in 1977. This expansion replaced the Seventh Street Unit, the Oil Pier, and the Fourteenth Street Unit with the two-berth, two-crane, 29-acre Outer Harbor Container Terminal (renamed the TransBay Container Terminal in 1986) and the one-berth, three-crane, 36-acre Maersk Terminal. Both began operation in 1977.²²

This expansion was overseen by Port of Oakland Executive Director, Ben E. Nutter (1962-77). Under his direction, the port assumed nearly the entire expanse of its current geographic size (with the exception of the

²⁰ Minor, 2000

²¹ Ibid.

²² Ibid.

Howard Terminal expansion in 1982 and 1994). It was during this period that Oakland rose to become the second largest container port in the world (by volume).²³ It was through his skill as a negotiator and businessman that many of the important shipping contracts and relationships between the Port of Oakland and its overseas partners were forged. This enabled expansion of facilities and regional dominance by the Port of Oakland.²⁴

Development of the Container Crane

The first modern container crane was developed by PACECO for the Matson Corporation and was installed in 1959 at Encinal Terminal in Alameda, directly across the estuary from the Port of Oakland.²⁵ As early as 1960, the Port of Oakland Board of Commissioners recommended installation of two such cranes, but it took several years before they followed through.²⁶ However, by the close of the decade, the Port of Oakland had installed eight container cranes, most manufactured by PACECO of nearby Hayward.²⁷

This first generation of container cranes at the Port of Oakland are known as Panamax cranes. Panamax is a class of size limits for ships traveling through the Panama Canal. These specifications have been in place since the opening of the waterway in 1914 and are in direct response to the size of the locks within the canal system. Ships larger than these standards are known as Post-Panamax vessels. When a third, much larger set of locks opened in 2016, many of the Post-Panamax class of ships gained access to the canal. Presently, those ships still too large to access the Panama Canal are known as Super Post-Panamax or Super-Panamax ships.

Since installation of the first generation of cranes at the Port of Oakland, continual changes to the port have been necessary to accommodate the growing size of containerized cargo ships. This has included dredging in the estuary and along the wharfs to allow for the increase draft of the larger ships as well as installation of cranes that can handle a higher reach and across a wider vessel beam. Oakland currently has 33 cranes: three Panamax cranes (X-415, X-416, and X-422, located on the project site), 15 Post-Panamax cranes, and 15 Super-Panamax cranes. In addition, three inoperable Panamax cranes (X-402, X-403, and X-404) are slated for demolition.

Howard Company & Howard Terminal

The Howard Company operated on a 17-acre site on the Estuary waterfront at the foot of Filbert Street. The company began in 1900 as a coaling station and depot for building materials and diversified as local demands changed with the growing population. It continued to expand through the 1920s and 1930s as a privately owned terminal on privately owned land.²⁸

Immediately adjacent to the Howard Company Terminal was the municipally owned Grove Street Terminal. It consisted of the Grove Street Pier, Market Street Pier, Clay Street Pier, and the quay wall. During World War II, nearly all of the Port, *except* the Grove Street Terminal, came under Navy control. Following the war, in 1956, the Port leased the Grove Street Terminal to the Howard Company. At that time, operations at the Grove Street Terminal were combined with Howard Terminal, and the entire complex was operated as Howard Terminal. The

²³ Port of Oakland, 1969.

²⁴ Expansion during this period was so rapid, the Board of Commissioners adopted special emergency provisions to enable streamlined processing for the acquisition of container cranes. Under these provisions, all cranes were ordered from the Pacific Coast Engineering Company (Port Board of Commissioners Meeting minutes-7/17/1967, 4/7/1969, 9/17/1969, 10/15/1969, Pacesco, Inc, 12/2/1969)

²⁵ AMSE, 1983.

²⁶ Details regarding discussions concerning, and contracts awarded for the cranes are from the Port of Oakland Commissioners Meeting Minutes, October 17, 1960.

²⁷ Port of Oakland, 1969.

²⁸ Minor, 1994.

Howard Company operated the terminal until 1974, when it ended its lease on the Grove Street Terminal and sold its original site to the Port of Oakland.

After gaining control of the entire site in the mid-1970s, the Port of Oakland undertook redevelopment of the site. This included removal of many of the breakbulk sheds, expansion of the wharf further into the estuary with replacement of most of the 1912 quay wall, and installation of two new Panamax Hitachi shipping cranes along the waterfront (cranes X-415 and X-416). The new terminal was named the Charles P. Howard Terminal in honor of the owner of its longest occupant. The terminal was expanded further in 1995 with the removal of the Grove Street Pier, development of the wharf, and replacement of the final section of the original 1912 quay wall.

Crane X-417 was installed in 1987, and Crane X-422 was relocated to Howard Terminal from Berth 39 in 1994.

The facility continued operations as a container terminal until 2013. In early 2014, it was closed for vessel loading/unloading as part of a strategic plan by the Port of Oakland to consolidate marine terminals. This was undertaken in response to changing economic demands on ocean carriers and their marine terminal affiliates serving the West Coast. While Howard Terminal remains a viable terminal facility, it is not desirable for loading/unloading due to its relatively small size (50 acres), older cranes (X-415, X-416, X-417, and X-422), and the physical constraints of its surrounding neighborhood.

Eligibility Analysis – Cranes X-415 and X-416

Cranes X-415 and X-416 were installed in 1981 as part of the development of the present-day Howard Terminal complex. They were the first two cranes at the facility, and both are Panamax rated structures (**Figure 5**.) Because they are presently 38 years of age, they must be evaluated with special consideration for historical resources achieving significance within the past 50 years. This is similar to the provisions outlined for the National Register under Criterion G: Properties that Have Achieved Significance Within the Past 50 years. In addition to the regular criteria for listing, resources subject to special consideration because of age can be considered eligible only “if it can be demonstrated that sufficient time has passed to understand its historical importance.”²⁹

Criterion 1 (Events)

These two cranes are associated with the second period of expansion at the Port of Oakland (1978-99). This period spans the years between initial development of the containerized cargo operations beginning in 1978 under Port Executive Director, Ben Nutter, and 1999, when an order for 12 Post-Panamax cranes began the present-day modernization to accommodate new, larger classes of container cargo vessels.³⁰ This period of steady growth built upon earlier investments and led to later modernization efforts. Part of this steady growth was expansion of container cargo handling operations onto the newly redeveloped Howard Terminal in the early 1980s. At that time, one of the last break-bulk areas of the port was expanded and redeveloped into the present-day Howard Terminal, including installation of two new, Panamax container cranes, X-415 and X-416.

²⁹ OHP Technical Assistance Bulletin 7, 2001.

³⁰ “Port of Oakland to Welcome 379-Foot-Tall Cranes,” 2005.



SOURCE: ESA, 2019.

Figure 5
Cranes X-422 (prone) and X-416 (articulated), looking west at the Project site.

While the opening of Howard Terminal in 1982 was met with great enthusiasm, cranes X-415 and X-416 are associated with a more recent period of development for the Port of Oakland. While the Port continued to expand during this time, the cranes and the Howard Terminal site were not instrumental in that expansion or in the technological advancements required to transition to a modern container port facility. Consequently, cranes X-415 and X-416 do not qualify for listing under Criterion 1.

Criterion 2 (People)

Cranes X-415 and X-416 are not known to be associated with any persons of historical significance. Therefore, they are not eligible for listing under Criterion 2.

Criterion 3 (Architecture)

These two cranes are Hitachi Panamax cranes, similar in dimensions and capabilities to the first-generation container cranes and smaller than the Post-Panamax that came to dominate the Port in the early 2000s. Cranes X-415 and X-416 are two of six remaining Panamax container cranes currently at the port. Three are slated for

demolition in late 2019. The remaining three Panamax cranes are found at Howard Terminal, within the project site. The Hitachi cranes are articulated cranes, similar to the later cranes that now dominate the port waterline. At 38-years of age, they are the oldest articulated cranes at the port.

These cranes are of a common type, if not of a common size, found at the Port of Oakland. They are also a common type and size of crane found at many smaller ports throughout California and the United States. Their current age (38 years) and common design render cranes X-415 and X-416 ineligible for listing under Criterion 3.

Criterion 4 (Information Potential)

Cranes X-415 and X-416 do not appear to have the potential to yield more information and, therefore, do not appear eligible under Criterion 4.

Eligibility Analysis - Crane X-417

Crane X-417 was installed at Howard Terminal in 1987. It is a Kumming Shipbuilding Equipment Company, Ltd. (KSEC) Post-Panamax articulated crane. It is one of 15 such cranes at the Port of Oakland. Its age and relatively abundant type do not qualify it for further evaluation as a historic resource.

Eligibility Analysis - Crane X-422

The Port of Oakland today is a reflection of strategic business partnerships, physical expansion, and technological advancements initiated by Ben Nutter during his time as Executive Director (1962-77). It is during this period that the Port assumed much of its current geographic extent and rose to become the regional economic generator that continues to shape the Bay Area. Crane X-422 was originally installed in 1970 at Berth 39 along the Outer Harbor terminal as part of this initial period of development and expansion. (Berth 39 no longer exists.) It is a PACECO, low-profile 40 long-ton, Panamax Portainer crane and will soon be the only crane remaining from this era of transformation.

Criterion 1 (Events)

Crane X-422 is associated with the early development of containerized shipping at the Port of Oakland and Ben Nutter's term as Executive Director (1962-1977.) By the end of 2019, it will be the last remaining first-generation crane from this period. At the time of its installation in 1970, the Port of Oakland was expanding greatly and had become the second largest container port in the world. This was primarily due to the early and prolific adoption of landside container cranes to accommodate the increasing containerized cargo ship traffic along the West Coast of the United States. The port's capacity to handle the largest ocean-going ships and its early and strategic international business relationships helped to establish the Port of Oakland as a major shipping center.

While these types of cranes were a typical feature in the Port of Oakland and at many ports throughout the Bay Area and around the world, very few currently remain. As ships grew larger, newer and larger cranes were developed and installed accordingly. Most examples of these early cranes have been removed and replaced with more modern equivalents. At the Port of Oakland, only four first-generation container shipping cranes of this era remain: X-402, X-403, X-404, and X-422. However, cranes X-402, X-403, and X-404 are slated for demolition in late 2019,³¹ which will leave X-422 on the project site as the last remaining crane associated with the 1962-77

³¹ These three cranes were evaluated by CH2M Hill in 2016. At that time, they were found to not qualify as historical resources for the purposes of CEQA, and demolition procedures were initiated.

era. As such, it will be the lone representative of this important period in the growth of the Port of Oakland, a major economic force for the entire San Francisco Bay Area.

For these reasons, crane X-422 qualifies as a historic resource under Criterion 1 for its contribution to broad patterns of history that have shaped the City of Oakland and the larger San Francisco Bay Area.

Criterion 2 (People)

Crane X-422 is not known to be directly associated with any persons of historical significance. Therefore, it is not eligible for listing under Criterion 2.

Criterion 3 (Architecture)

Crane X-422 is a low-profile, first-generation PACECO Portainer crane. It will soon be the only crane of its type remaining in the Port of Oakland. Low-profile cranes were required by the Navy to limit intrusions into the flight takeoff and landing zone associated with Naval Air Station Alameda (NAS Alameda). This restriction remained in place until 1997 when NAS Alameda closed. The Portainer type, now widely used, was a design that appeared approximately 10 years after the first PACECO container crane was installed at Encinal Terminal in Alameda in 1959. Cranes X-402, X-403, and the slightly later X-404 are similar to the original PACECO design while Crane X-422 represents the evolution of crane design over the first decade of containerized shipping.

When crane X-422 was relocated to Howard Terminal in March 1994, its lifting deck was raised 26 feet. Other modifications made to the crane include:

- Rail gauge increased from 96 feet to 100 feet (1993-1994)
- Mechanical and safety systems modified (1993-1994)
 - Power supply changed from cable and reel to underground collector
 - Operator's cab replaced
 - Personnel elevator installed
 - Upper chord pressure differential safety system was installed
 - Trolley rope tensioning system installed
 - Snag load safety system installed³²

As one of the few remaining cranes of its type, crane X-422 is an example of the early evolution of container crane design. However, the modifications noted above have impacted the design integrity of crane X-422 to a degree that it does not appear eligible for listing on the California Register under Criterion 3.

Criterion 4 (Information Potential)

Crane X-422 does not appear to have the potential to yield more information and therefore, does not appear eligible under Criterion 4.

³² Information provided by Port of Oakland staff.

Known Resources in the Project Variant Study Areas

PG&E Station C API

- Included in the study areas for the proposed Project and Variant 1 (Peaker Power Plant Variant. See above for a discussion of this historic resource.)

Old Oakland API

- Included in the study area for Variant 2 (Aerial Gondola Variant)

The Old Oakland API has been identified in myriad ways since 1967, at which time it was designated by the Oakland Landmarks Board and City Council as S-7 Preservation Combining Zone. It is this designation, as the Old Oakland Area of Primary Importance (API), that forms the basis for this analysis. In addition, in 1980, a subsection of the API known as Victorian Row (484 9th Street, 468 9th Street, 491 9th Street, 477 9th Street, 901 Broadway, and 821 Broadway) was determined eligible for listing on the National Register through the Section 106 process. In 1980 and 1982, the principal blocks fronting Washington Street as well as the properties fronting 8th and 9th streets were certified for the purposes of preservation tax incentives, thus confirming National Register eligibility.

Physical Description

The Old Oakland API includes nearly six city blocks fronting Washington Street from 7th to 10th streets. First designated in 1983, it contains 30 contributing buildings built between 1864 and the early 1920s. All of the contributing buildings have been rehabilitated since their initial recordation in the 1970s, and many have been rehabilitated since 2000. They range from one to four stories in height; are constructed of brick or wood; and feature large wood-sash windows, Italianate trim and details, prominent first-floor commercial storefronts, and office space above. Several of the contributing buildings historically functioned as hotels, a use that continues at 493 10th Street (Washington Inn) at the southeast corner of Washington and 10th streets.

Within the district, three buildings are individually listed on the National Register: 725 Washington Street (Dunn Block), 801 Washington Street (Liberty Hotel), and 538 9th Street (Swans Market). The district is recognized as the Old Oakland API as well as a National Register District designated through a resource survey. Seventeen of the contributing buildings fall within the Project variant study area. These are:

- 518-524 7th Street (APN 001 020302100)
- 489 8th Street (APN 001 020102200)
- 509-513 8th Street (APN 001 020301500)
- 512 8th Street (APN 001 020302600), (Fa Yun Chan Temple)
- 483 9th Street (APN 001 020100200), (Arlington Hotel)
- 538 9th Street (APN 002 003703000), (Swans Market, individually listed on the National Register)
- 493 10th Street (APN 002 004700300), (Washington Hotel)
- 717-719 Washington Street (APN 001 020301901), (Evers Building)
- 718-726 Washington Street (APN 001 02010200), (Oakland Peniel Mission)
- 725 Washington Street (APN 001 020301700), (Dunn Block, individually listed on the National Register)

- 727-735 Washington Street (APN 001 020301600), (MacKee Drug Co.)
- 736 Washington Street (APN 001 020102100)
- 801 Washington Street (APN 001 020302700)(Liberty Hotel, individually listed on the National Register)
- 809-815 Washington Street (APN 001 020302700), (Reier Block)
- 826 Washington Street (APN 001 020100100), (LaSalle Hotel/Snyder Block)
- 827 Washington Street (APN 001 020300600), (Ratto Building)
- 902 Washington Street (APN 002 004701100), (Nicholl Block)

Significance

According to the 1984 Oakland Cultural Heritage Survey, “The Old Oakland district is the surviving downtown commercial center of the 1870’s and 1880’s, with additions made in the early decades of the 20th century when the commercial heart had moved farther north but auxiliary commercial functions still attracted investment money. As commerce moved still farther north and to the suburbs, the subject area was preserved by neglect, then surrounded by government redevelopment, which in turn is bringing back commercial liveliness, through convention center and hotels, until the Old Oakland District is expected to become a virtual museum of built commercial history.”³³

Old Oakland is architecturally and historically significant as an intact, late-19th-century commercial district that once served as the primary commercial center for the City of Oakland. It represents the wealth and commerce that came to Oakland after it became the western terminus for the transcontinental railroad in 1869. In 1875, the Central Pacific Railroad established its first passenger depot on 7th Street, between Broadway and Washington Street. That same year, Alameda County opened a pair of lavish government buildings on Broadway between 4th and 5th streets. Over the next decades, the area flourished with construction of large, modern hotels and offices, commercial spaces, and retail markets.

Construction of City Hall at 14th Street and Broadway in 1914 shifted the commercial center of the city farther north along Broadway, marking the initial changes to the formerly vibrant Old Oakland district. By mid-century, the Old Oakland district began to suffer economically, leaving many buildings neglected. Redevelopment efforts in the 1950s and 1960s expanded government buildings and services in the area, thus providing a boost to neighboring businesses, while also separating Old Oakland from the Oakland Estuary through construction of the Eastshore Highway (present day Interstate 880).

Rehabilitation of the historic structures has occurred in the thirty years since it was first designated a locally eligible. It remains one of the largest and most intact 19th-century commercial districts in the Bay Area, having survived both the 1906 and 1989 earthquakes, mid-century redevelopment policies, and cycles of economic boom and bust.

The character-defining features of Old Oakland include:

- Rectangular-plan commercial block buildings ranging from one to four stories in height;

³³ OCHS, *Historic Resources Inventory Form for Old Oakland*, 1984.

- Street frontages with direct access to commercial spaces;
- Predominance of Italianate-style architectural details including heavy, bracketed cornices; paneled friezes; bay windows; elaborate door and window trims, and strong horizontal design elements
- Two-story, cast iron and plate glass commercial fronts; and
- Brick and wood-frame construction.

West Waterfront ASI

- Included in Variant 2 (Aerial Gondola Variant)

The West Waterfront ASI was first identified in 1985 in a reconnaissance-level survey. This survey was confirmed and augmented in 1996. It is designated as an Area of Secondary Importance as a historically or visually cohesive area or property group containing a high proportion of individual properties with ratings of “C” or higher. ASIs are similar to API except that it of local importance at a level that does not qualify it for listing on the National Register of Historic Places.³⁴

As noted above, ASIs are considered districts of local importance and are not automatically considered historical resources for the purposes of CEQA (see City of Oakland Historic Preservation Element Policy 3.8.) However, out of an abundance of caution, the City has chosen to consider the West Waterfront ASI as a historical resource for the purposes of this CEQA analysis.

Physical Description

The West Waterfront ASI is a visually distinctive early 20th century industrial district of approximately 21 buildings on 19 assessor’s parcels, on all or portions of 4 blocks between 2nd and 4th streets, and Jefferson Street and Broadway. The West Waterfront ASI is approximately centered at 3rd Street between Washington and Clay streets.

There are two structures within the West Waterfront ASI that qualify as individual resources because of their OCHS ratings.

301 Washington Street (B-Rated)³⁵

301 Washington Street is a two-story brick building with a shaped parapet on the northwest corner of Washington and 3rd streets. The façades are clad in stucco and feature recently painted murals. The window and door openings appear largely original in location, although all windows and doors have been replaced with contemporary materials. Along 3rd Street, the first-floor windows and original vehicular entryway are topped with arched heads.

The Washington Street Planing Mill was constructed at 301 Washington Street in 1893, making it one of the oldest buildings in the West Waterfront ASI. The planing mill operated at the site until around 1909, and by that time it had been acquired by the Cobbledick-Kibbe Glass Company. Cobbledick-Kibbe Glass Company was one

³⁴ The definition of an ASI is paraphrased from the City of Oakland Historic Preservation Element, Policy 1.1.

³⁵ Unless stated otherwise, this section references information provided in the Oakland Cultural Heritage Survey form for the Washington Street Planing Mill.

of the largest glazing companies in Northern California at the height of its success. It operated at 301 Washington Street until at least 1964.³⁶ Today, the building is occupied by professional offices.

Parker Electric Manufacturing Co. / Bay City Iron Works (221 Washington Street, B-Rated)³⁷

The former Parker Electric Manufacturing Co. building, at the southwest corner of Washington and 3rd streets, is the tallest building in the West Waterfront ASI. This oversized two-story, brick and wood-frame building is rectangular in plan with a stepped parapet at the roofline, arched double-hung windows, and several oversized pedestrian and vehicular entries on both the Washington Street and 3rd Street elevations. One of the building's most prominent features is the projecting second-story hoist and associated second-story cargo doors on the Washington Street façade. Despite some visible bowing of the exterior walls, the building is in fair condition and retains a high degree of integrity.

221 Washington Street was constructed in 1905 by Bay City Iron Works to replace an earlier structure that was destroyed by fire. Although the interior of the prior building was destroyed, much of the exterior was salvaged and incorporated into the new building. When Bay City Iron Works built a new, larger facility at 320 Washington Street in 1924, this site of the old facility was sold to Parker Electric Manufacturing Company. The building was purchased in 2013 by Digital Image Design Incorporated, a technology innovation think tank.³⁸

The following seven additional contributors to the West Waterfront ASI fall within the Aerial Gondola Variant study area.

520 3rd Street

According to the City of Oakland Planning and Zoning Map, this two-story brick building was constructed in 1950. The 1951 Sanborn map indicates that the building originally functioned a glass warehouse for the Cobble Dick-Kibbe Glass Co., which had operated from the adjacent building at 301 Washington Street (a B-rated historic property) since 1909. The primary (south) façade features a pedestrian entrance in a large arched recess, a round stained glass window located above the entrance, and 12 multi-light windows. The brick-clad façade appears to have been replaced in a number of areas, and the windows and primary entrance do not appear to be original to the building. Today, the building is known as Jack London Park and is occupied by professional offices.

522 2nd Street

According to the City of Oakland Planning and Zoning Map, this one-story, rectangular-plan commercial building was constructed of reinforced concrete in ca. 1955-56. The primary (south) façade features two pairs of glazed aluminum doors with fixed sidelights. A fabric awning stretches the width of the façade, which appears to be partially clad in brick, and a marquee that has been painted black is located below the roofline. The rear (north) façade features a pair of flush metal doors, several louvered vents, and a blank marquee. The building is

³⁶ "Executive Changes for Cobble Dick." *Oakland Tribune*. Nov. 5, 1964: 60. *Newspapers.com*. 11 Mar. 2019.

³⁷ Unless stated otherwise, this section references information provided in the Oakland Cultural Heritage Survey form for the Bay City Iron Works machine shop.

³⁸ Parker Electric Manufacturing Co. (official website), 2018, www.parkerelectricmfg.co, accessed May 16, 2019.

capped by a bowstring truss roof, which is disguised by parapets. Today, the building is occupied by the Oakland Metro Operahouse.

215 Washington Street (Freschi Box Co. Warehouse)³⁹

215 Washington Street is commonly known as the former Freschi Box Company Warehouse. It is a one-story, rectangular-plan, brick building facing Washington Street. The building has a single façade featuring a central recessed entry flanked by six evenly spaced industrial-sash windows. Minor modifications have been made to the entry and windows since its construction in 1941, and the building retains much of its original appearance and a high degree of integrity. Its scale and utilitarian appearance contribute to the industrial feeling and setting of the West Waterfront ASI. When constructed, it was one of a number of warehouses built near the waterfront with easy access to shipments delivered via water and rail.

315-317 Washington Street⁴⁰

315-317 Washington Street was constructed in 1925 for local real estate developer and businessman Hyman Davis. More ornamental than its neighbors, this brick and concrete building stands two stories high. Its exposed brick elevations are accented with painted concrete door and window moldings, painted anchor bolts at the ceiling levels of the first and second floors, and pilasters at the corners and center of the building. All doors and windows are contemporary. No major additions or modifications to the exterior of the building are visible, and the current appearance dates to at least 1993. Today, the building is occupied by The Port Workspaces.

380 Washington Street

380 Washington Street is one of two abutting buildings located on APN 001-0137-002. According to the City of Oakland Planning and Zoning Map and Sanborn maps, this two-story, rectangular-plan industrial building was constructed of reinforced concrete in 1917, and an early (and possibly the original) use was as a machine shop. The primary (west) façade is composed of five structural bays, and the secondary (north and south) façades are composed of four structural bays. The bays are delineated by simple pilasters and recessed horizontal panels and trim. Typical windows include multi-light, steel-sash fixed or casement windows with transoms. The primary entrance on the west façade is recessed from the sidewalk and features a partially-glazed metal door. Entrances on 4th Street include a recessed entry behind a metal gate and a glazed, roll-up vehicular door. The building is capped by a flat roof, and the façades terminate in an unadorned parapet. Today, the building is occupied by the professional offices of Playworks.

475 4th Street

475 4th Street is one of two abutting buildings located on APN 001-0137-002. According to the City of Oakland Planning and Zoning Map and Sanborn maps, this one-story, rectangular-plan industrial building was constructed of hollow clay tiles in 1917, and an early (and possibly the original) use was as a machine shop. The primary (north) façade features a partially glazed, paneled wood door flanked by pairs of multi-light, steel-sash windows with transoms. Another pair of windows separates the pedestrian entrance from a roll-up vehicular door and a recessed entry behind a metal gate. Above the fenestration is a series of recessed panels of different shapes. The building is capped by flat and gabled roofs with wire-glass skylights. The north façade and the visible portions of

³⁹ Unless stated otherwise, this section references information provided in the Oakland Cultural Heritage Survey form for the Freschi Box Company warehouse.

⁴⁰ Unless stated otherwise, this section references information provided in the Oakland Cultural Heritage Survey form for Davis Hyman factory building.

the east and west façades terminate in parapets with horizontal molding, and the south (rear) façade terminates in a stepped parapet. Today, the building is occupied by Ion Cars.

201 Washington Street/508 2nd Street

Constructed in 1875, the building at 205 Washington Street is the oldest building in the West Waterfront ASI and one of the oldest remaining buildings near the waterfront. It is a two-story, rectangular-plan building with a gabled roof behind a stepped false parapet. It is sited on the northwest corner of Washington and 2nd streets with its primary entrance on Washington Street. The primary façade is marked with a central pedestrian entry on the first floor and two multi-lite wood-sash windows flanking a central door and balcony on the second floor. Along 2nd street, more multi-lite, wood-sash windows span the first and second floors. Those on the first floor are covered with canvas awnings. On the second floor, the windows are partially covered with iron metalwork that imitates a balcony feature. The building is clad in stucco and currently houses The Fat Lady Bar & Restaurant. While the location of pedestrian entries and interior layout of the building have changed over time, the exterior remains largely intact and retains a high degree of integrity.

This building operated as a hotel and boarding house for much of its early history. Known as the Washington Hotel and the Bay City Hotel, by 1899 it functioned as a boardinghouse. Sanborn maps published in 1912 label the building as a saloon. By 1937, it operated as a bar and restaurant.⁴¹ The current business, The Fat Lady Bar & Restaurant, has been in operation at 201 Washington Street since 1970.⁴²

Significance

The West Waterfront ASI is primarily noteworthy for its concentration of early 20th century industrial buildings and its proximity to transportation infrastructure that gave rise to this industrial district. No one architectural style dominates, yet all buildings in the ASI are unified by the following character-defining features:

- Low scale ranging from one- to three-stories;
- Prominence of vehicle entry door and/or loading bays;
- Metal windows, both original and replacements;
- Stepped parapets;
- Arched roofs with skylights for interior daylighting;
- Zero street setbacks;
- Simplicity of design and decoration, largely utilitarian in appearance;
- Brick, concrete, or stucco finishes.

The West Waterfront ASI historically had the Western Pacific railroad tracks running along 3rd Street, with the Western Pacific Railroad Depot located just outside of the boundaries. Currently there are railroad tracks along Embarcadero West (south), BART tracks underground near 5th Street (north), and the I-880 freeway (north) within a one block radius.

⁴¹ Classifieds. *Oakland Tribune*. Apr. 15, 1937: 37. *Newspapers.com*. 12 Mar. 2019.

⁴² Fat Lady Bar and Restaurant (official website), *Our History*, 2018, http://www.thefatladyrestaurant.com/our_history.html, accessed May 16, 2019.

Since 1996, a number of development projects on the south side of Broadway have increased density and altered land use in the area. Many of the warehouse and manufacturing buildings south of Broadway have been redeveloped as residential units, and low-rise buildings and vacant lots have been redeveloped with multi-story residential and commercial buildings. The area in which the West Waterfront ASI is located has been identified for more intensive development within the Downtown Oakland Specific Plan (DOSP). It is for these reasons that the City has elected to treat the West Waterfront ASI as a historical resource for the purposes of this CEQA analysis.

Western Pacific Railroad Depot

- Included in proposed Variant 2 (Aerial Gondola Variant)

Physical Description

The Western Pacific Railroad Depot was constructed in 1909. It is a one-story, irregular E-plan concrete building. Its spine, and primary façade, faces 3rd Street with one leg of the building facing Washington (**Figure 6**). Most of the building is clad in stucco, scored in places to resemble rusticated stone. The 3rd Street façade is symmetrical, with a raised central pavilion flanked by recessed and arcaded wings. Along the 3rd Street elevation and the south ends of the two side elevations, full-height, arched windows with classical molding are placed between Tuscan pilasters, giving the building a highly articulated and structured appearance. This is reinforced by a prominent entablature comprised of a denticulated sheet metal cornice and blank frieze panels, and this is capped by a molded parapet at the roofline. Paired eagles originally stood at the corners of the central pavilion. The original ticket window within an angled bay remains at the center of the arcade on 3rd Street.⁴³



SOURCE: ESA, 2019.

Figure 6
Western Pacific Railroad Depot, Looking Northeast From Washington Street

⁴³ OCHS, *Historic Resources Inventory Form for the Western Pacific Railroad Depot*, 1983.

Significance

The Western Pacific Railroad Depot is significant for its direct association with the Western Pacific Railroad and is “Oakland’s most important surviving structure related to that event.”⁴⁴ Designed by W.H. Mohr and constructed by the Ransome Concrete Company in 1909, it was ready for the first train’s arrival on August 22, 1910. It was honored as Oakland City Landmark No. 1 on July 9, 1974, and has an OCHS rating of A2+, one of the highest possible ratings.

The character-defining features of the Western Pacific Railroad Depot include:

- Elevations with varying setbacks;
- Open arcade along 3rd Street;
- Ticket booth;
- Arched, multi-light windows at the east end of the 3rd Street façade and the south end of the southeast elevation;
- Reinforced concrete construction;
- Prominent entablature comprised of a denticulated sheet metal cornice and blank frieze panels; and
- Molded parapet at the roofline.

Potential Resources in the Variant Study Areas

Container Cranes

- Included in proposed Project. See physical description and significance evaluation above.

Alameda County Services Campus

- Included in Variant 2 (Aerial Gondola Variant)

The Alameda County Health Campus occupies the block bounded by 5th Street, Broadway, 4th Street, and Washington Street. Originally set aside for development as a public park, the County has owned and occupied the block since at least 1875. Today, it contains three buildings: 499 5th Street, 401 Broadway, and 480 4th Street. Of these, 499 5th Street and 480 4th Street are within the Variant 2 (Aerial Gondola Variant) study area.

Historical Context

The block bounded by 4th and 5th streets between Washington Street and Broadway has been owned by Alameda County since at least 1875 when the fourth Alameda County Courthouse, a sprawling Neoclassical-style building with corner towers and a double-height central tower facing Broadway, opened its doors. It was joined by the first county jail, which was also constructed in ca. 1875 and faced Washington Street. As Oakland and the County expanded, so did the judicial facilities. The jail was expanded between 1889 and 1902 and was completely replaced with a reinforced concrete structure in 1906.⁴⁵ In 1928, the campus was expanded again through construction of a courtroom annex at 480 4th Street.⁴⁶

⁴⁴ Ibid.

⁴⁵ “Wreckers Will Break Up Old Jail – Prisoners Tried, Failed.” *Oakland Tribune*. Apr. 12, 1959: 17. *Newspapers.com*. Apr. 1, 2019.

⁴⁶ “Contract for Annex to Court Awarded.” *Oakland Tribune*. Dec. 12, 1927: 3. *Newspapers.com*. Mar. 4, 2019.

Growth of the county necessitated construction of a new, modern courthouse in 1937. At that time, the fifth Alameda County courthouse was constructed of reinforced concrete at 1225 Fallon Street on the edge of Lake Merritt. With court activities relocated, the annex was no longer needed. It was remodeled in 1939 to serve as the first county-owned coroner's office and morgue.

After World War II, a number of large-scale construction projects began to reshape downtown Oakland, its waterfront, and the railyards. Freeway construction through the area began in earnest in the early 1950s and involved the removal of all buildings and structures between 5th and 6th streets along Washington Street and Broadway. The old courthouse was demolished (1951) along with the jail (1959), leaving only the coroner's office remaining on a then-empty block.⁴⁷

In 1966, after a segment of the Eastshore Freeway (Interstate 880) was completed along 5th Street, the morgue was expanded into the area formerly occupied by the county jail. It was soon joined by two new county buildings: the Alameda County Health Services building (499 5th Street, 1960) and the Alameda County Social Services building (401 Broadway, 1961). In 2014, the Coroner's Bureau and morgue, along with many other departments of the Alameda County Sheriff's Office that were once housed on the block, were relocated to the Peralta Oaks complex in a remodeled former child welfare office near the Dunsmuir Estate on the Oakland-San Leandro border. Today, 480 4th Street is vacant while the remaining buildings are partially occupied by various Alameda County departments and offices (**Figure 7**).



SOURCE: ESA, 2019.

Figure 7
Alameda County Health Services Campus, Looking NE from Washington and 4th Streets

⁴⁷ "Wreckers Will Break Up Old Jail – Prisoners Tried, Failed." *Oakland Tribune*. Apr. 12, 1959: 17. *Newspapers.com*. Apr. 1, 2019.

Both 499 5th Street and 480 4th Street fall within the Variant 2 Study Area and have the potential to be impacted by construction of an aerial gondola along Washington Street, between the Convention Center at 10th Street and Jack London Square.

Eligibility Analysis – 499 5th Street

The Alameda County Health Building, designed by the Oakland architecture firm of Anderson, Hyde, and Anderson, opened in the fall of 1961.⁴⁸ It was the first building in a boom of governmental construction in the area following completion of the Eastshore Freeway that included 400 and 401 Broadway (Alameda County Welfare Buildings, designed by Reynolds and Chamberlain, 1960) and 620 Washington Street (Hall of Justice/Police Administration Building, Confer and Willis, 1960). It also marked the final stage of the merger between the City of Oakland Health Department and the County of Alameda Health Department.

The firm of Anderson, Hyde, and Anderson were hired for several large civic and medical facilities in the late 1950s and early 1960s. These included the Mason's Hospital in Union City,⁴⁹ a metabolic research facility at Highland Hospital in Oakland,⁵⁰ and Castlemont High School in Oakland.⁵¹

Criterion 1 (Events)

499 5th Street is associated with mid-century expansion and modernization campaign undertaken by Alameda County to address the increased demands placed upon it in the post-WWII period. This building allowed the County to consolidate its health services, in concert with the City of Oakland, in one, modern building. The County continued to expand services and construct new facilities since 499 5th Street opened, and continues to do so today. While an important development in the evolution of county services in the early 1960s, it does not represent an event or trend that contributed to the broad patterns of local or regional history. Therefore, 499 5th Street does not qualify as a historical resource for the purposes of CEQA under Criterion 1.

Criterion 2 (People)

No persons of historical significance are known to be associated with the various health services conducted within 499 5th Street, or with the development of health policies, administration of health services, or other governmental or social developments that may have taken place within 499 5th Street. Therefore, the building does not appear to qualify as a historical resource for the purposes of CEQA under Criterion 2.

Criterion 3 (Architecture)

Very little is known about the architecture firm Anderson, Hyde, and Anderson. They operated in the East Bay during the 1950s and 1960s, seemingly concentrating on large civic and medical facilities. No known architectural achievements or recognition is given to any of the firm principles. And while the design of the building is harmonious with its contemporaries in the immediate vicinity (400 and 401 Broadway), there is nothing to suggest that the design was particularly influential. It is a good example of mid-century aesthetics – flat metal siding, flush, aluminum windows, uniform horizontal elements, and overall simplistic industrial design

⁴⁸ "Health Building Architect Named." *Oakland Tribune*. Dec. 6, 1957: 8. *Newspapers.com*. Mar. 22, 2019. "Colors Brighten Interior of New Health Building." *Oakland Tribune*. Sept. 21, 1960: 16. *Newspapers.com*. 22 Mar. 2019.

⁴⁹ "Masons to Build Decoto Hospital." *Oakland Tribune*. Jul. 31, 1958: 14. *Newspapers.com*. Apr. 4, 2019.

⁵⁰ "Board of Supervisors." *Oakland Tribune*. Nov. 18, 1960: 41. *Newspapers.com*. Apr. 4, 2019.

⁵¹ "Two School Projects Win Board OK." *Oakland Tribune*. Oct. 23, 1957: 25. *Newspapers.com*. Mar. 22, 2019.

– it is not a distinctive or influential example from this period. 499 5th Street does not appear to qualify as a historical resource for the purposes of CEQA under Criterion 3.

Criterion 4 (Information Potential)

499 5th Street does not appear to have the potential to yield more information and therefore does not appear eligible under Criterion 4.

Eligibility Analysis – 480 4th Street

The Coroner's office is the last remnant of what was once a campus of County buildings located on the block and in the immediate area - 400 Broadway (Hall of Records), 401 Broadway (fourth county courthouse), 400 Washington Street (county jail), and 480 4th Street (County Coroner and morgue). These buildings were razed in the 1950s and replaced by modern structures that continue to serve County residents. It was designed by notable local architect Henry H. Myers who served as county architect during a period of civic expansion. One of his most notable structures is the Posey Tube located three blocks east of the subject property. 480 4th Street served as the Coroner's office and morgue for 75 years and is one of the only Art Deco-style buildings in the Jack London Square neighborhood.

Criterion 1 (Events)

Alameda County has owned and operated various government agencies whose offices occupied the block bounded by 4th, 5th and Washington streets and Broadway since the 1870s. 480 4th Street was originally constructed as an annex to the County Courthouse (demolished 1950), a function that it performed for ten years. When the courthouse was relocated to a new facility at 1225 Fallon Street in 1937, the annex was remodeled for use as the County's first county-owned coroner's office and morgue. It served in this capacity for 75 years and is the last remaining remnant from an earlier period of county facilities on the block. As such, it is associated with the tremendous growth of Alameda County and the City of Oakland from before World War II through the present day. With most of the previous and contemporary buildings now demolished, 480 4th Street is one of the last remnants from this period.

At the local level, 480 4th Street appears to qualify for listing on the California Register under Criterion 1 for its association with the growth and governance of Alameda County in the 20th century.

Criterion 2 (People)

480 4th Street was historically associated with a number of former County Coroners. Research did not reveal any associations with groups or individuals known to have made a lasting contribution to the development of Oakland, Alameda County, or the broader region..

480 4th Street does not qualify for consideration as a historical resource under CEQA under Criterion 2.

Criterion 3 (Architecture)

480 4th Street was designed by County of Alameda architect, Henry H. Meyers, constructed by contractor A.F. Anderson in 1928, and remodeled by architect John J. Donovan in 1939.⁵² Henry Meyers is a notable East Bay

⁵² "Many See New County Morgue." *Oakland Tribune*. Nov. 16, 1939: 9. *Newspapers.com*. Mar. 4, 2019.

architect who served as Alameda County Architect from 1912 until his retirement in 1936.⁵³ During that time, he also worked on private commissions through his office and through various partnerships. His career resulted in over 200 buildings in the San Francisco Bay region, Northern California, Hawaii, and Guam.⁵⁴ Projects spanned a wide range of types, from residences to hotels, hospitals to commercial buildings, tunnel portals to civic and social halls.⁵⁵ 480 4th Street is associated with a period of peak professional development and shares design elements with other Meyers' projects of the time, including Art Deco detailing and the use of concrete, such as that seen on the Posey Tube (1927-1932), Oakland Veterans Memorial (1926), Alameda Veterans Memorial (1928), and Highland Hospital (1924-1926) among many others.⁵⁶ As such, the original 1928 Courtroom annex building appears eligible for listing on the California Register under Criterion C as the work of a master architect.

Historically, 480 4th Street has been associated with a campus of Alameda County buildings located on the 400 block of Broadway. When first constructed, this campus included the Hall of Records at 400 Broadway (constructed 1892, demolished 1964), the fourth Alameda County Courthouse at 401 Broadway (built 1875, demolished 1950), and the jail (several have existed on the site, the most recent was constructed in ca. 1910 and demolished in ca. 1960). Vastly different architecturally from these earlier buildings, 480 4th Street joined the campus in 1928 as a courthouse annex. It was constructed in concrete and executed in the Art Deco style, both popular choices for institutional buildings at the time. By mid-century, it was the oldest building on the site, with its neighbors being replaced by modern high-rise buildings (499 5th Street, 401 Broadway, and 400 Broadway).

480 4th Street is unique in its function as the county morgue for 75 years. Combined with the association of the original section of the building with Henry H. Meyer, both the 1928 building and its 1966 annex are eligible for consideration as a historical resource for the purposes of CEQA under Criterion 3.

Criterion 4 (Information Potential)

480 4th Street does not appear to have the potential to yield more information and therefore does not appear eligible under Criterion 4.

References

- American Society of Mechanical Engineers (ASME), *The PACECO Container Crane, the World's First High Speed, Dockside, Container Handling Crane*, 1983, www.asme.org/about-asme/who-we-are/engineering-history/landmarks/85-paceco-container-crane, accessed February 14, 2019.
- California Office of Historic Preservation (OHP), *California Office of Historic Preservation Technical Assistance Series #7: How to Nominate a Resource to the California Register of Historic Resources*. 2001.
- CH2M Hill, *Cultural Resource Assessment of Three PACECO Container Cranes (X-402, X-403, and X-404), Port of Oakland*, 2016.

⁵³ Environmental Design Archives, UC Berkeley. *Meyers, Henry*. <http://archives.ced.berkeley.edu/collections/meyers-henry> (Dec. 2, 2019).

⁵⁴ Online Archive of California. *Henry H. Meyers Collection, 1901-1942*. <http://oac.cdlib.org/findaid/ark:/13030/tf100001sq/> (Dec. 2, 2019).

⁵⁵ Environmental Design Archives, UC Berkeley. *Project Index*. <http://archives.ced.berkeley.edu/uploads/MeyersProjindex.xls> (Dec. 2, 2019).

⁵⁶ *Ibid.*

Delgado, James P, *National Register of Historic Places Registration Form for USS Potomac (Presidential Yacht)*, June 30, 1987 (rev. June 1, 1990), npgallery.nps.gov/nrhp, accessed February 2019.

Delgado, James P., *National Register of Historic Places Registration Form for Lightship WAL-605, Relief*, 1989, npgallery.nps.gov/nrhp, accessed February 2019.

Department of Toxic Substances Control (DTSC), *Fact Sheet: Cleanup Plan Available for Review at the PG&E Oakland MGP Site*, November 2007, www.pge.com/includes/docs/pdfs/shared/environment/taking-responsibility/mgp/DTSC_GLC_Fact_Sheet_Nov_2007.pdf, accessed February 12, 2019.

-----, *Fact Sheet: Draft Final Removal Action Work Plan for PG&E Oakland – 1 MGP*, www.pge.com/en_US/about-pge/environment/taking-responsibility/manufactured-gas-plants/oakland.page, July 2010.

Environmental Design Archives, UC Berkeley. *Meyers, Henry*. <http://archives.ced.berkeley.edu/collections/meyers-henry>, accessed December 2, 2019.

----, *Project Index*. <http://archives.ced.berkeley.edu/uploads/MeyersProjindex.xls>, accessed December 2, 2019.

Fat Lady Bar and Restaurant (official website), *Our History*, 2018, http://www.thefatladyrestaurant.com/our_history.html, accessed May 16, 2019.

Minor, Woodruff, *Historic American Buildings Survey: Grove Street Pier (Charles P. Howard Terminal)*. HABS No. CA-2406, 1994.

Minor, Woodruff, *Pacific Gateway: An Illustrated History of the Port of Oakland*. The Port of Oakland, Oakland, CA, 2000.

Oakland Cultural Heritage Survey (OCHS), *Historic Resources Inventory Form for the Bay City Iron Works Machine Shop*, 1994.

-----, *Historic Resources Inventory Form for the Davis Hyman Factory Building*, 1994.

-----, *Historic Resources Inventory Form for the Freschi Box Company Warehouse*, 1994.

-----, *Historic Resources Inventory Form for Old Oakland*, 1984.

-----, *Historic Resources Inventory Form for the Pacific Gas and Electric Company Station C*, 1985.

-----, *Historic Resources Inventory Form for the Southern Pacific Railroad Industrial Landscape District*, 1990.

-----, *Historic Resources Inventory Form for the Washington Street Planing Mill*, 1994.

-----, *Historic Resources Inventory Form for the West Waterfront District*, 1996.

-----, *Historic Resources Inventory Form for the Western Pacific Railroad Depot*, 1983.

Oakland Tribune

“Board of Supervisors.” *Oakland Tribune*. Nov. 18. 1960: 41. *Newspapers.com*. Apr. 4, 2019.

“Colors Brighten Interior of New Health Building.” *Oakland Tribune*. Sept. 21, 1960: 16. *Newspapers.com*. 22 Mar. 2019.

“Contract for Annex to Court Awarded.” *Oakland Tribune*. Dec. 12, 1927: 3. *Newspapers.com*. Mar. 4, 2019.

Classifieds. *Oakland Tribune*. Apr. 15, 1937: 37. *Newspapers.com*. 12 Mar. 2019.

“Executive Changes for Cobble Dick.” *Oakland Tribune*. Nov. 5, 1964: 60. *Newspapers.com*. 11 Mar. 2019.

“Health Building Architect Named.” *Oakland Tribune*. Dec. 6, 1957: 8. *Newspapers.com*. Mar. 22, 2019.

“Many See New County Morgue.” *Oakland Tribune*. Nov. 16, 1939: 9. *Newspapers.com*. Mar. 4, 2019.

“Masons to Build Decoto Hospital.” *Oakland Tribune*. Jul. 31, 1958: 14. *Newspapers.com*. Apr. 4, 2019.

“Port of Oakland to Welcome 379-Foot-Tall Cranes,” *Oakland Tribune*, Feb, 28, 2005, *Newsbank*. Feb, 22, 2019..

“Two School Projects Win Board OK.” *Oakland Tribune*. Oct. 23, 1957: 25. *Newspapers.com*. Mar. 22, 2019.

“Wreckers Will Break Up Old Jail – Prisoners Tried, Failed.” *Oakland Tribune*. Apr. 12, 1959: 17. *Newspapers.com*. Apr. 1, 2019.

Online Archive of California. *Henry H. Meyers Collection, 1901-1942*. <http://oac.cdlib.org/findaid/ark:/13030/tf100001sq/>, accessed December 2, 2019.

Pacific Legacy, *Archaeological Monitoring for the Oakland Power Plant Site Assessment for Remedial Designs Project in the City of Oakland, California*. On file at the NWIC (S-38895), August 2011.

Parker Electric Manufacturing Co. (official website), 2018, www.parkerelectricmfg.co, accessed May 16, 2019.

Port of Oakland, Board of Commissioners Meeting Minutes, Port Minutes, www.portofoakland.com/port/board-of-commissioners/board-meetings/archive/, accessed February – May 2019.

Port of Oakland, *Port of Oakland: A Facilities Prospectus*, 1969, archive.org/details/port-of-oakland, accessed February 26, 2019.

CUL.2 Historical Evaluation of Crane X-422, Port of Oakland, Alameda County, California Memorandum

155 Grand Avenue, Suite 800
Oakland, CA 94612
United States
T +1.510.251.2888
F +1.510.622.9000
www.jacobs.com

Subject Historical Evaluation of Crane X-422, Port of Oakland, Alameda County, California
Attention Diane Heinze, PE, Port of Oakland
From Jeremy Hollins, MA and Mark Bowen, MA, Jacobs Engineering Group Inc. (Jacobs)
Date June 25, 2019

1. Introduction

At the request of the Port of Oakland (Port), Jacobs Engineering Group, Inc. (Jacobs) prepared this historical evaluation of Crane X-422 memorandum in accordance with the significance criteria for the California Register of Historical Resources (CRHR) and the definition of a historical resource for purposes of the California Environmental Quality Act (CEQA). The City of Oakland is completing historical resources studies as part of the CEQA technical studies for the Oakland Waterfront Ballpark District Project (project) Environmental Impact Report. The project is considering the construction of a new stadium and associated mixed-use development at the Charles P. Howard Terminal within the Port in Alameda County. This memorandum has been completed in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines using the criteria outlined in Section 5024.1 of the California Public Resources Code.

This memorandum includes a summary of the field and research methodologies completed in May and June 2019, an evaluative historic context for Crane X-422, and an historical evaluation of the structure. Based on background research and field surveys, this memorandum concludes Crane X-422 does not appear to be meet the criteria for listing in the CRHR or meet the definition of a historical resource for purposes of CEQA.

2. Field and Research Methodologies

All fieldwork and research were completed by investigators who meet the Secretary of the Interior's professional qualification standards in history and architectural history. See attached resumes.

On June 13, 2019, Mark Bowen completed a reconnaissance field survey of Crane X-422, as well as its current setting within the Howard Terminal at the Port. As part of the survey, alterations and modifications to the structure were identified to assess changes to its physical and historic integrity, based on a review of historic plans, photographs, and images. Field notes and photographs documenting the structure and setting were completed.

Between May and June 2019, Mark Bowen and Jeremy Hollins completed primary and secondary source research on Crane X-422 and the overall history of the Port. Research was completed at/with the following repositories and sources:

- Port Archives
- Port Crane Department records
- Site visit with Port Crane department staff

- Historic newspaper databases
- City of Oakland library
- Journals and professional publications and databases
- Sanborn Fire Insurance Maps
- Historic maps and aerial photograph websites
- Discussions and research requests with Port staff and knowledgeable individuals

Information that was reviewed included (but is not limited to) various reports and studies, trade literature and publications, government publications, historic plans and specifications, Port Commissioner meeting minutes, Port newsletters, and newspaper articles.

3. Evaluative Historic Context

To properly assess the potential historical significance of Crane X-422, the following provides an evaluative historic context for the structure, which was erected in 1970 at Berth 35 at the 7th Street Terminal (now known as Ben E. Nutter Terminal), relocated to Berth 38 in 1991, and relocated again in 1994 to the Howard Terminal. The major historic themes discussed in this historic context include:

- Organization and initial growth of the Port's seaport
- Post-World War (WW) II transformation of the Port
- Containerization in the U.S. and Oakland
- Utilization of gantry (ship to shore) cranes
- The 7th Street Terminal

Organization and Initial Growth of the Port's Seaport

Initial development of the Oakland waterfront was spurred by the Central Pacific Railroad, which ultimately established the city as the western terminus of its transcontinental railroad line in 1868. Through the beginning of the 20th century, the railroad held a monopoly of waterfront land through a partnership with Horace Carpentier, who created the Oakland Waterfront Company. However, while the railroad had substantial right-of-way and acreage for yards and terminals within the waterfront, San Francisco remained the leading port in California during this period through construction of numerous piers, seawalls, rail terminals, beltlines, and a ferry terminal (Minor, 2000).

To challenge San Francisco's primacy as the Bay Area's main port, Oakland lobbied for harbor improvements throughout the 1860s to 1900s that included dredging projects, jetty and seawall construction, and tidal canals. Funding for this work remained sporadic, relying on appropriations from the U.S. Congress, state lawmakers, and the U.S. Army Corps of Engineers (Minor, 2000). As navigation within the harbor improved and the eastern part of the San Francisco Bay developed a reputation for shipbuilding, increases in freight and shipping helped Oakland grow as a seaport, with increased shipments of lumber, sugar, coal, iron, and perishable goods (Minor, 2000).

Between 1900 and the 1920s, a shipping boom occurred in the Bay Area sparked by the completion of the Panama Canal that significantly increased shipping speeds and led to the development of larger ships. San Francisco remained the primary port in the area; however, the Port of San Francisco could not keep up with tonnage entering its harbor, leading to vessels being diverted into the East Bay (Minor, 2000). During this period, Oakland developed a municipal port administration which was eventually formally organized in 1925 as the Port. To foster the Port's growth during this shipping boom, city leaders coordinated with the railroads to free up waterfront access along the western shoreline, annex and reclaim tidelands for port expansion, and established municipal docks and wharfs (Minor, 2000).

These improvements led to the Port administrators leasing land to a mixture of tenants and the establishment of privately-owned cargo facilities, transit sheds, warehouses, packing sheds, and rail spurs within the Port that focused on shipping and importing bulk commodities (Minor, 2000). As development continued, the Port organized its landscape into districts for more efficient management. The east part and estuary areas became known as the Inner Harbor, and the western part of the Port

included the Outer, Middle, and Northern harbors. The Port focused development at the Outer and Middle harbors, with the Outer Harbor serving as the shipping center. By the 1930s, the Port managed over one million square feet of warehouse and storage spaces in the Outer Harbor (Minor, 2000).

Growth remained steady within the Port through the Great Depression during the 1930s with total tonnage increasing nearly five times from 316,377 tons in 1928 to over a million tons by 1940 (Minor, 2000). The U.S.'s entry into WW II transformed the Port from commercial and freight uses to largely supporting the war effort. The Port became a major military port with Army and Naval bases occupying the waterfront (and the Oakland Airport), the military taking over most existing maritime facilities, and sprawling shipyards that produced new cargo ships, troop transports, minesweepers, and tugs (Minor, 2000). In Alameda, located immediately south-southeast of the Outer Harbor, the military had occupied the former airport since 1936 and expanded its naval air station considerably during the war. Naval Air Station Alameda remained in use by the Navy until 1997 serving as the home of numerous aircrafts and carriers throughout the mid to late 20th century (Alameda Naval Air Museum, 2019).

Post-WW II Transformation of Port

Following WW II, the waterfront reverted back to control of the Port administration, and its leaders started chartering aggressive long-range development plans that would expand the Outer Harbor, develop the North Harbor, and add piers and sheds along the Inner Harbor (Minor, 2000). The Port remained smaller to San Francisco's seaport both in size and tonnage during the initial postwar years, but Port leaders remained forward-thinking on how to transform and expand the waterfront's uses and industries.

Freight transportation and shipping remained a critical activity at the Port following WW II, which ultimately created a bustling waterfront filled with workers completing the litany of jobs needed to load and unload vessels at berths and piers. Prior to the rise of containerization, break-bulk terminals handled ship cargos. This method had been used since the initiation of shipping activities at the Port, and required crews of workers to physically remove cargo from ships, whether by hand or using equipment like lifts, conveyors, and rail belts, and then storing them in transit sheds and large warehouses that lined the waterfront (American Society of Mechanical Engineers (ASME), 1983). As ships increased in size and loads, this proved to be labor intensive as it could take between one to three weeks to fully unload a vessel (Sorenson, 1975; Rosenstein, 2000; ASME, 1983). All cargo required readying before being unloaded, attaching rigging to the cargo, and then transporting the cargo into transit sheds and warehouse spaces. Accidents frequently occurred, and longshoremen injuries were typical, which was one impetus for unionization of the trade (Rosenstein, 2000).

Through the post-WW II period, the industry lacked standardization in methods, equipment, and piers, which affected the speed and efficiency of unloading cargo. It became challenging for shipping companies to estimate the turnaround time for ships, with companies realizing the majority of their cost was "spent on the pier" from laborers and increasing the likelihood of damage to freight (Rosenstein, 2000). Over time, new practices, including "roll-on/roll-off" transport, were developed that used wheeled carts to move freight into trucks or flatcar railroads (Rosenstein, 2000).

By 1949, the Port had developed substantial truck and railroad infrastructure for moving freight in and out of the Port. Additionally, California's post-WW II improvements to its highway system, such as the development of the Eastshore Freeway and Interstates 80, 580, and 880, sped the movement of trucks entering and exiting the Port and facilitated greater access to the waterfront (Rosenstein, 2000). This allowed the Port to embrace an intermodal system that would drive development over the next coming decades. Meanwhile, at the end of the 7th Street mole, the Southern Pacific railroad continued to operate ferry service to San Francisco until 1958.

As freight improvements continued with better loading/unloading methods and greater transit access, a major technological innovation in the late 1950s helped Oakland firmly establish itself as the preeminent port in the Bay Area: containerization.

Containerization in the U.S and Oakland

The wide-scale use of container ships not only improved the efficiency of transporting freight, but also transformed the actual landscape and appearance of ports throughout the U.S. Containerization brought a new mechanized speed to cargo handling. Earlier mechanization of the industry relied on conveyor belts and lifts to move freight on/off ships; however, shipping still relied heavily on large numbers of longshoremen to load or break down a vessel over a several week period (Minor, 2000; Brooks et al., 2018). Containerization is premised on a simple practice: packaging freight and goods into standardized containers that can be easily transferred from ship to truck or rail (Brooks et al., 2018). This greatly simplified and accelerated packing, transit, pricing, transfers, as well as reduced losses and damage to cargo and caused massive increases in global trade (Brooks et al., 2018).

While earlier attempts to move goods in containers existed prior to the 1950s (primarily by the military and the railroads), successful containerization is largely attributed to Malcom McClean in 1956. McLean was originally a trucker by trade who grew his company into the second largest trucking firm in the U.S. by the 1950s. After getting frustrated with financial losses from long unloading times incurred at ports, he decided to purchase a steamship company to experiment with moving full containers from ship to shore. He accomplished this in April 1956 when his new enterprise, Pan-Atlantic Steamship Corporation (renamed three years later as Sea-Land Services, Inc.(Sea-Land)) moved 58 trailers from Newark, New Jersey to Houston, Texas (Bonney, 2001).

McClean's new service was an immediate success. Shipping costs dropped from \$4-5 dollars/ton to \$0.20 cents/ton (Rosenstein, 2000). Additionally, the time required to unload/load a ship dropped from weeks to hours and with fewer laborers needed and less opportunity for theft (ASME, 1983).

The shipping industry took notice of McClean's newfound efficiencies and adapted his intermodal model (Rosenstein, 2000). On the west coast, Matson Corporation initiated container shipping activities in 1958. The Port of San Francisco's aging infrastructure and small finger piers were not conducive to the large-scale ships and space needed for containerized shipping, so Matson started container operations in Alameda. In January 1959, Matson constructed the world's first high-speed dockside container crane in the Bay Area at the Encinal Terminal in Alameda (Minor, 2000).

Containerization first occurred at the Port in June 1962. Sea-Land started operations at the 14th Street Terminal, converting a former break-bulk terminal to now serve larger ships and utilize cranes and loaders (Sorensen, 1975).

In Oakland, several factors were the catalysts for this shift in technology:

- Decision by the International Longshoremen's and Warehousemen's Union (ILWU) to accept the Mechanization and Modernization Agreement
- Support of port leadership embracing containerization and government support
- Selection of Oakland by Sea-Land
- Economic assistance and infrastructure incentives provided by the Bay Area Rapid Transit District (BART) and Economic Development Agency (EDA) (Rosenstein, 2000)

Containerization was seen as a threat by the longshoremen not only at the Port, but worldwide. Various sources report ILWU members refusing to assist unloading containers in 1959 and 1960 at several ports, hoping to disrupt the operational success of the new practice (Rosenstein, 2000). The Port needed "consent of labor" to ensure containerization's permanence on the waterfront (Rosenstein, 2000). For years, ILWU members resisted nearly all new methods of cargo handling for fear of losing jobs. Potentially sensing the force of change was inevitable, the ILWU in 1959 brokered an understanding with the Pacific Maritime Association and the Port which established a Mechanization and Modernization Fund that provided lifetime and improved benefits to union workers (Rosenstein, 2000). This agreement allowed the freight companies to achieve "consent of labor" and containerization's benefits of reduced labor, while union workers were satisfied with the financial security they gained.

The rise of containerization in Oakland coincided with the career of Ben E. Nutter, who was first hired as an engineer in 1957 and then served as executive director of the Port from 1962 to 1977. Nutter provided the engineering and management leadership that effectively implemented containerization, based on his understanding of shoreside container handling. Prior to his appointment as executive director, Nutter oversaw terminal construction in Honolulu for Matson. (Minor, 2000).

Nutter drove Oakland's path to containerization through coordination and planning with Port commissioners, Asian investors and maritime officials, and securement of revenue bonds. His efforts proved fruitful as Nutter, along with the Port's representative for Japan, persuaded six Japanese steamship companies to base their operations in Oakland instead of in San Francisco in 1968 (Rosenstein, 2000; Minor, 2000). Perceiving the importance of Japan and Asia in the future of shipping, Nutter had a Port office and representative stationed in Japan during the 1960s and 1970s. Under Nutter, total tonnage of the Port increased from 2.5 million tons in 1962 to over 10 million tons by 1977, and Oakland became the second largest port in the world based on total tonnage, behind New York (and finally overtaking San Francisco) (Minor, 2000; Brooks et al., 2018; Port of Oakland, 1988).

The new Port administration, led by Nutter, worked with the Federal Marine Commission (FMC), to expand the capabilities of the Port using both private and public funding. In 1962, Sea-Land signed a preferential lease with the Port for a 650-foot section of an Outer Harbor berth and exclusive use of six acres for staging. To support this, the Port received federal funding for a new truck terminal. In 1966, the FMC approved a lease agreement between the Port and Sea-Land to develop 24 acres and construct two deepwater berths, partially funded by a \$3.2 million improvements revenue bond. Once this project was complete, Sea-land and the Port immediately negotiated development of another 14 acres (Rosenstein, 2000; Port of Oakland, 1967).

These developments with Sea-Land invoked civic pride in Oakland and led to major celebrations. Large public events celebrating the freight and shipping industry were held at the Port beginning in 1962 and every year following a major new development or improvement until the late 1960s. The new facilities were also frequently touted in the local newspapers and Port newsletters, boasting of the Port's new technologies and ability to load and unload containers in record-breaking speed (Port of Oakland, 1967, 1969, 1970, 1971).

Containerization remarkably changed the landscape and historic appearance of the Port beginning in 1962. As part of this, gantry (ship to shore) cranes also became part of the landscape which provided the necessary mechanism to transport containers between ships and the shore.

Utilization of Gantry (Ship to Shore) Cranes

Since the nascent period of containerization, cranes have been used to facilitate the transport and unloading of containers. During the initial period of container shipping, ship-based cranes were first used by McLean and Sea-Land. Land-based (or dockside) cranes were not initially used, since the industry lacked standardization and most existing wharfs could not handle the larger heavier loads from containers. Additionally, the ship-based cranes could be used at ports without shoreside facilities (Sorensen, 1975; Rosenstein, 2000; ASME, 1985). The challenges were that original containerships were modified tankers (not initially constructed for container use), and the ship-based cranes took up valuable deck space. To unload these early vessels, the ship-based crane would hoist up a crane and lower it on an empty trailer that would be rolled up alongside the ship and then driven to a yard (Sorensen, 1975; Rosenstein, 2000; ASME, 1985). While a definite improvement over the break-bulk methods of pre-WW II shipping, peak efficiency had not been reached and there was still risk in damaging cargo, since containers and trailer sizes were not frequently consistent. Companies like Matson realized that if they could operate in just a few ports, they could develop land-based cranes that would be compatible with the ships and containers they used (Rosenstein, 2000).

In 1958, the Pacific Engineering Company (PACECO) was awarded the contract by Matson to develop and construct the first land-based (or dockside) container crane. (PACECO remains the largest supplier of cranes world-wide .) The project was led by company president Dean Ramsden, chief engineer Chuck

Zweifel, and assistant chief engineer Murray Montgomery (ASME, 1985). The crane included an A-shaped frame, operator's cab, and all-welded box girders (avoiding use of trusses) (ASME, 1985). Able to handle a container weight of 20 tons and 400 tons per hour, PACECO's design became the standard for the structure with constant improvements and design modifications made to each one. The first crane was delivered to the Encinal Terminal in Alameda and was in use through the 1980s, following several modifications (ASME, 1985). In 1983, it was recognized as an ASME landmark which included a plaque dedication in May. In 1987, it was relocated to the Port of Nanjing, China (ASME, 1985).

Oakland did not receive its first land-based cranes until 1961, and they were not PACECO cranes. Instead, in October 1961, Washington revolving (or "whirling") gantry cranes were added to the former Howard Terminal. The cranes cost \$300,000 and were for both handling scrap metal and for moving 20-ton containers (Rosenstein, 2000). They differ from the PACECO cranes since they did not have an A-Frame or operate on a track, and were considered "whirling" because the cab and lift could complete full revolutions. The Port recognized the value of land-based cranes early on. Since they handled heavier loads, accurately placed containers on the holds of trailers, and minimized the risk of injury to laborers.

The first two PACECO cranes were added to the Port in 1966 at Sea-Land in the Outer Harbor. Improvements were constantly made to the PACECO cranes over those initial five years, increasing their height to 22 stories (with the boom fully raised) with an ability to lift 50 tons (*San Francisco Examiner*, 1967). By the end of the 1980s, at least 737 PACECO cranes operated in 200 ports making them common sights along industrial waterfronts.

Crane X-422 was the second of three low-profile cranes that were initially added to the Port due to the height restrictions from the Alameda naval base. Crane X-421 was first and added in 1968 and X-423 was added in 1971 (Port of Oakland, 2019). PACECO had built other low-profile cranes before this in Elizabeth, New Jersey and Boston, Massachusetts. (PACECO, 1966)

The 7th Street Terminal

Containerization in Oakland progressed with the re-development of the 7th Street Terminal beginning in 1967 (completed in 1971). Nutter and the Port commissioners had a vision for transforming the former Southern Pacific mole into a preeminent container facility. To accomplish this, they saw opportunity in coordination with BART and EDA (Rosenstein, 2000). The 7th Street Terminal would require significant fill materials and labor to expand out on the tidelands, while at the same time construction of BART required an easement for a transbay rail station and a place to dispose of dredged material from tunneling under San Francisco Bay and other construction (Rosenstein, 2000). In return for an easement and access along 7th Street as well as the removal of structures in the way of the transportation system, the Port received 5.3 million cubic yards of material that could be used to dike and fill 140 acres of tidelands. To construct this, the Port utilized funding and incentives from the EDA, which was established to increase labor opportunities in the Bay Area (Rosenstein, 2000).

The 7th Street Terminal was selected as the location for the Port expansion due to a 60-foot water depth in the bay at this location, with enough space to dredge further if needed. All ships were expected to be able to enter the terminal, unload, and depart within 36 hours. Seven privately-operated berths were initially added to the terminal, along with four public berths. Large tenants included Sea-Land and Matson and the terminal was critical to capture the Asian shipping market that Nutter saw as the backbone of the Port's revenue (Port of Oakland, 1971).

Nutter and the Port expected the construction and operation of the 7th Street Terminal to add 15,000 new jobs that would create \$116 million annually in wages (Port of Oakland, 1967). The \$33 million project would increase shipping capacity by over 1.5 million tons in the first couple of years alone when portions of the facility come online between 1968 and 1969, eventually reaching 3 million more tons by 1980. The project was designed and constructed by Kaiser Engineers (Port of Oakland, 1967).

The rise of containerization not only changed the economics of Oakland's port, but also caused major changes in the landscape. As seen in large projects like the 7th Street Terminal, containerization

operations required ports to modify their design, construction, and appearance. On the ship-side, larger vessels (now nearly 600-700 feet in length) required docks, piers, and wharfs to be stronger, constructed of reinforced concrete, and more monumental in scale (Sorensen, 1975; Rosenstein, 2000). On the shore side, large flat and open yard areas were needed for container storage, necessitating removal of transit sheds and warehouses (Sorensen, 1975; Rosenstein, 2000). Since containers were typically stacked no fewer than three or four containers high, these areas required reinforced aprons with large footings to sustain heavier loads (Sorensen, 1975; Rosenstein, 2000). The complex and antiquated network of railroads lines and spurs were removed and replaced with more streamlined belt lines and drive-in/drive-out routes for trucks (Rosenstein, 2000). Fencing and lighting were added to secure cargo that were no longer stored in warehouses. (Sorensen, 1975).

Crane X-422 was erected in 1970 at Berth 35 within the 7th Street Terminal (Port of Oakland, 1992). It was added after the initial opening of the 7th Street Terminal and a year before construction ended. It was the fourth crane added to this terminal and the ninth land-based crane added to the Port. It was a “low-profile crane” and differed significantly from the typical A-frame gantry cranes located throughout the Port. Its location near the runway of the Naval Air Station Alameda required the crane to have a low-profile. The height of the crane was limited to 96 feet tall, since a mandatory 132-foot height limit existed for anything within the runway’s flight path (Port of Oakland, 2019). The restricted height, compared to other PACECO cranes in the Port that were taller than 200 feet, gave the structure a squat boxy form and a very different visual appearance than the taller A-frame cranes. The lift height for the crane was only 74 feet compared to the 100-foot lift height of the other cranes at the waterfront, which restricted its ability to work with vessels stacked with more than three or four containers. The crane extended 115 ½ feet outward towards the harbor and extended 182 feet back into the wharf. Additionally, the crane had a holding capacity of 40-ton, which was less than the typical 50-ton capacity of the other A-frame cranes (PACECO, 1967).

Based on Port newsletters, the fanfare associated with other cranes added between 1965 and 1970, especially at the 7th Street Terminal, diminished notably by the time of the commissioning of Crane X-422 on August 4, 1970 (Port of Oakland, 1970). The crane largely supported an established consortium of Japanese container lines, Marine Terminal Corporation, Johnson Lines, and United States Lines. Discussions with Port personnel as part of this study revealed that because of its inferior design, Crane X-422 was not as heavily used as other cranes and largely acted as a back-up crane through most of its history (Dingle, personal communication, 2019).

Following damages suffered during the Loma Prieta earthquake in 1989, Crane X-422 went out of service and was relocated to Berth 38. It briefly returned to service, although it was seldom used. By 1992, Crane X-422 was determined to be surplus property by the Port due to its limited functionality. Additionally, its 96-foot gauge crane rails were not used anywhere else within the 7th Street Terminal (standard was 100-foot), requiring extensive structural retrofitting to be completed if it were to be brought back into service (Port of Oakland, 1992, 1993, 1994). The crane was put up for sale; however, no firm proposals were received immediately. Marine Terminals requested permission to use the crane at another berth, but would need to modify the gauge from 96 feet to 100 feet, raise the lift height to 100 feet, replace the cab, increase hoisting speed, and change the power pick-up system (Port of Oakland, 1994; PACECO, 1993). These changes significantly modified its low-profile design. In 1993, the modifications were completed, along with replacing the headlock, raising it an additional four feet, and adding a snag line. It was barged to its current location at Howard Terminal in 1994. The Port continues to improve its operations, facilities, and infrastructure. Currently, the Port has 36 cranes.

4. Evaluation

The significance of Crane X-422 was determined by applying the procedures and criteria for CRHR eligibility and the definition of a historical resource for purposes of CEQA. A resource is considered to be historically significant if it meets any of the following criteria for listing in the CRHR (defined in Public Resources Code Section 5024.1, Title 14 California Code of Regulations, Section 4852):

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
- **Criterion 2:** It is associated with the lives of persons important to local, California, or national history.
- **Criterion 3:** It 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.
- **Criterion 4:** Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to these criteria, a resource must retain sufficient historic integrity to be considered historically significant. Integrity is the authenticity of the physical identity that is evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity must be evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

As a property that was recently moved from its original location and less than 50 years old, Crane X-422 needs to be evaluated using the Special Considerations included in Section 4852 of the California Code of Regulations for these property types. The considerations for these property types include:

- **Moved buildings, structures, or objects:** The retention of historical resources on site is encouraged and the non-historic grouping of historic buildings into parks or districts is discouraged. However, it is recognized that moving an historic building, structure, or object is sometimes necessary to prevent its destruction. Therefore, a moved building, structure, or object that is otherwise eligible may be listed in the CRHR if it was moved to prevent its demolition at its former location and if the new location is compatible with the original character and use of the historical resource. An historical resource should retain its historic features and compatibility in orientation, setting, and general environment.
- **Historical resources achieving significance within the past 50 years.** In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance.

Based on Section 15064.5 of the CEQA Guidelines, historical resources included in a local register of historical resources, or identified as significant in an historical resource survey meeting the criteria set forth in subdivision (g) of Public Resources Code Section 5024.1, are presumed to be historically or culturally significant, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. Other structures which a lead agency determines to be historically significant may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered significant if it meets the criteria for listing on the CRHR. The fact that a resource is not listed in, or determined to be eligible for listing in, the CRHR, not included in a local register, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code sections 5020.1(j) (historically significant or significant in, among other categories, the engineering, economic, social, political, or cultural annals of California) or 5024.1 (eligible for the CRHR or identified in a local survey).

Based on site investigations and historic research, Crane X-422 is ineligible for listing in the CRHR as a historical resource for purposes of CEQA.

Criterion 1

Crane X-422 is not directly associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. The crane was first erected in 1970 at Berth 35 at the 7th Street Terminal, which was constructed between 1967 and 1971. The 7th Street Terminal did reflect the significance of containerization not only on a global scale, fostering trade between Asia and the U.S., but also for the Oakland economy. The 7th Street Terminal helped the Port overtake San Francisco as the main and largest port in California, sparked a major increase in both jobs and revenue, and is associated with major infrastructure projects like the establishment of BART. However, when considering the individual role of Crane X-422 with these important events and trends, the crane itself does not individually reflect or convey a direct linkage or association with these events or with the 7th Street Terminal. The 7th Street Terminal required port visionaries, like Nutter, to build a new marine terminal at the former Southern Pacific ferry terminal, expanding the area by importing millions of cubic yards of fill, building new wharves and yards, and helping to create a new waterfront intermodal transportation network. One single crane that was added to the terminal towards the end of this development does not embody or signify the monumental planning, design efforts, and coordination that were needed for the project's success. Instead, it was a small, late component of a much larger event and creates no sense of association with the construction of the 7th Street Terminal.

Additionally, as a low-profile crane, Crane X-422 was an aberration from the typical or standard A-frame gantry cranes that lined Oakland's waterfront during this period. Due to height restrictions imposed from the former Naval Air Station Alameda, Crane X-422 was significantly shorter than other cranes and had less lift height. Additionally, it had a lower holding capacity, and narrower gauge than other cranes. As a result, visually it looked different and had much limited functionality from the cranes lining the Port outside the flight path. It could only work on ships that had containers stacked three or four high, which prevented the crane from being heavily used and distinctively associated with the rise of globalization and containerization that defined the Port beginning in the 1960s.

Furthermore, Crane X-422 was not unique or exceptional within the history of PACECO cranes or even low-profile cranes. It was the ninth crane added to the Port and designed and constructed nearly a decade after PACECO put into service its first-ever dockside crane in 1958. It was the second low-profile crane added to the Port, and PACECO already had a reputation and established designs for completing low-profile cranes that met site needs related to height restrictions in New Jersey and Massachusetts.

When considering its present form and appearance, Crane X-422 was significantly modified in 1994 to no longer resemble a low-profile crane or possess the major characteristics from its original design. It was also relocated from its original location at the 7th Street Terminal to Howard Terminal. Major physical changes were made to make the structure more consistent with other higher profile cranes (e.g., raising its height, modifying its rail gauge, replacing its cab, etc.), after the Port declared it as surplus property. While the property has been relocated to a setting within a working industrial port, it has lost its historic connection and association with the 7th Street Terminal. The Howard Terminal is much smaller in size (50 acres) than the 7th Street Terminal (140 acres). It is also not currently operating as a container terminal.

Therefore, Crane X-422 lacks a lengthy or important association with significant events that characterized the Port during the containerization era, does not convey any association with the important construction of the 7th Street Terminal, and is not eligible for listing in the CRHR under Criterion 1 or as a historical resource for purposes of CEQA.

Criterion 2

Crane X-422 is not directly associated with the lives of persons important in our past. The crane was constructed at a time when Ben E. Nutter was serving as the executive director of the Port; however, there is no direct association or linkage with Nutter and the structure. The crane does not illustrate Nutter's important achievements and does not possess a lengthy association with him. Clearly other properties would better illustrate the importance of Nutter within the context of his contributions to the Port, such as the entirety of the 7th Street Terminal (which has been renamed the Nutter Terminal after him) or the Port administration buildings where he worked. A single crane constructed in 1970, eight years after he became the executive director of the Port, does not reflect his achievements. Therefore,

the structure is not eligible for listing in the CRHR under Criterion 2 or as a historical resource for purposes of CEQA.

Criterion 3

Crane X-422 does not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values. As a noted earlier, Crane X-422's original design, appearance, and major characteristics from its initial design have been heavily modified. It was constructed as a low-profile crane, but has been altered as part of its relocation to the Howard Terminal in 1994. Its lift height, rail gauge, and cab were all modified, new K-bracing was added, and its overall form and visual appearance and narrative were altered. As a result, it no longer embodies the distinctive characteristics of a low-profile gantry crane and lost many of its original features common to the property type that would make it important.

Since it was constructed over a decade after dockside cranes became common at ports and was not even the first low-profile crane at the Port, Crane X-422 did not represent any major engineering achievement. Throughout its history, it had limited functionality and was not used as much as other cranes due to its restrictive design (Dingle, personal communication, 2019). The crane was designed by PACECO, which designed the first dockside container crane in 1958. The initial cranes were significant for creatively solving the problems impeding containerization's global success, and PACECO approached the solution with a "philosophy that the best design has the fewest number of pieces" (ASME, 1985). For PACECO, this was common practice by the time they designed Crane X-422, which was the ninth crane added to the Port, and derivative of other designs they completed in the Bay Area and at other U.S ports. The crane does not demonstrate a particular phase in the development of the property type, Also, since it was not the first or last low-profile crane, it does not demonstrate the evolution of the property type or any type of important design transition. Therefore, the structure is not eligible for listing in the CRHR under Criterion 3 or as a historical resource for purposes of CEQA

Criterion 4

Crane X-422 does not appear to have the potential to yield more information and therefore, does not appear eligible under Criterion 4 or as a historical resource for purposes of CEQA. Crane X-422 is similar to other low-profile cranes designed by PACECO. As-builts and historic plans, as well as original specification information, are available for the property; therefore, there is no potential to yield more information on its design, construction, and assembly that is not already known.

Integrity Analysis

Aside from meeting one of the CRHR criteria, a historical resource must also retain a significant amount of its historic integrity to be eligible for listing in the CRHR. Integrity is the authenticity of an historical resource's physical identity *evidenced by the survival of characteristics that existed during the resource's period of significance*. To be eligible for listing, a resource must retain enough of its historic character of appearance to be recognizable as an historical resource and to convey the reasons for its significance. Historic integrity is comprised of seven aspects: location, design, setting, materials, workmanship, feeling, and association.

Location: Crane X-422 was relocated from its historic location within the 7th Street Terminal to Howard Terminal in 1994. Moving the property to a different terminal away from its historic location diminishes its historic relationship and origin with its original setting and period of development associated with the 7th Street Terminal. While Howard Terminal is a working industrial waterfront area, it is much different from the 7th Street Terminal. It is approximately one-third the size of the 7th Street Terminal, and faces a different portion of the bay (the Inner Harbor versus the Outer Harbor),

Design: Alterations that were completed to Crane X-422 in 1994 in order to sustain its use and functionality to the Port have diminished the combination of elements that create the form, plan, space, structure, and style of the property. Alterations to the property included modifying the gauge from 96 feet to 100 feet, raising the lift height to 100 feet, replacing the cab, and changing the power pick-up system (Port of Oakland, 1994; PACECO, 1993). These changes significantly modified its original low-profile

design and function. As a result, the property's proportion, space, materials, and scale were altered, diminishing its historic integrity of design.

Setting: The setting of Crane X-422 was diminished and modified through its relocation from the 7th Street Terminal to the Howard Terminal. The property was constructed in its original location within the flight path of the Alameda naval base, and consequently required a low-profile form. The physical environment and conditions of the property were diminished when it was moved, since it no longer required a low-profile form and aesthetic in its new location. The property no longer retains an association with its original surroundings since it was removed from the 7th Street Terminal and away from the runway and flight path of the naval base, which have affected its historical role and narrative.

Materials: As described above, key historic materials and fabric from the property's original construction and location at the 7th Street Terminal have been removed. Changes in materials include modifying the gauge from 96 feet to 100 feet, raising the lift height to 100 feet, replacing the cab, and changing the power pick-up system (Port of Oakland, 1994; PACECO, 1993). This has impacted the physical elements and their arrangement from the initial period of construction for the crane. The property is no longer a low-profile crane and no longer conveys a particular time and place associated with its initial location within the flight path at the 7th Street Terminal.

Workmanship: The workmanship has been diminished through modifications to the property's original construction methods and configuration. As a result, it no longer furnishes evidence of the technology of a craft or illustrate the aesthetic principles associated with a low-profile crane from 1970. Instead, it has the workmanship of a crane highly modified in 1994. When considering the other similar property types that already existed when it was built, the property also lacks innovative period techniques.

Feeling: The diminishment of the property's design, materials, and workmanship have impacted the crane's physical features that convey its historic character. The engineering team's original design, techniques, and practices are no longer visible, and it has a disrupted sense of time and place from its original construction in 1970.

Association: The relocation of the crane from its original location within the flight path at the 7th Street Terminal has diminished the property's direct link to the planning, design, and development of the 7th Street Terminal in the 1960s and 1970s. As a result, while the crane still retains an association to the Port as a whole it is no longer associated with the important events that created the 7th Street Terminal and led to the Port's explosive growth.

Overall, due to its relocation and modifications, Crane X-422 has diminished historic integrity from its initial period of construction and operation at the 7th Street Terminal. While the property is still recognizable as a crane, it does lack key and essential physical features that define it as a low-profile crane from 1970, and possesses a weakened historic relationship to its original setting, narrative, and sense of time and place.

Special Considerations

Crane X-422 was constructed less than 50 years ago and was also relocated from its original location. As a result, the property needs to be evaluated using the Special Considerations included in Section 4852 of the California Code of Regulations for these property types. Properties that have been relocated and determined to be otherwise eligible for listing in the CRHR may be considered significant if it was moved to prevent its demolition and if the new location is compatible with the original character and use of the resource. Generally, it still retains the general character of its previous setting (though as noted above, its current setting is still different from its original location). However, the property does not meet any of the other CRHR criteria. It was relocated recently and therefore no longer has a historic association with its immediate surroundings. Its design value was diminished by the modifications needed to support its move to a new location (to keep the property functional and in use) and it no longer has enough historic features to convey key aspects of its historic integrity.

As a property constructed less than 50 years ago, it may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance. Overall, recent

scholarship completed on the significance of containerization in Oakland and globally, significant historic context information exists to consider the historical importance of this property type. Within this framework, it becomes apparent that a crane constructed over a decade after cranes were first developed would not be considered exceptionally important as an individual resource in understanding and illustrating the importance of containerization.

CEQA Analysis

In accordance with CEQA Guidelines, this analysis has concluded that Crane X-422 does not meet the definition of a historical resource. As described above, the structure does not meet the criteria for listing in the CRHR and is also not listed in a local register of historical resources. Based on information provided by the Port and a review of information available through the City of Oakland, Crane X-422 has not been previously included in a historical resources survey. The analysis completed in this memorandum demonstrates the property is not significant within the engineering, economic, social, political, or cultural annals of California. It is a modified crane from 1970 that is no longer within its original location and lacks distinction as an engineering structure important to the state, region, or area.

5. Results

Based on background research and field surveys, this memorandum concludes Crane X-422 does not appear to be eligible for listing in the CRHR or meet the definition of a historical resource for purposes of CEQA.

6. References

Alameda Naval Air Museum. 2019. *History of Alameda Nava Air Station*. <http://alamedanavalairmuseum.org/history/>. Accessed June 15, 2019.

American Society of Mechanical Engineers (ASME). 1985. *The PACECO Container Crane; The American Society of Mechanical Engineers Dedicates an International Historical Mechanical Engineering Landmark*.

Booney, Joseph. *Malcolm P. McLean, 1913-2001*. JoC Week. June 4-11, 2001.

Brooks, Leah, Nicolas Gendron-Carrier, and Gisela Rua. 2018. "The Local Impact of Containerization," Finance and Economics Discussion Series 2018-045. Washington: Board of Governors of the Federal Reserve System, <https://doi.org/10.17016/FEDS.2018.045>.

Hayward Daily Review. "Encinal Terminals to Send Dormant Cranes to China." July 1, 1987.

Minor, Woodruff. 2000. *Pacific Gateway: An Illustrated History of the Port of Oakland*. The Port of Oakland, Oakland, CA.

PACECO. 1967. 30 Long Ton Low Profile PACECO Portainer.

PACECO. 1966. Advance Systems for Container and Bulk Handling

PACECO. 1993. *Low-Profile PACECO PORTAINER CRANE #395: Modification and Relocation*.

Port of Oakland. Meeting Minutes, 1992-1994.

Port of Oakland. Personal communication with Mike Dingle, Electrical/Mechanical Inspector (Crane Department). May – June 2019.

Port of Oakland, Personal communication with Diane Heinze, Environmental Supervisor (Port Archives), May – June 2019.

Port of Oakland. *Port Renames Terminal For Maritime Legend*. Press Release. June 17, 1988.

Port of Oakland. *Progress-News-Notes*. Various issues, 1967-1971.

Port of Oakland, *Guide to Marine Facilities*, June 1992.

Rosenstein, Mark. 2000. *The Rise of Maritime Containerization in the Port of Oakland: 1950 to 1970*. Master Thesis. New York University.

San Francisco Examiner. "Little Firm Leads A Revolution." April 16, 1967.

Sorensen, Paul. 1975. "Development of Containerization at the Port of Oakland, 1962-1974."

7. Attachments

Resume of Jeremy Hollins, Senior Architectural Historian, Jacobs/CH2M.

Resume of Mark Bowen, Senior Architectural Historian/Cultural Resources Specialist, Jacobs.

Jeremy Hollins

Senior Architectural Historian, Talent Supervisor

Education

MA, University of San Diego, Public History, 2005

BA, University of Rhode Island, History [Environmental], 2003

Distinguishing Qualifications

Secretary of Interior Professional Qualification Standards Architectural History and History (36 CFR Part 61)

Relevant Experience

Jeremy Hollins is a Secretary of Interior-qualified Architectural Historian and Historian for Jacobs Engineering Group. He is also a certified Project Manager. Mr. Hollins has performed numerous historic evaluations, context studies, and determinations of eligibility and effect for a range of resources based on local, state, and National Register criteria and through technical reports, DPR 523 series forms, HABS reports, cultural landscape reports, historic structures reports, and resolution documents. He has a detailed knowledge of the laws and ordinances which affect historic properties, such as Section 106 of the NHPA, CEQA, NEPA, Section 4(f), California Public Resources Code, State Historic Building Code, and the Secretary of Interior Standards for the Treatment of Historic Properties. Additionally, two academic journals have published Mr. Hollins' work, and he was an adjunct instructor in 'World Architectural History' at the New School of Architecture early in his career.

Representative Projects

Reno Spaghetti Bowl Interstate 80/Highway 395 Reconstruction, Washoe County, NV.

Cultural Resources Lead for Section 106 and NEPA studies for large-scale freeway reconstruction project. Oversaw the identification and evaluation of 600+ cultural resources, including 33 newly and previously identified historic properties. Authored MOA and extensive Assessment of Effects report for FHWA and SHPO, which included a detailed assessment of two different NRHP-listed Lincoln/Victory Highway historic districts in the county. Historic district assessment included identification of character-defining features, contributing and non-contributing roadside architecture, and district boundaries. Historic maintenance plan, consistent with the Secretary of Interior Standards, was developed to retain historic character-defining features of the roadway and ensuring new project changes are compatible to existing conditions. Utilized state-wide Multiple Property Documentation form to inform identification, evaluation, and treatment decisions.

March Air Reserve Base Integrated Cultural Resources Management Report (ICRMP), Riverside County, CA

Lead author and cultural resources lead for the development of the March Air Reserve Base ICRMP for the US Air Force. As part of the ICRMP, completed a base-wide survey of the entire base and drafting an updated NRHP nomination to address changes to the base since it was last recorded, including addition/removal of contributing resources, changes to character-defining features, and changes in historic district boundary following the base's 1996 realignment. Also completing overall historic district maintenance plan for the historic district that includes specific treatments for each building to preserve

Jeremy Hollins

its character-defining features and acceptable changes to the building consistent to the Secretary of Interior's Standards.

SCE West of Devers Transmission Line Upgrade Project, Riverside and San Bernardino Counties, CA

Cultural Resources Lead for project construction activities for a large-scale transmission line upgrade in Riverside and San Bernardino Counties. Responsible for monitor coordination, interfacing with SCE and lead federal and state agencies, implementation of project Cultural Resources Management Plan, Section 106 consultation following discoveries, oversight of ARPA and BLM permit, and cultural resources assessments for minor project realignments,

Contra Costa Power Plant CEQA Assessment, Contra Costa County, CA

Oversaw completion of the cultural resource and paleontology surveys for the remediation of the Contra Costa Power Plant. Participated in kick-off meetings; performed extensive background research; developed an evaluative historic context; completed architectural history surveys and oversaw archaeology and paleontology surveys; prepared DPR 523 series forms and a findings memorandum; and lead author for CEQA reports. Completed project per PG&E and DTSC guidelines.

Completed At Another Firm

NRG Renewables, Puente Power Plant, Ventura, CA.

Oversaw architectural history field survey and archival research as architectural history task manager for a new power plant and transmission line corridor in Ventura County, in accordance with CEC regulations. Oversaw historic research and community consultation, and the recordation and evaluation of 6 cultural resources, associated with power transmission, rural properties, and historic roads. Assessment was determined data adequate after first submission and did not receive any data requests.

BrightSource Energy, Rio Mesa Solar Plant, Blythe, CA.

Oversaw architectural history field survey and archival research as architectural history task manager for a large solar project in the Colorado Desert (partially within BLM land) in accordance with Section 106 of the NHPA, NEPA and, CEQA. Oversaw architectural history field survey of project footprint, transmission line and substation locations, and half-mile study area. Oversaw historic research and community consultation, and the recordation and evaluation of approximately 30 cultural resources, including historic-age transmission lines, canals and irrigation ditches, historic roads, mines, and borrow pits.

Merced Irrigation District LeGrand Canal Bifurcation Project , Merced, CA

Completion of senior review of cultural resources report and completion of historic evaluations to two canals located within the boundaries of the Merced Irrigation District Historic District. Analysis completed for CEQA included development of APE, DPR 523 series forms, correspondence records, Native American coordination, and historic research.

Process Water Recycling Project CEQA-Plus, Magalia, CA

Cultural Resources Task manager for a CEQA-Plus assessment for Paradise Irrigation District that requires compliance with Section 106 of the NHPA. Responsible for implementation of the State Revolving Fund Programmatic Agreement, delineation of the APE, overseeing Native American consultation, coordination with EPA, SWRB, and local water district. Managed archival research, wrote historic context, evaluated the APE for resource eligibility for listing in the NRHP and the CRHR (or as

historical resources for purposes of CEQA), recorded 2 resources (canal and a bridge). Authored report and SHPO Letter.

Franklin Reservoir Improvement Section 106 Compliance Project, Los Angeles County, CA

Performed Section 106 Compliance Study for Los Angeles Department of Water and Power for the replacement of five catch basins for a 1940s dam within the City of Beverly Hills. Prepared DPR 523 series forms and technical report for SHPO. Developed historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, analysis of effects, and development of mitigation measures. (2008-2009)

Alamo Creek Detention Basin, Vacaville, Solano County, CA

Completed cultural resources surveys for the construction of a new detention basin along Alamo Creek. Participated in kick-off meetings; performed extensive background research; developed an evaluative historic context; completed architectural history surveys; applied the programmatic and, prepared DPR 523 series forms and a findings memorandum for CEQA and Section 106 compliance.

Almaden Dam Improvement Project, Santa Clara County, CA

Architectural Historian for the identification and evaluation of the Almaden Dam for CEQA and Section 106 compliance. Identified character-defining features, conducted and oversaw archival research, evaluated the projects' APE for eligibility for listing in the NRHP and California Register of Historic Resources (CRHR), identified effects, completed appropriate DPR 523 forms. Assessment was included in a technical report for Santa Clara Valley Water District.

Marcucci Culvert Repairs, Marcucci, CA

Completion of Section 106 studies per the FEMA Programmatic Agreement for flood damage control (culvert replacement). Prepared Section 106 compliance materials, including findings memorandum, APE maps, DPR 523 series forms, correspondence records, Native American coordination, and historic research. Assessment was completed for 19th century culvert.

FEMA, Sutter Creek Broad Storm Drain Diversion, Sutter Creek, CA

Completion of Section 106 studies per the FEMA Programmatic Agreement for flood damage control (culvert replacement). Prepared Section 106 compliance materials, including findings memorandum, APE maps, DPR 523 series forms, correspondence records, Native American coordination, and historic research. Assessment completed for wall associated with Chinese laborers and townsite.

San Francisco Public Utilities Commission, Calaveras Dam Staff Housing Replacement Project, Sunol, Alameda County, CA

Architectural history task manager for the CEQA evaluation of a historic-period rural property that would be demolished to accommodate new staff housing for the project. CEQA evaluation included preparation of a technical archaeology and architectural history memorandum, recordation of the property through DPR 523 series forms, and preparation of project area maps. He developed evaluative historic context for the Spring Valley Water Company, Sunol, and Alameda County historic-period rural properties.

Owens Gorge Flow Restoration Project: Adams Auxiliary and Adams Main Powerhouses, Owens Valley, CA

Cultural resources task manager for the CEQA evaluation of two historic powerhouses located near the improvements planned within Owens Gorge. CEQA evaluation included preparation of a technical

Jeremy Hollins

archaeology and architectural history memorandum, recordation of the properties through DPR 523 series forms, and preparation of project area maps. Developed evaluative historic context for the resources and similar property types controlled by LADWP.

Napa Earthquake Task Order, FEMA, Napa and Solano Counties, CA.

Lead architectural historian for the Section 106 compliance activities undertaken as part of the disaster-relief efforts from the Napa Earthquake. Worked closely with FEMA staff to review over 50 Project Worksheets. Developed time- and cost-saving measures to expedite the process in accordance with the Programmatic Agreement, assist with coordination with the SHPO, and prepare cultural resources consultation letters and cultural resources findings reports (which may include DPR forms) for submittal to the SHPO.

Hillsdale Boulevard Interchange Project, San Mateo, CA

Architectural History Lead for an intensive architectural history field survey of the APE in accordance with the Caltrans PA. Managed archival research, directed completion of the historic context, evaluated the APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded several resources (consisting of several motels, residences, and commercial buildings). Co-authored HPSR and HRER for Caltrans approval.

Hearn Avenue Interchange Project, Santa Rosa, CA

Architectural History Task manager for an intensive architectural history field survey of the APE in accordance with the Programmatic Agreement between the FHWA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans (Caltrans PA). Managed archival research, directed completion of the historic context, evaluated the APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded several resources (consisting of a Julie Morgan designed cemetery, a mobile home park, and car dealership). Co-authored HPSR and HRER for Caltrans approval.

US 101 Express Lane Cultural Resource Assessment

Santa Clara County, CA

Architectural History Task manager for an intensive architectural history field survey of the direct APE and a reconnaissance survey of the indirect APE in accordance with the Programmatic Agreement between the FHWA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans (Caltrans PA). Managed archival research, wrote historic context, evaluated the APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded 4 resources (consisting of historic ranches to Minimal Traditional residences). Authored HPSR and HRER for Caltrans approval.

Bailey Ranch Historic Resource Assessment

Santa Clara County, CA

Completed historic resource assessment for Bailey Ranch including overseeing architectural history survey, integrity assessment, and assessment of effects for compliance with Section 106 of the NRHP and CEQA. Projects considering effects from demolition or relocation of locally historical resource. Required extensive regulatory knowledge of local, state, and federal laws, and strategic planning with Santa Clara Valley Water District to identify best path forward, considering regulatory approvals,

City of Los Angeles Department of Transportation Associated Transportation Projects, Caltrans District

7

City of Los Angeles, CA

Led Caltrans HPSR, ASR, and HRER studies for three different transportation projects for Los Angeles Department of Transportation and Bureau of Engineering to complete Local Assistance projects. Projects included Safe Routes to Schools consisting of curb extensions, crosswalks, new signals, road widening and narrowing, and addition of roundabouts. Prepared studies in conformance with Caltrans PA. Successfully negotiated smaller APE and streamlined studies on behalf of client with Caltrans District 7.

Santa Ana Fixed Guideway, Santa Ana, CA

Cultural Resources Task Manager. Oversaw determination of eligibility, analysis of integrity, and application of criteria for adverse effect for approximately 100 cultural resources in accordance with the NHPA, NEPA, CEQA, and FTA guidelines. Led consultation efforts with SHPO and authored the project MOA. Also, oversaw APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, field map and field form creation, and impact analysis. (Cost: \$60,000)

Caltrans and Alameda Corridor Transportation Authority, HAER, Level II, for the Commodore Schuyler F. Heim Bridge, Schuyler Heim Bridge Replacement and SR-47 Expansion Project – Long Beach, CA.:

Managed HAER for Commodore Schuyler F. Heim Bridge, a 1948 steel vertical lift bridge eligible for listing in the NRHP, to fulfill NHRA Section 106 mitigation requirements. The study was completed consistent to the specific guidelines and requirements of the United States Department of Interior and Library of Congress for a Level II HAER and included written historical and descriptive data, 5-by-7" large-format photographs and negatives, and 4-by-5" large-format photographic copies of as-built drawings and negatives. Oversaw project planning (client meetings, site visits, access permits, contract and engagement with photographer), facilitated field work, archival research, report drafting and editing and archival processing. Project required extensive FHWA, Caltrans, and Port of Los Angeles-Port of Long Beach coordination and consultation. Project was nominated for a URS Pyramid Award for Technical Excellence. (2010-2011)

Caltrans and City of Santa Ana, Bristol Street HPSR and HRER, Phase 3 and Phase 4 – Santa Ana, CA. Task manager for an intensive architectural history field survey of the direct APE and a reconnaissance survey of the indirect APE in accordance with the Programmatic Agreement between the FHA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans. Managed archival research, wrote a historic context, evaluated the APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded 66 resources (primarily early to mid-century residences in planned subdivisions) on the appropriate DPR 523 forms, and authored the HPSR and HRER. Adapted unique approach for recordation based on historic subdivisions and property types to facilitate and streamline compliance. (2010-2011)

Caltrans and SANBAG, Lenwood Road HPSR, ASR, and HRER – Barstow, CA.

Task manager for cultural resources studies, and preparation of HPSR, ASR, and HRER. Oversaw archival research, historic context, evaluated the project APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded forty-one resources (Historic Route 66-related commercial buildings and single-family residences) on the appropriate DPR 523 forms, and drafted the Historic Resources Evaluation Reports and Historic Properties Survey Reports. (2009-2011)

Caltrans District 7, Los Angeles River Bike Path Improvement Project, San Fernando Valley, CA.

Jeremy Hollins

Cultural Resources Task manager for an intensive archaeological and architectural history field survey of the APE in accordance with the Programmatic Agreement between the FHWA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans (Caltrans PA). Managed archival research, directed completion of the HPSR, ASR, and HRER, authored Finding of Effect, and completed evaluation of resources in the APE for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA).

Caltrans District 12, Santiago Canyon and Live Oak Canyon Road Projects, Orange County, CA.

Cultural Resources Task manager for an intensive archaeological and architectural history field survey of the APE in accordance with the Programmatic Agreement between the FHWA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans (Caltrans PA). Managed archival research, directed completion of the HPSR, ASR, and HRER, authored Finding of Effect, and completed evaluation of resources in the APE for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA).

Caltrans District 8, Frank Sinatra Drive Bridge at Whitewater River Project, Rancho Mirage, Riverside County, CA. 2014:

Oversaw preparation of the HPSR and ASR, including evaluation of a significant multi-component site in the APE. Completed per Caltrans guidelines.

Caltrans District 7, Alost Avenue Bridge Section 106 Compliance, LADPW, Los Angeles County, CA Architectural Historian

Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1929 Plate-Girder bridge and the California Central Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans/FHWA guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect for historic grade separation over Historic Route 66 in Los Angeles County. (2008)

Caltrans District 7, Long Beach Blvd. Bridge Section 106 Compliance, LADPW, Los Angeles County, CA Architectural Historian

Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1932 Warren truss Bridge and the Union Pacific Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans/FHWA guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect for Union Pacific Railroad Cut-Off Line linking Port of Los Angeles to Union Pacific mainline. (2008)

Caltrans District 7, Willow Street Bridge Section 106 Compliance, LADPW, Los Angeles County, CA.: Architectural Historian

Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1932 Warren truss Bridge and the Union Pacific Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect. (2007)

Caltrans District 8, Interstate 15/Murrietta Hot Springs Road Operational Improvement Project, Riverside County, CA. 2013:

Oversaw preparation of Archaeological Survey Report (ASR) and Historic Property Survey Report (HPSR) in accordance with Caltrans guidelines. Directed archival research, archaeological analysis and evaluation of resources and impacts in compliance with Section 106 of the NHPA and CEQA.

Caltrans District 8, Clay Street Grade Separation, Riverside County Transportation Department, Riverside County, CA. 2013:

Supported Section 106 Compliance Study for Riverside County Transportation Department for the at-grade crossing of Clay Street with the Union Pacific Railroad. Oversaw preparation of HPSR, ASR, HRER

Caltrans District 11 and SDGE, Lilac Ranch Pole Replacement, San Diego County, CA. Oversaw Caltrans studies completed for SDG&E on a historic ranch owned and operated by Caltrans. Led compliance for state-owned resources and oversaw preparation of an HPSR, HRCR, ASR, ESA Action Plan, and SOI Treatment Plan for NRHP-listed historic property and archaeologically sensitive areas.

Supplemental Information

Years Experience Prior to Jacobs: 14

Jacobs Hire Date: 2

Mark Bowen

EDUCATION/QUALIFICATIONS

MA, Public History, California State University, Sacramento

BA, History, California State University, Chico

Certificate in Public History and Archaeological Field School, California State University, Chico

REGISTRATIONS/ CERTIFICATIONS

Registered Historian, California (#576)

PROFESSIONAL ORGANIZATIONS

California Preservation Foundation

AREAS OF EXPERTISE

- NEPA and CEQA compliance
- Section 106 compliance
- Section 4(f) compliance
- Built-environment historic evaluations
- Primary/Secondary document historic research
- Project effects analysis

OTHER

- Entered the profession: 1996
 - Total Years: 22
 - With Jacobs: <1 year
- Office location: Sacramento, CA

SENIOR ARCHITECTURAL HISTORIAN / CULTURAL RESOURCES SPECIALIST

Mark has served as senior historian, architectural historian, project manager, and team leader with 22 years of experience conducting cultural resources inventories and evaluations in California for federal, state, and local agencies. He authors or coauthors cultural resources technical reports including historic resources and historic architectural inventories and evaluations and archives and collections management documents. He specializes in historic building and structure documentation, research for thematic contexts, and design and implementation of project-specific computer databases. He is also experienced in archaeological field survey and excavation methods. He conducted research of primary and secondary documentation at various repositories throughout California as well as in Washington, Oregon, Nevada, Utah, Colorado, and Ohio for the purposes of environmental compliance, land use histories, water rights research, and other litigation support.

Mark serves as project manager on a wide variety of infrastructure, government facilities, and development projects. He has experience preparing cultural resources technical studies in compliance with light/heavy/high-speed rail, Caltrans/FHWA requirements for bridge replacement, road widening, and highway projects and has prepared studies for review by Caltrans staff in Districts 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11.

Relevant Project Experience

Transportation

Alameda County Transportation Commission, 7th Street, Port of Oakland, CA. *Architectural Historian.* Mark assisted the Alameda County Transportation Commission and Caltrans District 4 with cultural resources studies for multiple infrastructure improvement project components within the Port of Oakland. Oversaw completion of Caltrans technical studies consideration of Section 4(f) analysis. Participated in Caltrans/client coordinating meetings wherein Mark helped negotiate the substantial reduction of analysis effort for efficient Section 106 compliance.

City of Sparks, Oddie Pedestrian Overcrossing, Reno/Sparks, NV. *Historian.* Mark researched construction records for assessment of construction history and use. Conducted primary and secondary document research at various local and state repositories to complete updated and refined property history and activities at site.

Caltrans, Two Rivers Bike Trail Project Phase II, Sacramento, CA. *Architectural Historian.* Two Rivers Trail is a planned Class 1 bicycle and pedestrian trail along the south bank of the American River that extends from Tiscornia Park at Jibboom Street to the H Street Bridge in Sacramento, California. The proposed project would construct the remainder of the project's Phase II by extending the Class 1 trail west from Sutter's Landing Regional Park to the Sacramento Northern Bikeway Trail at North 18th Street, and east from the eastern terminus of Sutter's Landing Regional Park to the H Street Bridge. Part of the cultural

Mark Bowen

SENIOR ARCHITECTURAL HISTORIAN /
CULTURAL RESOURCES SPECIALIST

resources team preparing Caltrans' technical documents (HPSR and HRER) and evaluated resources within the APE.

Caltrans and City of Rancho Cordova, White Rock Road Widening, Rancho Cordova, CA. Architectural Historian. City of Rancho Cordova and Caltrans planned to widen the existing two-lane road between Luyung Drive and Grant Line Road in Rancho Cordova. As Senior Architectural Historian, directed cultural resources studies in compliance with Section 106 and the First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, SHPO, and Caltrans Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California. Conducted archival research and evaluated a segment of the Old White Rock Road and mining-related resources. The SHPO concurred with the findings.

California High Speed Rail Authority, HABS for the Pacific Coast Seeded Raisin Building, HST Merced to Fresno Section, Fresno, CA. Architectural Historian. The Pacific Coast Seeded Raisin Building was determined eligible for the CRHR. The building was slated for demolition as part of the HST project. The mitigation required a HABS be written. Part of the team that prepared the HABS documentation for the property and conducted extensive archival research that resulted in a comprehensive historic context concerning the raisin industry in California.

California High Speed Rail Authority, HAERs for the Belmont Subway and Traffic Circle and Weber Avenue Overcrossing (Bridge #42C0071), HST Merced to Fresno Section, Fresno, CA. Architectural Historian. As part of the Section 106 process for the California HST project, the three structures were determined eligible for the NRHP by the SHPO. As part of the mitigation, SHPO required that HAERs be prepared for each structure. Mark assisted with preparing the HAERs. The National Park Service accepted the documentation in 2017.

Georgia Department of Transportation, State Route 20 Corridor Improvements Project, Various Counties, GA. Architectural Historian. Part of a team of architectural historians providing peer review of Property Information Forms for this Section 106 transportation project. Peer reviews used pre-defined standards adopted by the Georgia Department of Transportation and the Georgia Historic Preservation Division.

Transbay Joint Powers Authority (TJPA), Transbay Transit Center (TTC) NHPA–Section 106 Supplemental Consultation, San Francisco, CA. Architectural Historian. The TJPA, in cooperation with the FTA and the FRA, proposes changes to the approved 2004 Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (Transbay Program). Further engineering for the Caltrain Downtown Extension has occurred since its approval in 2004 and includes track curvature entering the train box, extension of below-grade rail levels of the TTC to accommodate high-speed rail requirements, and other refinements necessary for implementing the Transbay Program. Prepared the supplemental consultation report and analyzed the potential for additional adverse effects to historic resources, including

Mark Bowen

SENIOR ARCHITECTURAL HISTORIAN /
CULTURAL RESOURCES SPECIALIST

four historic districts. The recommendation is that there were no additional adverse effects because of the undertaking.

Santa Clara Valley Transportation Authority (VTA), Mission Boulevard (SR 62) Widening Near Brown Road Project, Alameda County, CA. *Project Manager and Architectural Historian.* Mark assisted with document preparation for the project. Provided cultural resources compliance services for this highway interchange in Alameda County. Produced Historic Resources Compliance Report (HRCR) for the proposed project. Coordinated with the Valley Transportation Authority (VTA) and Caltrans D-4 Local Assistance staff to complete cultural resources technical documentation.

Sonoma-Marin Area Rail Transit, Multiuse Bicycle and Pedestrian Pathway, Sonoma and Marin Counties, CA. *Architectural Historian.* Mark served as architectural historian for the survey work and assisted with document preparation for the project. Provided NEPA compliance services for this 70-mile long multiuse pathway through Sonoma and Marin counties. Contributed to Preliminary Environmental Study (PES) forms for all three segments of the pathway. Coordinated with SMART and Caltrans D-4 Local Assistance staff to complete NEPA environmental documentation.

San Joaquin County Department of Public Works, Wilson Way and McAllen Road – Newton Road Traffic Signal and Intersection Improvement Project HPSR, San Joaquin County, CA. *Senior Architectural Historian/Project Manager.* Prepared a cultural resources analysis and Section 106/CEQA documentation for an intersection improvement project near the City of Stockton. The San Joaquin County Department of Public Works proposed to improve safety by upgrading the signal phasing and providing additional turn lanes at the intersection of Wilson Way and McAllen Road-Newton Road. The Caltrans Historic Property Survey Report (HPSR) package evaluated the full range of cultural resources issues for compliance needs of staff at Caltrans District 10. Major challenges included tailoring the required reports to comply with Section 106 and CEQA while allowing for the justifiable exemption of difficult resources such as the Central California Traction Company tracks and alignment. Early and continuous collaboration with the San Joaquin County Department of Public Works, and Caltrans District 10 cultural staff resulted in an expedited conclusion to the required HPSR documentation as well as the Section 106 process.

California High Speed Rail Authority, California High Speed Train Merced to Fresno Segment, Merced, Madera, and Fresno Counties, CA. *Architectural Historian.* Mark was an integral member of the multi-company team inventorying and evaluating more than 400 properties in Merced, Madera, and Fresno Counties for eligibility for the National Register of Historic Places and California Register of Historical Resources in compliance with Section 106 of the National Historic Preservation Act and CEQA. Also coordinating with Caltrans District 6 for Section 106 compliance. Following completion of this Identification/Evaluation documentation, cultural resources team completed appropriate section of combined EIR/EIS, Finding of Effect Addendum, and Built Environment Treatment Plan Addendum. Worked with the Authority to revise and create compliance documentation

Mark Bowen

SENIOR ARCHITECTURAL HISTORIAN /
CULTURAL RESOURCES SPECIALIST

approaches necessary for Section 106 compliance. This work was completed at an accelerated schedule driven by Federal ARRA funding needs.

Tahoe Transportation District, SR 89 Fanny Bridge, Placer County, CA. *Architectural Historian.* Mark assisted TTD with cultural resources studies for intersection improvement, possible bridge replacement, and possible additional new bridge in Tahoe City. Also coordinated with Caltrans District 3 and prepared reports for their review.

California Department of Water Resources, 17 Bridge Evaluations, Merced, Fresno, Kings County, CA. *Architectural Historian.* Mark assisted DWR and Caltrans District 6 with cultural resources studies for bridge upgrades along the California State Water Project. Also coordinating with Caltrans District 6.

Port of Los Angeles, Historic Resources Survey of Built Environment Resources, San Pedro, CA. *Senior Architectural Historian.* Mark peer reviewed documentation produced for 13 facility sites at the Port. Resources included recently constructed buildings and were evaluated for NRHP/CRHR eligibility as well as for listing as a Los Angeles City Cultural-Historic Monument. The Port had the documentation prepared as part of their long-term mitigation efforts.

Caltrans District 11, Mitigation Analysis—Black Canyon Road Bridge, San Diego County, CA. *Architectural Historian.* Mark conducted analysis of modification designs applied to bridge for the purposes of mitigating adverse effects. Also coordinated with Caltrans District 11 and prepared reports for their review.

City of Winters, Streetscape Improvement Project Phase II, Yolo County, CA. *Architectural Historian.* Mark assisted the City of Winters and Caltrans District 3 with cultural resources studies for a streetscape improvement project. The schedule for compliance was critical and truncated. The City's compliance needs with Caltrans/FHWA were met within deadline.

City and County of San Francisco, Yerba Buena Ramps Improvement Project, San Francisco County, CA. *Architectural Historian.* Mark assisted the City of San Francisco and Caltrans District 4 with cultural resources studies for a ramps improvement project, conducted in conjunction with the East Bay Bridge Replacement Project. Oversaw completion of Caltrans technical studies and an EIS section. Participated in SHPO consultation meetings.

City of Martinez, Martinez Marina Vista Streetscape Improvement Project, Contra Costa County, CA. *Architectural Historian.* Mark assisted the City of Martinez and Caltrans District 4 with cultural resources studies for a streetscape improvement project in downtown Martinez. The schedule for compliance was critical and truncated. The City's compliance needs with Caltrans/FHWA were met within deadline.

MGE Engineering, Historic Winters Bridge Replacement Project, Yolo County, CA. *Architectural Historian.* Mark conducted Caltrans District 4 cultural resources studies for a historic bridge replacement project. Completed identification HPSR, FOE, memorandum of

Mark Bowen

SENIOR ARCHITECTURAL HISTORIAN /
CULTURAL RESOURCES SPECIALIST

agreement, and draft Section 4(f) study report for replacement of a bridge that was eligible for listing on the NRHP.

Transystems, SP Railyards, Sacramento County, CA. Architectural Historian. Mark conducted cultural resources studies for a redevelopment project in Sacramento. Also assisted with consultation between agencies, conducted research, and drafted a report regarding historic properties. Also coordinated with Caltrans District 3 and prepared reports for their review.

URS, Colorado US 36, Denver and Boulder Counties, CO. Architectural Historian. Mark surveyed and evaluated irrigation features along BNSF railroad and highway alignments between Denver and Boulder, Colorado. Also conducted primary and secondary document research at various federal and state repositories.

City of West Sacramento, West Sacramento Clarksburg Branch Compliance, Yolo County, CA. Architectural Historian. Mark assisted the City with cultural resources studies for a railroad acquisition project. Coordinated with SHPO to complete cultural resources studies pertaining to the railroad alignment.

Sacramento Regional Transit District, Survey of Historic Properties, Amtrak-Folsom Corridor Light Rail Project, Sacramento County, CA. Architectural Historian. Mark assisted with research of properties within the district and prepared maps and graphics for the final report.

Caltrans District 3, Evaluation of Glenshire Bridge Historic, Nevada County, CA. Architectural Historian. Mark assisted in mapping and draft report production in the evaluation of a Truckee bridge's historical significance under CEQA and Section 106. Also coordinated with Caltrans District 3 and prepared reports for their review.

Marin County, Larkspur Bridges, Marin County, CA. Architectural Historian. Mark managed a multidisciplinary team to conduct NEPA and CEQA compliance for three bridges in Larkspur, California.

Sonoma County/Imbsen and Associates, Sonoma Bridges Evaluation and Finding of Effect, Sonoma County, CA. Architectural Historian. Mark assisted with cultural resources studies for seismic retrofit projects on the Bohemian Highway, Wohler, and Moscow Road bridges in Sonoma County. Wrote evaluation reports and presented his findings at a Sonoma County Landmarks Commission meeting. Also coordinated with Caltrans District 4 and prepared reports for their review.

California Department of Transportation, Caltrans Environmental Improvement Program, El Dorado County, CA. Architectural Historian. Mark prepared Caltrans cultural resources technical studies for two segments of the Caltrans Environmental Improvement Program in the Lake Tahoe Basin. Assessed impacts on built-environment resources.

Santa Clara Valley Transportation Agency, I-880 HOV Lanes Widening Project, Santa Clara County, CA. Architectural Historian. Mark prepared a Caltrans District 4 historic property survey report to support CEQA IS/MND and NEPA EA/FONSI for a Corridor Mobility

Mark Bowen

SENIOR ARCHITECTURAL HISTORIAN /
CULTURAL RESOURCES SPECIALIST

Improvement Account project to construct HOV lanes in both directions on Interstate 880 in San Jose and Milpitas.

Tulare County Resource Management Agency, Caldwell Road (Avenue 280) Road Widening, Tulare County, CA. *Architectural Historian.* Mark authored a Caltrans historic property survey report for a road-widening project in Tulare County.

Sacramento County, I-80 Pedestrian Overcrossing, Sacramento County, CA. *Architectural Historian.* Mark conducted cultural resources studies of impacts of a pedestrian crossing over components of a historic district. Also coordinated with Caltrans District 3 and prepared reports for their review.

HPSR and Bridge Evaluation—Bohemian Highway Bridge at Monte Rio, Sonoma County, CA. *Architectural Historian.* Mark conducted a field survey, research, and authored reports, including an HPSR. Also coordinated with Caltrans District 4 and prepared reports for their review.

Williams Communications, American River Bridge Evaluation, Sacramento County, CA. *Architectural Historian.* Mark conducted an evaluation and FOE of the American River Bridge for a fiber optics alignment. Evaluated the bridge for eligibility for listing on the NRHP and CRHR.

U.S. Army Corps of Engineers (USACE), First Street Bridge Over the Napa River, Napa County, CA. *Architectural Historian.* Mark conducted Section 4(f) and cultural resources studies of buildings near the Napa First Street Bridge. Also coordinated with Caltrans District 4 and prepared reports for their review.

City of Sacramento and Parsons Brinckerhoff, Tower Bridge HAER, Sacramento County, CA. *Architectural Historian.* Mark completed a HAER and Interpretive Kiosk mitigation for a bicycle/pedestrian walkway improvement project on a historic bridge in Sacramento. Also coordinated with Caltrans District 3 and prepared reports for their review.

Yuba County, Honcut Bridge Historic American Engineering Record, Butte and Yuba Counties, CA. *Architectural Historian.* Mark authored HAER documentation for the Honcut Bridge replacement project between Butte and Yuba Counties. Conducted research, authored a report, and assisted with photo documentation of the bridge. Also coordinated with Caltrans District 3 and prepared reports for their review.

Port of Los Angeles, HRER on Port of Los Angeles Berths, Los Angeles County, CA. *Architectural Historian.* Mark coauthored evaluation reports of various berths and assisted with the compliance process. Conducted historic resource research and documentation of Port of Los Angeles Berths 147 and 171–173. Coauthored evaluation reports of berths and assisted with evaluation under the NRHP and CRHR. Also inventoried and evaluated port buildings for listing in the CRHR and provided content for a mitigation Web site, including text for the removal of the historic Badger Avenue Bridge.

CUL.3 Oakland Cultural Heritage Survey
(OCHS) *Historic Resources Inventory
Form for the Pacific Gas and Electric
Company Station C, 1985.*

HISTORIC RESOURCES INVENTORY

IDENTIFICATION

- 1. Common name: Pacific Gas and Electric Company Station C
- 2. Historic name: Same
- 3. Street or rural address: Multiple, see Continuation page 3
City _____ Zip _____ County _____
- 4. Parcel number: 0-410-7 and 1-125-5 (portion)
- 5. Present Owner: P.G. & E. Co. Address: 1919 Webster St.
City Oakland Zip 94612 Ownership is: Public _____ Private X
- 6. Present Use: Electric Power Plant Original use: Same

DESCRIPTION

- 7a. Architectural style: Beaux Arts derivative power station
- 7b. Briefly describe the present *physical description* of the site or structure and describe any major alterations from its original condition:

P.G. & E. Co. Station C consists of three buildings of related uses and appearance, constructed in several sections at various periods from 1888 through 1938. Beaux Arts stylistic elements unify the exterior of the whole complex through monumental scale, generously quoined piers, round-headed windows set each in its own panel, and a Classically derived cornice. The thrust of the complex is horizontal because of the large land area (more than a square block) and because most segments are articulated as if they were one story tall under the horizontal of the overhanging cornice. Sanborn maps describe this appearance as "1 (story) = 4," "1 = 2" and "3 = 4," and by heights respectively of 60 ft., 32 ft. and 42 ft. Access to the complex is through a gate in the fence between 50 and 64 Grove Street. The complex's unity has recently been enhanced by painting all the elements in a single color scheme of cream on quoins, piers and simple horizontal elements; tan on panels; and dark brown on cornices and openings. Street trees have also been planted along Grove and the south side of Embarcadero West.

(see continuation page 5)



- 8. Construction date: Estimated _____ Factual 1888-1938
- 9. Architect See Continuation Page 3
- 10. Builder See Continuation Page 3
- 11. Approx. property size (in feet)
Frontage _____ Depth _____
or approx. acreage 2.10
- 12. Date(s) of enclosed photograph(s) _____

- 13. Condition: Excellent Good _____ Fair _____ Deteriorated _____ No longer in existence _____
- 14. Alterations: Various interior removals; large windows on Embarcadero facade infilled; most surfaces painted.
- 15. Surroundings: (Check more than one if necessary) Open land _____ Scattered buildings _____ Densely built-up _____
Residential _____ Industrial Commercial Other: _____
- 16. Threats to site: None known Private development _____ Zoning _____ Vandalism _____
Public Works project _____ Other: _____
- 17. Is the structure: On its original site? Moved? _____ Unknown? _____
- 18. Related features: None

SIGNIFICANCE

19. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site.)

P.G. & E. Co. Station C is important as a monumental Beaux-Arts-ornamented industrial complex constantly devoted to a single use--the production of electricity--ever since about 1889. Designers involved have included architect Walter J. Mathews, engineer Henry C. Vensano and architect Ivan C. Frickstad. The complex includes the second electrical generating plant ever built in Oakland. Today, according to the Montclarion of 12 Oct. 1982, p.9, it "is capable of producing 165,000 kilowatts of electricity, enough to supply about 40% of Oakland's electric needs." Although the price of such consistent use has been a continual restructuring and updating of technology, the utility company has added to the original structures with only partial demolitions, has kept the same buildings since 1938, and in its most recent reworking--1979 according to the Montclarion--has sensitively refurbished the street facades while removing interior court-side parts of the structures and installing new equipment.

The company began locally as the Oakland Gas Light Company, which according to the Tribune

(see continuation page 10)

20. Main theme of the historic resource: (If more than one is checked, number in order of importance.)
- Architecture 2 Arts & Leisure _____
 - Economic/Industrial 1 Exploration/Settlement _____
 - Government _____ Military _____
 - Religion _____ Social/Education _____

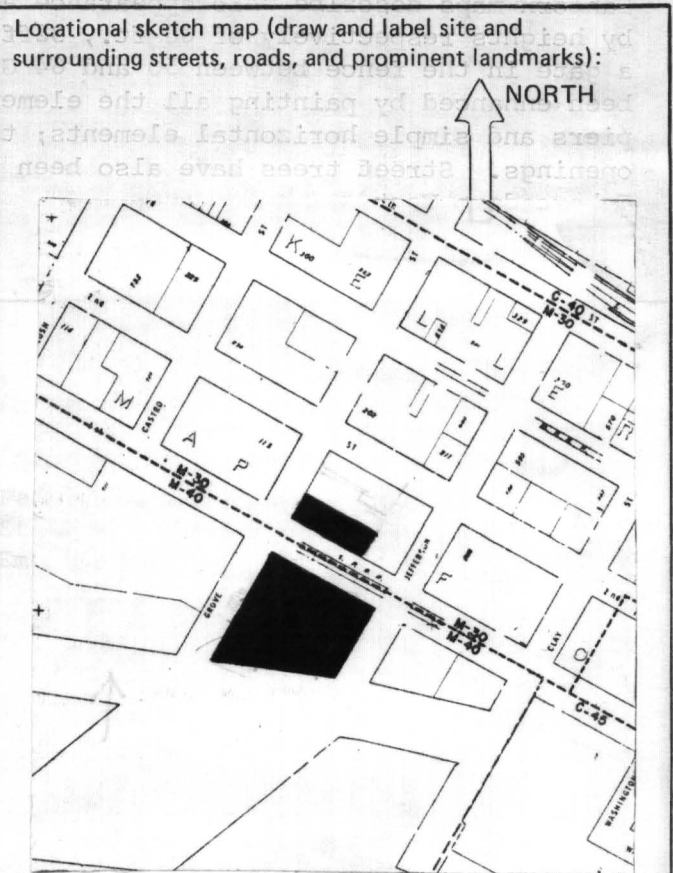
21. Sources (List books, documents, surveys, personal interviews and their dates). P.G. & E., Properties Owned & Operated, 1911: 168-69.

Pacific Service Magazine, May 1914: 404.

Tribune Yearbook, 1939: 56-57

(see continuation page 13)

22. Date form prepared January 31, 1985
By (name) Staff
Organization Oakland Cultural Heritage Survey
Address: One City Hall Plaza, 6th Floor
City Oakland Zip 94612
Phone: (415) 273-3941





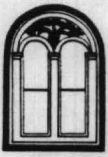
HISTORIC RESOURCES INVENTORY

CP

Street or rural address: Pacific Gas & Electric Co. Station C

Address Historic Name	Date Cost	Architect Builder	Source
4623-106-9999 601-45 Embarcadero/51 Jefferson St./64 Grove St. Pacific Gas & Electric Co. Station "C" constructed as:	1888-1938 See below	Multiple, see nine components below	Multiple, see nine components below
601 Embarcadero 4623-106-1	1928 \$150,000	Ivan C. Frickstad P.G. & E.	Permit #A30632 (includes c.635 Embarcadero & 51 Jefferson)
605 Embarcadero 4623-106-2	1920 \$27,000	Henry C. Vensano (E) (attrib.) Cahill & Vensano	Permit #58348
629 Embarcadero 4623-106-3	1908 \$35,000	Henry C. Vensano (E) Unknown	Permit #13399
c.635 Embarcadero 4623-106-4	1928	See 601 Embarcadero	See 601 Embarcadero
645 Embarcadero 4623-106-5	1937-38 \$100,000	Ivan C. Frickstad P.G. & E.	Permit #70575
64 Grove St.* 4623-106-6	1889-90	Unknown Unknown	Sanborn map 1889
c.74 Grove St.* 4623-106-7	1888-89 \$40,000	Unknown Unknown	Oakland Enquirer, 25 July 1888
51 Jefferson St. 4623-106-8	1928	See 601 Embarcadero	See 601 Embarcadero
c.75 Jefferson St. 4623-106-9	c.1912-14 Unknown	Unknown Unknown	Hegemann, Report..., 1915: 39
628 Embarcadero/106 Grove St. P.G. & E. Station "C" Switch & Control House 4623-106-10	1937 \$80,000	Ivan C. Frickstad (A) A.H. Markwart (E) P.G. & E. (B)	Permit #A67752
50 Grove St. Standard Electric Co. Substation 4623-106-11	1899-1900 \$2,544	Walter J. Mathews Unknown	California Architect & Building News, 9-1899: vi

*Historic name: Oakland Gas, Light and Heat Company Electric Light Works.



HISTORIC RESOURCES INVENTORY

CP

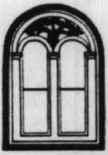
Street or rural address: Pacific Gas and Electric Company Station C7b. Description (continued from page 1)

601-45 Embarcadero/51 Jefferson Street/64 Grove Street is a C-plan with each facade a composite of three or four major construction projects. The Grove Street facade is a painted brick structure, the others steel frame reinforced concrete with stucco veneer. The main facade, 601-45 Embarcadero, occupies the whole city blockfront 300 feet long. Monumental in scale and 60 feet high, it is divided into 15 vertical panels each containing a single tall, narrow, round-headed window most of which has recently been stuccoed over, leaving a slit in the center. Panels are paired between quoined piers, except for the single easternmost panel, at Jefferson, which has a rectangular window. Except for this single panel, there are no differences between the five sections constructed in four building campaigns over a 30-year period (see continuation pages 3 and 4). Each successive designer respected and continued the design of his predecessor(s) to create the rhythmically decorated monumental block we see today. The panels rest on an unadorned base into which piers extend. Over all is a boxed cornice of galvanized metal on consoles, surmounted by a paneled parapet that conceals the flat roof. This principal block extends in harmonious returns along the first portion of each cross street. Each return features a Classical bracketed entablature over a giant-scale equipment-and-truck door of metal.

The main building's Grove Street facade begins at the Embarcadero corner with a return of the principal facade and continues with the two oldest sections, c. 74 and 64 Grove Street, which are matched, two-story, 32'-high, gable-ended brick structures with quoins, piers, a corbeled cornice and a corbeled belt course of brick. Quoined piers are at the corners and at the meeting of the two buildings, five bays from the southern end. Each facade is divided into nearly square panels defined by piers, the belt course and the cornice. Within each panel is a pair of round-headed windows, sometimes (originally always) with pairs of arches as the transom tracery. Downstairs windows have deeper reveals than upstairs ones, reflecting the decreasing thickness of the structural brick walls. The gable is decorated with stepped projecting bricks imitating barge boards. The corner piers terminate with a crenelated box above the roof line. The corbeling of cornice and belt course is incised into small segments rather like consoles. This segmented effect, the panels, the quoins and the round-headed windows became themes for the monumental facade on Embarcadero. A photograph published by the Oakland Tribune in 1898 shows these sections going all the way up to Embarcadero, with seven bays north of the joint between 64 and c.74 Grove instead of the present four bays. This original seven-bay building was four bays wide on Embarcadero instead of the present two bays, and the Oakland Tribune Annual of 1890 announced its dimensions as 80' (on Embarcadero) x 120'. Apart from the partial demolitions and changed chimneys, 64 and c.74 Grove retain their original appearance, though the interior is now open from ground to roof.

The Jefferson Street facade is basically a lower structure than the monumental facade on Embarcadero and its return at the corner. Though 32' high, c.75 Jefferson Street appears as a single story, with cornice, parapet and quoined piers matching those on the monumental facade. The center section has three bays with simple panels adjoining the corner bay, then three similar-sized bays with small-paned metal windows in triple banks topped by a single wire glass panel and triple transoms. All are now painted over except the clear transoms. Plain panels, quoins and windows were all rebuilt in 1928, but apparently with little change. 51 Jefferson Street, the 1928 addition to the south, is about half the length of the center section; it has a more complicated rhythm. Most of it extends slightly from the facade plane as a pavilion; its fenestration is more vertical as the mullions separating wider banks of windows extend through the horizontal panel, and there are side lights.

(see continuation page 6)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

HISTORIC RESOURCES INVENTORY

CP

Street or rural address: Pacific Gas and Electric Company Station C

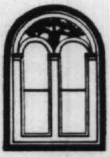
7b. Description (continued from page)

628 Embarcadero/106 Grove St. is a L-plan monumental structure surrounding but not touching the northeast corner of Embarcadero and Grove Street. Flat-roofed, it is constructed of reinforced concrete with form marks visible on the exterior. Nevertheless its ornamentation echoes that of the main block across the street: quoins at all corners, piers separating its sides into vertical panels, substantial but simple base and a Classical entablature emphasizing horizontality. About 42' high, the L-plan's foot is a little less tall than its stem, but the cornice is repeated. The building presents great blank walls, broken by the quoins and paneling, by 2 or 3 tiny square windows and by a small door.

50 Grove Street is a small, 1½-story, gable-ended rectangular brick structure. Like the other buildings of the P.G. & E. complex, it is divided by piers and corner quoins into bays: 2 on the end facing Grove, 4 on the north facade. An incised and corbeled belt course matching those on 64 and c.74 Grove Street divides each bay into an attic section and an almost square, panel-like section containing a round-headed double-casement window rather similar to those at 64 Grove Street. One bay on Grove contains, instead, a large equipment-and-truck entrance with unadorned metal doors. Other differences from 64 and c.74 Grove Street are that the piers are clusters of 3, and the corner piers terminate without crenelated boxes.



217-23 Jefferson St. elevation
P.G. & E. Station C 5/82



HISTORIC RESOURCES INVENTORY

CP

Pacific Gas and Electric Company Station C

Street or rural address: _____



217-15 601-45 Embarcadero
(P.G. & E. Station C) 5/82



217-24 601 & 605 Embarcadero
(P.G. & E. Station C) 5/82



217-27 Detail, Jefferson at
Embarcadero 5/82



HISTORIC RESOURCES INVENTORY

CP

Street or rural address: Pacific Gas and Electric Company Station C



219-13 64 & c.74 Grove St.
(P.G. & E. Station C) 5/82



219-17 Bay detail, 64 Grove St.
5/82



219-15 Corner detail, 64 Grove St.
5/82



HISTORIC RESOURCES INVENTORY

CP

Street or rural address: _____

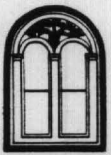
Pacific Gas and Electric Company Station C



219-22 628 Embarcadero/106 Grove St.
(P.G. & E. Station C) 5/82



219-12 50 Grove St.
(P.G. & E. Station C) 5/82


HISTORIC RESOURCES INVENTORY

CP

 Street or rural address: Pacific Gas and Electric Company Station C

 19. Historical and/or Architectural Importance (continued from page 2)

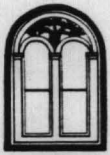
Annual of 1890, p.20, was incorporated in 1866 by Anthony Chabot, James Freeborn, H.H. Haight and Joseph G. Eastland. In 1870 it acquired the waterfront marsh land between Castro and Clay Streets, and began the process of reclamation and construction. When electric lighting began to appear in competition with gas light, the company decided to produce both, the first company on the West Coast to do so. Coleman in P.G.& E., p.41, reports that it reincorporated in 1884 as the Oakland Gas Light & Heat Co., which built its first electric plant in 1885. This plant proving inadequate to projected needs, on 25 July 1888, the Oakland Enquirer, p.2, noted commencement of a new electric power plant, four bays of whose original 7-bay length exists today as c.74 Grove Street. With a salt-water supplied Hamilton-Corliss steam engine and dynamos costing \$60,000, the new plant was expected to quintuple the company's electric production capacity. The article estimated \$40,000 for building construction.

The 1889 Sanborn map and a photograph published in the Tribune Annual of 1898 together indicate that shortly after completion of c.74 Grove Street the Oakland Gas Light & Heat Co. constructed the matching 5-bayed power plant addition known as 64 Grove Street.

The man whom the Enquirer noticed in 1888 as the company's secretary was a Bostonian named John A. Britton, who began working for Oakland Gas Light about 1875 (Coleman, p.155-56). Through hard work, night school and marrying boss Van Leer Eastland's step-daughter, he became president of the company in 1900, at the age of 45. Britton played a role in the successive mergers of local and generating enterprises that resulted finally in the Pacific Gas & Electric Company. He was director and vice-president of the closely held California Central Gas & Electric, then general manager of P.G.& E. for its first 20 years.

Meanwhile the small building at 50 Grove Street had been erected in 1899-1900 for the Standard Electric Co., which Coleman (p.147) indicates was mostly a transmission company, though it was also building the Electra hydroelectric power plant on the Mokelumne River. In the Grove Street building it handled power from the Bay Counties Company's Colgate hydroelectric plant via the first high-power cables ever to cross the Carquinez Strait. This power Standard Electric delivered to Oakland Gas Light & Heat's system just a few feet away at 64 Grove Street. No wonder mergers produced the unified P.G.& E.

The California Architect & Building News for September 1899, p. xiii, stated this "Building, Grove near First" (Embarcadero) for Standard Electric Company, projected to cost \$2544, was by Walter J. Mathews, architect. Mathews (1850-1947) maintained one of the Bay Area's longest-lived architectural practices, beginning in 1874 as junior partner of his father Julius C. Mathews, suspending in 1883 for a year's educational travel in England, Germany and France, and continuing thenceforth on his own well into old age. He built residences, business buildings, government buildings, banks, and department stores--4 miles worth by 1911. He designed structures in San Francisco, Los Angeles, San Luis Obispo, Redondo Beach and on Angel Island, but especially in his home city of Oakland. Here he built the First Unitarian Church (681-85 14th Street, 1890), the Easton or Union Savings Bank Building (1300 Broadway, 1904), the Will Rogers Hotel (371-75 13th Street, 1906), the Metcalf House (1909), and the Central Bank Building (1400-16 Broadway, 1926, in association with George Kelham) (see SHRI forms). He was consulting architect for the Hotel Oakland and the Oakland Auditorium. The Standard Electric plant is one of his very few known industrial buildings.



HISTORIC RESOURCES INVENTORY

CP

Street or rural address: Pacific Gas and Electric Company Station C

19. Historical and/or Architectural Importance (continued from page 10)

The next addition to the P.G. & E. complex, 629 Embarcadero, is the subject of Oakland building permit #13399, issued Aug. 1908, for a \$35,000 "one-story steel and corrugated iron power station" designed by Henry C. Vensano, engineer. A photograph published in 1911 by P.G. & E. in Properties Owned & Operated shows this building as the earliest section of the present Embarcadero facade. Four bays wide, it has all the design elements characteristic of the whole facade: tall and narrow round-headed windows set in panels, piers with rusticated quoins marking each pair of panels, box cornice with consoles, paneled parapet masking the roof, and the plain base. The permit's "corrugated iron" probably was the side surface material.

Henry Vensano (1881-1960), therefore, created the design of the Embarcadero facade, which his successors copied and expanded. Born in San Francisco of an Italian father and a California-born mother of Mairéparentage, he earned a degree in civil engineering from the University of California in 1903 and worked briefly for the Minneapolis Steel & Machinery Company. By the 1908 San Francisco Directory he was civil engineer for the San Francisco Gas & Electric Co., which soon merged into the P.G. & E. In nearly 10 years with the Company he supervised several large power developments, including Oakland's Substation C. Next he went into a partnership with Edward G. Cahill, a business that later developed into the giant Cahill Construction Company, but without Vensano. With Cahill or later alone, Vensano is credited in his obituary (S.F. Examiner, 9 Oct. 1960, p. 15/1) with "numerous industrial buildings, 17 dams and three Sacramento River pumping stations." In 1936 he joined the Golden Gate International Exposition (Treasure Island Fair of 1939-40) as chief of construction and assistant works director, becoming director of works in 1940. He was Director of San Francisco's Department of Public Works 1942 to 1950.

Vensano seems also to have designed the second matching section of the Substation's Embarcadero frontage, 605 Embarcadero. Building permit #58348, issued 30 Oct. 1920, calls for a \$27,000 building by Cahill & Vensano. Plans for the 1927 permit (see below) show 8 bays of the facade as pre-existing. So in 1920-21 Cahill & Vensano must have put up a 4-bay addition to the east of Vensano's original 4-bay building of 1908. They matched perfectly.

Before the expansion on Embarcadero, a free-standing P.G. & E. building had been erected at c.75 Jefferson Street. This building appears exactly as at present (though now with some windows painted over) both as pre-existing on the 1927 plans and in a photograph published in 1915 in the Hegemann Report, p.39. No building permit exists; construction must have occurred between the 1911 Sanborn map, where the space is vacant, and the 1915 photo.

On 18 Nov. 1927 building permit #A30632 was approved for \$150,000 for three additions to Station C by I.C. Frickstad. Plans exist, which show the intended work as one bay at the southeast corner of Embarcadero and Jefferson (601 Embarcadero), two bays on Embarcadero west of the previously built 8 bays (c.635 Embarcadero), and the southern section of the Jefferson Street facade (51 Jefferson). Frickstad carefully showed the precise relationships between old and new, with instructions such as "Present quoins to be cut off and rebuilt," or "Dotted lines show existing work (in cornice & parapet)." From these elevations the windows could be restored.

Ivan C. Frickstad appears in San Francisco Directories as a draftsman, independent in 1902, working for Newsom & Newsom in 1903 and for Albert Farr in 1905. He lived

(see continuation page 12)



HISTORIC RESOURCES INVENTORY

CP

 Street or rural address: Pacific Gas and Electric Company Station C

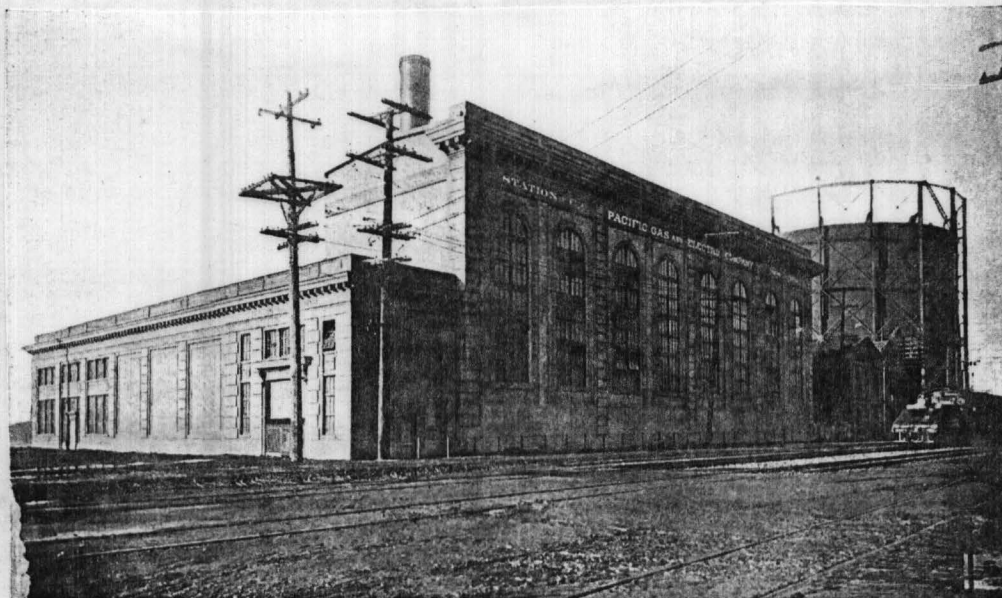
 19. Historical and/or Architectural Importance (continued from page 11)

in Oakland and later practiced architecture here. Splendid Survivors, p.176, identifies him as a P.G. & E. "company architect who did a number of substations and office buildings based on prototypes by Willis Polk and Frederick Meyer." Indeed, the bracketed entablature over the Jefferson Street truck entry seems derived from Polk's Jessie Street Substation in San Francisco. However Frickstad's own P.G. & E. buildings are highly rated, and his expansion here of the already extant Embarcadero frontage shows an unusual sensitivity in continuing a good design rather than attempting to supersede it.

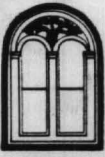
Frickstad is due even more credit for continuing his sensitive copying as late as 1937-38 in the four-bay section completing the full block facade, 645 Embarcadero. His name appears as the designer of the \$100,000 addition on permit #A70575, approved 1 Dec. 1937. The plans include a detailed profile of the Polk-type bracketed entablature above the truck entry on Grove.

A few months earlier, on 12 May 1937, the City had approved permit #A67752 for an \$80,000 3-story concrete Substation across the street at 628 Embarcadero/106 Grove, also by Frickstad. Here, since he was not continuing an extant facade, he interpreted more freely: without the round-headed windows, the consoles or the stucco veneer. However the monumentality and the rhythm, quoins and cornice all carry over from the Vensano-Frickstad facade of 601-45 Embarcadero.

The complex as a whole and two of its three component buildings as individual structures appear eligible for listing on the National Register of Historic Places. When it is 50 years old, 628 Embarcadero/106 Grove Street should also become eligible for listing.



P.G. & E. Station C, 1916 view;
 Source: Pacific Service Magazine



HISTORIC RESOURCES INVENTORY

CP

Street or rural address: Pacific Gas and Electric Company Station C

21. Sources (continued from page 2)

Oakland Enquirer, 25 July 1888: 211.

Montclarion, 12 Oct. 1982: 9.

Illus. Ed. Oak. Trib., 1890: 20.

Hegemann, Werner, Report on a City Plan for the Municipalities of Oakland & Berkeley, 1915: 39-51.

Building Permits & (*)Plans

1908 - #13399, 19 Aug., 1-st. steel & corrug. iron
\$35,000, H.C. Vensano eng'r.

1920 - #58348, 30 Oct., NW Water & Jefferson
\$27,000, Cahill & Vensano

1927*- #A30632, 18 Nov., SW Jefferson & 1st(Embarcadero)
\$150,000, -----

1937/38*- #A70575, finalized 23 Nov. 38, SE 1st & Grove
\$100,000, -----

1937 - #A67752, 12 May, Switch & Control House,
\$80,000, Ivan C. Frickstad

CA & BN XX #9 (20 Sept 1899): xiii .

Coleman, Chas. M., P.G. & E. of Calif., NY 1952, McGraw Hill

Oakland Cultural Heritage Survey, "Walter J. Mathews" file
"Henry C. Vensano" file
"Ivan C. Frickstad" file

Sanborn Maps 1889-1901, 1902-1911, 1912-1935, 1912-1947

Pacific Service Magazine, July 1916: 51



217-29 51 Jefferson St.
(P.G. & E. Station C) 5/82