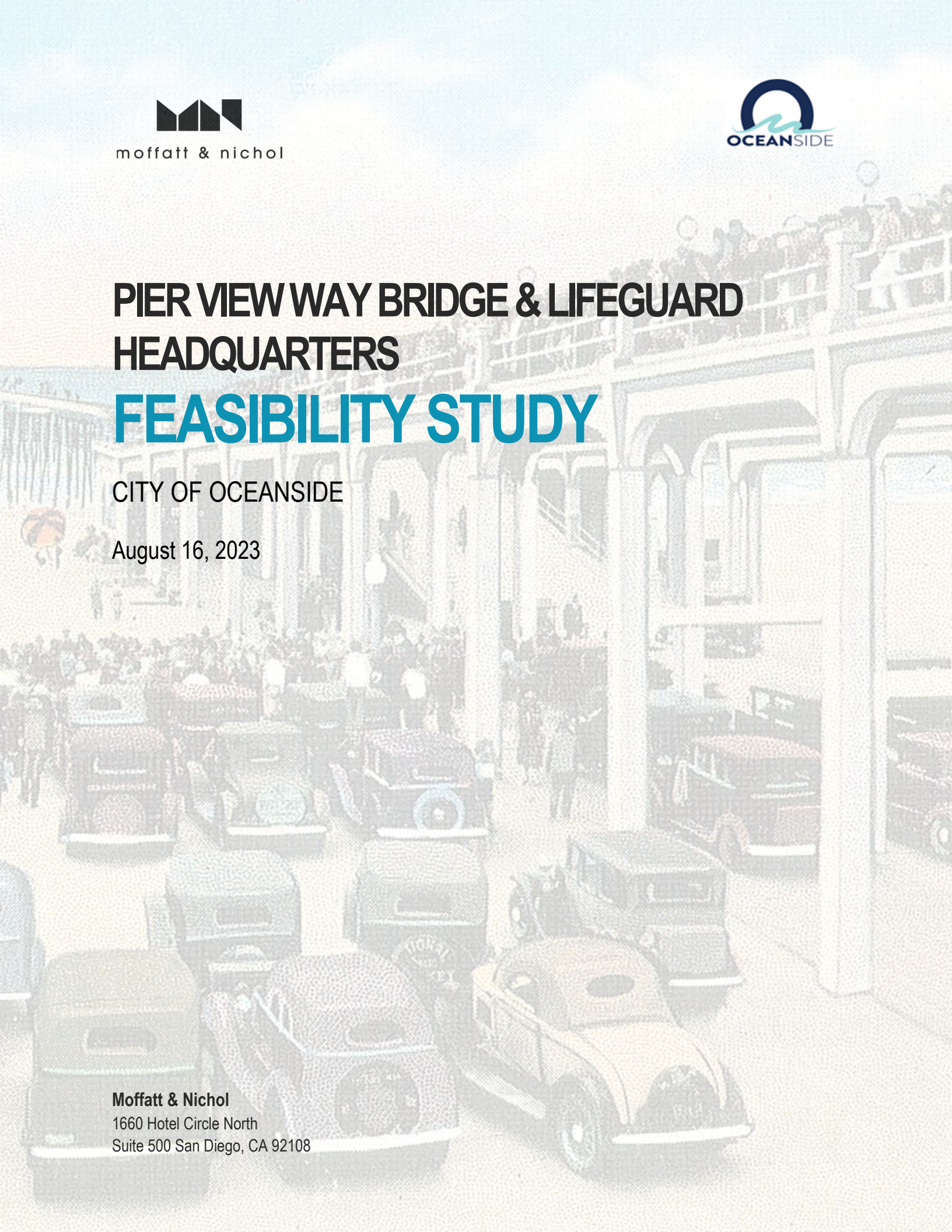
Appendix B-2

Pier View Way Bridge & Lifeguard Headquarters
Feasibility Study



PIER VIEW WAY BRIDGE & LIFEGUARD HEADQUARTERS

FEASIBILITY STUDY

CITY OF OCEANSIDE

August 16, 2023

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Glossary

ADA	Americans with Disabilities Act
ACM	Asbestos-Containing Material
CCC	California Coastal Commission
CEQA	California Environmental Quality Act
CHBC	California Historical Building Code
CDP	Coastal Development Permit
CMP	Corrugated Metal Pipe
DIP	Ductile Iron Pipe
ft	Feet
HBM	Hazardous Building Materials
HVAC	Heating, Ventilation, and Air Conditioning
JSBCC	Junior Seau Beach Community Center
LCS	Lead-Containing Surfaces
OPC	Ocean Protection Council
OHPAC	Oceanside Historic Preservation Advisory Commission
PFR	Preliminary Foundation Report
PVC	Polyvinyl Chloride
PEIR	Program-Level Environmental Impact Report
RWQCB	Regional Water Quality Control Board
RCP	Reinforced Concrete Pipe

SOHO	Save Our Heritage Organisation
SLR	Sea Level Rise
SHPO	State Historic Preservation Officer
SLC	State Lands Commission
TWL	Total Water Level
USACE	United States Army Corps of Engineers
VMT	Vehicle Miles Traveled
VCP	Vitrified Clay Pipe

1. Executive Summary

This feasibility study summarizes the findings of the Phase 1 Schematic Design process for the Pier View Way Bridge & Lifeguard Headquarters Project. The project proposes improvements to the Pier View Way Bridge ("Pier Bridge") and Lifeguard Headquarters, located at the east end of the Oceanside Municipal Pier. The Pier Bridge was constructed in 1927, and despite maintenance efforts over the years, it has reached the end of its useful service life. The Lifeguard Service is operated out of its headquarters located at the base of the Oceanside Municipal Pier. The Lifeguard Headquarters, constructed in 1987, is integral with the Pier Bridge and also continues to deteriorate with time. Additionally, the facility is undersized for the current and future needs of the Lifeguard Service.

Improvements to the existing structure must carefully consider its local historic significance. Though not listed on the National Register of Historic Places, the structure is eligible for designation and qualifies as a historic resource under CEQA. In addition, the project must consider sea level rise and other key issues in order to meet requirements of environmental and permitting agencies. Due to the constraints associated with the bridge's local historic significance, two alternatives are possible to address its poor condition: 1) restoration of the bridge, maintaining the existing materials where possible, or 2) reconstructing the bridge to match the original structure. The condition of the existing bridge's structural materials is such that restoration would result in a shorter service life and would cost significantly more.

Pursuant to Section 30254 of the Coastal Act, the existing Lifeguard Headquarters is considered a coastal dependent essential "public works facility" that is vital to the continued health and safety of Oceanside's public recreation, commercial recreation, and visitor-serving land uses. To address the current and future operational needs of the Lifeguard Service, several alternatives were considered in the vicinity of the current headquarters location. As the footprint and height of the existing Lifeguard Headquarters cannot be modified due to CEQA historic protections, it was determined additional space beyond the existing headquarters building footprint is needed.

In addressing the Pier Bridge and Lifeguard Headquarters needs, this project also presents an opportunity to provide public enhancements to the area. Proposed improvements include an enhanced public view deck, plaza patio, and new ADA access from Pacific Street to The Strand.

Phase 1, Schematic Design, for this project began in March 2021 and culminates with this Feasibility Study. Based on the findings from the schematic design phase, staff recommends in-kind reconstruction of the existing Pier Bridge and Lifeguard Headquarters, with a new Lifeguard Support Facility to the east of The Strand to augment the Lifeguard Headquarters (Figure 1.1; Figure 1.2; Figure 1.3; Attachment 1). Phase 2, Preliminary Design and Environmental, will follow contingent upon City Council approval.

FIGURE 1.1: STAFF-RECOMMENDED OPTIONS (SITE PLAN)

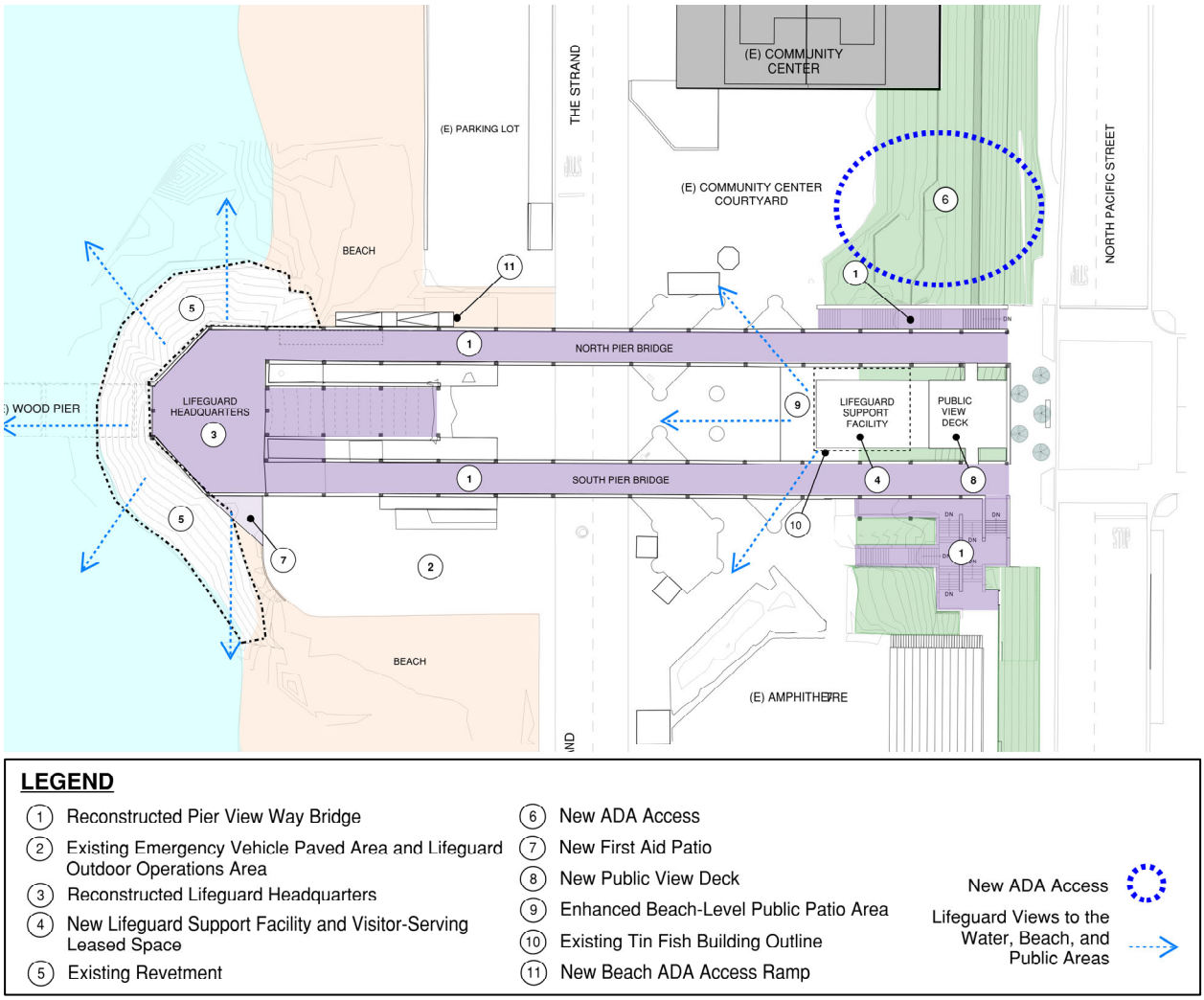


FIGURE 1.2: STAFF-RECOMMENDED OPTIONS (3-D VIEW)

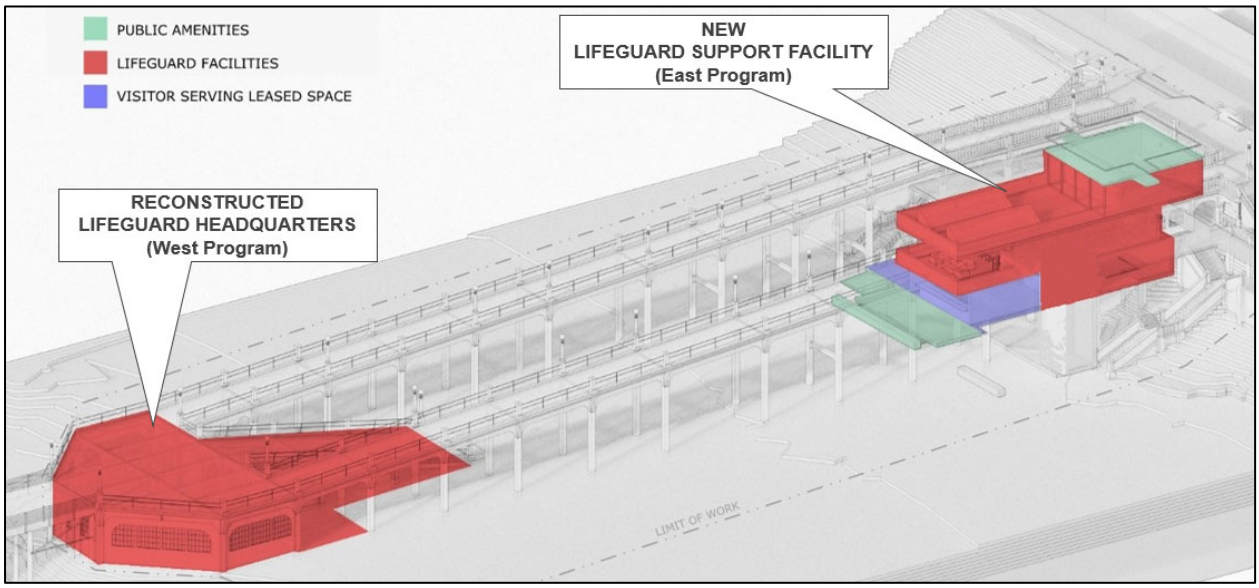
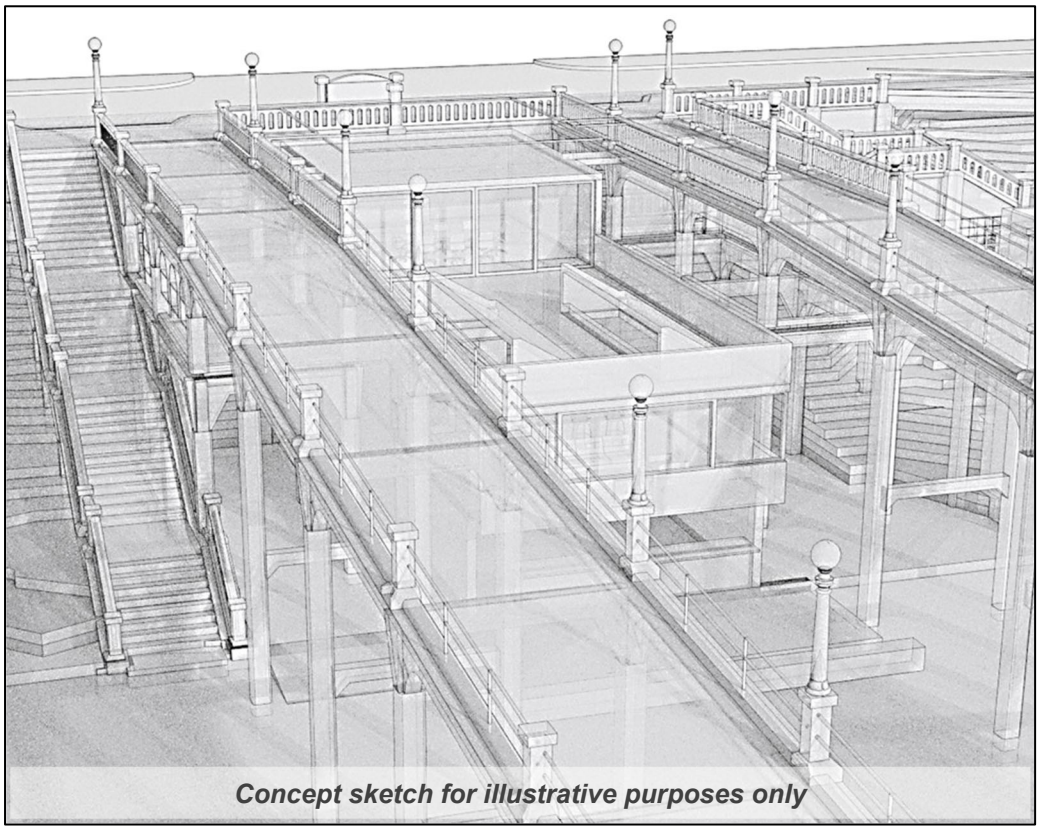


FIGURE 1.3: STAFF-RECOMMENDED OPTION (3-D VIEW, EAST LIFEGUARD SUPPORT FACILITY)



2. Project Overview

2.1. Introduction

The Pier View Way Bridge ("Pier Bridge") is the primary entrance and exit to the Oceanside Municipal Pier, located at the terminus of Pier View Way in Oceanside, California. The concrete structure, which spans over The Strand, was designed by Oceanside City Engineer R.L. Loucks and constructed in 1927 (Figure 2.1). The bridge was originally constructed with a public dining room at the western end of the concrete structure where it abuts the wooden pier; in 1987 this was converted to the Lifeguard Headquarters which is still present today.

The bridge is over 95 years old and despite maintenance efforts over the years, most recently in 2016-2018, the structure, including the Lifeguard Headquarters, continues to deteriorate and has reached the end of its service life. At the same time, the Lifeguard Service has outgrown the current Lifeguard Headquarters facility, and additional space is required for current and future operational needs.

This project provides an opportunity to address both the condition of the Pier Bridge and the space needs of the Lifeguard Service which operates out of the headquarters, while simultaneously enhancing these spaces to improve the overall public experience, access, and usability. Improvements to these facilities involve evaluating constraints for facilities with historic protections, requirements dictated by CEQA and permitting agencies, as well as the needs of the public.

The project consists of the following phases:

- Phase 1 Schematic Design (Current Phase)
- Phase 2 Preliminary Design & Environmental
- Phase 3 Final Design & Permitting
- Phase 4 Construction

Separately but concurrently, the Beachfront Improvements Feasibility Study - Phase II explored potential improvements to the nearby Junior Seau Beach Community Center, Junior Seau Pier Amphitheater and Bandshell, and the public spaces in between.

In the City's effort to evaluate and plan the beachfront area cohesively, Phase 2, Preliminary Design & Environmental, of the Pier View Way Bridge & Lifeguard Headquarters Project will coordinate and incorporate the Beachfront Improvement Feasibility Study - Phase II proposed improvements. Figure 2.2 shows the components studied for each area.

FIGURE 2.1: EXISTING PIER BRIDGE AND LIFEGUARD HEADQUARTERS STRUCTURE



FIGURE 2.2: EXISTING SITE OVERVIEW

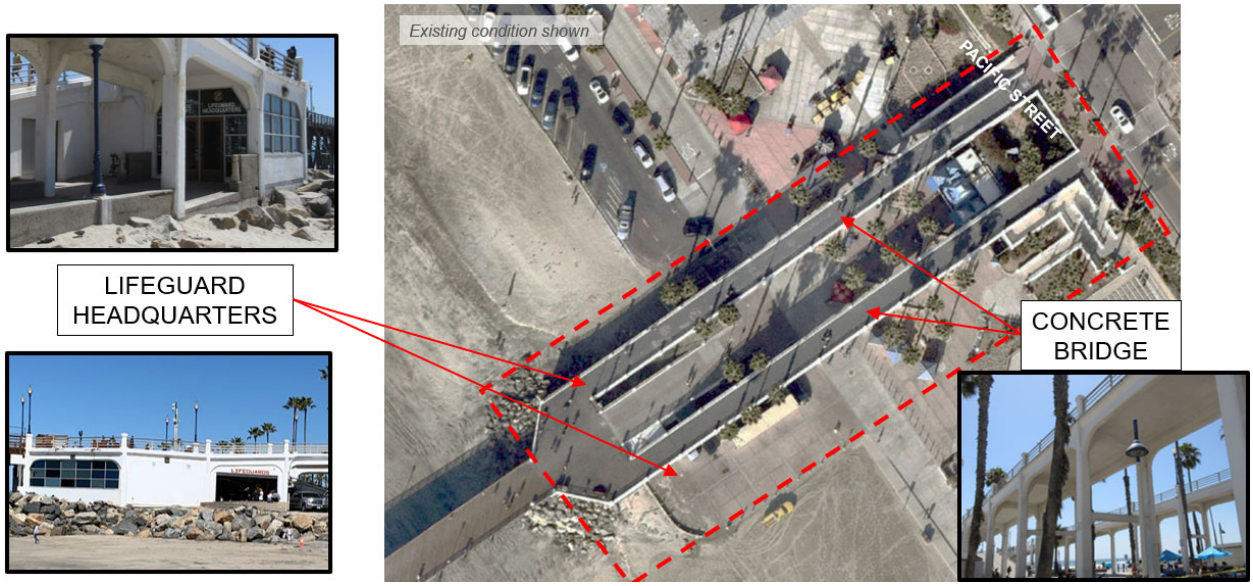


2.2. Existing Conditions

2.2.1. Project Site and Configuration

The existing Pier Bridge serves as an important link between Pacific Street and the Oceanside Municipal Pier. On the east side of the bridge, stairs connect from the bridge down to the pier plaza below on both the north and south sides (Figure 2.3). Alongside the stairs are elevated enclosed areas currently used for storage that were once restrooms. The Lifeguard Headquarters is located at the western end of the structure in a space that was originally a public dining area.

FIGURE 2.3: PROJECT SITE (EXISTING)



Improvements to the Pier Bridge and Lifeguard Headquarters must consider the overall context of the project site and surrounding area. The bridge is perched above the pier plaza which is utilized by vendors, beachgoers, and visitors. Located between the bridges on the east side of the site is a visitor-serving leased restaurant space, currently housing the Tin Fish, with seating scattered throughout the pier plaza area (Figure 2.4). Near its midway point, the bridge spans The Strand, the main thoroughfare along the beach.

Just north of the Pier Bridge is the Junior Seau Beach Community Center, a 17,000 square-foot facility that hosts a number of activities throughout the year, including youth sports, day camps, and after school programs. Directly south of the bridge is the Junior Seau Pier Amphitheater and Bandshell; the bandshell and current 2,500-person amphitheater are known for holding concerts, graduation ceremonies, and special events. A bait shop and Lifeguard Dispatch Tower are located near the midway point of the wooden portion of the pier, with a restaurant located at the pier's westerly terminus.

FIGURE 2.4: VISITOR-SERVING LEASED RESTAURANT SPACE (TIN FISH)



2.2.2. Existing Pier Bridge and Lifeguard Headquarters

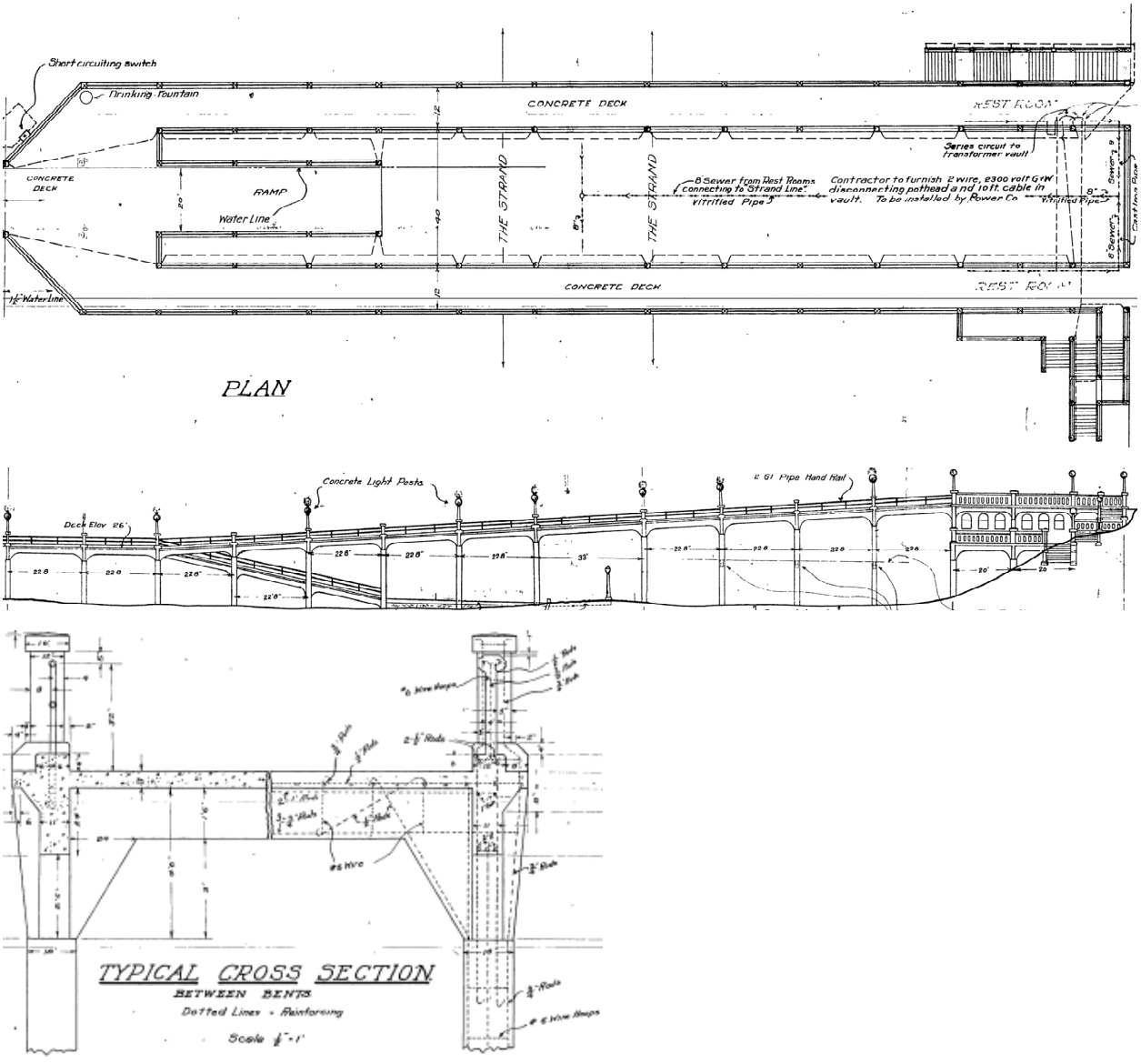
The existing Pier Bridge is a cast-in-place reinforced concrete structure constructed in 1927. The bridge has 15 spans, with a typical span length of 22'-8", minimum spans of 20'-0" at the enclosed storage areas, and a maximum span of 33'-0" over The Strand. The total length of the structure is 340'-4", which includes

the Lifeguard Headquarters at the base of the pier at the western end of the project site. The typical bridge cross section is 15'-4" wide measured to the edge of deck. The bridge is split into a north and south structure at the east end of the site; the two structures converge at the west end to form the shell of the Lifeguard Headquarters. A three-span vehicular ramp slopes down from the west end to The Strand. At the east end, an enclosed storage area is located below deck level, accessed by stairs on the north and south sides of the bridge.

The existing bridge superstructure is comprised of a 7-inch-thick reinforced concrete deck supported on 2-foot-deep reinforced concrete beams. The superstructure is supported on 18-inch square reinforced concrete columns. At the Lifeguard Headquarters on the west end, the columns are supported on timber pile foundations. All other columns are supported on spread footings.

Record drawings for the Pier Bridge can be found in Figure 2.5 and Attachment 2.

FIGURE 2.5: PIER BRIDGE RECORD DRAWINGS



The Lifeguard Headquarters, constructed in 1987, is integral with the Pier Bridge. The facility consists of a reception area, first aid area, meeting room, garage, offices, and locker rooms (Figure 2.6).

FIGURE 2.6: LIFEGUARD HEADQUARTERS



2.2.2.1. Structural Inspection (2006-2007; 2018)

A Waterfront Facility Inspection (WFI) Report for the Oceanside Municipal Pier and Pier Bridge was prepared in draft form in 2007. The inspection covered all exposed surfaces of the structure, utilizing a manlift to access difficult-to-reach areas (Figure 2.7). Concrete core samples were taken at 16 locations on the bridge, and testing of these samples showed chloride ion content up to 14 times the threshold for corrosion of reinforcing steel. The overall rating of the bridge at the time was “Fair”, meaning all primary structural elements were sound, but minor to moderate defects and deterioration were observed. In addition, the railings, deck and ramp were rated “Poor” in condition.

In 2018, the draft Waterfront Facility Inspection Report was updated and finalized (Due to file size report available in project file). The overall bridge condition was re-evaluated and downgraded from “Fair” to “Poor”. Advanced deterioration was observed on widespread portions of the structure.

FIGURE 2.7: 2006 - 2007 STRUCTURAL INSPECTION



2.2.2.2. 2016-2018 Concrete Maintenance Efforts

From 2016 to 2018, the City performed maintenance efforts on the underside of the bridge deck, beams, and columns as a temporary measure aimed at addressing spalling concrete over the short term.

FIGURE 2.8: 2016 - 2018 CONCRETE MAINTENANCE EFFORTS



2.2.2.3. Ongoing Deterioration

Despite maintenance efforts, spalling and delamination of the concrete continues. In 2021, a large piece of concrete spalled off the ceiling of the Lifeguard Headquarters, landing on the desk of the Lifeguard Captain (Figure 2.9). In the storage area, portions of the ceiling concrete have spalled and appear to be held intact by the ceiling paint (Figure 2.10). This type of deterioration will continue as corrosion of the reinforcing steel continues.

FIGURE 2.9: CONCRETE SPALLING IN LIFEGUARD HEADQUARTERS



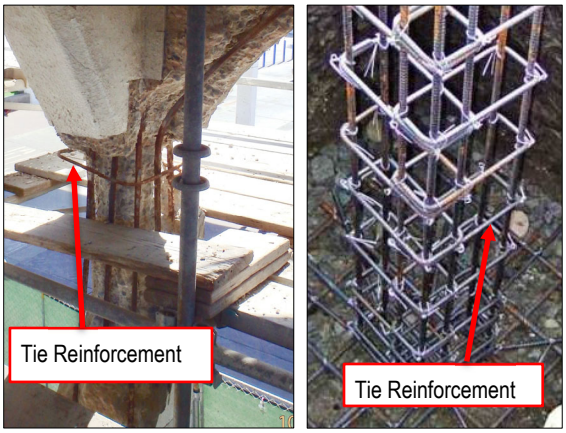
FIGURE 2.10: CONCRETE SPALLING IN STORAGE AREA



2.2.2.4. Seismic Deficiencies

In addition to its deteriorating condition, the structure also has a number of seismic deficiencies typical of structures constructed over 90 years ago. Most notably, the bridge column reinforcement is significantly less than what is required to meet current seismic design codes. Figure 2.11 shows the existing column reinforcement (left) compared with modern column reinforcement (right). Tie reinforcement in modern columns is spaced much closer to provide ductility during a seismic event. This is discussed along with other seismic deficiencies in a 2018 Seismic Deficiencies Letter (Attachment 13).

FIGURE 2.11: COLUMN REINFORCEMENT DETAILING



2.2.3. Utilities

A number of utilities are present at the timber pier, Pier Bridge, Lifeguard Headquarters, and surrounding plaza area. The timber pier carries an assortment of utilities, including a 6-inch water line, 4-inch sewer line, and 1.5-inch gas line, along with a number of miscellaneous 2-inch to 4-inch conduits for electrical, lighting, and telecom. The utilities transition down from the pier into the ground through a housing on the west face of the Lifeguard Headquarters (Figure 2.12). From there most utilities are routed around the north face of the Lifeguard Headquarters towards the pier plaza area. Several of the pier utilities are being upgraded as part of the City's Pier Utility Replacement Project (Section 2.5.2) which commenced work in November 2022.

FIGURE 2.12: PIER UTILITIES AT LIFEGUARD HEADQUARTERS



Along the Pier Bridge, electrical conduit for the light poles runs along the inside bridge curbs before transitioning into the ceiling of the Lifeguard Headquarters. The enclosed storage areas that were once restrooms have water, sewer, and electrical utilities.

The Lifeguard Headquarters and the visitor-serving leased restaurant space have standard building utilities, including water, sewer, HVAC, electrical, and telecom.

A 36" storm drain from Pacific Street runs parallel along the north side of the bridge stairs, under the pier plaza, and includes an outfall integrated with the rip-rap at the Lifeguard Headquarters. The storm drain ties into a precast drainage structure on the northeast side of the bridge.

Several utilities run parallel with The Strand, including sewer, gas, electrical and telecom. Potholing will be performed during a future phase of the project to provide additional information. A summary of available utility information is shown in Table 2-1.

TABLE 2-1: EXISTING UTILITIES

EXISTING UTILITIES		
Type	**Location**	**Disposition**
2" Lighting Conduits	Pier	Protect in place
5 Electrical Conduits (2" to 4")	Pier	Protect in place
2 – 2" Telecomm	Pier	Protect in place
1" Conduit	Pier	Protect in place
8" Water	Pier Pier Plaza (Northwest)	As part of Pier Utility Replacement Project (by others): Exist 8" to be designated for Firewater. Add new 3" Domestic Water. Protect in place
1.5" Gas	Pier Pier Plaza (Northwest)	Protect in place
4" DIP Sewer Force Main	Pier Pier Plaza (Northwest)	Protect in place
18" CMP Storm Drain (Abandoned)	Pier Plaza (Northwest)	Protect in place
36" RCP Storm Drain w/ outfall	Pier Plaza (along pier length)	Protect in place
Storm Drain Structure	Pier Plaza (Northeast)	Protect in place
12" PVC Sewer Main	The Strand	Protect in place
8" VCP Sewer (Abandoned)	The Strand	Remain in place
Gas (unknown size)	The Strand	Protect in place
Electrical (unknown size)	The Strand	Protect in place
Telecomm (unknown size)	The Strand	Protect in place
Electrical conduit	Pier Bridge (along length)	Remove and replace
Water, sewer, and electrical utilities for former restrooms	Pier Bridge (enclosed balcony)	Remove
Various utilities inside Lifeguard Headquarters Building	Lifeguard Headquarters	Remove and replace
Various utilities inside the visitor-serving leased restaurant	Tin Fish	Remove and replace

2.3. Historical & Architectural Considerations

2.3.1. Architectural Changes over the Years

The aesthetic of the structure has changed over its more than 95 year lifespan. The original surface was bare concrete; the gunite coating present today was added around 1938 to protect the structure (Figure 2.13) and is now coated with white paint. The gunite has dulled the sharp details of the original cast concrete. The original precast balustrades have also been coated and the metal pipe rails have been modified to meet code requirements (Figure 2.14). The original light fixtures with spherical globes have been replaced with newer acorn lights (Figure 2.15).

The elevated enclosed spaces on the northeast and southeast bridge balconies were originally used as public restrooms. Arched windows on the outside face were infilled around 1987 when the spaces were converted to storage (Figure 2.16).

The original structure incorporated a municipal dining room on the lower western end of the project site where the two bridges converge (Figure 2.17). In 1987, this space was infilled to become the Lifeguard Headquarters. Additionally, the windows were all replaced and the stone-lined outdoor barbeque pits were removed. A raised stage was originally located between the north and south Pier Bridges at the east end of the site. This location now houses the visitor serving leased restaurant space for the Tin Fish (Figure 2.18).

Figure 2.13 through Figure 2.18 contain photos comparing the original structure to the present day. All photos of the original structure were obtained from the Oceanside Historical Society. A Historical Integrity Summary can be found in Attachment 7.

FIGURE 2.13: PIER BRIDGE VIEW FROM PACIFIC STREET (ORIGINAL VS. PRESENT DAY)



FIGURE 2.14: PIER BRIDGE CONCRETE BALLUSTRADES (ORIGINAL VS. PRESENT DAY)

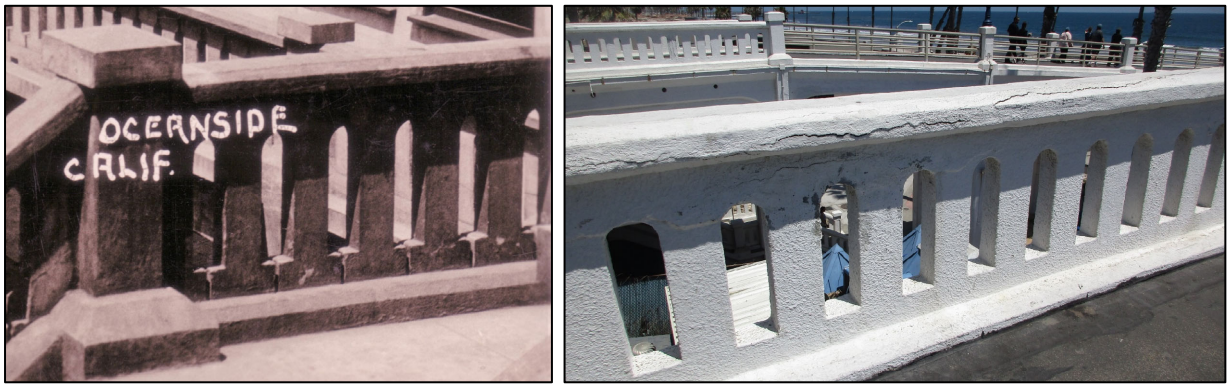


FIGURE 2.15: LIGHT FIXTURES (ORIGINAL VS. PRESENT DAY)



FIGURE 2.16: BALCONY WINDOWS (ORIGINAL VS. PRESENT DAY)

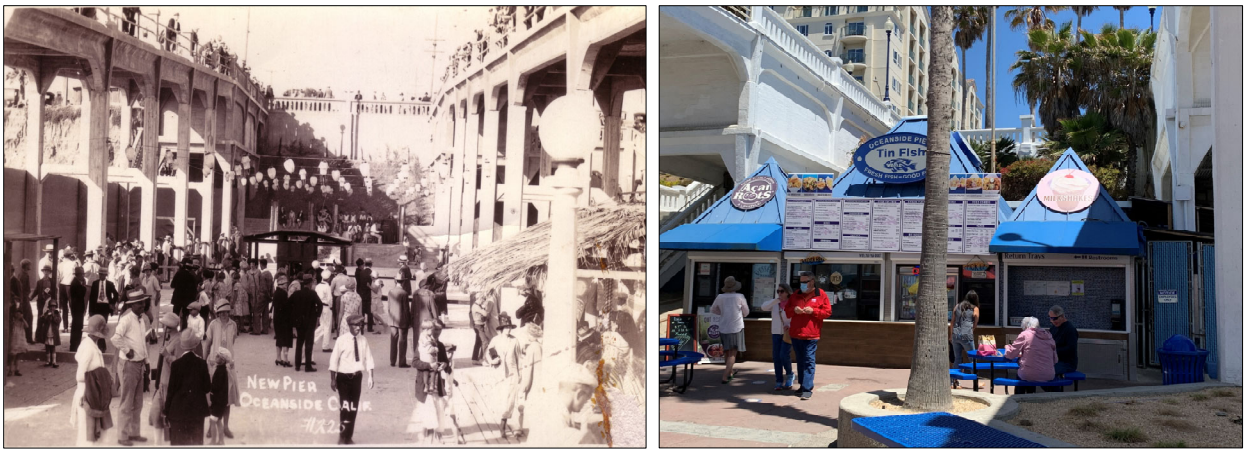


FIGURE 2.17: ORIGINAL DINING ROOM (PRESENT DAY LIFEGUARD HEADQUARTERS)





FIGURE 2.18: AREA BETWEEN PIER BRIDGES (ORIGINAL VS. PRESENT DAY)



2.3.2. Structure Considerations – Historic Protections

While the Pier Bridge is not on the National Register of Historic Places, it is eligible for designation and qualifies as a historic resource under CEQA due to the important role it has played in the history of Oceanside. Reconstruction of the structure would be required to follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction*. The reconstruction would be in-kind in terms of matching the proportions and character of the original bridge, including replicating the board-formed bare concrete finish and color, wood windows at the restrooms, original precast concrete light posts, individual precast concrete balustrades, and the pipe railing (with code-compliant modifications).

The slope of the existing bridge is approximately 6%. To meet ADA requirements, the bridge slope would need to be flattened to 5%, or landings would need to be provided along the length of the bridge. However, both of these options would impact the character of the bridge. Structures with CEQA historic protections can gain exemptions for this reason, as the California Historical Building Code (CHBC) allows for disabled access exceptions to the regular code.

On the west end of the existing bridge, a steep vehicle ramp with a slope of approximately 19% connects from the bridge down to the pier plaza. This ramp is currently used for vehicular service and pedestrian access and is significantly steeper than allowed by ADA code. The slope cannot be modified without violating *Secretary of the Interior's Standards*.

The Lifeguard Headquarters is a non-original component and rehabilitation or reconstruction performed on this portion of the structure must not detract from the look, feel, and character defining features of the Pier Bridge. Additionally, the footprint and ceiling height of the Lifeguard Headquarters cannot be modified without violating *Secretary of the Interior's Standards*.

The new Lifeguard Support Facility (Section 3.2.2) and any other new public improvements must be designed such that it is compatible with the existing structure, but also differentiated so as not to create a false sense of history. In addition, this building must be designed structurally such that future removal would not impact the integrity of the adjacent Pier Bridge.

2.3.3. Visual Impacts

The California Coastal Act requires protection of the scenic and visual qualities of coastal areas as a resource of public importance. Reconstruction or rehabilitation of the existing Pier Bridge and Lifeguard Headquarters should not negatively affect the current view corridor (Figure 2.19).

FIGURE 2.19: EXISTING EYE-LEVEL VIEWS FROM PACIFIC STREET



2.4. Lifeguard Service Needs

The Oceanside Lifeguard Service provides public safety to users of Oceanside's coastline and ocean waterways from the Oceanside Harbor entrance to the south city limits, approximately 3.7 miles of beach. A component of Phase 1, Schematic Design was to understand the needs of the Lifeguard Service as its headquarters is integral with the pier structure, located at the base of the Oceanside Municipal Pier. The Lifeguard Service also includes the Junior Lifeguard Program and Marine Safety Unit (MSU) which operate out of several facilities in the harbor. Meetings were held with the Oceanside Lifeguard Division throughout this phase of the project to understand the Lifeguard Service including the constraints of their current headquarters building, and current and future operational needs.

The Lifeguard Service operates year-round, with summer operational hours from 8:00 am to 8:00 pm and winter hours from 8:00 am to 6:00 pm. Additionally, lifeguard services and special teams are a part of the 911 system and respond to after-hours emergencies. Lifeguard responsibilities include water rescue of swimmers and surfers, emergency medical care, boat rescues, underwater search and rescue teams, swift-water rescue teams for river or flood emergencies, missing persons, and other related emergencies. Oceanside Lifeguards also handle enforcement of Oceanside Beach laws and regulations through citation and arrest in assistance of the Oceanside Police Department.

The Lifeguard Headquarters is a coastal-dependent land use required for public health and safety pursuant to Section 30254 of the Coastal Act. The current location of the Lifeguard Headquarters provides critical views of the beach, particularly at and under the pier where the strongest rip currents occur (Figure 2.20).

FIGURE 2.20: VIEWS FROM CURRENT LIFEGUARD HEADQUARTERS



Based on the type and number of incidents and medical aid calls near the pier and along the beach, it is imperative to maintain these observation points and keep the Lifeguard Headquarters in its current location to ensure expedited response times. In fiscal year (FY) 2022, the Lifeguard Service ran 8,682 calls for service with a total number of 54,887 victims/ involved parties (Figure 2.21). These calls for service included minor medical aids, major medical aids (including Oceanside Fire Department response), ocean rescues, boat rescues, enforcement contacts and preventative actions adjacent to the pier area. Other Lifeguard Service facilities, including the Junior Lifeguard building in the harbor, do not have the adequate size to house the program or provide the same critical views and expedited emergency response times as the current headquarters location does.

FIGURE 2.21: GEOGRAPHIC "HOT SPOT" INCIDENT MAP (FY 2022)



The Lifeguard Headquarters is deteriorating similarly to the pier structure and undersized for current and future Lifeguard Service needs. The facility was constructed in 1987 and is approximately 3,700 square feet which includes a meeting room, office/work spaces, locker rooms, lobby, first aid room, kitchen, dive locker and storage (Figure 2.22). The Lifeguard Headquarters requires office/work spaces for the Lifeguard Captain, Lieutenants, Sergeants, and Senior Lifeguards. As the number of Lifeguard staff has increased, the offices and workstations in the current facility have become crowded and undersized for staffing needs.

A central meeting space large enough to accommodate all daily staff is also needed to facilitate daily briefings and gatherings, including shift changes.

FIGURE 2.22: CURRENT LIFEGUARD HEADQUARTERS



To understand the current and future staffing and space needs for the Lifeguard Headquarters a detailed assessment/ survey was performed (Attachment 5). Findings showed the existing Lifeguard Headquarters capacity can support 18 staff per day, and 30 staff total. The current staffing demands are 35 staff per day, and 98 staff total. The future projected staffing demands will be 54 staff per day, and 130 staff total.

If the service is expanded in the future to include 24-hour Lifeguard operations, bunk and restroom accommodations for three staff would be needed. These spaces would allow Lifeguards to maintain a presence at the beach at all times.

The Lifeguard Service utilizes a wide variety of rescue equipment to handle their responsibilities, including 4-wheel drive vehicles, rescue paddleboards, all-terrain vehicles or ATVs, personal watercraft, and inflatable rescue boats. Storage space is limited at the current Lifeguard Headquarters. Items requiring storage on site include water and beach rescue crafts, SCUBA equipment, marine animal rescue cages, medical supplies, ADA wheelchairs, uniforms, IT and radio network equipment, and other miscellaneous supplies. Due to lack of space in the facility, the Lifeguards currently supplement their storage space with a 40-foot container located in the paved area just south of the building (Figure 2.23). However, some of this equipment is susceptible to damage during flooding and should be stored at a higher elevation.

FIGURE 2.23: CONTAINER USED FOR LIFEGUARD STORAGE



The current Lifeguard first aid area, located inside the building near the north entrance, is underutilized due to low public visibility. Instead, those seeking first aid typically approach the Lifeguards by entering through the garage on the south side of the building (Figure 2.24). This is not ideal, as it causes the public to interfere with Lifeguard operations in and out of the garage. Therefore, a more visible first aid area on the south side of the building is needed.

FIGURE 2.24: LIFEGUARD FIRST AID



2.5. Collaboration with Adjacent Projects

2.5.1. Beachfront Improvement Projects

The City of Oceanside has been enhancing the beachfront area in the proximity of the Oceanside Municipal Pier, Junior Seau Amphitheater and Bandshell, and Junior Seau Beach Community Center over years. The following are the two most recent beachfront improvement projects within the vicinity of the Pier Bridge and Lifeguard Headquarters project area:

Beachfront Improvements Phase I – Beach Operations: This project was completed in Summer 2022 and consisted of a new maintenance building, public restroom, grand staircase, plaza, sewer lift station, and Police substation.

Beachfront Improvements Feasibility Study – Phase II: This study was completed in Fall 2022 and explored potential improvements to the Junior Seau Beach Community Center, Junior Seau Pier Amphitheater and Bandshell, and public spaces in between. Although not a primary focus of this study, highly conceptual potential improvements to maintain community recreational programming at the beach were also included in this study at Betty's Lot. During the October 26, 2022 Council workshop, City Council approved the staff-recommendation options and authorized staff to proceed with preliminary design plans and environmental review in coordination with the Pier View Way Bridge & Lifeguard Headquarters Project.

In the City's effort to evaluate and plan the beachfront area improvements holistically, it is anticipated that efforts for the Pier View Way Bridge & Lifeguard Headquarters Project and Beachfront Improvements Feasibility Study - Phase II will be coordinated and will proceed to preliminary design plans and environmental review phase concurrently. By advancing the projects together the environmental review process will be cohesive and streamlined.

2.5.2. Pier Utility Replacement Project

The City of Oceanside is currently undertaking a Pier Utility Replacement project to upgrade several utilities on the pier. This work includes removing and replacing an existing 4-inch sewer line, removing and replacing an existing 6-inch water line for firewater use, and adding a new 3-inch water line designated for domestic water. Off the pier, the new 3-inch water line will follow the existing water line underground along the north side of the Lifeguard Headquarters. The existing pipe housings on the west face of the Lifeguard Headquarters will be removed and replaced.

These improvements are anticipated to be constructed prior to the Pier View Way Bridge & Lifeguard Headquarters Project. Considerations for utilities during construction of the new Lifeguard Headquarters are discussed in Section 3.5.3

2.6. Environmental Considerations

2.6.1. CEQA Clearance

As part of Phase 1, Schematic Design, baseline/ existing conditions assessments were performed to provide the foundational steps to formally initiate the California Environmental Quality Act (CEQA) process (Attachment 6). Concurrent with the Pier View Way Bridge & Lifeguard Headquarters Project, the Beachfront Improvements Feasibility Study - Phase II explored potential improvements to the Junior Seau Beach Community Center, Junior Seau Pier Amphitheater and Bandshell, and public spaces in between. As these project areas and facilities are connected both physically and operationally, a Program-Level Environmental Impact Report (PEIR) is anticipated that will analyze the proposed improvements collectively and evaluate the potential environmental impacts of both projects.

The PEIR will evaluate, under a single environmental entitlement process, specific proposed improvements to the Pier View Way Bridge & Lifeguard Headquarters, and the proposed improvements for the Beachfront Improvements Feasibility Study - Phase II, including potential long term recreational programming at Betty's Lot. Additionally, CEQA case law [*Laurel Heights Improvement Association v. Regents of University of California* (1988) 47 Cal.3d 376, 396] has established precedents that prohibit piecemealing or segmenting projects. Specifically, CEQA generally prohibits an agency from piecemealing or "chopping up" a large project into several smaller ones, each of which might individually have minimal environmental consequences, but collectively may have significant environmental impacts.

The PEIR will provide the City with a framework under which the proposed projects can be planned, designed, advertised, and constructed (individually, collectively, or in combinations) with the needed implementation flexibility. This foundation document will also allow the City to advance select proposed project elements based on funding and defined capital improvement priorities. Based on this scenario, the City could then approve future implementation actions without additional environmental documentation.

The potential environmental factors warranting analysis and documentation through the PEIR include:

- Traffic and Transportation (VMT)
- Visual & Aesthetics
- Cultural and Tribal Resources
- Native American Consultation (AB 52)
- Hydrology, Hydraulics & Floodplain
- Water Quality
- Hazardous Materials & Waste
- Air Quality, Greenhouse Gas, Health Risk Assessment & Climate Change
- Noise and Vibration
- Biological Resources
- Geology & Geotechnical
- Energy
- Land Use and Planning
- Parks and Recreation
- Public Services/Utilities
- Wildfire
- Cumulative

The duration of the CEQA process through approval of the Final PEIR is anticipated to be approximately 24 months. This process will be completed concurrently with development of the 30% design plans.

2.6.2. U.S. Army Corps of Engineers

The United States Army Corps of Engineers (USACE) jurisdictional purview for the proposed project will be through Section 10 of the Rivers and Harbors Act of 1899, which requires authorization for the construction

or repair of any structure in, over, or beneath navigable waters of the United States. Navigable waters of the United States are those that are subject to the ebb and flow of the tide and/or are used or may be used to transport interstate or foreign commerce (i.e., Pacific Ocean). Section 10 jurisdiction in tidal waterways extends to the mean high-water line and is defined by the line on the shore established by the average of all high tides, typically over an extended period. The Section 10 application includes structures or work if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, and bank protection (e.g., rip-rap, revetment, bulkhead).

Based on the regulatory requirements defined above and a detailed understanding of the proposed project improvements, an application will be prepared for verification under the Nationwide Permit program during the Preliminary Design & Environmental phase of the project. The application and supporting materials will address any work at or below the mean high-tide line in the project area. Pre-application coordination with USACE staff will be undertaken to determine the appropriate Nationwide Permit for the project and facilitate timely permitting approval.

2.6.3. Regional Water Quality Control Board

Section 401 of the federal Clean Water Act specifies that states must certify that any activity subject to a permit issued by a federal agency, such as the USACE, meets all state water quality standards. In the state of California, the State Board and the regional boards are responsible for taking certification actions for activities subject to any permit issued by the USACE pursuant to Section 404 of the federal Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Where federal jurisdiction is concurrent, meaning there aren't isolated waters of the state, discharges into waters of the state are regulated by the San Diego Regional Water Quality Control Board (RWQCB) under Section 401 of the federal Clean Water Act.

Based on these regulatory parameters and an understanding of the project's proposed improvements, an application will be submitted for Section Water Quality Certification that fully addresses any work at or below the mean high water line in the project area. This will include both temporary and permanent impacts associated with construction, and future post-construction operations.

2.6.4. California State Lands Commission

The California State Lands Commission (SLC) has notification and comment authority over the proposed project, specific to any dredge (excavation) or fill resulting from construction activities. Written notification will need to be inclusive of the limits of disturbance, the depth of excavations, and the delineation of those construction activities within westerly limits of the permanently defined ordinary high-water mark per the Boundary Line Agreement 37 (February 11, 1963) and the Chapter 217, Statutes of 1963 – Service Agreement (April 14, 1965).

The key points of coordination and corresponding submittal requirements will include the following:

- A description of the dredging (excavation) to be conducted, including a map and land description showing the area and project site.
- A description of the amount of material to be dredged (excavated), disposal amount, location, and means of disposal, if available.
- The time and manner in which dredging (excavation) is to occur.
- The relevant permits, authorizations, and approvals that exist or must be obtained to complete dredging (excavation), including the USACE Section 10 Permit, RWQCB Section 401 Certification, Coastal Development Permit, and CEQA Program Environmental Impact Report.

- A declaration that the dredging (excavation) is necessary and why and a declaration that the dredging (excavation) is consistent with the statutory trust grant.
- A statement with supporting documents that explains whether the City anticipates receiving any revenue from the materials to be dredged (excavated), and, if so, in what amounts.
- The City may presume that a dredging lease is not required if the following conditions are also met:
    - The dredged (excavated) material is disposed of at an approved on or offshore disposal site.
    - The dredged (excavated) material is not sold.
    - The dredging (excavation) is consistent with the proper management of the granted public trust lands.

2.7. Coastal Development Permit & California Coastal Commission

This project falls within the jurisdiction of both the California Coastal Commission and the City of Oceanside. Rather than applying for individual permits from each agency for sections of the project, one consolidated Coastal Development Permit issued by the Coastal Commission is anticipated encompassing the entire project site.

Several meetings have been held between the project team and staff from the California Coastal Commission (CCC) over the course of the Phase I, Schematic Design, to understand the key coordination points for the project. This culminated in a letter from the CCC on April 21, 2023, which states staff is ”generally supportive of the project and do not have significant comments on the bridge replacement portion of the project, acknowledge the lifeguard station is necessary to protect public safety, and can support the new development proposed on the eastern side of The Strand” (Attachment 12). Building from the proactive coordination with CCC staff undertaken during this phase, coordination and consultation will continue into the next phase of the project.

Key coordination points with Coastal Commission staff are provided below:

- Structures with historic protections must be preserved, including the footprint and shell of the western Lifeguard Headquarters that was part of the original construction per CEQA protections.
- There would be no expansion of the structure footprints.
- Existing Lifeguard uses that are essential for emergency response would remain at the existing Lifeguard facility on the beach.
- Supplemental Lifeguard services, staffing, and support would be relocated to the new east Lifeguard Support Facility to address sea level rise and other potential coastal hazards.
- The existing Lifeguard Headquarters shoreline protection will need to be maintained either by reconstruction of the existing rip-rap or a seawall. The shoreline protection would not expand or augment the protection feature in any way in a post construction scenario.
- The new east Lifeguard Support Facility would include Lifeguard uses as well as public spaces, and the replacement of the existing lower-cost food establishment/visitor-serving leased restaurant space.
- A full sea level rise analysis will be performed in the next phase of the project. In general, the project will seek to minimize exposure to coastal hazards.
- Further evaluation of site parking and the at-grade paved driveway/emergency vehicle access for the existing Lifeguard Headquarters.

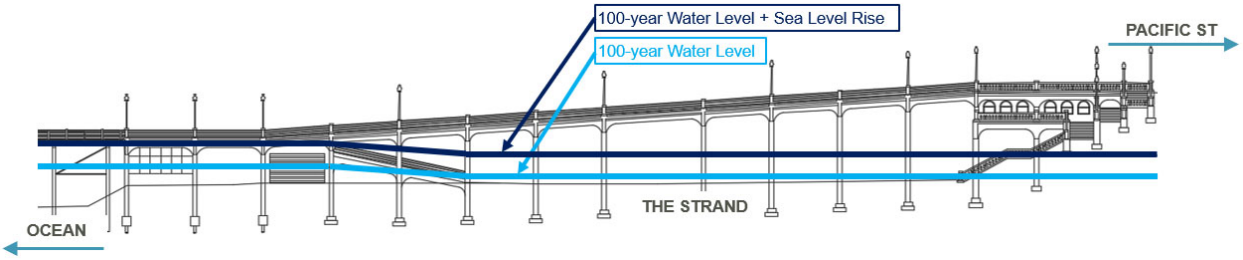
2.7.1. Design Water Levels & Sea Level Rise

The existing Lifeguard Headquarters has been subject to flooding over the years. The City's Coastal Hazard Vulnerability Assessment report prepared in 2018 noted that the increased frequency of flooding of the Lifeguard Headquarters will lead to water damage along with other flood related damages.

As part of Phase 1, Schematic Design, a coastal hydraulic analysis was performed to determine the 100-year design water elevations with sea level rise for the existing project conditions (Attachment 8). During the next phase of the project, this analysis will be expanded for the entire project including the Beachfront Improvements Feasibility Study – Phase II area. In accordance with the Ocean Protection Council (OPC) 2018 Sea Level Rise Guidance, three sea level rise scenarios will be considered: existing condition (no sea level rise), and two sea level rise scenarios dependent on facility type. Recommendations per the Coastal Commission's Sea Level Rise Guidance for Critical Infrastructure will be considered to the extent practicable.

Figure 2.25 shows the projected water levels for the 100-year storm event, with and without sea level rise, for the existing Pier Bridge. Additional analyses will occur in the next phase of the project for the proposed condition.

FIGURE 2.25: DESIGN WATER LEVELS (EXISTING SITE)



The project will accommodate sea level rise by raising the finished floor elevation of the west Lifeguard Headquarters to the maximum extent allowable per historic considerations, approximately 3 feet, and by housing critical components of the Lifeguard Service on the 2nd and 3rd stories of the new east Lifeguard Support Facility, which will be elevated above the maximum water level.

2.7.2. Bluff/ Slope Impacts

During Phase 1, Schematic Design, CCC staff questioned the option of potential development of the bluff/slope located between the north and south Pier Bridge, behind the visitor-serving leased restaurant space currently housing the Tin Fish Restaurant. Initial CCC comments noted that this area was a natural bluff and therefore development should be restricted or prohibited. Based on this initial feedback, the project team analyzed the space necessary for the Lifeguard Service and new Lifeguard Support Facility in order to determine and justify any development into the bluff. This information was submitted to the CCC in a letter responding to their comments and inquiries.

However, during further review and conversations between the City and CCC, the project team was able to demonstrate that the existing bluff has been modified over the years and is not a natural bluff but instead a landscaped slope (Figure 2.26). For this reason, development of the bluff/slope is allowed and the CCC "can generally support the proposed grading of the bluff" (Attachment 12).

A subsequent project benefit in grading the bluff/slope is this visually degraded area would be enhanced by the proposed development, including the addition of a new public view deck and planting of native species (Figure 2.27); see Section 2.8 for further discussion.

FIGURE 2.26: HISTORIC PHOTO SHOWING DISTURBED BLUFF/ SLOPE (1952)



FIGURE 2.27: CURRENT BLUFF/ SLOPE CONDITION (AS OF DECEMBER 2022)



2.7.3. Lifeguard Headquarters Shoreline Protection

The Lifeguard Headquarters currently has rip-rap shoreline protection (Figure 2.24). Detailed studies will be undertaken in the next phase of the project, including wave runup analyses, to determine the preferred continued shoreline protection strategy. These will include evaluating whether the existing rip-rap can be minimized, replaced by a seawall, or combination thereof. Close coordination between the CCC and project team will be necessary to thoroughly evaluate all strategies.

FIGURE 2.28: LIFEGUARD HEADQUARTERS RIP-RAP SHORELINE PROTECTION (EXISTING)



2.7.4. Lifeguard Headquarters Access/ Emergency Vehicle Egress

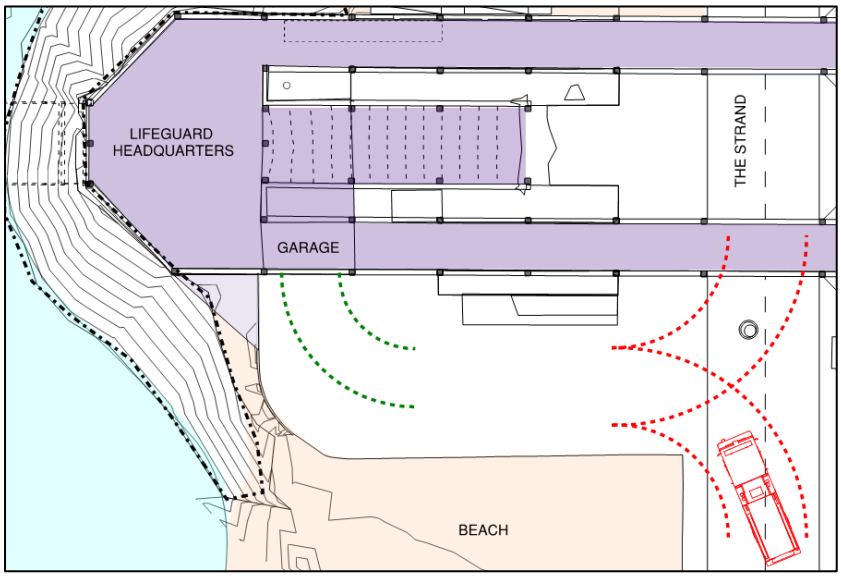
The Lifeguard Headquarters is currently accessed by an at-grade paved driveway of The Strand. During Phase 1, Schematic Design, CCC staff questioned whether this paved area is necessary for Lifeguard Service operations, and if a portion of it could be converted to sandy beach.

A vehicular turning radius analysis was performed to understand the necessary emergency access area for the following vehicles:

- **Firetruck** – Per the City of Oceanside's Fire Department requirements, a 30-foot inside/50-foot outside turning radius is required for a fire truck. This paved area provides the space necessary for a firetruck to pull off of The Strand and out of the main public circulation areas.
- **Lifeguard Vehicle with Trailer** – A 20-foot inside turn radius is needed to provide space for the Lifeguards to back a truck and trailer into the garage.

The turning radius diagram in Figure 2.29 shows the existing paved driveway footprint in front of the Lifeguard Headquarters garage must be maintained in order to continue to provide necessary emergency vehicle access and staging. During the next phase of the project, this paved area will be further evaluated in response to the questions posed by CCC staff.

FIGURE 2.29: TURNING RADIUS DIAGRAM FOR LIFEGUARD HEADQUARTERS ACCESS/ EMERGENCY VEHICLE EGRESS



2.8. Landscape

The existing landscape featured at the project site is a compilation of landscape interventions over several decades. Mature Mexican fan palms are featured throughout the site and raised planters feature a variety of artificial turf, cobble, succulents and grasses (Figure 2.30). These planters lack cohesion of palette and disrupt pedestrian circulation and flexible use of the site. The bluff/slope planting consists of a variety of non-native ornamental species supplemented with large cobble. Cobble has been used as ground cover throughout the site due to poor performance of plantings and as a deterrent to undesired activities.

FIGURE 2.30: EXISTING LANDSCAPE PLANTERS



The proposed landscape concept will be identified through the design development process and refined by input received during the public outreach process. A cohesive landscape design vernacular will unify the coastal aesthetic of the pier and adjacent beachfront projects. Planters and hardscape treatments will be evaluated in conjunction with the proposed improvements from the Beachfront Improvements Feasibility

Study - Phase II and seek to maximize circulation and flexible site use opportunities. Site lines and visibility will be maintained throughout the site for public safety and to support operations of the Lifeguard Service. Plant palettes will feature native and drought tolerant species appropriate for coastal exposure. Plantings will utilize native coastal species suitable for bluff/slope stabilization; example plantings are shown in Figure 2.31. Landscape treatments will promote a sense of place while embodying the resilient qualities required for public use and coastal settings.

FIGURE 2.31: EXAMPLE NATIVE VEGETATION



2.9. Geotechnical Considerations

A Preliminary Foundation Report (PFR) was prepared in March 2022 (Attachment 9). The PFR is based on existing available information and will be supported by borings completed in the next project phase.

Based on existing geologic mapping, marine beach deposits supporting the pier and the western end of the Pier Bridge are unconsolidated, loose to medium dense, fine to medium grained sands. Deeper beach deposits were derived from sediments being carried down the San Luis Rey River. The coastal bluffs above the beach are composed of older Quaternary paralic deposits consisting of interfingered strandline, beach, estuarine and colluvial deposits of siltstone, sandstone, and conglomerate. From research performed in the schematic design phase it was determined the bluffs have been previously modified as part of the development surrounding the pier (see discussion in Section 2.7.2).

The site is in seismically active southern California and is subject to shaking from both local and distant earthquakes. Large events on the nearby Newport-Inglewood fault control the seismic design of the project. The near surface soils are assumed to be unconsolidated beach sands that would be subject to liquefaction during a seismic event. The site is generally flat, and thus has a low probability for lateral spreading. These assumptions will be confirmed during the geotechnical investigation performed in the next phase.

The existing structure is supported on timber pile foundations at the Lifeguard Headquarters and spread footings at the bridge columns. Though the structure does not exhibit signs of settlement or distress due to the existing spread footings, the proposed structure is recommended to be supported on pile foundations due to the potential for liquefaction. Spread footing foundations are feasible for the new Lifeguard Support Facility near the bluff. Geotechnical design parameters will be part of the Geotechnical Report prepared during the future phases of the project.

2.10. Hazmat

A Hazardous Building Materials (HBM) survey was performed for the Pier View Way Bridge & Lifeguard Headquarters in May 2021 (Attachment 10). The survey included a visual reconnaissance of the structures, collection of bulk samples to be tested for asbestos-containing material (ACM), and collection visual readings for potential lead-containing surfaces (LCS).

Only one instance of ACM was found during the survey. The ACM was detected in an approximately six-inch-diameter asbestos cement (transite) pipe emerging from the sand to the northeast of the Lifeguard Headquarters (Figure 2.32).

FIGURE 2.32: TRANSITE PIPE WITH ASBESTOS-CONTAINING MATERIALS DETECTED



Surfaces containing lead (LCS) were identified in the storage spaces that were previously restrooms. The LCS was detected on painted surfaces and ceramic tile in these areas.

Prior to construction, the ACM and LCS must be removed by a licensed abatement contractor in accordance with federal, state and local regulations.

2.11. Outreach and Project Coordination

2.11.1. Public Outreach

Public Outreach Meeting #1: August 24, 2021

The first public outreach meeting was held the evening of August 24, 2021 at the City of Oceanside Library Community Rooms. The purpose of the meeting was to introduce the project to the public and collect initial feedback to understand the issues most important to the community. A project overview presentation highlighted the historic considerations of the project, the structure condition and ongoing deterioration, the needs of the Lifeguard Service, and the overall project constraints and opportunities. The presentation focused on the general approach for the project and did not present design concepts. Feedback from the community was gathered during a Question & Answer session following the project presentation to assist in the development of design alternatives.

Public Outreach Meeting #2: November 10, 2022

A second public outreach meeting was held the evening of November 10, 2022 at the City of Oceanside Library Community Rooms. The purpose of the meeting was to update the community on the development

of the project and present a proposed concept. The concept proposed at the meeting was reconstruction of the Pier Bridge and west Lifeguard Headquarters, supplemented by a new three-story east Lifeguard Support Facility (Alternative 1, see Section 3.2.2.2; Figure 3.6).

Several attendees brought up questions regarding view impacts from the new east Lifeguard Support Facility. A subsequent view study was completed to further assess these questions by simulating the visual impacts of the new Lifeguard Support Facility (Section 2.3.3). Feedback from the public outreach meeting and subsequent view study were used to revise the proposed concept.

2.11.2. City Departments

When the project began in March 2021, the design team held meetings with various City Departments to understand their challenges and needs pertaining to the project. These departments included the City Planning Department, Property Management Department, Building Department, Lifeguard Division, and Public Works Department. Coordination has continued with these departments to develop the design alternatives, and coordination will continue into the next phase of the project.

2.11.3. Historical Experts

A number of meetings were held with experts regarding the historical nature of the project, with the goal of understanding the project opportunities and constraints from a historic standpoint. The proposed concepts presented at these meetings were based on reconstruction of the Pier Bridge and west Lifeguard Headquarters supplemented by a new east Lifeguard Support Facility. A summary of these meetings and feedback received is provided below.

- Meeting with John Daly (Oceanside Historical Society) – July 15, 2021
- Meeting with Save Our Heritage Organisation (SOHO) – August 17, 2021
- Letter from Milford Wayne Donaldson, FAIA, (former SHPO, preservation architect) – August 24, 2021 (see Attachment 11)
- Letter from Save Our Heritage Organisation (SOHO) – September 27, 2021 (see Attachment 11)
- Meeting with Oceanside Historic Preservation Advisory Commission (OHPAC) – January 4, 2022
- Meeting with Oceanside Historic Preservation Advisory Commission (OHPAC) – July 31, 2023

In general, the following feedback was received:

- The reconstruction should match the original aesthetic and maintain the proportions and character of the Pier Bridge.
- The reconstruction should conform to the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction*.
- If the slope of the Pier Bridge were reduced to meet 5% slope per ADA standards, it would alter the character of the bridge.

2.11.4. City Council Briefings

Individual City Council member briefings were conducted during the Phase 1 Schematic Design process.

- City Council Briefings #1: August 2021
- City Council Briefings #2: October 2022
- City Council Briefings #3: August 2023

3. Alternatives Analysis

3.1. Pier Bridge

The Pier Bridge has reached the end of its service life and requires action to maintain public safety. As a potentially historic structure with CEQA protections, it must either be restored or reconstructed in-kind. In both cases the new structure should match the existing structure to the extent feasible. Therefore, two alternatives were considered for addressing the Pier Bridge as discussed below.

3.1.1. Pier Bridge Alternative 1: Restoration

Restoration of the Pier Bridge would retain the historic fabric of the structure to the extent feasible while strengthening the bridge to meet current design codes. It would maintain eligibility for historic designation as long as the restoration follows *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction*. Chloride extraction or cathodic protection would be used to address the high concentration of chloride ions causing the reinforcing steel to corrode. Removal of unsound concrete and deteriorated reinforcing steel would be necessary where the existing materials are beyond the possibility of encapsulation or repair.

During restoration, the bridge deck would be fully replaced, and the superstructure components would be restored or replaced as necessary. The concrete columns would require strengthening to meet code requirements, which would be achieved by forming a new reinforcing cage around the exterior of the existing column, then placing concrete to form the new column while encapsulating the existing column (Figure 3.1). This would result in bulky columns that would detract from the character of the bridge (Figure 3.2).

Restoring the structure would be costly due to the labor-intensive work required to remove and replace the unsound concrete and deteriorated reinforcing steel. Cost estimates prepared during a previous study showed the overall cost of restoration would exceed the cost of reconstruction (Attachment 3; Attachment 14). Furthermore, because the restored structure would be composed of old materials, the service life for the restoration would be shorter than for an in-kind reconstruction.

FIGURE 3.1: EXISTING COLUMN (LEFT) VS. RESTORED COLUMN (RIGHT)

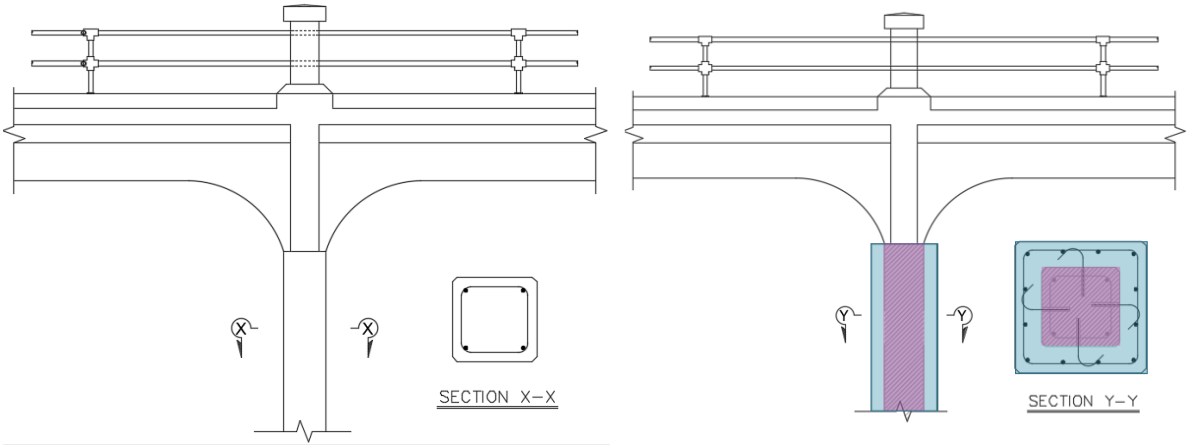
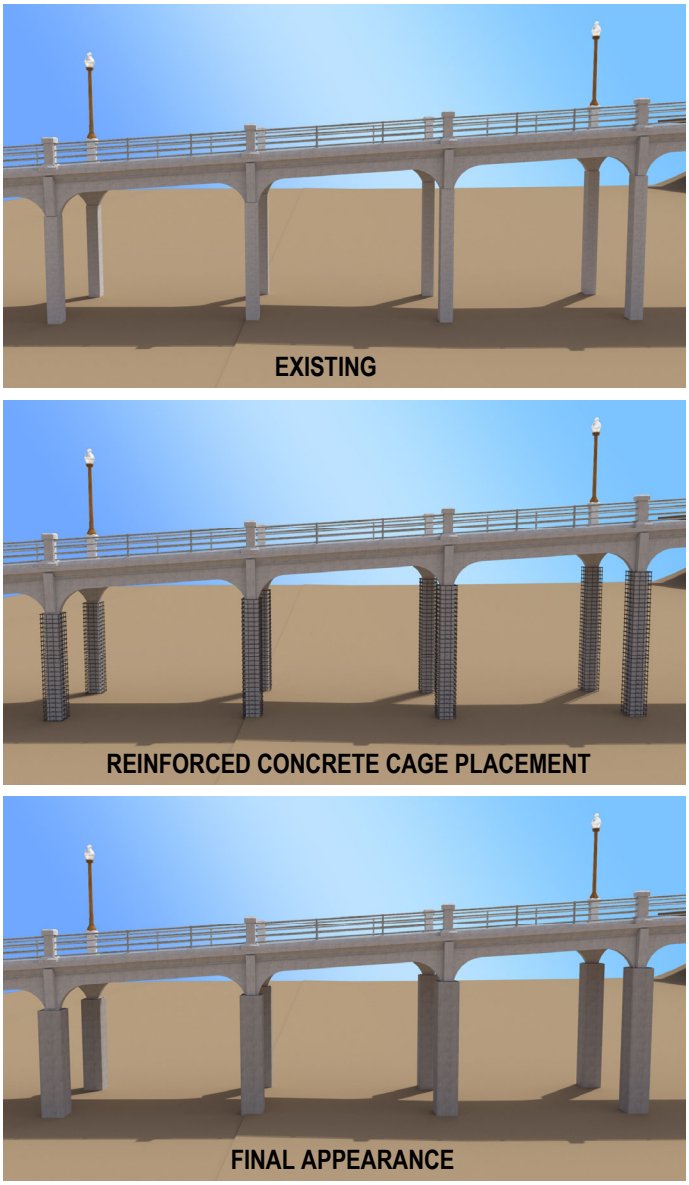


FIGURE 3.2: COLUMN RESTORATION SEQUENCE



3.1.2. Pier Bridge Alternative 2: Reconstruction

Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction defines reconstruction as the process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site. Reconstruction of the Pier Bridge would replace the bridge in-kind while maintaining the look, feel and character-defining features of the existing structure. The reconstructed structural members would match the existing dimensions, to the extent feasible, while meeting current design codes and would not require the bulky encapsulated columns discussed in Section 3.1.1.

Reconstruction would maximize the service life of the new structure to approximately 75 to 100 years (Attachment 3; Attachment 14) by reconstructing it with competent materials and detailing that meets current design standards. The reconstructed structure would also more closely resemble the appearance of the original 1927 structure. Additionally, the cost to reconstruct the bridge is anticipated to be lower than the cost of restoration.

3.1.3. Summary of Alternatives for Pier Bridge

The two alternatives for addressing the deteriorated condition of the Pier Bridge are summarized in the table below.

Restoration would retain the most historic fabric, but it would not recreate the historic appearance of the structure. Due to the labor-intensive work required for restoration, the cost of restoring the structure would be higher than the cost to reconstruct in-kind.

Reconstruction would maximize service life by utilizing modern, competent materials and would allow for integral seismic detailing that would meet current design codes. The reconstructed bridge would still maintain eligibility for historic designation.

FIGURE 3.3: SUMMARY OF RECONSTRUCTION VS. RESTORATION

	Restoration	Reconstruction
Retains the most historic fabric	✓	
Approximate service life	50 – 60 years	75 – 100 years
Recreates historic 1927 appearance		✓
Allows for integral seismic strengthening		✓
Maintains eligibility for historic designation	✓	✓
Best return on investment		✓

3.2. Lifeguard Headquarters & Lifeguard Support Facility

The current Lifeguard Headquarters is undersized for the current and future needs of the Lifeguard Service (see Section 2.4). Due to CEQA historical protections the existing facility footprint cannot be altered, therefore a supplemental facility is necessary. The reconstructed Lifeguard Headquarters (Section 3.2.1), in its original location to the west of The Strand, would be supplemented by a new Lifeguard Support Facility (Section 3.2.2) to the east of The Strand. Collectively, these facilities would accommodate current and future Lifeguard Service needs.

3.2.1. Lifeguard Headquarters (West Side)

The existing Lifeguard Headquarters is a coastal-dependent land use required for public health and safety that has been in operation at this location since 1987. Its current location provides critical views and access to a busy public area. Since the Lifeguard Headquarters is limited in size to stay within the 3,700 square foot historic shell configuration, the new proposed floor plan was developed to retain and optimize key space requirements to maintain essential operations and maximize public safety at the current location. All other Lifeguard support operations and staffing would be housed in the proposed new Lifeguard Support Facility (Section 3.2.2).

The layout of the reconstructed Lifeguard Headquarters (Figure 3.4) was developed to retain and optimize four critical public safety functions at this location:

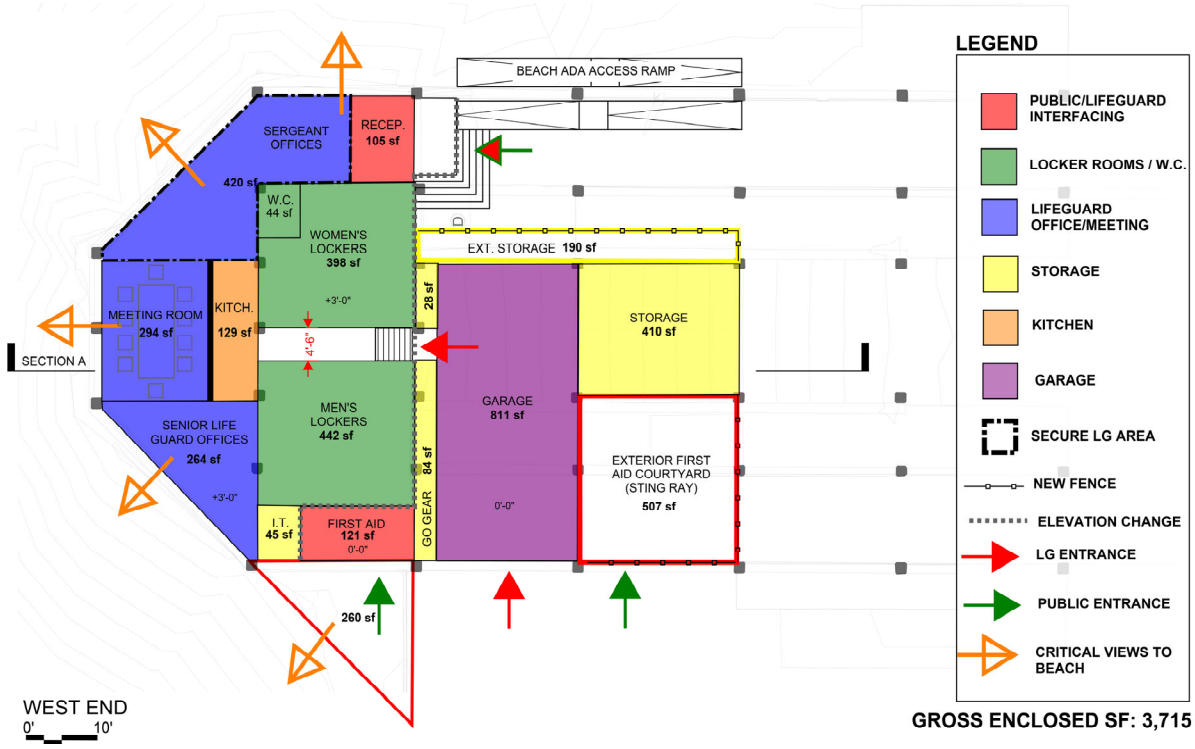
1. **Supervisory Lifeguard Workstations** – The reconstructed Lifeguard Headquarters would provide workstations for Lifeguard supervisors to have clear and unobstructed observation posts to the beach and water. The workstations would be expanded to meet current and future staffing demands and would not be overcrowded like the current facility. These workstations include senior Lifeguard offices on the southwest facing side where the majority of beach users tend to be. On the northwest facing side, a series of sergeant offices would be located to observe real and developing hazards. These functions are in constant communication with individual field staff (fixed and mobile) along the beach and on the pier. In each of the two observation posts, linear workstations would be placed along the two main observation windows to allow for direct visual supervision. A central meeting room facing west would act as an operational briefing center, training classroom, and meeting room for key City staff to coordinate and discuss area projects. The central meeting room will enable staff to maintain constant observations of real and developing hazards while being located adjacent to Lifeguard supervisors.

2. **Central Lifeguard Preparation Area** – The reconstructed Lifeguard Headquarters would provide for a more functional area where all Lifeguard staff could report for duty, gather operational supplies, and prepare rescue equipment. These functional areas would include expanded men's and women's locker rooms sized to meet future staffing needs, a central meeting space, and indoor and outdoor staging areas. They would be near supervisor offices with direct linkages to the beach and water to minimize life-saving response time. The Central Lifeguard Preparation Area would also include the outdoor space to the south that allows for critical Lifeguard staging activities.

3. **Public Interface and First Aid Areas** – The proposed design would provide a location for the public to access the Lifeguards that is the shortest distance from the beach and water activity areas. A reception space designed for public access would remain in its original location on the north side. On the more active south facing side, new first aid spaces would be located to be easily identifiable and accessible to the public. The spaces would include a walk-up first aid window and a separate first aid treatment courtyard that would allow users to be partially screened from the main public areas.

4. **Beach Rescue Equipment**– The reconstructed Lifeguard Headquarters would include approximately 410 SF of general storage area and approximately 811 SF of vehicle and equipment storage essential for beach rescue operations, which must remain as close to the beach and water as possible to reduce public safety response time. The storage areas in this location would supplement the central storage space in the new Lifeguard Support Facility (Section 3.2.2).

FIGURE 3.4: LIFEGUARD HEADQUARTERS (WEST) PROPOSED FLOOR PLAN



3.2.2. Lifeguard Support Facility (East Side)

3.2.2.1. Location Evaluation

To accommodate the Lifeguard Service needs a new Lifeguard Support Facility is necessary to supplement the Lifeguard Headquarters. As this is a coastal-dependent land use, the following adjacent locations were evaluated for this new facility, which are summarized below and in Figure 3.5. Refer to Figure 2.2 for a site overview. Other Lifeguard Service facilities, including the Junior Lifeguard building in the harbor, were not included in this evaluation due to their insufficient size and distance from the activity and incident calls around the pier and beach (Refer to Section 2.4).

- **Existing Lifeguard Headquarters Building** – Not feasible due to CEQA historic protections, which do not allow expansion of the building footprint or constructing a 2nd story.
- **Beach Operations Center** – There is not enough space available in the new Beach Operations Center to accommodate the Lifeguard Service.
- **Junior Seau Beach Community Center (JSBCC)** – Based on public feedback related to the Beachfront Improvements Feasibility Study - Phase II, the community prefers the JSBCC to remain essentially "as-is". In addition, the necessary space is not available in the JSBCC.
- **Existing Lifeguard Tower on the Timber Pier** – This location would not be ideal due to its distance from the existing Lifeguard Headquarters. Environmental and permitting requirements for expanding the facility over the open ocean would also be a challenge. For these reasons, this alternative was not pursued further.
- **New Facility at Betty's Lot** – Based on public feedback related to the Beachfront Improvements Feasibility Study - Phase II, constructing new facilities at this location would not be preferred by the community.

- **New Facility on Beach** – A new facility on the beach on the west side of The Strand was considered. However, a new building in this location would be susceptible to flooding, and would be subject to stricter regulatory agency requirements than a new building on the east side of The Strand.
- **New Facility East of Strand** – Constructing a new facility to the east of The Strand would address the project constraints with CEQA historic protections, space needs, sea level rise, and environmental/ permitting requirements. It would also provide enhanced amenities, including a new public view deck (see Section 3.4).

FIGURE 3.5: SUMMARY OF POTENTIAL LIFEGUARD SUPPORT FACILITY LOCATIONS

Potential Locations	Historic Req.	Space Needs	Sea Level Rise	Env/ Permit	Feasibility	Comments
Existing Lifeguard HQ Building	✗				✗	Historic requirements disallow expansion of footprint or building 2nd story.
Beach Operations Center	✓	✗	✗	✓	✗	Required space not available.
Junior Seau Beach Community Center (JSBCC)	✓	✗	✗	✓	✗	Based on public feedback from Beachfront Feasibility Study, community prefers JSBCC to remain as-is.
Existing Lifeguard Observation Tower on Timber Pier	✓		✓	✗	✗	Location not ideal for Lifeguards.
Betty's Lot	✓	✓	✓	✓	✗	Based on public feedback from Beachfront Feasibility study, location is not preferred.
New Facility on Beach	✓	✓	✓	✗	✗	More regulatory agency requirements for permitting and environmental approval.
New Facility East of Strand	✓	✓	✓	✓	✓	Meets all project criteria. Close proximity to West Lifeguard HQ.

Ultimately, a new facility east of The Strand was identified as the most feasible location. Constructing a new facility, rather than altering the footprint of the current Lifeguard Headquarters building, would address CEQA historic protections. The new facility would provide the Lifeguard Service with much-needed support and logistic spaces near critical operational areas. Furthermore, the new facility east of The Strand would allow critical infrastructure to be elevated to address sea level rise. Locating the new facility to the east, rather than west, of The Strand would reduce environmental permitting requirements. Three alternatives were further evaluated for the proposed new east Lifeguard Support Facility, discussed in the following section.

3.2.2.2. Alternatives Considered

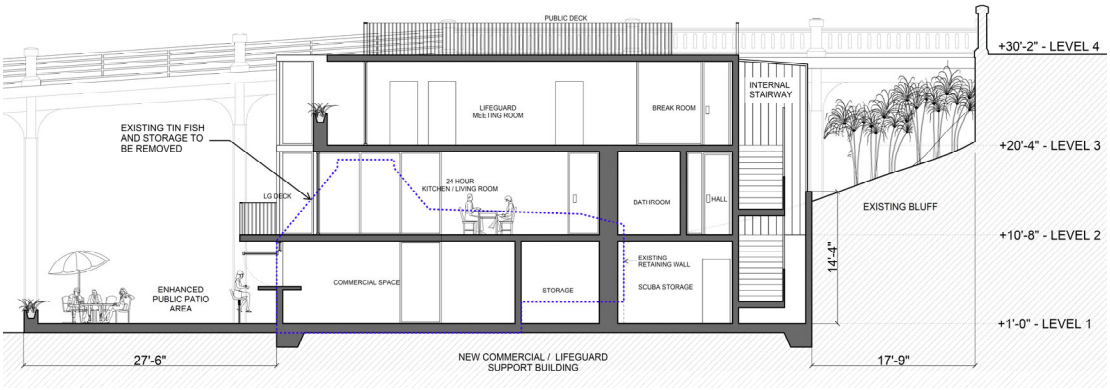
Three alternatives were considered for the new east Lifeguard Support Facility. All three alternatives provide sufficient space to support current and future Lifeguard Service needs and address public safety. All three alternatives also provide for, and enhance, the visitor-serving leased restaurant space (currently the Tin Fish restaurant) and provide a raised public patio with additional community seating.

For each of the three alternatives, Lifeguard Logistics spaces on the lower level would house critical beach and water rescue equipment and crafts, allowing the Lifeguards to store, protect, and easily maintain critical public safety elements near the beach without further impacting the existing beach and water edge conditions. Lifeguard Support and Lifeguard Administration functions would be provided on the upper levels, including observation/meeting spaces, offices, storage, IT, and multi-use spaces designed to accommodate current staffing needs and could also house any future 24/7 operations. Locating the Lifeguard Support and Lifeguard Administration uses on the upper levels is part of a strategic approach to minimize sea level rise impacts by allowing critical public safety features to be located above projected water elevations. Key differences between the three alternatives are discussed below.

- **Alternative 1: Three-Story Building** – This alternative proposes a new Three-Story Lifeguard Support Facility. In addition to supporting Lifeguard needs and providing visitor-serving leased

restaurant space, this alternative would also provide an expanded view deck amenity at the Pacific Street level, offering an enhanced view area for the public. This alternative would utilize a full third story in order to minimize the building footprint and reduce impacts to the bluff/slope. As a result, there would be potential impacts to the view of the beach from Pacific Street. A schematic cross section of the building is shown in Figure 3.6.

FIGURE 3.6: ALTERNATIVE 1: THREE-STORY BUILDING



- **Alternative 2: Modified Three-Story Building** – The Modified Three-Story Lifeguard Support Facility alternative would be similar to Alternative 1, providing for Lifeguard Service needs and incorporating a public view deck amenity at the Pacific Street level. The key difference is that the third level, which provides the necessary Lifeguard Service space, would be shifted into the bluff/slope area toward Pacific Street. This shift and encroachment into the bluff/slope area minimizes potential view impacts to the beach from Pacific Street. Schematic cross sections of the building are shown in Figure 3.7 and Figure 3.8.

FIGURE 3.7: ALTERNATIVE 2: MODIFIED THREE-STORY BUILDING (LONGITUDINAL CROSS SECTION)

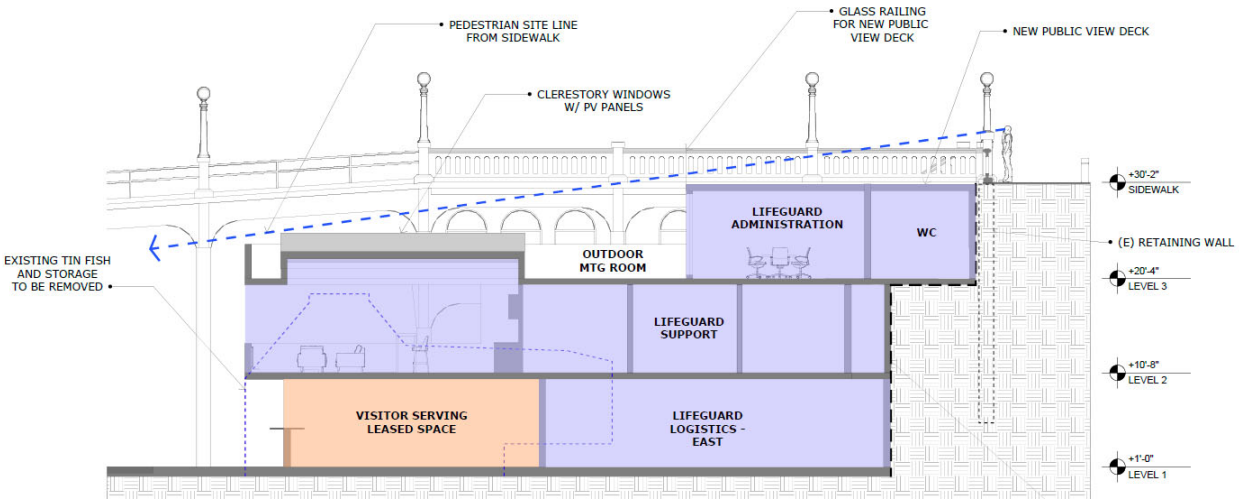
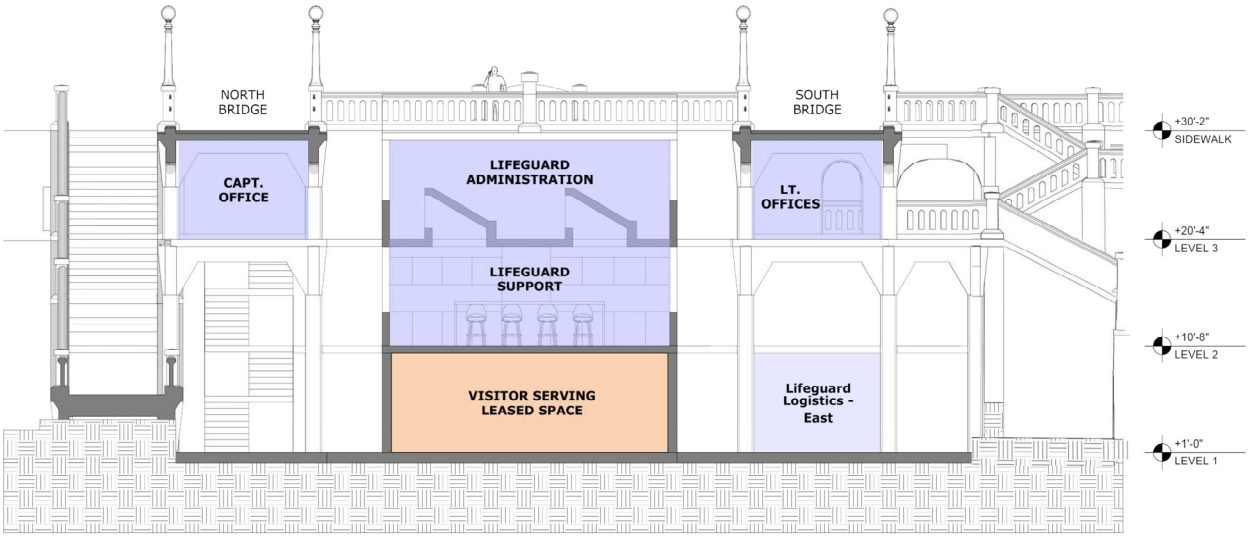
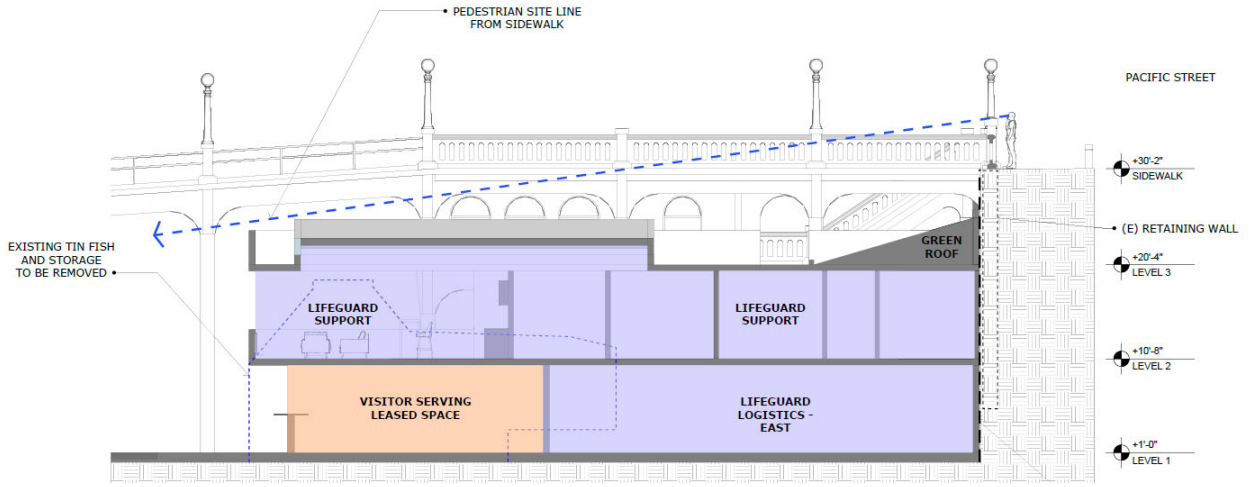


FIGURE 3.8: ALTERNATIVE 2: MODIFIED THREE-STORY BUILDING (TRANSVERSE CROSS SECTION)



- **Alternative 3: Two-Story Building** – The Two-Story Lifeguard Support Facility alternative would provide the necessary Lifeguard Service space and visitor-serving leased restaurant space but would not have a third level or public view deck. Instead, the top of the second story would be accessible only by Lifeguards. The two-level concept would minimize visual impacts similar to Alternative 2. The footprint of the building would need to be expanded all the way to Pacific Street to accommodate the Lifeguard Service needs, resulting in the most substantial bluff/slope encroachment impacts. To accommodate the Lifeguard Service space needs, this alternative would also utilize the two enclosed spaces on the third level under the bridge deck for office and storage space. These two spaces are currently being used for storage. A schematic cross section of the building are shown in Figure 3.9.

FIGURE 3.9: ALTERNATIVE 3: TWO-STORY BUILDING



3.2.2.3. Summary of Lifeguard Support Facility Alternatives

Schematic floor plans for the building alternatives were developed to confirm each would accommodate the needs of the Lifeguard Service. The overall square footage for each of the three alternatives is approximately 5,800 square feet, with variations due to architectural considerations, use of enclosed

balcony spaces, elevator, stair and hallway layouts, and column configuration of the existing bridge. Within the floorplan of each building alternative, the space needs of the Lifeguard Service are met or exceeded.

Table 3-1 provides a summary of the key considerations for the three east Lifeguard Support Building alternatives considered. All three alternatives would meet the needs of the Lifeguard Service, provide visitor-serving leased restaurant space, and address sea level rise. Alternative 1 would have the most significant view impacts to the beach, while Alternatives 2 and 3 would have little impact on the views from Pacific Street. The most significant bluff/slope encroachment impacts would occur with Alternative 3, while Alternatives 1 and 2 would have reduced bluff/slope impacts. Alternatives 1 and 2 would provide a new public view deck amenity, while Alternative 3 would not.

TABLE 3-1: SUMMARY OF LIFEGUARD SUPPORT FACILITY ALTERNATIVES

	Alternative 1: 3-Story Building	Alternative 2: Mod. 3-Story Building	Alternative 3: 2-Story Building
Lifeguard Service Needs Addressed	✓	✓	✓
Visitor-Serving Leased Restaurant Space Provided	✓	✓	✓
Sea Level Rise Addressed	✓	✓	✓
Bluff/Slope Excavation Minimized	✓	✓	✗
Visual Impacts Minimized	✗	✓	✓
Provides Public View Deck	✓	✓	✗

3.3. Staff-Recommended Options

Based on the key considerations discussed herein, the staff-recommended options are an in-kind reconstruction of the concrete Pier Bridge and Lifeguard Headquarters, and construction of a new east Lifeguard Support Facility. The reasons for these recommendations are summarized below.

Longevity – Reconstruction of the Pier Bridge, rather than restoration, would provide the option with the longest service life.

Historic Protections – The Pier Bridge would be reconstructed in-kind, maintaining the look, feel and character-defining features of the existing structure. The existing Lifeguard Headquarters would be reconstructed with the same footprint and structure height as the existing building, which will not violate CEQA historic protections. The new east Lifeguard Support Facility would be architecturally compatible with the existing historic structure, but differentiated so as not to create a false sense of history.

Lifeguard Service Needs – The needs of the current and future Lifeguard Service would be addressed with the supplementation of the new east Lifeguard Support Facility. The new facility would incorporate multi-use spaces that could be utilized for future 24/7 operations as Lifeguard sleeping quarters to allow for a continuous public safety presence at the beach. Additionally, this facility provides future opportunity for relocation of Lifeguard Services into the new east Lifeguard Support Facility if conditions physically limit operations out of the west Lifeguard Headquarters.

Public Safety/ Essential Services – Lifeguard operations at the beach are an essential service critical to public safety. Keeping the Lifeguard Service at its current location provides crucial views of the beach, particularly under the pier where the strongest rip currents occur. The new Lifeguard Support Facility on the east side of The Strand would maximize critical sight lines to both the beach and The Strand and allow the lifeguards to maintain necessary support and logistic spaces near critical operational areas.

Sea Level Rise Resilience – For the Lifeguard Headquarters building, sea level rise would be addressed by raising the finished floor elevation several feet. The new three-story east Lifeguard Support Facility would have the first floor raised one foot above the plaza level, while allowing critical infrastructure to be elevated and remain high and dry on the second and third levels.

Public Access – Public, ADA compliant access improvements from Pacific Street down to The Strand will be provided through this project. Additionally, an ADA ramp to the north of the Lifeguard Headquarters would provide wheelchair beach access.

Visitor-Serving Leased Restaurant Space – Visitor-serving leased restaurant space will still be maintained and enhanced through the construction of a new east Lifeguard Support Facility. This space would be reserved for lower-cost food services per the City's Local Coastal Program.

Public Enhancements – New public enhancements in the area would include a public view deck on top of the new east Lifeguard Support Facility, and an enhanced public patio in front of the visitor-serving leased restaurant space.

Coordination with Adjacent Projects – The environmental process for Beachfront Improvements Feasibility Study - Phase II will be coordinated with the Pier View Way Bridge & Lifeguard Headquarters Project, which will satisfy CEQA requirements and ensure cohesion between the adjacent project and study areas.

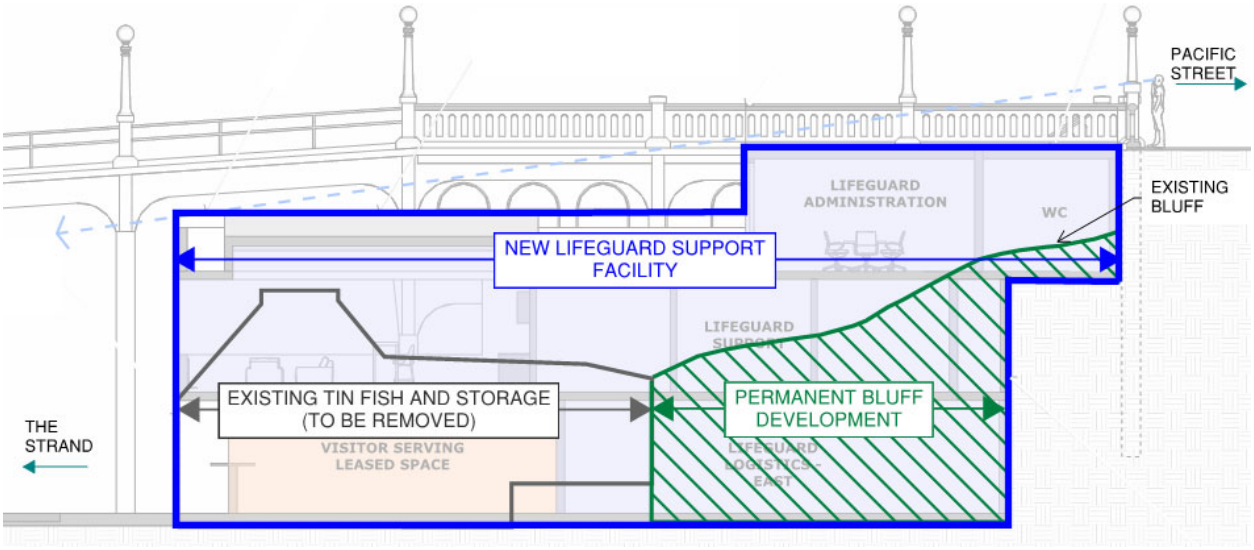
In comparing the Lifeguard Support Facility alternatives, the modified three-story concept is preferred by the Lifeguard Division and City staff for the following reasons:

- The concept study shows that a modified three-story alternative does not significantly increase view impacts to the water and beach from Pacific Street (Figure 3.10).
- The alternative provides the Lifeguard Service operational space needs while reducing grading impacts to the existing bluff/slope (Figure 3.11).
- At the preferred alternative's third level, the design provides an outdoor training area that is directly adjacent to the indoor training room, creating more flexible use for the Lifeguards.
- The modified three-story alternative provides a public view deck amenity off Pacific Street that further enhances the public viewing experience of the beach and water.

FIGURE 3.10: EYE-LEVEL VIEW FROM PACIFIC STREET: MODIFIED THREE-STORY ALTERNATIVE



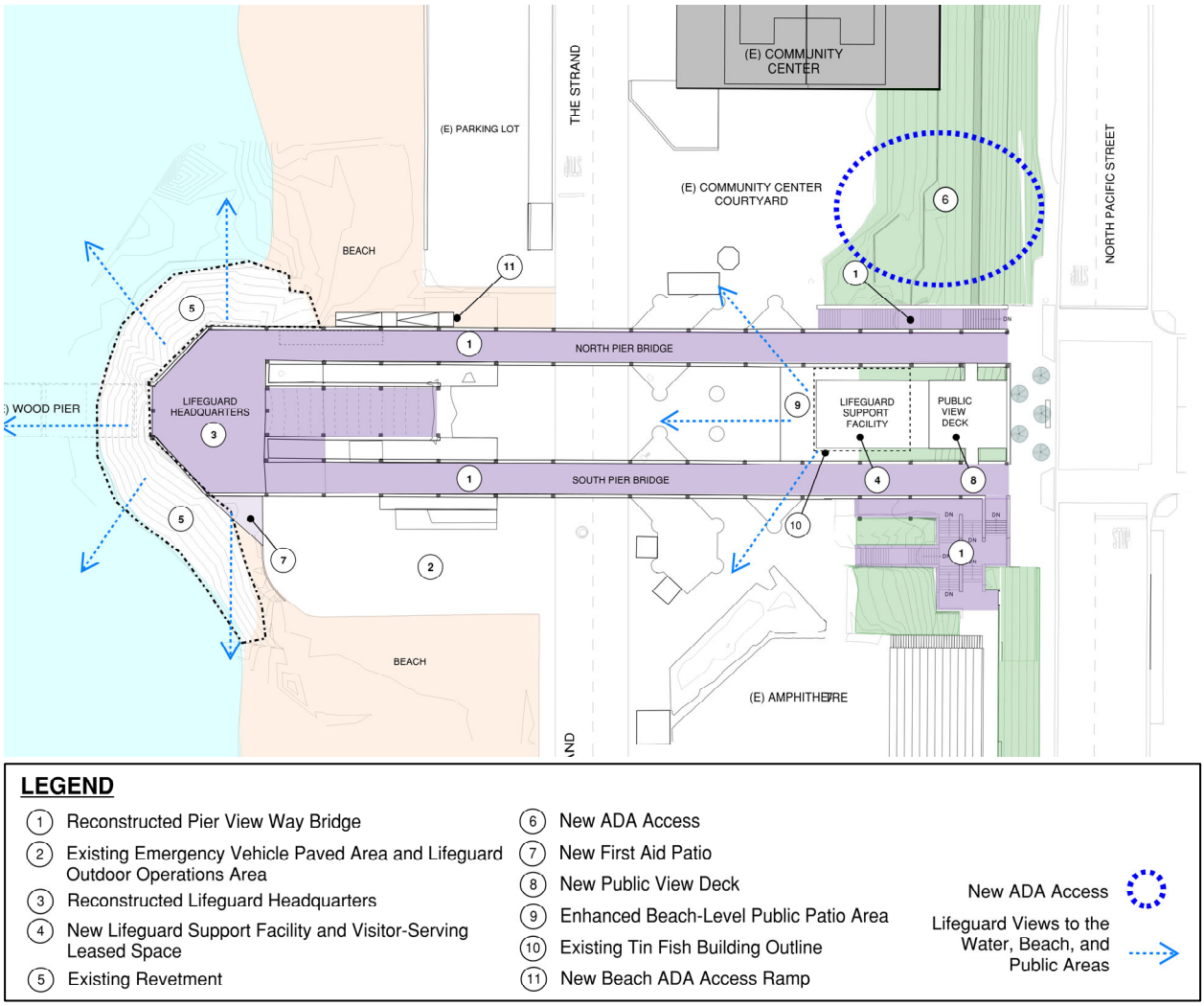
FIGURE 3.11: MODIFIED THREE-STORY ALTERNATIVE BLUFF/ SLOPE DEVELOPMENT



3.4. Public Accommodations

As part of this project, a number of public accommodations are proposed that would improve accessibility while providing enhanced amenities for public use (Figure 3.12).

FIGURE 3.12: PROJECT SITE PLAN & PROPOSED PUBLIC ACCOMMODATIONS



3.4.1. ADA Access to The Strand

ADA accessibility has long been a challenge at this site (see Section 2.3.2). Currently to access The Strand from Pacific Street a person must either take the stairs at the east end of the bridge or the ramp at the west end of the bridge, neither of which are ADA-compliant (Figure 3.13).

FIGURE 3.13: STAIRS AT EAST END OF PIER BRIDGE (LEFT), RAMP AT WEST END OF PIER BRIDGE (RIGHT)



As part of Phase 1, Schematic Design, a number of alternative options for providing ADA access to The Strand were considered including:

- **Flatten Vehicular Ramp –** The existing vehicular ramp at the west end of the bridge is sloped at approximately 19%, exceeding the slope allowed by ADA standards. If the ramp could be flattened, it would provide ADA access from the bridge to The Strand. However, because the ramp is part of the structure which has CEQA historic protections its slope cannot be modified. In addition, a flattened ramp would protrude into the public area along The Strand.

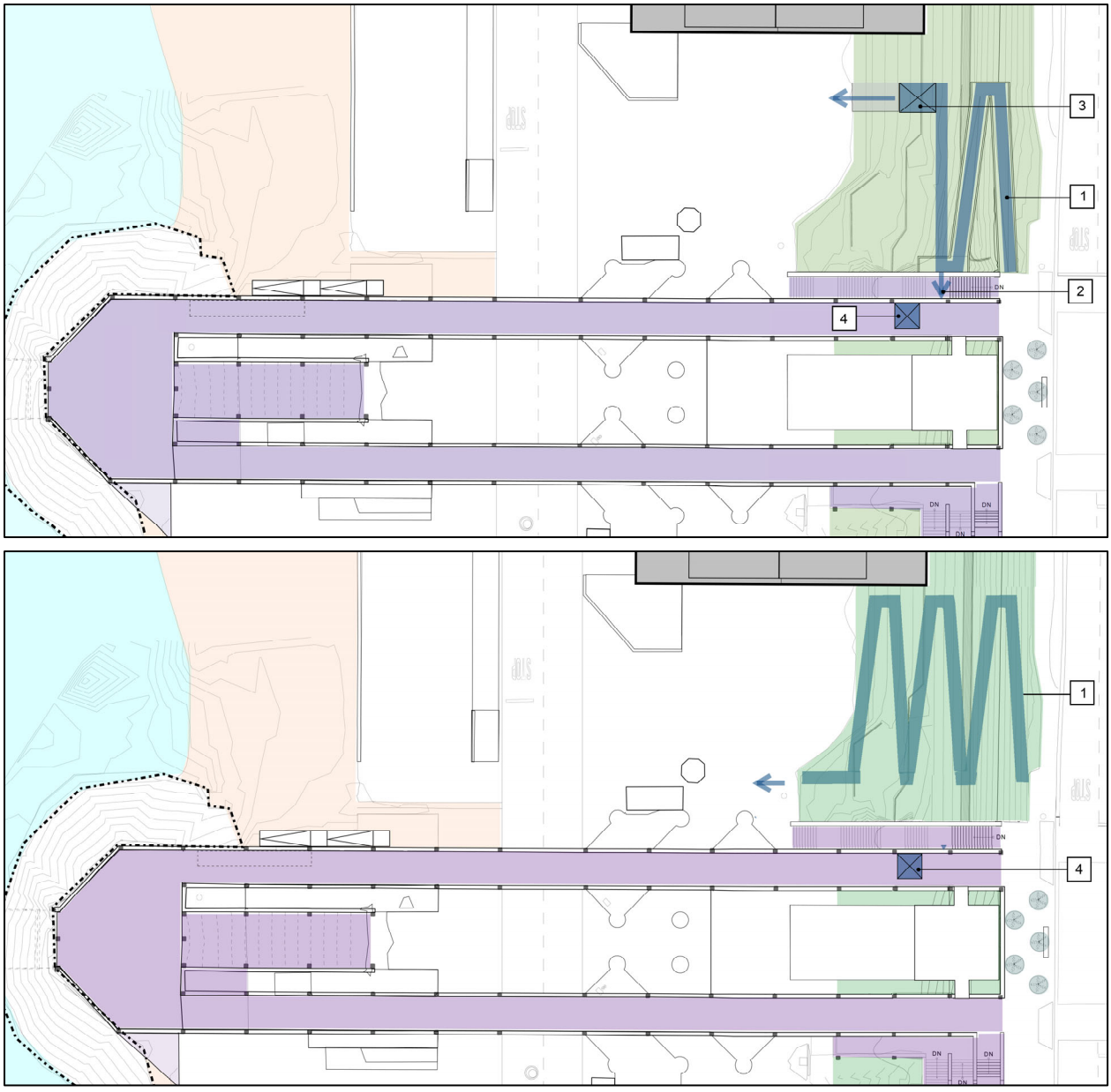
- **Elevator Full Height –** An elevator connecting Pacific Street to The Strand was considered. This would expedite ADA access down to The Strand because it would not involve a ramp to the bridge balcony. However, this option would require the elevator housing to protrude well-above Pacific Street, which would detract from the character of the historic structure.

- **Full-Length Ramp on Northeast Side –** Another option considered was a full-length ramp northeast of the bridge from Pacific Street all the way down to The Strand (Figure 3.14, bottom). This ramp would be similar to the existing full-length ramp down to The Strand at Pacific Street and Seagaze (1st Street). In order to meet ADA requirements, the ramp would need to be approximately 400 feet in length with multiple switchbacks.

- **Ramp and Elevator System on Northeast Side** – For this option, a ramp located on the northeast side of the bridge would connect to an elevator midway down the slope (Figure 3.14, Top). The ramp would connect to the landing of the stairway on the north side of the bridge at the third level, with potential for secure access to the Lifeguard Support Facility. The elevator would be located away from the bridge and below Pacific Street to avoid detracting from the character of the structure.

- **Ramp and Elevator System on Southeast Side** - An elevator on the southeast side of the bridge to transport people from The Strand up to the bridge balcony was evaluated. From there, a ramp would connect the balcony to Pacific Street. However, this alternative conflicted with the proposed future improvements to the Junior Seau Pier Amphitheater being studied as part of the Beachfront Improvements Phase II Feasibility Study (Section 2.5.1).

FIGURE 3.14: OPTIONS FOR ADA ACCESS TO THE STRAND



Ultimately, ADA compliant access improvements from Pacific Street down to The Strand will be provided through this project either via a full-length ramp on the northeast side of the bridge or a ramp and elevator system northeast of the bridge. These improvements will be further reviewed and refined in the next phase of the project.

3.4.2. ADA Access to Beach

Reconstruction of the Lifeguard Headquarters offers an opportunity to provide much-needed wheelchair access to the beach from The Strand. A ramp is proposed on the north side of the Lifeguard Headquarters that would provide permanent, year-round wheelchair access to the beach (Figure 3.12, Keynote 4).

3.4.3. Public View Deck

The modified three-story Lifeguard Support Facility alternative incorporates a new public view deck on the roof of the structure (Figure 3.12, Keynote 5). This view deck would provide the public with added space to enjoy views of the ocean and surrounding area. In addition, it would help alleviate overcrowding on the sidewalk along Pacific Street in front of the Pier Bridge. A simulated view from the new view deck is shown in Figure 3.15.

FIGURE 3.15: SIMULATED VIEW FROM NEW PUBLIC VIEW DECK



3.4.4. First Aid Patio and Courtyard

The existing Lifeguard Headquarters lobby on the north side of the building is seldom used by the public; instead, those seeking treatment tend to approach the Lifeguards through the garage on the south side of the building. A new First Aid Patio on the south side of the Lifeguard Headquarters is proposed, which would provide walk-up access to an outside-facing first aid window built into the Lifeguard Headquarters (Figure 3.12 Keynote 7). This walk-up first aid concept would offer increased visibility to the public on The Strand and at the beach, would provide better security, and would be more easily accessible for emergency response vehicles.

A First Aid Courtyard is proposed to be tucked underneath the Pier Bridge on the southwest side, adjacent to the Lifeguard garage and within the existing bridge footprint. This space would utilize removable fencing to provide privacy for individuals being treated for stingray stings and other common injuries.

3.4.5. Visitor-Serving Leased Restaurant Space

The lower level of the new east Lifeguard Support Facility would still incorporate a visitor-serving leased restaurant space. The new space would be approximately 700 square feet, which would be larger than the current 612 square foot space. This would be in compliance with the City of Oceanside's Local Coastal Program, which requires this space to be reserved for a lower-cost food service.

3.4.6. Public Patio

An enhanced public patio area is proposed in front of the visitor-serving leased restaurant space at the new east Lifeguard Support Facility (Figure 3.12, Keynote 6). The patio would be raised one foot above the plaza level to match the new Lifeguard Support Facility, offering a subtle partition from the rest of the pier plaza while providing sea level rise resilience.

3.5. Constructability

Temporary impacts, construction durations, and costs must all be carefully considered when assessing the constructability of the project.

3.5.1. Key Considerations

Key constructability considerations are summarized below.

- **Access to Timber Pier –** Access to the timber pier and its facilities, including the bait shop, Lifeguard Dispatch Tower, and restaurant, must be maintained during construction for public use and City maintenance. Temporary structures meeting ADA requirements will be necessary to bypass the demolition to access the pier. Temporary access can be provided either from Pacific Street or from The Strand.
- **The Strand –** Public travel along The Strand must be maintained during construction to the extent feasible. In addition to being a busy public thoroughfare, The Strand is also important for emergency vehicle use and waste management. An overhead protective cover can be used the majority of the time. Flagging and temporary closures will be necessary during some portions of construction, including when the work is occurring directly overhead.
- **Pier Plaza –** Construction impacts to the pier plaza area must be minimized while maintaining public safety. Construction fencing will be necessary to block off restricted areas, including a Contractor laydown yard.
- **Lifeguard Operations –** Lifeguard operations will need to be temporarily relocated while the Lifeguard Headquarters is reconstructed. This could be accomplished with temporary trailers in a parking lot or shifting the operations to an alternate location temporarily. These options will be further reviewed during the next phase of the project.
- **Visitor-Serving Leased Restaurant Space** (Tin Fish) – This visitor-serving leased restaurant space is located on the east side of the site in between the north and south bridge adjacent to the bluff/slope. It will eventually be demolished and replaced with the new east Lifeguard Support Facility which will still maintain this use on the first floor. It will not be possible for this space, currently operated by the Tin Fish Restaurant, to remain open while work on the project is taking place.
- **Parking Impacts –** Portions of adjacent parking lots may be impacted to provide space for Contractor material storage and staging, equipment, and job trailers for the project, and for temporary Lifeguard operations while their new facilities are being constructed. One of the most likely candidates would be the parking lot immediately to the north. This parking lot was recently utilized for the Pier Utility Replacement Project. The impacts of reduced parking especially during peak seasons will need to be further identified, studied, and addressed.
- **Pacific Street –** The sidewalk along the west side of Pacific Street will likely need to be closed during construction. A temporary detour will be necessary to facilitate the closure.
- **Beachfront Improvements Feasibility Study - Phase II –** The timing of any future improvements associated with this study area must all be considered together. This can affect public access, construction staging, location of temporary facilities, and overall duration of disruption in the immediate area.

3.5.2. Construction Staging

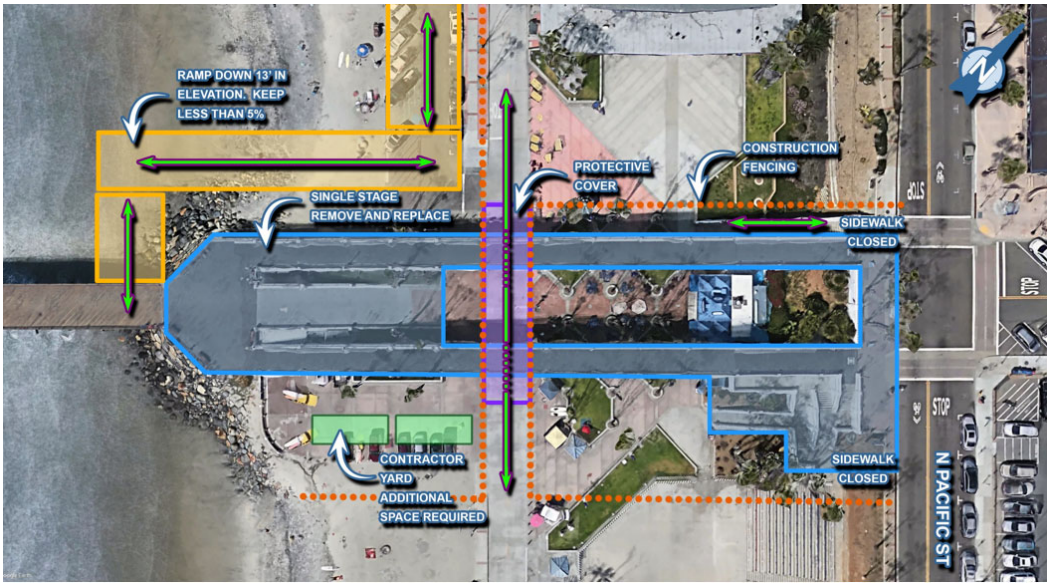
Construction staging for the project can be performed in a single stage, or multiple stages. The schemes below, however, do not specifically account for combinations with Beachfront Improvements Feasibility Study - Phase II, but would still have similar aspects.

During construction, a temporary ramp is anticipated to maintain access to the pier. This will require coordination with the CCC and other agencies to review the construction methodologies, features, footprint and timeline for the temporary access. Preserving pier access while minimizing loss of parking and other impacts during construction will be key considerations.

Single-Stage Construction (Preferred)

An example of a single-stage construction scheme is shown in Figure 3.16. A temporary ramp approximately 260 feet in length would provide ADA access between The Strand and the timber pier. However, there would be no access from Pacific Street to the pier with this scheme. The Pier Bridge, Lifeguard Headquarters, and visitor-serving leased restaurant space would all be demolished during this stage. Demolition and reconstruction would be efficient because there would not be any components of the bridge to protect in place.

FIGURE 3.16: SINGLE-STAGE CONSTRUCTION SCHEME

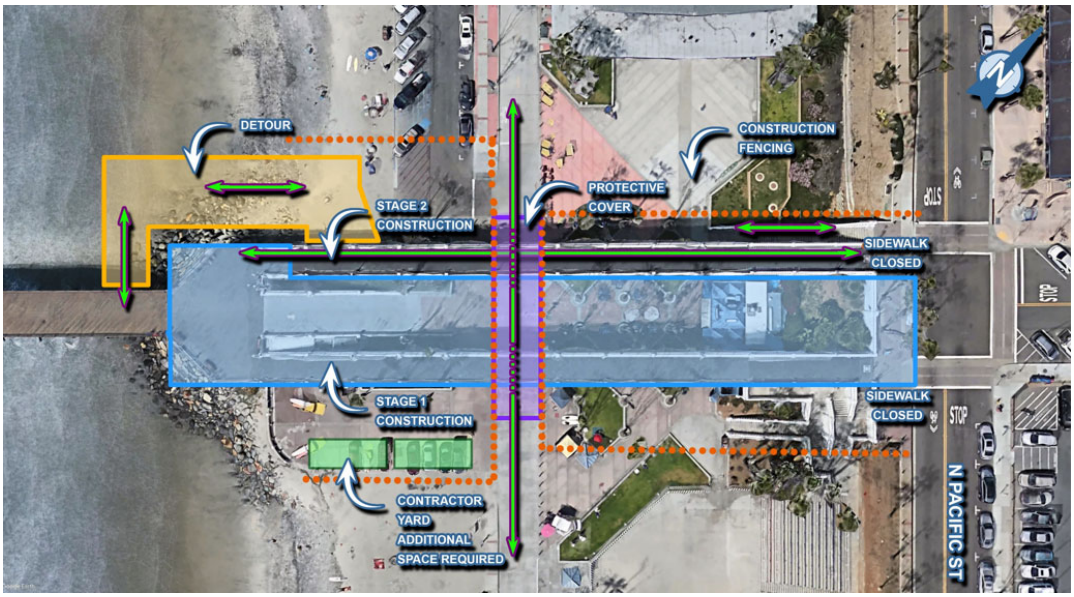


Two-Stage Construction

An example of a two-stage construction scheme is shown in Figure 3.17. In this scheme, the southern portion of the bridge, along with the Lifeguard Headquarters and the Tin Fish Restaurant, would be demolished in the first stage. Like the single stage construction, Lifeguard Service operations would need to move into a temporary facility. The northern portion of the bridge would remain in place. A temporary elevated walkway approximately 110 feet in length would be necessary to connect the northern portion of the bridge with the timber pier. Through this scheme, access to the pier would be maintained via Pacific Street across the northern portion of the bridge and a temporary walkway. The pier could also be accessed by taking the stairs on the north side of the bridge, though this would not be ADA compliant. Once the Lifeguard Headquarters and southern portion of the bridge were reconstructed, traffic would be shifted to the southern half of the bridge. The pier would be accessed from Pacific Street across the reconstructed southern portion of the bridge, with no temporary walkway required. The northern half of the bridge would then be demolished and reconstructed.

Construction in two stages presents several challenges. Keeping half of the bridge open in each phase will reduce the Contractor's work area and would have the public closer to the construction activities. Two stages would increase construction difficulty along Pacific Street due to retaining wall construction and temporary shoring. The duration of construction activities would be extended, as there would be reduced efficiencies in mobilization and increased construction time. Finally, the cost of construction would be greater than for a single stage.

FIGURE 3.17: TWO-STAGE CONSTRUCTION SCHEME



3.5.3. Utilities

Certain utilities, including utilities that service the pier, will need to be maintained throughout reconstruction efforts. Temporary relocation of some of these facilities will be required.

3.5.4. Impacts at Pacific Street

In the area immediately adjacent to Pacific Street a permanent anchored wall system and other temporary shoring will be required. These systems will need to minimize any deflections and settlements of the Pacific Street including the existing utilities within the street. Additionally, the sidewalk along Pacific Street and portions of the street itself will require reconstruction. Temporary closures of the sidewalk and a detour for pedestrians are discussed above.

3.5.5. Duration of Construction

The timeframe for construction is dependent on several factors, including the staging scheme required, the season in which construction starts, and seasonal work windows that might be identified during the environmental permitting process. Furthermore, any future improvements associated with the adjacent Beachfront Improvements Feasibility Study - Phase II study area would also influence the duration of the construction.

When considering solely the Pier View Way Bridge & Lifeguard Headquarters Project, the construction duration could be around 18 to 24 months. A detailed construction schedule will be determined once the design is advanced farther, and factors influencing the schedule are further identified, such as site/environmental restrictions, permitting requirements, construction start dates, and temporary access.

3.6. Cost Estimate

A preliminary cost estimate for the overall project is summarized in Table 3-2 (see Attachment 3 for additional information). This cost estimate considers the staff-recommended options to reconstruct the existing Pier Bridge (Section 3.1.2) and Lifeguard Headquarters (Section 3.2.1), and construct a new Modified Three-Story Lifeguard Support Facility (Alternative 2; Section 3.2.2.2). The cost estimate was developed based on square foot costs for similar items, and carries 25% for contingency, which is

appropriate for this stage of the project. The contingency will be reduced during future phases as the project is refined.

TABLE 3-2: COST ESTIMATE SUMMARY – STAFF-RECOMMENDED OPTIONS

Item	Description		Amount
1	Demolition	$	1,475,738
2	Temporary Timber Pier Access	$	1,427,600
3	Pier Bridge & Lifeguard Headquarters - Reconstruction	$	14,224,050
4	Lifeguard Headquarters - MEP/FF	$	584,200
5	Lifeguard Support Facility - Alt 2 - Modified 3-Story	$	4,354,480
6	Lifeguard Support Facility - MEP/FF	$	769,650
7	Elevator Tower	$	301,200
8	Site Stairs & Ramps	$	1,831,530
9	Landscape & Hardscape	$	965,000
10	Site Lighting	$	610,000
11	Revetment	$	108,500
12	Utilities	$	1,500,000
13	SWPPP/Fencing/Traffic Control/Minor Items	$	500,000
	Subtotal	***$***	***28,651,948***
	Mobilization (@10% of cost)	*$*	*3,183,550*
	Contingencies (@25%)	*$*	*7,958,874*
	Grand Total	***$***	***39,794,372***
	For Budgeting (Current Dollars)	**$**	**39,800,000**

Cost data was also developed to compare restoration (Section 3.1.1) vs. reconstruction (Section 3.1.2) for the Pier Bridge and west Lifeguard Headquarters building only (see below). These costs are relative only to the existing structure and do not include the new east Lifeguard Support Facility, ADA access, and other items. For additional information, see Attachment 3.

- **Restoration:** $34.8 million
- **Reconstruction:** $22.6 million

The new east Lifeguard Support Facility cost was developed based on square foot cost data. Comparison between Alternative 2: Modified Three-Story Building and Alternative 3: Two-Story Building is presented below. For additional information, see Attachment 3.

- **Alternative 2 - Modified Three-Story Building:** $7.0 million
- **Alternative 3 - Two-Story Building:** $7.1 million

The cost estimates provided in this section are dated August 2023 and do not include cost escalation. All cost estimates include 10% for mobilization and 25% for contingencies. The estimates do not include costs for mitigation, right-of-way, engineering, or permitting. The project cost estimate will be refined in future phases as details are further defined.

3.7. Next Steps

Upon City Council approval, the staff-recommended options to reconstruct the Pier Bridge and Lifeguard Headquarters, and to build a new east Lifeguard Support Facility, will be further studied in the next phase of the project. Phase 2, Preliminary Design & Environmental, includes the Pier View Way Bridge & Lifeguard Headquarters project as well as coordinating efforts with Beachfront Improvements Feasibility Study - Phase II. The key tasks to be completed during Phase 2 include:

- Program-Level Environmental Impact Report (PEIR)
- 30% Preliminary Design Drawings (Architectural, Structural, and Landscape)

This Feasibility Study and the staff-recommended options conclude the Phase 1, Schematic Design, for this project. Upon City Council approval, Phase 2, Preliminary Design & Environmental, is anticipated to begin in Fall 2023 and will take approximately 24 months to complete.

4. SUPPORTING DOCUMENTS AND REPORTS

ATTACHMENT 1: CONCEPT ALTERNATIVES & EXHIBITS

ATTACHMENT 2: AS-BUILT PLANS

ATTACHMENT 3: COST ESTIMATE

ATTACHMENT 4: VIEW STUDIES

ATTACHMENT 5: LIFEGUARD SPACE NEEDS ASSESSMENT

ATTACHMENT 6: CEQA HISTORIC EVALUATION MEMO

ATTACHMENT 7: HISTORICAL INTEGRITY SUMMARY

ATTACHMENT 8: 100-YEAR DESIGN WATER ELEVATIONS WITH SEA LEVEL RISE MEMO

ATTACHMENT 9: PRELIMINARY FOUNDATION REPORT

ATTACHMENT 10: HAZARDOUS BUILDING MATERIALS SURVEY

ATTACHMENT 11: LETTERS OF SUPPORT (SOHO; MILFORD WAYNE DONALDSON)

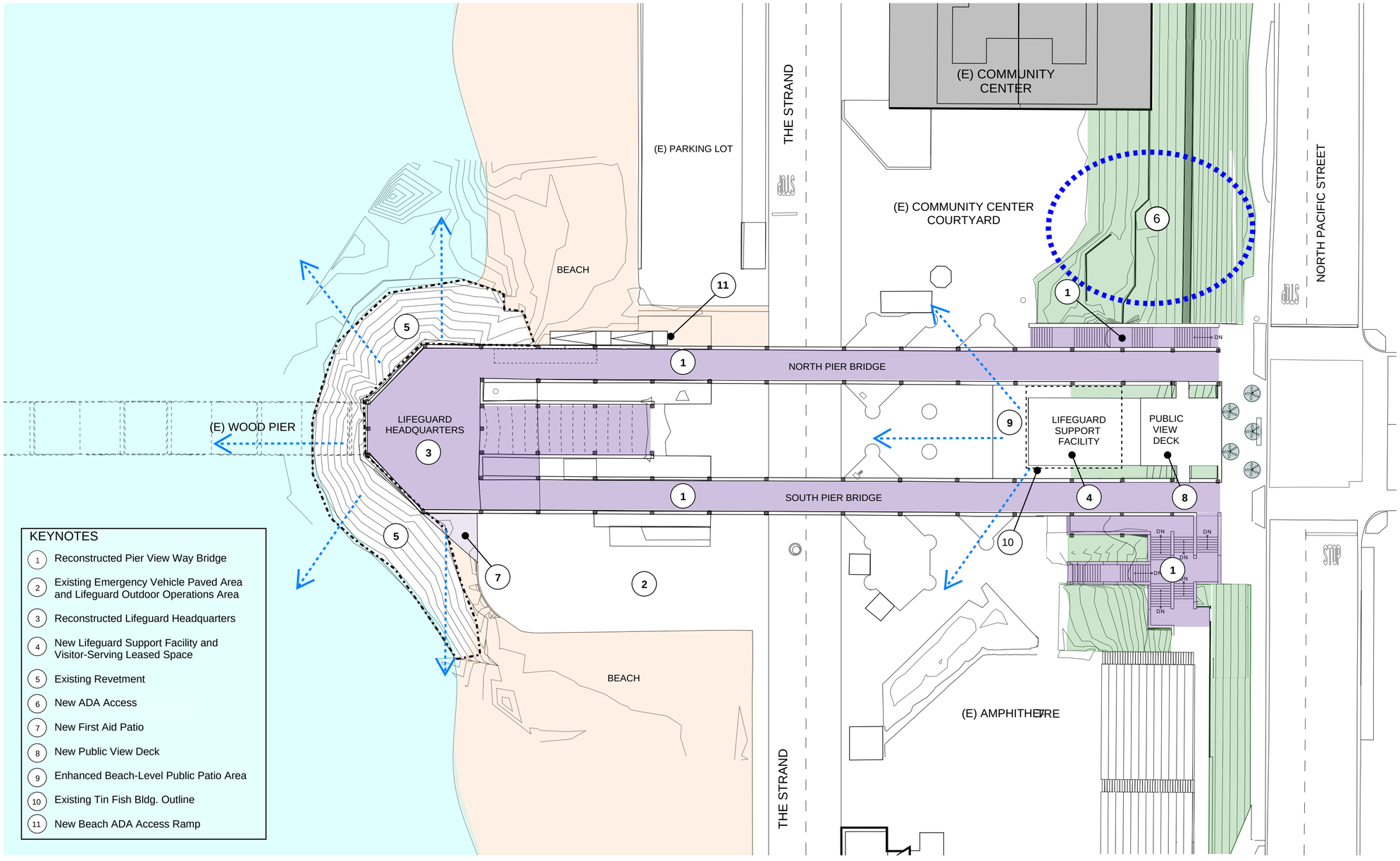
ATTACHMENT 12: CORRESPONDENCE WITH CALIFORNIA COASTAL COMMISSION

ATTACHMENT 13: PIER VIEW WAY BRIDGE SEISMIC DEFICIENCIES LETTER

ATTACHMENT 14: PIER VIEW WAY BRIDGE AT OCEANSIDE PIER – SUMMARY OF COST ESTIMATE COMPARISONS

ATTACHMENT 1:

CONCEPT ALTERNATIVES & EXHIBITS



KEYNOTES

1. Reconstructed Pier View Way Bridge
2. Existing Emergency Vehicle Paved Area and Lifeguard Outdoor Operations Area
3. Reconstructed Lifeguard Headquarters
4. New Lifeguard Support Facility and Visitor-Serving Leased Space
5. Existing Revetment
6. New ADA Access
7. New First Aid Patio
8. New Public View Deck
9. Enhanced Beach-Level Public Patio Area
10. Existing Tin Fish Bldg. Outline
11. New Beach ADA Access Ramp

SITE PLAN
1:30 SCALE

0' 15' 30' 60'

LEGEND

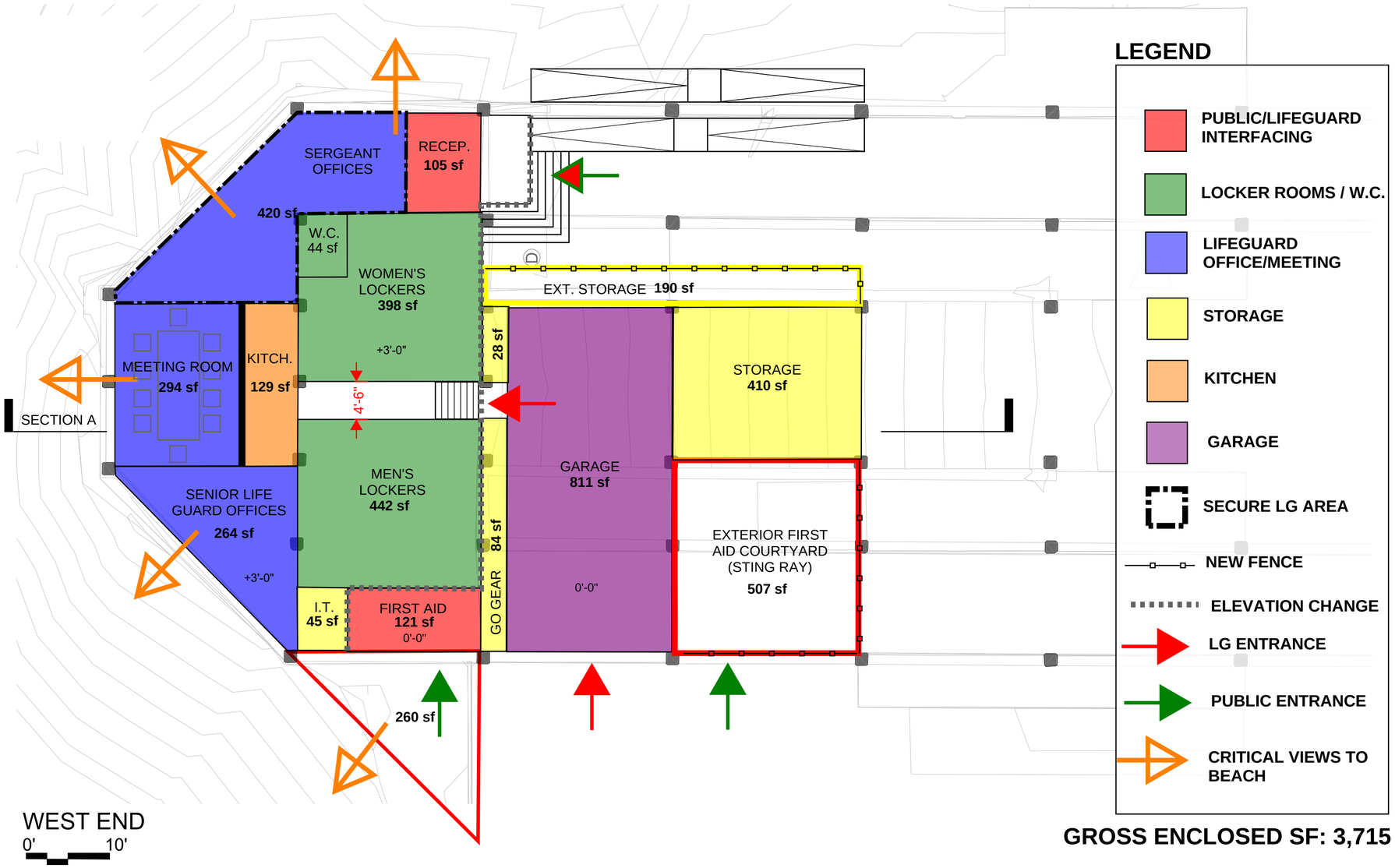
Lifeguard Views to the Water, Beach, and Public Areas

Concept Site Plan

OCEANSIDE PIER VIEW WAY BRIDGE RECONSTRUCTION

June 01, 2023

ROESLING NAKAMURA TERADA ARCHITECTS

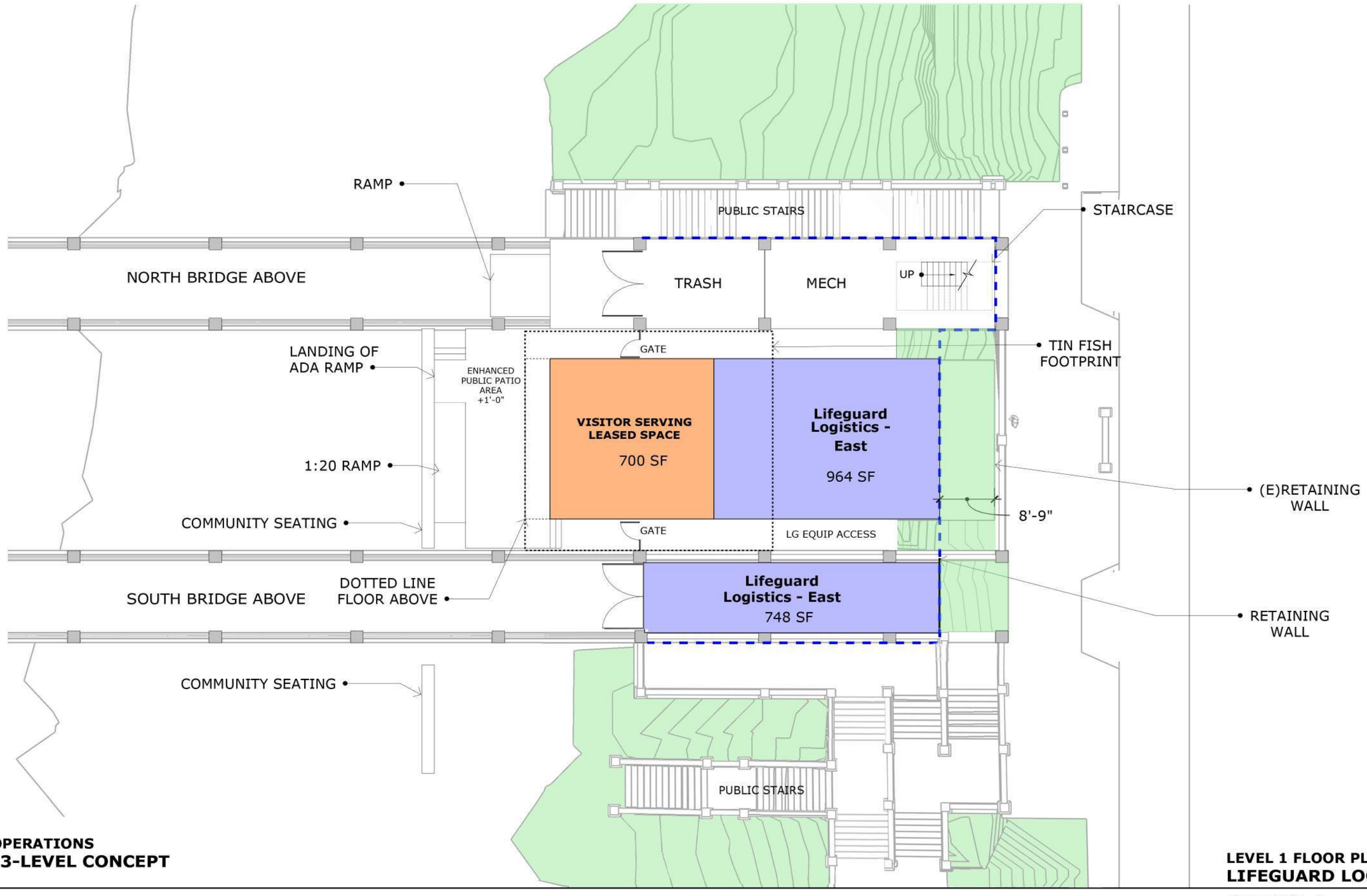


Concept Floor Plan - West End

OCEANSIDE PIER BRIDGE REPLACEMENT AND NEW LIFEGUARD FACILITIES

ROESLING NAKAMURA TERADA ARCHITECTS

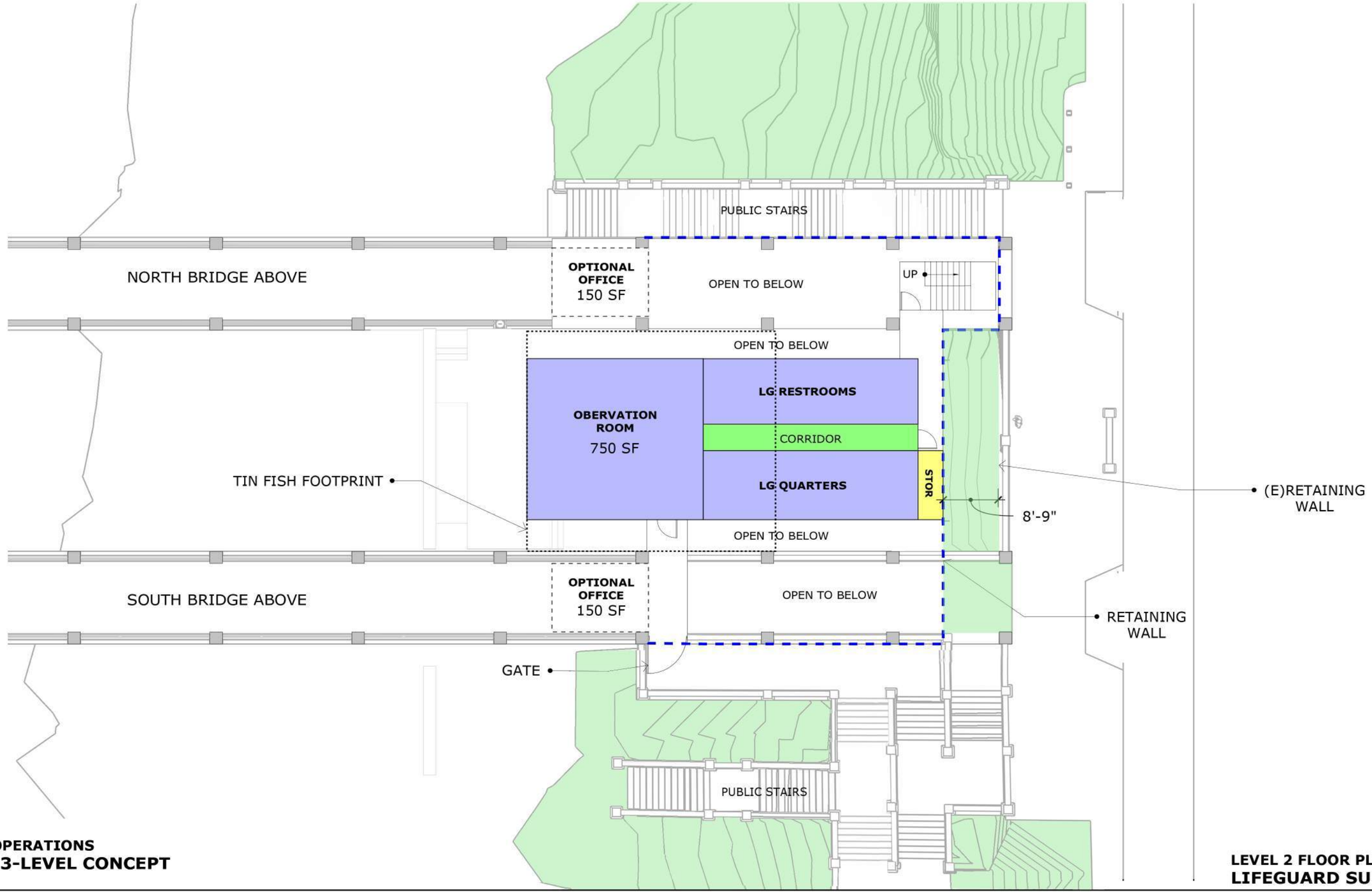
September 01, 2022



LIFEGUARD OPERATIONS
EAST SIDE 3-LEVEL CONCEPT
RNT 1/31/23

LEVEL 1 FLOOR PLAN
LIFEGUARD LOGISTICS

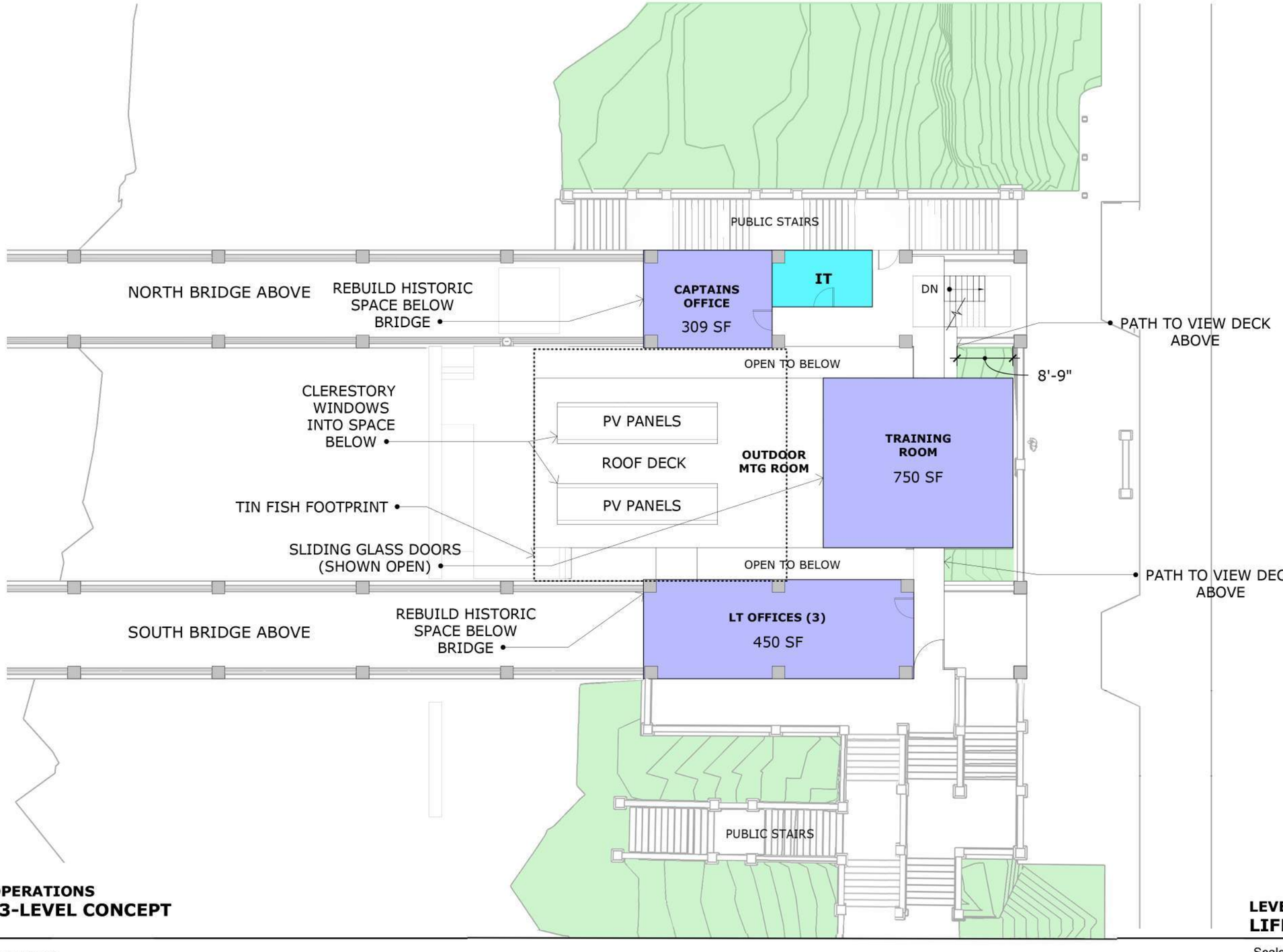
Scale: 1/16" = 1'



LIFEGUARD OPERATIONS
EAST SIDE 3-LEVEL CONCEPT
RNT 1/31/23

LEVEL 2 FLOOR PLAN
LIFEGUARD SUPPORT

Scale: 1/16" = 1'



LIFEGUARD OPERATIONS

EAST SIDE 3-LEVEL CONCEPT

RNT 1/31/23

OCEANSIDE PIER BRIDGE

LEVEL 3 FLOOR PLAN

LIFEGUARD ADMINISTRATION

Scale: 1/16" = 1'



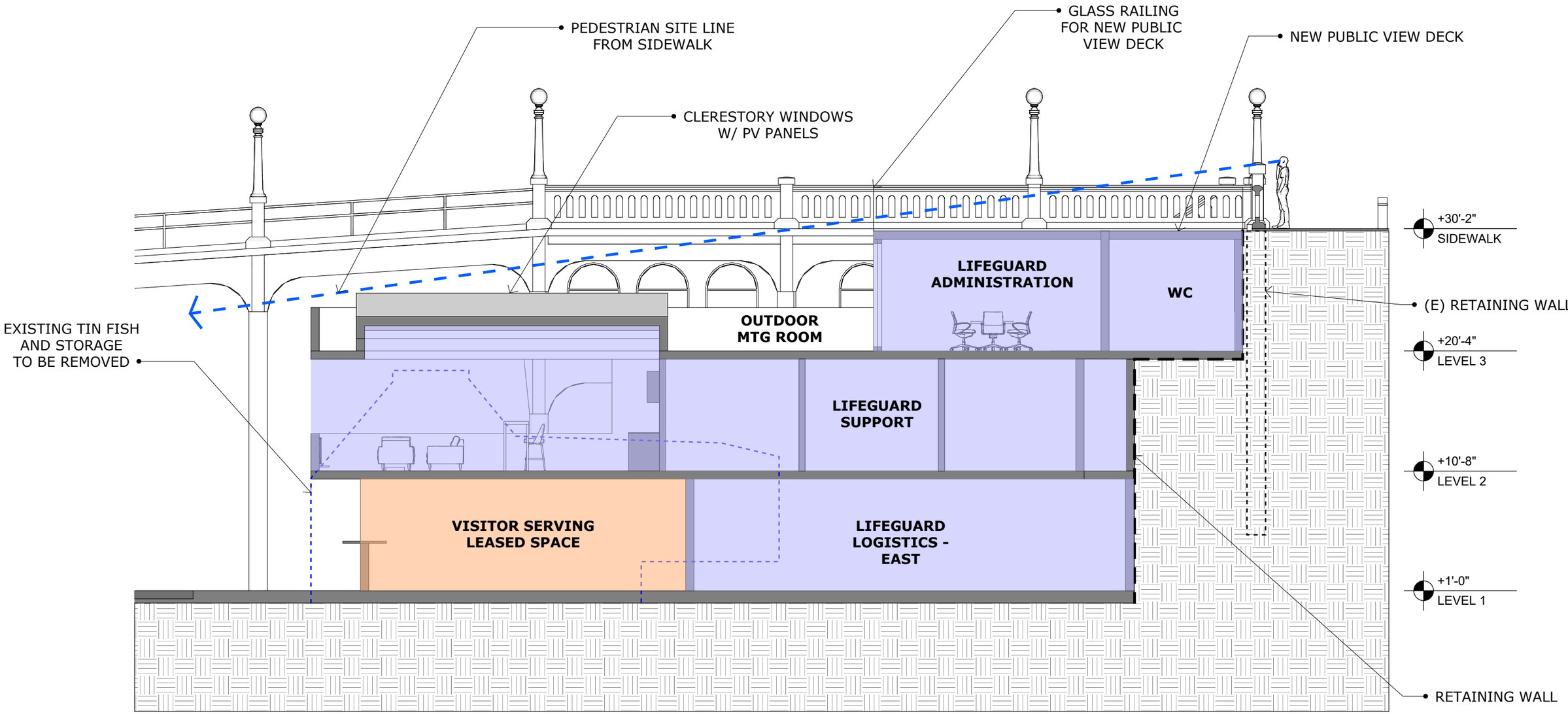
LIFEGUARD OPERATIONS

EAST SIDE 3-LEVEL CONCEPT

RNT 1/31/23

PACIFIC STREET LEVEL

Scale: 1/16" = 1'



LIFEGUARD OPERATIONS

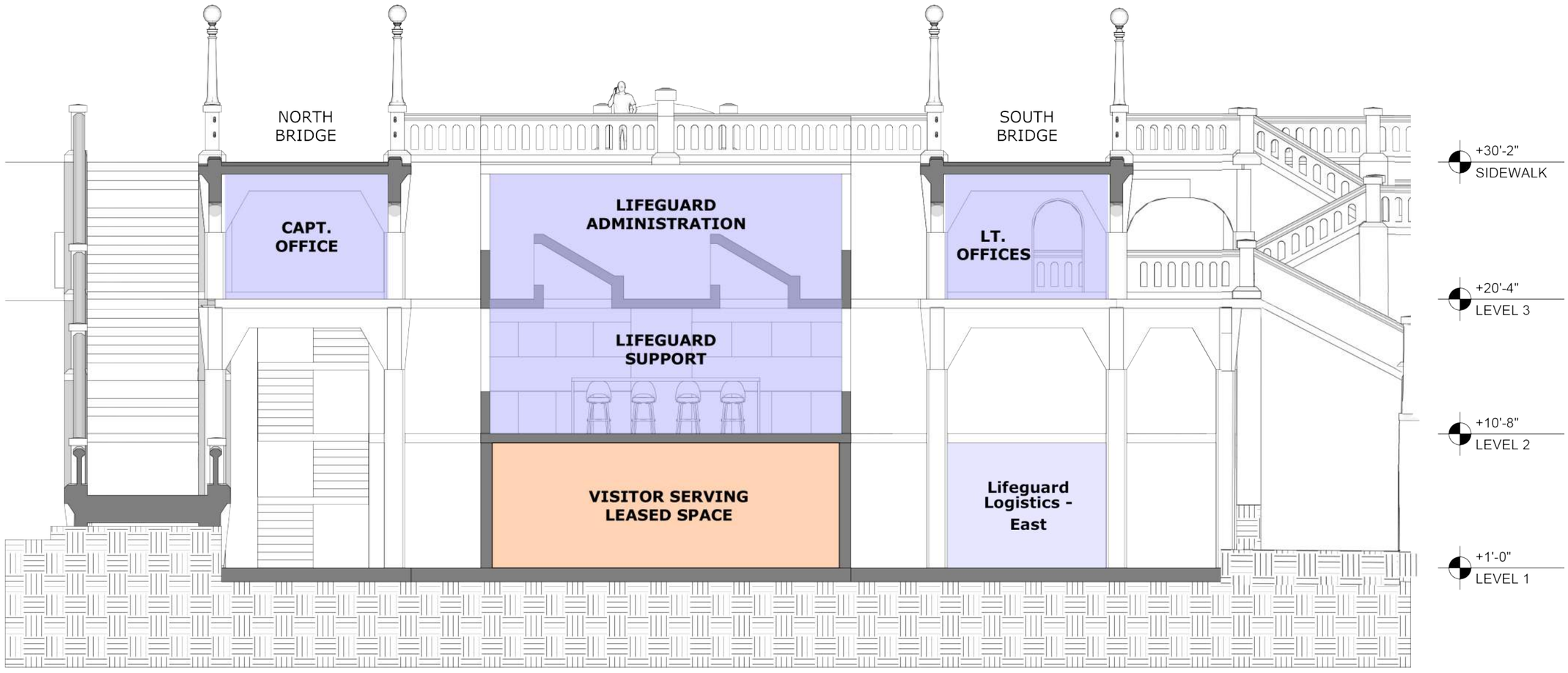
EAST SIDE 3-LEVEL CONCEPT

RNT 1/31/23

OCEANSIDE PIER BRIDGE

SECTION

Scale: 1/8" = 1'



LIFEGUARD OPERATIONS

EAST SIDE 3-LEVEL CONCEPT

RNT 1/31/23

OCEANSIDE PIER BRIDGE

SECTION

Scale: 1/8" = 1'

RAMP

STAIRCASE

NORTH BRIDGE ABOVE

TRASH

UP

TIN FISH FOOTPRINT

LANDING OF ADA RAMP

ENHANCED PUBLIC PATIO AREA +1'-0"

VISITOR SERVING LEASED SPACE

700 SF

Lifeguard Logistics - East

1199 SF

1:20 RAMP

(E)RETAINING WALL

COMMUNITY SEATING

LG EQUIP ACCESS

SOUTH BRIDGE ABOVE

DASHED LINE FLOOR ABOVE

Lifeguard Logistics - East

RETAINING WALL

COMMUNITY SEATING

PUBLIC STAIRS

LIFEGUARD OPERATIONS

EAST SIDE 2-LEVEL CONCEPT

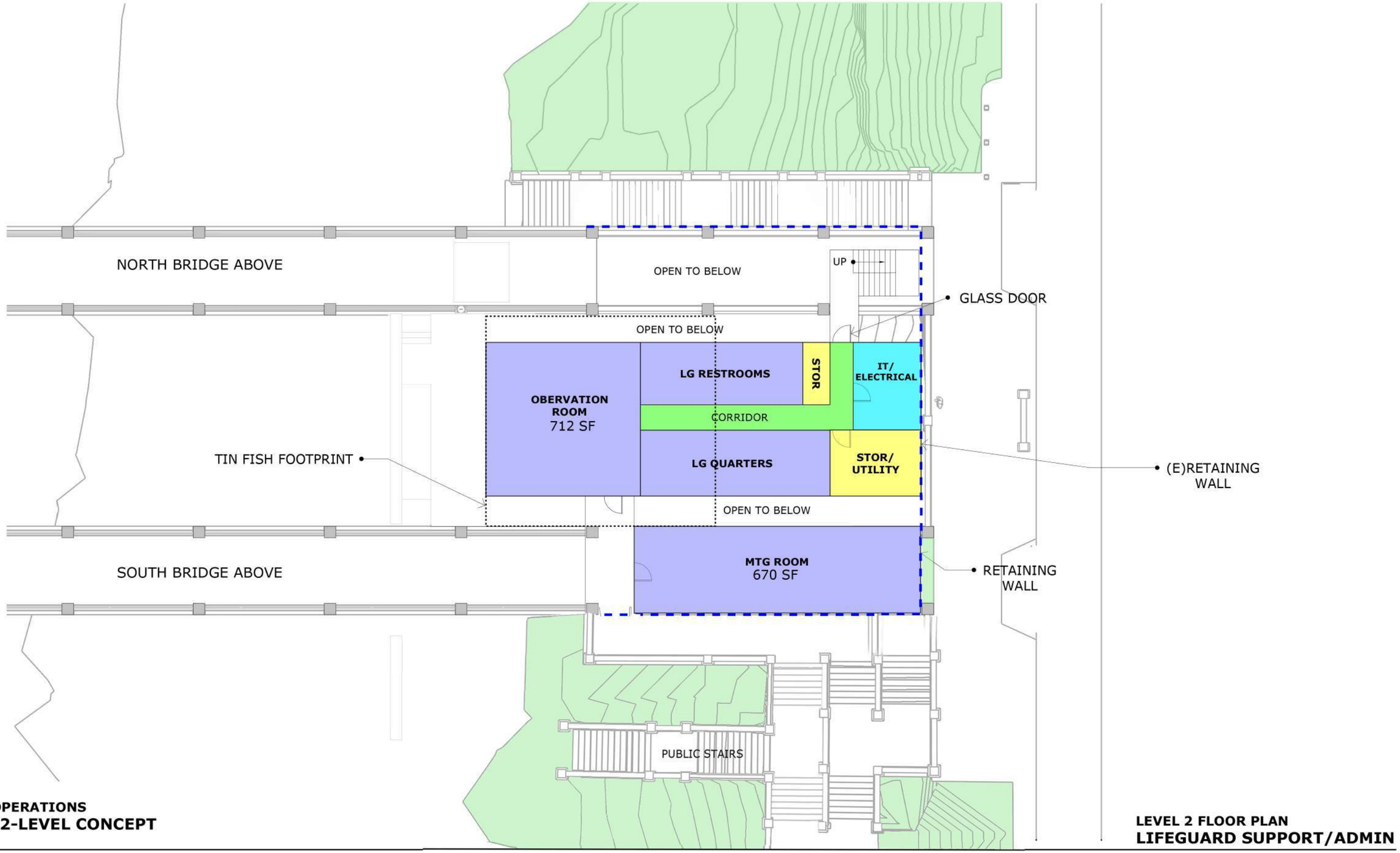
RNT 1/31/23

OCEANSIDE PIER BRIDGE

LEVEL 1 FLOOR PLAN

LIFEGUARD LOGISTICS

Scale: 1/16" = 1'



LIFEGUARD OPERATIONS

EAST SIDE 2-LEVEL CONCEPT

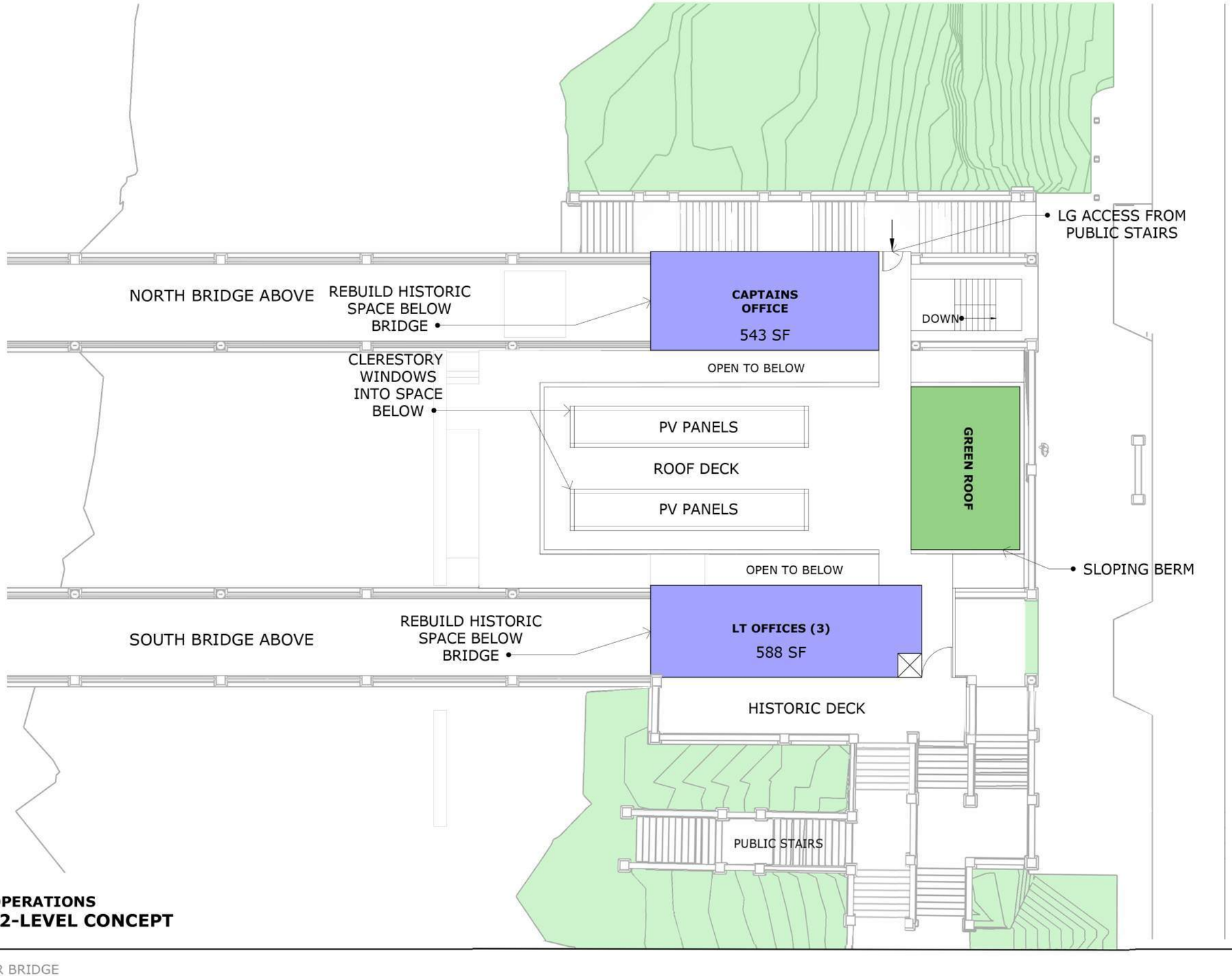
RNT 1/31/23

OCEANSIDE PIER BRIDGE

LEVEL 2 FLOOR PLAN

LIFEGUARD SUPPORT/ADMIN

Scale: 1/16" = 1'



LIFEGUARD OPERATIONS

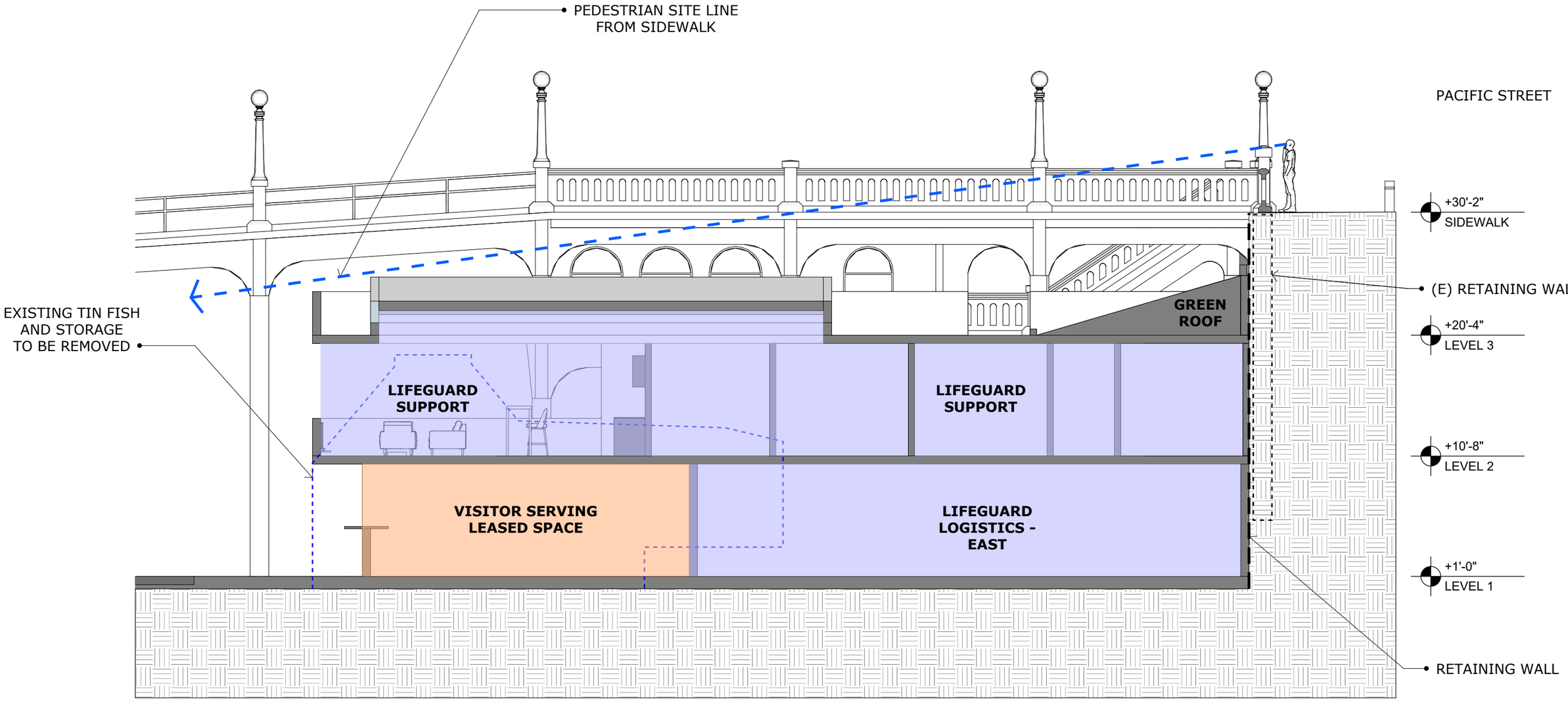
EAST SIDE 2-LEVEL CONCEPT

RNT 1/31/23

LEVEL 3 FLOOR PLAN

LIFEGUARD ADMINISTRATION

Scale: 1/16" = 1'



LIFEGUARD OPERATIONS

EAST SIDE 2-LEVEL CONCEPT

RNT 1/31/23

OCEANSIDE PIER BRIDGE

SECTION

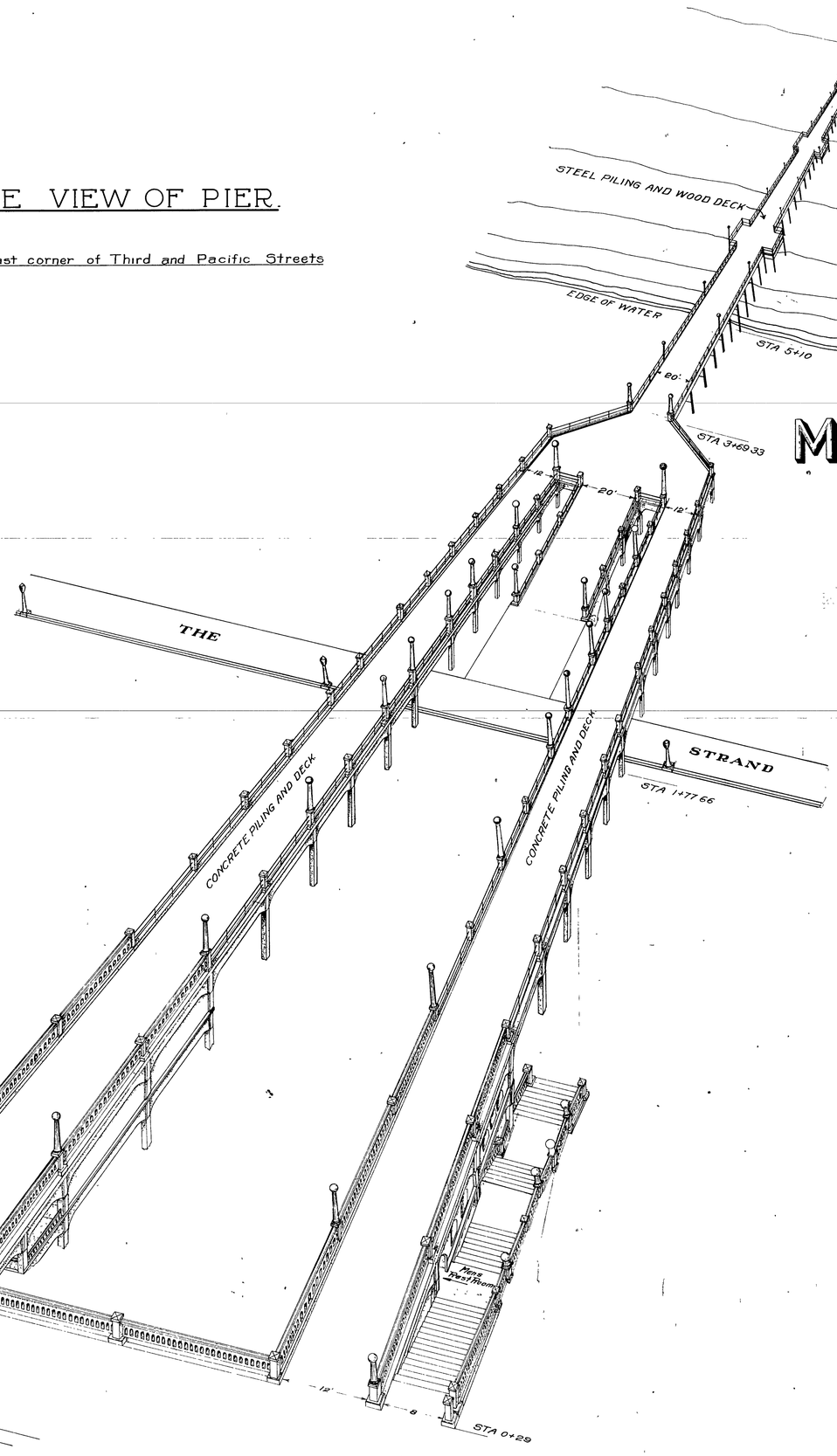
Scale: 1/8" = 1'

ATTACHMENT 2:

AS-BUILT PLANS

PERSPECTIVE VIEW OF PIER.

As seen from over the northeast corner of Third and Pacific Streets



MUNICIPAL PLEASURE PIER.

FOR THE CITY OF

OCEANSIDE, CALIFORNIA.

DESIGNED BY AND BUILT UNDER THE SUPERVISION OF } P.L. Loucks C.E., City Engineer of Oceanside. 1926.

Drawn by - C.S. Seabrook

CONTENTS OF PLANS.	
SHEET	SUBJECT
1.	Title and perspective
2.	General Plan (concrete section)
3.	" " (steel section)
4.	South Rest Room
5.	North Rest Room
6.	Rest Rooms to steel structure
7	Concrete details
8.	" "
9.	" "
10.	Steel details
11.	" "
12.	Pier end

BOARD OF TRUSTEES

E.A. Walsh (PRESIDENT)
Bernard Macdonald
C.D. Merrill
H.D. Brodie
H.F. Crandell
J.H. Landes (CLerk)

3-B

MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA
Sheet 2 of 12 Sheets
R.L Loucks - City Engineer

GENERAL · PLAN · AND · ELEVATION.

PART - 1

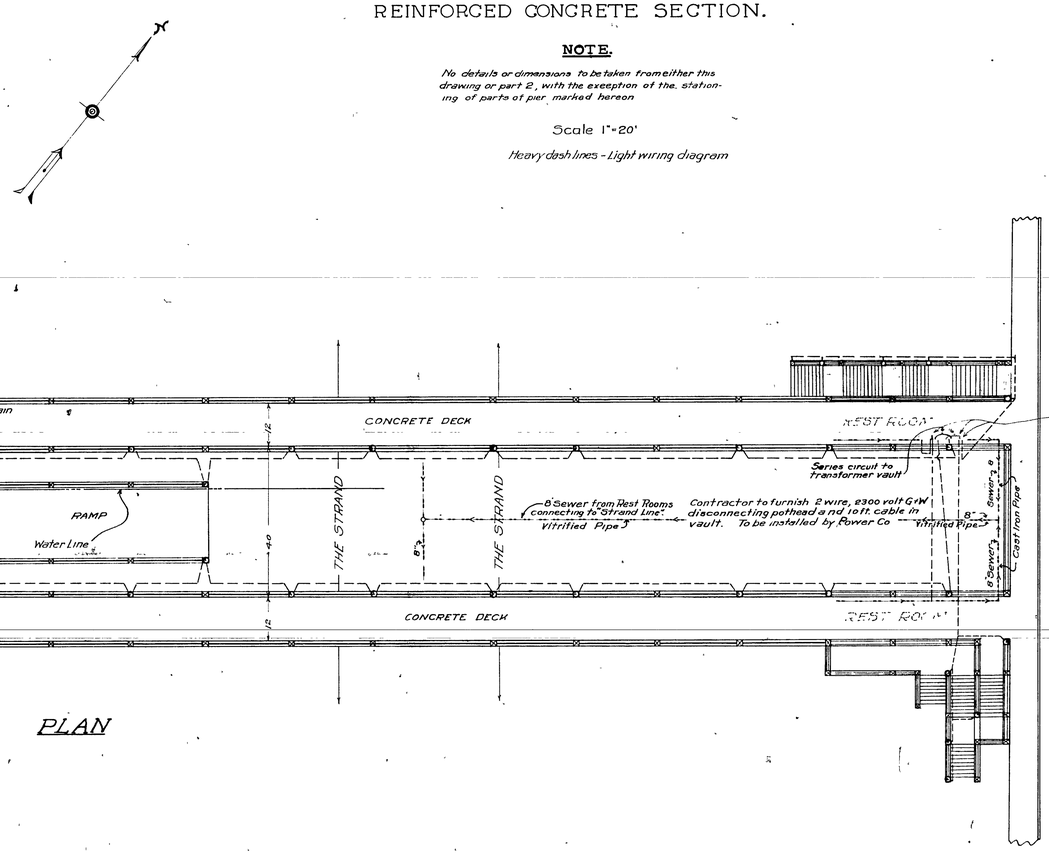
REINFORCED CONCRETE SECTION.

NOTE.

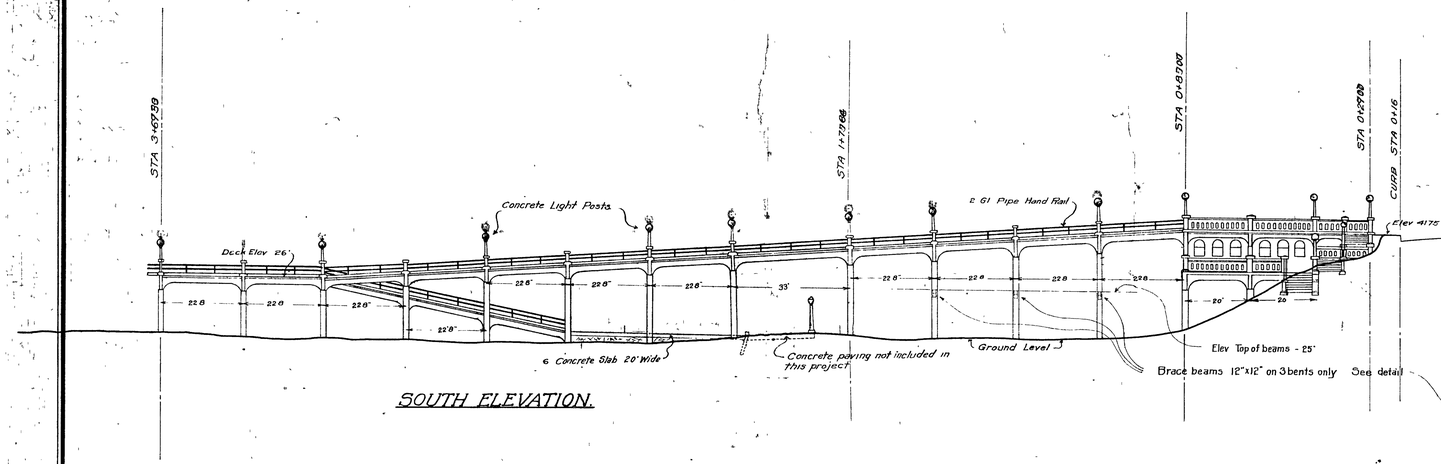
No details or dimensions to be taken from either this drawing or part 2, with the exception of the stationing of parts of pier marked hereon

Scale 1"=20'

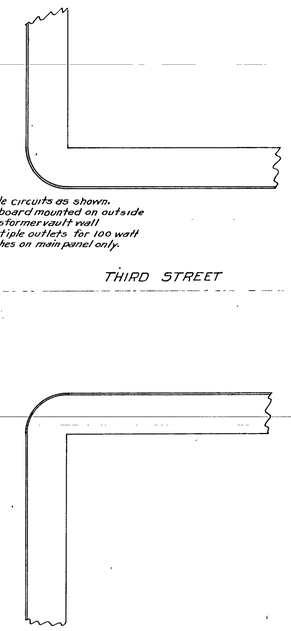
Heavy dash lines - Light wiring diagram

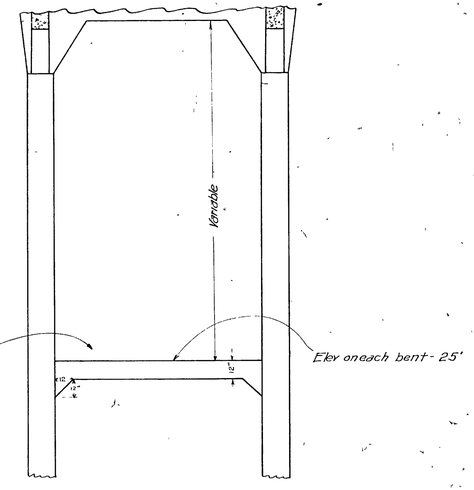


PLAN



SOUTH ELEVATION.



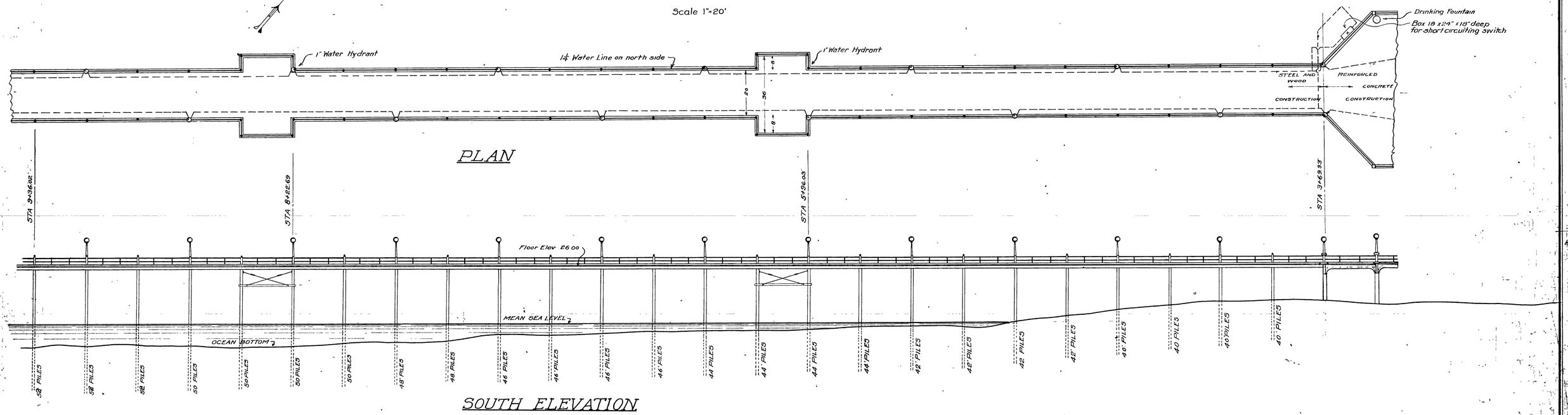


BRACING BEAM ON 3 BENTS ONLY

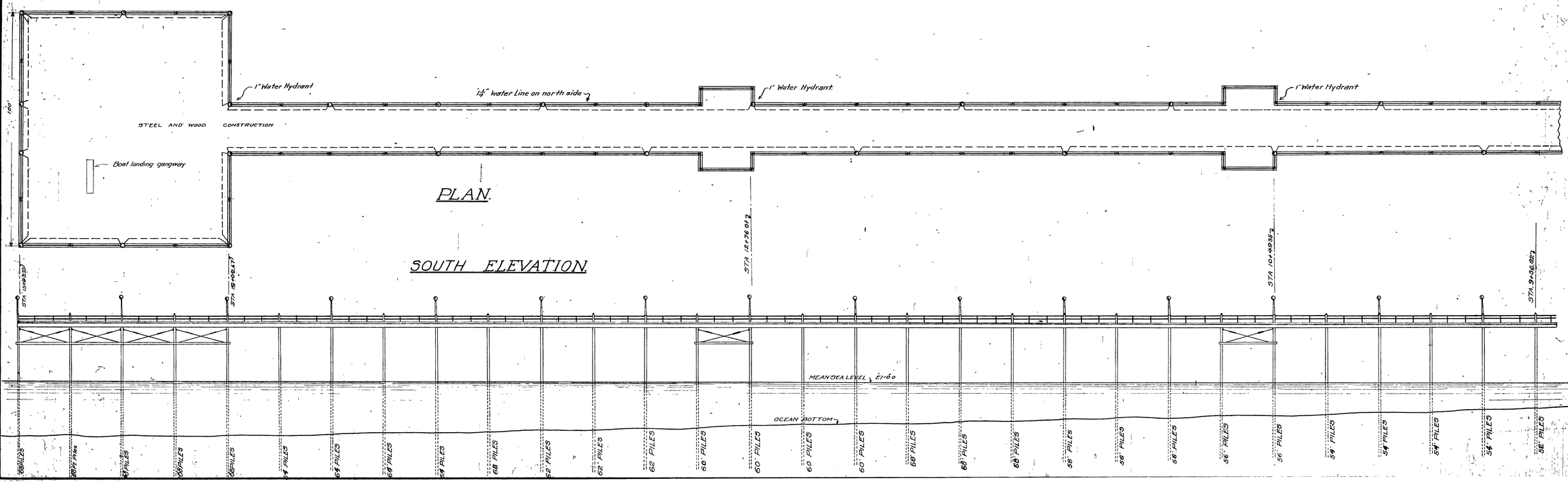
MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA.
Sheet 3 of 12 Sheets
R.L. Loucks - City Engineer.

GENERAL PLAN AND ELEVATION.
PART - 2.
STEEL AND WOOD SECTION.

Scale 1"=20'



NOTE
All bents on this sheet 22'6" c-c.



MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA.

Sheet 4 of 12 Sheets.

R.L. Loucks - City Engineer

REST ROOM

CONCRETE DECK
Elevation 41.75

BALCONY
Elev 32.38

PLAN.

STA 0+89.06

Elev 41.75

CONCRETE SIDEWALK

WEST CURB LINE OF PACIFIC STREET

PACIFIC STREET

Elev 37.38

STA 0+29.00

STA 0+16

SOUTH WING OF PIER.
PORTION ADJOINING PACIFIC STREET.
REINFORCED CONCRETE CONSTRUCTION.

Scale 1"=4'

Lights and light posts as shown on general plan

SOUTH ELEVATION.

2" GI Pipe Hand Rail.

4" Vents

4" Vents

SIDEWALK
Elev 41.75

CURB

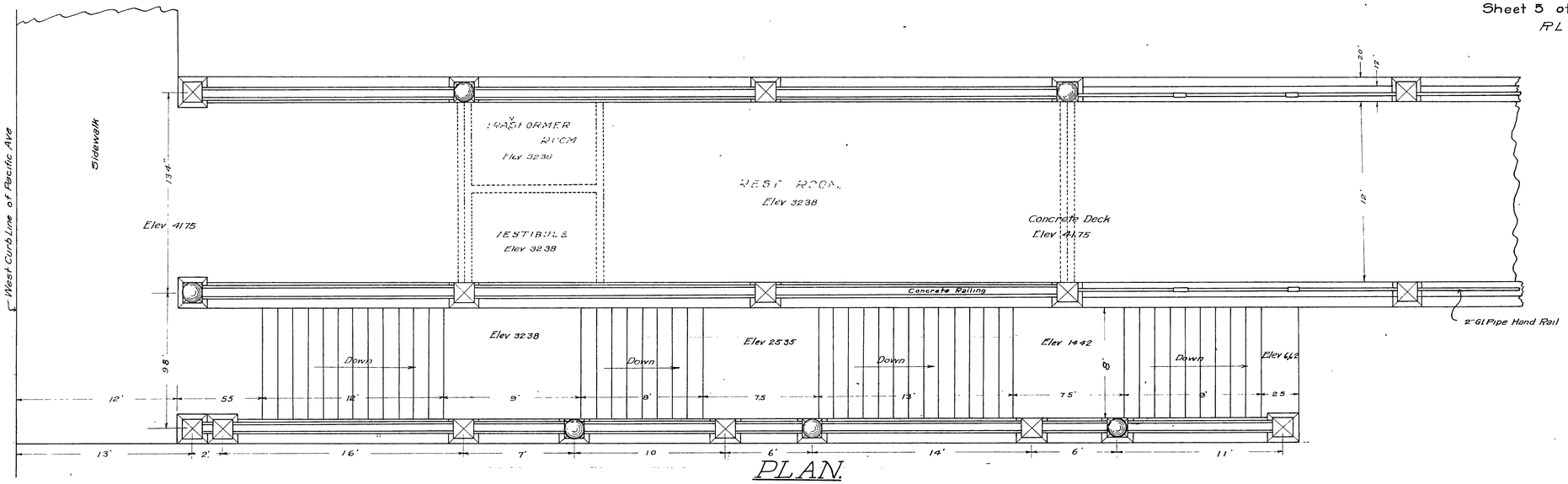
Elev 32.38
BALCONY FLOOR

Top of 12"x12" brace
Elev 23

GROUND PROFILE

22'6" | 22'8 | 20' | 11'0 | 9'0" | 9'0" | 9'0"

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 5 of 12 Sheets.
R L Loucks - City Engineer



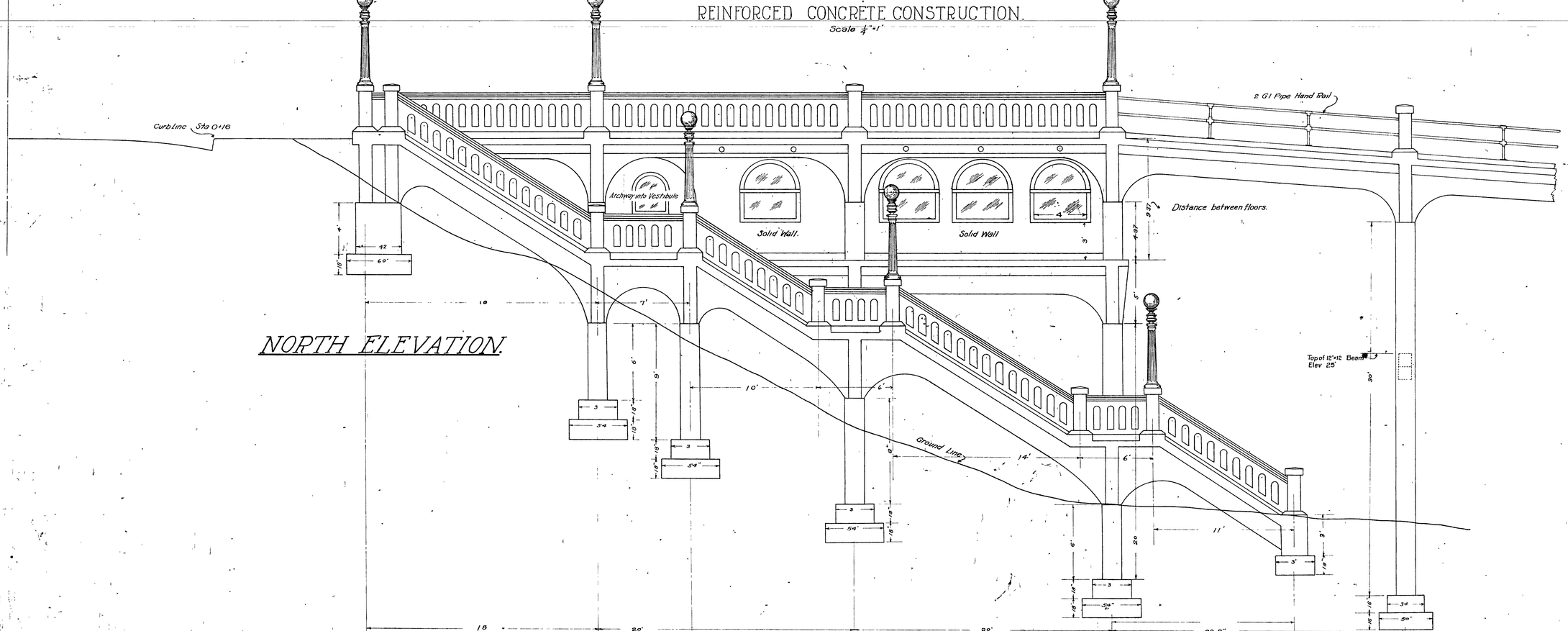
PLAN.

NORTH WING OF PIER.

PORTION ADJOINING PACIFIC AVENUE.

REINFORCED CONCRETE CONSTRUCTION.

Scale 4"=1'



NORTH ELEVATION.

E. & PACIFIC ASE STA 0+00

3-34

MUNICIPAL PLEASURE PIER
OCEANSIDE, CALIFORNIA.

Sheet 6 of 12 Sheets.

R.L. Loucks, City Engineer.

PORTION OF PIER
INCLUDING RAMP

Steel and Wood Construction

Reinforced Concrete Construction

Drinking Fountain

WALK

CONCRETE

DECK

12'

10'

20'

10'

12

CONCRETE

Wood Deck Concrete Deck

Dotted Circles indicating wooden piling beneath footing

67'4"

Elev 26.00

CONCRETE RAMP

TO PIER

TO BEACH

CONCRETE WALK TO STRAND

CONCRETE

DECK

CONCRETE

DECK

PLAN

22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 33'

Floor Elev 26.00

Floor Elev 26.00

7'7" 7'7" 7'7" 7'7" 7'7" 8'3" 9'3"

18' 18' 18' 18' 18' 18' 18' 18'

20' 20' 20' 22' 24' 25' 24' 26'

Elev 12.90

6" Concrete slab, 20' long extending from ramp to point on The Strand.

THE STRAND.

GROUND LEVEL

EARTH FILL

These footings are to be 3' wide, 3' deep, and 74' long, being continuous from one side of the pier to the other.

Wood piling, 16' long, one beneath each column as shown

DATUM PLANE MEAN SEA LEVEL

#6 Wire Hoops

5/8 Rods

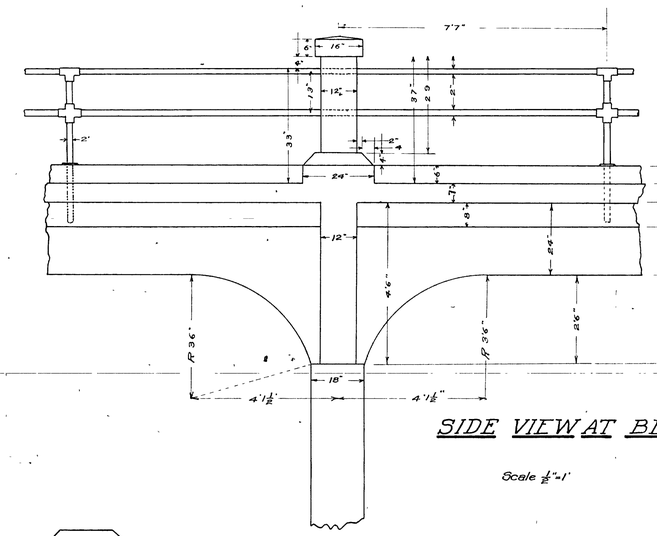
Typical reinforcing to be placed in each footing

SOUTH ELEVATION

DETAILS

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 7 of 12 Sheets.

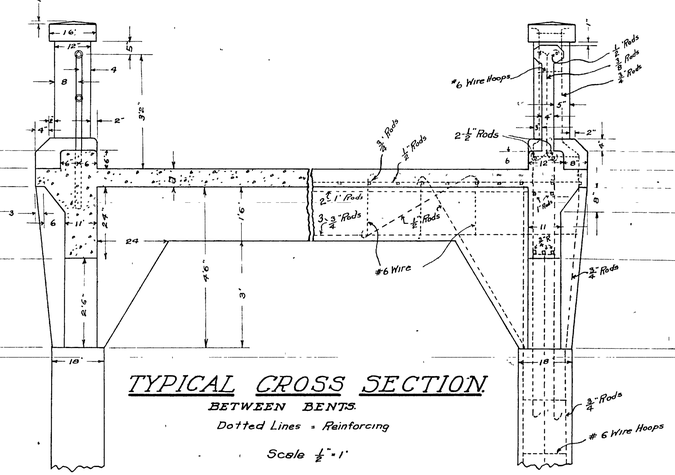
P.L. Loucks - City Engineer.



SIDE VIEW AT BENT

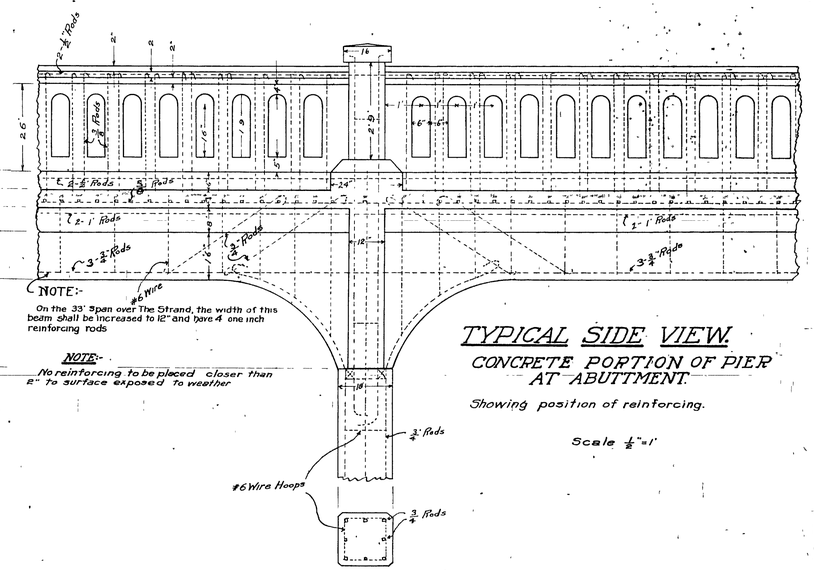
Scale ½"=1'

PIPE HAND RAIL — CONCRETE HAND RAIL



TYPICAL CROSS SECTION
BETWEEN BENTS.
Dotted Lines = Reinforcing

Scale ½"=1'

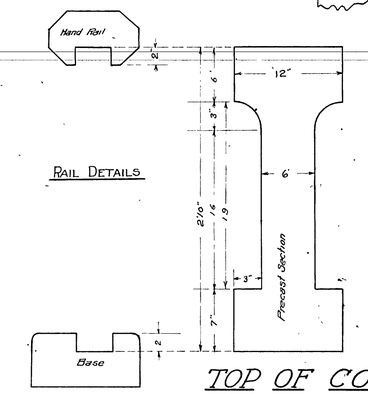


NOTE:-
On the 33' Span over The Strand, the width of this beam shall be increased to 12" and have 4 one inch reinforcing rods

NOTE:-
No reinforcing to be placed closer than 2" to surface exposed to weather

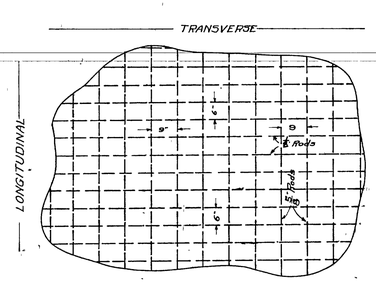
TYPICAL SIDE VIEW.
CONCRETE PORTION OF PIER AT ABUTTMENT.
Showing position of reinforcing.

Scale ½"=1'



RAIL DETAILS

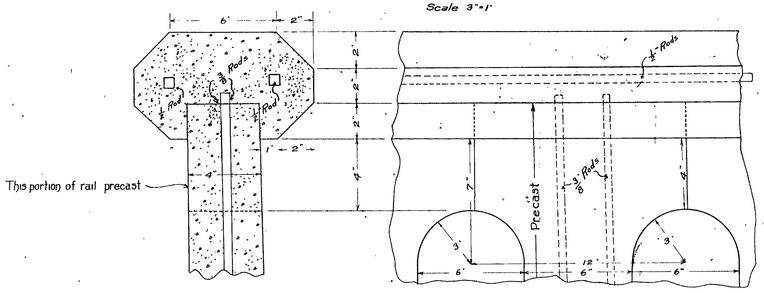
TRANSVERSE



SECTION OF FLOOR showing REINFORCING.

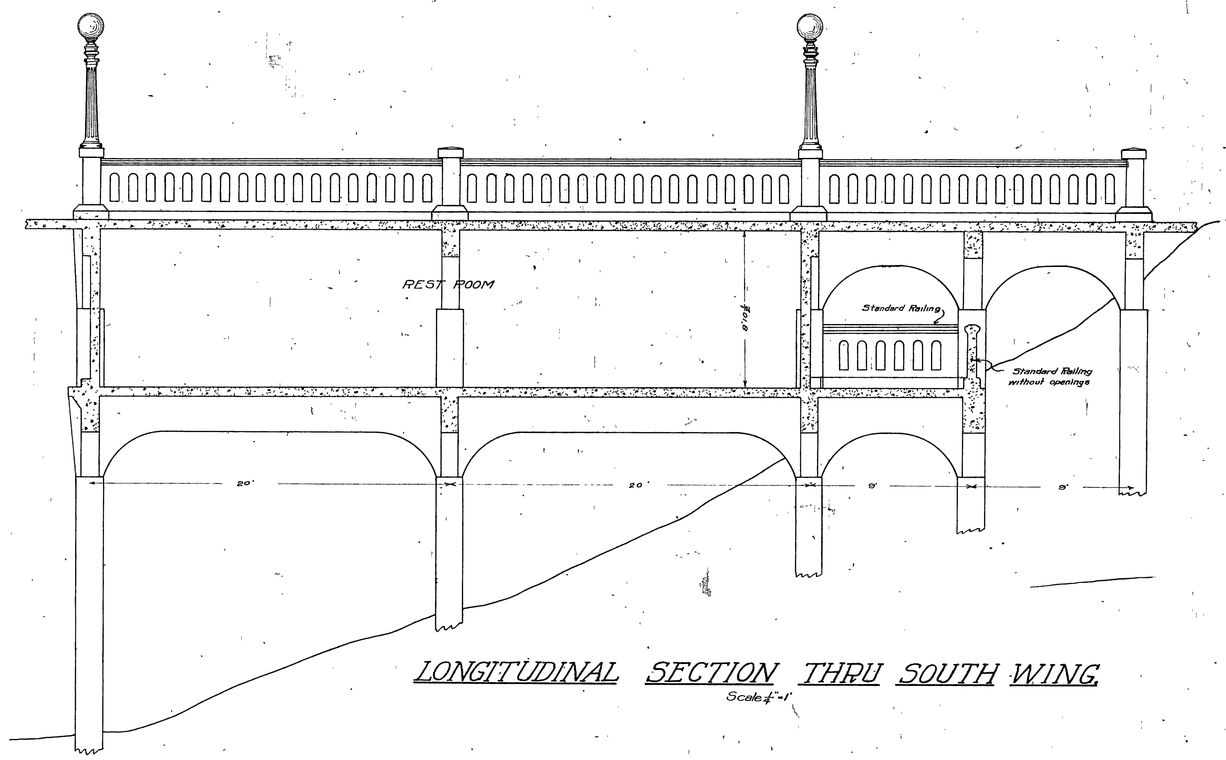
TOP OF CONCRETE RAILING.

Scale 3"=1'



CROSS SECTION

SIDE VIEW.



LONGITUDINAL SECTION THRU SOUTH WING.

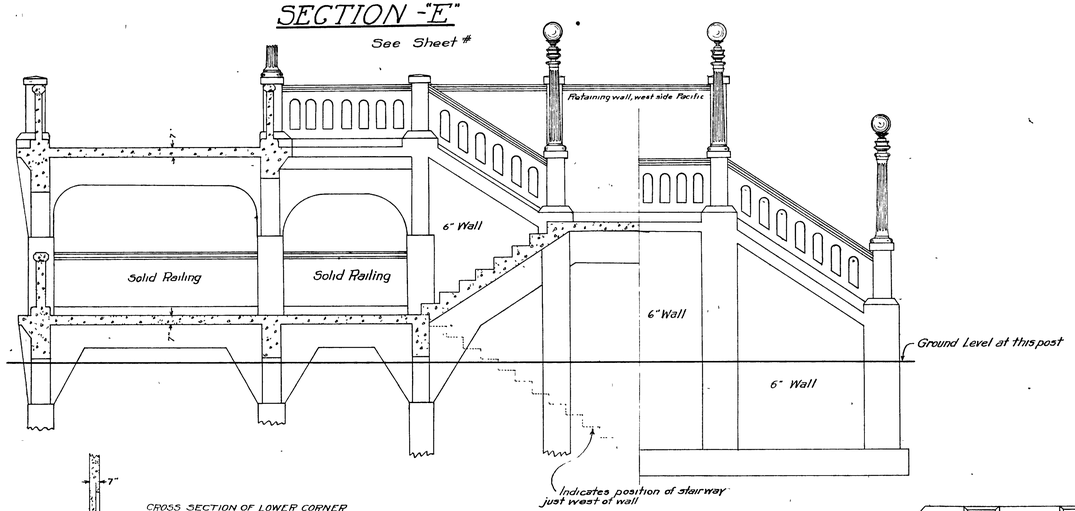
Scale ¼"=1'

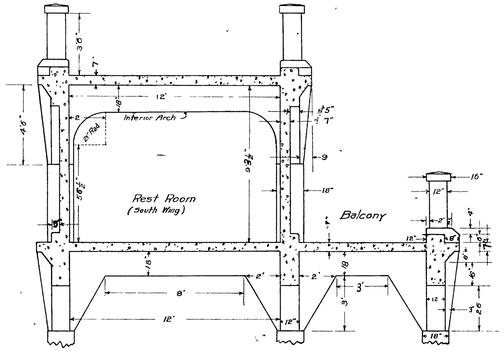
MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 8 of 12 Sheets.
R L Loucks - City Engineer

DETAILS.

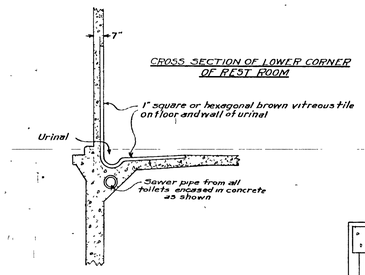
SECTION -"E"

See Sheet #

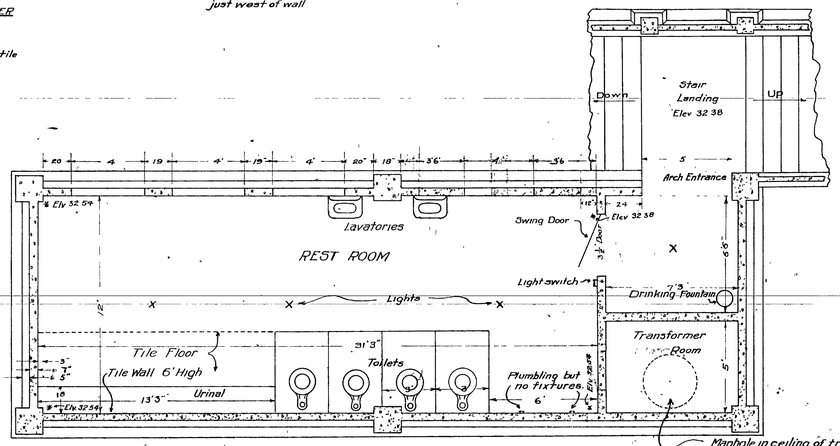




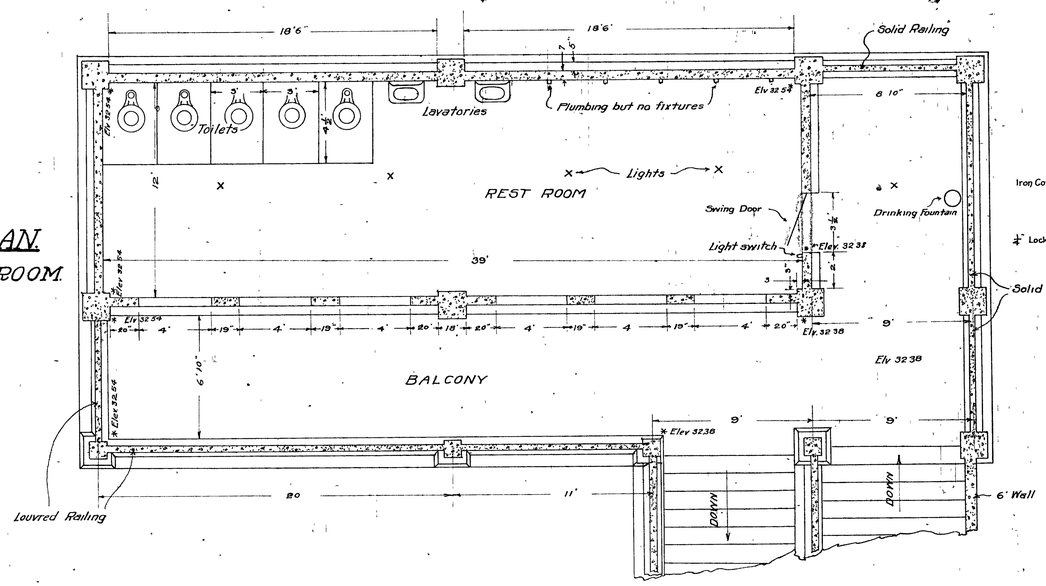
TYPICAL SECTION.
SOUTH WING REST ROOM.
Scale ¼"-1'

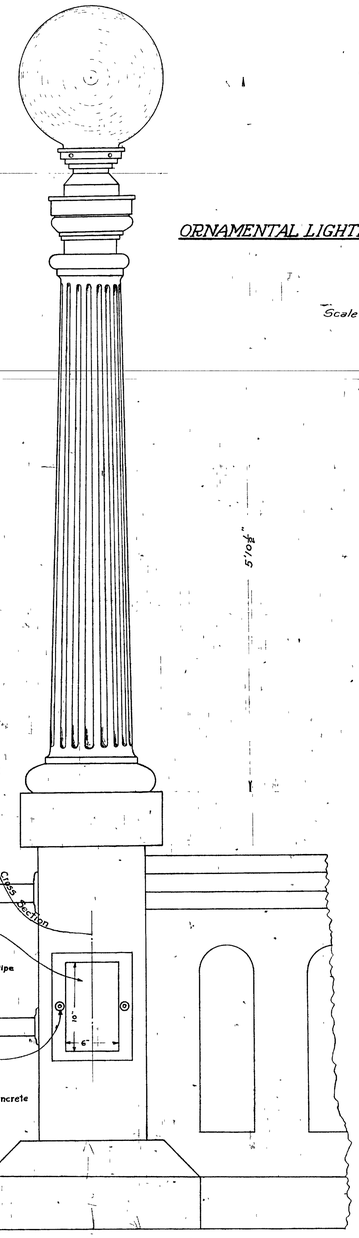


FLOOR PLAN.
NORTH REST ROOM.
Scale ¼"-1



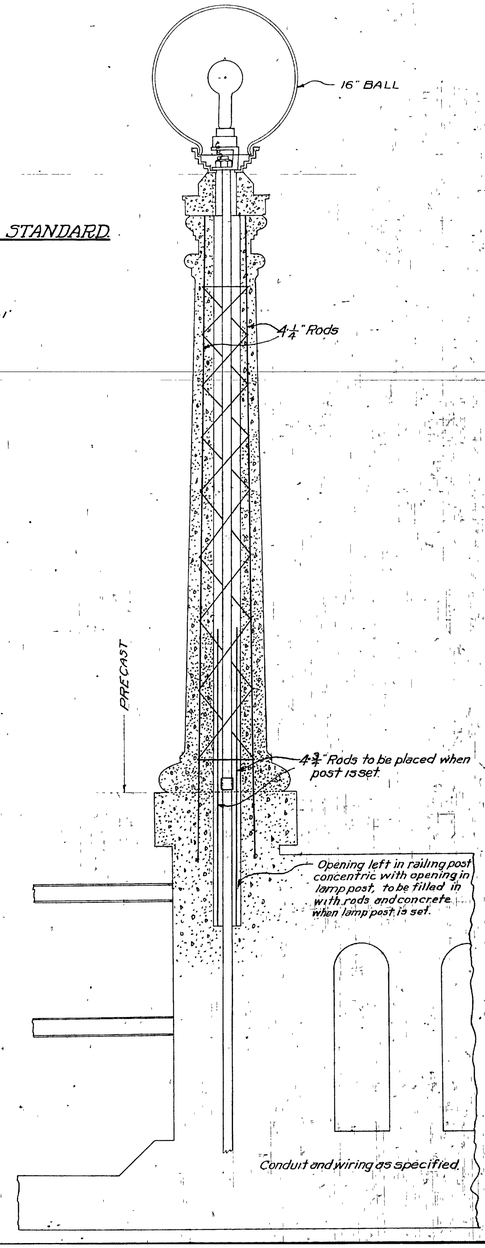
FLOOR PLAN.
SOUTH REST ROOM.
Scale ¼"-1'





ORNAMENTAL LIGHTING STANDARD.

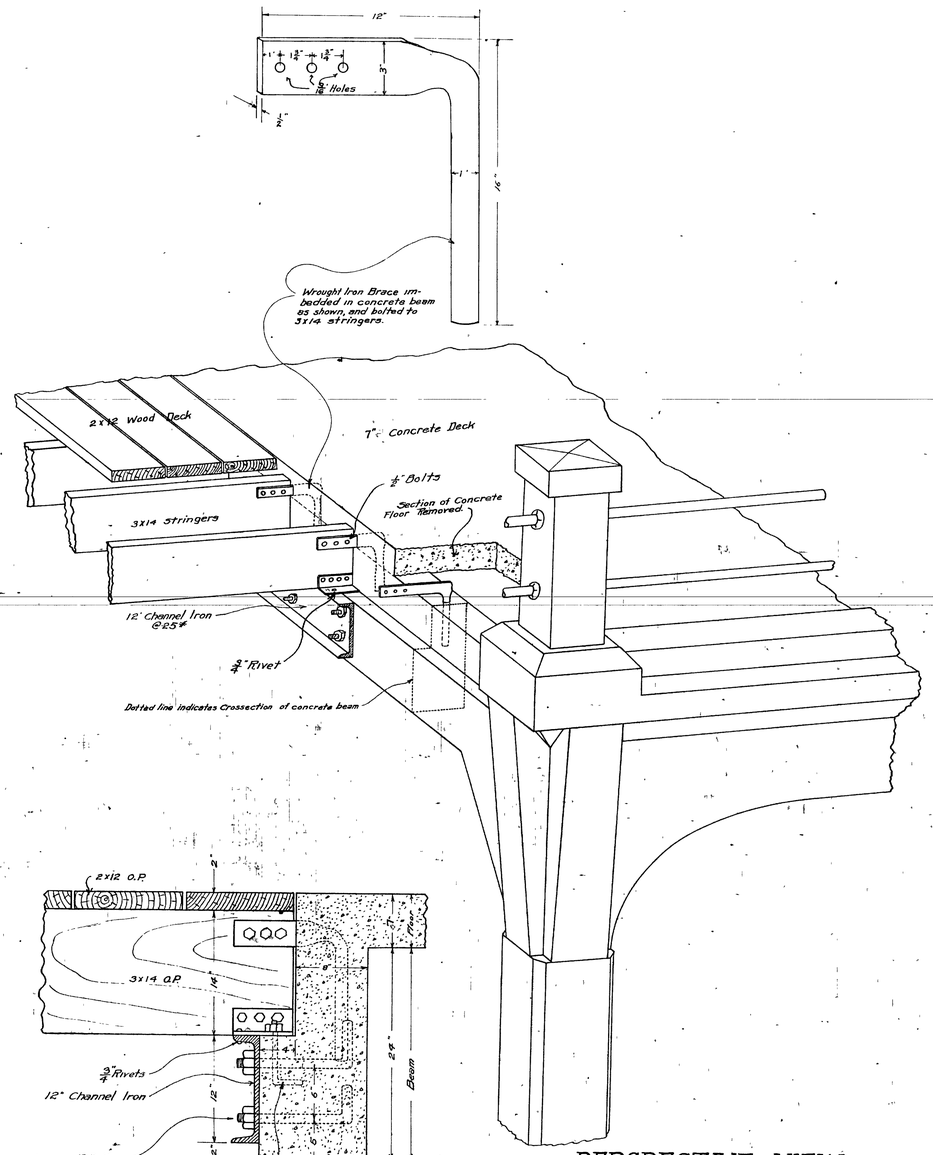
Scale - 1½"-1'



MUNICIPAL PLEASURE PIER
OCEANSIDE CALIFORNIA
Sheet 9 of 12 Sheets.

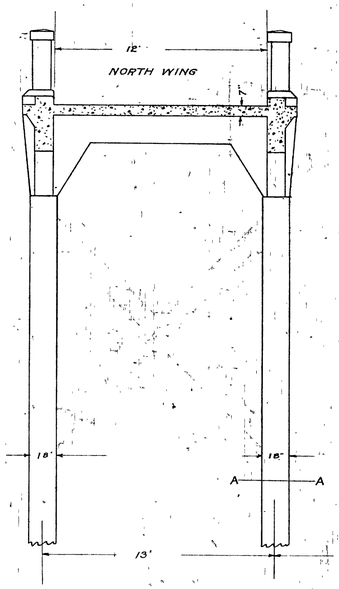
H.L. Loucks. City Engineer.

DETAILS.



PERSPECTIVE VIEW.
JUNCTION OF CONCRETE AND STEEL AND WOOD.

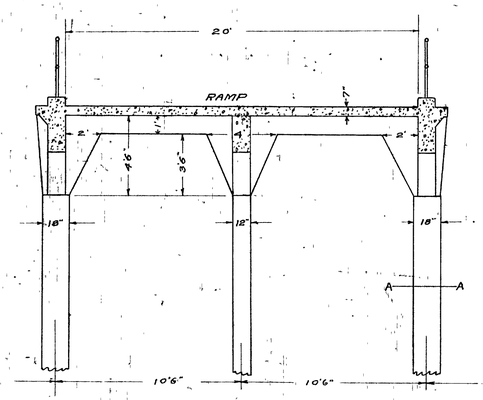
CROSS SECTION.
Scale 1 1/2" = 1'



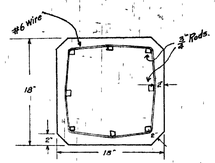
SECTION OF PIER THRU RAMP

SHOWING TRUSSES AND GENERAL CONSTRUCTION.

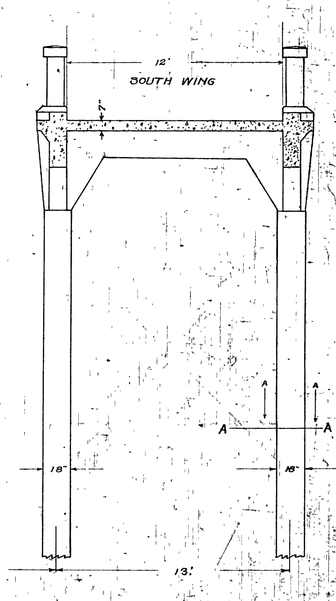
Scale 1/4" = 1'



Standard, Single footings as shown on general plan.



SECTION AA



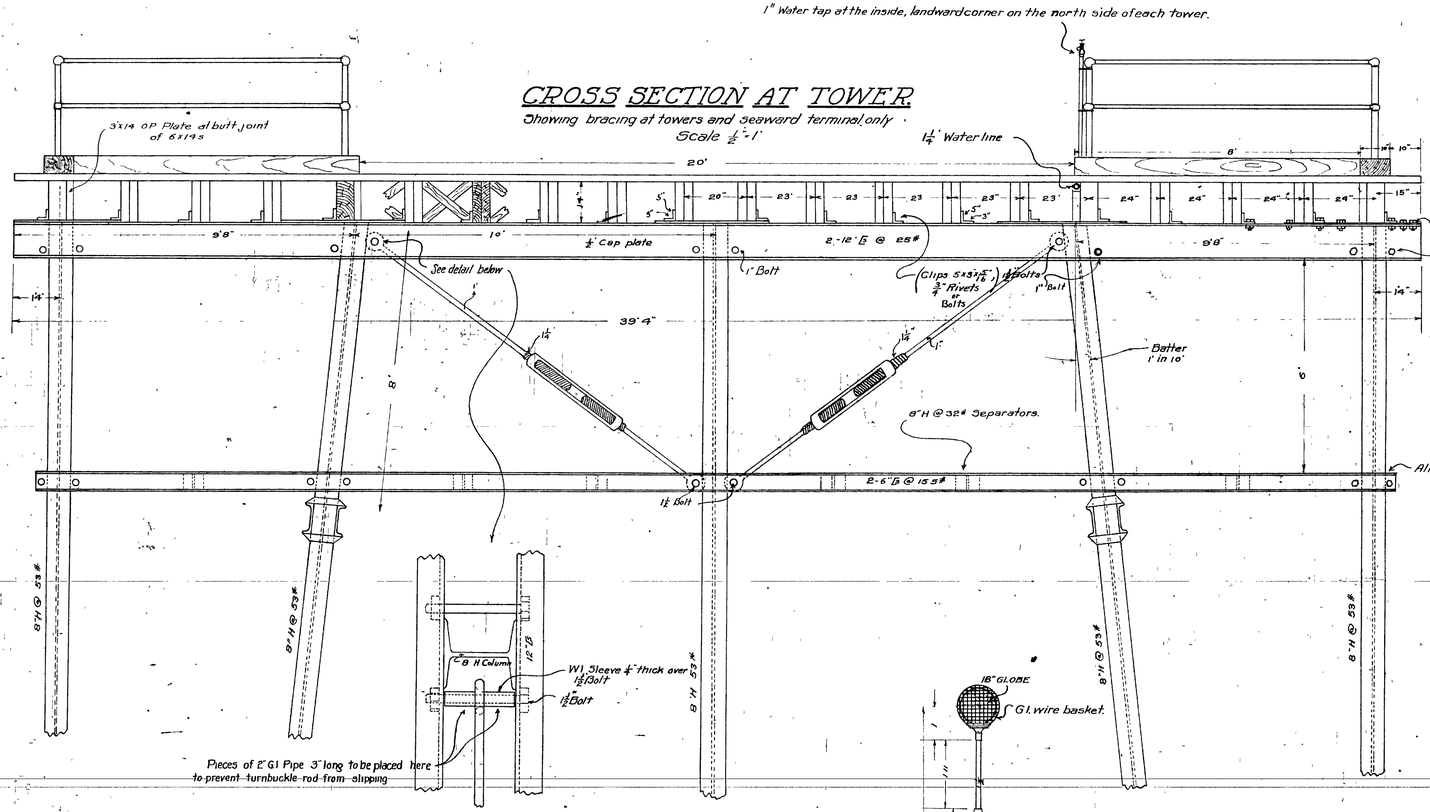
MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.

Sheet 19 of 12 Sheets.

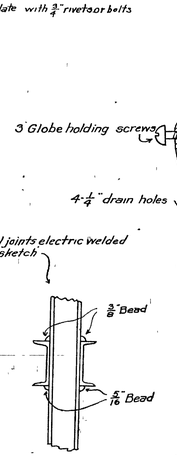
R.L. Loucks - City Engineer

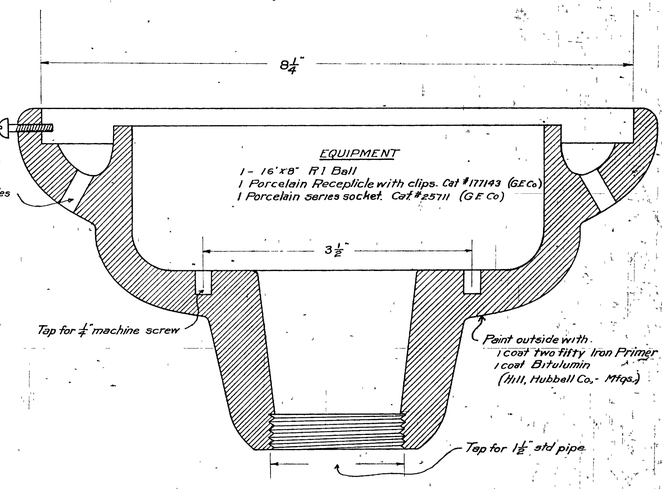
CROSS SECTION AT TOWER.

Showing bracing at towers and seaward terminal only.
Scale ½"-1'



DETAIL SHOWING TURNBUCKLE ROD ANCHOR.

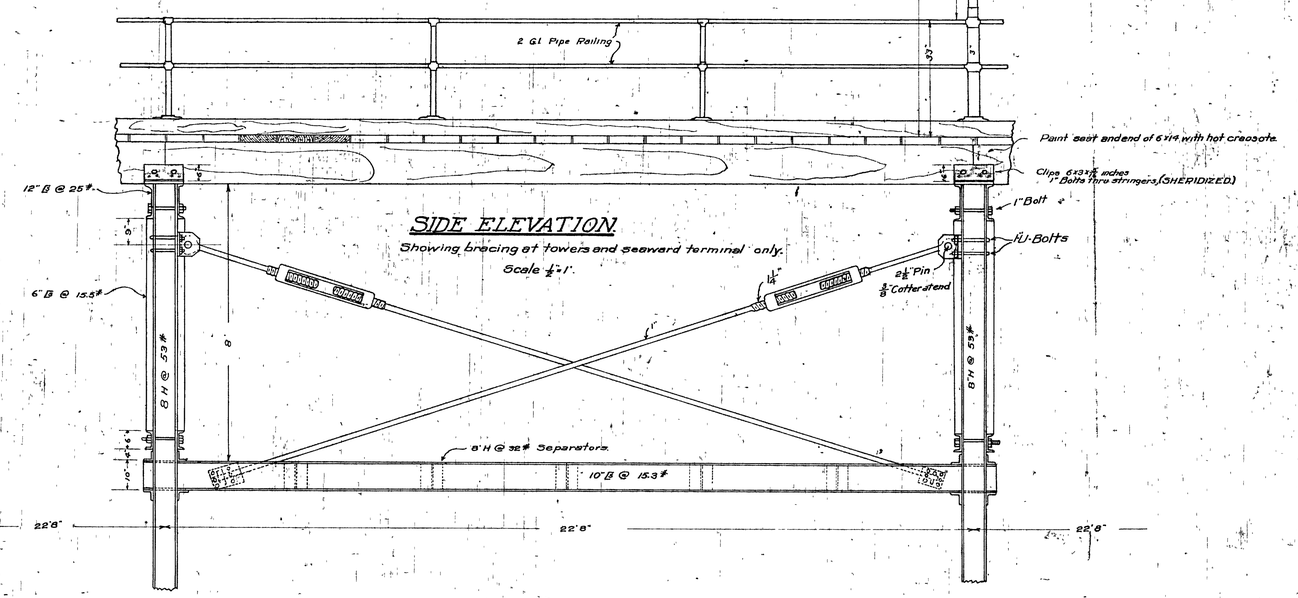


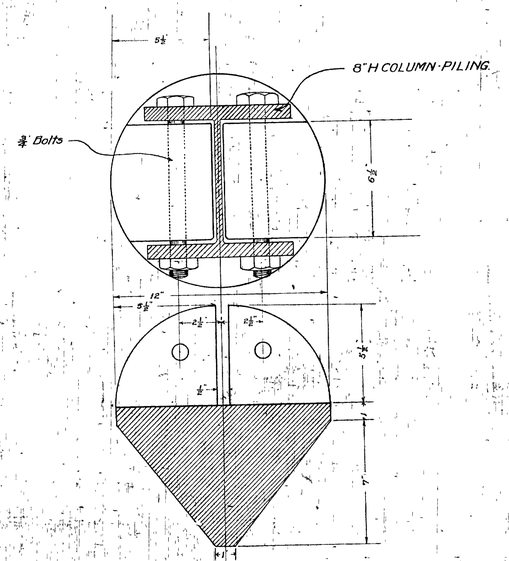


SECTION.

GLOBE HOLDER FOR PIPE LAMP POST.

Scale - Full Size.





JET NOZZLE AND SHOE FOR PILES.

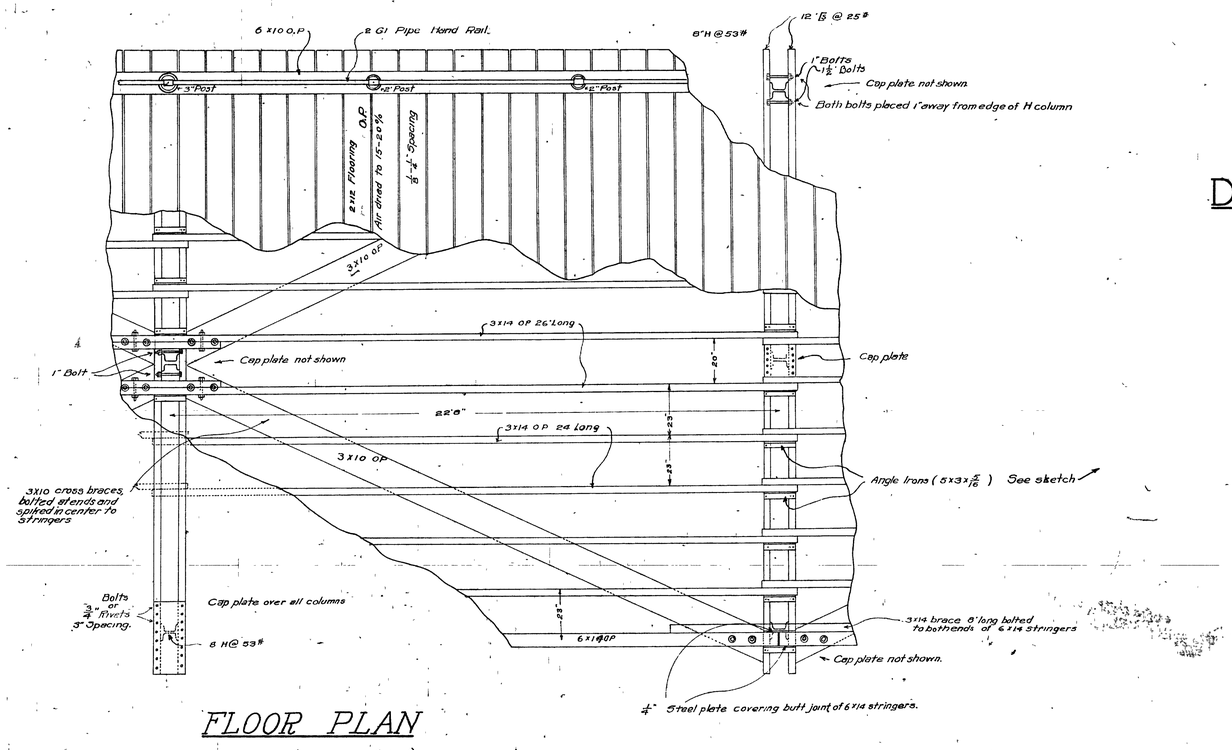
Scale ½"-1"

To be made of Cast Iron.

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 11 of 12 Sheets
R.L. Loucks - City Engineer.

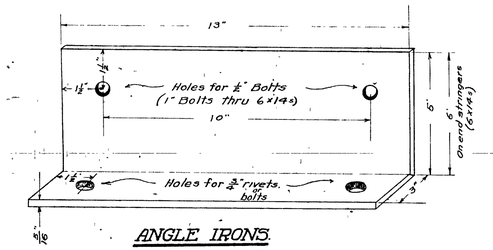
DETAILS OF STEEL AND WOOD STRUCTURE.

(PORTION OF PIER OVER THE WATER)

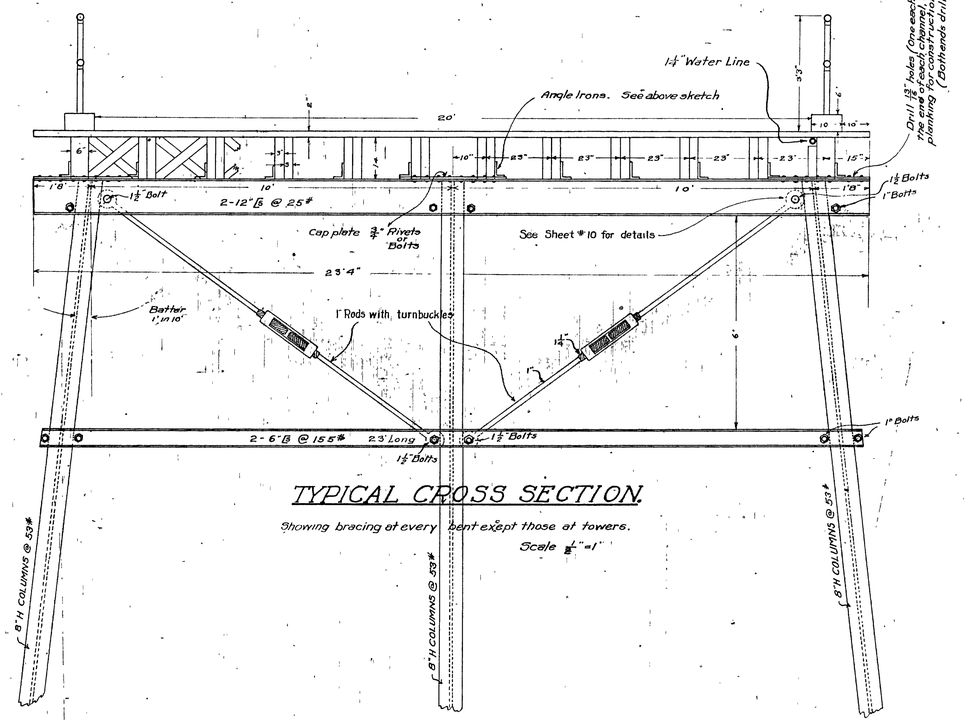


FLOOR PLAN

Scale 1" = 2'8" (⅜" = 1')



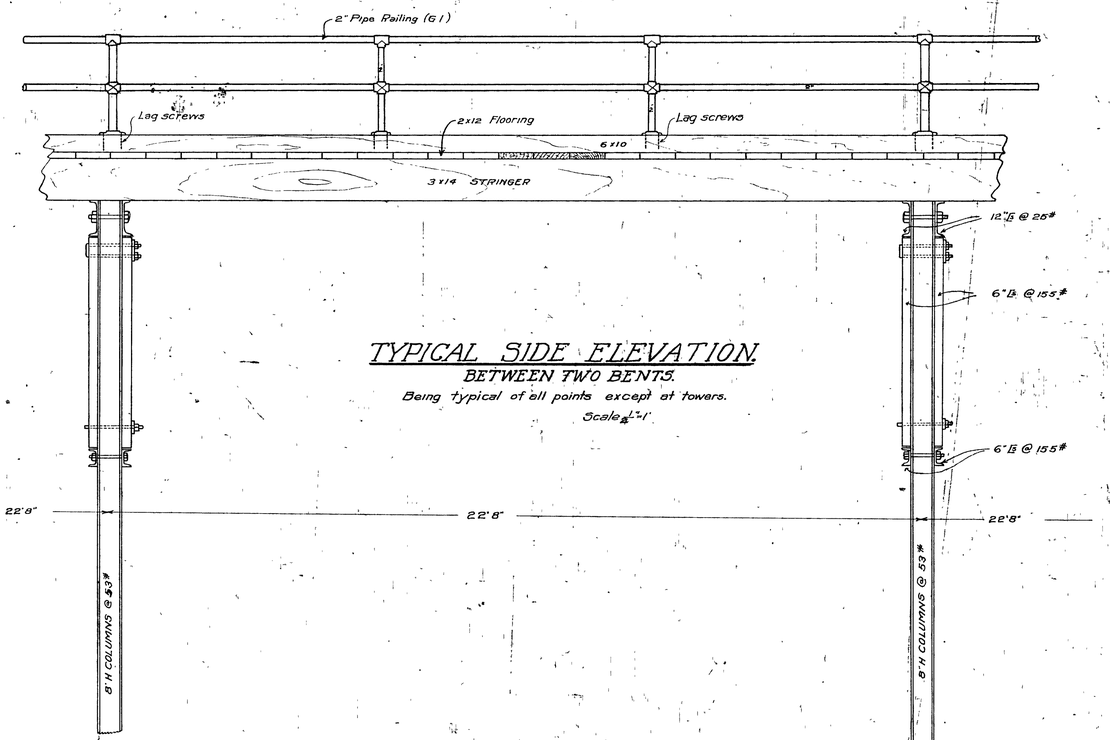
ANGLE IRONS.



TYPICAL CROSS SECTION.

Showing bracing at every bent except those at towers.

Scale ½" = 1'



TYPICAL SIDE ELEVATION.

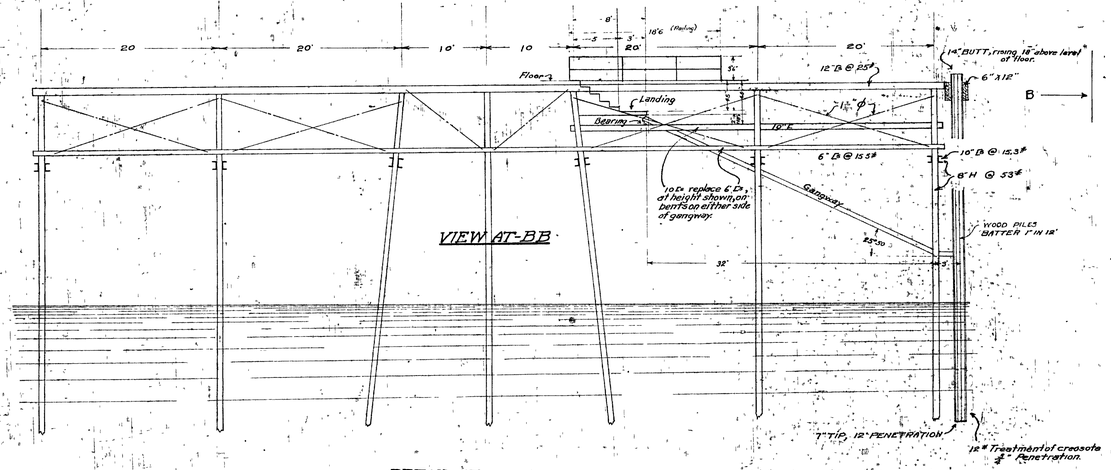
BETWEEN TWO BENTS.

Being typical of all points except at towers.

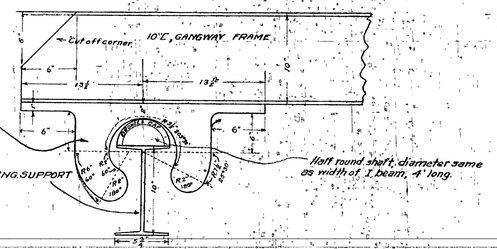
Scale ½" = 1'

SEAWARD TERMINAL OF PIER.

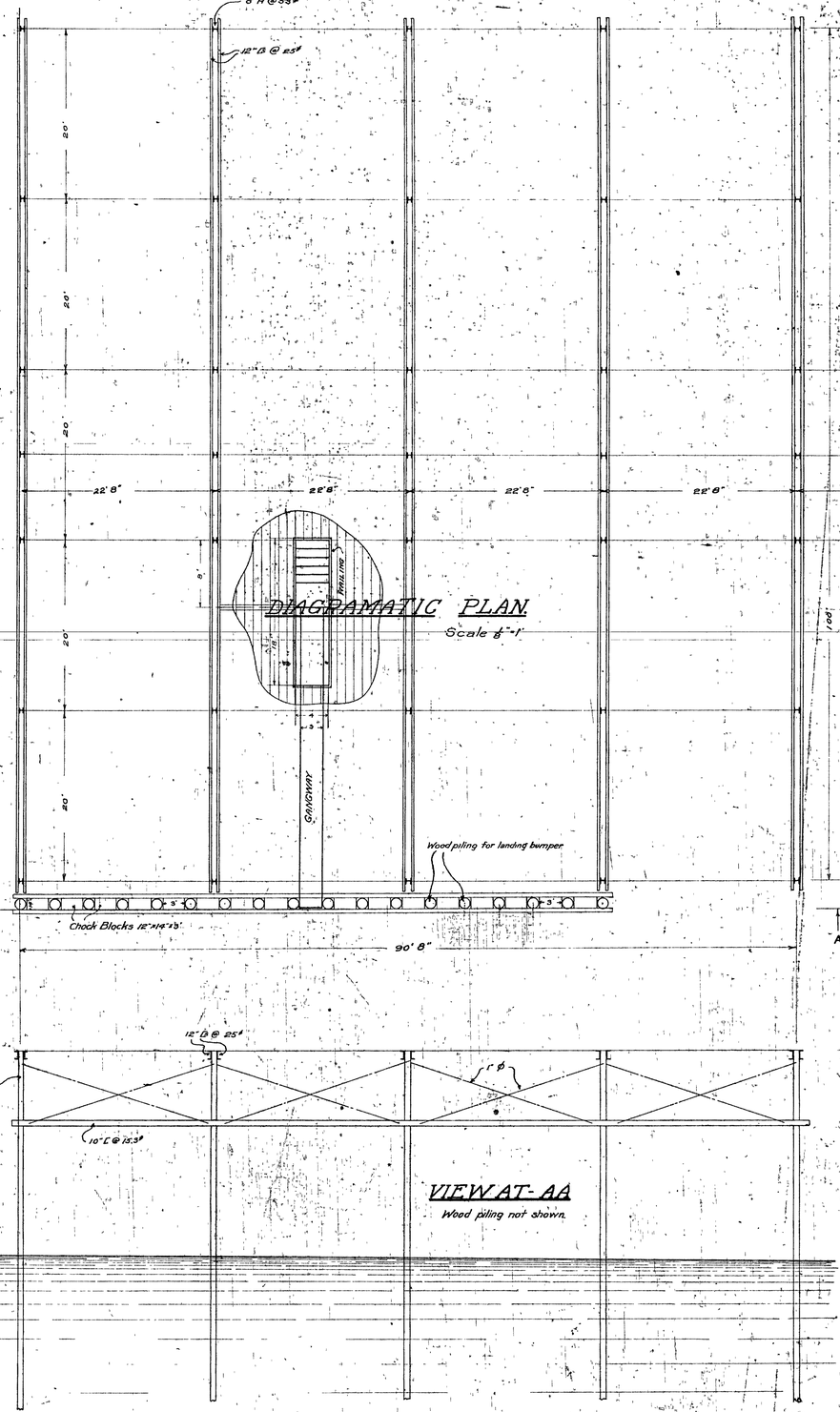
MUNICIPAL PLEASURE PIER
OCEANSIDE, CALIFORNIA
Sheet 12 of 12 Sheets
P.L. Lovette, City Engineer



DETAIL OF GANGWAY BEARING.



PERSPECTIVE OF GANGWAY.



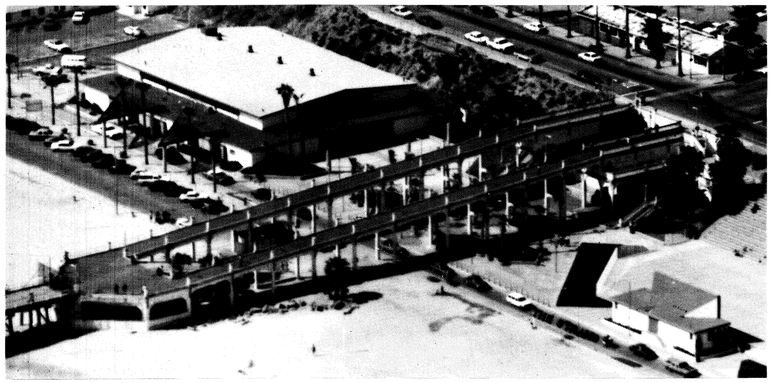
BRACING OF 100 Ft SQUARE PLATFORM.

The line of bents continuous with the main portion of pier and running thru the center of the hundred foot platform will be braced laterally, duplicating the construction of all other similar bents. The rest of the said hundred foot platform will be braced as shown on this sheet with 1" turnbuckle rods forming triangular trusses all around the outside, but on the outside only. The one exception will be the portion enclosing the gangway which will be braced as shown on this sheet.

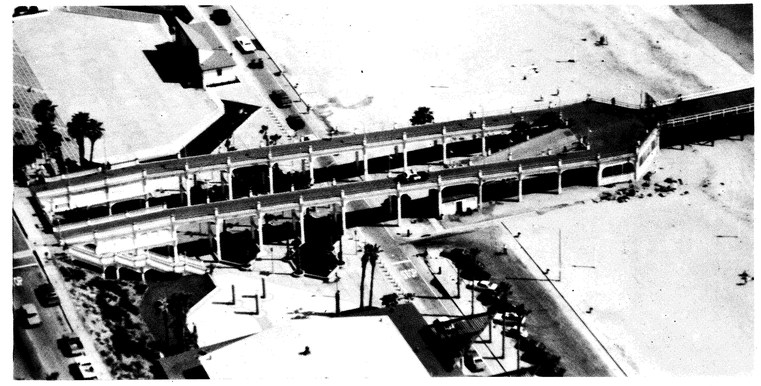
89969

OCEANSIDE PIER RESTORATION

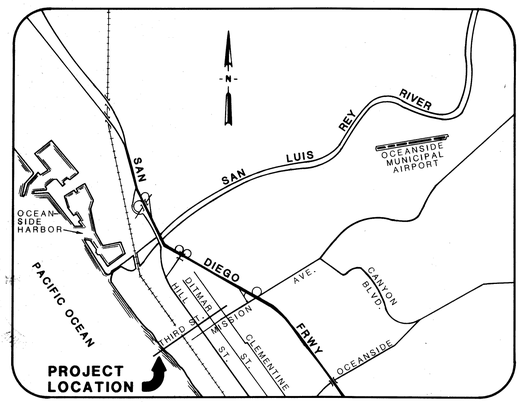
CONCRETE PORTION, INCLUDING LIFEGUARD HEADQUARTERS



LOOKING NORTH



LOOKING SOUTH



LOCATION MAP

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R-5	NEW ROOF SECTIONS & DETAILS	B-406
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E-6	ELEVATION, ONE-LINE DIAGRAM	B-425

REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

NOTE:
PHOTOS ON THIS SHEET WERE TAKEN 5-8-85

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET R-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

TITLE SHEET

Approved
City Engineer

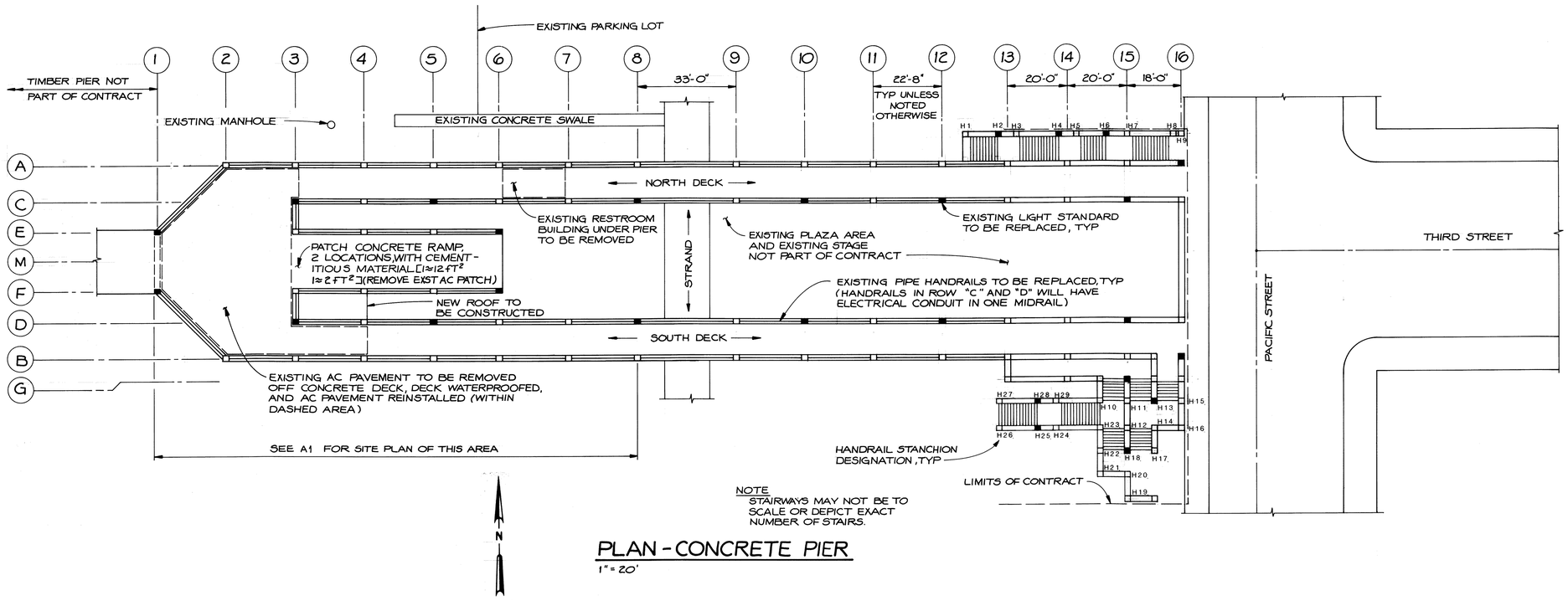
ENGINEER OF WORK
R.C.E. 20883

Checked by
Approval date

B-402

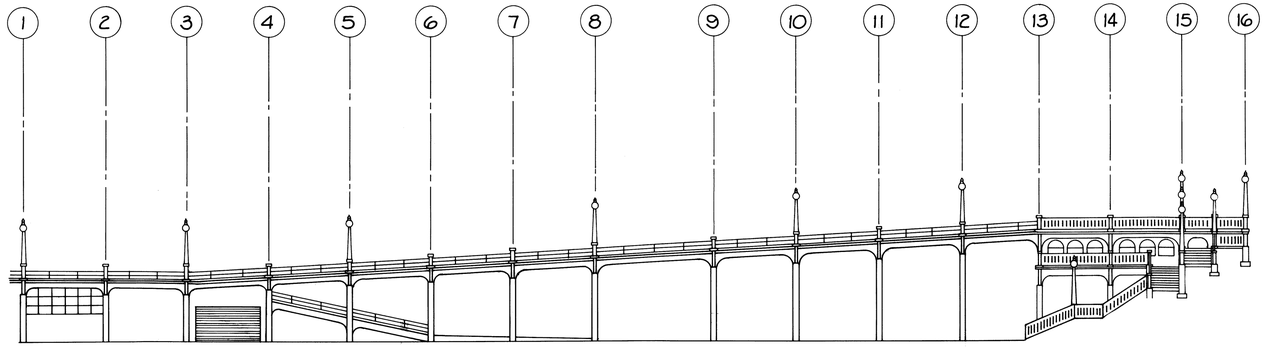
0000000154

89969



NOTE
STAIRWAYS MAY NOT BE TO SCALE OR DEPICT EXACT NUMBER OF STAIRS.

PLAN - CONCRETE PIER
1" = 20'



SOUTH ELEVATION
1" = 20'

NOTES:
1. Locations on pier requiring repair are noted in the field inspection report enclosed with the specification. They are referenced to the bent and row designation noted on these drawings. Areas found in possible need of repair that are not designated in the inspection report shall be brought to the attention of the Engineer.

2. All materials and construction shall be in conformance with these plans and specifications, the Standard Specifications for Public Works Construction (where not covered in these specifications), the City of Oceanside Department of Building and Safety, OSHA, and all other applicable codes and ordinances.

3. Dimensions and quantities shall be verified by the contractor.

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

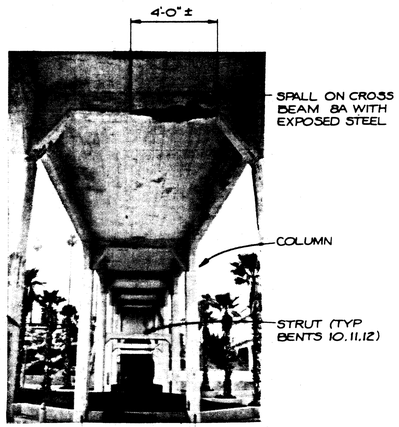
SHEET R-2 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

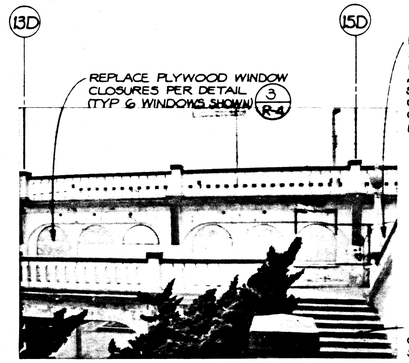
PLAN AND ELEVATION

Approved Ronald A Beach 8-17-95 City Engineer

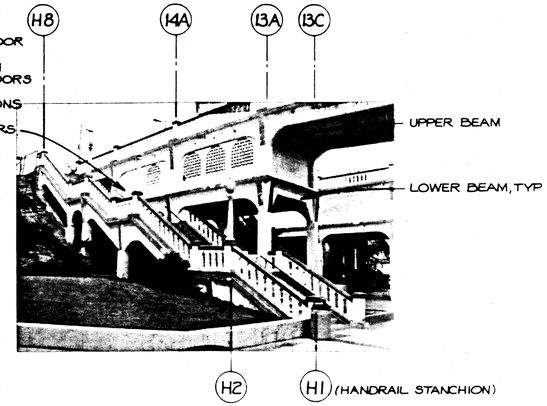
ENGINEER OF WORK R.C.E. 20883 | Checked by | Approval date | B-403



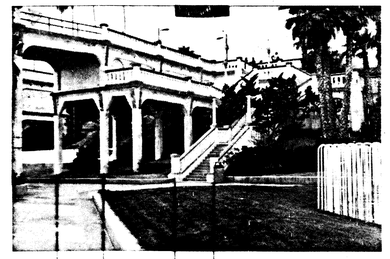
1 R-3 BELOW NORTH DECK - LOOKING EAST



4 R-3 ELEVATION



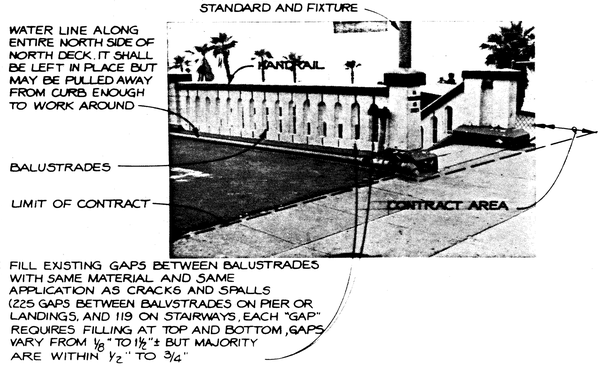
8 R-3 NORTH STAIRWAY



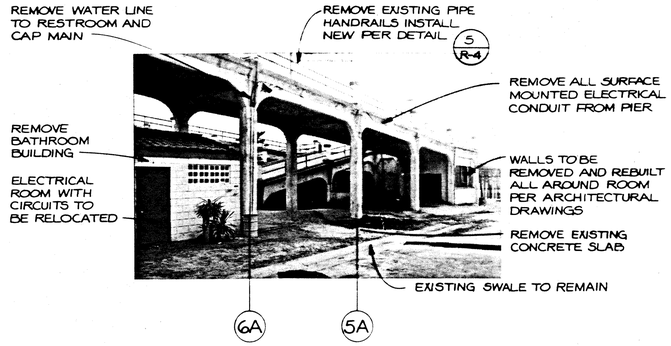
11 R-3 SOUTH STAIRWAY



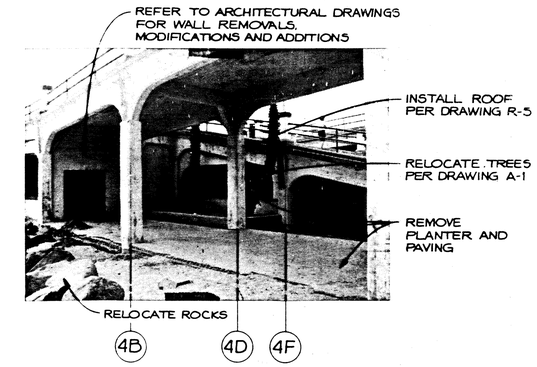
2 R-3 NORTH STAIRWAY



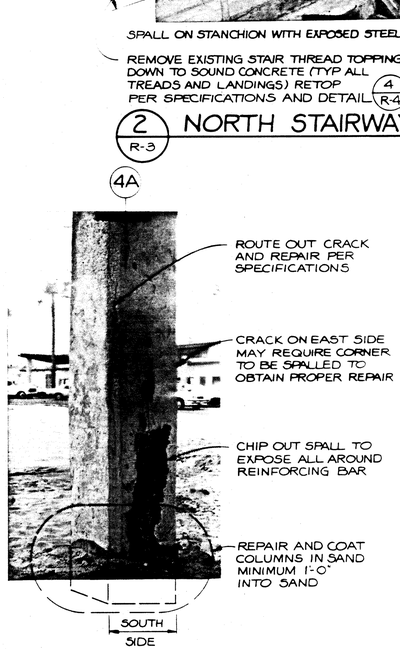
NORTH DECK AND PACIFIC STREET SIDEWALK
5 R-3



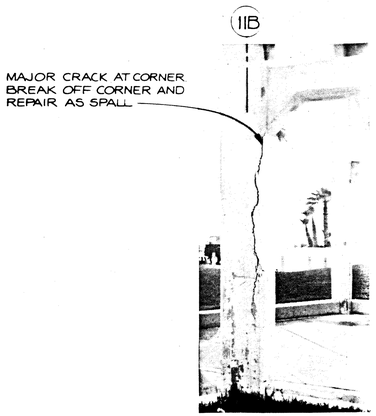
9 R-3 NORTH DECK AT WEST END



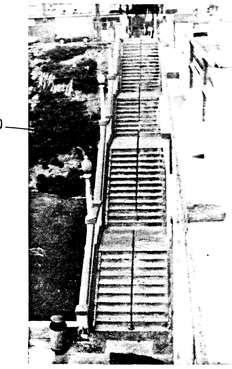
12 R-3 SOUTH DECK NEAR WEST END



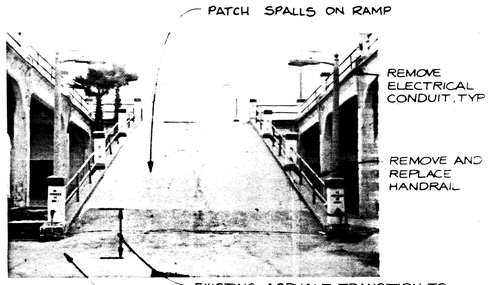
3 R-3 COLUMN SPALL



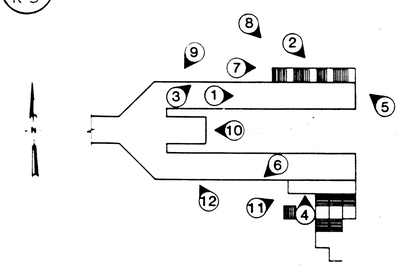
6 R-3 COLUMN CRACK



7 R-3 NORTH STAIRWAY



10 R-3 CONCRETE RAMP



KEY PLAN
NO SCALE

NOTE:
PHOTOS ON THIS SHEET WERE TAKEN 5-16-85

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev. Datum.

REGISTERED PROFESSIONAL ENGINEER — CALIFORNIA

SHEET R-3 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

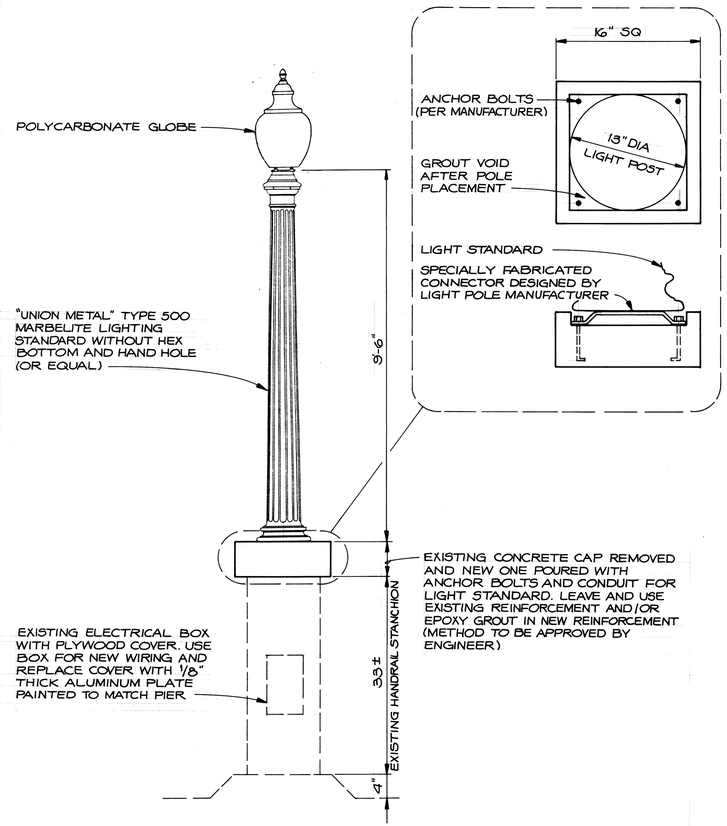
OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

PHOTO DETAILS

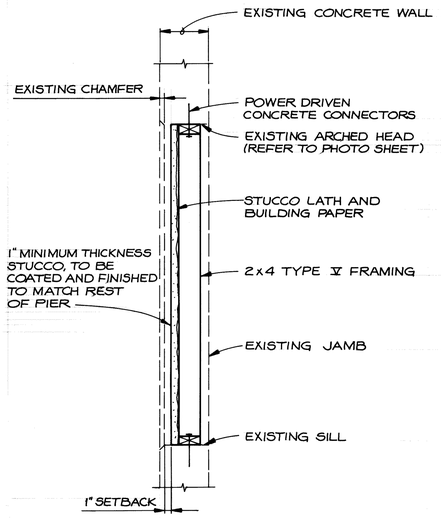
Approved: Conrad A. Buckman 9-12-85 City Engineer

ENGINEER OF WORK: R.C.E. 20883
Checked by
Approval date
B-404

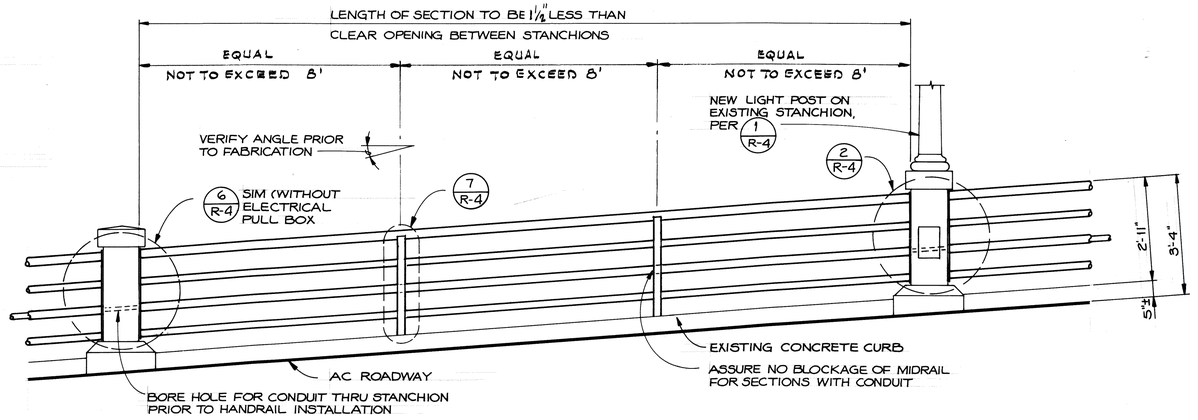
89969



1 R-4 LIGHT STANDARD REPLACEMENT
NO SCALE



3 R-4 SECTION - WINDOW CLOSURE
1"=1'-0" (DOOR CLOSURE SIMILAR)

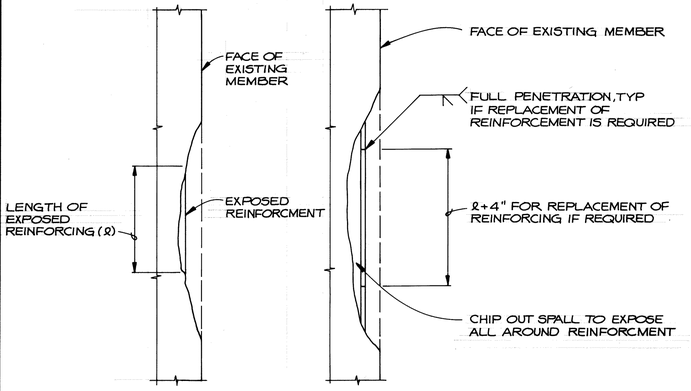


NOTE
HANDRAIL SHALL BE GALVANIZED AFTER FABRICATION

HANDRAIL LENGTHS *
WITH CONDUIT (AS SHOWN) = 18 - 21'-6"± SECTIONS, 2 - 32'-0"± SECTIONS
WITHOUT CONDUIT = 26 - 21'-6"± SECTIONS, 4 - 32'-0"± SECTIONS, 2 - 7'-0"± SECTIONS

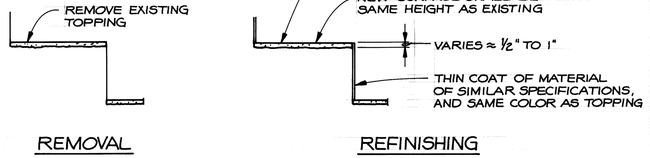
* APPROXIMATIONS ONLY - CONTRACTOR TO VERIFY EVERY LENGTH IN FIELD.

5 R-4 HANDRAIL ELEVATION
1/2"=1'-0"



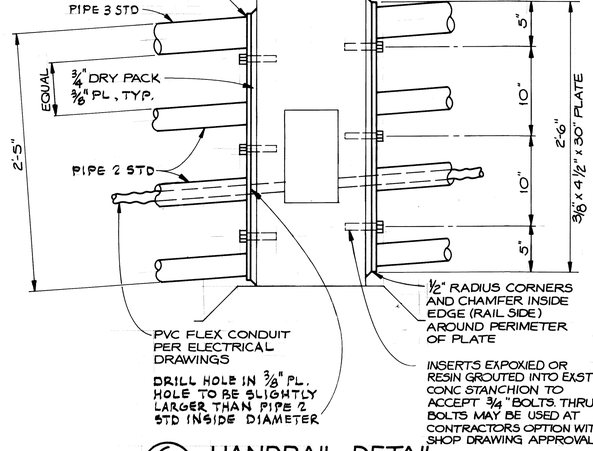
INITIAL SPALL SPALL REPAIR

2 R-4 SECTION
NO SCALE

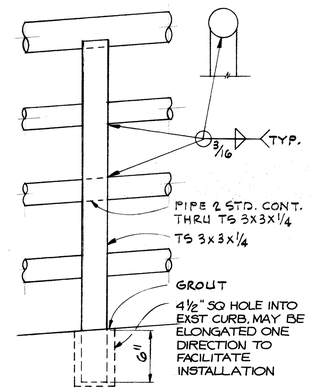


REMOVAL REFINISHING

4 R-4 SECTION - EXISTING STAIRWAYS



6 R-4 HANDRAIL DETAIL
1 1/2"=1'-0"



7 R-4 HANDRAIL DETAIL
1 1/2"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET R-4 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
SECTIONS AND DETAILS

Approved Ronald A. Beck 9-17-85 City Engineer

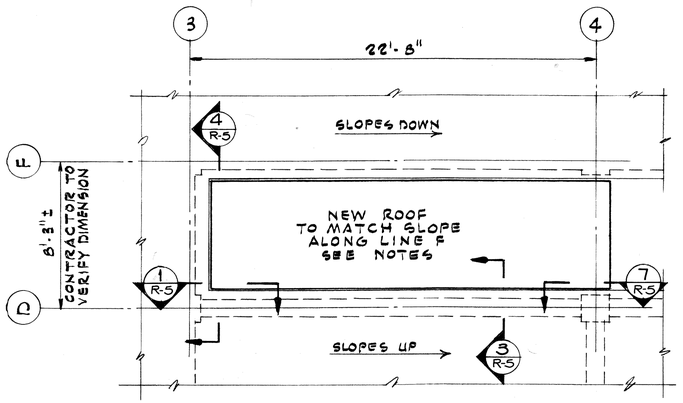
ENGINEER OF WORK R.C.E. 20883

Checked by

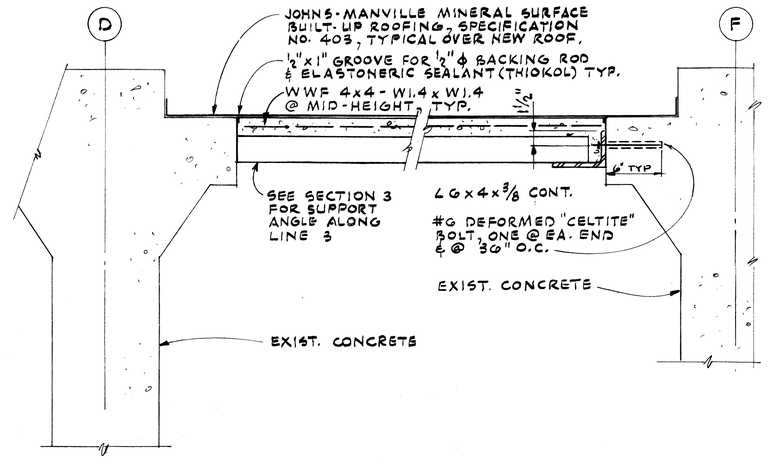
Approval date

B-405

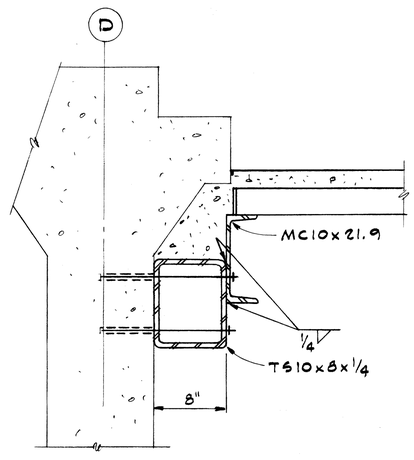
89969



PLAN
1/4" = 1'-0"



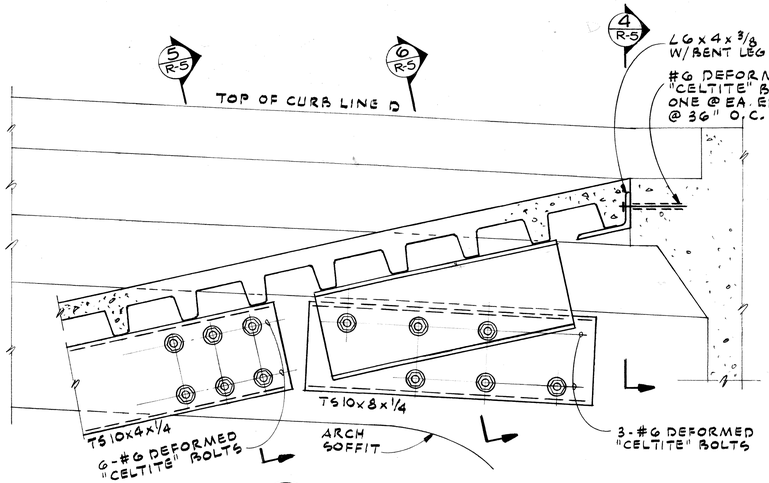
4 R-5 SECTION
1 1/2" = 1'-0"



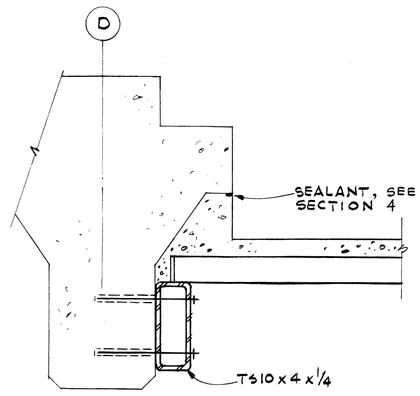
6 R-5 SECTION
1 1/2" = 1'-0"

NOTES ON NEW ROOF

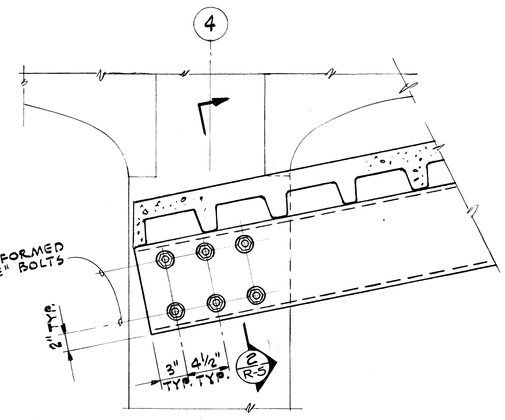
1. NEW ROOF TO BE "VERCO TYPE N-24" (22 GAGE) W/ 2" NORMAL WEIGHT CONCRETE TOPPING OR APPROVED EQUAL (SPAN EQUALS 8'-0" WITH 80 PSF UNIFORM LOAD)
2. PROVIDE 5/8"ϕ PUDDLE WELD @ 24" O.C. TO SUPPORT AND 1'1/2" LG. TOP SEAM WELD @ 24" O.C. FOR SIDE LAP FASTENING.
3. DEFORMED BOLTS SHALL CONFORM TO ASTM A-615, GRADE 60. BOLT ASSEMBLIES SHALL BE INSTALLED USING "CELTITE" POLYESTER CARTRIDGE RESIN SYSTEM, OR OTHER APPROVED EPOXY TYPE SYSTEM.



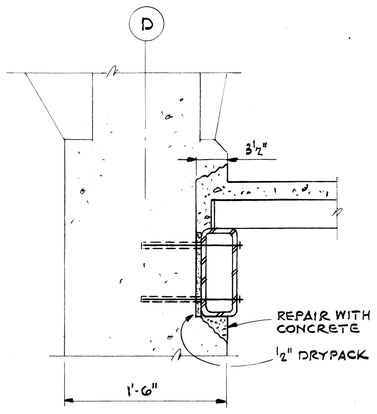
1 R-5 SECTION



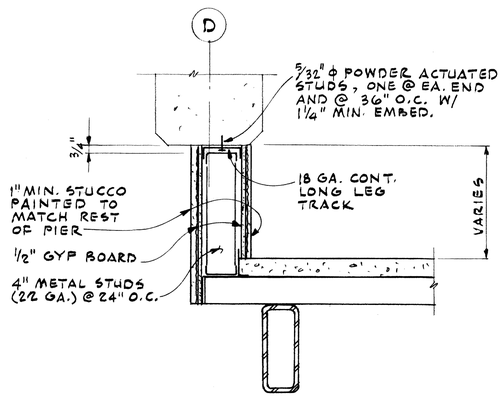
5 R-5 SECTION
1 1/2" = 1'-0"



7 R-5 SECTION
1 1/2" = 1'-0"



2 R-5 SECTION
1 1/2" = 1'-0"



3 R-5 SECTION
1 1/2" = 1'-0"

NOTE TO BIDDERS:
THE ROOF AS SHOWN ON THIS DRAWING WILL BE ADDENDED DURING THE BIDDING PERIOD TO SHOW IT CONSTRUCTED WITH A MINIMUM SLOPE AND AT A LOWER LEVEL TO ACCOMMODATE THE HEAT PUMP UNITS. LOUVERS WILL BE ADDED AT THE ROOF LOCATIONS DESIGNED DESIGNATED ON THIS DRAWING.

SUPERSEDED

APPROVED CHANGES			
No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET R-5 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

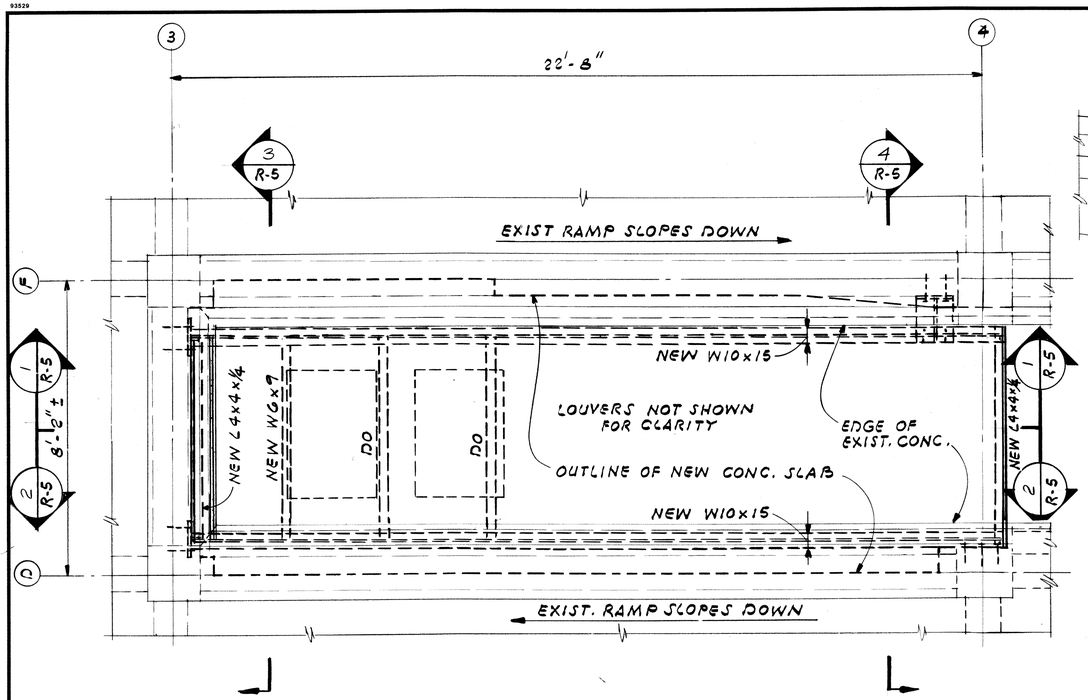
OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

NEW ROOF SECTIONS AND DETAILS

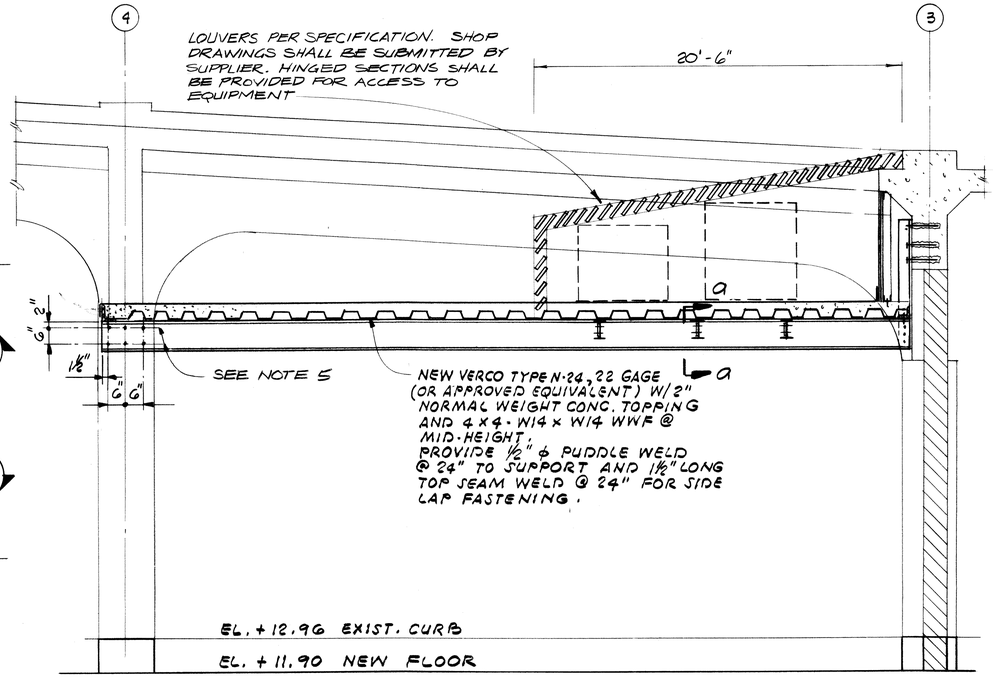
Approved Ronald A Beach 5-17-85 City Engineer

ENGINEER OF WORK R.C.E. 20883 | Checked by | Approval date | B-406

93529



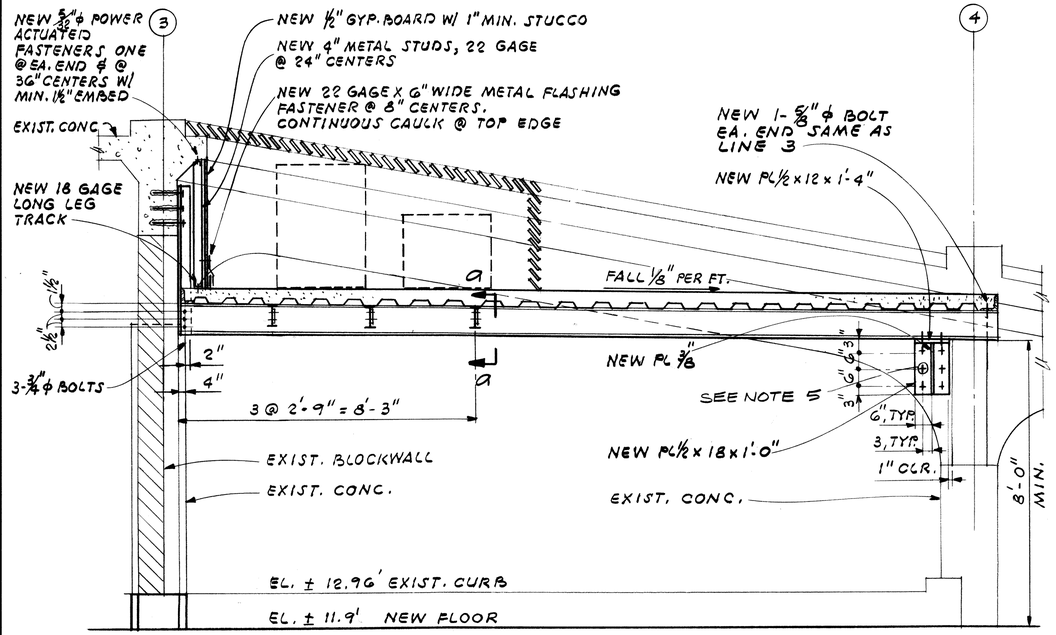
PLAN
½" = 1'-0"



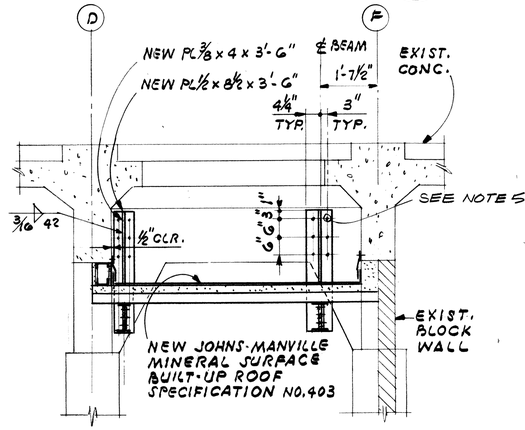
2 / R-5 SECTION
½" = 1'-0"

NOTES:

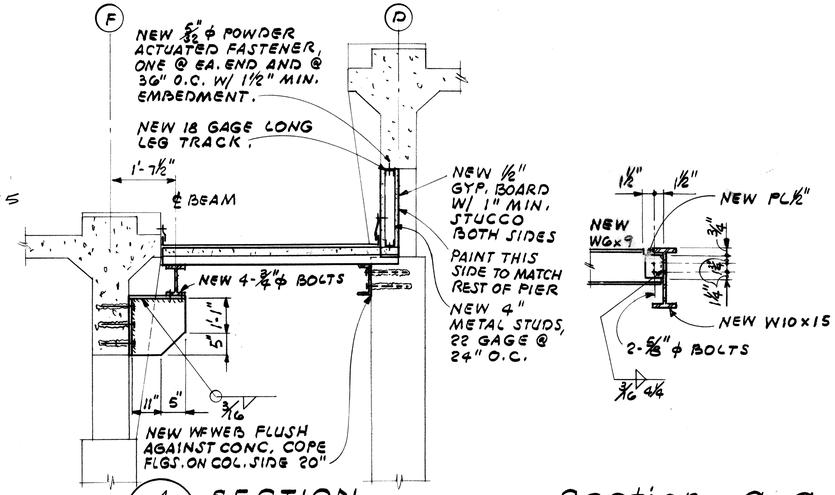
1. ADHESIVE CONCRETE ANCHORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (ALTERNATE APPROVED SYSTEM ACCEPTABLE)
2. MESH REINFORCEMENT SHALL CONFORM WITH ASTM A185, GRADE 65
3. CONCRETE STRENGTH: 3000 PSI @ 28 DAYS
4. DESIGN LOADS:
   LIVE LOAD = 20 PSF
   EQUIP. (2 ITEMS) = 340 LBS. EA.
5. BOLTED CONNECTIONS INTO EXISTING CONCRETE SHALL BE ¾" EXPANSION SHIELDS (REDHEAD OR EQUAL) OR APPROVED ADHESIVE ANCHORS.



1 / R-5 SECTION
½" = 1'-0"



3 / R-5 SECTION
½" = 1'-0"



4 / R-5 SECTION
½" = 1'-0"

Section a-a

REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

No.	Description	Approved By	Date
1	NEW SHEET - REVISED ROOF INTO MECHANICAL PLATFORM	JMR	10-1-85

URS / JOHN A. BLUME AND ASSOCIATES, ENGINEERS
100 FOURTH STREET (YERBA BUENA WEST), SAN FRANCISCO, CA 94103

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET R-5 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

NEW ROOF SECTIONS AND DETAILS

Approved
City Engineer

ENGINEER OF WORK
R.C.E. 20883

Checked by
Approval date

B-406

93529

NOTE:
REMOVE EXISTING SLAB INSIDE LIFEGUARD HEADQUARTERS, FILL ANY EXISTING VOIDS AND POUR NEW 6" THICK SLAB WITH #4 @ 12" O.C.E.W.

NEW SLAB ELEVATION INSIDE LIFEGUARD HEADQUARTERS = 12.40'

USE THIS EXISTING ELEVATION AS CONTROL FOR OTHER ELEVATIONS

EXISTING STORM DRAIN MANHOLE

EXTENSION TO SWALE

JOIN (10.68')

EXTERIOR AND GARAGE CONCRETE PAVING SHALL BE 6" THICK WITH #3 @ 18" O.C.E.W.

PLANTER

FLOW

ON TOP OF RAMP (12.08')

VERTICAL CURVE TRANSITION IN CONCRETE TO MATCH EXISTING RAMP

EXISTING CONCRETE SWALE

JOIN

STRAND

JOIN (11.37')

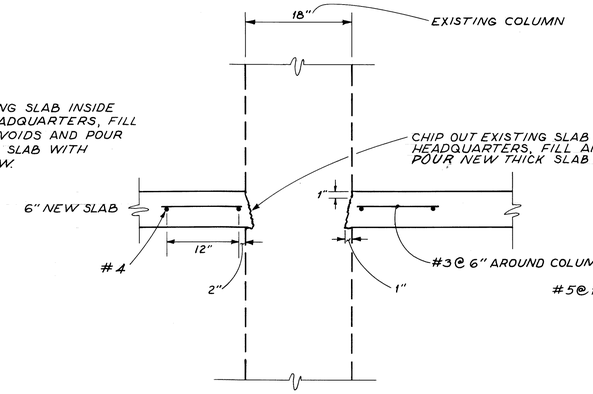
JOIN (11.47')

JOIN (11.58')

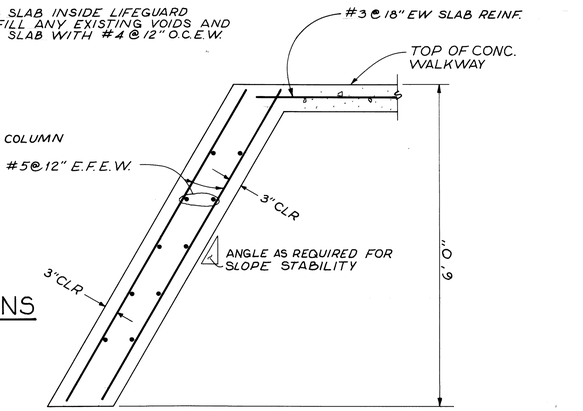
(9.35') SAND

10' TYP.

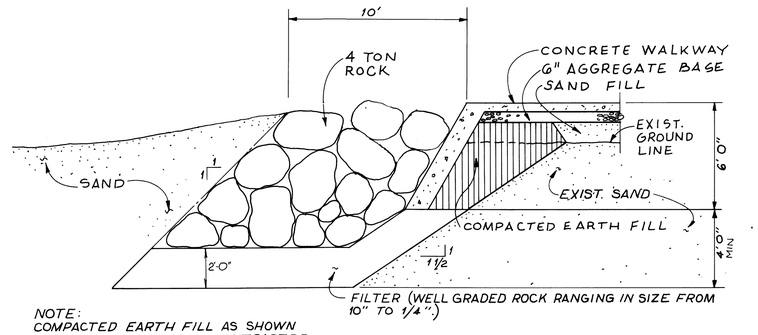
20'



2 / R6 SLAB AND EXISTING COLUMNS
1" = 1'-0"



TYP. SECTION THRU NEW CUT-OFF WALL
3/4" = 1'-0"



NOTE:
COMPACTED EARTH FILL AS SHOWN MAY BE ELIMINATED IF CONTRACTOR ELECTS TO FORM BOTH SIDES OF CUT-OFF WALL. IN SUCH CASE, WALL MAY BE VERTICAL. ROCK AND BASE SECTION SHALL REMAIN THE SAME DIMENSIONS.

1 / R6 SECTION
1/4" = 1'-0"

LEGEND

PAVEMENT GRADE BREAK

12.40 (11.96) NEW ELEVATION / EXISTING ELEVATION

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

REGISTERED PROFESSIONAL ENGINEER JAMES T. [illegible] CIVIL

SHEET R-6 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

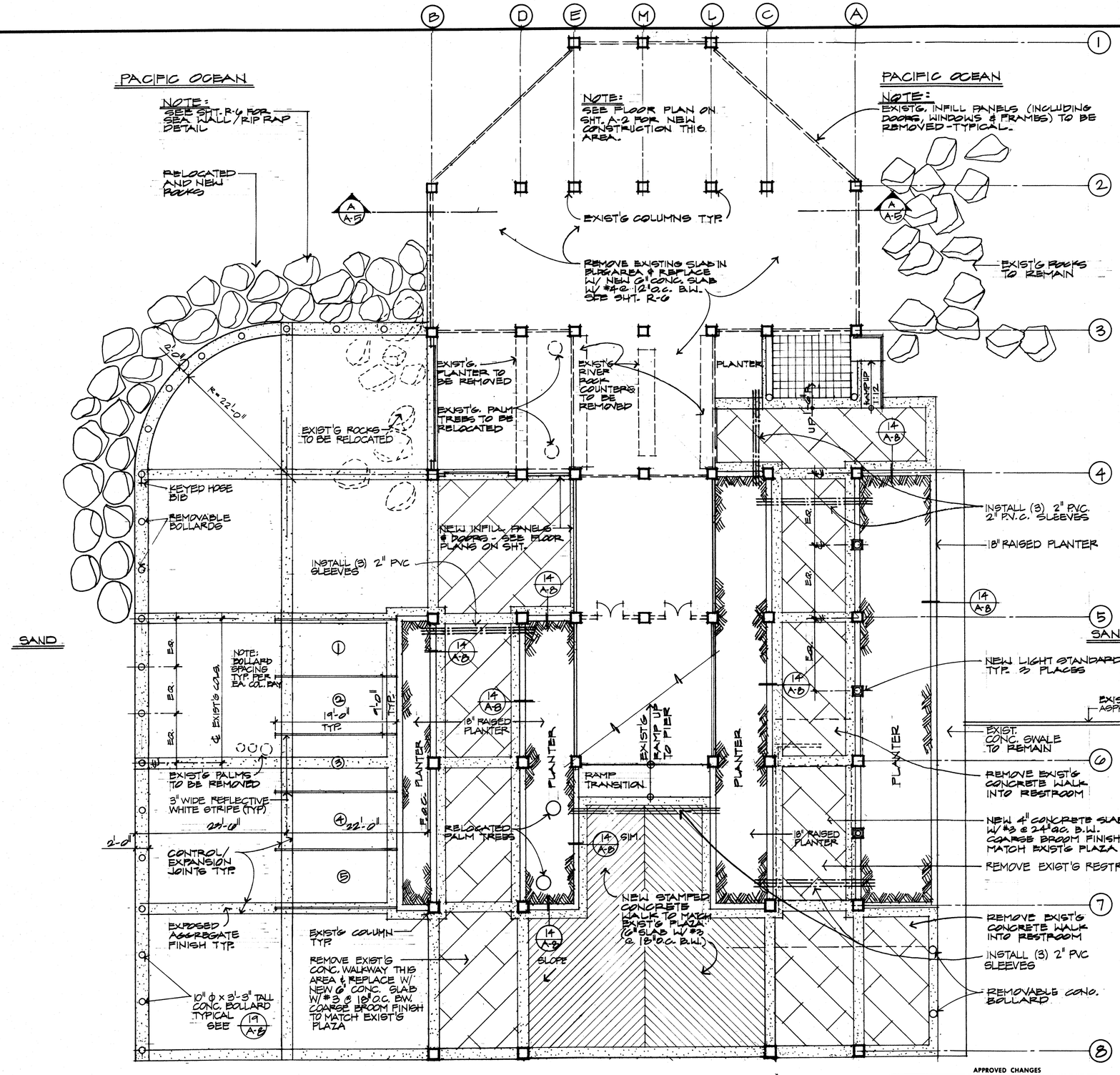
OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
GRADING & ROCK PROTECTION PLAN

Approved 9-1285
City Engineer

ENGINEER OF WORK R.C.E. 20883

Checked by
Approval date

B-407



SITE/DEMOLITION PLAN
SCALE 1/8"=1'-0"

PROJECT NORTH
TRUE NORTH

MATERIALS INDICATION

- EARTH
- ROCK FILL
- SAND/MORTAR/PLASTER
- CONCRETE — CAST IN PLACE OR PRECAST
- BRICK
- CONCRETE BLOCK/MASONRY
- STONE — INCLUDES MARBLE
- METAL — INDICATION IN THIN MATERIAL OMITTED
- METAL LATH
- WOOD, FINISH
- WOOD, FRAMING — THROUGH MEMBER
- WOOD, FRAMING — INTERRUPTED MEMBER (BLOCKING)
- PLYWOOD
- GLASS — INDICATION IN THIN MATERIAL OMITTED
- ACOUSTIC TILE OR BOARD
- GYPSUM BOARD — DOUBLE LINES AT SMALL SCALE OMITTED
- INSULATION, BATT OR WALL WITH
- INSULATION, RIGID
- CERAMIC TILE — SHOW PROFILE ONLY
- 1 HOUR RATED WALL — 5/8" TYPE 'X' GYP. BD. EACH SIDE STUDS @ 16" O.C.
- EXISTING WALL OR LOW WALL
- NEW WALL — POCHE BACK OF SHEET LIGHT BLUE

SYMBOLS

- WALL SECTION — SECTION IDENTIFICATION, SHEET WHERE SECTION IS DRAWN, 1/2" DIA.
- BUILDING SECTION — SECTION IDENTIFICATION, SHEET WHERE SECTION IS DRAWN, 1/2" DIA.
- DETAIL — DETAIL IDENTIFICATION, SHEET WHERE DETAIL IS DRAWN, 1/2" DIA.
- INTERIOR ELEVATION(S) — ELEVATION IDENTIFICATION (UNFOLD ELEVATIONS CLOCKWISE. SHADED ARROWS MEANS ELEVATION SHOWN.), SHEET WHERE ELEVATION IS DRAWN
- ROOM IDENTIFICATION, TYPE 1 — ROOM NAME, ROOM NO., ROOM MATERIAL CODES (1ST NO. - FLOOR, 2ND NO. - BASE, 3RD NO. - CEILING), CEILING HEIGHT OTHER THAN TYP. WALLS/WAINSCOT
- ROOM IDENTIFICATION, TYPE 2 — ROOM NAME, ROOM NO.
- NEW FINISH GRADE — DRAWN @ 45°
- EXISTING GRADE — SHOWN( )
- TOP OF WALL
- TOP OF CURB
- TOP OF PAVEMENT
- PROPERTY LINE
- NEW OR FINISHED CONTOURS
- EXISTING CONTOURS
- COLUMN LINE/GRID LINES — LETTERS IN ONE DIRECTION, NUMBERS IN THE OTHER DIRECTION, 1/2" DIA.
- DOOR NUMBER — 5/16" DIA.
- WINDOW TYPE — 1/4" SQUARE
- EQUIPMENT TYPE
- REVISION — CLOUD AROUND REVISION OPTIONAL
- MATCH LINE — SHADED PORTION IS THE SIDE CONSIDERED.
- WORK POINT, CONTROL POINT OR DATUM POINT

REGISTERED ARCHITECT — No. — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET A-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

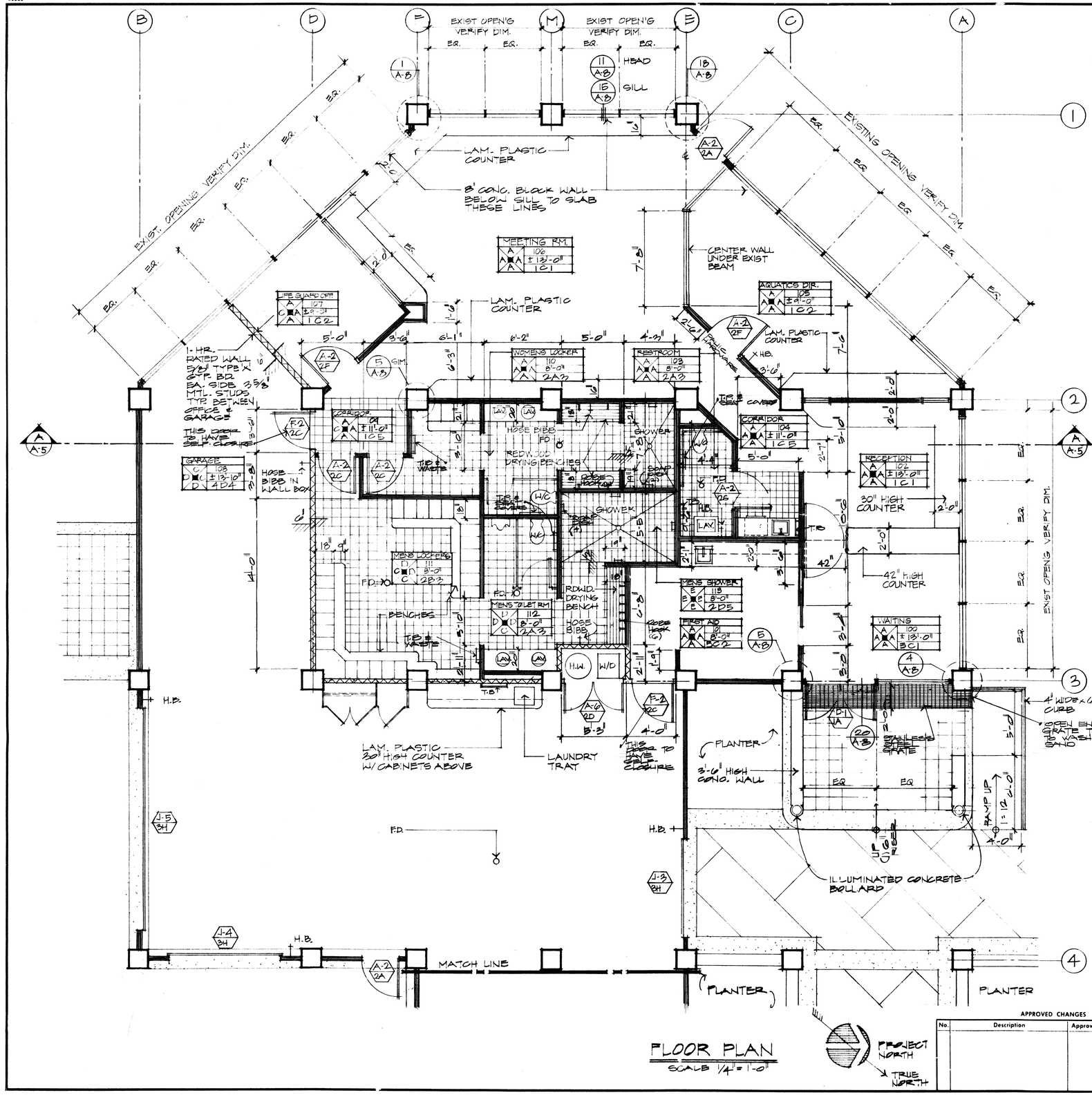
SITE/DEMOLITION PLAN

Approved
City Engineer

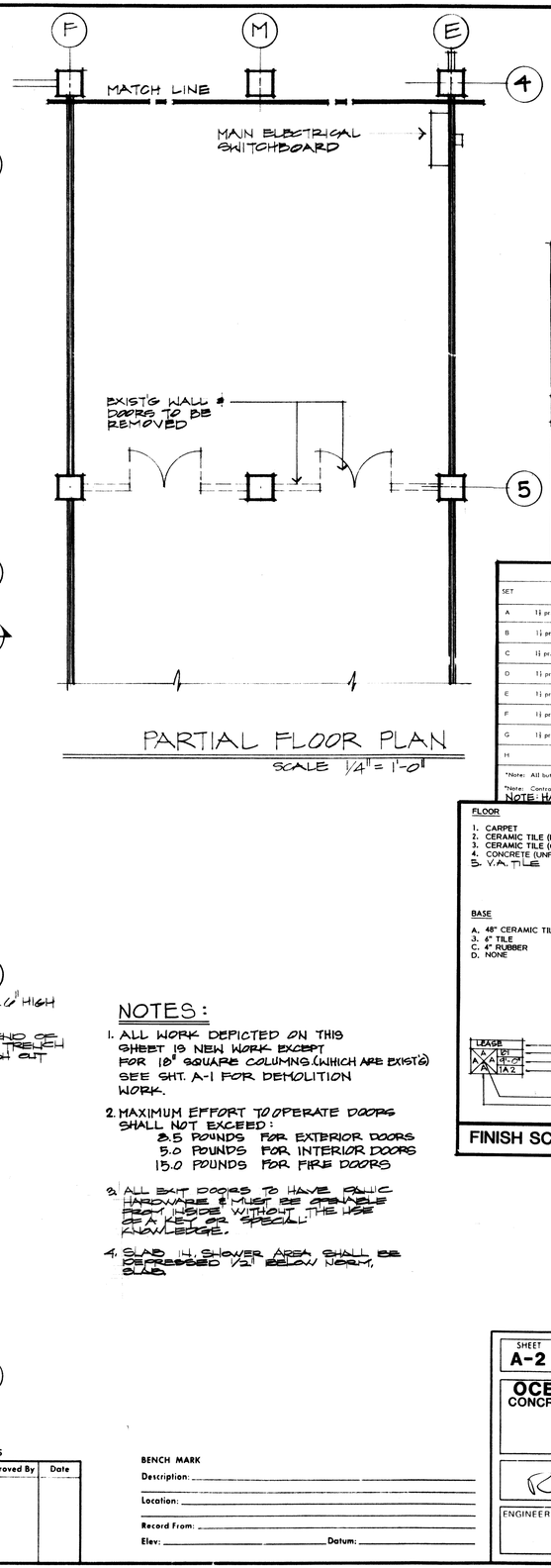
ENGINEER OF WORK
R.C.E.

Checked by
Approval date

B-408



FLOOR PLAN
SCALE 1/4" = 1'-0"

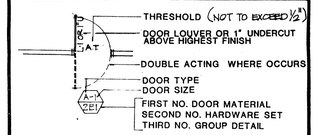


PARTIAL FLOOR PLAN
SCALE 1/4" = 1'-0"

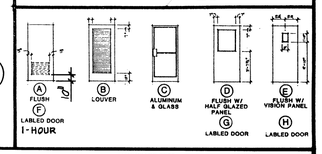
NOTES:

1. ALL WORK DEPICTED ON THIS SHEET IS NEW WORK EXCEPT FOR 18" SQUARE COLUMNS (WHICH ARE EXIST'G) SEE SHT. A-1 FOR DEMOLITION WORK.
2. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED:
   - 8.5 POUNDS FOR EXTERIOR DOORS
   - 5.0 POUNDS FOR INTERIOR DOORS
   - 15.0 POUNDS FOR FIRE DOORS
3. ALL EXIT DOORS TO HAVE PANIC HARDWARE & MUST BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE.
4. SLAB IN SHOWER AREA SHALL BE DEPRESSED 1/2" BELOW NORMAL SLAB.

DOOR SIZE	DOOR & FRAME
1. Pair 2'-8" x 7'-0"	1. WD. & HOL. MTL. (KNK.DN.)
2. 3'-0" x 7'-0"	2. HOL.MTL. & HOL.MTL.KN.DN
3. 8'-0" x 8'-0"	3. ALUMINUM COILING
4. 9'-0" x 9'-0"	
5. 18'-0" x 10'-0"	GROUP DETAIL
6. Pair 2'-4" x 7'-0"	
LOUVERS (GROSS AREA)	THRESHOLDS (TYPE / DTL)



DOOR TYPES



HARDWARE SETS

SET	HINGES*	LOCKSET*	DEADLOCK*	DOOR CLOSER*	STAINLESS PUSH PLATE*
A	1½ pr. 4½ x 4½ TA384 S.S.	977L-788 US32D	623	-	-
B	1½ pr. 4½ x 4½ TA384 S.S.	977L-755 US32D	-	-	-
C	1½ pr. 4½ x 4½ TA384 S.S.	977L-788 US32D	623	100	-
D	1½ pr. 4½ x 4½ TA384 S.S.	977L-710 US32D	-	-	-
E	1½ pr. 4½ x 4½ TA384 S.S.	-	623	-	X
F	1½ pr. 4½ x 4½ TA384 S.S.	977L-751 US32D	-	-	-
G	1½ pr. 4½ x 4½ TA384 S.S.	977L-720 US32D	-	-	-
H			-	Motorized*	-

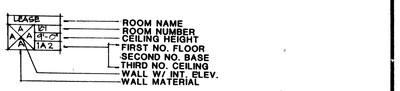
*Note: All butt hinges are to be McKinney Builders Hardware or equal. All other hardware shall be Corbin.

*Note: Contractor to furnish cut sheet for motorization of overhead ceiling door.

NOTE: HARDWARE TO BE MOUNTED BETWEEN 30" AND 44" A.F.F.

FLOOR	WALL
1. CARPET	A. 1/2" GYP. BD. (TO PAINT)
2. CERAMIC TILE (PAVERS)	B. TACKBOARD OVER 1/2" GYP. BD.
3. CERAMIC TILE (GLAZED)	C. 5/8" TYPE 'X' GYP. BD. (TO PAINT)
4. CONCRETE (UNFINISHED)	D. 1/2" GYP. BD. (MOIST. RESIST.)
5. V.A. TILE	E. CERAMIC TILE O/1/2" MOIST. RESIST. GYP. BD.

BASE	CEILING FINISH
A. 48" CERAMIC TILE	1. 1/2" GYP. BD. (TO PAINT)
B. 4" TILE	2. SUSPENDED (ACOUSTICAL TILE)
C. 4" RUBBER	3. SUSPENDED (HIGH DENSITY CERAMIC COATED TILE)
D. NONE	4. EXPOSED
	5. STUCCO



FINISH SCHEDULE

APPROVED CHANGES			
No.	Description	Approved By	Date

BENCH MARK
Description: _____
Location: _____
Record From: _____
Elev: _____ Datum: _____

REGISTERED ARCHITECT — RONALD A. DANIELSON — No. C 7396 — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET A-2	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

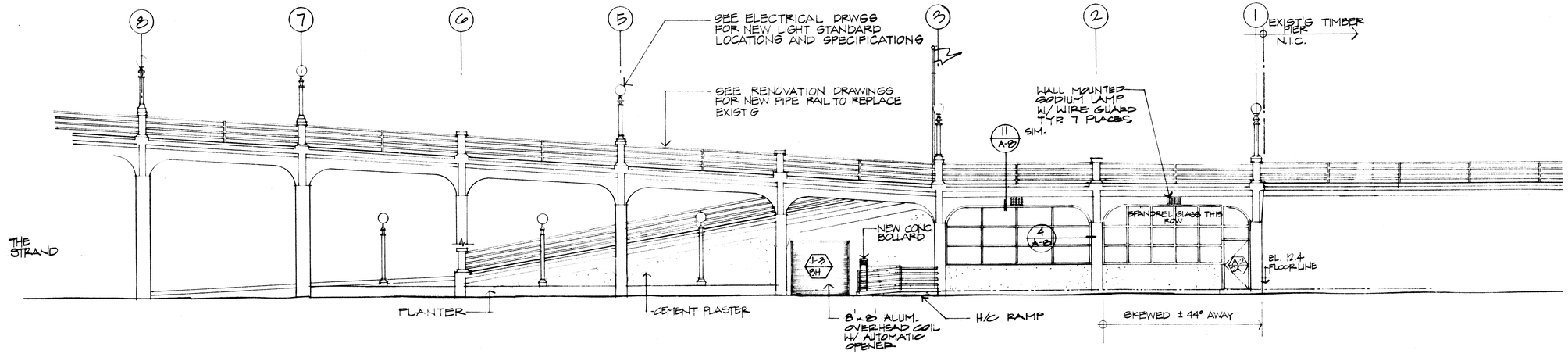
FLOOR PLAN

Approved Ronald A. Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

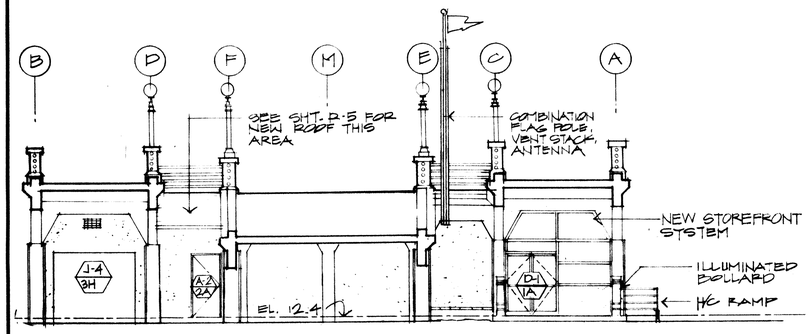
Checked by — Approval date

B-409



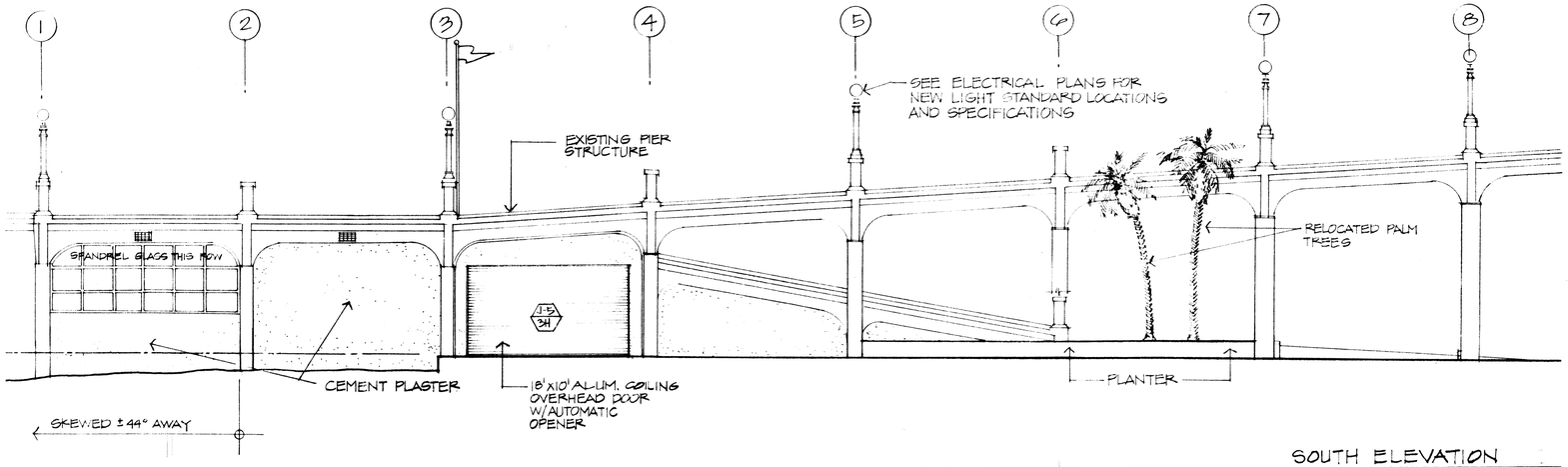
NORTH ELEVATION

SCALE 1/8" = 1'-0"



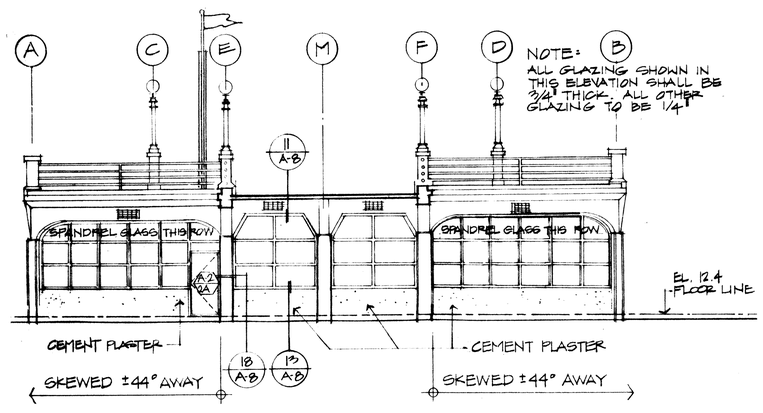
EAST ELEVATION

SCALE 1/8" = 1'-0"



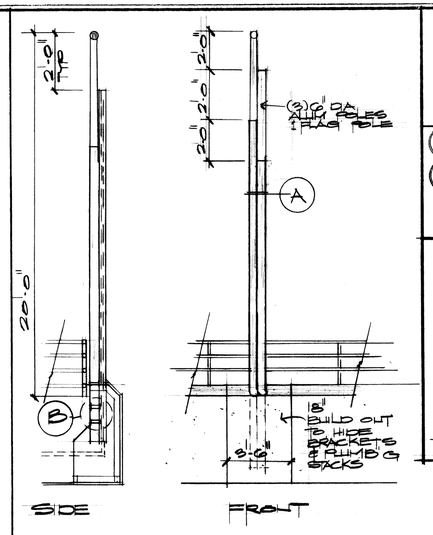
SOUTH ELEVATION

SCALE 1/8" = 1'-0"



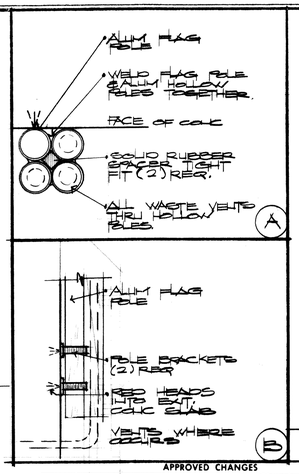
WEST ELEVATION

SCALE 1/8" = 1'-0"



FLAG POLE

1



HELVETICA MEDIUM

OCEANSIDE LIFEGUARD HEADQUARTERS

6" TYP.

DIE-CUT VINYL LETTERS TO BE INSIDE MOUNTED TO GLASS PANEL NEXT TO PUBLIC ENTRY DOORS SEE SPEC.



MOUNT ON DOOR TO RM. 111

MOUNT ON DOOR TO RM. 110

MOUNT ON DOOR TO RM. 102

THESE SIGNS TO BE ALUMINUM FRAME WITH ACRYLIC PLASTIC PLAQUE INSERTS SEE SPEC.

SIGNS

2

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK

Description: _____

Location: _____

Record From: _____

Elev: _____ Datum: _____

REGISTERED ARCHITECT — WILLIAM A. DANIELSON — No. C7396 — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS
A-3		

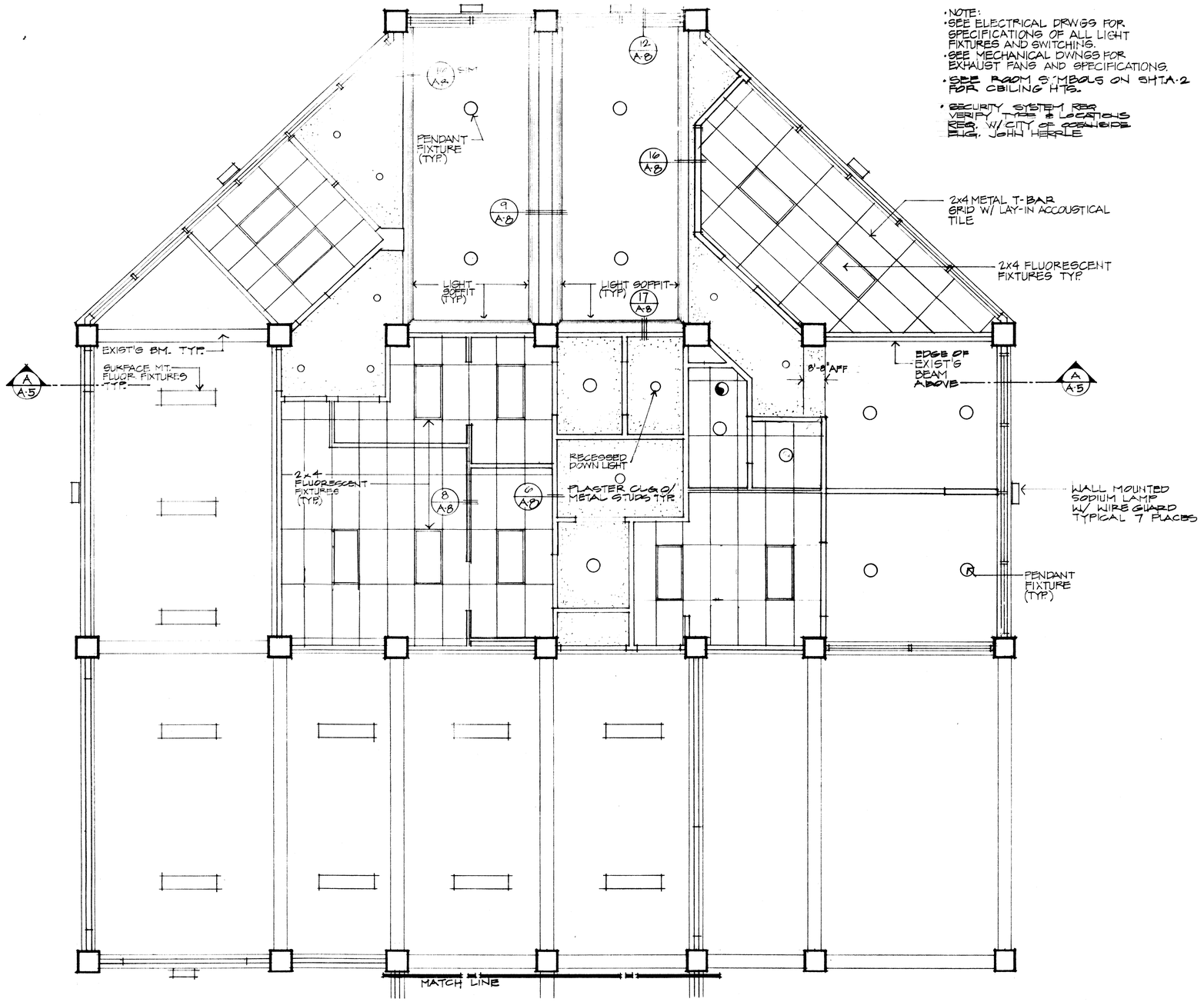
OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

EXTERIOR ELEVATIONS

Approved Ronald A Beck 9-17-85 City Engineer

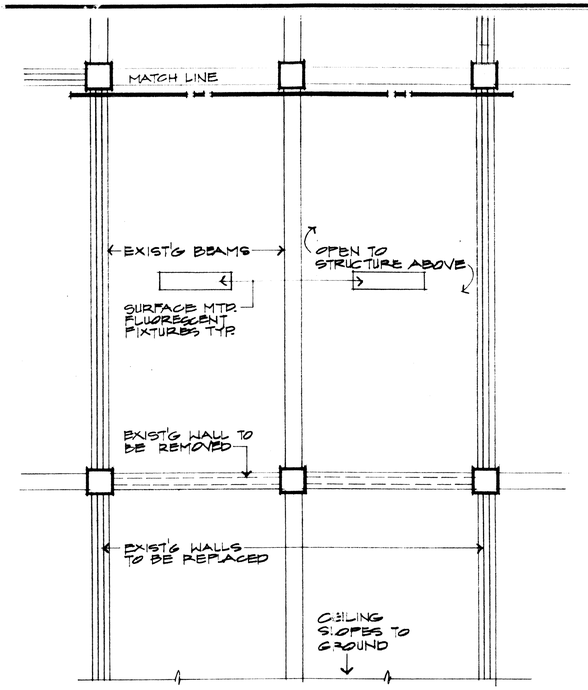
ENGINEER OF WORK	Checked by	
R.C.E.	Approval date	B-410

89969



REFLECTED CEILING PLAN
SCALE 1/4" = 1'-0"

- NOTE:
- SEE ELECTRICAL DRWGS FOR SPECIFICATIONS OF ALL LIGHT FIXTURES AND SWITCHING.
- SEE MECHANICAL DWGS FOR EXHAUST FANS AND SPECIFICATIONS.
- SEE ROOM SYMBOLS ON SHT A-2 FOR CEILING HTS.
- SECURITY SYSTEM REQ. VERIFY TYPES & LOCATIONS REQ. W/ CITY OF OCEANSIDE BLDG. JOHN HEERLE



PARTIAL REFLECTED CEILING PLAN
SCALE 1/4" = 1'-0"

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

REGISTERED ARCHITECT DANIELSON No. C-7396 STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET A-4	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

REFLECTED CEILING PLAN

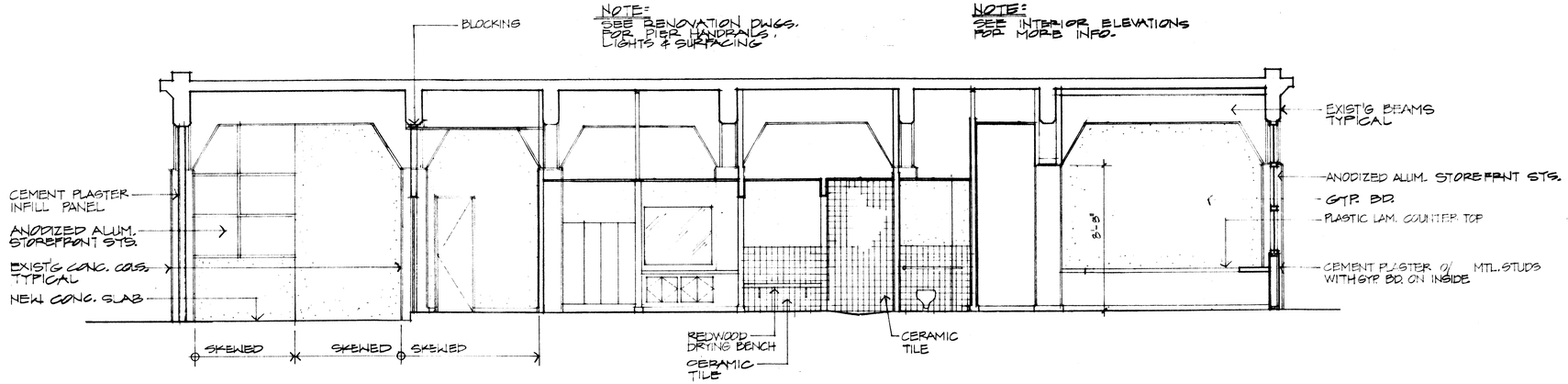
Approved Ronald A Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by
Approval date

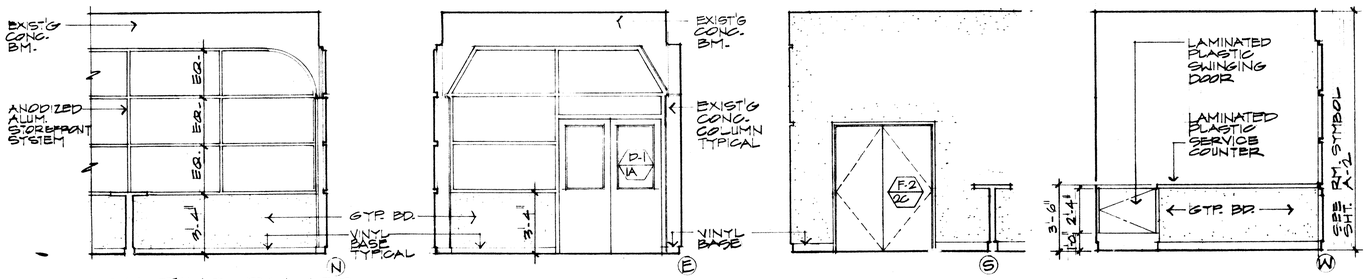
B-411

R9969

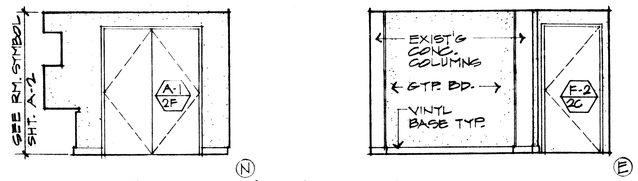


SECTION A-A

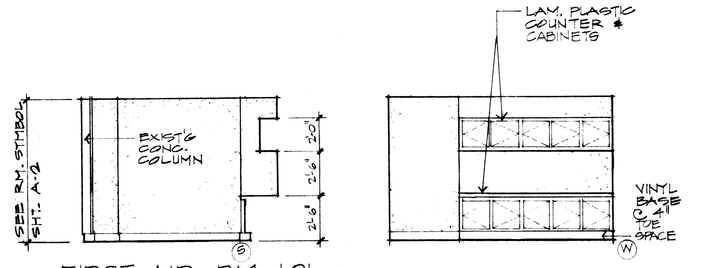
SCALE 1/4" = 1'-0"



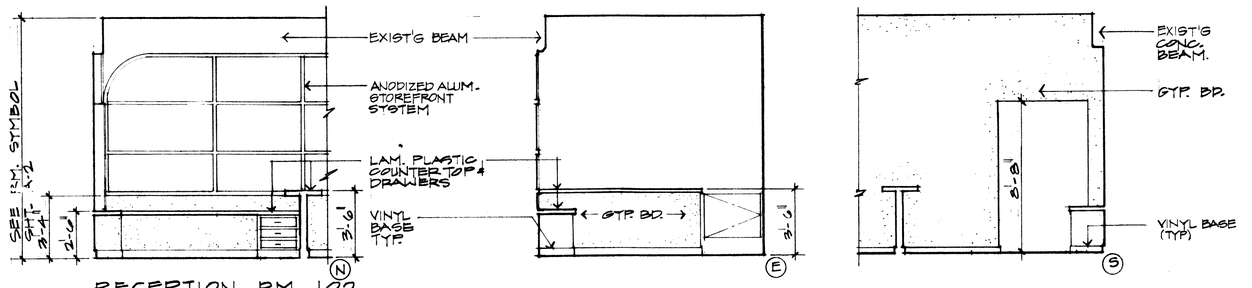
WAITING RM. 100



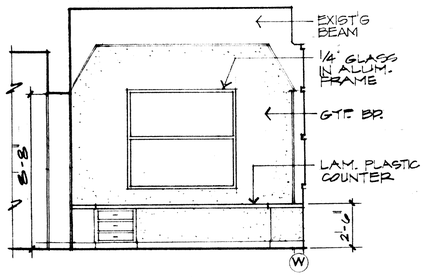
FIRST AID RM. 101



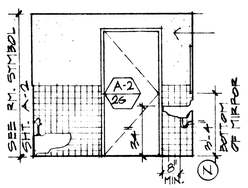
FIRST AID RM. 101

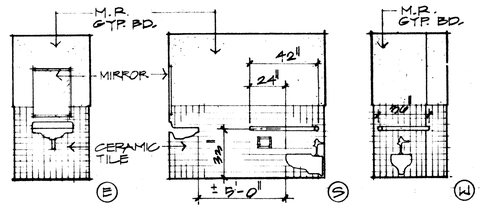


RECEPTION RM. 102



RECEPTION RM. 102





RESTROOM RM. 103

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK

Description: _____

Location: _____

Record From: _____

Elev: _____ Datum: _____

REGISTERED ARCHITECT — RONALD A. DANIELSON — No. C 7395 — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET A-5

CITY OF OCEANSIDE ENGINEERING DEPARTMENT

SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

SECTION/INTERIOR ELEVATIONS

Approved Ronald A Beck 9-17-85 City Engineer

ENGINEER OF WORK

R.C.E.

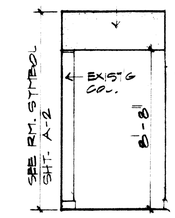
Checked by

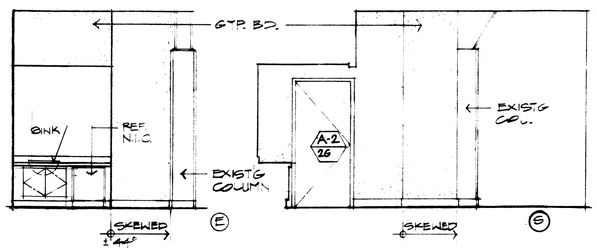
Approval Date

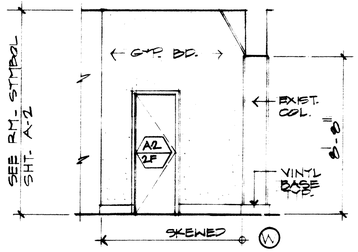
B-412

89969

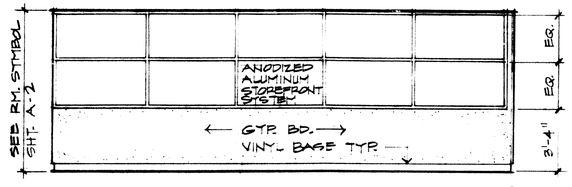
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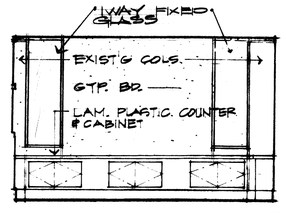


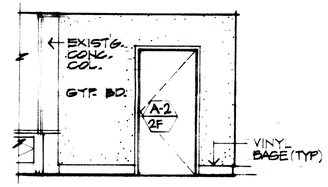


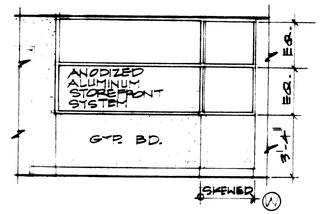


CORRIDOR RM. 104

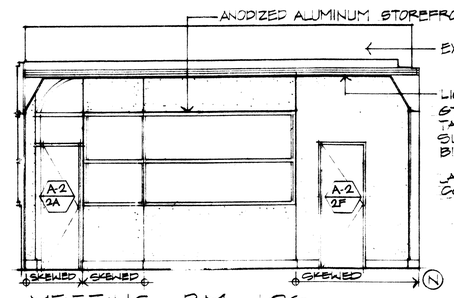


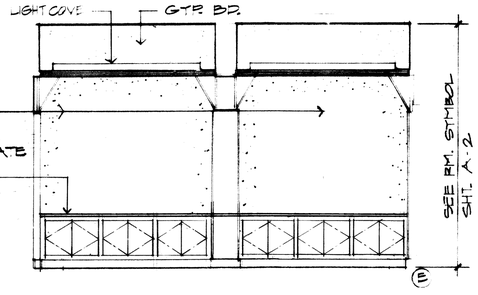


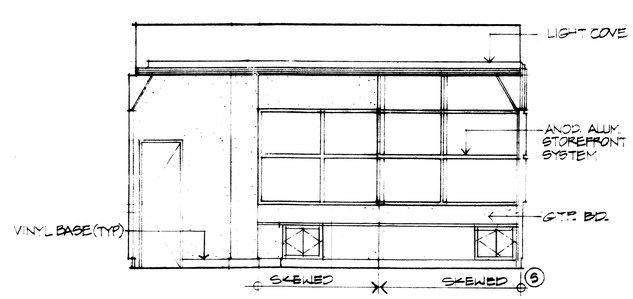


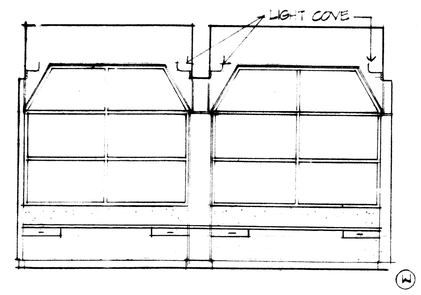


AQUATICS DIRECTOR RM. 105

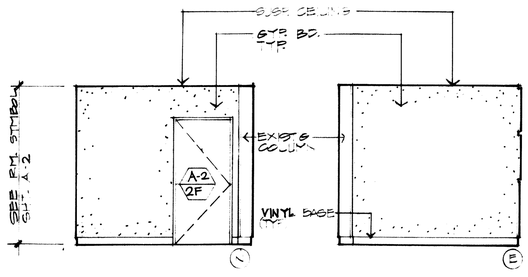


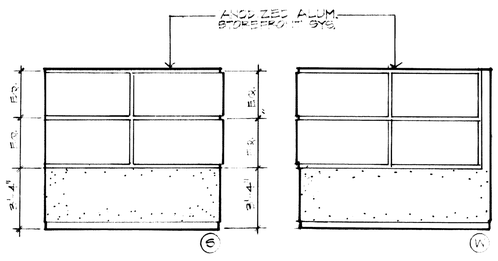




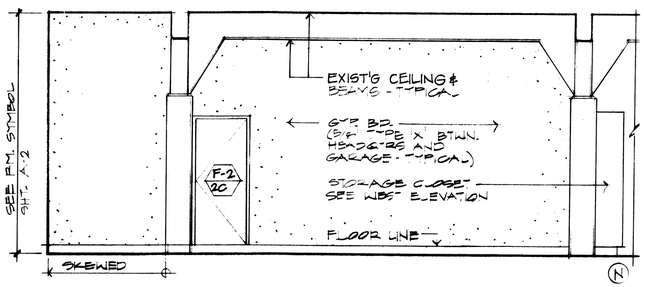


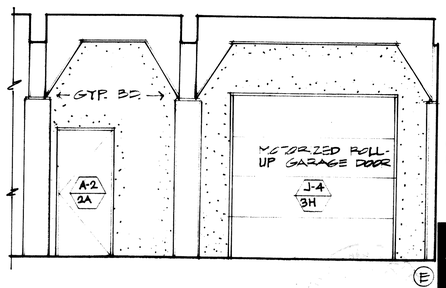
MEETING RM. 106





LIFE GUARD OFFICE RM. 107





GARAGE RM 108

REGISTERED ARCHITECT RICHARD A. DANIELSON No. 7396 STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET A-6

CITY OF OCEANSIDE ENGINEERING DEPARTMENT

SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
INTERIOR ELEVATIONS

Approved Ronald A Beck 5-12-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by

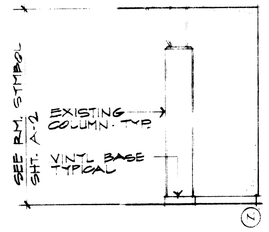
Approval date

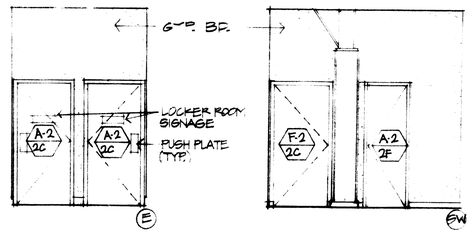
B-413

89959

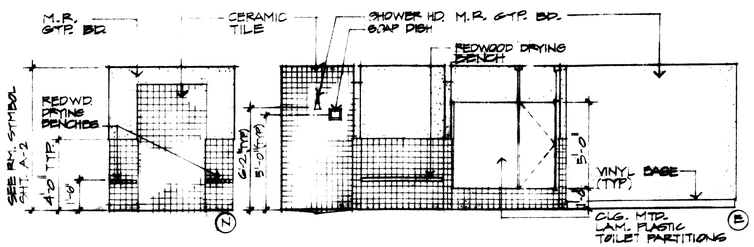


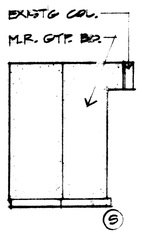
GARAGE RM 105

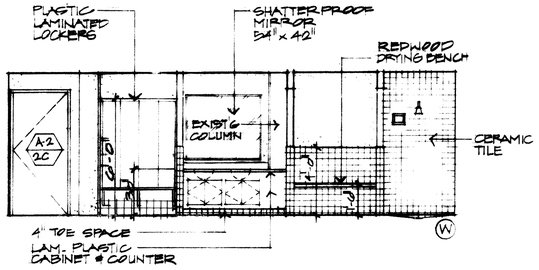


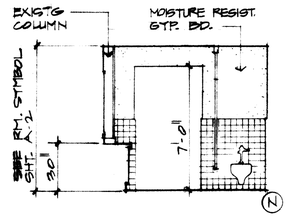


CORRIDOR RM 109

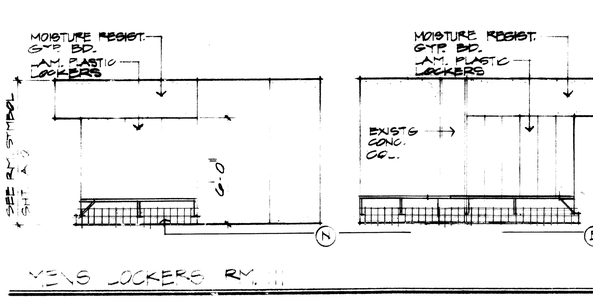


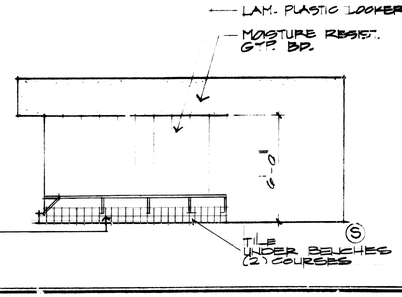


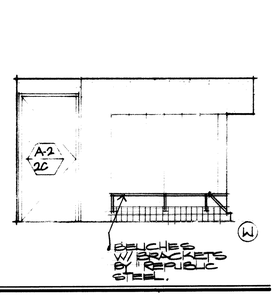




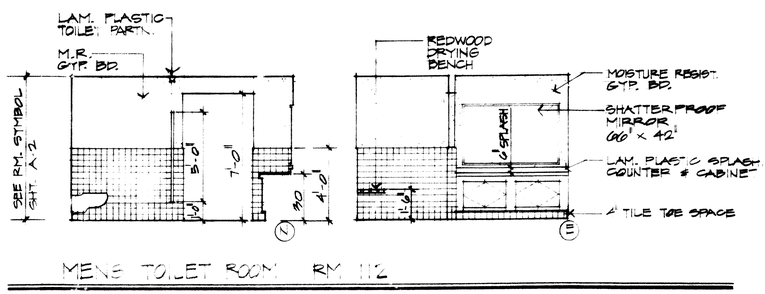
WOMENS LOCKER RM RM. 110



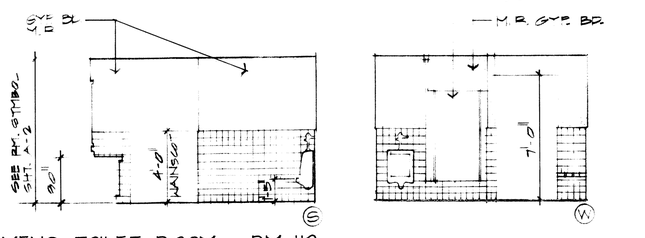




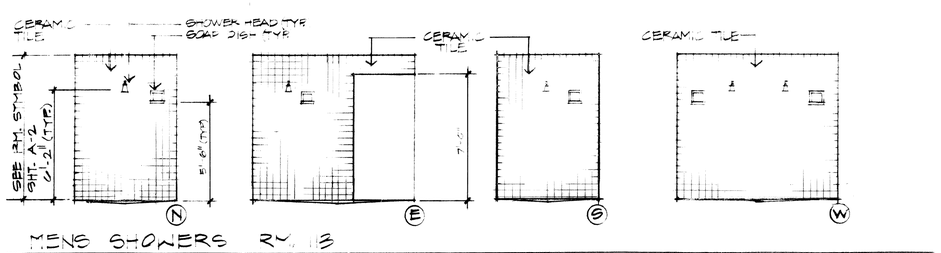
MENS LOCKERS RM. 111



MENS TOILET ROOM RM. 112



MENS TOILET ROOM RM. 112



MENS SHOWERS RM. 113



DANIELSON DESIGN GROUP

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET A-7

CITY OF OCEANSIDE
ENGINEERING DEPARTMENT

SHEET

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

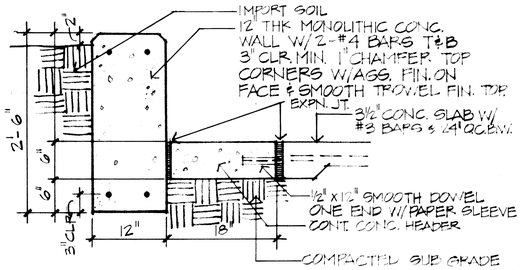
INTERIOR ELEVATIONS

Approved
Ronald A. Boden 9-17-85
City Engineer

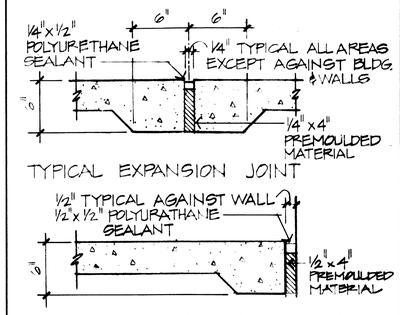
ENGINEER OF WORK
R.C.E.

Checked by
Approval date

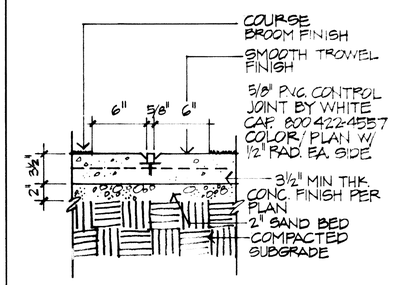
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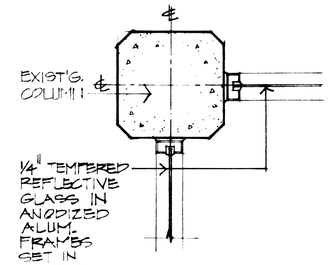
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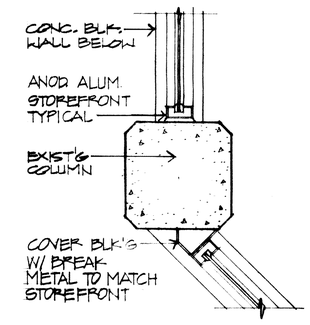
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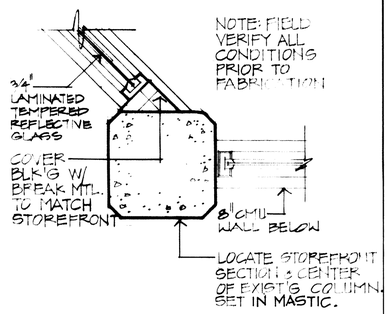
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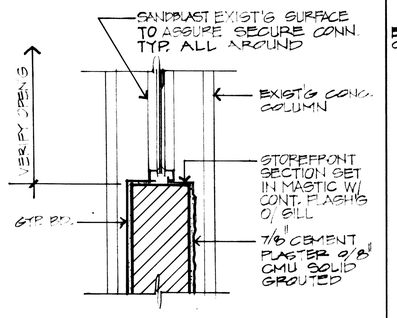
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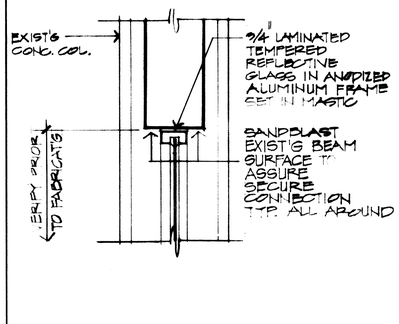
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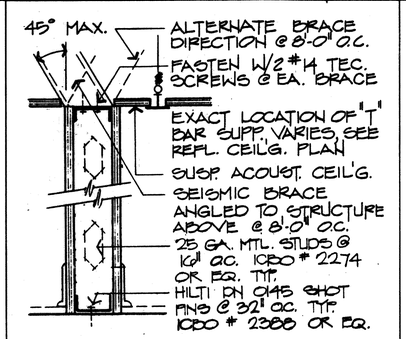
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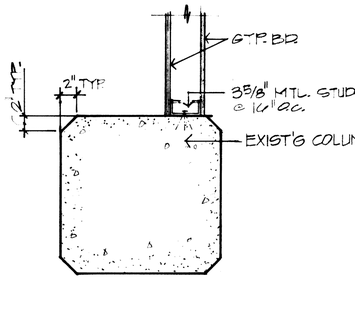
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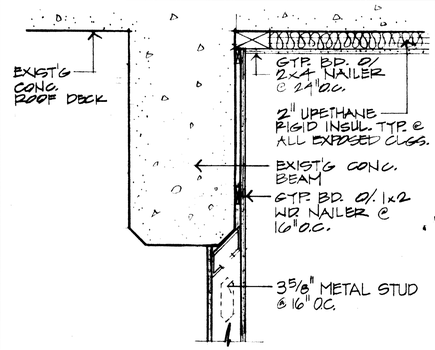
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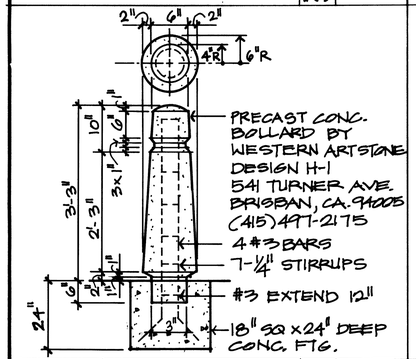
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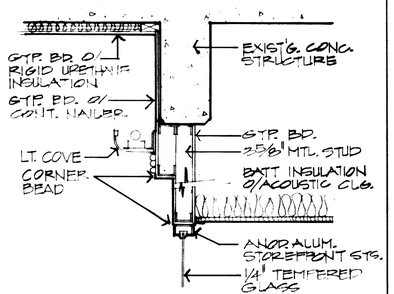
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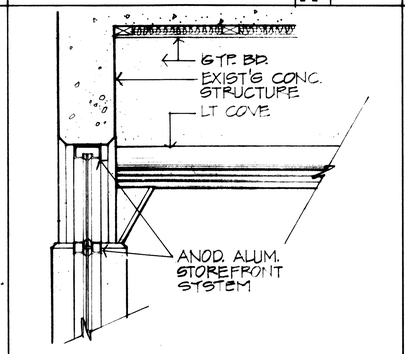
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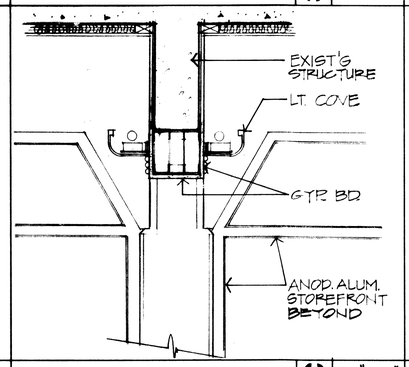
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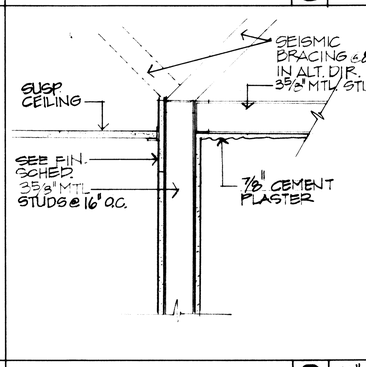
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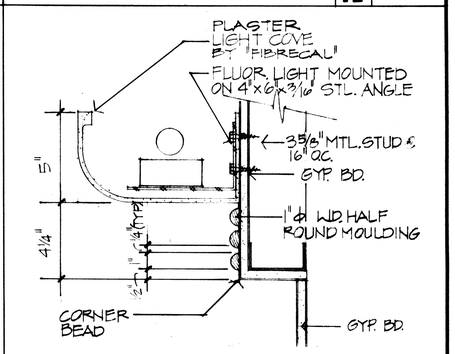
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9 ¾"=1'-0"

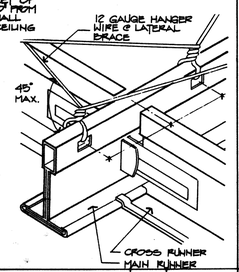


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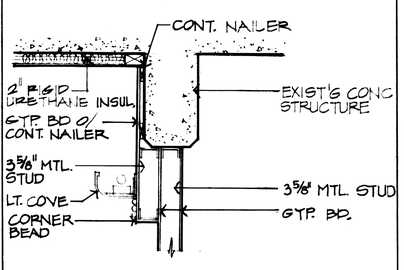


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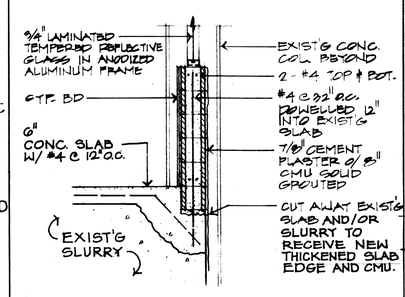
AT SUSPENDED CEILINGS PROVIDE SEISMIC TIES CONSISTING OF A SET OF 4-12 GAUGE SPLAY WIRES TO STRUCTURE ABOVE @ 12'-0" O.C. MAX. IN DIRECTION I SET OF SPLAY WIRES FOR EACH MAIN OR RUNNER OF CEILING. PLACE SPLAY WIRES BRAC'G. IN PLANE OF EACH RUNNER AT A VERT. ANGLE OF 45°. FIRST SET OF SPLAY WIRES SHALL BE 2'-0" FROM ANY WALL. SPLAY WIRES SHALL BE TAUT WITHOUT CAUSING CEILING TO LIFT.



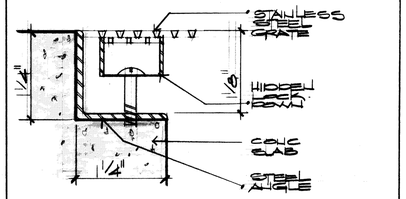
21 NO SCALE



17 ¾"=1'-0"



13 ½"=1'-0"



21 1"=1'-0"

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

REGISTERED ARCHITECT — No. C7396 — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET A-8	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

DETAILS

Approved Ronald A. Beck 9-12-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by

Approval date

B-415

DIVISION 15 - PLUMBING

PART 1 - GENERAL

1. SCOPE: Work shall include all labor and materials required for a fully operating plumbing system including, but not necessarily limited to: All excavation, installation, backfill and compaction; Obtaining and paying for permits, fees, meters; Water distribution; Vents and wastes; Gas distribution; Fixtures and trim; Rough-in and connect to mechanical equipment; Flash and seal all roof penetrations.

2. SUBMITTALS: Shop Drawings and As Built Drawings: Within 10 days after award of contract submit a list of materials and shop drawings. During work maintain an accurate record of all changes. Present a reproducible plan to Architect reflecting changes.

3. JOB CONDITIONS: Contractor shall acquaint himself with site conditions prior to bidding and verify electrical supply on site. Maintain existing service.

PART 2 - PRODUCTS

1. Soil and waste and vent piping within buildings: ~~Service weight cast iron no hub soil pipe unless~~ otherwise noted. ~~Make up with compression type fittings with stainless steel clamp and shield assemblies and neoprene joints.~~ ABS
2. ~~Vent piping 2 1/2" size and smaller above floor may be Schedule 40 galvanized steel pipe, made up with cast iron drainage fittings.~~
3. Sewer and waste exterior: From five feet outside the buildings, ~~extra strenght vitrified clay pipe with mechanical joints.~~ ABS
4. Domestic water piping:
   A. Hot and cold water above floor shall be Type "L" hard-drawn copper made up with 50-50 solder.
   B. Below-slab shall be Type "L" annealed copper made up above floor.
   C. Domestic water piping below ground outside of buildings size 1-1/2" and smaller shall be PVC Schedule 40. Size 2" and larger shall be PVC Schedule 80 or Class 315 using Schedule 80 Fittings. Only Schedule 40 male adaptors are acceptalbe. Set minimum of 18" deep, and provide ground wire to meter.
5. Gas Piping:
   A. Gas piping within building shall be Schedule 40 black steel. All gas piping 3" and larger shall be made up with welded fittings. All gas piping 2-1/2" size and smaller shall be made up with malleable iron screwed fittings and plain pattern couplings.
   B. Below grade outside use wrapped welded black steel or PVC if allowed.
6. Indirect waste piping shall be DWV copper.
7. Valves: "Walworth", or equal, 125 lb. solder ends, all bronze. Hose bibbs shall be "Acorn", rough chrome with loose key, (8100-2 wall box at walkways).
8. Gas cocks: Gas cocks shall be "Norstrom" 142 and 143.
9. Pipe sleeves and Escutcheons: "Adjusto-Crete", or equal, with B&C chrome escutcheons.
10. Hangers and supports: Grinnel or equal. Provide lateral bracing where hangers exceed 18". Isolate piping with Semco Trisolators. Insulate at structure with 1/2" felt.
11. Water hammer arrestors: Smith 5000 at all quick closing valves.
12. Cleanouts-Smith: C.O.; 4021, 4041. C.O.T.G.; 4251. Wall; 4471, 4472.
13. Isolation: Isolate all dissimilar metals with "EPCO" dielectric unions.
14. Access Panels: Stainless with proper rating at all concealed valves and equipment.
15. Watts P.T.R. Valves: On tanks and water heaters, sized per input rating.
16. Pipe wrapping: Coat all buried metal pipe with 30 mils thick Johns Manville Trantex lapped 1/2". Insulate all hot water pipe above grade with 1" thickness R4. Hot water pipe below grade shall be wrapped with 1" Armaflex.
17. Trap Primers: Provide ~~at each floor drain~~ as required by local authorities.
18. Other Materials: All other materials required for a complete insallation, shall be new and subject to approval of Architect.

PART 3 - EXECUTION

1. GENERAL REQUIREMENTS: Clearances: Piping shall be concealed with offsets as necessary to conform to stucture and keep passageways clear. Equipment shall be accessible for maintenance. Coordinate with other trades. Drilling, cutting and patching shall be done according to the appropriate section. Perform all work per applicable codes.
2. INSTALLATION OF PIPING:
   A. Thoroughly clean piping before installation.
   B. Underground piping shall have a minimum cover of 12".
   C. Provide clamps or thrust blocks where separation may occur and make provision for pipe expansion. No close nipples or bushings will be allowed.
   D. Provide cast bronze drop ear fittings at all water supply outlets to fixtures. Provide a union at valves and equipment connections.
3. INSTALLATION OF PLUMBING FIXTURES AND EQUIPMENT:
   A. Verify locations and service with the architectural plans.
   B. Wall-hung fixtures shall be securely attached to a 1/4" thick by 8" wide steel plate, which shall extend to a least one stud beyond the first and last fixture mounting point. Plate shall be shop drilled with holes 1/16" larger than stud bolts supplies with fixture or fixture arms specified. A jam nut shall be set tight against face of plate to secure stud. Fixture hanger or arm shall be supported free of finished wall by means of second set of jam nuts. Plates shall be securely bolted to each stud crossed with 1/8" minimum by 2" steel backup plates.
   C. Each individual fixture supply shall be provided with chrome plated loose key stops, trim and connections. Supplies shall be metal to metal only.
4. DEMOLITION: The romoval of existing piping, equipment, and accessories not used in new system shall become the property of the Contractor, unless otherwise noted on the drawings, and it is his responsibility to remove them from the premises.
5. CLEANING AND ADJUSTING: Chlorinate and clean the entire potable water system in accordance with AWWA and flush before buildings are occupied. Perform all tests and adjustments.

PART 4 - GUARANTEES

Materials and equipment provided and/or installed under this section of the specification shall be guaranteed for a period of one (1) year from date of final acceptance of the work by the Owner.

PLUMBING NOTES

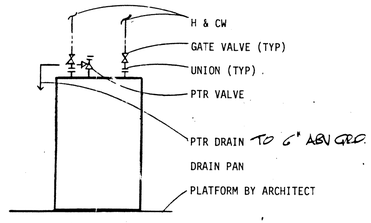
1. INSTALLATION OF ALL PLUMBING SHALL COMPLY WITH THE CODES AND REGULATIONS OF THE LOCAL HEALTH DEPARTMENT, BUILDING DEPARTMENT AND ALL APPLICABLE GOVERNMENT AGENCIES.
2. BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT SIZE, LOCATION AND ELEVATION OF ALL UTILITIES.
3. EXACT LOCATIONS, DIMENSIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM ARCHITECTURAL DRAWINGS.
4. INSTALL ALL PLUMBING IN COORDINATION WITH ELECTRICAL, MECHANICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS AND TRADES.
5. THE CONTRACTOR SHALL RECORD ON AS-BUILT DRAWINGS, ALL SIZES, MATERIALS, ELEVATIONS, LOCATIONS AND DEPTHS OF BURIED PIPES.
6. ALL SERVICE OUTLETS FOR FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A LINE SIZE SHUT-OFF VALVE OR STOP AS SPECIFIED.
7. COORDINATE PIPING IN WALLS WITH RECESSED ROOM ACCESSORIES.
8. SLOPE ALL SANITARY WASTE AT A MINIMUM OF 1/4 INCH PER FOOT UNLESS OTHERWISE NOTED OR APPROVED.
9. VERIFY AND COORDINATE ROUGH-IN LOCATIONS AND DIMENSIONS FOR EQUIPMENT. PROVIDE ALL INTER-CONNECTING PIPING AND APPURTENANCES REQUIRED AND MAKE FINAL CONNECTION.
10. MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND PAY FOR ALL PERMITS, CHARGES AND METERS.
11. INSULATE ALL HOT WATER LINES (EXCEPT 12 FT. RUNOUTS) WITH 3/4" R4 FOR UP TO 1" PIPE AND 1" R4 FOR 1¼" AND LARGER.
12. GUARANTEE ALL LABOR AND MTL'S FOR ONE YEAR.

PLUMBING LEGEND

ABBR.	SYMBOL	DESCRIPTION
S		SANITARY WASTE
V		SANITARY VENT
D	—D—	INDIRECT DRAIN
CW		COLD WATER
HW		HOT WATER
G	G	GAS - LOW PRESSURE
GV		GATE VALVE
GC		GAS COCK
RV		RELIEF VALVE
HB		HOSE BIBB w/VACC BKR. EXAMINATION DEVICE
FCO		FLOOR CLEANOUT
COTG		CLEANOUT TO GRADE
WCO		WALL CLEANOUT
		RISER DOWN - ELBOW
		RISER UP - ELBOW
VTR		VENT THRU ROOF
IE		INVERT ELEVATION
POC		POINT OF CONNECTION
SOV		SHUT-OFF VALVE
WHA		WATER HAMMER ARRESTER
RI&C		ROUGH-IN AND CONNECT
CWV	—CWV—	COMBINATION WASTE & VENT
TPL	—TPL—	TRAP PRIMER LINE
UAS		UNDER ANOTHER SECTION
RW	—RW—	RAIN WATER

PLUMBING SCHEDULE

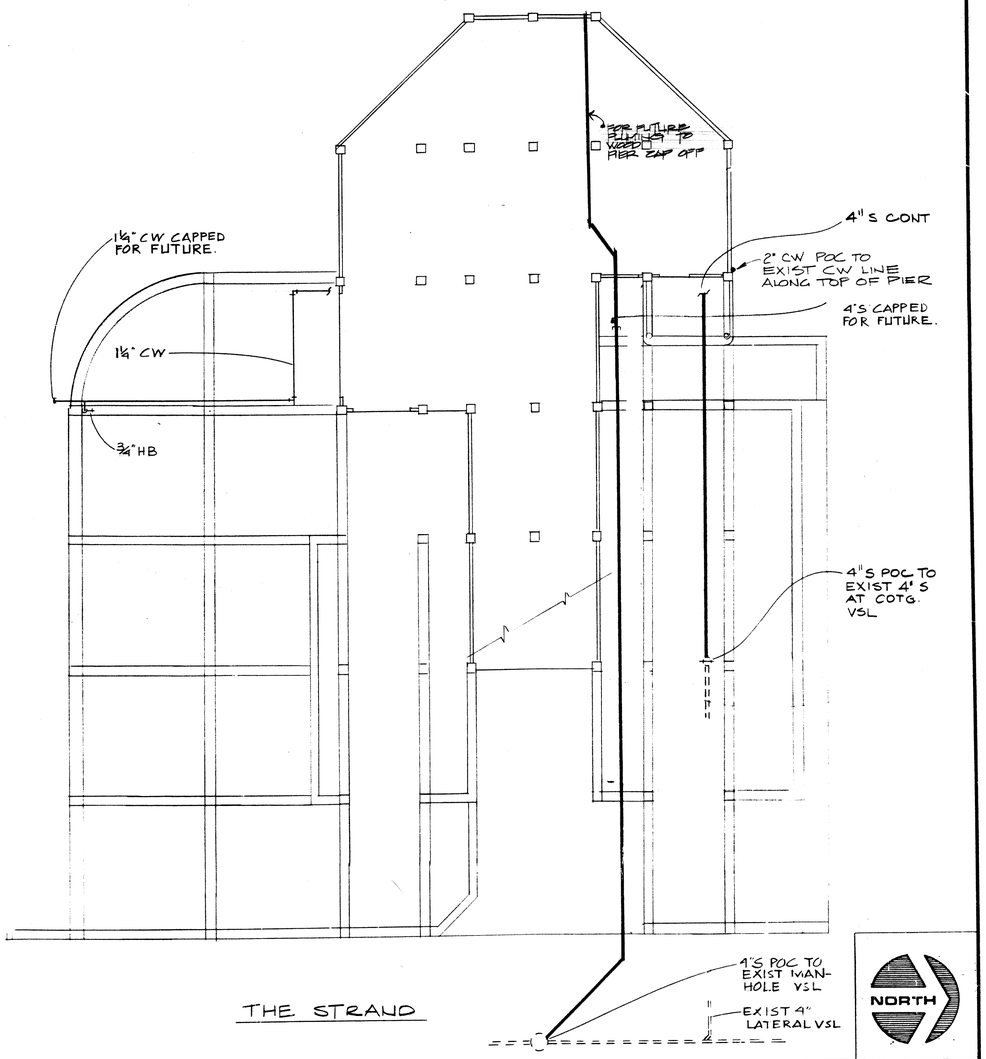
ITEM	FIXTURE	ROUGH-IN-SIZE WOR S	V	CW	HW	DESCRIPTION:
WC 1	WATER CLOSET	4"	2"	1¼"	-	K-4430-ET KINGSTON WATER-GUARD TOILET. VITREOUS CHINA SIPHON JET ELONGATED TOILET WITH 2-5/8" (67 MM) PASSAGEWAY AND 1-1/2" TOP SPUD. RECOMMENDED SEAT - K-4670-C LUSTRA SOLID PLASTIC WHITE SEAT WITH CHECK HINGE. SUGGESTED FLUSH VALVE - SLOAN 110-3.
U 1	URINAL	2"	1½"	1¼"	-	K-4980-T BARDON WATER-GUARD VITREOUS CHINA WASH-OUT ACTION URINAL WITH 3/4" (19 MM) TOP SPUD INLET, 2" I.P.S. (51 MM) OUTLET, WALL HANGERS AND REMOVABLE BEEHIVE STRAINER. SUGGESTED FLUSH VALVE - SLOAN 186.
L 1	LAVATORY	2"	1½"	½"	½"	AMERICAN STANDARD 3211.059 "LEDGELYN" ~~WITH HERITAGE 2379.071 FAUCET~~ WITH 2411.015 GRID DRAIN. PROVIDE WITH 2303.063 SUPPLIES WITH LOOSE KEY STOPS. W/MOEN 4922 FAUCET.
L 2	LAVATORY	2"	1½"	½"	½"	AMERICAN STANDARD 0355.012 "LUCERNE" ~~WITH HERITAGE 2379.071 FAUCET~~ WITH 2411.015 GRID DRAIN. PROVIDE WITH 2303.063 SUPPLIES WITH LOOSE KEY STOPS. W/MOEN 4922 FAUCET.
SH 1	SHOWER	-	-	½"	½"	MOEN 2275A WITH STOPS ~~CHICAGO 1762 - 1S~~ SHOWER FITTINGS WITH INTEGRAL STOPS
S 1	SINK	2"	1½"	½"	½"	ELKAY BRCA-150C 20 GA STAINLESS STEEL 15" X 15" AND LK35 STRAINER. PROVIDE SUPPLIES WITH LOOSE KEY STOPS. W/MOEN 4901-A FAUCET. IN-SINK-ERATOR - H_2OT-HC-B INSTANT HOT/COLD WATER DISPENSER. ADD FILTER AND COOLING SYSTEM ALSO.
S 2	SINK	2"	1½"	½"	½"	ELKAY BRCA-150C 20 GA STAINLESS STEEL 15" X 15" ~~WITH LK 2489.8 FAUCET~~ AND LK35 STRAINER. PROVIDE SUPPLIES WITH LOOSE KEY STOPS. INCLUDE WAWS MODEL 7612 EMERGENCY EYE WASH. W/MOEN 4901A FAUCET.
LT 1	LAUNDRY TUB	2"	1½"	½"	½"	COMMERCIAL ELKAY/LUSTERTONE ONE COMPARTMENT 25" x 21" SELF RIMMING LAUNDRY TRAY W/ MOEN # 4975
FD 1	FLOOR DRAIN	2"	1½"	-	-	J.R. SMITH 2010-AU CAST IRON WITH POLISHED BRONZE TOP WITH TAMPER PROOF SCREWS.
WH 1	WATER HEATER	-	-	1¼"	1¼"	A. O. SMITH EES-80 ENERGY SAVER. 120 GALLON, 4.5 KW, 18.45 GPH RECOVERY. 240V-1HZ-60 CYCLE.



RUN PIPES AS SHOWN ON PLAN. RUN FULL SIZE TO W.H. WITH FULL SIZE VALVES.

WATER HEATER DETAIL

SCALE A
NONE P1



SITE PLAN

SCALE 1
NONE P1

TERRY ENGINEERING
180 EAST MAIN STREET • SUITE 135
TUSTIN, CA 92680 • (714)838-1124

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET P-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

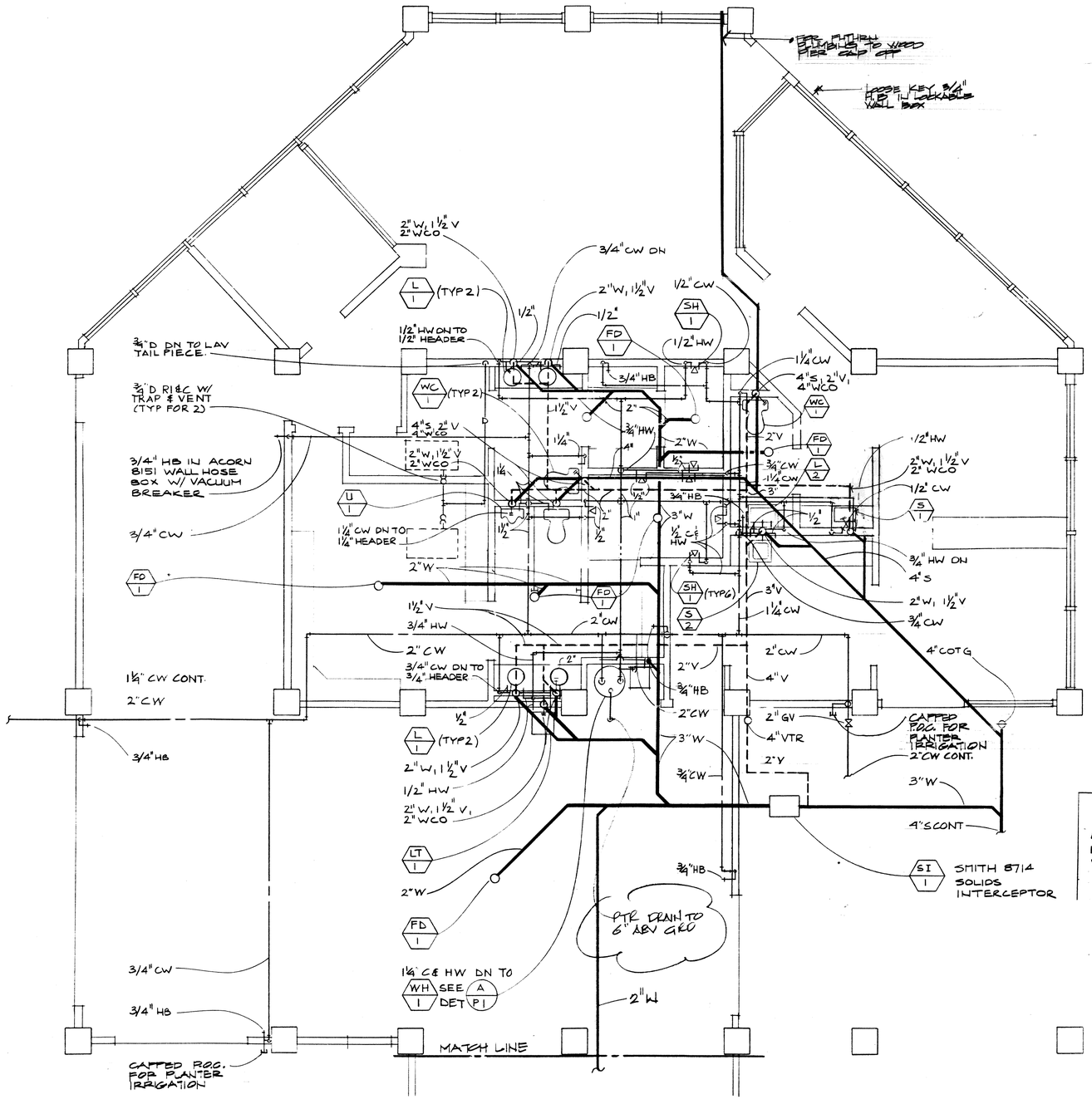
SITE PLAN/SCHEDULE

Approved Ronald A. Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

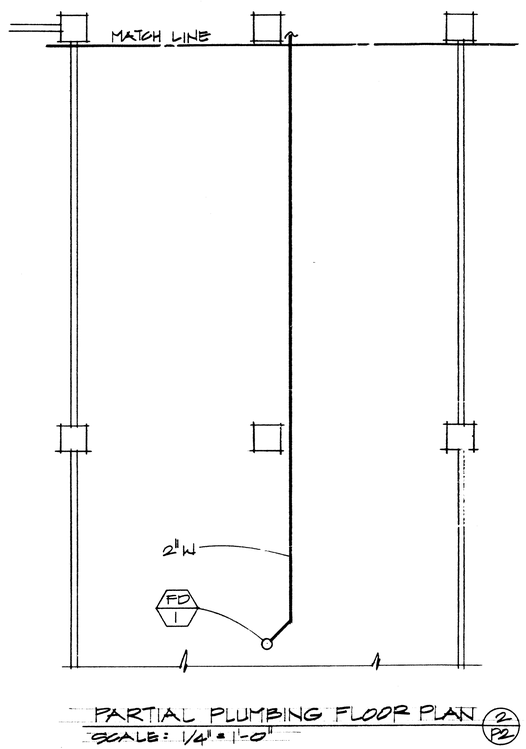
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Approval date
B-416

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PLUMBING FLOOR PLAN (1/P2)

SCALE: 1/4"=1'-0"



PARTIAL PLUMBING FLOOR PLAN (2/P2)

SCALE: 1/4"=1'-0"

The California Nonresidential Energy Conservation Standards have been reviewed and the design, drawings, and calculations comply substantially with these standards

REGISTERED PROFESSIONAL ENGINEER JAMES H. TERRY NO. 17014 MECHANICAL STATE OF CALIFORNIA

TERRY ENGINEERING
180 EAST MAIN STREET • SUITE 135
TUSTIN, CA 92680 • (714) 838-1124

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET P-2 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

PLUMBING FLOOR PLAN

Approved Ronald A Bodi 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

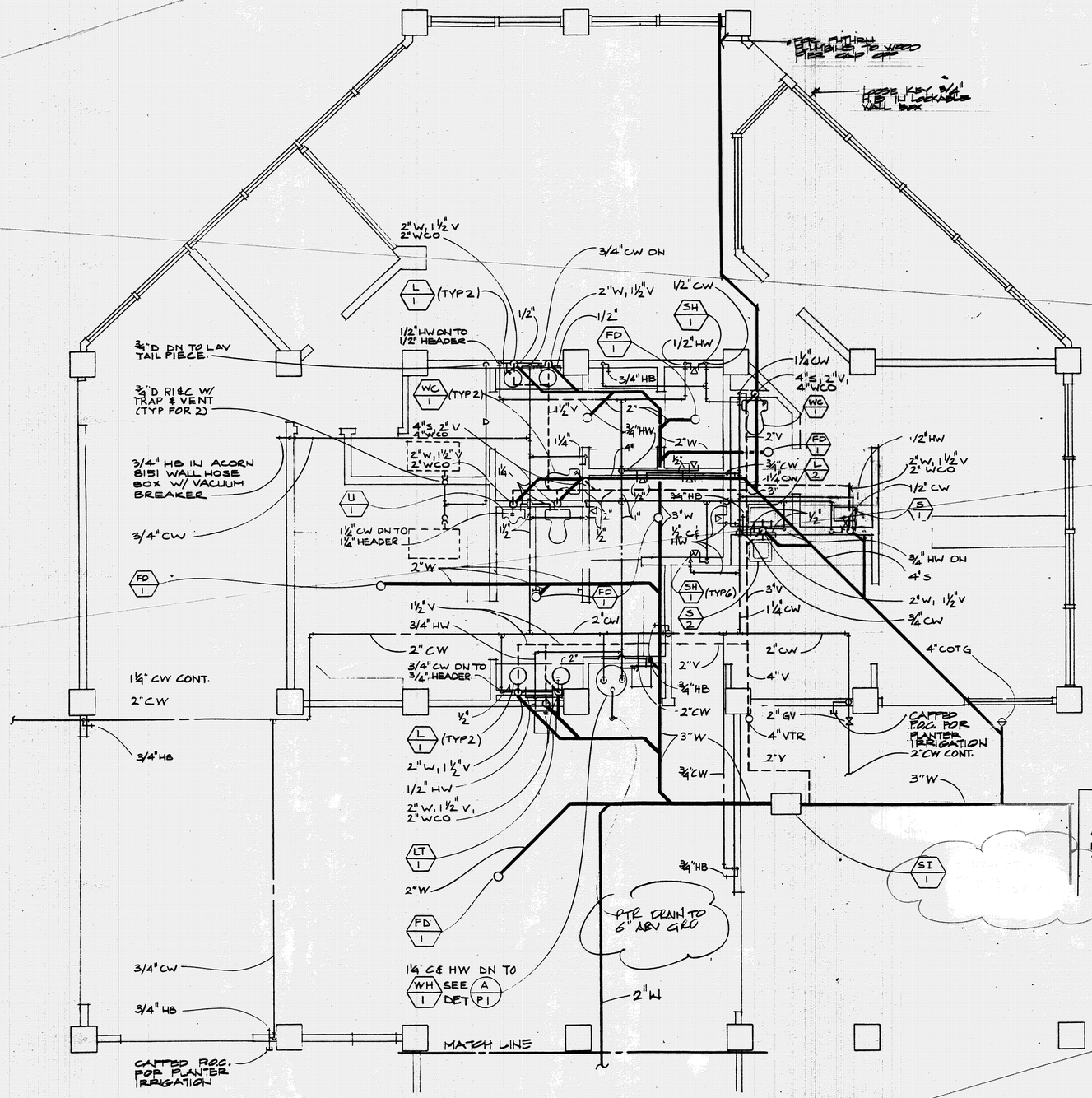
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Approval date

B-417

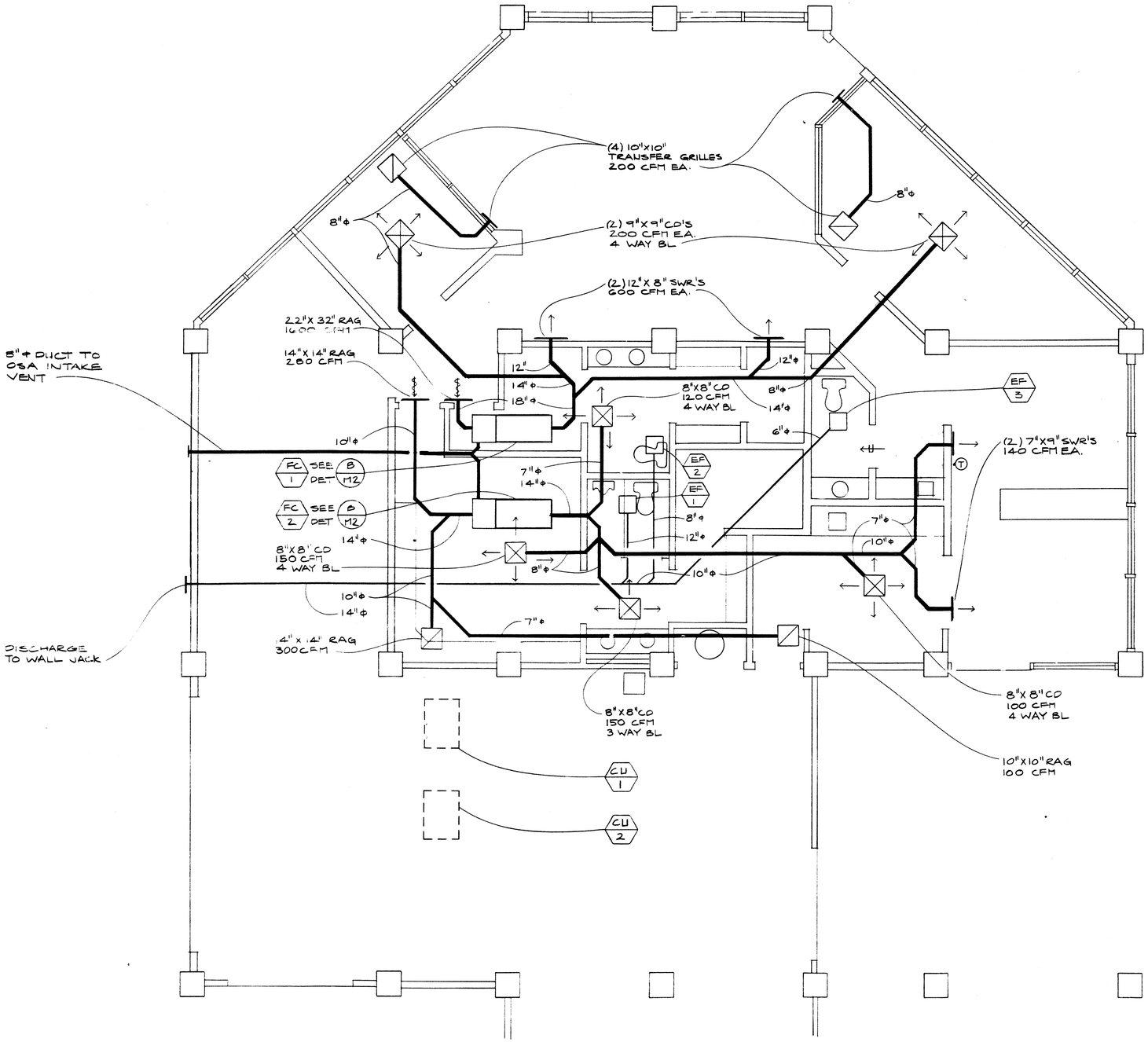
The California Nonresidential Energy Conservation Standards have been reviewed and the design, drawings, and calculations comply substantially with these standards

REGISTERED PROFESSIONAL ENGINEER JAMES H. T. NO. 17014 MECHANICAL STATE OF CALIFORNIA


2"W, 1½"V 2"WCO
3/4"CW DN
(TYP 2)
1/2"
2"W, 1½"V
1/2"CW
1/2"HW DN TO 1/2" HEADER
1/2"
1/2"HW
3/4"D DN TO LAV TAIL PIECE
3/4"D RI&C W/ TRAP & VENT (TYP FOR 2)
3/4"HB IN ACORN 8151 WALL HOSE BOX W/ VACUUM BREAKER
3/4"CW
1¼"CW DN TO 1¼" HEADER
2"W
1½"V
3/4"HW
2"CW
3/4"CW DN TO 3/4" HEADER
1½" CW CONT.
2"CW
3/4"HB
1/2"
(TYP 2)
2"W, 1½"V
1/2"HW
2"W, 1½"V, 2"WCO
2"W
1¼"CW
4"S, 2"V, 4"WCO
2"V
1/2"HW
2"W, 1½"V
2"WCO
1/2"CW
3/4"HW DN 4"S
2"W, 1½"V
3/4"CW
4"COTG
CAPPED RCC. FOR PLANTER IRRIGATION
2"CW CONT.
3"W
NORTH
PTR DRAIN TO 6" ABV GRD
1½" CE HW DN TO WH SEE DET A P1
2"W
3/4"CW
3/4"HB
CAPPED RCC. FOR PLANTER IRRIGATION
MATCH LINE
3"V
1¼"CW
(TYP 6)
2"CW
2"V
4"V
3/4"HB
2"CW
2"GV
4"VTR
2"V
3/4"CW
3/4"HB
2"W
3"W
1/2"
3/4"HB
3"W
1/2" C&E HW
2"CW
1/2"
1"
1/2"
1/2"
1¼"
2"
3/4"HW
4"
2"W
1/2"
3/4"CW
1¼"CW
3"
1/2"
3/4"HB
1/2"
1/2"
2"
2"

The California Nonresidential Energy Conservation Standards have been reviewed and the design, drawings, and calculations comply substantially with these standards

REGISTERED PROFESSIONAL ENGINEER
JAMES H. TERRY
NO. 7014
MECHANICAL
STATE OF CALIFORNIA



MECHANICAL FLOOR PLAN

SCALE: 1/4"=1'-0"

1/M1

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

TERRY ENGINEERING
180 EAST MAIN STREET • SUITE 135
TUSTIN, CA 92680 • (714)838-1124

SHEET M-1

CITY OF OCEANSIDE
ENGINEERING DEPARTMENT

SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

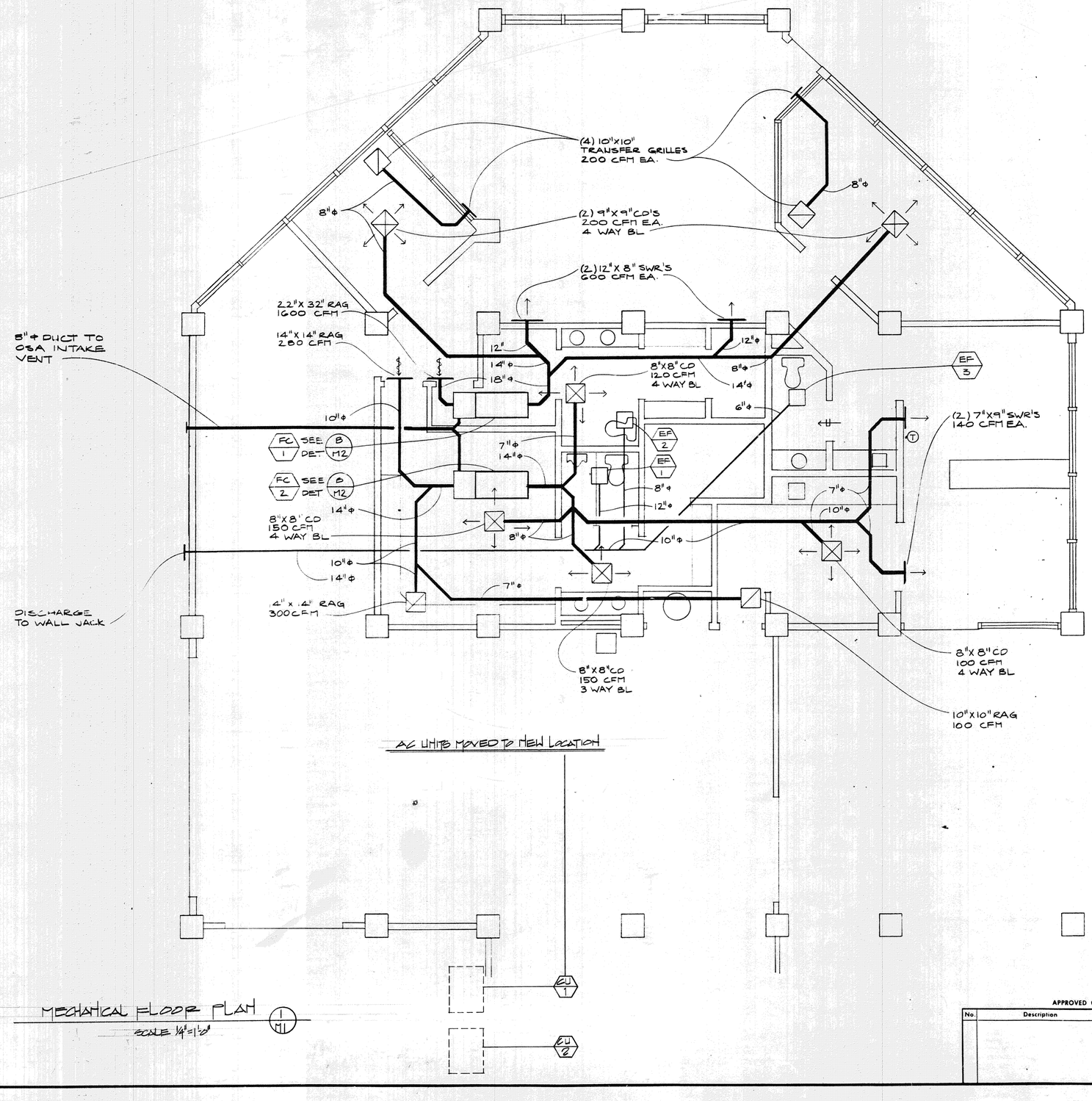
MECHANICAL FLOOR PLAN

Approved Ronald A. Bod 9-17-85 City Engineer

ENGINEER OF WORK
R.C.E.

Checked by
Approval date

B-418



MECHANICAL FLOOR PLAN (M1)
SCALE 1/4"=1'-0"

AC AS BUILTS

The California Nonresidential Energy Conservation Standards have been reviewed and the design, drawings, and calculations comply substantially with these standards

REGISTERED PROFESSIONAL ENGINEER JAMES H. TERRY NO. 17014 MECHANICAL STATE OF CALIFORNIA

TERRY ENGINEERING
180 EAST MAIN STREET · SUITE 135
TUSTIN, CA 92680 · (714)838-1124

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
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SHEET M-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

MECHANICAL FLOOR PLAN

Approved Ronald A. Bod 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by

Approval date

B-418

89969

DIVISION 15 - HEATING VENTILATION & AIR CONDITIONING

PART 1 - GENERAL

1. SCOPE Work to include labor and materials required for a fully-operating system including (but not limited to): Equipment; Controls; Ductwork; Appurtenances; Paying all required fees; Low voltage wiring. Work specified elsewhere will be plumbing connections and equipment platforms.

2. SUBMITTALS Shop and As Built Drawings: With ten (10) days after award of contract, submit to the Architect a complete set of shop drawings and list of equipment and materials. On completion present a professionally done reproducible drawing to the Architect showing changes in the plan.

3. JOB CONDITIONS Verify electrical power requirements on site. Maintain continuity of service to existing systems. Visit site prior to bidding to understand conditions affecting installation of the proposed system.

PART 2 - PRODUCTS

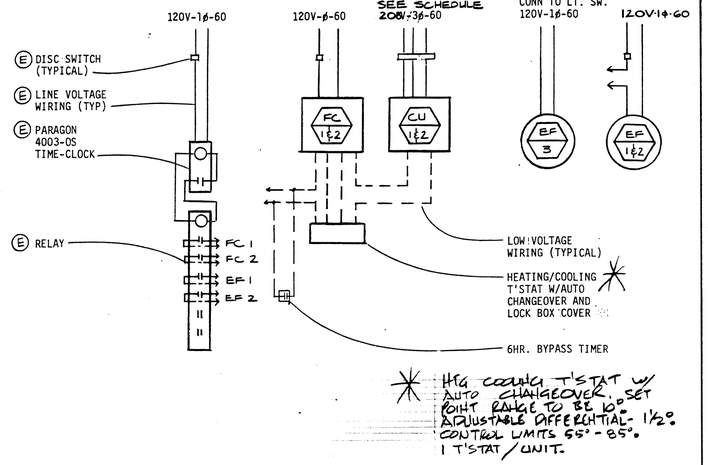
1. General: Use only new materials. Equipment and materials shall conform to requirements of A.G.A., State Fire Marshall and UL listed.
2. Ductwork shall be airtight, USSG galvanized iron or steel, with gauges and construction conforming to NAPA Pamphlet No. 90A and SMACNA recommendations. Provide air foil turning vanes on mitered elbows and R/W = 1.5 on radius elbows. Change sizes with a slope not more than one in three. Use adjustable extractors and reinforce where needed for smooth silent flow. Net inside dimensions indicated on drawings.
3. Flexible ductwork in 6' lengths may used at outlets.
4. Seal ductwork exposed to weather watertight with Arabol and canvas. Protected ductwork shall be taped with approved pressure sensitive tape.
5. Support ducts on roof on structural angle frames and base plates set in mastic. Use 1" galvanized steel hangers in ceiling space.
6. At contractor's option, Casco duct 1" thick with positive vapor seal is acceptable in lieu of concealed sheet metal round pipe.
7. Concealed ductwork: Insulated with 2", 3/4 lb., fiberglass, (R = 6). Lap 2" and secure with 18 gauge galvanized annealed wire on 12" centers. Provide a .05 perm vapor barrier.
8. Ductwork exposed inside and outside buildings, and lined ductwork: Line supply and return air ducts with coated 1-1/2 lb. duct liner, applied with adhesive (use 2" inside building and 1-1/2" inside building or in RA duct). With ducts over 24" wide, secure with mechanical fasteners in addition to adhesive. Coat exposed edges of liner with adhesive.
9. Provide outlets, registers and diffusers with opposed blade dampers and appurtenances required to accomplish satisfactory air distribution.
10. Finish of air outlets shall be factory finished baked white enamel and a gasket shall be provided. CD's shall be ADP MAC-S, SWR's shall be ADP K-305. RAR's and RAG's shall be ADP ERBD-700 and 705 respectively.
11. See architectural reflected ceiling plan for exact location of outlets.
12. Manual dampers: Provide locking quadrant on all duct branches.
13. Fire dampers: Provide approved fire dampers in ductwork as required by authorities having jurisdiction, including the State Fire Marshall, and in conformance with U.B.C. Standard No. 43-7 bearing UL label.
14. Access doors: Provide where dampers or equipment require access. Shall be double-wall type with gasket seal and cash locks. Insulate and rate per application. In wall and ceilings use Inland Steel "Milcor" with prime coat enamel.
15. Flashing and birdscreens: Provide watertight sheet metal flashing and counter flashing. Barometric dampers and 1/4" mesh birdscreens shall be provided on outside air openings.
16. Air conditioning equipment: Year-round packaged equipment, factory-assembled and tested, with factory-wired control systems and identification labels. Provide high and low pressure switches, short cycle protection and crank case heaters on each unit.
17. Time switches: Paragon 4003, purchased and installed by the Electrical Contractor.
18. Motors to be open drip-proof type built in accordance with NEMA standards. G.E. or equal.
19. Refrigerant piping to be type "L" copper with silver brazed fittings. Tube kits may be used on short runs. Charge piping per manufacturer's recommendations. Insulate suction line with 3/4" Armaflex insulation; tape and seal.

PART 3 - EXECUTION

1. Clearances: Verify locations of equipment, ductwork and piping. Piping service clearances and offsets in piping and ductwork necessary to conform to structure and keep passageways clear. Install equipment per manufacturers instructions.
2. Standards: Coordinate the work of the Section with that of all other sections and comply with all applicable codes and regulations. Mount equipment level and anchor.
3. Ductwork and equipment: Fabricate in strict accordance with the referenced standards and materials.
4. Cutting and patching: Do all drilling, cutting and patching if the same materials and workmanship as the original work.
5. Painting: Paint inside of ductwork at registers or grilles flat black.
6. Weatherproofing: Provide sheet metal weatherproof hoods over exposed equipment.
7. There shall be conspicuously posted at or near access to the roof, a set of instructions for shutting down the system in case of emergency which shall include the name, address and day and night telephone numbers for obtaining service.
8. Building footing clearance: Pipes running parallel to footing shall have a depth defined by any line which may be drawn from the footing bottom and dropping down at a slope of 45 degrees. Furnish dimensioned drawings for bases, pads, openings. Furnish and install all anchor bolts and inserts.
9. Any existing piping or conduit that is encountered shall be properly shored and protected from damage, or relocated and reconnected to the existing system, as directed by the Architect.
10. Testing and adjusting: Provide for proper distribution of air and elimination of drafts, noise and vibration, and leave in first-class operating condition.
11. Contractor shall instruct the Owner in all details of operation and maintenance and provide maintenance manuals and tools furnished with equipment.
12. All outside air openings shall be 10 ft. away or 3 ft. below noxious vent outlets. Hood exhaust to be 10 ft. from adjacent building.

PART 4 - GUARANTEE

Materials and equipment provided and/job installed under this Section of the Specification shall be guaranteed for a period of one (1) year from the date of final acceptance of the work by the owner. The owner shall reserve the right to make temporary repairs as necessary to keep equipment in operating condition without voiding the Contractors's guarantee bond. Labor for mechanical equipment repair will be covered for 90 days. Any leaks will be fixed during the first one (1) year for no extra cost.



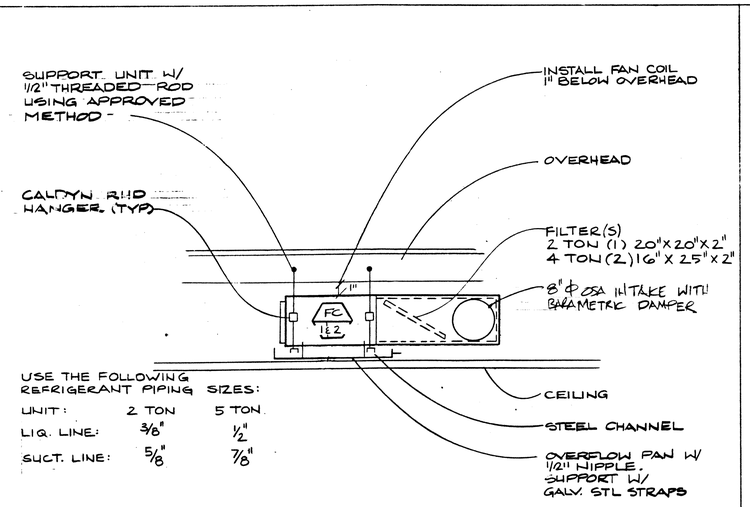
CONTROL DIAGRAM — SCALE NONE — C — M2

MECHANICAL NOTES

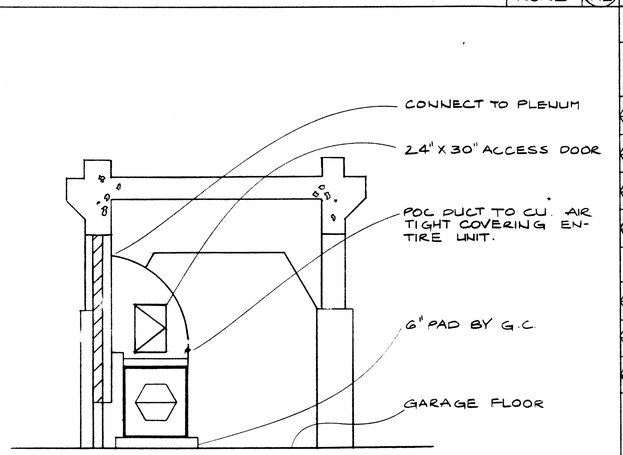
1. INSTALLATION OF ALL EQUIPMENT SHALL COMPLY WITH ALL GOVERNING CODES.
2. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
3. INSTALL ALL EQUIPMENT, PIPING, AND DUCTWORK IN COORDINATION WITH OTHER TRADES.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF OUTLETS.
5. ALL DUCTWORK SHALL BE GALV. STEEL AND INSTALLED TO THE LATEST SMACA STANDARDS. GLASS-FLEX "1HP-1" MAY BE USED AT OUTLETS.
6. INSULATE CONCEALED DUCTWORK BY WRAPPTING WITH 2 INCHES OF .5 LB. PER FT^3 INSULATION. LAP 2 INCHES. APPLY WITH ADHESIVE AND 18 GA. WIRE AT 12 INCHES. INSULATE EXPOSED AND LINED DUCTWORK WITH 2 INCH - 1½ LB. PER FT^3. COATED LINER APPLIED WITH ADHESIVE AND FASTENERS 12 INCHES ON CENTER.
7. INSTALL EXTRACTORS AND VOLUME DAMPERS WHERE REQUIRED TO BALANCE SYSTEM. USE MITERED ELLS OR R/W = 1.5 RADIUS ELLS.
8. MOUNT ALL THERMOSTATS AT 5'-0" ABOVE FINISHED FLOOR.
9. FLASH AND COUNTERFLASH ALL ROOF PENETRATIONS WATER TIGHT.
10. OUTSIDE AIR INTAKES SHALL BE 10 FT. FROM VENTS. COVER INTAKES WITH 1/2 INCH MESH SCREEN.
11. EXPOSED DUCTWORK SHALL BE SEALED WITH ARABOL AND CANVAS. CONCEALED DUCTWORK SHALL BE TAPED WITH NASHUA NO. 357.
12. RIGID FIBERGLASS MAY BE USED IN LIEU OF GALV. STEEL FOR CONCEALED ROUND DUCT.
13. GUARANTEE ALL LABOR AND MTL'S FOR ONE YEAR.

MECHANICAL LEGEND

SYMBOL	ABBR.	DESCRIPTION
		DUCT
		INTERNALLY LINED DUCT
		ADJUSTABLE EXTRACTOR
		ELBOW W/TURNING VANES
	SA	SUPPLY AIR
	RA	RETURN AIR
	EA	EXHAUST AIR
	OSA	OUTSIDE AIR
	MA	MIXED AIR
	AD,AP	ACCESS DOOR PANEL
		RISER & DROP (S.A.)
		RISER & DROP (R.A.)
	CD	CEILING DIFFUSER
	RAR	RETURN AIR REGISTER
	EAR	EXHAUST AIR REGISTER
	G	GRILLE
	SWR	SIDE WALL REGISTER
	AFD	AUTOMATIC FIRE DAMPER
	MVD	MANUAL VOLUME DAMPER
	FC	FLEXIBLE CONNECTION
	DL	DOOR LOUVER
	UD	UNDERCUT DOOR
T	T'STAT	THERMOSTAT
E		BY ELECTRICAL
	G	GAS
	D	DRAIN
	TYP	TYPICAL
	DISC, SW.	DISCONNECT SWITCH
	ABV.BEL.	ABOVE, BELOW



FAN COIL DETAIL — SCALE NONE — B — M2



SECTION — SCALE NONE — A — M2

EQUIPMENT SCHEDULE

ITEM	MODEL NO.	COOLING MBH TOT	COOLING MBH SENS	HEATING KW IN	HEATING MBH OUT	FAN CFM	FAN H.P.	ELECTRICAL SUPPLY	ELECTRICAL FLA	ELECTRICAL LRA	ELECTRICAL EER	ELECTRICAL COP	WT. LBS.	REMARKS
CU 1	PAYNE 545B 048	48	36	—	48	-	-	208-3-60	25	100	9.2	2.8		
CU 2	PAYNE 545B 024	24	18	-	24	-	-	208-1-60	13	54	9.5	2.8		
FC 1	PAYNE 517E 048075	-	-	7.5	19.2	1600	½	208-1-60	-	-	-	-	-	7.5 KW STMP HT
FC 2	PAYNE 517E 024005	-	-	5	18	800	½	208-1-60	-	-	-	-	-	5 KW STMP HT
EF 1	TRADEWIND VQT 300					300	⅙	120-1-60						
EF 2	TRADEWIND VQT 200					200	⅙	↓						
EF 3	TRADEWIND VQT 90					90	⅙	↓						

TERRY ENGINEERING
180 EAST MAIN STREET • SUITE 135
TUSTIN, CA 92680 • (714) 838-1124

APPROVED CHANGES

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BENCH MARK
Description: _____
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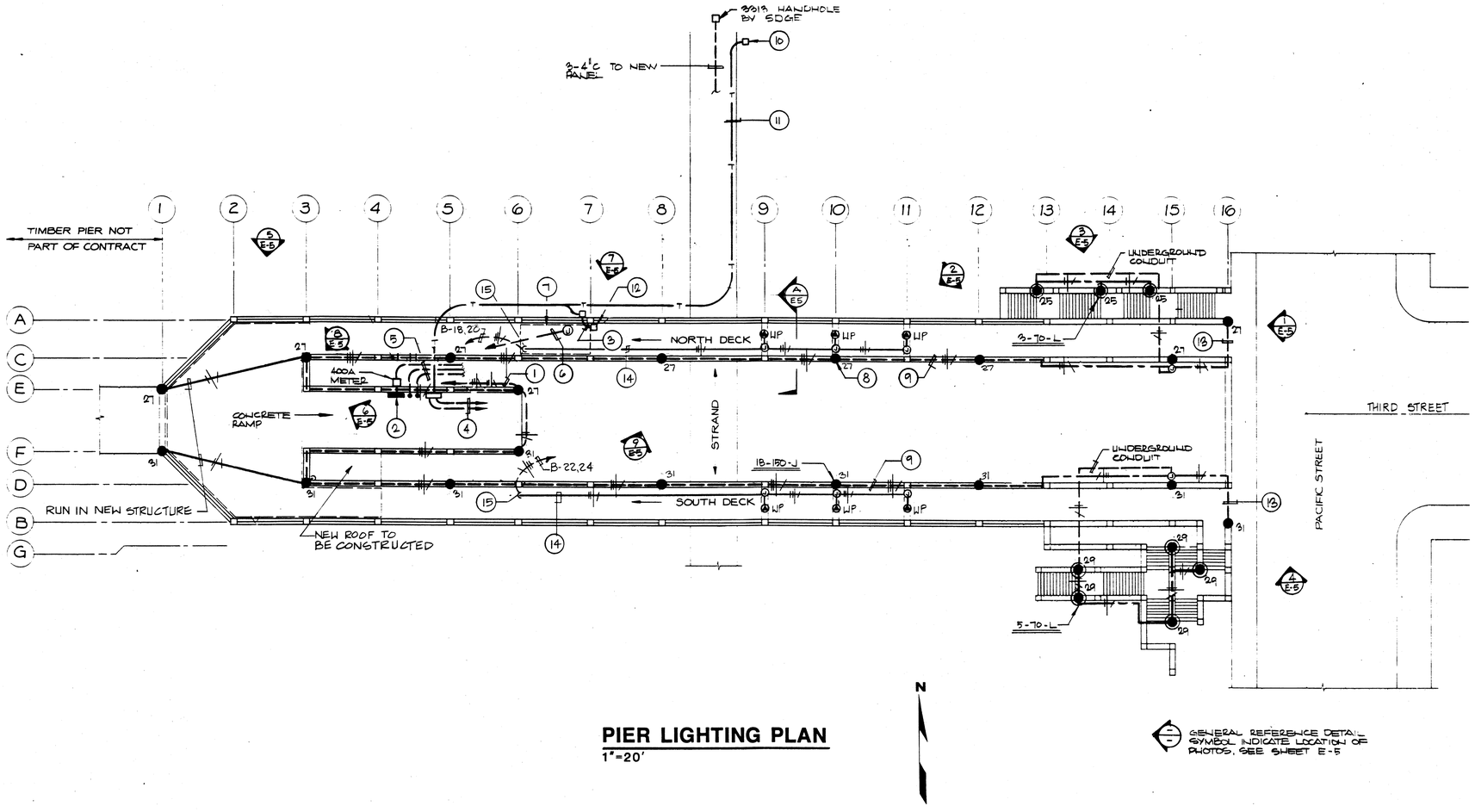
SHEET M-2 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

DETAILS/SCHEDULE

Approved Ronald A. Beach 9-17-85 City Engineer

ENGINEER OF WORK R.C.E. | Checked by | Approval date | B-419

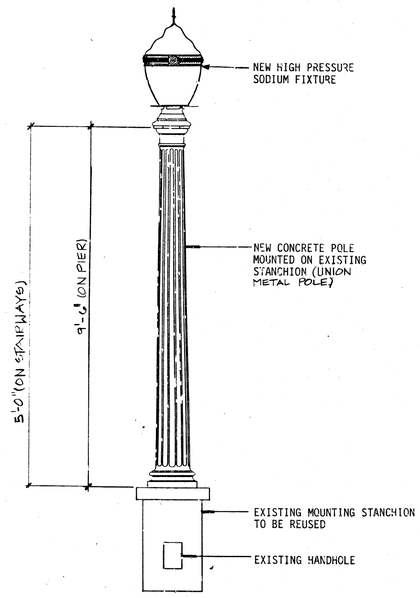


PIER LIGHTING PLAN
1"=20'

GENERAL REFERENCE DETAIL SYMBOL INDICATE LOCATION OF PHOTOS. SEE SHEET E-5

NOTES:

1. UNDERGRGUND CONDUIT AND WIRE TO NEW PANEL "A". A-25,27,29 AND 31 THRU CONTACTOR (CIRCUIT 'A") SEE EXTERIOR LIGHTING CONTROL DIAGRAM ON SHEET E-2.(1" CONDUIT)
2. NEW MAIN SERVICE LOCATION UNDER PIER. SEE RISER DIAGRAM ON SHEET E-2.
3. 2" CONDUIT AND TELEPHONE METER BOX FROM MAIN TELEPHONE BOARD TO A POINT NEAR COLUMNS 7/A TO PICK UP EXISTING PAY PHONE.
4. 2-4" CONDUIT TO TELEPHONE COMPANY MANHOLE.
5. 3-4" CONDUIT TO S.D.G.E. SERVICE.
6. INTERCEPT EXISTING FEEDERS. PROVIDE FLUSH WEATHERPROOF J-BOX 12"x12"x6"D AND EXTEND (5) 20A-1P CIRCUITS TO NEW PANEL "A".
7. EXISTING RESTROOM BUILDING UNDER PIER BEING REMOVED. REMOVE EXISTING MAIN SERVICE TO THE BUILDING.
8. NEW FIXTURE AND POLE. SEE POLE DETAIL THIS SHEET (TYPICAL FOR 26).
9. NEW FLEX CONDUIT AND WIRE INSIDE NEW HANDRAIL SYSTEM. 3#6 THHN, 1#12 GROUND AND 3/4" CONDUIT.(TYPICAL).
10. EXISTING PACIFIC BELL SERVICE PEDESTAL.
11. 2-4" PVC WITH 3/8" PULL CORD.
12. NEW LOCATION OF EXISTING PAY PHONE.
13. CONDUIT UNDER NEW ASPHALT OF PIER.
14. 1" CONDUIT-3#8 AND 1#8 GROUND. CONDUIT MOUNTED UNDER PIER. SEE SECTION A SHEET E5.
15. CONDUIT RUN DOWN COLUMN AND UNDERGROUND TO PANEL "3".



POLE DETAIL -TYPE 'J'
N T S

SYMBOL LIST:

▭	FLUORESCENT FIXTURE-SEE FIXTURE SCHEDULE FOR TYPE	———	CONDUIT CONCEALED IN WALLS OR ABOVE CEILING
○	INCANDESCENT OR HID FIXTURE-SEE FIXTURE SCHEDULE FOR TYPE	— — —	CONDUIT CONCEALED IN FLOOR SLAB OR EXTERIOR HAND RAIL
S	SINGLE POLE SWITCH +48" OR NOTED	— — —	CONDUIT RUN EXPOSED
S^3	3-WAY SWITCH	H, A-3	HOME RUN TO PANEL 'A', CIRCUIT 3, DIAGONAL SLASH INDICATED CODE SIZE GROUND WIRE RUN IN CONDUIT
S^4	4-WAY SWITCH	3-150-G	1ST NUMBER INDICATES QUANTITY, 2ND NUMBER INDICATES WATTAGE, 3RD NUMBER INDICATES FIXTURE TYPE AS SHOWN ON SCHEDULE
⊜	20A DUPLEX GROUNDED RECEPTACLE +12" OR NOTED	○3d	NUMBER INDICATES CIRCUIT, LETTER DESIGNATES SWITCH
⊜ GFI	20A DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION +48" OR NOTED	C.O.	CONDUIT ONLY
▼	TELEPHONE OUTLET WITH 3/4"C STUBBED OUT ABOVE CEILING UNLESS OTHERWISE NOTED +12" OR NOTED.	W.P.	WEATHERPROOF
(R)	OUTLET BOX RECESSED IN WALL WITH 3/4" C STUBBED OUT ABOVE ACCESSIBLE CEILING +12" OR NOTED (FOR RADIO)	(M)	OUTLET BOX RECESSED IN WALL WITH 1/2"C TO AMPLIFIER FOR MICROPHONE OUTLET
		⊓	DISCONNECT SWITCH NON-FUSED
(B)	TELEPHONE BELL	⊓ F	FUSED WITH DUAL ELEMENT FUSES
△	SPECIAL OUTLET AS NOTED	S^T	STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION.
⊃	MOTOR HP AS NOTED	●	NEW 150W H.P.S. FIXTURES (PIER LIGHTS) 9'-6 POLES
(J)	CODE SIZE JUNCTION BOX	◉	NEW 70W H.P.S FIXTURES (STAIRWAY LIGHTS) 5'-0 POLES

GENERAL NOTES:

VERIFY CEILING CONSTRUCTION TO DETERMINE EXACT CONDUIT ROUTING REQUIRED. ALL CONDUIT WITHIN THE LIFEGUARD HEADQUARTERS SHALL BE SCH. 40 PVC, SUPPORTED PER 1984 NATIONAL ELECTRICAL CODE AND SHALL BE CONCEALED WHEREVER POSSIBLE.

CONDUITS RUN IN ROOMS WITH OPEN BEAM CONSTRUCTION SHALL BE CONCEALED IN NEW SLAB OVERLAY OR WALLS WHEREVER POSSIBLE. WHEREVER IT IS NOT POSSIBLE TO DO SO, THE CONTRACTOR SHALL NOTIFY THE ARCH./ENG. FOR ALTERNATE METHODS OF INSTALLATION.

FLUORESCENT LIGHT FIXTURES IN THE 100 SQ. FT. AREA IMMEDIATELY ADJACENT TO MAIN RADIO EQUIPMENT SHALL INCORPORATE RADIO INTERFERENCE FILTERS.

THE USE OF FLEXIBLE AND RIGID ELECTRICAL NON-METALIC TUBING SHALL BE PERMITTED IN STRICT CONFORMANCE WITH ARTICLE 331 OF THE 1984 N.E.C. ALL SUCH CONDUIT SHALL INCORPORATE A CODE SIZED GROUND WIRE WITH THE POWER CONDUCTORS.

ALL EXISTING LIGHT FIXTURES BEING REMOVED SHALL BE TURNED OVER TO THE CITY AND SHALL BE DELIVERED TO A LOCATION AS DETERMINED BY THE CITY.

REMOVE THE EXISTING MAIN SERVICE PANEL IN THE TOILET ROOM BEING DEMOLISHED. INTERCEPT THE EXISTING FEEDERS AT THIS POINT AND INSTALL A WEATHERPROOF JUNCTION BOX AND EXTEND THE EXISTING CIRCUIT TO NEW PANEL "A".

ALL WIRES SHALL BE #12 THW CU MINIMUM AND ALL CONDUIT SHALL BE 3/4" MINIMUM UNLESS OTHERWISE NOTED.

CONDUITS RUN FOR PIER LIGHTING SHALL BE CONCEALED AS INDICATED ON THE DRAWINGS WHEREVER POSSIBLE. WHEREVER IT IS NOT POSSIBLE THE CONDUIT SHALL BE RUN EXPOSED IN THE NEATEST WORKMAN LIKE MANNER WITH THE APPROVAL OF THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

CONTRACTOR SHALL FURNISH AN ACCESSIBLE COLD WATER OR UFER GROUND FOR THE TELEPHONE COMPANY MAIN TERMINAL BOARD.

COORDINATE COMPLETE TELEPHONE INSTALLATION WITH PACIFIC BELL PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL MAKE PARTICULAR REFERENCE TO PACIFIC BELL CO. DETAIL "E" FOR CONDUIT TERMINATIONS AT PEDESTAL, AND DETAIL "H" FOR TRENCHING, AND ALL OTHER APPLICABLE NOTES AND DETAILS.

THE CONTRACTOR SHALL CONTACT THE ELECTRICAL AND TELEPHONE SERVING UTILITIES. THE ELECTRICAL CONTRACTOR SHALL VERIFY COMPLIANCE WITH THE UTILITY COMPANY REQUIREMENTS AND COORDINATE THE INSTALLATION OF THE SERVICE SUPPORT EQUIPMENT.

E.C SHALL CONTACT THE ALARM SYSTEM CONTRACTOR TO COORDINATE SYSTEM INSTALLATION. (SYSTEM FURNISHED BY OWNER).

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

UTILITY CONTACTS:
S.D.G.E. - TROY SUTTON (619) 438-6000
PACIFIC BELL - ANDY PARKER (619) 586-3815

E 9319
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
SIGNAL HILL, CALIFORNIA 90806
Telephone: (213) 426-3336

SHEET E-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | 6 SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
PIER LIGHTING PLAN, POWER SYMBOL LIST, DETAIL

Approved: Ronald A. Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by
Approval date
B-420

89969

PANEL "A" LOCATION GARAGE MOUNTING SURFACE

VOLTAGE/PHASE 120/240V,1Ø,3W BUS AMPS 225 MAIN BREAKER -----

REMARKS	OUTLETS LTG	OUTLETS REC	OUTLETS MISC	WATTS/VOLT AMPS A	WATTS/VOLT AMPS B	WATTS/VOLT AMPS CIR	BRKR/ POLE	A B	BRKR/ POLE	WATTS/VOLT AMPS CIR	WATTS/VOLT AMPS A	WATTS/VOLT AMPS B	OUTLETS MISC	OUTLETS REC	OUTLETS LTG	REMARKS
EXISTING CIRCS.				500	x	1-	20/1	-*-----	20/1	- 2	500	x				EXISTING CIRCS.
				x	500	3-		-----*-		- 4	x	500				
				500	x	5-		-*-----		- 6	1540	x			29	MEETING/OFFICE
W&M LOCKERS	9			x	640	7-		-----*-		- 8	x	1190			14	GARAGE
FIRST AID/OFFICE WAITING	11		1EF	1748	x	9-		-*-----		-10	1260	x		7		AQUATIC DIR. OFF.
EXTERIOR FLOODS	7			x	735	11-		-----*-		-12	x	1620		9		DIR.OFF./RECEPTION
L.G. OFFICE		6		1440	x	13-		-*-----		-14	1260	x		7		WAITING
L.G OFFICE		5		x	900	15-		-----*-		-16	x	1440		8		FIRST AID/REFRIG.
MEET/LOCKERS	5	8		900	x	17-	20/GFI	-*-----		-18	720	x		4		RESTROOMS
GARAGE		5		x	900	19-	20/1	-----*-		-20	x	540		3		KITCHEN
GARAGE		4		720	x	21-	20/1	-*-----		-22	1000	x				EXIST WDN PIER LTS
SMOKE DETECTOR *			2	x	100	23-		-----*-		-24	x	1000				EXIST WDN PIER LTS
PIER LIGHTS	3			315	x	25-		-*-----		-26	540	x		3		WAVE MACHINE * ALARM/RADIO
	9			x	1791	27-		-----*-		-28	x	500	1	1		TEL TERM. BOARD *
	5			525	x	29-		-*-----	30/1	-30	2040	x		2		GARAGE OUTLET
	9			x	1791	31-		-----*-	3/	-32	x	2800				DRYER
RESTROOMS		3		540	x	33-	20/GFI	-*-----	2/	-34	2500	x				DRYER
[illegible]				x		35-		-----*-	20/1	-36	x	1500				WASHER
					x	37-		-*-----		-38		x				SPACE
				x		39-		-----*-		-40	x					
					x	41-		-*-----		-42		x				

Total 36695 Plus LCL 3069 Total 39764 VA/W at 120/240 Volts 1 Phase 165.7 Amps

GROUND BUS & FULL NEUTRAL BUS
*LOCK-ON.

PANEL "B" LOCATION GARAGE MOUNTING SURFACE

VOLTAGE/PHASE 120/240V-1Ø,3W BUS AMPS 225 MAIN BREAKER—

REMARKS	OUTLETS LTG	OUTLETS REC	OUTLETS MISC	WATTS/VOLT AMPS A	WATTS/VOLT AMPS B	WATTS/VOLT AMPS CIR	BRKR/ POLE	A B	BRKR/ POLE	WATTS/VOLT AMPS CIR	WATTS/VOLT AMPS A	WATTS/VOLT AMPS B	OUTLETS MISC	OUTLETS REC	OUTLETS LTG	REMARKS
COND. UNIT #1			1	3000	x	1-	40/2	-*-----	30/2	- 2	2848	x	1			)FAN COIL UNIT #2
				x	3000	3-		-----*-		- 4	x	2848				
COND. UNIT #2			1	1560	x	5-	20/2	-*-----	30/2	- 6	2250	x				)WATER HEATER
				x	1560	7-		-----*-		- 8	x	2250				
FAN COIL UNIT#1			1	4338	x	9-	50/2	-*-----	20/2	-10	—	x				)SPARE
				x	4338	11-		-----*-		-12	x	—	2			
GARAGE DOOR				1200	x	13-	20/2	-*-----	20/1	-14	1056	x	2			EXH. FAN
OPERATOR				x	1200	15-		-----*-	20/1	-16	x	20				RELAY COIL
				1200	x	17-	20/2	-*-----	20/2	-18	1920	x		3		PIER RECEPTS
				x	1200	19-		-----*-		-20	x	1920				
				1200	x	21-	20/2	-*-----	20/2	-22	1920	x		3		
				x	1200	23-		-----*-		-24	x	1920				
SPACE					x	25-		-*-----		-26		x				SPACE
				x		27-		-----*-		-28	x					
					x	29-		-*-----		-30		x				
				x		31-		-----*-		-32	x					
					x	33-		-*-----		-34		x				
				x		35-		-----*-		-36	x					
					x	37-		-*-----		-38		x				
				x		39-		-----*-		-40	x					
					x	41-		-*-----		-42		x				

Total ØB 43948 Plus LCL 2280 Total 46228 VA/W at 120/240 Volts 1 Phase 192.6 Amps

FIXTURE SCHEDULE

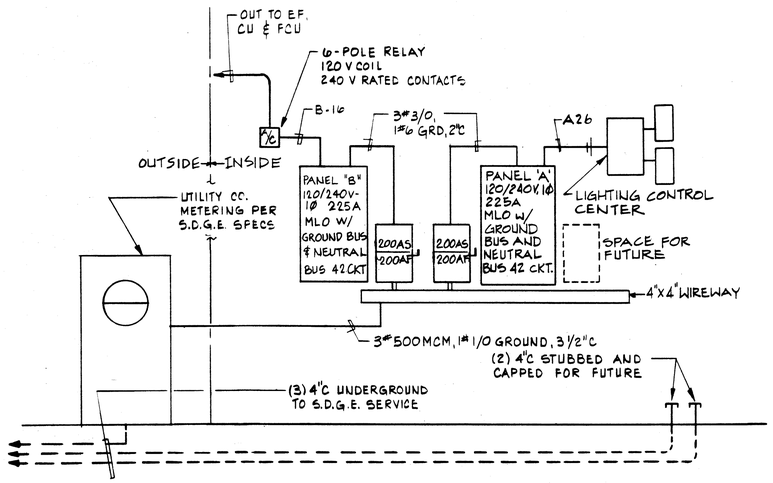
SYM	MANUFACTURER NAME	MANUFACTURER CATALOG NO.	MOUNTING	WATTAGE	LAMP	REMARKS
A	PRUDENTIAL	P2324 48RS-PRA	REC.	160	F40CW	FIRST AID DIRECTORS OFF
B	PRUDENTIAL	P-122-48RS	SURF.	80	F48T12	GARAGE/INDUSTRIAL
C	PRUDENTIAL	P2322-48RS PRA	REC.	80	F40CW	LOCKER,OFF.
D	CAPRI	WO 150 WG	WALL	150	IF	EXTERIOR DOORS
E	CAPRI	R10X-SH12 P60WA19	REC.	60	IF	WATERPROOF SHOWER LIGHT
F	*		PENDANT	100	IF	MEET/RECEPTION
G	CAPRI	R9X-R12P60WA19	REC.	60	IF	CORRIDORS MEETING ROOM
H	PRUDENTIAL	P101 48 RS	SURF.	40	F40CW	COVE SINGLE STRIP LIGHT
** J	WESTERN LTG. STANDARD	FXA 340	POLE	199	HPS	PIER LIGHTS 150W LAMP
K	HI-TEK	TWP70S120-PE	WALL	105	HPS	EXTERIOR FLOODS 7CW LAMP
** L	WESTERN LTG.	FXA 340	POLE	105	HPS	PIER LIGHTS 70W LAMP

* ILLUMINATING EXPERIENCES, INC. TYPE EARLY ELECTRIC II, REPRESENTED BY INTERNATIONAL LIGHTING CONCEPTS, CORP. 1933 S. BROADWAY, SUITE 1203 LOS ANGELES, CALIFORNIA 90007.

** INSIDE FROSTED GLOBE

NOTES: (FIXTURE SCHEDULE ONLY)

1. ALL WATTAGE FOR FLUORESCENT FIXTURES AND HPS INCLUDE BALLAST.
2. ALL FLUORESCENT FIXTURES TO HAVE ENERGY SAVING BALLAST AND WATT MISER LAMPS.
3. VERIFY ALL FIXTURES WITH ARCHITECT.

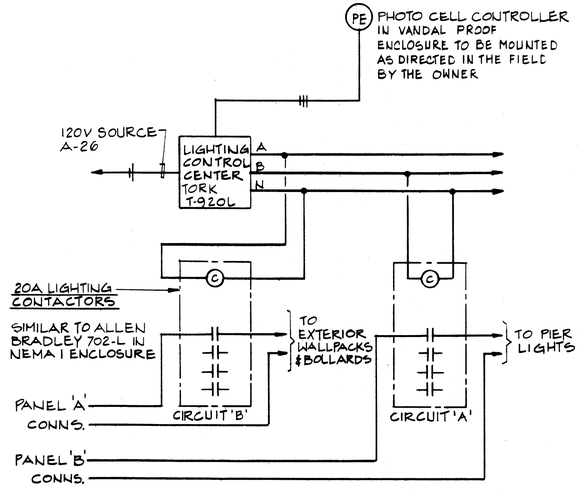


NOTE:
ALL EQUIPMENT RATED FOR SERVICE ENTRANCE

RISER DIAGRAM

NTS

PANEL A CONN. LOAD = 32.7 KW
PANEL B CONN. LOAD = 36.3 KW
TOTAL CONN. LOAD = 69.0 KW
@ 120/240 V-1Ø = 288 AMPS



EXTERIOR LIGHTING CONTROL DIAGRAM

NTS

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

MB Yuma E 9319
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
SIGNAL HILL CALIFORNIA 90806
Telephone: (213) 426-3336

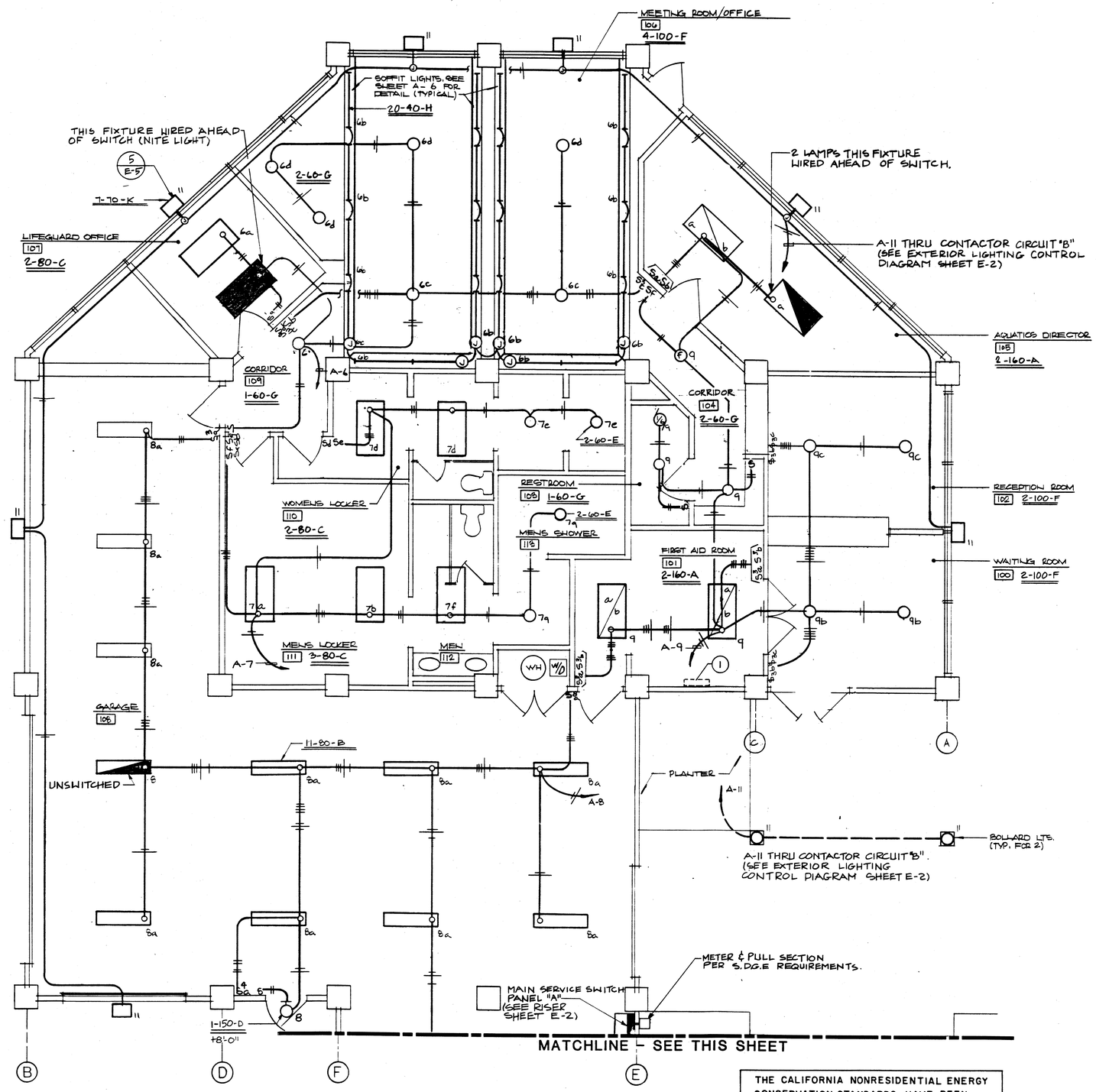
SHEET E-2 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | 6 SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
DETAILS SCHEDULES

Approved Ronald A. Beck 9-17-85 City Engineer

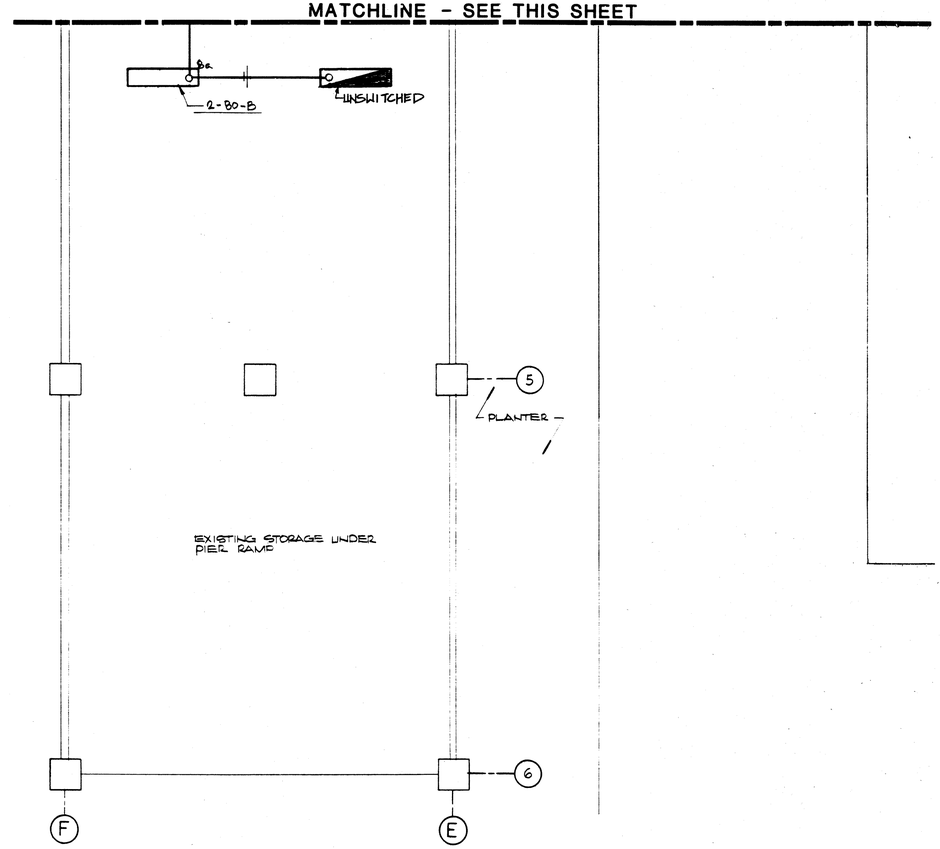
ENGINEER OF WORK R.C.E. | Checked by | Approval date | B-421

1588



LIFEGUARD STATION LIGHTING PLAN

1/4"=1'-0"



PARTIAL GARAGE LIGHTING PLAN

1/4"=1'-0"

SEE SHEET E1 FOR GENERAL PLAN NOTES

NOTES:

(1) EXISTING PANEL TO BE REMOVED. INTERCEPT EXISTING CIRCUITS FOR THE WOODEN PIER LIGHTS AND EXTEND TO NEW PANEL "A", CIRCUITS 22 AND 24.

THE CALIFORNIA NONRESIDENTIAL ENERGY CONSERVATION STANDARDS HAVE BEEN REVIEWED AND THE LIGHTING DESIGN OF THIS PROJECT CONFORMS SUBSTANTIALLY WITH THE REGULATIONS.

M B Yuma 9719 9/3

SIGNATURE E.E. NO. DATE

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK

Description:

Location:

Record From:

Elev: Datum:

M B Yuma E 9719
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1904 EAST 29th STREET
SIGNAL HILL, CALIFORNIA 90806
Telephone: (213) 426-3336

SHEET E-3 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | 6 SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUAFTERS

ELECTRICAL - LIGHTING PLAN

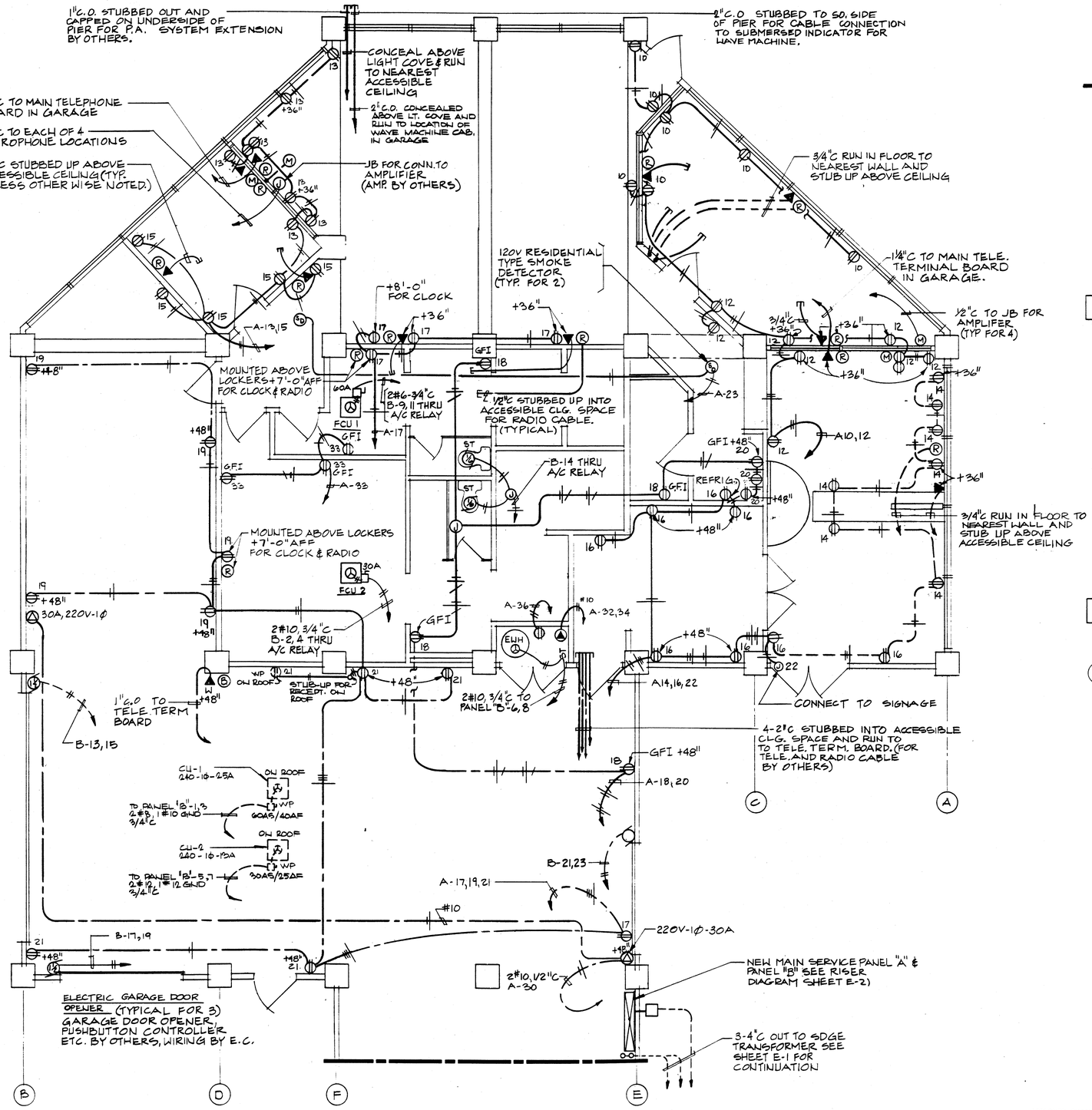
Approved Ronald A. Beach 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by Approval date

B-422

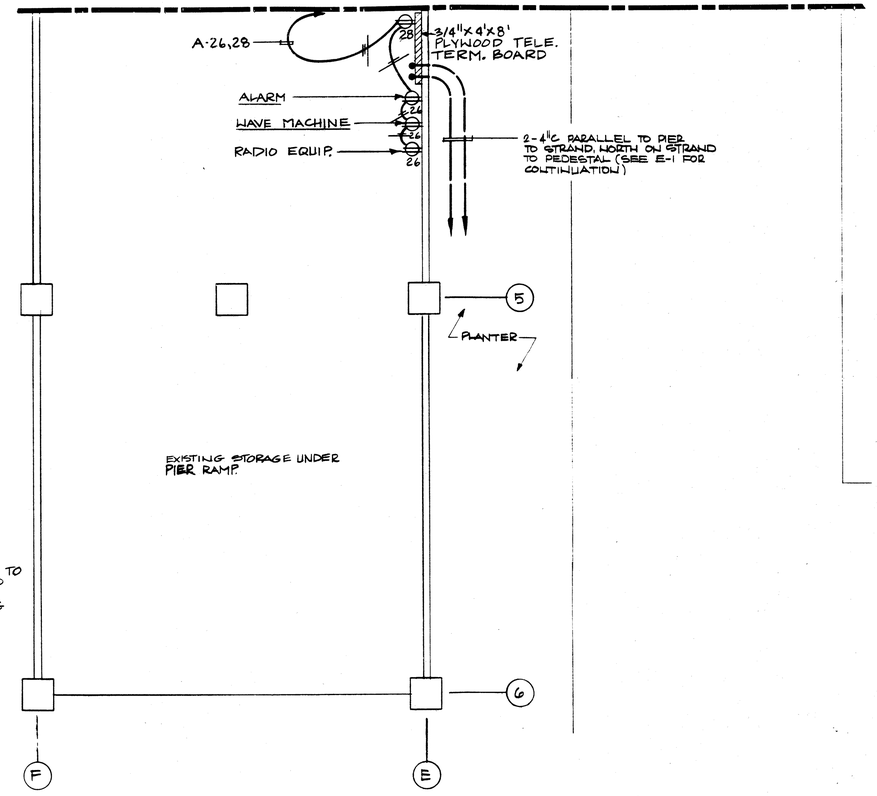
1688



POWER AND TELEPHONE PLAN (LIFEGUARD STATION)

1/4"=1'-0"

N



PARTIAL GARAGE POWER PLAN

1/4"=1'-0"

SEE SHEET E1 FOR GENERAL PLAN NOTES

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

M.B. Kumar E9319
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
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SHEET	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS
E-4		6

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

ELECTRICAL - POWER PLAN

Approved Ronald A. Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

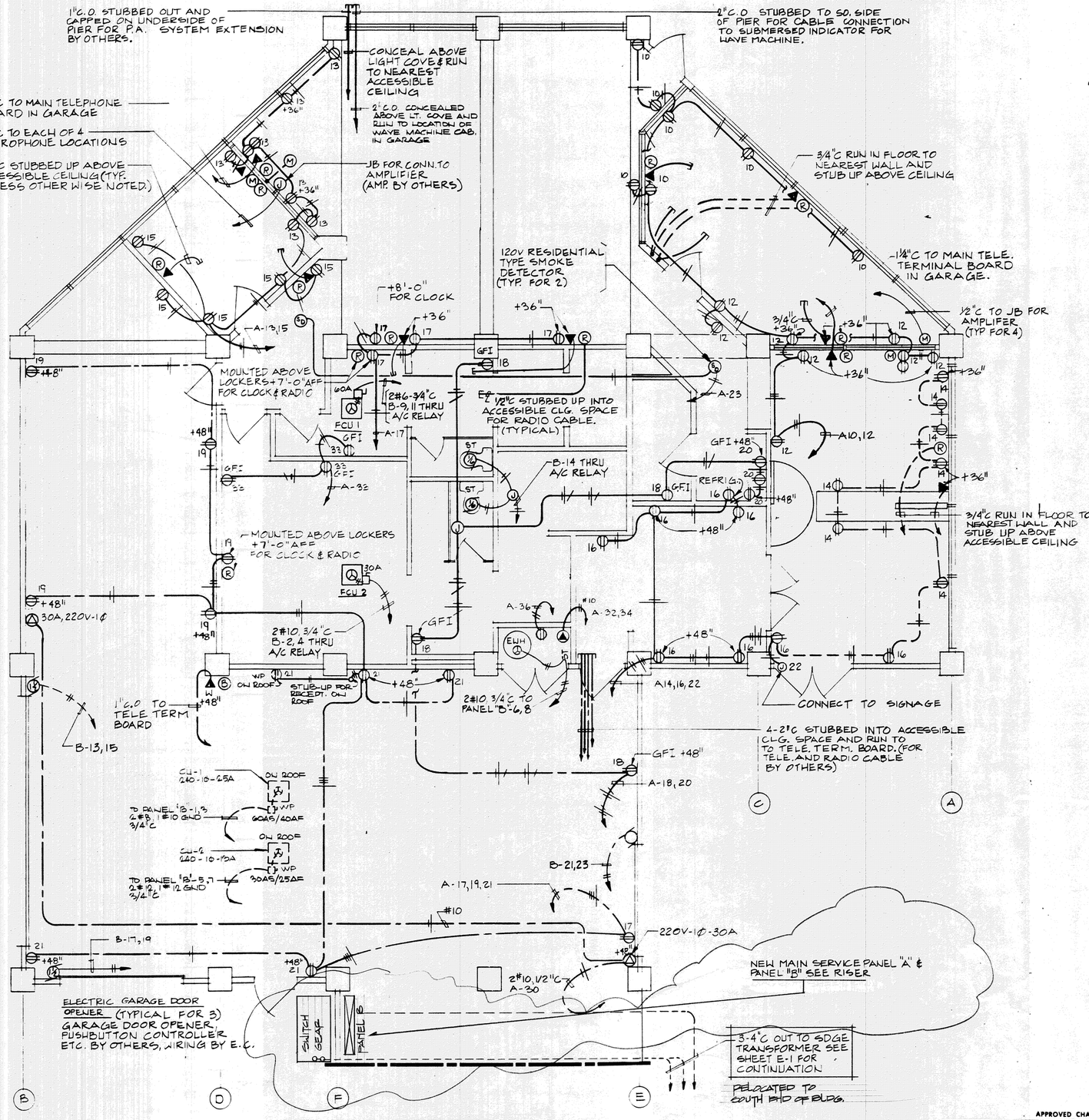
Checked by

Approval date

B-422a

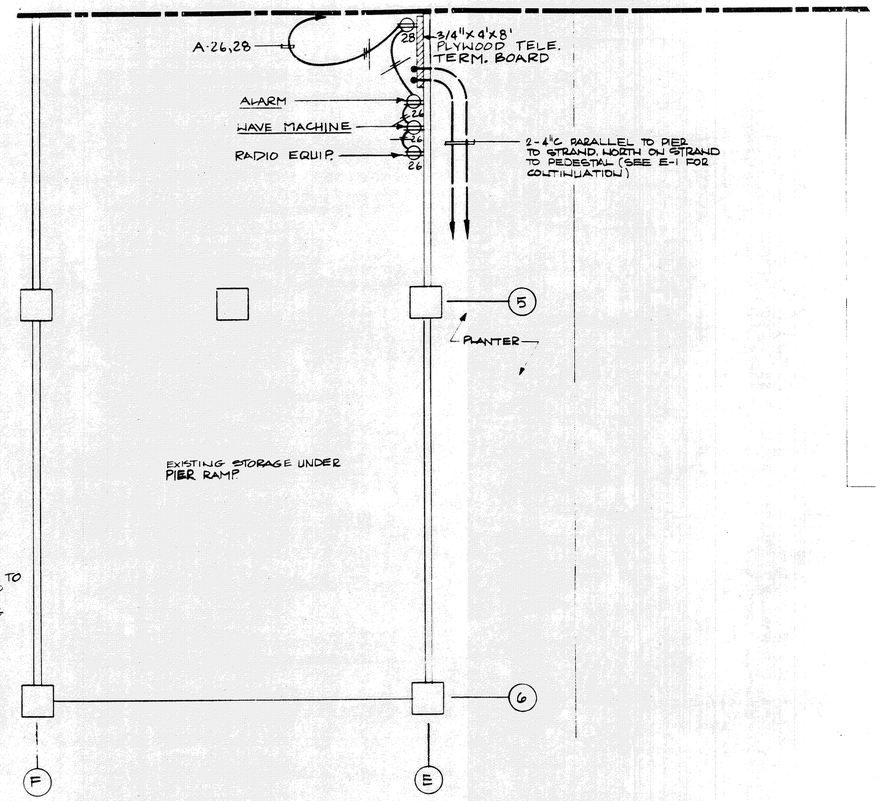
1688

4224



POWER AND TELEPHONE PLAN (LIFEGUARD STATION)

1/4"=1'-0"



PARTIAL GARAGE POWER PLAN

1/4"=1'-0"

SEE SHEET E1 FOR GENERAL PLAN NOTES

ELECTRICAL AS BUILTS

Mill Valley CA 94941
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
SIGNAL HILL, CALIFORNIA 90806
Telephone: (213) 426-3336

SHEET	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS
E-4		6

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

ELECTRICAL - POWER PLAN

Approved: Ronald A. Beck, City Engineer, 9-17-85

ENGINEER OF WORK, R.C.E.

Checked by

Approval date

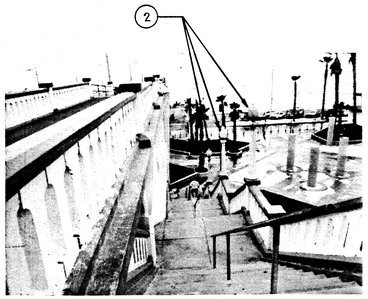
B-422a

APPROVED CHANGES

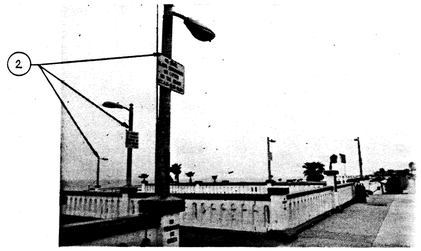
No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

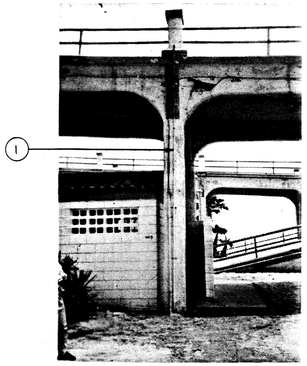
688



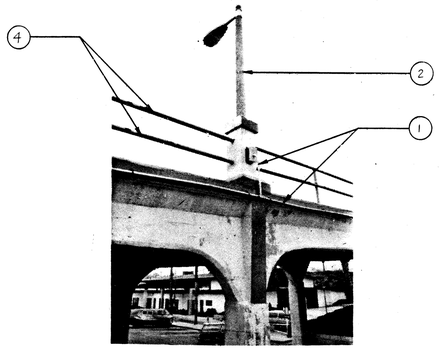
DETAIL 1 / E-5



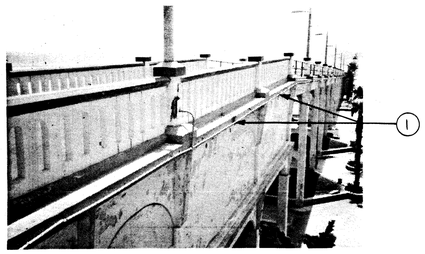
DETAIL 4 / E-5



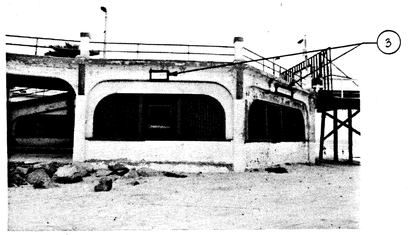
DETAIL 7 / E-5



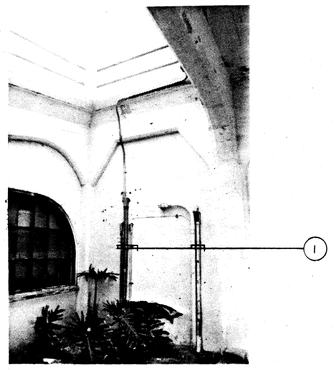
DETAIL 9 / E-5



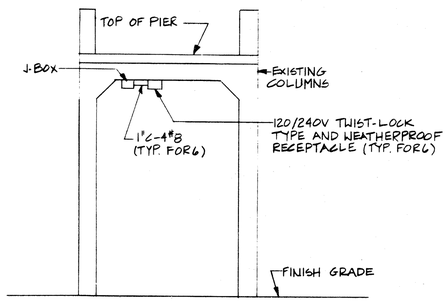
DETAIL 2 / E-5



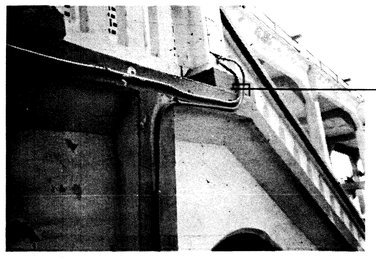
DETAIL 5 / E-5



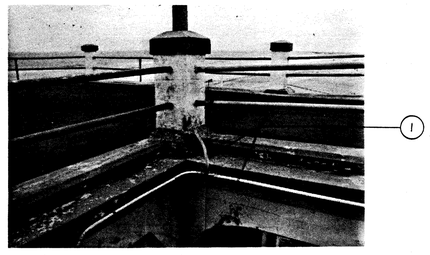
DETAIL 8 / E-5



SECTION A / E-5



DETAIL 3 / E-5



DETAIL 6 / E-5

NOTES: (THIS SHEET ONLY)

1. REMOVE EXISTING CONDUIT AND WIRE.
2. REMOVE AND REPLACE EXISTING POLE AND FIXTURE. (TYPICAL FOR 26).
3. NEW HIGH PRESSURE SODIUM FLOODLIGHTS.
4. REMOVE AND REPLACE EXISTING HANDRAIL WITH NEW FLEX CONDUIT ROUTED INSIDE ONE OF THE RAILS FOR PIER LIGHTS. SEE DETAIL ON SHEET E-6

M18 Knight E9209
SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
SIGNAL HILL, CALIFORNIA 90806
Telephone: (213) 426-3336

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET E-5 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | 6 SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
GENERAL REFERENCE DETAILS

Approved Ronald A. Bad 9-17-84 City Engineer

ENGINEER OF WORK R.C.E.

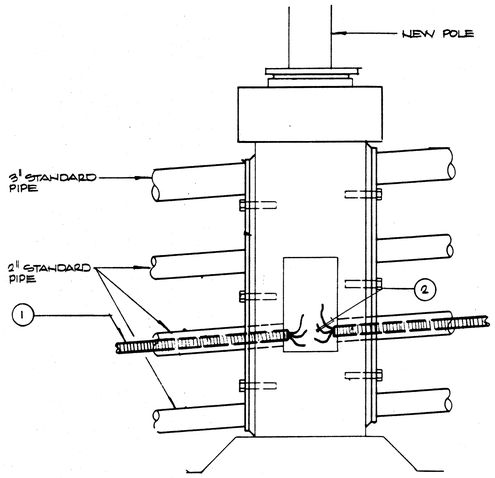
Checked by

Approval date

B422-b

1688

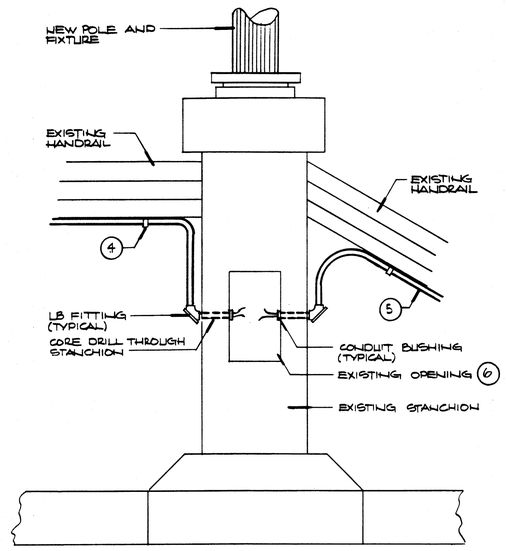
422-5



NOTES:

1. 3/4" CARLON FLEX-PLUS EMT CONDUIT TO BE USED INSIDE RAILING SYSTEM. (TYPICAL FOR ALL CONDUITS INSIDE RAIL)
2. PROVIDE 12" OF WIRE FOR ELECTRICAL CONTRACTOR, TO BE CONNECTED TO NEW LIGHT. (TYPICAL)
3. SEE SHEET R-4 , DETAIL , FOR CLARIFICATION ON ROUTING CONDUIT.

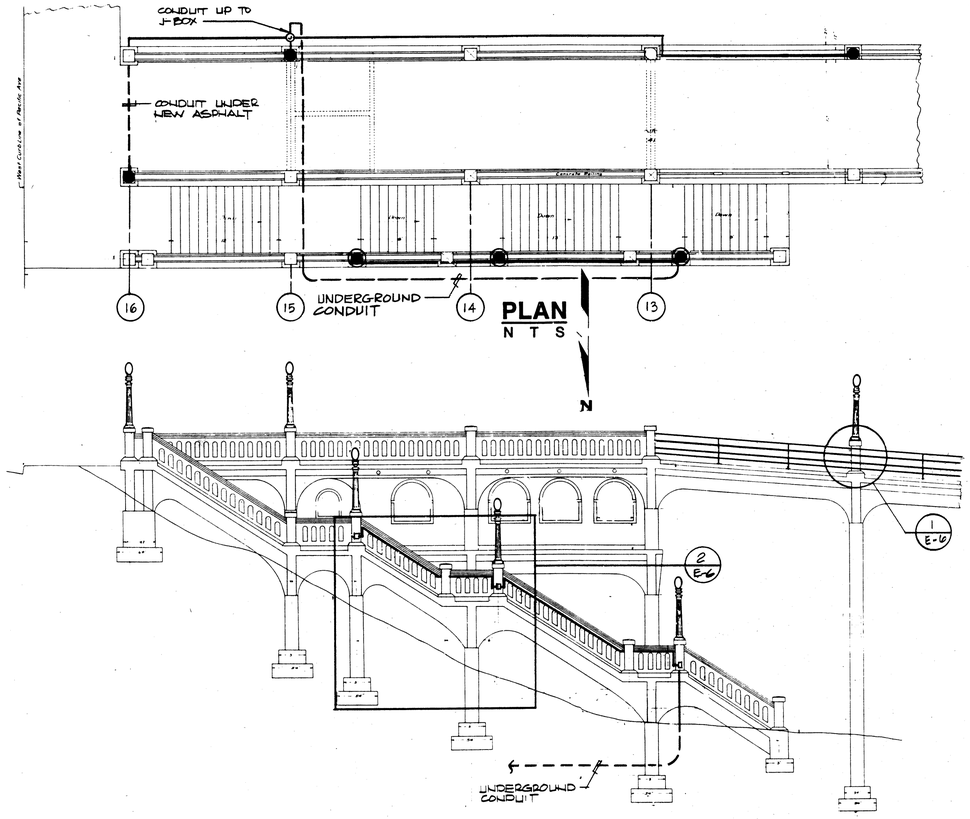
RAIL DETAIL
N T S — 1 / E-6



NOTES:

4. CONDUITS STRAPS MOUNTED AT 3' ON CENTER. (TYPICAL)
5. MOUNT NEW 3/4" CONDUIT UP AGAINST THE CORNER OF THE HANDRAIL. (TYPICAL)
6. DETAIL SHOWN WITHOUT THE OPENING COVER FOR CLARITY.

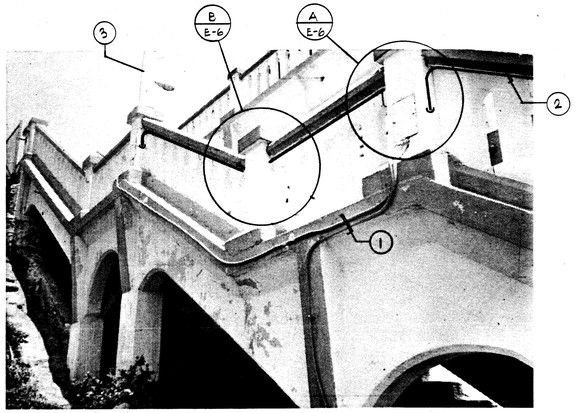
DETAIL
N T S — A / E-6



PLAN
N T S

N

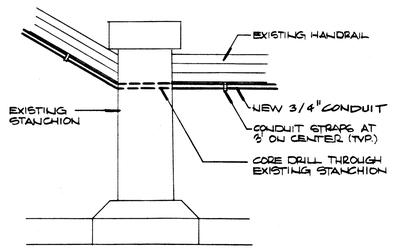
NORTH ELEVATION
N T S



DETAIL
N T S — 2 / E-6

NOTES: .

1. EXISTING CONDUIT AND WIRE TO BE REMOVED.
2. NEW 3/4" CONDUIT MOUNTED UP AGAINST THE CORNER OF THE HANDRAIL.
3. EXISTING POLE AND FIXTURE TO BE REMOVED AND REPLACED.



DETAIL
N T S — B / E-6

M.B. Issued E9519

SPARVAN, Inc.
ELECTRICAL & CONTROL SYSTEM ENGINEERS
1304 EAST 29th STREET
SIGNAL HILL, CALIFORNIA 90806
Telephone: (213) 426-3336

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET E-6	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	6 SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS
ELEVATION ONE-LINE DIAGRAM

Approved Ronald A. Beck 9-17-85 City Engineer

ENGINEER OF WORK R.C.E.

Checked by
Approval date

B422-C

1688

ATTACHMENT 3:

COST ESTIMATE

Opinion of Probable Cost

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction **8/16/2023**

Project Summary

Item	Description		Amount
1	Demolition	$	1,475,738
2	Temporary Timber Pier Access	$	1,427,600
3	Pier Bridge & Lifeguard Headquarters - Reconstruction	$	14,224,050
4	Lifeguard Headquarters - MEP/FF	$	584,200
5	Lifeguard Support Facility - Alt 2 - Modified 3-Story	$	4,354,480
6	Lifeguard Support Facility - MEP/FF	$	769,650
7	Elevator Tower	$	301,200
8	Site Stairs & Ramps	$	1,831,530
9	Landscape & Hardscape	$	965,000
10	Site Lighting	$	610,000
11	Revetment	$	108,500
12	Utilities	$	1,500,000
13	SWPPP/Fencing/Traffic Control/Minor Items	$	500,000
	Subtotal	***$***	***28,651,948***
	Mobilization (@10% of cost)	*$*	*3,183,550*
	Contingencies (@25%)	*$*	*7,958,874*
	Grand Total	***$***	***39,794,372***
	For Budgeting (Current Dollars)	**$**	**39,800,000**

COMMENTS:

1 This estimate represents the Engineer's professional opinion of probable cost only and no guarantee regarding its accuracy is expressed or implied. Actual bid prices will vary depending on market conditions at the time of bidding and are not within the Engineer's control.

2 This estimate does not include any forecast of cost escalation unless shown in the table above.

3 This estimate includes structure items only and does not include costs for mitigation, right-of-way or engineering, or permitting.

4 Revisions since previous estimate: None

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction w/ Alt 2 **8/16/2023**

Project Detail

Demolition	**Unit**	**Quantity**	**Cost**		**Amount**
West Deck	SF	2540	$57	$	144,780
West Ramp (over garage)	SF	1590	$57	$	90,630
West Floor	SF	2540	$32	$	81,280
North Bridge (to Pacific Street)	SF	4530	$57	$	258,210
South Bridge (to Pacific Street)	SF	4530	$57	$	258,210
North Enclosed	SF	620	$57	$	35,340
South Enclosed	SF	1130	$57	$	64,410
East Stairs (north & south)	SF	2210	$32	$	70,720
Tin Fish	SF	800	$110	$	88,000
Hardscape/Landscape	SF	50000	$5	$	250,000
Potential Hazardous Waste (10% of above)	LS	1	$134,158	$	134,158
Subtotal				***$***	***1,475,738***

Temporary Timber Pier Access	**Unit**	**Quantity**	**Cost**		**Amount**
16'x340 (Pacific to Timber)	SF	5440	$215	$	1,169,600
20'x60' (N/S leg, extra wide)	SF	1200	$215	$	258,000
Subtotal				***$***	***1,427,600***

Pier Bridge & Lifeguard Headquarters - Reconstruction	**Unit**	**Quantity**	**Cost**		**Amount**
West Deck	SF	2540	$832	$	2,113,280
West Ramp (over garage)	SF	1590	$832	$	1,322,880
West Floor	SF	2540	$693	$	1,760,220
North Bridge (to Pacific Street)	SF	4530	$832	$	3,768,960
South Bridge (to Pacific Street)	SF	4530	$832	$	3,768,960
North Enclosed	SF	620	$832	$	515,840
South Enclosed	SF	1130	$832	$	940,160
Garage Floor	SF	1350	$25	$	33,750
Subtotal				***$***	***14,224,050***

Lifeguard Headquarters - MEP/FF	**Unit**	**Quantity**	**Cost**		**Amount**
Office Space	SF	1140	$140	$	159,600
Kitchen	SF	130	$360	$	46,800
Lockers/Restrooms	SF	920	$300	$	276,000
Garage/Storage	SF	1350	$50	$	67,500
1st Aid	SF	120	$140	$	16,800
Exterior spaces	SF	700	$25	$	17,500
Subtotal				***$***	***584,200***

Opinion of Probable Cost

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction w/ Alt 2 **8/16/2023**

Project Detail

Lifeguard Support Facility - Alt 2 - Modified 3-Story	**Unit**	**Quantity**	**Cost**		**Amount**
East 1st Floor	SF	1680	$754	$	1,266,720
East 2nd Floor	SF	1780	$754	$	1,342,120
East 3rd Floor	SF	800	$754	$	603,200
2nd Floor add'l offices	SF	360	$754	$	271,440
East Retaining Wall	SF	2400	$350	$	840,000
Ext slabs Trash/Mech/Storage	SF	1240	$25	$	31,000
Subtotal				***$***	***4,354,480***

Lifeguard Support Facility - MEP/FF	**Unit**	**Quantity**	**Cost**		**Amount**
Office Space (includes kitchen)	SF	3210	$140	$	449,400
Lockers/Restrooms	SF	370	$300	$	111,000
Living Quarters	SF	550	$140	$	77,000
Garage/Storage	SF	1020	$50	$	51,000
Exterior Spaces	SF	3250	$25	$	81,250
Commercial (not included, TI by others)	SF	700	$0	$	-
Subtotal				***$***	***769,650***

Elevator Tower	**Unit**	**Quantity**	**Cost**		**Amount**
Elevator Cab & Mechanical	LS	1	$75,000	$	75,000
Elevator Tower	SF	300	$754	$	226,200
Subtotal				***$***	***301,200***

Site Stairs & Ramps	**Unit**	**Quantity**	**Cost**		**Amount**
West Ramp (to beach)	SF	400	$150	$	60,000
East Ramp (to Pacific)	SF	960	$250	$	240,000
North East Stairs	SF	680	$693	$	471,240
South East Stairs	SF	1530	$693	$	1,060,290
Subtotal				***$***	***1,831,530***

Landscape & Hardscape	**Unit**	**Quantity**	**Cost**		**Amount**
Landscaped & Irrigation	SF	10000	$15	$	150,000
Specialized Hardscape	SF	20000	$25	$	500,000
Typical Hardscape	SF	20000	$15	$	300,000
Specimen Trees	SF	10	$1,500	$	15,000
Subtotal				***$***	***965,000***

Site Lighting	**Unit**	**Quantity**	**Cost**		**Amount**
Historic Lights on Bridge	EA	28	$20,000	$	560,000
Other area lights	EA	10	$5,000	$	50,000
Subtotal				***$***	***610,000***

Opinion of Probable Cost

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction w/ Alt 2 **8/16/2023**

Project Detail

Revetment	**Unit**	**Quantity**	**Cost**		**Amount**
Rock Slope Protection	CY	500	$217	$	108,500
				$	-
Subtotal				***$***	***108,500***

Utilities	**Unit**	**Quantity**	**Cost**		**Amount**
Misc wet/dry/stormdrains	LS	1	$1,500,000	$	1,500,000
				$	-
Subtotal				***$***	***1,500,000***

SWPPP/Fencing/Traffic Control/Minor Items	**Unit**	**Quantity**	**Cost**		**Amount**
Misc other items	LS	1	$500,000	$	500,000
				$	-
Subtotal				***$***	***500,000***

Opinion of Probable Cost

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction **8/16/2023**

Comparison of
Alternative 2 to Alternative 3 Lifeguard Support Facility

Item	Description - Alternative 2 - Modiffied 3-Story		Amount
1	Lifeguard Support Facility - Alt 2 - Modified 3-Story	$	4,354,440
2	Lifeguard Support Facility - MEP/FF	$	715,230
	Subtotal	***$***	***5,069,670***
	Mobilization (@10% of cost)	*$*	*563,297*
	Contingencies (@25%)	*$*	*1,408,242*
	Grand Total	***$***	***7,041,208***

Item	Description - Alternative 3 - 2-Story		Amount
1	Lifeguard Support Facility - Alt 3 - 2-Story	$	4,354,480
2	Lifeguard Support Facility - MEP/FF	$	769,650
	Subtotal	***$***	***5,124,130***
	Mobilization (@10% of cost)	*$*	*569,348*
	Contingencies (@25%)	*$*	*1,423,369*
	Grand Total	***$***	***7,116,847***

Opinion of Probable Cost

Pier View Way Bridge & Lifeguard Heaquarters - Reconstruction **8/16/2023**

Comparison of
Restoration vs Reconstruction

Item	Description - Restoration of Pier Bridge & LG HQ		Amount
1	Demolition	$	450,000
2	Pier Bridge & Lifeguard Headquarters - Rehabilitation	$	24,050,000
3	Lifeguard Headquarters - MEP/FF	$	584,200
	Subtotal	***$***	***25,084,200***
	Mobilization (@10% of cost)	*$*	*2,787,133*
	Contingencies (@25%)	*$*	*6,967,833*
	Grand Total	***$***	***34,839,167***

Item	Description - Reconstruction of Pier Bridge & LG HQ		Amount
1	Demolition	$	1,475,738
2	Pier Bridge & Lifeguard Headquarters - Reconstruction	$	14,224,050
3	Lifeguard Headquarters - MEP/FF	$	584,200
	Subtotal	***$***	***16,283,988***
	Mobilization (@10% of cost)	*$*	*1,809,332*
	Contingencies (@25%)	*$*	*4,523,330*
	Grand Total	***$***	***22,616,650***

ATTACHMENT 4:

VIEW STUDIES



EXISTING VIEW LOOKING WEST



PROPOSED VIEW WITH NEW PUBLIC ROOF DECK LOOKING WEST

3 Story View Impact Study

OCEANSIDE PIER VIEW WAY BRIDGE RECONSTRUCTION

ROESLING NAKAMURA TERADA ARCHITECTS



PROPOSED VIEW FROM NEW PUBLIC ROOF DECK LOOKING WEST

3 Story View Impact Study

OCEANSIDE PIER VIEW WAY BRIDGE RECONSTRUCTION

ROESLING NAKAMURA TERADA ARCHITECTS



EXISTING VIEW LOOKING NORTHWEST



PROPOSED VIEW LOOKING NORTHWEST

3 Story View Impact Study

OCEANSIDE PIER VIEW WAY BRIDGE RECONSTRUCTION

ROESLING NAKAMURA TERADA ARCHITECTS

ATTACHMENT 5:

LIFEGUARD SPACE NEEDS ASSESSMENT

05-13-2022

OCEANSIDE PIER VIEW WAY BRIDGE
LIFEGUARD HEADQUARTERS - PROGRAMMING

OCEANSIDE PIER BRIDGE LIFEGUARD HEADQUARTERS - PROGRAMMING

EXISTING PROGRAM	EXISTING # OF SPACES	EXISTING AREA SQ FOOTAGE (SF)	TYP. DAILY # OF USERS IN THIS SPACE	EXISTING EQUIPMENT	CAN THIS SPACE/FUNCTION MOVE EAST? (Y or N)
LIFEGUARDS PLEASE FILL OUT COLUMNS INDICATED IN YELLOW* - THIS DOCUMENT WILL BE USED TO FORM THE PROGRAMMING DOCUMENT (aka TELL US WHAT YOU WANT/NEED)					
GARAGE	1	1,494	11 / 42	4 TRUCKS, 2 PWC, SCUBA, 2 IRB, 4 ADA wheelchairs, Marine resue animal cages,	
WASH ROOM	1	15	1	Hot Water heater, stacked Washer dryer	
CORRIDORS	3	216	11 / 42		
CAPTAINS OFFICE	1	125	1	1 Station, 1 position	
LIEUTENANT'S OFFICE	2	80	3	4 Stations, 4 positions	
MEN'S LOCKER ROOMS	1	262	60	58 Lockers, 1 Toilet, 1 Urnal, 2 Sinks, 5 Shower Heads	
WOMEN'S LOCKER ROOM	1	166	35	20 Lockers, 1 Toilet, 1 Sink, 2 Shower Heads	
DIVE LOCKER ROOM	7	136	11	7 sets of SCUBA gear, 7 sets of SRT gear	
RESTROOM	1	36	1	ADA complient,1 Toilet, 1 Sink	
FIRST AID	1	140	10	1 Refrigerator, 1 Ice machine, 1 Sink, first aid supplies	
KITCHENETTE	1	26	11 / 42	1 Sink,1 Microwave, water dispencer	
SERGEANTS OFFICE	1	206	4	4 Stations, 4 positions	
SENIOR LIFEGUARD OFFICE	1	202	4	2 Stations, 4 positions	
WAITING/LOBBY	1	80	2	1 filling cabinet, 2 office supply storage lockers	
MEETING ROOM	1	525	11 wint, 42 sum	10 chair table, TV, White Boards, phone LG Raidio.	
TOTALS	**24**	**3709**	**132**		

MISSING BUT NEEDED FUTURE PROGRAM SPACES	PROJECTED No. OF SPACES NEEDED	PROJECTED SQ FOOTAGE (SF) NEEDED	PROJECTED TYP. NUMBER OF USERS	PROJECTED EQUIPMENT NEEDED IN THIS SPACE	CAN THIS SPACE/FUNCTION MOVE EAST? (Y or N)
FOR EXAMPLE: DECONTAMINATION ROOM, WORKOUT SPACE, SURFBOARD STORAGE, SUPERVISORS LOCKERS ETC.					
24/7 STAFF BEDROOMS	3	462	3	11'X14'=154 (SF) each	Y
24/7 STAFF RESTROOMS/SHOWER	3	351	3	13'X9'=117 (SF)	Y
24/7 KITCHEN	1	574	25	Frig, table, stove, sink, dish washer, 22'X17'=574 (SF)	Y
GARAGE	1	1,494	15 / 50	4 Trucks, 2 PWC, SCUBA, 2 IRB, 4 ADA Wheel chairs, Marine Rescue Animal Cages	N
WASH ROOM	2	32	1	Continuas hot water heater, washer and Dryer	N
CAPTAINS OFFICE	1	210	1	1 Desks, 1 Computers, 1 phones, shelves, table, chairs (14x15)	Y
LIEUTENANT'S OFFICE	1	308	3	3 Desks, 3 Computers, 3 phones, shelves, table, chairs (14X22)	Y
MEN'S LOCKER ROOMS	2	442	70	70 lockers, 2 Toilets, 2 Urnals, 4 Sinks, 10 Shower Heads (26x17)	N
WOMEN'S LOCKER ROOM	2	442	60	60 Lockers, 4 Toilets, 4 Sinks, 10 Shower Heads (26x17)	N
DIVE LOCKER ROOM	11	308	11	11 sets of SCUBA gear, 11 sets of SRT gear (14x22)	N
RESTROOM	1	90	1	ADA comliant (9X10)	N
FIRST AID	1	150	15	1 Refrigerator,1 Ice Machine, 1 Sink, 1 exam table, M.S. (10x15)	N
KITCHENETTE	1	32	15 / 50	Sink, Microwave, water dispencer (8X4)	N
SERGEANTS OFFICE	1	420	5	5 Desks, 5 Computers, 5 phones, shelves, table (14X30)	N
SENIOR LIFEGUARD OFFICE	1	350	4	4 Desks, 4 Computers, 4 phones, shelves, table, chairs (14X25)	N
WAITING/LOBBY	1	132	4	2 chairs, 1small table, office supplies (11X12)	Y
Meeting Room	1	595	15 / 60	12 chair table, TV, White Boards, phonw, LG Radio (35X17)	Y
Storage	1	286	2	Medical Supplies, Uniforms, Office supplies(13'X22')	Y
IT / Radio Room	1	210	2	Information Tec, Radio Network, Beach Camera (14x15)	Y
TOTALS	**36**	**6888**	**207**		

05-13-2022

OCEANSIDE PIER VIEW WAY BRIDGE
LIFEGUARD HEADQUARTERS - PROGRAMMING

LIFEGUARD QUESTIONNAIRE: *PLEASE FULLY ANSWER EACH QUESTION BELOW AND INCLUDE WHY. THESE RESPONSES ARE JUSTIFICATIONS TO COASTAL COMMISSION*

1) WHAT SPACES ARE REQUIRED TO HAVE VISIBILITY IN THE STATION? WHICH SPACES DO NOT REQUIRE VISIBILITY AND CAN MOVE TO THE PROPOSED "PIER EAST STATION"?

RESPONSE:

Office/ computer stations need to have beach/ ocean visibility for public safety observation duties. Meeting/ break room in west pier needs to have beach/ ocean visibility for public safety observation duties. Restrooms, storage rooms, kitchen/ food station areas do not need coastal observation/ visibility.

2) HOW MANY CAPTAIN'S AND LIEUTENANTS' OFFICES ARE REQUIRED IN THE UPDATED STATION?

RESPONSE:

1 Captain, 3 Lieutenants, 5 Sergeants.

3) WHAT IS THE PROJECTED FUTURE NUMBER OF LIFEGUARDS THAT WILL BE USING THE STATION PEAK SEASON? (Assume 15 years) WE WERE TOLD CURRENTLY 32-42 IS COMMON FOR GENERAL MEETINGS AND 7 (MAX 16) ARE TYPICALLY POSTED IN THE OFFICE.

RESPONSE:

Projected number of Lifeguards using station peak season: 54 per daily operations. All staff reports for duty and safety briefings at station prior to deployment. Daily intermittent use for equipment and administrative needs. All staff returns to station at end of shift for reports and closing duties.

4) IS THE CURRENT MEETING ROOM LARGE ENOUGH? DOES IT NEED TO BE LARGER? CAN THE MEETING ROOM MOVE TO THE EAST SIDE OF THE PIER WITHOUT CAUSING PROBLEMS?

RESPONSE:

Current meeting room is adaquate for small operational meetings. A larger formal meeting room would be prefered on East location where it would not share function as building's main thoroughfare.

5) ARE THE CURRENT LOCKER ROOMS LARGE ENOUGH? IS IT ANTICIPATED THAT THERE WILL BE A NEED FOR AN EQUAL NUMBER OF MEN & WOMEN LOCKERS IN THE FUTURE? HOW MANY TOTAL LOCKERS FOR MEN AND WOMEN ARE NEEDED?

RESPONSE:

Current locker rooms are not large enough for current and projected staff. Current locker room layout and square footage not being used to potential. Locker rooms are dual function with storage areas for uniform cache. Uniform storage can be moved to East location for improved environmental conditions. Yes, additional lockers/ space will be needed for current and projected staff members. Minimum 50 lockers for men's locker room and 50 lockers for women's locker room will ne needed.

6) ARE THERE CURRENTLY ENOUGH RESTROOMS INSIDE THE STATION (separate from locker room)? HOW MANY MORE ARE NEEDED?

RESPONSE:

Not enough restrooms inside station. Only one (1) unisex restroom currently outside of locker room. Recommend East location to provide additional restrooms. Increase locker room's toilet and sink numbers.

7) IS THE FIRST AIDE AREA CURRENTLY UTILIZED? IF SO, IS IT LARGE ENOUGH? WE HAVE BEEN TOLD THE GARAGE IS PRIMARILY USED FOR SUMMER STING RAYS, IS THIS STILL PREFERRED OR OUT OF NECESSITY?

RESPONSE:

First Aid area utilized as First Aid supply storage room, refridgerator, and ice machine. Storage of First Aid supplies would be preferred at East location for improved environmental conditions. Public medical aids are conducted outside of facility to reduce contamination/ exposure issues in facility.

8) IS THE CURRENT KITCHENETTE LARGE ENOUGH? WOULD A FULL KITCHEN BE PREFERRED IN A BREAK ROOM? CAN THIS ROOM BE MOVED EAST WITHOUT CAUSING MAJOR DISRUPTION?

RESPONSE:

Current Kitchenette extremely small for daily use and not sufficient. Only space for hand sink, microwave, and cabinent. Full kitchen would be preferred at East location for overnight and prolonged work shift schedules.

9) HOW MANY STAFF ARE NEEDED FOR 24/7 SERVICE? WHAT IS THE PEAK NUMBER OF 24/7 STAFF ANTICIPATE DURING BUSY SEASON? THESE SPACES WILL LIKELY FUNCTION AS FIRE STATION BEDROOMS.

RESPONSE:

Projected 24/7 staffing is a minimum standard of three (3) personnel. Projected 24/7 staffing for peak season/ peak incident is 6 personnel. "Peak incident" would include Swiftwater Rescue Team personnel on overnight duty for inclement weather/ flood conditions.

OCEANSIDE PIER VIEW WAY BRIDGE
LIFEGUARD HEADQUARTERS - PROGRAMMING

10) HOW MANY VEHICLES ARE CURRENTLY OCCUPYING THE GARAGE AND HOW MANY MORE ARE ANTICIPATED FOR FUTURE USE? WHAT OTHER FUNCTIONS DOES THE GARAGE NEED TO SERVE THAT IT CURRENTLY DOES NOT?

RESPONSE:

Currently four (4) mid-size pick-up Lifeguard vehicles, two (2) personal rescue watercraft (PRWC), and one (1) inflatable rescue boat occupy the garage for immediate deployment onto beach/ ocean for emergency responses. No additional space available for increase in vehicles. Garage also functions as ocean rescue equipment staging, beach safety signage and flagging storage, maintenance and tool work area, Public Safety Dive and Swiftwater Rescue team equipment staging, marine animal rescue equipment, ADA beach wheelchair storage, physical fitness training, cleaning and decontamination supplies.

11) IS THE GARAGE THE ONLY STORAGE AREA CURRENTLY? HOW MANY STORAGE CONTAINERS ARE BEING UTILIZED OUTSIDE OF THE PIER STATION FOOTPRINT? WHAT KIND OF EQUIPMENT IS STORED THERE?

RESPONSE:

Current storage areas have been incorporated into all rooms/ offices due to limited space and staffing growth. One (1) 10x40 storage container is being used outside of station footprint. Staff lockers, rescue equipment, dive equipment, training equipment, vehicle equipment, tower supplies and equipment, drying rack and personal protective equipment are stored in 10x40 container.

12) WHAT ITEMS THAT ARE CURRENTLY STORED IN THE STATION/GARAGE COULD BE STORED IN THE PROPOSED PIER EAST STATION? THOSE TYPICALLY NOT NEEDED DAY TO DAY.

RESPONSE:

Items for East station storage would be radio equipment, uniform cache, First Aid/ Medical supply stock, office supplies/ copy machine, permanent staff lockers and uniform, kitchen and supplies, and any items needed to be stored in improved environmental conditions away from salt, sand, and moisture.

13) IS SOMEONE TYPICALLY STATIONED IN THE LOBBY/RECEPTION AREA? OR IS THAT SPACE ONLY USED WHEN SOMEONE WALKS IN? IS THE SPACE LARGE ENOUGH OR IS IT WASTED SPACE?

RESPONSE:

Currently lobby/ reception area is staffed by office specialist and intermittenly by lifeguard personnel for administrative work. Walk-in public contacts are routinely done at south garage door entrance. Lobby/ reception space could be more efficiently utilized.

14) IS IT BE PREFERRED THAT THE STATION "FRONT DOOR" LOBBY/RECEPTION IS IN A DIFFERENT LOCATION SUCH AS THE CURRENT GARAGE ENTRANCE? IT WAS EXPRESSED THAT THE CURRENT ENTRANCE IS OUT OF SIGHT.

RESPONSE:

Due to restrictions on West station footprints and primary needs for staff and equipment deployment, Front Door lobby entrance location sufficient. East station location would be preferred public access for general business.

15) WHAT SPACES ARE CONSIDERED "WET" SPACES AND COULD AFFORD TO GET WET IN THE EVENT OF A 100 YEAR KING TIDE? WHICH SPACES ARE CRITICAL TO OPERATION AND CANNOT AFFORD TO GET FLOODED IN THIS TYPE OF EVENT?

RESPONSE:

Garage area and locker rooms are considered WET spaces due to proximity and routine access from beach/ ocean duties of staff. Drainage of these areas needs improvement. Electrical equipment and office/ work station spaces need to be protected from environment and can not function in flood conditions.

16) PLEASE LIST ANY ADDITIONAL NEEDS THAT WERE NOT MENTIONED ABOVE.

RESPONSE:

Current roofing/ pier ashphalt top showing leaking and flooding into ground floor headquarters during mild rain events: Recommend plans for efficient drainage system. Current interior drop ceilings and panels degrade quickly in marine environment: Recommend open ceilings for moisture control/ ventilation. Current exterior windows and framing routinely experience cracks and water leakage: Recommend improvement to more robust materials. ADA beach acces ramps from current lifeguard buildeing are recomended.

ATTACHMENT 6:

CEQA HISTORICAL EVALUATION MEMO

605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 F 760.632.0164

MEMORANDUM

To:	Oceanside Concrete Bridge and Timber Pier, Project Team
From:	Sarah Corder, Built Environment Lead, Allison Lyons, Senior Architectural Historian, and Nicole Frank, Architectural Historian, Dudek
Subject:	Oceanside Concrete Bridge
Date:	July 13, 2021
cc:	Jason Reynolds, Dudek

1.0 Purpose

Dudek's built environment staff has prepared this memorandum to help guide the project team for the Oceanside Pier, Pier View Way Bridge and Lifeguard Headquarters Project (the project). The project is currently in the initial planning phases. No designs and no specific program have been determined for the Oceanside Concrete Bridge.

The Oceanside Concrete Bridge and Pier was first evaluated in 1992 and given the status code 5S3: Appears to be individually eligible for local listing or designation through survey evaluation.[1] The bridge and pier was revaluated in 2015 and found to be a significant resource under Criterion A, because of the important role the bridge and pier has played in the history and very identity of Oceanside since 1888.[2] The Oceanside Concrete Bridge and Pier has been identified as potentially significant and therefore qualifies as a historical resource under CEQA.

The Oceanside Concrete Bridge and Pier has two main sections: a concrete bridge and a timber pier (see Figure 1). The timber pier was reconstructed in 1987. The concrete bridge has been altered since its initial construction in 1927. While the concrete bridge retains original components and character-defining features, several aspects are in poor condition.

The test for determining whether or not a proposed project would have a significant impact on an identified historical resource is whether or not the project would alter in an adverse manner the physical integrity of the historical resource such that it would no longer be eligible for listing in the National or California Registers or other landmark programs.

[1] Susan Carrico & Kathy Flanigan, DPR 523 Form: Oceanside Pier, August 10, 1992.

[2] Kristi S. Hawthorne, *Cultural Resources Report for the Historic Assessment of the Oceanside Pier*, October 26. 2016.

Dudek has conducted preliminary research on the development of the Oceanside Concrete Bridge and Pier. This memorandum clarifies some of the major changes to the pier over time. This memorandum intends to inform the project team of opportunities and constraints for the project to ensure the Oceanside Concrete Bridge and Pier would retain sufficient integrity to convey significance and to minimize the potential for the project to have an adverse effect on the historical resource.[3]

[3] This memorandum is intended to facilitate internal, design-team dialogue in an effort to identify opportunities and constraints for a project that could comply with the Secretary of the Interior's Standards for Rehabilitation. This document was not intended to summarize the previous structural assessments of the bridge or provide a comprehensive documentation of the history of changes to the Oceanside Concrete Bridge and Pier. For specific information on the structural systems and condition of the Oceanside Concrete Bridge and Pier, please see:

Moffatt & Nichol, 2019, "Pier View Way Bridge at Oceanside Pier- Summary of Seismic Deficiencies Letter," February 7, 2019.

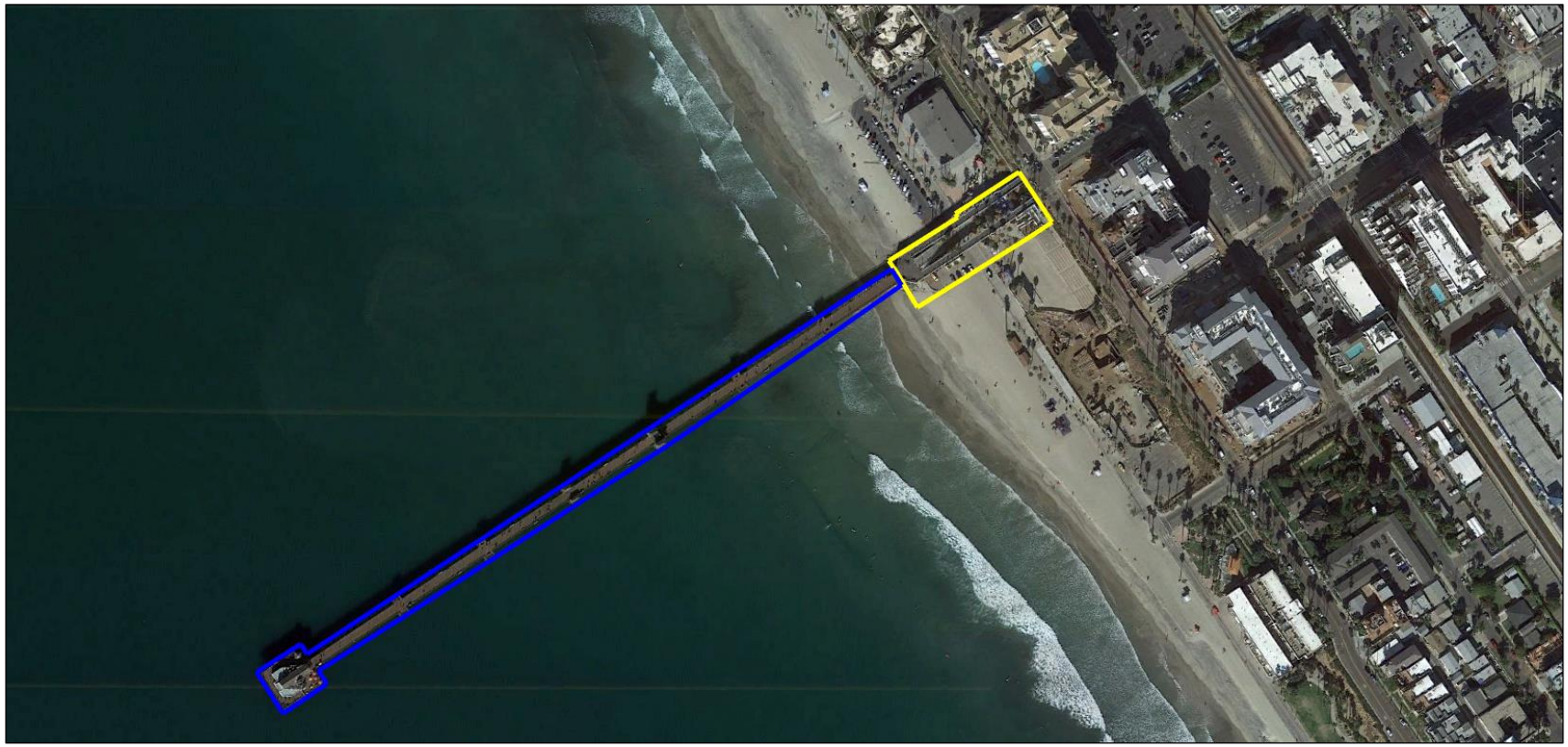


Figure 1. Aerial photo of the Oceanside Concrete Bridge and Pier with the concrete bridge outlined in yellow and the timber pier outlined in blue (Google Earth 2020)

2.0 Determining the Significance of Impacts on Historical Resources

The State CEQA Guidelines set the standard for determining the significance of impacts to historical resources in Title 14 California Code of Regulations Section 15064.5(b), which states:

> A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

Title 14 California Code of Regulations Section 15064.5(b)(1) further clarifies "substantial adverse change" as follows:

> Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

Title 14 California Code of Regulations Section 15064.5(b)(2) in turn explains that a historical resource is "materially impaired" when a project:

> Demolishes or materially alters in an adverse manner those physical characteristics that convey its significance and that justify its inclusion in or eligibility for inclusion in the California Register, local register, or its identification in a historic resources survey.

A substantial adverse change in significance occurs if the project involves:

- Demolition of a significant resource;
- Relocation that does not maintain the integrity and (historical/architectural) significance of a significant resource;
- Conversion, rehabilitation, or alteration of a significant resource which does not conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings; or
- Construction that reduces the integrity or significance of important resources on the site or in the vicinity.

As such, the test for determining whether or not a proposed project will have a significant impact on an identified historical resource is whether or not the project will alter in an adverse manner the physical integrity of the historical resource such that it would no longer be eligible for listing in the National or California Registers or other landmark programs.

3.0 Oceanside Concrete Bridge and Pier – Construction History

Year	Description of Work

1927	Municipal Pleasure Pier (Figure 2).
	• Combined length of 1,600 feet
	• Designed by City Engineer R. L. Loucks
	• The pier has two sections:
	  ○ Reinforced concrete bridge with municipal dining room and restrooms
	  ○ Timber pier at the seaward end

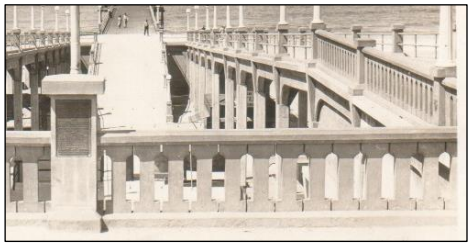
1938	The concrete bridge's approach, ramp, balustrades, and railing posts as well as the exterior of the municipal dining room are sprayed with shotcrete (Figure 4).
1947	The timber pier is extended by 205 feet and two boat landings are added on either side of the pier-head. Other improvements to the timber pier included reinforcement of piles, the addition of horizontal braces to each bent, replacement of washed-out piles and damaged or rotten stringers, replacement of rotten decking, and resurfacing the entire pedestrian deck.
1978	The timber pier is split into two sections after winter storms wash away the majority of the pier, leaving only 200 feet of the 1,335-foot-long structure constructed in 1947.
1985	Restoration of the concrete bridge. • Work included sandblasting the walls and ramps and repainting the concrete. • The concrete steps and walkway from Pacific Street were patched and refinished. • The municipal dining room's exterior walls are demolished (Figure 6).
1987	Reconstruction completed on the Municipal Pier (as it currently appears).[4] Some of the characteristics of the Municipal Pier following this work include: • Total length of 1,942 feet. • The new timber pier included a restaurant at the pier's seaward end, a lifeguard tower, public restrooms, and a small concession building (Figure 10). • Men's and women's restrooms exterior fenestration removed, and openings infilled. Use changed to storage (Figure 5). • Walkway/deck re-surfaced with asphalt (Figure 3). • New walls are constructed in the same location as the municipal dining room, which becomes the Oceanside lifeguard headquarters (Figure 7).

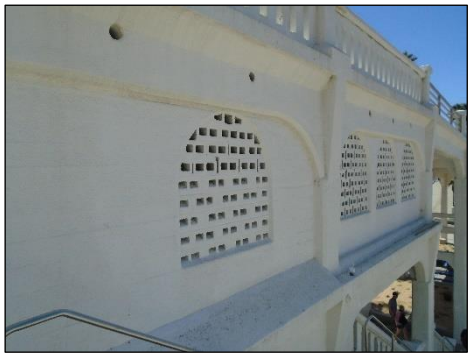
[4] For complete plans of the reconstruction and related work, please see:

Danielson Design Group, 1985, "Oceanside Pier Restoration: Concrete Portion, Including Lifeguard Headquarters," City of Oceanside Engineering Department, August 17, 1985.

Year	Description of Work
	• Light posts, metal guardrails, and metal handrails replaced (Figures 8-10).

4.0 Oceanside Concrete Bridge and Pier – Components

Component	Figure	Research Finding, Field Observation, Alterations
Concrete Bridge's Ramp, Stairs, and Piers	Figure 2  (APRIL 28, 2021, DSC02687)	• Original feature • Constructed in 1927 • Retains original profile • Exterior finishes altered
Walkway/Deck	Figure 3  (APRIL 28, 2021, DSC02539)	• Non-original feature • 1927 plans label as concrete • Overlain with asphalt circa 1987
Balustrades	Figure 4  Original 1927 balustrade (Oceanside Historical Society)	• Original feature • Substantially altered, no longer retains the original profile • Sprayed with shotcrete in 1938 • Appears to be in poor condition

Component	Figure	Research Finding, Field Observation, Alterations
	 (APRIL 28, 2021, DSC02725)	
Restrooms	Figure 5  (APRIL 28, 2021, DSC02728)	• Original feature • Windows removed • Fenestration openings extant, infilled 1985-1987 • Use changed to storage
Municipal Dining Room	Figure 6  Exterior of Pier Municipal Dining Room, October 6, 1983 (Oceanside Historical Society)	• Original feature • Constructed in 1927 • Sprayed with liquid cement in 1938 • Demolished in 1985 • WPA murals removed in 1985
Lifeguard Station	Figure 7  (APRIL 28, 2021, DSC02699)	• Non-original feature • Constructed circa 1987 • No historic fabric

Component	Figure	Research Finding, Field Observation, Alterations
Light posts	Figure 8  Original 1927 light post (Oceanside Historical Society)  (APRIL 28, 2021, DSC02543)	• Non-original feature • No historic fabric • Do not match the 1927 historic images and plans

Component	Figure	Research Finding, Field Observation, Alterations
Metal handrails	Figure 9  (APRIL 28, 2021, DSC02729)	• Non-original feature • Added recently (date unknown)
Metal Guardrails	Figure 10  (APRIL 28, 2021, DSC02542)	• Non-original feature • Original rails had two horizontals • Appears to be in poor condition
Timber structure and walkway	Figure 11  (APRIL 28, 2021, DSC02532)	• Non-original feature • Replaced in 1987 • No historic fabric

5.0 Considerations

Plans for the project should retain the look, feel, and character-defining features of the Oceanside Concrete Bridge and Pier. The extant materials and essential form of the reinforced concrete bridge should remain intact in a post project condition. The project team should continue to explore options of hidden structural systems for a retrofit strategy. The project team may retain or replace substantially altered or non-original components that are too damaged to restore or salvage. The Lifeguard Station (Figure 7) is a non-original component. While there is no historic fabric to retain in this component, plans developed for this space should not detract from

the historic look, feel, and character-defining features of the Oceanside Concrete Bridge. Future plans should ensure replaced features and materials are compatible with the historic character of the structure.

The content of this memorandum, including the recommendations and the historical evaluation summary provided above, are presented to inform the project team during this schematic design stage of the project. The content of the memo should not be construed as changing the currently identified level of CEQA documentation (Initial Study/Mitigated Negative Declaration).

Thank you for your consideration of this memorandum and the recommendations within. We are happy to answer any questions you may have.

Sincerely,

Allison Lyons, MSHP
Senior Architectural Historian

Nicole Frank, MSHP
Architectural Historian

Attachment A: Preparer's Qualifications

6.0 Works Cited

Carrico, Susan and Kathy Flanigan. 1992. "DRP 523 Form: Oceanside Pier." Oceanside Historic Resources Inventory. August 10, 1992.

Danielson Design Group. 1985. "Oceanside Pier Restoration: Concrete Portion, Including Lifeguard Headquarters." City of Oceanside Engineering Department. August 17, 1985.

Hawthorne, Kristi S. 2015. "Cultural Resources Report for the Historic Assessment of the Oceanside Pier, Oceanside, California." October 26, 2016.

Moffatt & Nichol. 2019. "Pier View Way Bridge at Oceanside Pier- Summary of Seismic Deficiencies Letter." February 7, 2019.

Attachment A

Preparer's Qualifications

DUDEK

14045
July 2021

Allison Lyons, MSHP

Senior Architectural Historian

Allison Lyons (AL-ih-suhn LYE-ons*; She/Her*) is an architectural historian with 12 years' experience throughout the western United States in all elements of cultural resources management. She joined Dudek in 2021. Her expertise includes the preparation of environmental compliance documents in accordance with the California Environmental Quality Act and Section 106 of the National Historic Preservation Act, focusing on the evaluation of historical resources and analysis of project impacts. As a historic preservation consultant, she has been involved in the preparation of numerous large-scale historic resources surveys; Historic American Buildings Survey/Historic American Engineering Record recordation; Federal Rehabilitation Tax Credit and Mills Act Historic Property Contract applications; local landmark nominations; and evaluations of eligibility for a wide variety of projects and property types throughout California. She is highly experienced in writing National Register of Historic Places nominations as well as historic context statements for local governments.

Ms. Lyons meets the Secretary of the Interior's Professional Qualifications Standards for history and architectural history pursuant to the Code of Federal Regulations, 36 CFR Part 61, Appendix A.

Education

Columbia University, 2010
M.S., Historic Preservation,

Scripps College, 2006
B.A., European Studies,

Professional Experience

Dudek, Senior Architectural Historian, 2021-Present

GPA Consulting, Associate Architectural Historian, 2015-2019, Senior Architectural Historian, 2019-2021

Chattel Inc., Associate Architectural Historian, 2013-2015

Architectural Resources Group, Architectural Historian, 2010-2013

Mellon Graduate Fellowship in Primary Sources, Columbia University, 2009-2010

Relevant Project Experience

City of Coronado, As-Needed Historic Research Consultant, City of Coronado, California. Dudek is currently working with the City of Coronado Community Development Department to provide historic preservation services on an as-needed basis. Services scoped under the current contract include historic resources surveys; archival research; preparation of evaluation reports in consideration of National Register of Historic Places, California Register of Historical Resources, and City of Coronado designation criteria; attendance at Historic Resource Commission and City Council hearings; and review of projects for conformance with the Secretary of the Interior's Standards for Rehabilitation. Since January 2019, Dudek has completed 20 work orders for the city. Ms. Lyons serves as a senior architectural historian for the historical resource evaluation task orders and is responsible for QA/QC of specific deliverables. (2021–Present)

Athens Park Aquatics Facility, Renovation Project, Los Angeles, California. The County of Los Angeles proposed a rehabilitation project at the Aquatics Facility at Athens Park, a park determined eligible for listing in the National Register of Historic Places. Ms. Lyons collaborated with the architect for the project on two phases of work. In advance of the development of project plans, Ms. Lyons prepared a Preservation Plan for the Aquatics Facility to establish the opportunities and constraints for the rehabilitation. After project plans were prepared, Ms. Lyons reviewed the project plans for compliance with the Secretary of the Interior's Standards for Rehabilitation and made recommendations for modifications to ensure the project plans complied with the Standards. (2020 - 2021)

North Beach Historic District, National Register of Historic Places Nomination and Plaque Program, San Clemente, California. Founded in 1925, San Clemente was one of the first new master-planned towns in California. The North Beach Historic District occupies a prominent location as the historic northern tip of the City of San Clemente along North El Camino Real. The North Beach Historic District was listed on the National Register of Historic Places at the local level of significance under Criterion A in the areas of Community Planning and Development and Entertainment/Recreation. The district features five historic contributing resources designed in the Spanish Colonial Revival style with a period of significance between 1927-1946. Ms. Lyons served as project manager for the National Register of Historic Places nomination of the district and a concurrent, Certified Local Government (CLG) grant-funded project with the City of San Clemente to create content and designs for signage across the district and informational postcards featuring historic images. (2020)

Rives Mansion, Rehabilitation Project, Downey, California. Working with the City of Downey, Ms. Lyons collaborated with the project architect for a renovation and rehabilitation project at the Rives Mansion, a historic mansion and walnut farm. In advance of the development of project plans, Ms. Lyons prepared a Preservation Plan for the property to establish the opportunities and constraints for the rehabilitation. After project plans were prepared, Ms. Lyons reviewed the plans for compliance with the Secretary of the Interior's Standards for Rehabilitation and made recommendations for modifications to ensure the project plans complied with the Standards. Ms. Lyons also performed periodic construction monitoring. (2019 - 2021)

Long Beach Armory, HABS Documentation, Long Beach, California. The 26,530 square-foot Armory building was built by the California Army National Guard in 1930 and was decommissioned in 2018. A private developer proposed a rehabilitation project that would incorporate the historic Armory building into a larger development of residential buildings with affordable housing. Ms. Lyons helped fulfill a mitigation measure to complete Historic American Buildings Survey (HABS) Documentation of the Armory building prior to the rehabilitation. Ms. Lyons peer-reviewed narrative documentation prepared by colleagues at GPA Consulting and worked with photographer Stephen Schaeffer to establish views for the photographs that were submitted to the Library of Congress. (2019)

Hughes Industrial Historic District, General Preservation Services, Playa Vista, California. While at GPA Consulting, Ms. Lyons assisted the Ratkovich Company with the redevelopment of the Hughes Industrial Historic District. The former home of Hughes Aircraft, the district had been previously determined eligible for listing in the National Register of Historic Places. GPA prepared a Historic Resource Treatment Plan (HRTP), which documented the history and significance of the district, identified the character-defining features of the eleven contributing buildings and made recommendations for their treatment, and provided guidelines for rehabilitation and new construction. Additional services included reviewing plans for compliance with the HRTP, construction monitoring, and creating a website on the history of the district. Ms. Lyons collaborated with a team of website designers, property owners, and leasing agents to create a website providing information on the history of the Hughes Industrial Historic District, from its association with eccentric company founder Howard Hughes, to its early incarnation as a center of Southern California's defense and aviation industries, and finally to its recent rebirth as a film production facility and the Hercules Campus, a tech campus for several prominent Silicon Beach companies. (2017)

3003 Runyon Canyon, Rehabilitation Project, Los Angeles, California. Ms. Lyons collaborated with the property owner and architect on a project to construct a new residence on the same hillside parcel as the Headley/Handley House, a designated City of Los Angeles Historic-Cultural Monument designed by master architect Lloyd Wright. After project plans were prepared, Ms. Lyons reviewed the project plans for compliance with the Secretary of the Interior's Standards for Rehabilitation and made recommendations for modifications to ensure the project plans complied with the Standards. She also responded to public comments on the designs. (2016 - 2018)

James K. Van de Kamp (La Loma Road) Bridge, Rehabilitation, Pasadena, California. Ms. Lyons prepared a Historic American Engineering Record (HAER) report for the historic La Loma Road bridge in the Arroyo Parks and Recreation National Register Historic District. The report was completed as mitigation in compliance with Section 106. Ms. Lyons' contributions included the preparation of a written historical and descriptive data report as well as coordinating the photographic documentation. Since renamed the John K. Van de Kamp Bridge, the project received a Preservation Design Award from the California Preservation Foundation and a Historic Preservation Awards from the City of Pasadena's Historic Preservation Commission. (2015)

Vista Irrigation District Reservoirs E2 and F, Historical Resource Evaluations, Vista, California. Ms. Lyons evaluated components of a historic irrigation district in northern San Diego County. Two concrete reservoirs dating to the early twentieth century were recorded and evaluated for historical significance. The significance evaluation included conducting fieldwork and archival research for the reservoirs and completion of a historic context. The reservoirs were evaluated for historical significance and determined not eligible for inclusion in the National Register of Historic Places, California Register of Historic Resources, or the County Register. (2015)

Scripps College - Residence Halls, Claremont, California. Listed on the National Register of Historic Places, the campus of Scripps College in an architecturally significant women's college with contributing buildings developed primarily between the 1920s and 1940s. Working with GPA Consulting, Ms. Lyons assisted the campus architect with ongoing projects to adapt the campus buildings and designed landscapes to meet accessibility requirements. Services included preparing a memorandum describing how proposed ADA- related alterations, including new elevator towers and exterior ramps, would comply with the Secretary of the Interior's Standards. Ms. Lyons presented proposed work to the Board of Trustees and student groups. (2015 - 2019)

Santa Monica Post Office, Historical Resource Treatment Plan, Santa Monica, California. In August 2012, the United States Postal Service (USPS) approved the closure of the 1938 Santa Monica Post Office at 1248 Fifth Street. In December 2013, Skydance Productions purchased the 1938 Santa Monica Post Office with the intention of converting it to creative office space for the film production company. Prior to the purchase, Santa Monica City Council agreed to accept a preservation covenant for the post office's exterior and lobby. In 2014, the site was designated a Santa Monica Landmark. Ms. Lyons participated in substantial design collaboration for the adaptive reuse of historic post office building and prepared a Historical Resource Treatment Plan making recommendations to ensure the adaptive reuse of the historic building would be in conformance with the Secretary of the Interior's Standards for Rehabilitation. (2013 - 2015)

San Diego Veterans Administration (VA) Master Plan Historical Resource Technical Report, San Diego, California. Leo Daley worked with the Veterans Administration to develop a master plan for the campus of the VA San Diego Healthcare System. Working with Chattel, Inc., Ms. Lyons assisted with research, historic resource survey, and fieldwork documentation of the Main Building and Administration Building as part of an evaluation of potential historical resource impacts for the new master plan. (2014)

Nicole Frank, MSHP

Architectural Historian

Nicole Frank (nih-COHL FRAYNK; she/her) is an architectural historian with 3 years' professional experience in the historic preservation field. Ms. Frank's professional experience encompasses a variety of projects for local agencies, private developers, and homeowners in both highly urbanized and rural areas, including reconnaissance-level surveys, preparation of resource-appropriate and citywide historic contexts, and historical significance evaluations in consideration of the NRHP, CRHR, and local designation criteria. She has experience conducting historic research, writing landmark designations, performing conditions assessments, and working hands-on in building restoration projects throughout the United States. Ms. Frank also has governmental experience with the City of San Francisco's Planning Department and the City of Chicago's Landmark Designations Department. She meets the Secretary of the Interior's Professional Qualification Standards for Architectural History.

Education

The School of the Art Institute of Chicago, MS
Historic Preservation, 2018
The College of Charleston, BA,
Historic Preservation and Art History, 2016

Professional Affiliations

California Preservation Foundation
Association for Preservation Technology (APT)
Encinitas Preservation Association

Relevant Project Experience

Mira Mesa Community Plan Area Historic Context Statement and Mira Mesa Community Plan Area Focused Reconnaissance Survey, City of San Diego Planning Department, San Diego California (In Progress). Dudek was retained by the City of San Diego to prepare a historic context statement identifying the historical themes and associated property types important to the development of Mira Mesa, accompanied by a reconnaissance-level survey report focused on the master-planned residential communities within the Mira Mesa Community Plan Area. This study was completed as part of the comprehensive update to the Mira Mesa CPA and Programmatic Environmental Impact Report. While the historic context statement addressed all development themes and property types within the community, the scope of the survey was limited to residential housing within the CPA constructed between 1969 and 1990. Acting as architectural historian the historic context statement and survey document and all associated archival research efforts was co-authored/completed by Ms. Frank.

University Community Plan Area Historic Context Statement and University Community Plan Area Focused Reconnaissance Survey, City of San Diego Planning Department, San Diego California (In Progress). Dudek was retained by the City of San Diego to prepare a historic context statement identifying the historical themes and associated property types important to the development of University, accompanied by a reconnaissance-level survey report focused on the master-planned residential communities within the University Community Plan Area. This study was completed as part of the comprehensive update to the University CPA and Programmatic Environmental Impact Report. While the historic context statement addressed all development themes and property types within the community, the scope of the survey was limited to residential housing within the CPA constructed between the 1960s and 1990s. Acting as architectural historian the historic context statement and survey document and all associated archival research efforts was co-authored/completed by Ms. Frank.

Coronado Citywide Historic Resources Inventory and Historic Context Statement, City of Coronado, California (In Progress). Dudek is currently in the process of preparing a historic context statement and historic resources inventory (HRI) survey for all properties at least 50 years or older within city limits. Following current professional methodology standards and procedures developed by the California Office of Historic Preservation and the National Park Service (NPS), Dudek will: (1) develop a detailed historic context statement for the City that identifies and discusses the important themes, patterns of development, property types, and architectural styles prevalent throughout the city; and (2) conduct a reconnaissance-level survey of all properties within city limits that are at least 50 years old to identify individual properties and groupings of properties (i.e., historic districts) with potential for historical significance under City Criterion C (properties that possess distinctive characteristics of an architectural style; are valuable for the study of a type, period, or method of construction; and have not been substantially altered).

As Needed Historic Research Consulting Services, City of Coronado, Coronado, California (2019-present). Dudek was retained by the City of Coronado to provide as-needed historic consulting services for projects in Coronado. Each evaluation involved the creation of an occupancy timeline, supplemental research on occupants, architect/ builder, and property, building development research, a pedestrian survey of the project area, a description of the surveyed resource, and completion of a historical significance evaluation report in consideration of designation criteria and integrity requirements. Acting as project manager and architectural historian, Ms. Frank authored twenty historical resource evaluation reports.

Sycuan Fee to Trust Project, Sycuan Band of the Kumeyaay Nation Reservation, Unincorporated San Diego County, California (2021). The Sycuan Band of the Kumeyaay Nation Reservation retained Dudek to complete a Historic Properties Inventory and Evaluation Report for the proposed Sycuan Fee to Trust Project, located within the vicinity of El Cajon, California in unincorporated San Diego County. The project proposes a fee-to-trust transfer of five parcels that cumulatively total approximately 40 acres. The transfer of land from the Sycuan Band to the Bureau of Indian Affairs (the federal lead agency) would include several parcels. Dudek's report included development of a Project APE Map; the relevant results of a California Historical Resources Information Systems records search and background research; a pedestrian survey of the APE for built environment resources; and a historical significance evaluation of all properties more than 50 years of age within the APE, in consideration of potential adverse effects to historic properties under Section 106 of the National Historic Preservation Act. The evaluation found that Properties 1, 2, 4 and 5 were not eligible for the National Register of Historic Places at the individual level or as part of a larger historic district. As a result, no historic properties were identified within the APE and Dudek recommends a finding of No Historic Properties Affected. As architectural historian conducted background research and pedestrian survey.

Phase 1, Cultural Resources Inventory Report for the San Diego County Water Authority Southern First Aqueduct Structures Rehabilitation Project, San Diego County Water Authority, San Diego County, California (2021). Dudek was retained by the San Diego County Water Authority to conduct a Phase I Cultural Resources (including both archaeological and built-environment) Inventory for the Southern First Aqueduct Rehabilitation Project, located along a 21-mile stretch of the First San Diego Aqueduct, east of Interstate 15 from the City of Escondido in the north, to the Goodan Ranch/Sycamore Canyon County Preserve west of San Vicente Reservoir. As part of this effort, the Water Authority will be applying for a Letter of Permission under their Programmatic Master Plan Permit with the United States Army Corps of Engineers, pursuant to Section 404 of the Clean Water Act. The United States Army Corps of Engineers is the federal lead agency responsible for overseeing compliance with Section 106 of the National Historic Preservation Act, as this project is exempt from review under CEQA. Acting as architectural historian, co-authored the Phase I Cultural Resources Inventory Report and authored the analysis of potential adverse effects.

Historic Properties Inventory Report for the Senior Residences at Hillcrest Project, 3900 Cleveland Avenue, San Diego, California (2020). Dudek was retained by DFA Development to prepare a Historic Properties Inventory Report for the Senior Residences at Hillcrest Project, which proposed to develop a 68-unit, senior affordable housing community located at 3900 Cleveland Avenue in the Hillcrest neighborhood of San Diego, California. The Project site is partially developed with existing buildings for pre-school services associated with the adjacent University Christian Church and a parking lot. The Project is proposing to receive U.S. Department of Housing and Urban Development project vouchers issued to the San Diego Housing Commission, and is therefore, is required to undergo a National Environmental Policy Act analysis for receiving federal funding. Acting as architectural historian, Ms. Frank co-authored the technical report and conducted a pedestrian survey of the site.

Historical Resources Technical Report for the Enclave at Ivanhoe Ranch Project, Rancho San Diego, San Diego County, California (2020). Dudek was retained by Vance & Associates to complete a Historical Resources Technical Report (HRTR) in support of the proposed Enclave at Ivanhoe Ranch Project (project). The proposed project is a residential development project. The project site totals approximately 121.9 acres in an unincorporated San Diego County, south of the City of El Cajon, California. Included in the 121.9-acre project site is a historic-era complex of horse ranch buildings and accompanying residences, located at 3256, 3261, 3263, 3267, and 3269 Ivanhoe Ranch Road (APNs 518-030-41, 518-030-43, 518-030-44, and 518-030-45) which was evaluated for historical significance. This study was conducted in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, and the project site was evaluated in consideration of National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and County of San Diego Historic Preservation Ordinance and RPO requirements. Acting as architectural historian, Ms. Frank co-authored the technical report and conducted a pedestrian survey of the site.

JVR Energy Park, BayWa R.E. Solar Projects LLC, San Diego County, California (2020). Served as architectural historian, co-authored historical resources technical report. BayWa R.E. Solar Projects LLC is proposing the development of a solar energy facility and energy storage system, the JVR Energy Park Project. The project site totals approximately 1,356 acres and is located immediately east of the community of Jacumba Hot Springs in unincorporated southeastern San Diego County, within the County's Mountain Empire Subregional Plan area. Dudek prepared an Historical Resources Technical Report which involved a pedestrian survey by a qualified architectural historian for the presence of historic built environment resources. All buildings and structures over 45 years old were recorded and evaluated for historical significance. The significance evaluation included conducting archival and building development research for the Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex located on the project site, and completion of a historic context. The complex of dairy buildings located at 45346 Old Highway 80 (APN 661-060-12) was evaluated for historical significance and is not eligible for inclusion in the National Register of Historic Places, California Register of Historic Resources, or the County Register due to a lack of significant historical associations.

Historic Context Statement for Reservoirs, City of San Diego Public Utilities Department, California (2020). Dudek was retained by the City of San Diego Public Utility Department to complete a survey and historic context statement for the city's surface water storage system, including 10 dam complexes and the Dulzura Conduit. Dudek also prepared detailed impacts assessments for proposed modification to dams, as required by the Department of Safety of Dams. The project involves evaluation of 10 dam complexes and conduit for historical significance in consideration of National Register of Historic Places, California Register of Historic Resources, and city designation criteria and integrity requirements, and required extensive archival research and pedestrian survey. Evaluated five resources including the Dulzura Conduit, Upper Otay Dam, Murray Dam, Sutherland Dam, and Miramar Dam.

ATTACHMENT 7:

HISTORICAL INTEGRITY SUMMARY

HERITAGE
ARCHITECTURE & PLANNING

Oceanside Pier

Historical Integrity Summary

May 3, 2021

GENERAL

- The pier was completed in 1927, not 1925 as many believe.
- The pier is apparently not officially historically designated, but it has been identified as potentially historic, so it qualifies for CEQA protections.
- The wood portion of the pier was replaced in 1987, so the only remaining component from 1927 are the concrete bridges, ramp, stairs, and (former) restrooms.
- The entire pier is coated with a non-historic textured finish, approximately 1/16-inch thick.
    - The original finish was unpainted board-formed concrete.
- Multiple areas of patchwork at the pier columns. Patchwork is bulging at multiple locations and is not flush with historic surfaces.
    - There are several locations of visible cracking and spalling.
- In-filled windows at the north and south bathrooms.
    - Wood window sills are also missing.
- Vertical gaps originally occurred between individually cast concrete balustrades, but have been infilled. Balustrades now appear as one contiguous piece.
- Non-historic low-height planter walls at multiple locations underneath the pier bridge.
- Non-historic wing walls at lifeguard HQ entry.
- Non-historic textured infill panels added at the south stairs.
- Lifeguard HQ infill construction from the 1980s.
    - Historic photos show a municipal dining room facility at this location ca.1947 providing a precedent for infill at this location.

RAILINGS

- Non-historic stainless-steel handrails added at north and south stairs.
    - Handrail is non-compliant with current standards (not continuous and has no extensions).
- Circular tube steel guardrails with square tube steel posts at pier bridge is non-historic.
    - Original metal rails had two horizontals.
- Current guardrails are rusting in multiple locations and are non-compliant with current codes.

LIGHTING & ELECTRICAL

- Existing steel light posts are non-original with globes designs that do not match the historic aesthetic.
    - Original light posts were fluted concrete with round glass globes and were only located on the inward-facing rails of the bridges.

832 FIFTH AVENUE, SAN DIEGO, CA 92101 TEL: 619.239.7888 HERITAGEARCHITECTURE.COM FAX: 619.234.6286

- There are missing light posts at multiple locations.
- Added surface mounted conduit is visible at multiple locations.
    - At the east and west ends of the interior side of the north bridge at the bridge level.
    - At the interior side of multiple columns of the north bridge.
    - Approx. 3" conduit running almost full length of the interior side of the south bridge at the bridge level.
    - Major raceway at the underside of the south bathrooms.
    - Approx. 3" conduit running almost full length of the exterior side of the south bridge at the bridge level.
    - At the interior side of multiple columns of the south bridge.
- Surface mounted electrical boxes occur at multiple locations.
- Former flagpole is now a security camera pole at the west end of the north bridge.
- Non-historic security lights are mounted at multiple locations.

SIGNS & PLAQUES

- Original dedication plaque and benchmark located on the central newel post at the east end of the pier bridges.
    - Additional benchmark locations cast into the base rail of the bridge handrails at the north and south side of the west end of the bridge.
- A 1925 historic marker plaque is mounted at the entry of the south bridge (with the wrong year).
- A non-historic arch-topped wall with multiple plaques was added at the curb as part of the 1987 pier reconstruction.
- A carved wood "pier rules" sign was added at the east end of the south bridge.

ATTACHMENT 8:

100-YEAR DESIGN WATER ELEVATIONS WITH SEA LEVEL RISE MEMO

MEMORANDUM

To:

From: Weixia Jin, PhD, PE, D.CE, and Qing Wang

Date: April 6, 2022

Subject: Pier View Way - 100-year Design Water Elevations with Sea Level Rise

M&N Job No.: 11151

The City of Oceanside contracted with Moffatt & Nichol to provide engineering services for the restoration and/or reconstruction of Pier View Way Bridge and Lifeguard Headquarters building. Figure 1 presents locations of the Pier View Way Bridge and Lifeguard Headquarters building. The Pier View Way Bridge connects to Oceanside Pier at the seaward end of the bridge and consists of a concrete structure that spans from North Pacific Street on the bluff to the wooden pier on the beach. The wooden pier extends from the bridge to the ocean. A historical aerial photo shown in Figure 2 illustrates the location of the Lifeguard building. It is the substructure beneath the concrete bridge span, right at the beachfront. There are rock revetments in front of the Lifeguard building to protect against wave impacts and coastal erosion. The City's Coastal Hazard Vulnerability Assessment report pointed out that the increased frequency of flooding of the Lifeguard Headquarters will lead to water damage and other flood related damages (ESA 2018). This restoration/reconstruction effort will improve the site condition and provide adaptation to the future SLR impacts.



Figure 1: Location of Pier View Way Bridge and Lifeguard Headquarters Building



Figure 2: Historical Photo of Lifeguard Headquarters Building and Rock Revetment

This memorandum documents the determination of design water elevations at the Pier View Way Bridge and Lifeguard Headquarters building with consideration of sea level rise (SLR). In the analysis, the bridge structure, Lifeguard Headquarters building and revetment (or riprap) protection fronting the Lifeguard Headquarters building were based on the existing conditions. The analyses will be updated when the information for the proposed structure is available. Detailed coastal hydraulic analyses for developing the design water elevations included the following:

- Review CCC SLR guidance and determine the SLR scenarios.
- Review USGS Coastal Storm Modeling System (CoSMoS) results and FEMA Flood Insurance Rate Map (FIRM).
- Perform wave runup analyses using data from FEMA California Coastal Analysis and Mapping Project/Open Pacific Coast (CCAMP/OPC) study.
- Determine the 100-year design water elevations.

1. Project Site and Flood Zones for Design Water Levels

For design water elevation determination, the project area is divided into two flood zones and a transition zone in between due to the nature of the flood hazards. As shown in Figure 3, the zones from coastal to inland are named: Zone 1, Transition Zone and Zone 2. Zone 1 is the area subjected to direct wave impacts and its design water level includes wave runup on structure. Zone 2 is the area not subjected to the direct wave impacts, but it will be flooded due to wave runup on the beach and the Lifeguard Headquarters building. A small transition zone is provided between the two zones.

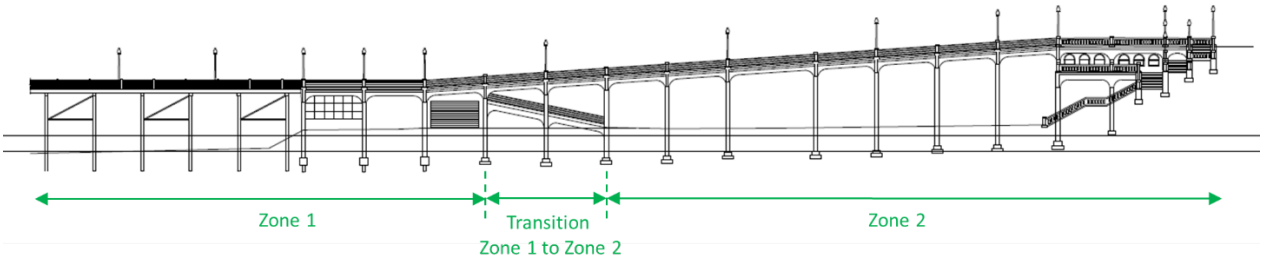


Figure 3: Flood Zones for Design Water Elevations

2. Sea Level Rise

It is assumed that the proposed project will be constructed in year 2030 with a design life of 50-years. The end of the design life will be year 2080. Hence, sea level rise projections in year 2080 and 2100 are considered in this analysis.

Per California Ocean Protection Council (OPC) 2018 Sea Level Rise Guidance, the projected SLRs are 4.6 ft in year 2080 and 7.1 ft in year 2100 under the medium-high risk aversion and high emissions scenario (shown in Table 1). Three SLR scenarios below are considered in the analyses:

- Existing sea level (No SLR);
- 4.6 ft SLR;
- 7.1 ft SLR.

Table 1: Projected Sea Level Rise at La Jolla (OPC 2018)

		Probabilistic Projections (in feet) (based on Kopp et al. 2014)					H++ scenario (Sweet et al. 2017) *Single scenario
		MEDIAN	LIKELY RANGE		1-IN-20 CHANCE	1-IN-200 CHANCE	
		50% probability sea-level rise meets or exceeds...	66% probability sea-level rise is between...		5% probability sea-level rise meets or exceeds...	0.5% probability sea-level rise meets or exceeds...	
				Low Risk Aversion		Medium - High Risk Aversion	Extreme Risk Aversion
High emissions	2030	0.5	0.4 -	0.6	0.7	0.9	1.1
	2040	0.7	0.5 -	0.9	1.0	1.3	1.8
	2050	0.9	0.7 -	1.2	1.4	2.0	2.8
Low emissions	2060	1.0	0.7 -	1.3	1.7	2.5	
High emissions	2060	1.2	0.9 -	1.6	1.9	2.7	3.9
Low emissions	2070	1.2	0.9 -	1.6	2.0	3.1	
High emissions	2070	1.5	1.1 -	2.0	2.5	3.6	5.2
Low emissions	2080	1.4	1.0 -	1.9	2.4	4.0	
High emissions	2080	1.9	1.3 -	2.5	3.1	4.6	6.7
Low emissions	2090	1.6	1.0 -	2.2	2.9	4.8	
High emissions	2090	2.2	1.6 -	3.0	3.8	5.7	8.3
Low emissions	2100	1.7	1.1 -	2.5	3.3	5.8	
High emissions	2100	2.6	1.8 -	3.6	4.6	7.1	10.2
Low emissions	2110*	1.9	1.3 -	2.7	3.5	6.4	
High emissions	2110*	2.8	2.0 -	3.7	4.7	7.5	12.0
Low emissions	2120	2.0	1.3 -	3.0	4.1	7.6	
High emissions	2120	3.1	2.3 -	4.3	5.5	8.8	14.3
Low emissions	2130	2.2	1.4 -	3.2	4.5	8.6	
High emissions	2130	3.5	2.5 -	4.9	6.3	10.2	16.6
Low emissions	2140	2.4	1.5 -	3.6	5.1	9.7	
High emissions	2140	3.9	2.8 -	5.4	7.1	11.7	19.2
Low emissions	2150	2.5	1.5 -	3.9	5.7	11.1	
High emissions	2150	4.3	3.0 -	6.1	7.9	13.3	22.0

**Most of the available climate model experiments do not extend beyond 2100. The resulting reduction in model availability causes a small dip in projections between 2100 and 2110, as well as a shift in uncertainty estimates (see Kopp et al. 2014). Use of 2110 projections should be done with caution and with acknowledgement of increased uncertainty around these projections.*

3. FEMA Base Flood Elevation

Per FEMA FIRM Panel 06073C0734J, the Pier View Way Bridge and Lifeguard building are located in the coastal VE zone with a base flood elevation (BFE) of 16 ft NAVD88. This FIRM panel is effective on December 20, 2019. FEMA's BFE defines the water elevation with one percent chance of equaling or exceeding that level in any given year. The two bounding FEMA transects (shown as Transect #16 and

Transect #17 in Figure 4) do not cross the pier structure, thus the revetment protection and its impact to wave runup is not considered in FEMA's BFE analysis. Additionally, no SLR was considered in FEMA's BFE analysis. Hence, the BFE of 16ft NAVD88 is appropriate for Zone 2 for the no SLR condition, but it is not appropriate for Zone 1. A site-specific calculation of design water level is required for Zone 1 considering the revetment impacts.



Figure 4: FEMA FIRM Panel 06073C0734J, Effective 12/20/2019.

4. USGS Coastal Storm Modeling System (CoSMoS)

The CoSMoS model developed by USGS predicted coastal flooding for the Southern California coast for both current and future SLR scenarios (Barnard et al. 2018). The modeled flood elevations and 100-year storm wave conditions were extracted from the CoSMoS database at the Oceanside Pier and listed in Table 2. As CoSMoS results are available in 0.25-meter (m) increments for SLR less than 2 m, 1.5m and 2m SLR scenarios were selected as the closest scenarios to 4.6ft and 7.1ft SLR. The predicted 100-year coastal flooding elevations based on the maximum wave height (H_{max}) are included in Table 2. The 100-year water elevations from CoSMoS do not include the pier structure impacts.

Table 2: CoSMoS Predicted Flood Elevations under 100-year Coastal Storm

SLR Scenario	Water Elevation[1] (ft NAVD88)	100-year Significant Wave Height (ft)	Combined 100-year Water Elevation[2] (ft NAVD88)
No SLR	10.1	0.7	11.0
+1.5 m SLR	14.0	3.3	18.3
+2.0 m SLR	15.3	4.6	21.3

Note: [1] The water elevation extracted from CoSMoS includes surge and wave setup.
[2] The wave crest assumed 70% of the wave height is above the water elevation (FEMA 2011).

5. M&N Analysis of Design Water Surface Elevations

M&N has conducted an analysis of design water surface elevations for the three SLR scenarios. This section summarizes the methodology, input data, and analysis results. As FEMA's BFE is recommended for the design water elevation for the existing No SLR condition at Zone 2, M&N analyzed the two SLR scenarios following FEMA's methodology for consistency.

a. Analysis Transect

Detailed bathymetric and topographic information at the transect passing the pier and Lifeguard building is required for the water level analysis. Figure 5 illustrates the new transect passing the pier (labeled as Pier Transect), together with the two bounding FEMA transects shown in FEMA FIRM panel. The new transect profile was extracted from the 2016 USGS West Coast El-Nino Lidar DEM (OCM 2022). The revetment and Lifeguard building from the project survey were then added to the 1-D transect profile as shown in Figure 6. The computed foreshore beach slope is 0.097 at this transect. The foreshore beach slope is the slope between Mean Sea Level and Highest Observed Tide, and is used in Stockdon method only. According to the record drawing in Figure 7, the revetment has a 1H:1V slope, a toe elevation of +6 ft NAVD88 and a crest elevation of +14 ft NAVD88. The design of the restoration/reconstruction will be based on the 100-year coastal storm, hence, the revetment intact condition was assumed in the calculations. When the water level is higher than the revetment crest due to SLR, waves on a vertical wall are assumed in the calculations as waves will directly attack the Lifeguard building. The toe of the wall is at +14 ft NAVD88, and the crest is the bridge soffit, approximately +26.15 ft NAVD88 (assuming 2ft deck thickness).

The future beach profiles of the new pier transect under 4.6ft and 7.1ft SLR were developed with the assumption that the beach berm will rise with SLR and the foreshore beach slope remains to be similar to the current slope.



Figure 5: Transect Locations at Pier View Way

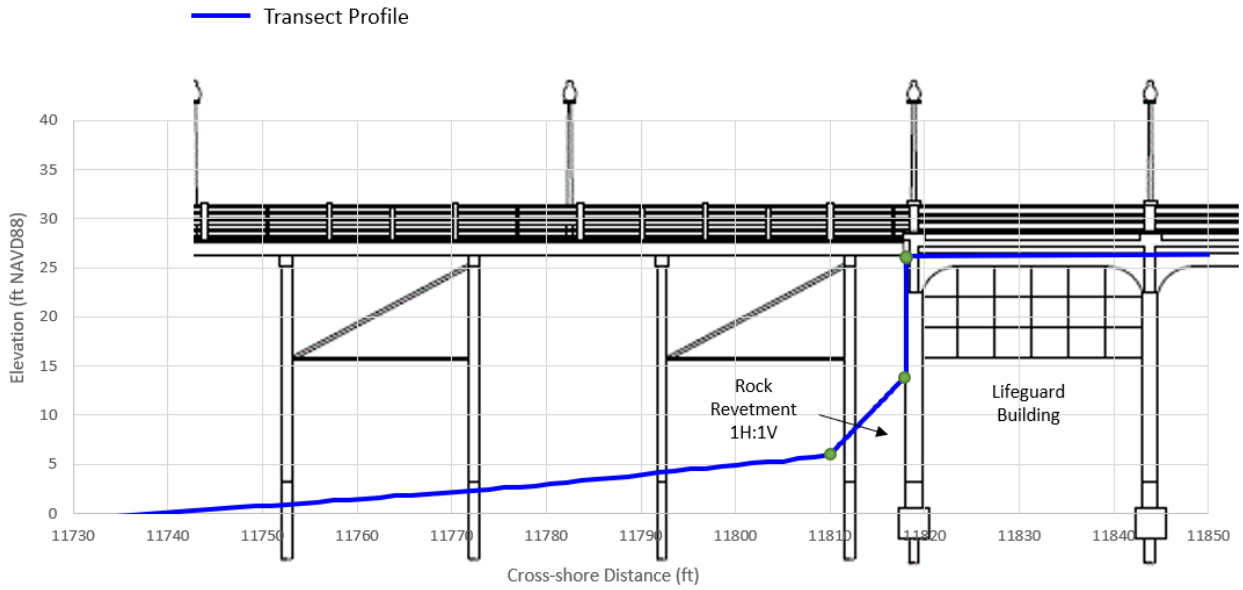


Figure 6: Elevation Profile at New Pier Transect

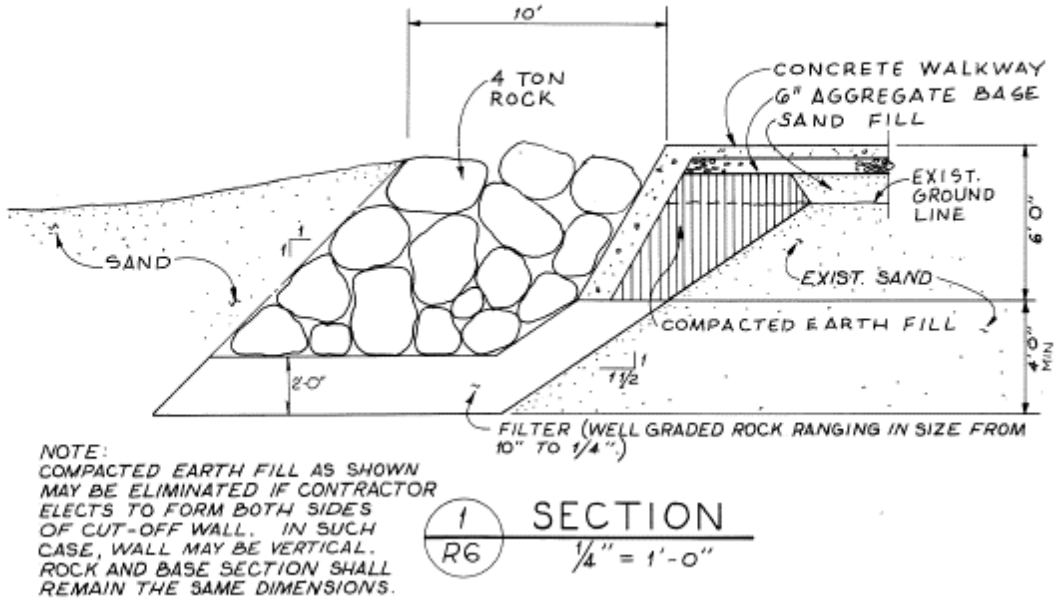


Figure 7: Record Drawing of Rock Revetment Fronting Lifeguard Building

b. Nearshore Wave and Water Level Conditions

Extensive wave modeling was performed by Scripps Institution of Oceanography (SIO) as a part of the recent FEMA CCAMP/OPC study. Deepwater wave conditions were transformed to the surf zone at a depth of 15m. The nearshore wave parameters provided the input conditions for the one-dimensional (1-D) transect-based wave runup analysis. A total of 155 extreme wave events over a 50-year period from 1960 to 2009 at FEMA Transect #17 were available and used in M&N's wave runup analysis (FEMA 2016) as Transect #17 is the closest FEMA transect to the pier.

c. Approach

This analysis follows technical approach and study methodologies documented in CCAMP/OPC Intermediate Data Submittal Reports (FEMA 2016). The flowchart in Figure 8 depicts the technical approaches that were used in the recent FEMA mapping analysis. The nearshore wave parameters and water levels at the 15 m depth from the nearest Transect #17 of the FEMA CCAMP/OPC study were directly adopted in this study. The wave runup, setup and overtopping in the surf zone were re-analyzed based on the nearshore bathymetric and topographic condition at the pier location with SLR scenarios.

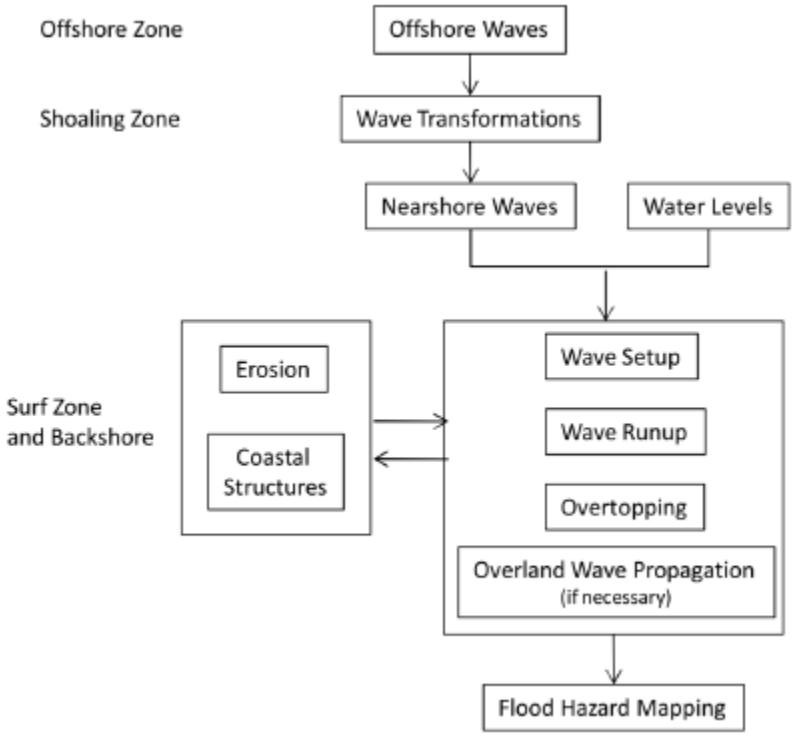


Figure 8: Summary of Technical Approach Adapted from Pacific Guidelines (FEMA 2016)

The analysis conducted by M&N can be summarized in the following steps:

- Construct transect topographic profile at the pier and Lifeguard building including the existing revetment;
- Extract extreme wave parameters at FEMA Transect #17 to be used in 1-D wave setup and runup analysis;
- Calculate total wave levels (including stillwater elevation, wave setup and runup) for the extreme events at the pier transect under the two SLR scenarios;
- Conduct extreme value analysis to determine the 100-year design water elevation at the site.

As illustrated in Figure 6, the transect across the pier is composed of three shoreline types/structures from offshore to inland: sandy beach, rock revetment and vertical wall (Lifeguard building). Given the foreshore slope is less than 0.11, the wave setup and runup were computed using Stockdon or TAW methods according the FEMA guidance. The Stockdon method was used when the revetment toe is not inundated. If the revetment toe becomes inundated (above +6 ft NAVD88) but does not reach the toe of the vertical wall (below +14ft NAVD88), the TAW method is used. If the entire revetment is inundated (above +14 ft NAVD88) under the SLR scenarios, and green water directly hits the building, the TAW method was adjusted considering the influence of the vertical wall. For each computed wave event, the total water level (TWL) is calculated using both TAW and Stockdon methods; the higher TWL between the TAW method and Stockdon method is selected.

d. Results

The TWLs were calculated for three SLR conditions: no SLR, +4.6ft SLR and +7.1ft SLR. The analysis was focused on the offshore Zone 1 (as illustrated in Figure 3) since there will be direct wave runup on the revetment and the Lifeguard building with rising sea level. Zone 2 is the area behind the Lifeguard building where there is no direct wave impact, but it could be flooded by wave runup and overtopping on beaches north and south of the lifeguard building.

Zone 1:

Upon the analysis of TWL with no SLR, the revetment toe would be inundated during the selected 155 extreme wave events over the 50-year hindcast period. With 4.6 ft and 7.1 ft SLRs, the crest of revetment (or toe of the building wall) will be inundated during these events. Extreme value analyses were performed on the computed TWLs over the 155 extreme wave events and their results are summarized in Table 3.

Zone 2:

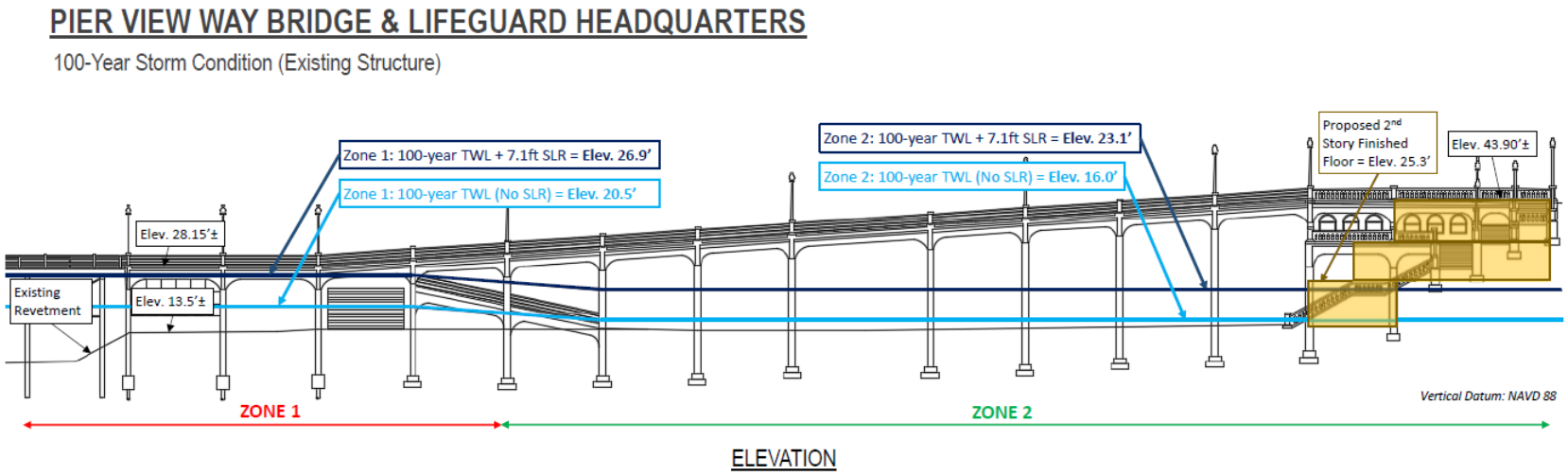
Due to no direct wave effects in Zone 2, the 100-year flood elevation is conservatively assumed to be the same as the adjacent beaches. FEMA BFE of 16 ft NAVD88 was adopted for No SLR scenario, and the TWL linearly increases with the SLR amount for the two SLR scenarios as the Stockdon method does not include water level as input. Table 3 summarizes the 100-year design water elevations for the three SLR scenarios.

Table 3: Summary of 100-year Design Water Elevations, in ft NAVD88 (Existing Structure)

SLR Scenarios	Zone 1	Zone 2
No SLR	20.5	16.0
+4.6ft SLR	23.8	20.6
+7.1ft SLR	26.9	23.1

6. Conclusions

This memo summarized 100-year flood elevations from FEMA FIRM and USGS CoSMoS results. FEMA FIRM does not include the pier structure (revetment and building) in the transect analysis and is only available for the existing No SLR condition. CoSMoS model simulated SLR impacts, but also does not consider the structure impact. M&N performed site-specific analysis following FEMA's approach used in FEMA's recent mapping study for the existing structure. The results are listed in Table 3 and also presented in Figure 9. The memo will be updated for the proposed structure when the design information is available.



DEFINITIONS

SLR = Sea Level Rise

NAVD 88 = North American Vertical Datum of 1988

TWL = Total Water Level
Maximum water level anticipated during 100-year storm event
Σ Stillwater + Wave Setup + Wave Runup

Total Water Level for 100-year Storm (including Sea Level Rise)			
Location	**Present Day** (0.0ft SLR)	**2080** (4.6ft SLR)	**2100** (7.1ft SLR)
Zone 1	20.5 ft	23.8 ft	26.9 ft
Zone 2	16.0 ft	20.6 ft	23.1 ft

Figure 9: 100-year Design Water Elevations at Pier View Bridge (Existing Structure)

7. Reference

Barnard, P.L., Erikson, L.H., Foxgrover, A.C., Limber, P.W., O'Neill, A.C., and Vitousek, S. 2018. Coastal Storm Modeling System (CoSMoS) for Southern California, v3.0, Phase 2 (ver. 1g, May 2018): U.S. Geological Survey data release. https://doi.org/10.5066/F7T151Q4.

ESA 2018. Coastal Hazard Vulnerability Assessment, City of Oceanside, March 2018, revised September 2018.

FEMA 2005. Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States. February 2005.

FEMA 2011. Coastal Construction Manual, P-55, August 2011.

FEMA 2016. FEMA Region IX CCAMP/OPC Intermediate Data Submittal #3, Nearshore Hydraulics, San Diego County, California. July 2016.

Office for Coastal Management (OCM) 2022. 2016 USGS West Coast El-Nino Lidar DEM (WA, OR, CA) from 2010-06-15 to 2010-08-15. NOAA National Centers for Environmental Information, https://www.fisheries.noaa.gov/inport/item/48383.

Ocean Protection Council (OPC) 2018. State of California Sea-Level Rise Guidance. 2018 Update.

ATTACHMENT 9:

PRELMINARY FOUNDATION REPORT

Earth Mechanics, Inc.
Geotechnical & Earthquake Engineering

March 14, 2022

EMI Project 20-156

Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, CA 92123

Attention: Mr. Jared Cole, PE

Copy: Ms. Alex Ford, PE

Subject: **Preliminary Foundation Report**
Pier View Way Bridge and Lifeguard HQ Project
City of Oceanside, California

Dear Mr. Cole:

Attached is our Preliminary Foundation Report (PFR) for the proposed Pier View Way Bridge and Lifeguard Headquarters project. This report is prepared to support the preliminary design phase of the project.

The recommendations and conclusions provided in this report are based on very limited available subsurface soil information. These conclusions and recommendations are considered preliminary and should be confirmed following completion of a site-specific geotechnical field investigation, laboratory testing program, and additional engineering analyses.

We appreciate the opportunity to provide geotechnical services for this project. If you have any questions, please do not hesitate to contact us.

Sincerely,

EARTH MECHANICS, INC.

Jody Castle, CEG 2592
Senior Geologist

Eric Brown, GE 2806
Principal Engineer

17800 Newhope Street, Suite B, Fountain Valley, CA 92708 • Tel: (714) 751-3826 • Fax: (714) 751-3928

PRELIMINARY FOUNDATION REPORT
PIER VIEW WAY BRIDGE AND LIFEGUARD HQ PROJECT
CITY OF OCEANSIDE, CALIFORNIA

Prepared for:

Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, CA 92123

Prepared by:

Earth Mechanics, Inc.
820 Los Vallecitos, Suite H
San Marcos, California 92708

EMI Project 20-156

March 8, 2022

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APPENDIX

Appendix A. Existing Bridge Plans

1.0 INTRODUCTION

This Preliminary Foundation Report (PFR) has been prepared to provide the preliminary geotechnical information to assist the structural designers in the planning phase of the Pier View Way Bridge and Lifeguard Headquarters project. The contents of this PFR generally follow the reference titled "Foundation Reports for Bridges" (Caltrans, 2021). In addition to the information provided for the Pier View Way Bridge, which will be designed according to Caltrans guidelines, preliminary geotechnical recommendations are provided for the Lifeguard Headquarters that will be designed according to California Building Code (CBC, 2019) guidelines.

The preliminary recommendations provided in this report are based on the very limited subsurface information contained in the reference documents included with the project Request for Proposals. A site-specific geotechnical investigation will be performed for the subject improvements during the final design phase; therefore, the following preliminary recommendations require verification when additional site-specific information becomes available.

The geotechnical scope of work included: (1) reviewing available geotechnical/geologic information including reports, published geologic maps, and seismic hazard reports, (2) reviewing as-built plans of the existing structure, (3) assessing the foundation types for the existing or proposed structure, (4) engineering analyses; and (5) preparation of this PFR. The geotechnical and geologic references reviewed for this project are listed in the references section of this report.

2.0 PROJECT DESCRIPTION

The project site is located in the City of Oceanside where Pier View Way spans between North Pacific Street and the Oceanside Municipal Pier. The Oceanside Municipal Pier consists of two distinct elements, the concrete Pier View Way Bridge constructed in the mid-1920's and the timber pier constructed in the late 1980's.

The Pier View Way Bridge (Bridge) is constructed of reinforced concrete with two lanes divided by a vehicle access ramp. Exterior stairways are located on either side of the Bridge at the eastern end to provide pedestrian access from Pier View Way to The Strand that passes beneath the Bridge. The structure comprises a concrete slab spanning between longitudinal beams that frame into bridge piers consisting of concrete columns and transverse beams. The Bridge has 15 spans with the three westernmost supports founded on 16 ft long timber piles and the eastern supports founded on spread footings. The lifeguard headquarters was incorporated underneath the western end (between the two westernmost spans) of the bridge in the mid-1980s.

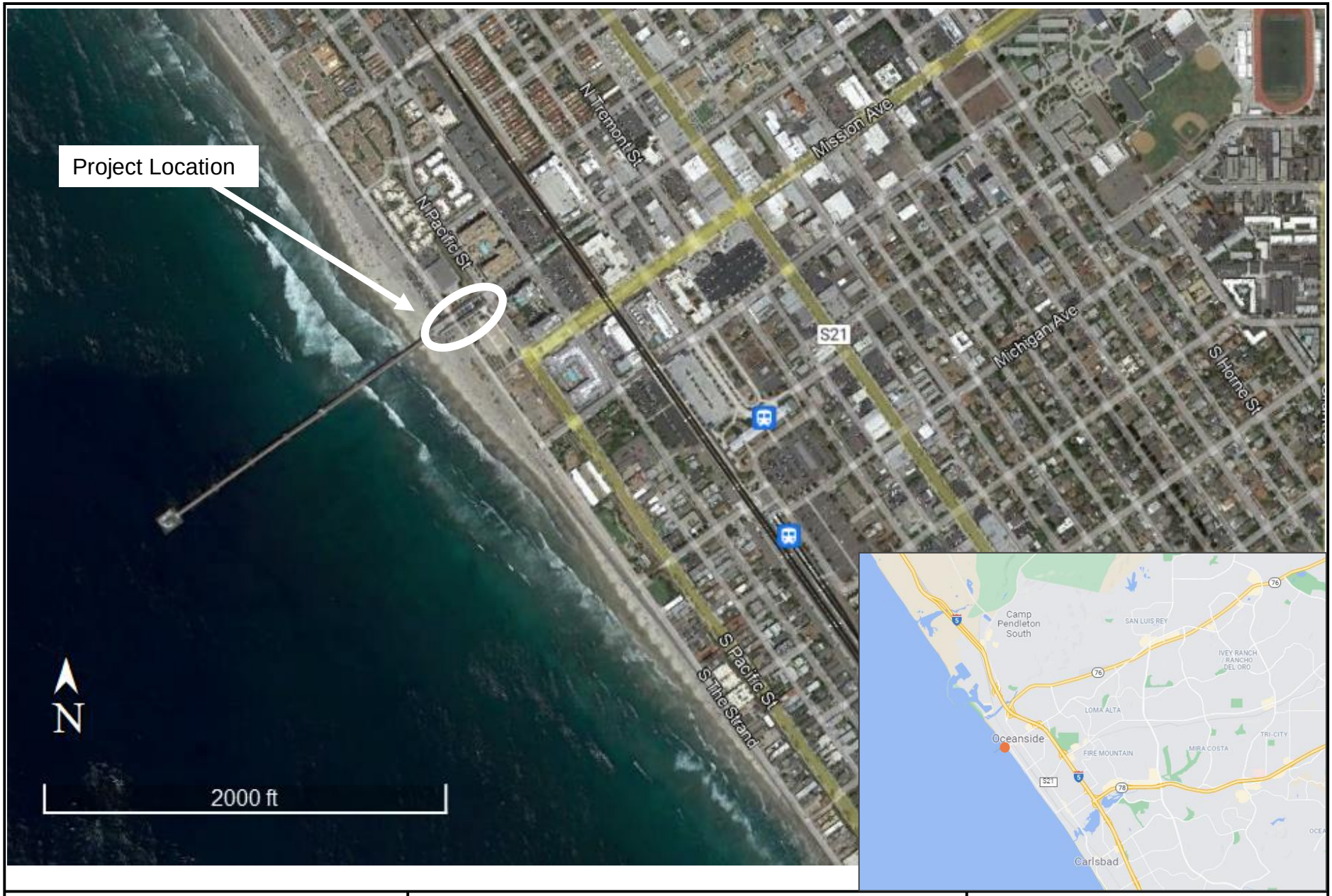
The timber pier (Pier) comprises a timber deck supported by timber stringers and pile caps that are in turn supported by timber piles. The piles are supported laterally with a steel pipe bracing system. The Pier is in good condition, except for the steel pipe bracing and certain connection hardware elements that are in poor condition, primarily due to corrosion of the steel material. The Pier remains capable of sustaining the original vertical design loads and is not part of the subject project improvements. Copies of relevant pages of the Bridge plans are included in Appendix A.

The Bridge was rated as being in "fair" condition in 2007, primarily because of concrete degradation associated with corrosion of reinforcing steel, a common phenomenon with reinforced concrete structures in the marine environment. The bridge has been assigned a "poor" condition

rating as of 2018 due to an additional 10 years of service and observations made during the 2016 to 2018 concrete maintenance work.

The existing Bridge and Lifeguard Headquarters will be reconstructed or restored due to the poor condition rating. The structure(s) will be located along the same alignment as the existing structure and within the same structure footprint. The Pier will remain in its current condition with minor serviceability improvements. The location of the project site is shown in Figure 1.

Vertical control of the original as-built information for the structure is based on the National Geodetic Vertical Datum of 1929 (NGVD 29). A vertical adjustment will be provided by the project surveyor to convert the original datum (NGVD 29) of the as-built plans to the current datum (NAVD 88) during the PS&E phase of the project.



Earth Mechanics, Inc.
Geotechnical and Earthquake Engineering

Pier View Way Bridge and Lifeguard HQ Project

Project No. 20-156

Date: March 2022

Site Location Map

Figure 1

3.0 EXCEPTIONS TO POLICIES AND PROCEDURES

From a geotechnical standpoint, there are no known geotechnical conditions that would cause deviation from Caltrans policies or procedures that require an exception. If the site-specific geotechnical investigation reveals that site soils are classified S2 per Caltrans SDC (2019c), then a fixed pile head condition would be required. Lifeguard Headquarters will be designed according to the California Building Code (2019).

4.0 GEOTECHNICAL INVESTIGATION

No site-specific geotechnical field investigation was performed specifically in preparation of this PFR. There is no geotechnical information included on the structure plans for the Bridge. TerraCosta Consulting Group (TerraCosta) provided geotechnical input (TerraCosta, 2007a) for a Design Wave Analysis (Terracosta, 2007b) in 2007. The geotechnical study performed by TerraCosta indicates several sources of information were reviewed for the study, but none were included as attachments to the report.

5.0 LABORATORY TESTING PROGRAM

No site-specific laboratory testing was performed specifically in preparation for this PFR. No available geotechnical laboratory test results from previously conducted investigations were available for review as part of the preparation of the subject report.

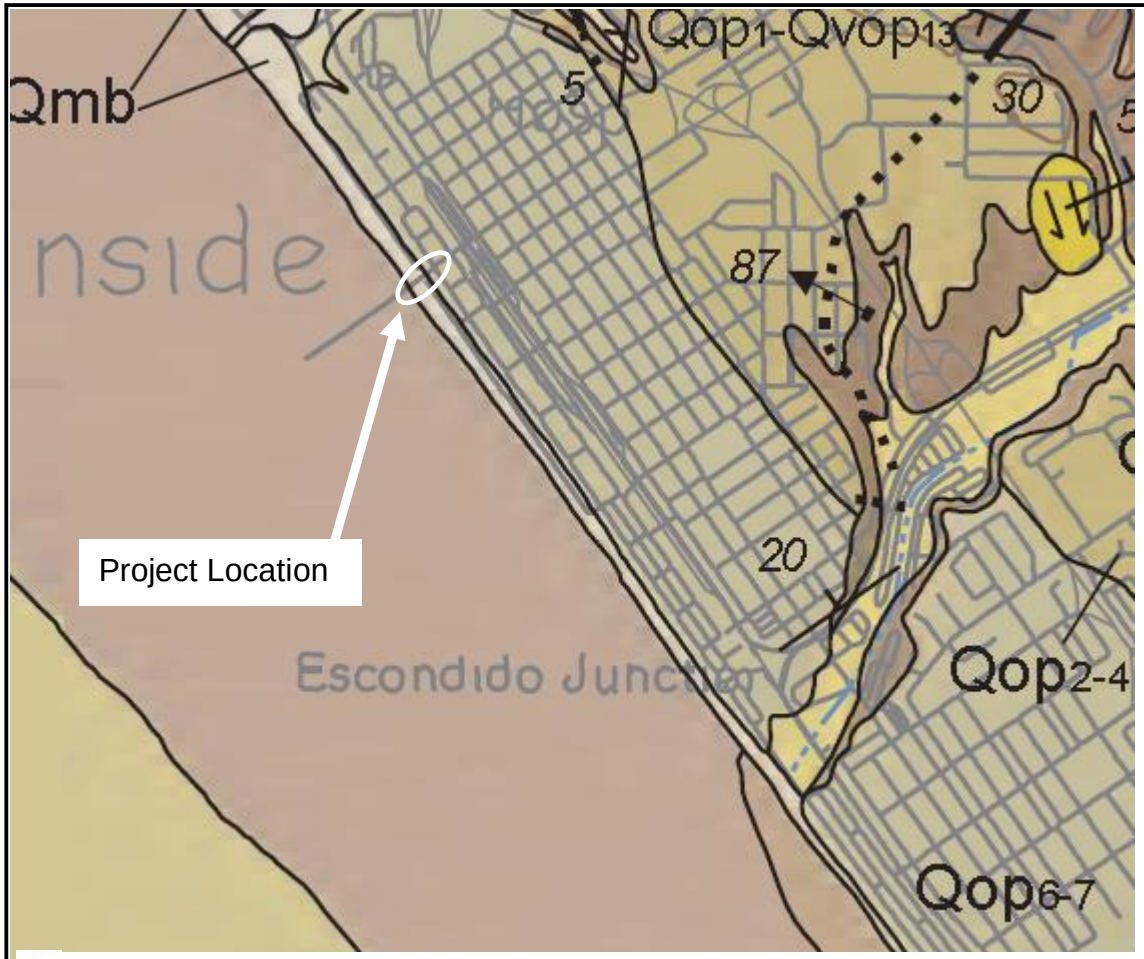
6.0 GEOTECHNICAL CONDITIONS

6.1 Geology

The project area is located in the western portion of the Peninsular Ranges physiographic province, in the Coastal Plain subregion. The Coastal Plain region, ranging from approximately 1 to 12 miles wide, is bounded by the Pacific Ocean to the west, and the Peninsular Ranges to the east. It is characterized by broad, planar mesas gently sloping to the west, incised by deep canyons. The Peninsular Ranges are a group of northwest-southeast trending mountains and valleys between the San Andreas fault on the east and the offshore area called the Continental Borderland. Bedrock in the Peninsular Ranges is predominantly composed of Mesozoic-age granitics. The region surrounding Oceanside, including the offshore Continental Borderland area, is transected by a series of long, mostly northwest-trending, strike-slip fault systems.

Published geological mapping (Figure 2) indicates that surficial soils at the project site consist of consolidated old paralic deposits (Qop). From the coastal bluffs west to the ocean, surficial soils consist of unconsolidated beach sands (Qmb) (Kennedy et al., 2007).

The project alignment, while not crossed by any known faults or projected fault trends, is located in a seismically active region and is subject to shaking from both local and distant earthquakes. Active regional faults closest to the project site include the offshore section of the Newport-Inglewood fault and the Oceanside section of the Rose Canyon fault. Generally, these sections are considered to be one continuous fault zone (USGS, 2021). The north-south trending Newport-Inglewood-Rose Canyon fault zone is located approximately 2.4 miles east of the project. A dextral strike-slip fault, the fault is considered to be capable of producing a magnitude 6.9 earthquake.



N

SCALE

0 1.0 2.0 miles

Map Source:
Kennedy, M.P., Tan, S.S., Bovard, K.R., Alvarez, R.M., Watson, M.J., and Gutierrez, C.I., 2007, Geologic map of the Oceanside 30x60-minute quadrangle, California: California Geological Survey, Regional Geologic Map No. 2, scale 1:100,000

GEOLOGIC SYMBOLS

not all symbols shown on each map

FORMATION CONTACT *dashed where inferred or indefinite dotted where concealed*

MEMBER CONTACT *between units of a formation* Prominent bed

CONTACT BETWEEN SURFICIAL SEDIMENTS *located only approximately in places*

FAULT: *Dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful. Parallel arrows indicate inferred relative lateral movement. Relative vertical movement is shown by U/D (U=upthrown side, D=downthrown side). Short arrow indicates dip of fault plane. Sawteeth are on upper plate of low angle thrust fault.*

FOLDS: overturned — ANTICLINE — SYNCLINE

arrow on axial trace of fold indicates direction of plunge; dotted where concealed by surficial sediments

Strike and dip of sedimentary rocks: inclined; inclined (approximate); overturned; horizontal; vertical

Strike and dip of metamorphic or igneous rock foliation or flow banding or compositional layers: inclined; inclined (approximate); vertical; overturned

OTHER SYMBOLS: Direction of landslide movement; outline of water bodies shown on map; water well; oil well; springs

Qya	Young alluvial flood-plain deposits (Holocene and late Pleistocene)
Qls	Landslide deposits, undivided (Holocene and Pleistocene)
Qmb	Marine beach deposits (late Holocene)
Qop	Old paralic deposits, undivided (late to middle Pleistocene)
Qop_7	Unit 7
Qop_6	Unit 6
Qop_4	Unit 4
Qop_3	Unit 3
Qop_1	Unit 1
Qop_{6-7}	Units 6-7
Qop_{4-6}	Units 4-6
Qop_{2-4}	Units 2-4
Qop_{1-2}	Units 1-2
Qop_{7-8}	Units 7-8
Qop_{2-6}	Units 2-6
$Qop_{1-Qvop_{13}}$	Units Qop_1 -$Qvop_{13}$
Tsa	Santiago Formation (middle Eocene)

Earth Mechanics, Inc.
Geotechnical and Earthquake Engineering

Pier View Way Bridge and Lifeguard HQ Project

Project No. 20-156 | Date: March 2022

Regional Geologic Map

Figure 2

Perhaps the most significant recent earthquake in the region was the 1986 event which occurred offshore from Oceanside. This earthquake had a moment magnitude (M_W) of 5.8. The earthquake caused damage throughout San Diego County. Damage consisted mainly of broken plate-glass windows, cracked walls, and plaster, and broken chimneys.

6.2 Surface Conditions

The project site lies along the coastal shoreline and is bounded by the Oceanside Pier to the west and North Pacific Street to the east. Grade below the majority of the Bridge is generally flat with the western supports located right at the shoreline being protected by a breakwater. The intermediate supports span over The Strand, a local street that provides pedestrian and vehicle access to the beach as well as the lifeguard headquarters, community center, retail shops and an outdoor amphitheater that surround the Bridge. At the eastern end of the Bridge, grade rises about 30 ft via the bluffs at the roadway edge of North Pacific Street where the deck of the Bridge is accessed. The majority of the area beneath the Bridge is covered with hardscape or pavement with the exception of a few areas with grass landscaping and the banks of the bluffs below North Pacific Street.

6.3 Subsurface Conditions

Based on existing geologic mapping (Kennedy et al., 2007), the marine beach deposits (Qmb) supporting the pier and the western end of the Bridge are unconsolidated, loose to medium dense, fine to medium grained sands. The deeper beach deposits were derived from sediments being carried down the San Luis Rey River. Construction of Lake Henshaw in 1922 reduced the sediment-carrying capacity of the San Luis Rey River and thereby diminished the natural supply of beach material to Oceanside beaches. During the late 1880s the beach off Oceanside was approximately 300 feet wide (USCGS 1889). By 1925 the usable beach was quite narrow, and the beach width could be correlated with the stream runoff rate from the river (Hales 1978). The last storm-flood year to contribute appreciable amounts of sediment to southern California beaches was 1938 (Troxell et al. 1942).

The coastal bluffs above the beach are composed of older Quaternary paralic deposits (Qop) consisting of interfingered strandline, beach, estuarine and colluvial deposits of siltstone, sandstone, and conglomerate. The soils are expected to be moderately well consolidated and dense to very dense. The bluffs are historically capable of standing near vertical due to cementation within the siltstone, sandstone, and conglomerate layers. Prior to development surrounding the pier, the greatest detriment to bluff stability prior to the narrowing of the beach in the mid 1920's, was subaerial erosion. After the narrowing of the beach, between late December 1940 and early January 1941, a series of storms originating in the Aleutian Islands moved into southern California and considerably damaged beachfront and bluff-top property (Kuhn and Shepard 1979a). The project area has since been covered with hardscape and landscape associated with the pier construction and surrounding development and is now largely resistant to subaerial and storm related erosion.

The bluffs have not historically been susceptible to landslides and are expected to be globally stable even during the design seismic event. The bluffs have been modified as part of the development surrounding the pier and are suitable for support of habitable structures on spread

footings without requiring extensive foundations. The bluff materials are expected to be easily excavated with conventional earth moving equipment.

Lateral soil springs (P-Y curves) are provided in the TerraCosta (2007) report to support the Wave Analysis and as stated in the report "The site soils appear to be generally comprised of sands throughout the depth of pile embedment. We have assumed that these sands have a relative density of 50 percent. In addition, we understand that the existing pier piles consist of 18-inch timber piles that have a minimum depth of embedment of 20 ft below the bottom of the design scour depth."

The above description is consistent with the available information for regional geologic maps (see Section 6.0). The preliminary recommendations provided in this report assume that the near-surface profile below the Bridge consist of saturated, medium dense sands within the depth of penetration of the existing structure foundations.

7.0 GROUNDWATER

Due to the site's proximity to the ocean, groundwater will be influenced by tidal fluctuations. For preliminary design purposes, the groundwater is placed at the high tide elevation. Based on current National Oceanic and Atmospheric Administration (NOAA) tide chart, high tide for San Diego (Station ID 9410170) is approximately +7 ft. (NAVD88). Sea level rise may also be included in the project requirements which would likely raise the project design groundwater elevation for final design and would be determined as part of the environmental study.

8.0 AS-BUILT DATA

As described in Section 2, the bridge has 15 spans with the three westernmost supports founded on 16 ft long timber piles and the eastern supports founded on spread footings. There are no pile design loads or design bearing pressures for the footings included on the structure plans. The lifeguard headquarters was incorporated underneath the western end (between the two westernmost spans) of the bridge in the mid-1980s. There are no plans available for the lifeguard headquarters and it is assumed to be supported on a slab on grade.

9.0 SCOUR DATA

The entire footprint of the project area below the bridge is covered with concrete hardscape. Scour is not considered a design issue for the subject structures.

10.0 CORROSION EVALUATION

No soil corrosion lab tests at the site are currently available. Therefore, corrosion potential of on-site soils is not known. Due to the site's proximity to the ocean, site soils are anticipated to contain elevated chloride levels and be considered corrosive to concrete and steel. If site soils are found to be corrosive, possible mitigation measures include increased cover for reinforcing steel, epoxy coated steel, corrosion resistant cement (in case of concrete piles and shallow foundations), and sacrificial steel can be provided for steel surfaces in contact with site soils.

11.0 SEISMIC INFORMATION

11.1 Ground Motion Hazard

The site is in seismically active southern California and is subject to shaking from both local and distant earthquakes. Large events on the nearby Newport-Inglewood fault control seismic design of the project.

Table 1. Fault Data

Fault	Fault ID	Fault Type(1)	Maximum Earthquake Magnitude	Approx. Distance from Site to Fault (miles)	Surface Fault/Blind Fault
Newport-Inglewood (offshore)	381	SS	6.9	2.4	Surface
Rose Canyon (Oceanside section)	396	SS	6.8	4.6	Surface

Note:
(1). SS = Strike Slip.

11.2 Other Seismic Hazards

11.2.1 Pier View Way Bridge

The preliminary ARS curve for the 975-year return event was determined using the Caltrans ARS Online V3.0.2 (2019a). The small-strain shear wave velocity for the upper 100 feet (Vs_{30}). Vs_{30} was estimated based on the near surface profile described in Section 6 and our review of regional geologic maps. The Vs_{30} and design response spectrum will be updated once the field investigation is completed after environmental clearance has been secured. Key information such as the site coordinates and assumed shear wave velocity for determining the preliminary ARS curve are listed in Table 2.

Table 2. Preliminary ARS Curve

Latitude	Longitude	Shear Wave Velocity, V_{s30}	Design Earthquake Return Period	Peak Ground Acceleration (PGA)	Mean Magnitude	Mean Site-Source Distance (km)
33.1944°	-117.3842°	820 ft/sec (250 m/sec)	975	0.4	6.64	33.5

The preliminary ARS curve is presented in Figure 3. Near-fault factors were not applied per Caltrans SDC V2.0 (2019c) guidelines based on the mean site to source distance from the deaggregation being greater than 25 km. The peak ground acceleration (PGA), mean magnitude (for PGA) and mean site-source distance (for Sa at 1 second) is listed in Table 2. The soil class at the proposed structure location is estimated to be S2 per Caltrans SDC V2.0 (2019c).

The design ARS curve, magnitude, and site classification will be updated during the final design phase following the field investigation based on a Vs_{30} determined using SPT correlations obtained from site-specific soil borings.

11.2.2 Lifeguard Headquarters

For the purposes of preliminary design, near surface site soils are assumed to be liquefiable. Due to the presence of potentially liquefiable materials, the site is classified as Class F for seismic evaluations of structures per California Building Code (CBC, 2019) and ASCE 7-16 (ASCE, 2016). Therefore, site-specific design Acceleration Response Spectrum (ARS) should be developed per ASCE 7-16 guidelines (ASCE, 2016). The site-specific ARS curve was developed using the USGS Unified Hazard Tool with the Dynamic: Conterminous U.S. 2014 (V4.2.0) edition conservatively using Sight Class D (V_{s30} = 259 m/s). Table 3 below provides the recommended design earthquake parameters per ASCE 7-16 Section 21.4.

Table 3. Input Seismic Parameters

Parameter	Value per CBC 2019/ASCE 7-16
S_s	0.993g
S_1	0.364g
F_a	1.103
F_v	1.936 [1]
S_{DS}	0.730g
S_{D1}	0.470g [1]
T_L	8 seconds
PGA_M	0.506g
Note: (1) The requirements outlined in ASCE 7-16 – Section 11.4.8 – Exception No. 2 should be satisfied. The recommended F_v should be used only for calculation of T_s per ASCE 7-16 Standard.	

11.3 Liquefaction Potential

In the absence of site-specific geotechnical information, it is assumed that the near surface deposits below the majority of the pier bridge are unconsolidated beach sands that were subject to repeated cycles of scour and deposition by wave action prior to construction of the Bridge. These near surface soils have sufficient bearing capacity to support the existing structure with no signs of settlement or distress; however, it is expected that during seismic shaking the unconsolidated nature of the sandy soils in conjunction with the shallow groundwater will result in a high potential for liquefaction at the site. The soils that support the bluff on the east end of the Bridge have proven over time to be resistant to erosion and are composed of old paralic (interfingered continental and marine) deposits that are expected have a low potential for liquefaction. This conclusion will be confirmed using additional site-specific soil borings and groundwater data to be obtained later during the PS&E phase.

11.4 Seismically-Induced Settlement

Since the liquefaction potential is expected to be high below the majority of the project site, the magnitude of liquefaction-induced (seismic) settlement of onsite soils is anticipated to be on the order of several inches to a foot. However, this conclusion will need to be confirmed using site specific soil borings to be performed later during the PS&E phase.

11.5 Lateral Spreading Potential

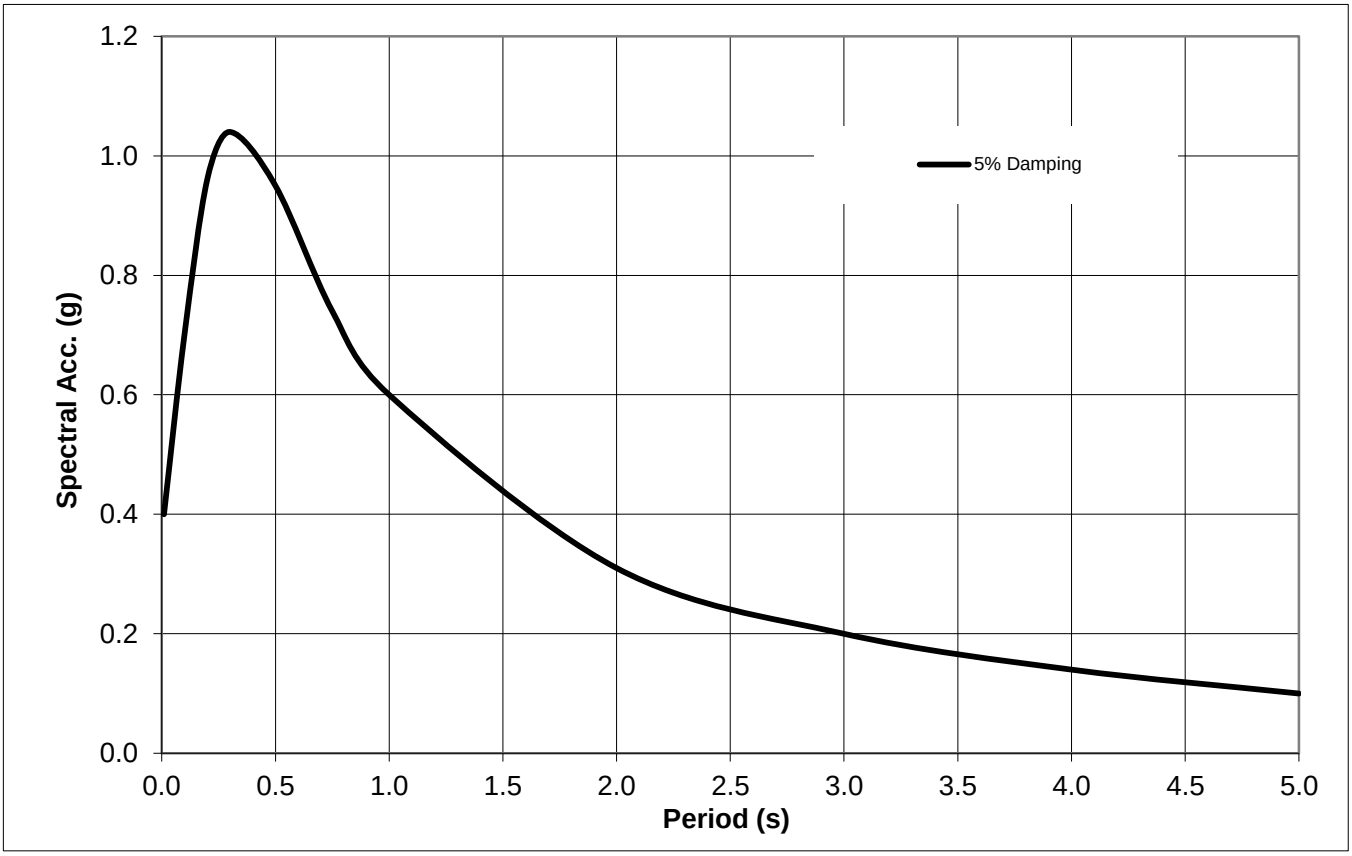
The western portion of the project supporting the Bridge with a high potential for liquefaction is generally flat. There are no submerged slopes within the project area. Therefore, the potential for lateral spreading at the site is considered low.

11.6 Seismic Slope Instability

Since liquefaction potential of the soils supporting the bluff on the eastern end of the project is expected to be low they are not expected to lose strength during the design seismic event. Seismic slope stability is not considered a design issue. Slope stability will be assessed during the PS&E phase using final cross-sections when they become available.

11.7 Surface Fault Rupture

The proposed structure does not fall within an Alquist-Priolo Earthquake Fault Zone or within 1,000 ft of an unzoned fault that is Holocene or younger in age; therefore, in accordance with Caltrans Memo To Designers 20-10 (Caltrans, 2013), further fault studies will not be necessary.



Preliminary ARS Curve

Shear Wave Velocity (V_{s30}) = 250 m/s

Lattitude: 33.1944° Longitude: -117.3842°

5% Damping

ARS Online Version 3.02

Spectral Coordinates:

Period (sec)	**Acc.** (g)
0.01	0.40
0.10	0.70
0.20	0.96
0.30	1.04
0.50	0.95
0.75	0.74
1.00	0.60
2.00	0.31
3.00	0.20
4.00	0.14
5.00	0.10

12.0 GEOTECHNICAL RECOMMENDATIONS

As described in Section 2, the Bridge and Lifeguard Headquarters will be reconstructed or restored with the existing timber Pier remaining as is. The existing structure is supported on spread footings that appear to have performed adequately over time as there are no signs of settlement or distress of the existing super structure. Spread footings are feasible for support for the eastern abutment in the bluffs composed of more consolidated older Quaternary paralic deposits (Qop). However, based on the anticipated high potential for liquefaction beneath the majority of the structure, spread footings are not considered suitable for the remaining supports.

Site soils are expected to be conducive to both driven and drilled deep foundations. Due to the presence of shallow groundwater, "wet" construction methods will be required for Cast-In-Drilled-Hole (CIDH) piles. Both driven steel (pipe piles and HP piles) and driven concrete piles are considered feasible. The older alluvium deposits that comprise the bluffs are anticipated beneath the near-surface unconsolidated beach sands but at a currently unknown depth. Difficult driving conditions for displacement piles is anticipated when the piles encounter the dense, deeper deposits. Depending on the depth at which they are encountered, driven concrete piles may not be preferable due to the potential for early refusal before sufficient embedment is achieved for lateral fixity. That potential cannot be evaluated until a site-specific soil investigation is conducted.

The lifeguard headquarters is anticipated to be a lightly loaded structure capable of being supported on spread footings or a mat foundation. Near-surface site soils above the water table are expected to be predominantly silty sand, sand, and sand with silt, and therefore, they are expected to be non-expansive.

12.1 Shallow Foundations

Bearing Capacity. In the absence of site-specific subsurface information, preliminary design of the foundation for the lifeguard headquarters can be based on presumptive values in Section 1806 of the CBC (2019). A static net allowable bearing capacity of 2,000 psf can be used for mat type foundation with a minimum embedment depth of 12 inches. The allowable bearing capacity may be increased by one-third when considering transient load combinations such as wind and earthquake loading.

Lateral Resistance: The lateral sliding resistance is offered by the friction at the bottom and sides of the footing. We recommend an ultimate frictional coefficient of 0.25 for footings poured against native soil per the CBC (2019).

Lateral Bearing: Lateral bearing pressure of 150 psf per foot of depth up to 2,250 psf is recommended. The resistance from the top one foot of soil should be neglected unless the surface is paved.

The lateral resistances offered by lateral sliding resistance and lateral bearing may be combined to obtain the total lateral resistance.

Modulus of Subgrade Reaction: Modulus of subgrade reaction (Kv1) is estimated to be 70 pci for a square rigid plate having dimensions of 1 ft x 1 ft. For a square foundation having dimension of B (ft) x B (ft), a value of modulus of subgrade reaction K_{BxB} can obtained using the following

equation: $K_{BxB} = K_{v1} ((B+1)/2B)^2$. For a rectangular foundation having a long dimension of L (ft) and short dimension of B (ft), a value of modulus of subgrade reaction K_{LxB} can obtained using the following equation: $K_{LxB} = K_{BxB} [1+(0.5B/L)]/1.5$.

In order to accommodate the uncertainty in estimating the subgrade reaction modulus, use 1.5 and 0.67 as upper-bound and lower-bound multipliers on base modulus of subgrade reaction.

12.2 Deep Foundations

For preliminary design and cost estimating purposes, preliminary axial capacity curves for 24inch diameter CIDH piles, Caltrans Alt "X" concrete piles and Class 90 Alt "W" (PP 14x0.375) piles are provided in Figure 4. For the CIDH piles, 24inch diameter piles are required to accommodate gamma-gamma inspection tubes and the tremie pipe necessary for concrete placement per Caltrans Memo-To-Designers 3-1 (2014).

The preliminary axial pile capacities for CIDH piles were estimated following the Caltrans Amendments to AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications – Eighth Edition (Caltrans, 2019), which are based on the Reese and O'Neil method outlined in Federal Highway Administration (FHWA) Publications FHWA-IF-99-025. The axial capacities for the CIDH were estimated using the computer program SHAFT (2017). The axial capacities for the driven concrete Alt "X" and driven steel Alt "W" piles were estimated according to the recommendations by Tomlinson (1987), where limited values for determining both skin friction and end bearing for cohesionless soils were considered following the recommendations from API (2000). The Alt "W" piles were assumed to be driven open ended.

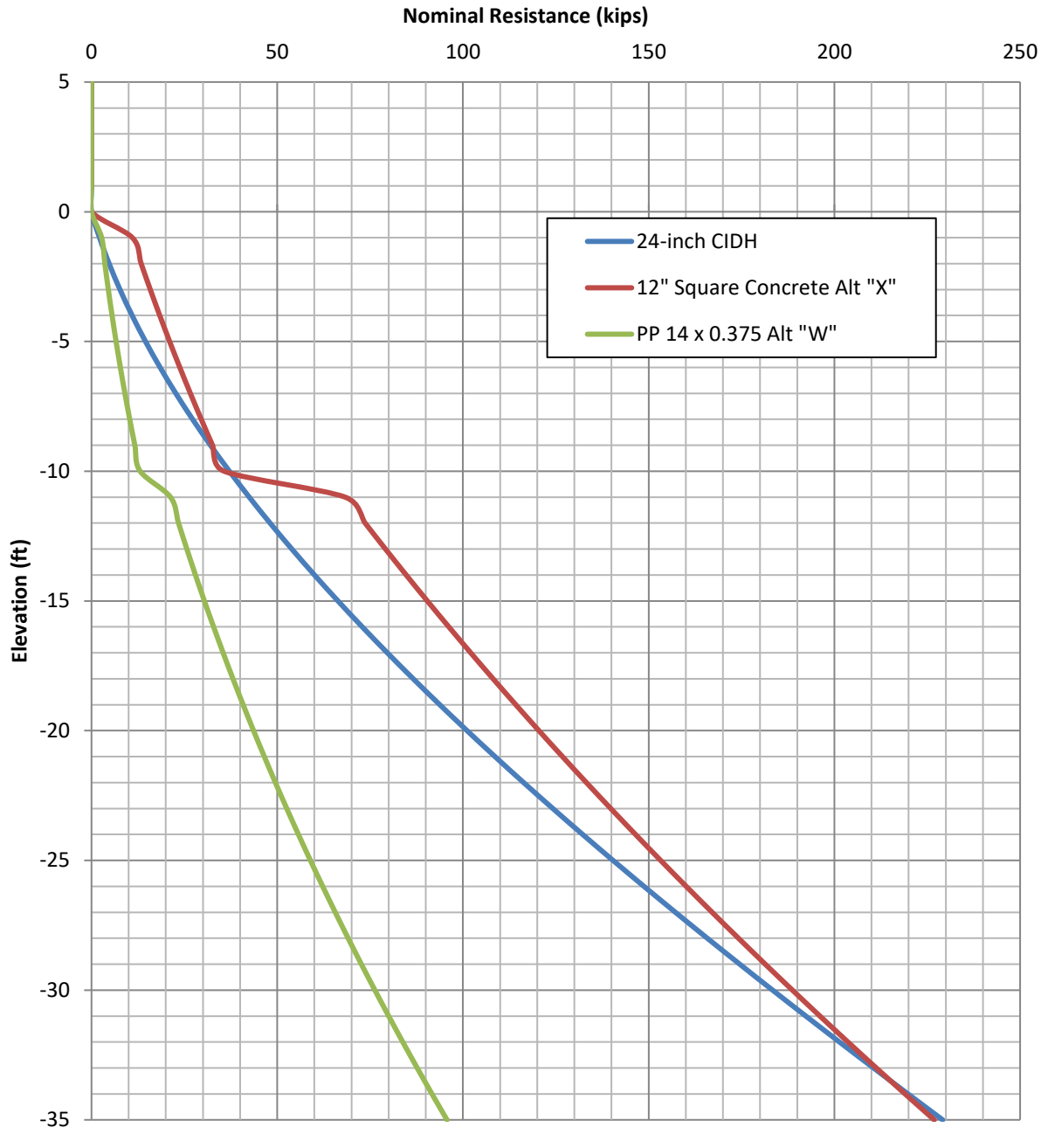
A resistance factor of 0.7 for the strength limit state should be applied to the pile capacities presented in Figure 4 per AASHTO LRFD Bridge Design Specifications (2018). The pile capacities are based on soil resistance only and may be further limited by the pile-head connection details and structural material strength.

13.0 ADDITIONAL FIELD WORK AND LABORATORY TESTING

For final design, EMI intends to perform an exploration program consisting of multiple rotary wash borings. EMI will drill and sample one geotechnical boring through the bluffs at the eastern end of the Bridge. Additional borings will be performed along the length of the Bridge where access permits. Each boring will extend to 15 feet below the bottom of the new proposed foundations.

Samples recovered from the soil borings will be transported to the laboratory for testing. All the soil samples will be visually classified. Additional samples will be collected for moisture content/density tests, sieve analysis, #200 wash, corrosion, Atterberg limit, consolidation, collapse potential, direct shear and unconfined compressive strength testing. Other laboratory tests may be required depending upon the nature of the soils encountered during the investigation.

Nominal Resistance vs Pile Embedment



Notes:
(1) No end bearing assumed for 24" CIDH, both skin friction and end bearing considered for Alt "X" and Alt "W" pile
(2) Assumed cut-off elevation at +0 ft
(3) For strength limit state multiply nominal capacity by a resistance factor of 0.7

Earth Mechanics, Inc. Geotechnical and Earthquake Engineering	Project Number : 21-156	Date: March 2022
	Pier View Way Bridge and Lifeguard HQ Project **Axial Pile Nominal Resistance**	Figure 4

14.0 REFERENCES

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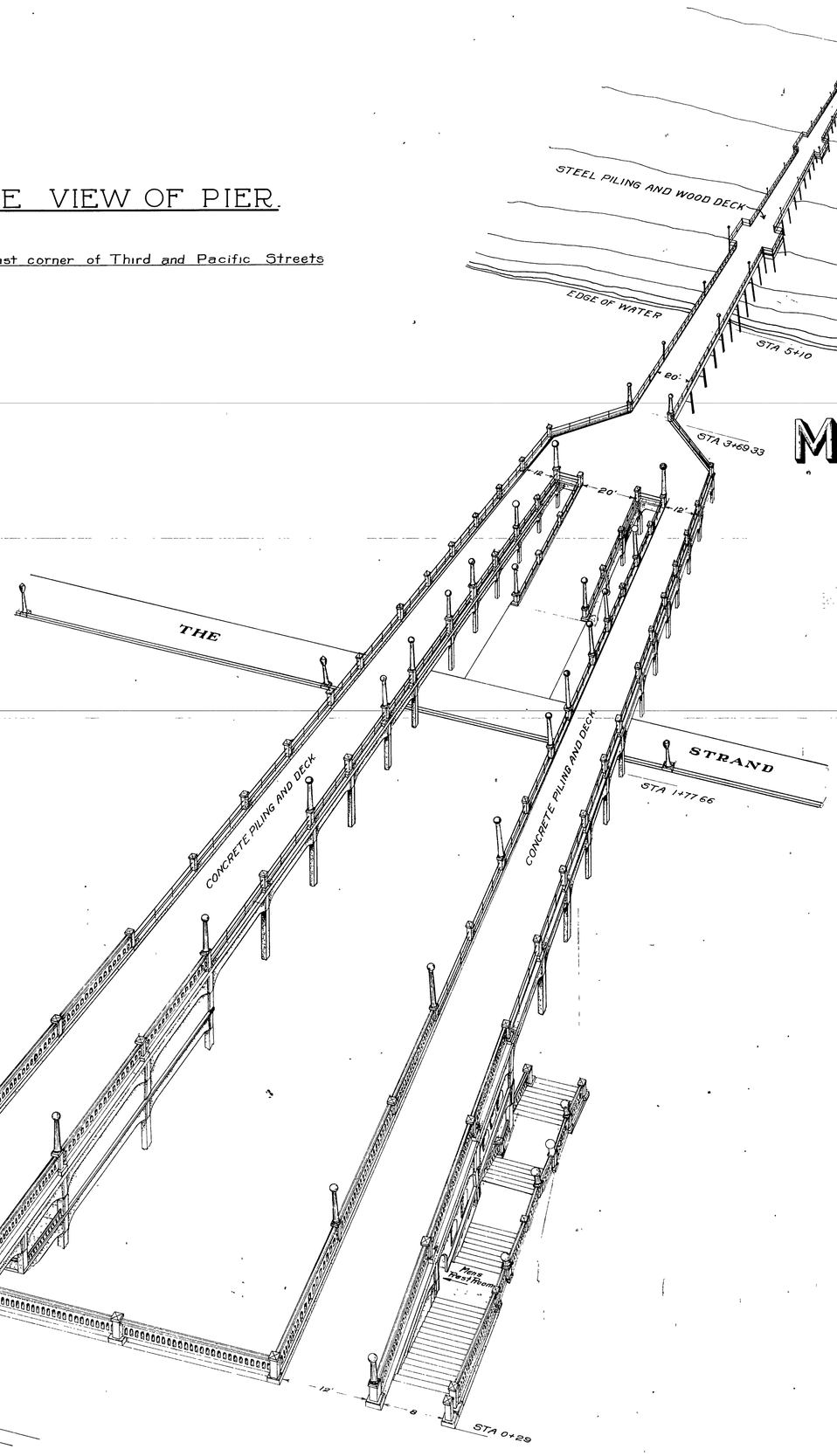
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APPENDIX A
EXISTING BRIDGE PLANS

PERSPECTIVE VIEW OF PIER.

As seen from over the northeast corner of Third and Pacific Streets



MUNICIPAL PLEASURE PIER.

FOR THE CITY OF

OCEANSIDE, CALIFORNIA.

DESIGNED BY AND BUILT UNDER THE SUPERVISION OF } P.L. Loucks C.E., City Engineer of Oceanside. 1926.

Drawn by - C.S. Seabrook

CONTENTS OF PLANS.	
SHEET	SUBJECT
1.	Title and perspective
2.	General Plan (concrete section)
3.	" " (steel section)
4.	South Rest Room
5.	North Rest Room
6.	Rest Rooms to steel structure
7	Concrete details
8.	" "
9.	" "
10.	Steel details
11.	" "
12.	Pier end

BOARD OF TRUSTEES

E.A. Walsh (PRESIDENT)
Bernard Macdonald
C.D. Merrill
H.D. Brodie
H.F. Crandell
J.H. Landes (CLerk)

3-B

MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA.

Sheet 4 of 12 Sheets.

R.L. Loucks - City Engineer

REST ROOM

CONCRETE DECK
Elevation 41.75

BALCONY
Elev 32.38

PLAN.

STA 0+89.06

Elev 41.75

CONCRETE SIDEWALK

WEST CURB LINE OF PACIFIC STREET

PACIFIC STREET

Elev 37.38

STA 0+29.00

STA 0+16

SOUTH WING OF PIER.
PORTION ADJOINING PACIFIC STREET.
REINFORCED CONCRETE CONSTRUCTION.

Scale 1"=4'

Lights and light posts as shown on general plan

SOUTH ELEVATION.

2" GI Pipe Hand Rail.

4" Vents

4" Vents

SIDEWALK
Elev 41.75

CURB

Elev 32.38
BALCONY FLOOR

Top of 12"x12" brace
Elev 23

GROUND PROFILE

22'6" | 22'8 | 20' | 11'0 | 9'0" | 9'0" | 9'0"

MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA
Sheet 2 of 12 Sheets
R.L Loucks - City Engineer

GENERAL · PLAN · AND · ELEVATION.

PART - 1

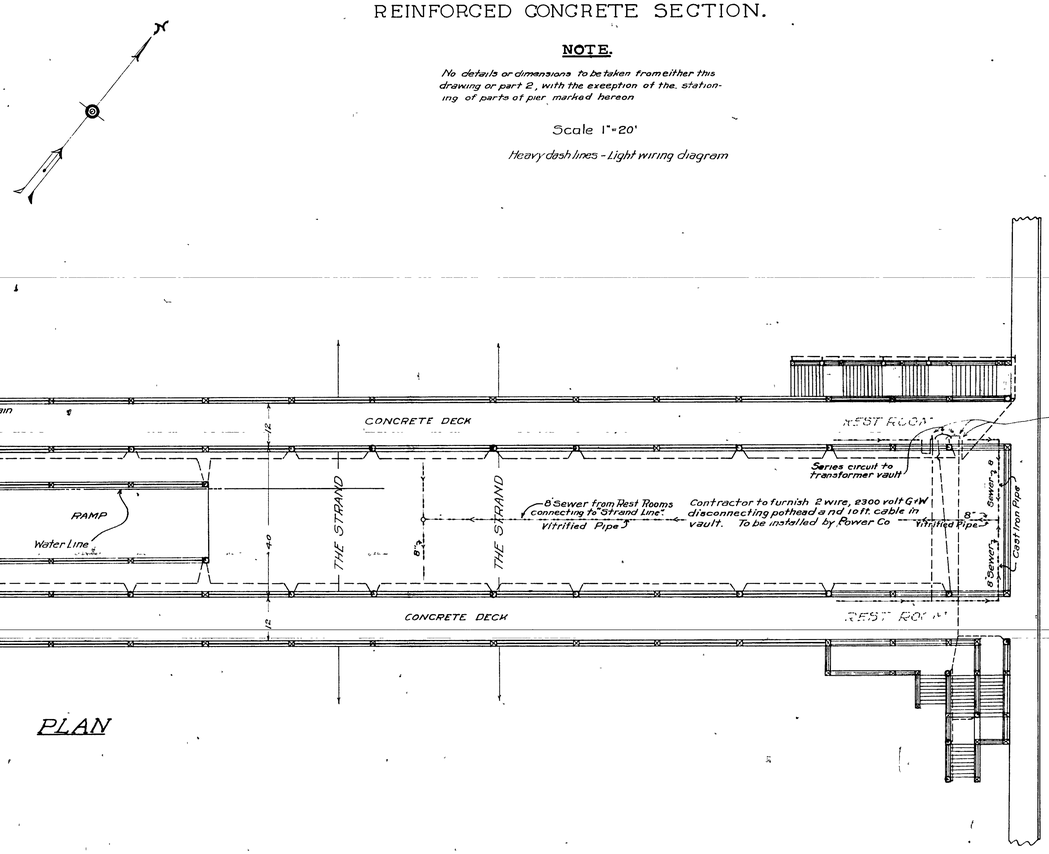
REINFORCED CONCRETE SECTION.

NOTE.

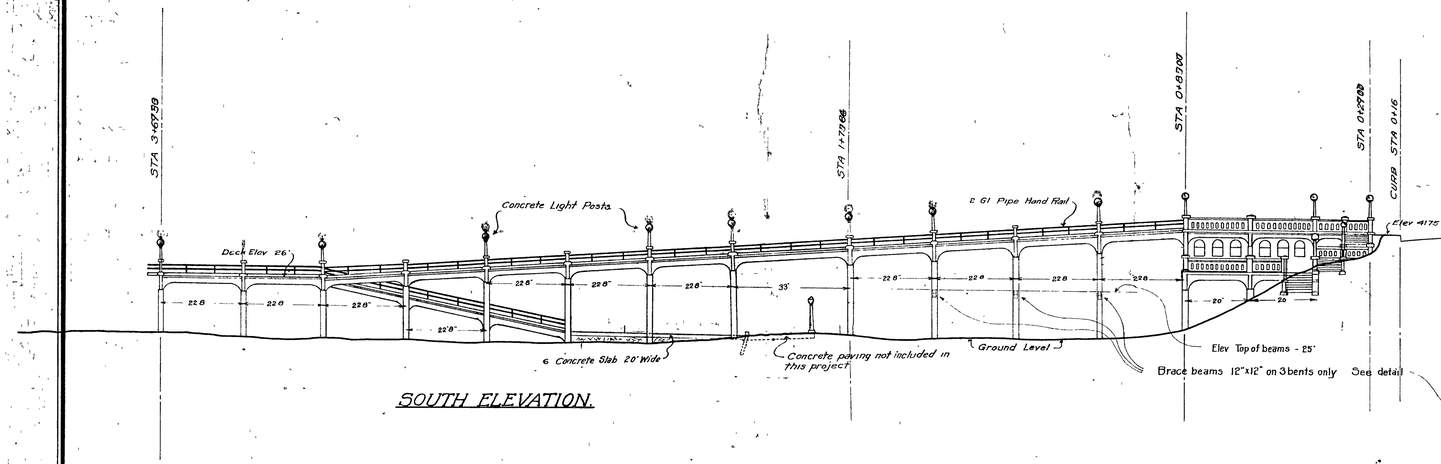
No details or dimensions to be taken from either this drawing or part 2, with the exception of the stationing of parts of pier marked hereon

Scale 1"=20'

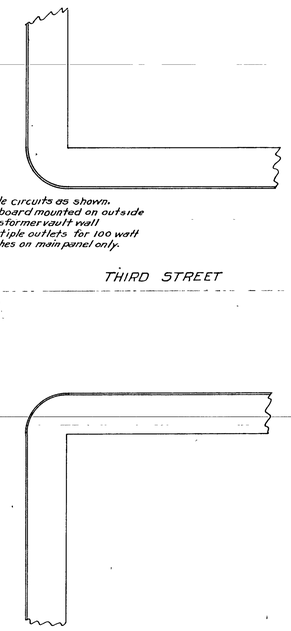
Heavy dash lines - Light wiring diagram

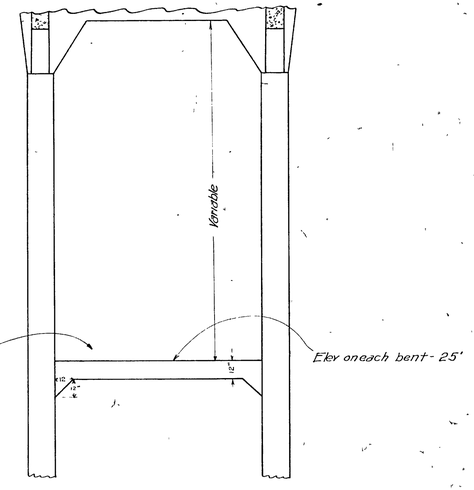


PLAN



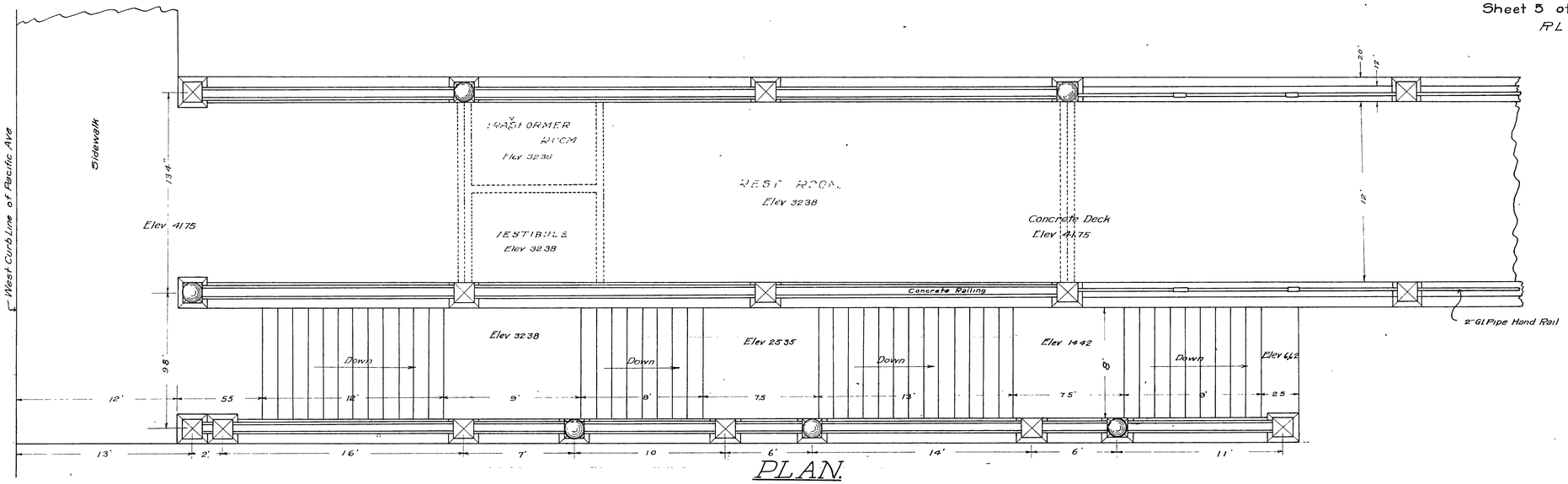
SOUTH ELEVATION.





BRACING BEAM ON 3 BENTS ONLY

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 5 of 12 Sheets.
R L Loucks - City Engineer



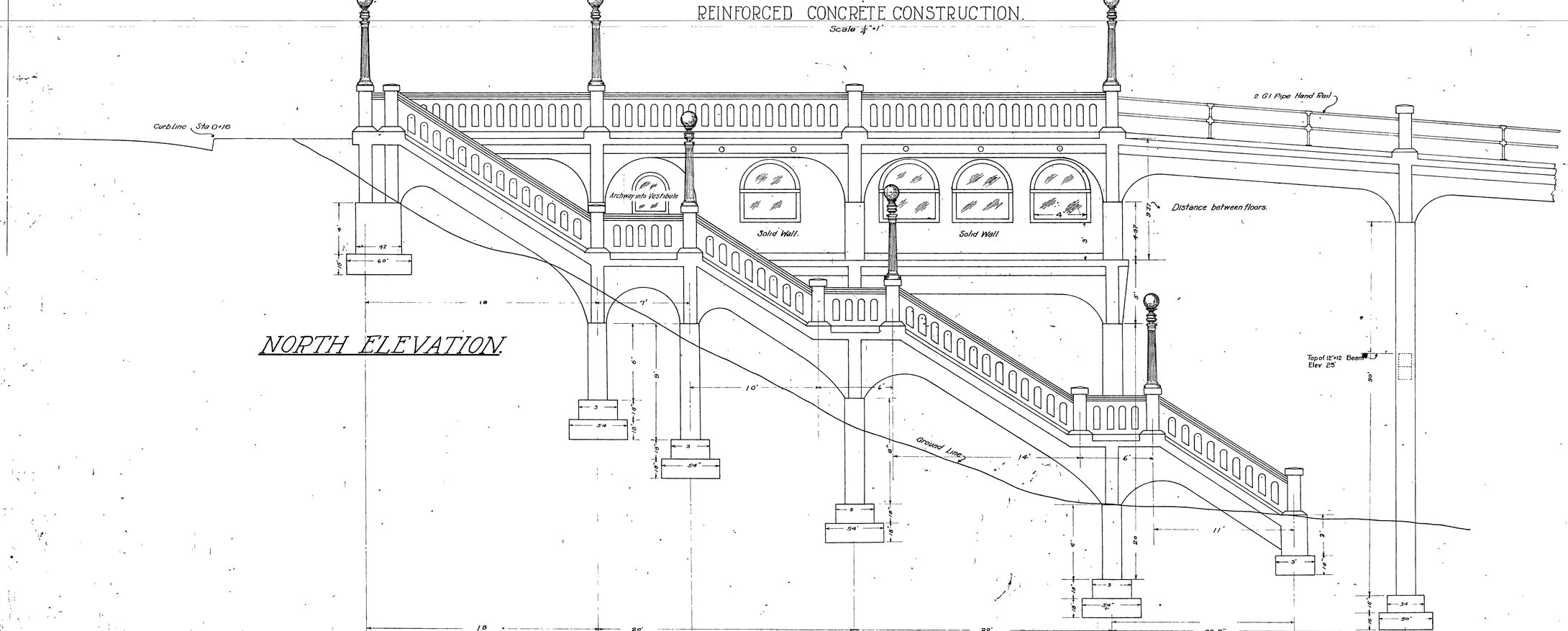
PLAN.

NORTH WING OF PIER.

PORTION ADJOINING PACIFIC AVENUE.

REINFORCED CONCRETE CONSTRUCTION.

Scale 4"=1'



NORTH ELEVATION.

E. & PACIFIC ASE STA 0+00

3-34

MUNICIPAL PLEASURE PIER
OCEANSIDE, CALIFORNIA.

Sheet 6 of 12 Sheets.

R.L. Loucks, City Engineer.

PORTION OF PIER
INCLUDING RAMP

Steel and Wood Construction

Reinforced Concrete Construction

Drinking Fountain

WALK

CONCRETE

DECK

12'

10'

20'

10'

12

CONCRETE

Wood Deck Concrete Deck

Dotted Circles indicating wooden piling beneath footing

67'4"

Elev 26.00

CONCRETE RAMP

TO PIER

TO BEACH

CONCRETE WALK TO STRAND

CONCRETE

DECK

CONCRETE

DECK

PLAN

22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 33'

Floor Elev 26.00

Floor Elev 26.00

7'7" 7'7" 7'7" 7'7" 7'7" 8'3" 9'3"

18' 18' 18' 18' 18' 18' 18' 18'

20' 20' 20' 22' 24' 25' 24' 26'

Elev 12.90

6" Concrete slab, 20' long extending from ramp to point on The Strand.

THE STRAND.

GROUND LEVEL

EARTH FILL

These footings are to be 3' wide, 3' deep, and 74' long, being continuous from one side of the pier to the other.

Wood piling, 16' long, one beneath each column as shown

DATUM PLANE MEAN SEA LEVEL

#6 Wire Hoops

5/8 Rods

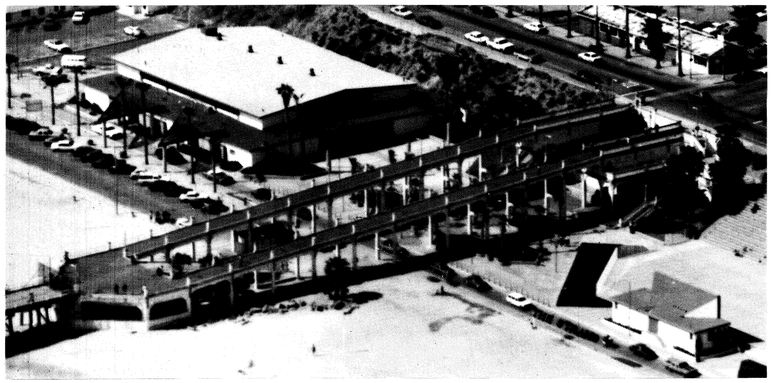
Typical reinforcing to be placed in each footing

SOUTH ELEVATION

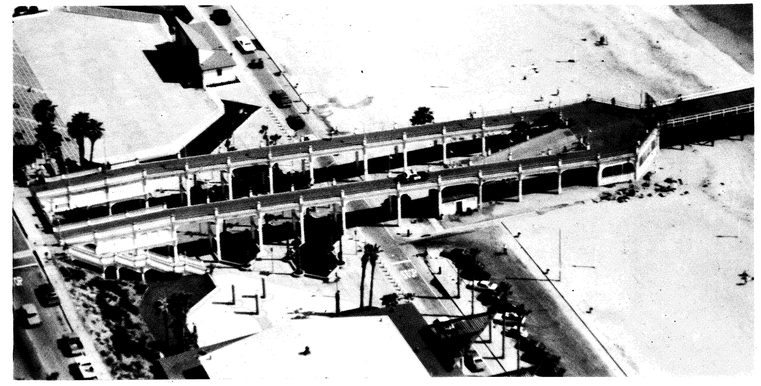
89969

OCEANSIDE PIER RESTORATION

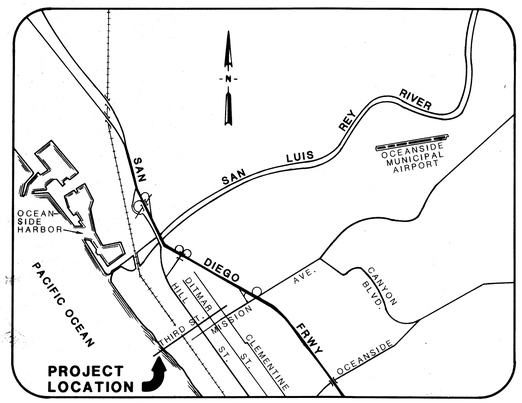
CONCRETE PORTION, INCLUDING LIFEGUARD HEADQUARTERS



LOOKING NORTH



LOOKING SOUTH



LOCATION MAP

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R-5	NEW ROOF SECTIONS & DETAILS	B-406
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REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

NOTE:
PHOTOS ON THIS SHEET WERE TAKEN 5-8-85

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

SHEET R-1 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

TITLE SHEET

Approved
City Engineer

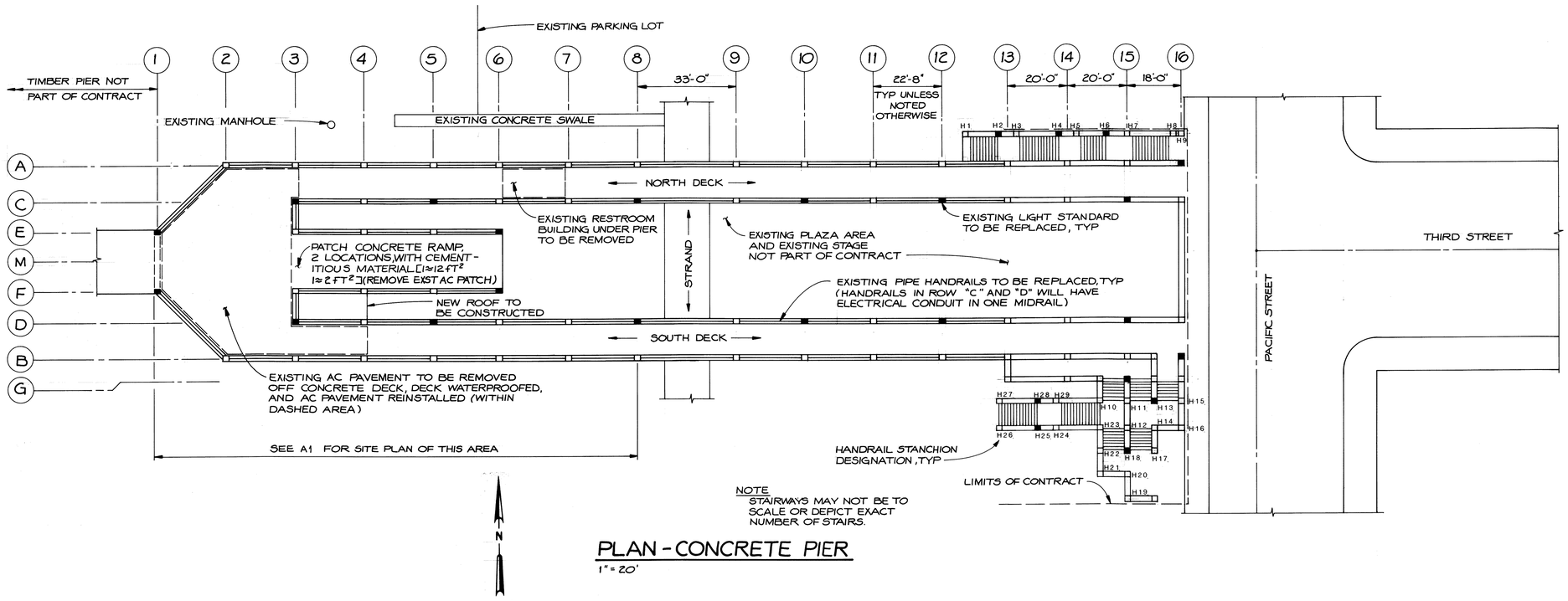
ENGINEER OF WORK
R.C.E. 20883

Checked by
Approval date

B-402

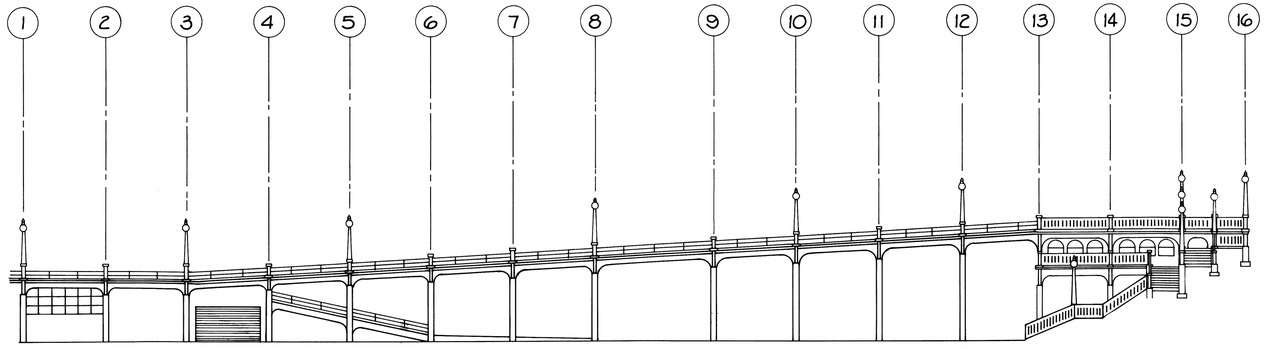
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NOTE
STAIRWAYS MAY NOT BE TO SCALE OR DEPICT EXACT NUMBER OF STAIRS.

PLAN - CONCRETE PIER
1" = 20'



SOUTH ELEVATION
1" = 20'

NOTES:
1. Locations on pier requiring repair are noted in the field inspection report enclosed with the specification. They are referenced to the bent and row designation noted on these drawings. Areas found in possible need of repair that are not designated in the inspection report shall be brought to the attention of the Engineer.

2. All materials and construction shall be in conformance with these plans and specifications, the Standard Specifications for Public Works Construction (where not covered in these specifications), the City of Oceanside Department of Building and Safety, OSHA, and all other applicable codes and ordinances.

3. Dimensions and quantities shall be verified by the contractor.

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK
Description:
Location:
Record From:
Elev: Datum:

REGISTERED PROFESSIONAL ENGINEER
JAMES M. ROSS
20883
CIVIL
STATE OF CALIFORNIA

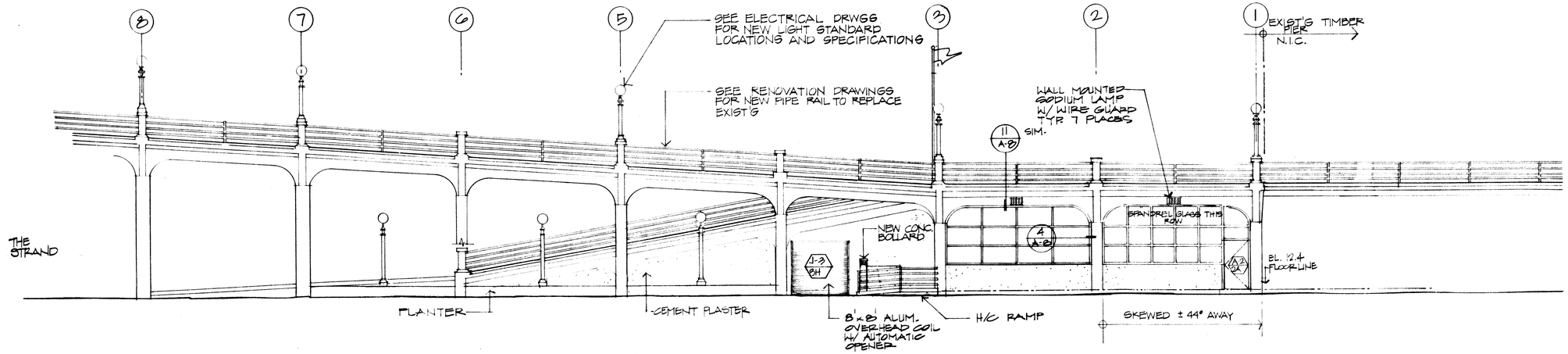
SHEET R-2 | CITY OF OCEANSIDE ENGINEERING DEPARTMENT | SHEETS

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

PLAN AND ELEVATION

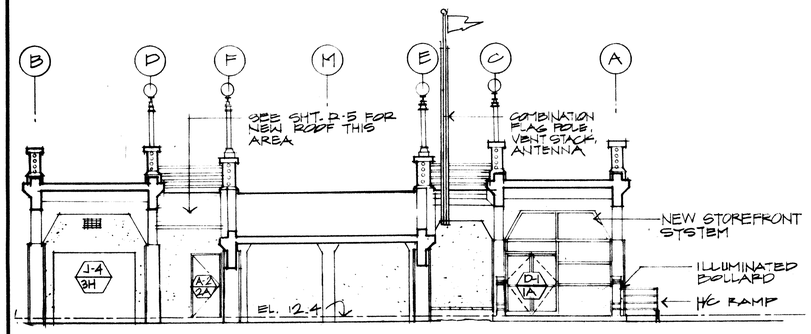
Approved Ronald A Beach 8-17-95 City Engineer

ENGINEER OF WORK R.C.E. 20883 | Checked by | Approval date | B-403



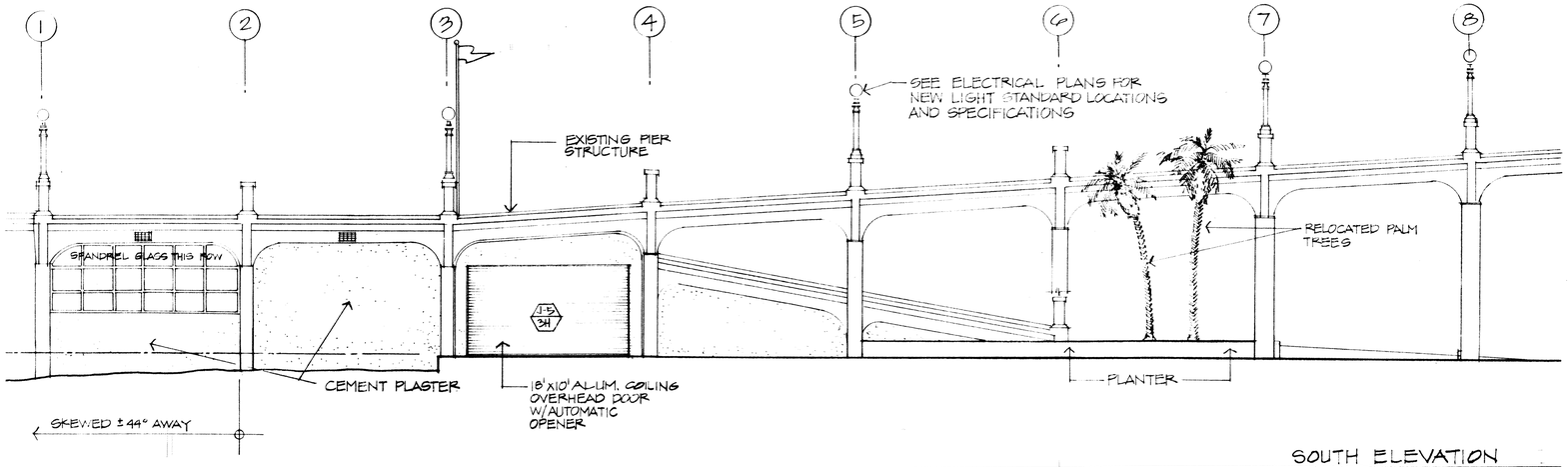
NORTH ELEVATION

SCALE 1/8" = 1'-0"



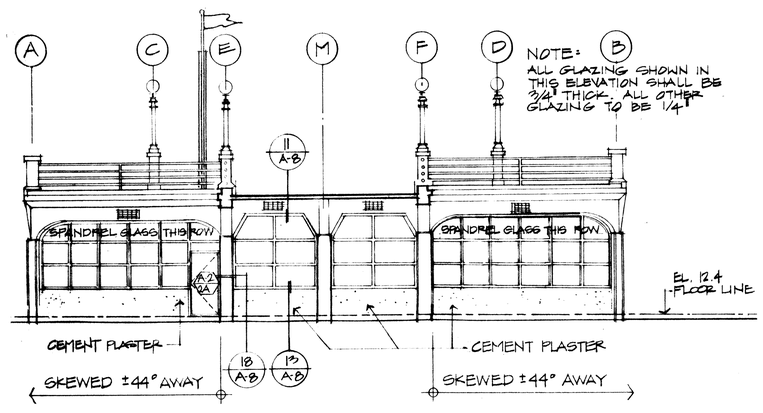
EAST ELEVATION

SCALE 1/8" = 1'-0"



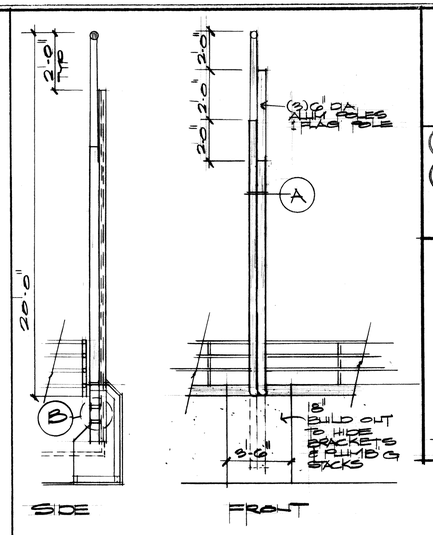
SOUTH ELEVATION

SCALE 1/8" = 1'-0"



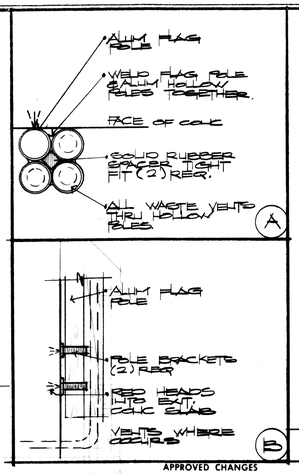
WEST ELEVATION

SCALE 1/8" = 1'-0"



FLAG POLE

1



HELVETICA MEDIUM

OCEANSIDE LIFEGUARD HEADQUARTERS

6" TYP.

DIE-CUT VINYL LETTERS TO BE INSIDE MOUNTED TO GLASS PANEL NEXT TO PUBLIC ENTRY DOORS SEE SPEC.



MOUNT ON DOOR TO RM. 111

MOUNT ON DOOR TO RM. 110

MOUNT ON DOOR TO RM. 102

THESE SIGNS TO BE ALUMINUM FRAME WITH ACRYLIC PLASTIC PLAQUE INSERTS SEE SPEC.

SIGNS

2

APPROVED CHANGES

No.	Description	Approved By	Date

BENCH MARK

Description: _____

Location: _____

Record From: _____

Elev: _____ Datum: _____

REGISTERED ARCHITECT — WILLIAM A. DANIELSON — No. C7396 — STATE OF CALIFORNIA

DANIELSON DESIGN GROUP

SHEET	CITY OF OCEANSIDE ENGINEERING DEPARTMENT	SHEETS
A-3		

OCEANSIDE PIER RESTORATION
CONCRETE PORTION/LIFEGUARD HEADQUARTERS

EXTERIOR ELEVATIONS

Approved Ronald A Beck 9-17-85 City Engineer

ENGINEER OF WORK	Checked by	
R.C.E.	Approval date	B-410

ATTACHMENT 10:

HAZARDOUS BUILDING MATERIALS SURVEY

Hazardous Building Materials Survey

City of Oceanside Municipal Pier
Pier View Way Bridge and Lifeguard Headquarters
Restoration/Replacement Project
301 The Strand North
Oceanside, California

Moffatt & Nichol

1660 Hotel Circle North, Suite 500 | San Diego, California

May 26, 2021 | Project No. 109214001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

May 26, 2021
Project No. 109214001

Mr. Jared Cole, PE
Moffatt & Nichol
1660 Hotel Circle North, Suite 500
San Diego, California 92108

Subject: Hazardous Building Materials Survey
City of Oceanside Municipal Pier
Pier View Way Bridge and Lifeguard Headquarters
Restoration/Replacement Project
301 The Strand North
Oceanside, California 92054

Dear Mr. Cole:

In accordance with your request and authorization to proceed, Ninyo & Moore has performed a hazardous building materials (HBM) survey at the Pier View Way Bridge and Lifeguard Headquarters (subject structures) of the City of Oceanside Municipal Pier, located at the western terminus of Pier View Way and addressed 301 The Strand North in Oceanside, California (subject site). The HBM survey was performed in support of the Restoration/Replacement Project, which is an effort between Moffatt & Nichol and the City of Oceanside to update and improve the subject structures. The attached report presents our methodology, findings, and recommendations regarding the HBM at the subject site.

Sincerely,
NINYO & MOORE

Nicholas Marinello | CAC No. 17-6117
Project Environmental Scientist

Stephen J. Waide | CIH, CSP
Principal Environmental Scientist

NSM/SJW/gg

Distribution: (1) Addressee (via email)
(1) Mr. Matthew Martinez, Moffatt & Nichol (via email)
(1) Ms. Alexandra Ford, Moffatt & Nichol (via email)

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1	INTRODUCTION	1
2	OBJECTIVE AND SCOPE OF SERVICES	1
3	SITE DESCRIPTION	2
4	PHYSICAL LIMITATIONS	3
5	SAMPLE COLLECTION AND ANALYSES	3
5.1	Asbestos-Containing Materials Survey	3
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6.1	Asbestos-Containing Materials	5
6.2	Lead-Containing Surfaces	6
6.3	Other Potential Hazardous Building Materials	7
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1 – Site Location

2 – Site Plan

3 – Sample Locations, Lifeguard Headquarters

4 – Sample Locations, Bait Shop and Pier Storage

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1 – Asbestos Survey Results

2 – Summary of Asbestos-Containing Materials

3 – XRF Data Sheet

4 – Summary of Lead-Containing Surfaces

5 – Summary of Other Potential Hazardous Building Materials

APPENDICES

A – Suspect Asbestos-Containing Materials Sampling Protocol

B – Laboratory Analytical Report and Chain-of-Custody Records

C – County of San Diego – Rule 1206 Requirements

D – XRF Testing Methodology

E – CDPH Form 8552 – Lead Hazard Evaluation Report

1 INTRODUCTION

Ninyo & Moore has conducted an HBM survey at the Pier View Way Bridge and Lifeguard Headquarters of the Oceanside Municipal Pier, addressed 301 The Strand North within the City of Oceanside and the County of San Diego, California (Figure 1). Our services included an asbestos-containing materials (ACM) survey, a lead-containing surfaces (LCS) survey, and visual identification and quantification of building materials potentially falling under the California Department of Toxic Substances Control (DTSC) Universal Waste Rule (UWR) and other potential hazardous building materials. Our scope included the concrete portions of the Pier, specifically the concrete bridge, stairways, ramp, storage space, and lifeguard headquarters (subject structures). It is our understanding that the Restoration/Replacement Project will develop a plan either to renovate the subject structures to address age and access-related concerns or to demolish and replace the subject structures.

The purpose of this survey was to locate other suspect building materials/surfaces, to sample and/or test the identified suspect materials/surfaces, and to assess conditions and quantities of those materials/surfaces identified as hazardous that may be impacted by the Restoration/Replacement Project. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by the California Department of Public Health (CDPH) and U.S. Department of Housing and Urban Development (HUD), and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

The survey was performed in accordance with established guidelines for the assessment of ACM and LCS, and is based upon conditions at the subject site at the time of our survey update activities.

2 OBJECTIVE AND SCOPE OF SERVICES

The purpose of this report is to provide information regarding the current site conditions to assist Moffatt & Nichol and the City of Oceanside in developing and implementing future site improvements to the subject structures. Our scope of work performed for the survey is identified below.

- Conducted a visual reconnaissance of the subject structures to identify and/or document homogeneous areas and locate suspect ACM, LCS, building materials potentially falling under the UWR, and other potential hazardous building materials.
- Collected 58 bulk samples of suspect ACM and submitted them to an independent laboratory for analysis of asbestos content. Samples were analyzed via the U.S. Environmental Protection Agency (EPA)-recommended method of polarized light microscopy (PLM) with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993.

- Collected 264 X-Ray Fluorescence (XRF) readings of potential LCS.
- Visually assessed building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed.
- Prepared this report presenting our data and summarizing our findings and recommendations regarding ACM, LCS, and other potential hazardous building materials for the subject structures.
- Prepared sample location maps showing the locations where suspect ACM were collected and the locations where XRF readings of surfaces with lead concentrations in excess of 1.0 milligrams per square centimeter (mg/cm^2) were detected.

3 SITE DESCRIPTION

Ninyo & Moore performed survey activities in May of 2021. The subject site is located at the western terminus of Pier View Way, spanning across The Strand North from the intersection with North Pacific Street. The Junior Seau Beach Community Center is located to the north along The Strand and Rotary Park located to the south.

The concrete bridge was constructed in 1926 to connect the bluff to the wooden pier. The structure consists of two parallel spans, a ramp to the beach, stairways on the north and south sides, and storage spaces that were originally restrooms. Restroom use is reported to have ended decades ago when public restrooms were built along The Strand, and restroom fixtures are no longer present in the bridge structure. In 1985, the western portion of the bridge substructure was converted into the Oceanside Fire Department's Lifeguard Division Headquarters. The conversion built office, locker room, and garage space into the bridge.

The concrete bridge has a textured finish on the bent columns, railings, pedestals, and walls. The walking deck, ramp, and stairs are untextured and unpainted concrete. The storage areas generally have concrete ceilings, walls, and floors; the exception is the southwestern portion of the north storage area (formerly a men's restroom) where ceramic tiles are present on the walls and floors.

The Lifeguard Headquarters is generally finished with drop-in ceiling panel, drywall, or plaster ceilings; concrete or drywall walls with vinyl covebase; and carpet or vinyl floor tile floors. The locker room areas are finished with plaster ceilings, drywall and ceramic tile walls, and ceramic tile floors. The garage is finished with concrete and metal ceilings and concrete walls and floors.

4 PHYSICAL LIMITATIONS

Survey activities were limited to the aboveground structures within our scope. Underground utilities, such as suspect cementitious water lines or suspect insulated/coated gas or electrical lines, were not assessed during our survey activities.

Physical limitations, such as inaccessible rooms or spaces, were generally not encountered during survey activities. Since non-destructive sampling techniques were used, there is a possibility that additional suspect materials and/or surfaces may be encountered in inaccessible areas (e.g., interstitial wall and ceiling spaces and canopy soffits) during structure renovation and/or demolition activities. For instance, untested thermal system insulation may be present within wall and ceiling cavities and/or behind plumbing and heating fixtures (e.g., sinks, boilers, and radiators). Suspect materials and/or surfaces encountered during structure renovation and/or demolition activities that have not been assessed either may be assumed to be asbestos- and/or lead-containing and handled accordingly, or may be sampled and analyzed to assess whether they are asbestos- and/or lead-containing.

5 SAMPLE COLLECTION AND ANALYSES

The subject structures were assessed for the presence of ACM and LCS, and other potential hazardous building materials. The ACM and LCS surveys followed EPA guidelines, or industry standards, within the limitations of the scope of this assessment. Survey activities are discussed below.

5.1 Asbestos-Containing Materials Survey

Ninyo & Moore's objective was to collect representative samples of suspect ACM observed in the subject structures. The asbestos survey was performed by a State of California Certified Asbestos Consultant and Certified Site Surveillance Technician. Survey activities included a preliminary visual assessment, bulk sampling of suspect ACM, and logging and mapping of collected samples. Representative samples of suspect ACM were collected after identification of homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction or application date, and general appearance). Material type, location, condition, and friability were noted for each homogeneous area. For the purposes of the assessment, the bridge structures, including the Lifeguard Headquarters and storage spaces, were not subdivided for the identification of homogeneous areas. Fifty-eight (58) samples of suspect ACM were collected using EPA-recommended sampling procedures (Appendix A).

The suspect ACM samples were delivered to EMSL Analytical of San Diego, California and shipped to EMSL Analytical of Las Vegas, Nevada (EMSL) for analysis. EMSL is accredited in the National Voluntary Laboratory Accreditation Program for bulk asbestos fiber analysis. The samples were analyzed for the presence and quantification of asbestos fibers, using PLM with dispersion staining, in accordance with EPA Method 600/R-93/116, version dated July 1993. Due to material layering, eighty-six (86) separate PLM analyses were initially performed. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by weight. Currently, the EPA and the State of California stipulate that materials containing greater than 1% asbestos constitute ACM. The State of California further stipulates that materials containing greater than 0.1% asbestos constitute asbestos-containing construction materials (ACCM).

Building materials that were sampled and analyzed for the presence of asbestos in this survey are presented in the attached Table 1, and the locations from which bulk asbestos samples were collected during this survey are shown on Figures 3 and 4. Copies of the laboratory analytical report and chain-of-custody records for this survey are presented in Appendix B. Survey information, as required by the County of San Diego Air Pollution Control District's Rule 1206, is presented in Appendix C.

5.2 Lead-Containing Surfaces Survey

Ninyo & Moore's objective was to test suspect LCS observed in the subject structures and to assess the condition of those surfaces found to be lead-containing. The testing was conducted by a CDPH-certified Inspector/Assessor using a portable Viken Detection Pb200i XRF Lead Paint Analyzer, in accordance with accepted environmental science and engineering practices for renovation projects. The testing methodology utilized is presented in Appendix D. Two hundred sixty-four (264) XRF readings (including calibration checks) were collected during the survey. LCS, based on the CDPH and HUD lead-based paint regulatory standards, are surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm^2, or 0.5% by weight. For the purposes of this assessment, LCS refers to both lead-based paint, as defined by CDPH and HUD, and other potential lead-containing materials, including, but not limited to, ceramic tile and porcelain bathroom fixtures.

Building components that were tested for the presence of lead during this survey are presented in the attached Table 3. The XRF testing orientation (A, B, C, and D wall orientations) utilized during the survey, and the locations from which XRF readings in excess of 1.0 mg/cm^2 were detected, are shown on Figures 3 and 4. A copy of CDPH Form 8552 "Lead Hazard Evaluation Report" for the subject buildings is included in Appendix E.

5.3 Other Potential Hazardous Building Materials

Ninyo & Moore performed a visual assessment of building materials potentially falling under the UWR, including, but not limited to non-incandescent light bulbs, mercury-containing thermostat triggers, batteries, and electronic devices. Other potentially hazardous building materials, including, but not limited to, polychlorinated biphenyl-containing light ballasts, tritium-containing exit signs, americium-containing smoke detectors, and Freon-containing air conditioning units and refrigerators, were noted, if observed. For the purposes of this assessment, "Freon" refers to both Freon™, the brand-name refrigerants and aerosols produced by The Chemours Company, and other halocarbon/fluorocarbon refrigerants. **In accordance with the scope of work, positive identification of the suspect hazardous material, via analytical testing, was not performed.** Other potentially hazardous building materials are summarized in Table 5.

6 FINDINGS AND RECOMMENDATIONS

The findings of this survey are based on our visual observations and analysis of suspect building materials/surfaces. Our findings are presented below.

6.1 Asbestos-Containing Materials

Based on the analytical results from this survey, ACM are located at the subject structures and are summarized in Table 2. Specifically, an approximately six-inch-diameter asbestos cement pipe (also known as transite) was identified emerging from the sand to the northeast of the Lifeguard Headquarters (see below photograph; additional photographs available upon request). The amount of material present is unknown, although approximately one foot was visible. Materials that were not sampled and analyzed as part of this assessment and that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should also be assumed to be asbestos-containing.

The identified ACM should not be disturbed. Given the material's location and accessibility, a protective enclosure of the material is recommended. Prior to future structure renovation and/or demolition activities, a licensed asbestos abatement contractor should remove the ACM in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm ACM locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.**



Photograph: Asbestos cement pipe (transite) located northeast of Lifeguard Headquarters.

Should additional suspect materials, not sampled or assessed in this report, be uncovered during building renovation and/or demolition: (a) samples of suspect materials should be collected for laboratory analysis, and all activities that may impact the materials should cease until laboratory analytical results are reviewed; or (b) the materials should be assumed to be asbestos-containing and handled as such. Note that any work involving the disturbance of materials containing asbestos should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

6.2 Lead-Containing Surfaces

Based on the results of the XRF assays collected during this survey, surfaces containing concentrations of lead greater than or equal to 1.0 mg/cm^2, or 0.5% by weight, were identified in the subject structures. Specifically, painted surfaces and ceramic tile in the storage spaces/former restrooms were identified as LCS. Surfaces with a lead content exceeding the regulatory standards for lead in surface coatings are summarized in Table 4.

Please note that disturbing surfaces containing lead concentrations below the LCS criteria, as defined by CDPH and HUD, (e.g., lead concentrations less than 1.0 mg/cm^2, or 0.5% by weight) may still trigger the California Occupational Safety and Health Administration (Cal-OSHA) lead in construction standard (Title 8 California Code of Regulations Section 1532.1).

The identified LCS should not be disturbed. Prior to structure renovation and/or demolition activities, a licensed abatement contractor should remove the LCS in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm LCS locations and quantities prior to bid submittals and prior to initiating renovation and/or demolition activities for the subject structures.** In addition, please note that LCS condition was based upon Ninyo & Moore's visual observations during survey activities and that LCS conditions may further deteriorate prior to renovation and/or demolition activities.

Should suspect surfaces, not tested or assessed in this report, be uncovered during structure renovation and/or demolition: (a) XRF testing of the surfaces should occur and all activities that impact the suspect surfaces should cease until XRF testing results become available; (b) paint chip or bulk samples of suspect surfaces should be collected for laboratory analysis and all activities that impact the suspect surfaces should cease until laboratory analytical results are reviewed; or (c) the surfaces should be assumed to contain concentrations of lead greater than or equal to 1.0 mg/cm^2, or 0.5% by weight, and handled as such. Note that any work involving the disturbance of surfaces containing lead should be performed using appropriate work practices and be conducted by, and under the supervision of, properly trained, experienced, and certified personnel.

6.3 Other Potential Hazardous Building Materials

A visual assessment and quantification of building materials falling under the UWR and other potential hazardous building materials that could be impacted by the Restoration/Replacement Project was performed. Other potential hazardous building materials observed within the subject Structures are summarized in Table 5 and include:

- Fluorescent light tubes and associated ballasts;
- Non-incandescent light bulbs and associated ballasts;
- Potentially americium-containing smoke detectors;
- Potentially Freon-containing refrigeration systems; and
- Gasoline, oil, and paint storage.

Prior to renovation and/or demolition activities that could potentially disturb these materials, building materials falling under the UWR and other potential hazardous building materials should be removed and properly recycled or disposed of by a licensed contractor in accordance with federal, state, and local regulations. **It is the contractor's responsibility to confirm miscellaneous hazardous building materials quantities and locations present prior to bid submittals and initiating renovation and/or demolition activities for the subject structures.** The Contractor is also responsible for waste characterization for all materials removed from the subject structures.

7 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by conducting a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the site evaluated. However, if additional suspect building materials are encountered during renovation and/or demolition activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. In addition, please note that quantities of impacted building materials are approximate. It is the contractor's responsibility to confirm quantities present.

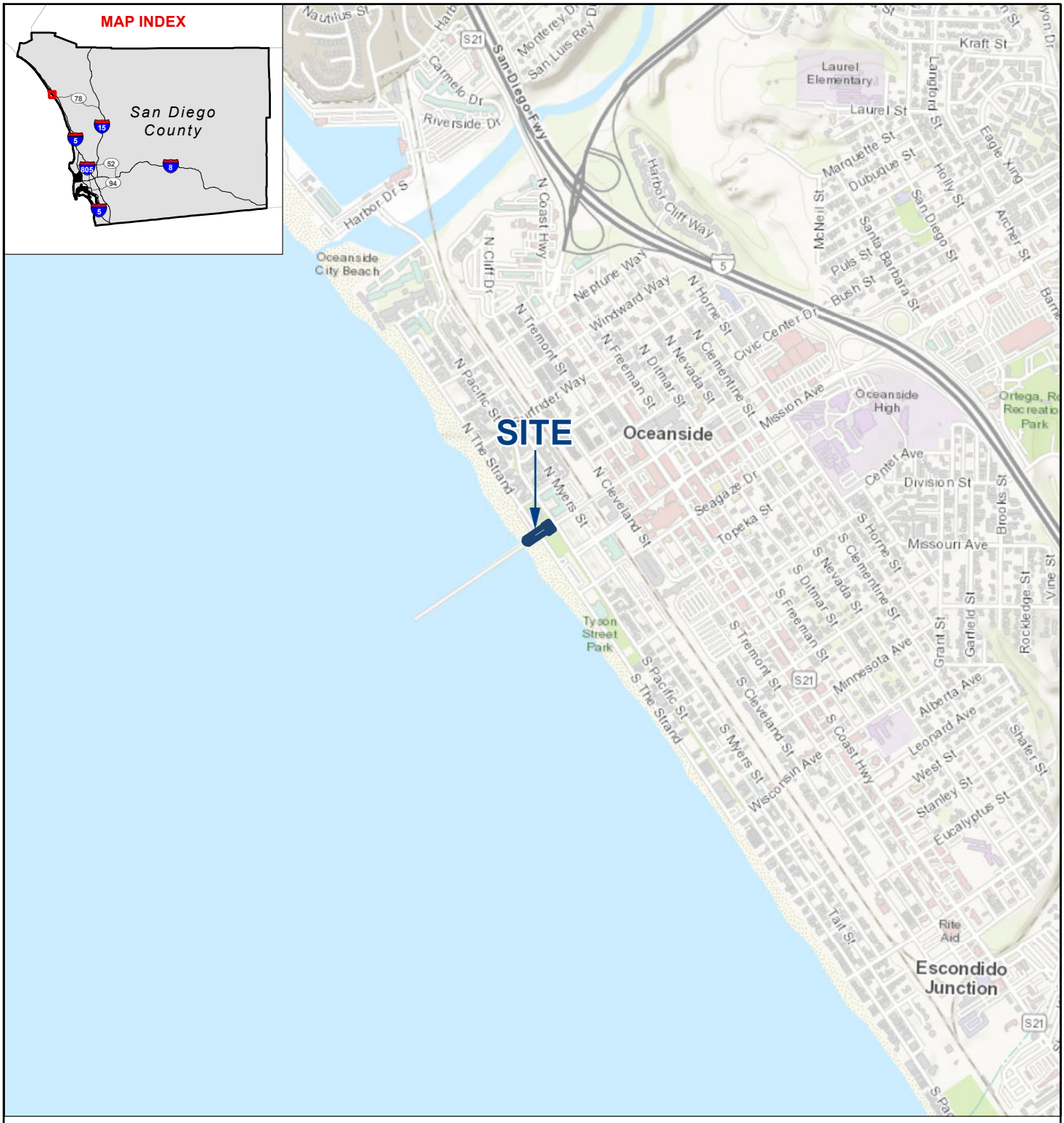
The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory that is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results. Please note the laboratory analytical report states “Due to the magnification limitations inherent in PLM, asbestos fibers below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testings by transmission electron microscopy to confirm asbestos quantities.”

Our findings, opinions, and recommendations are based on an analysis of the observed site conditions. It should be understood that the conditions of the site can change with time as a result of natural processes or the activities of humans at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

FIGURES



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: ESRI WORLD TOPO, 2021

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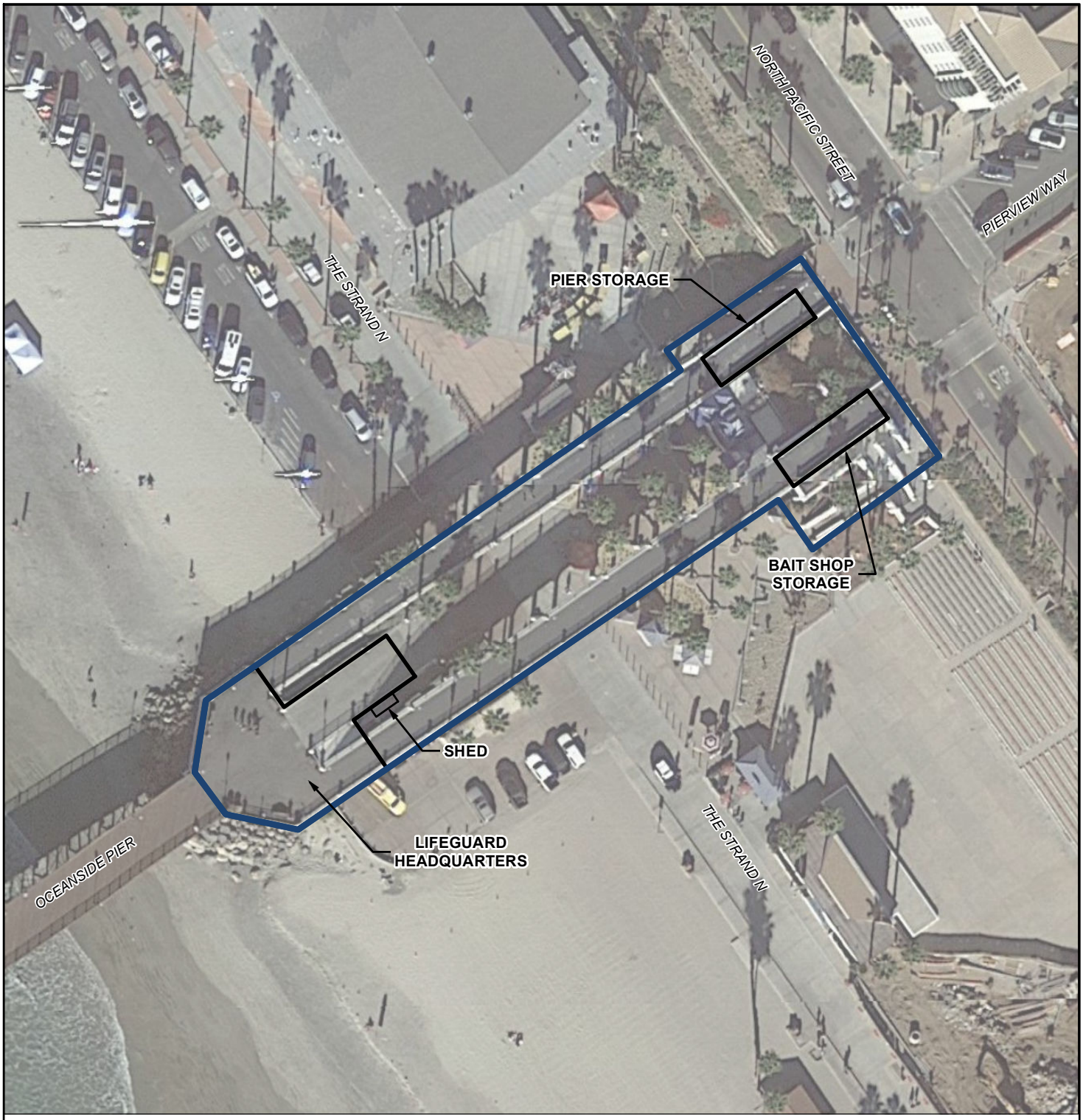
FIGURE 1

SITE LOCATION

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 | 5/21

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



LEGEND

SITE BOUNDARY

AREA/SPACE BOUNDARY

N

FEET

0 60 120

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2021

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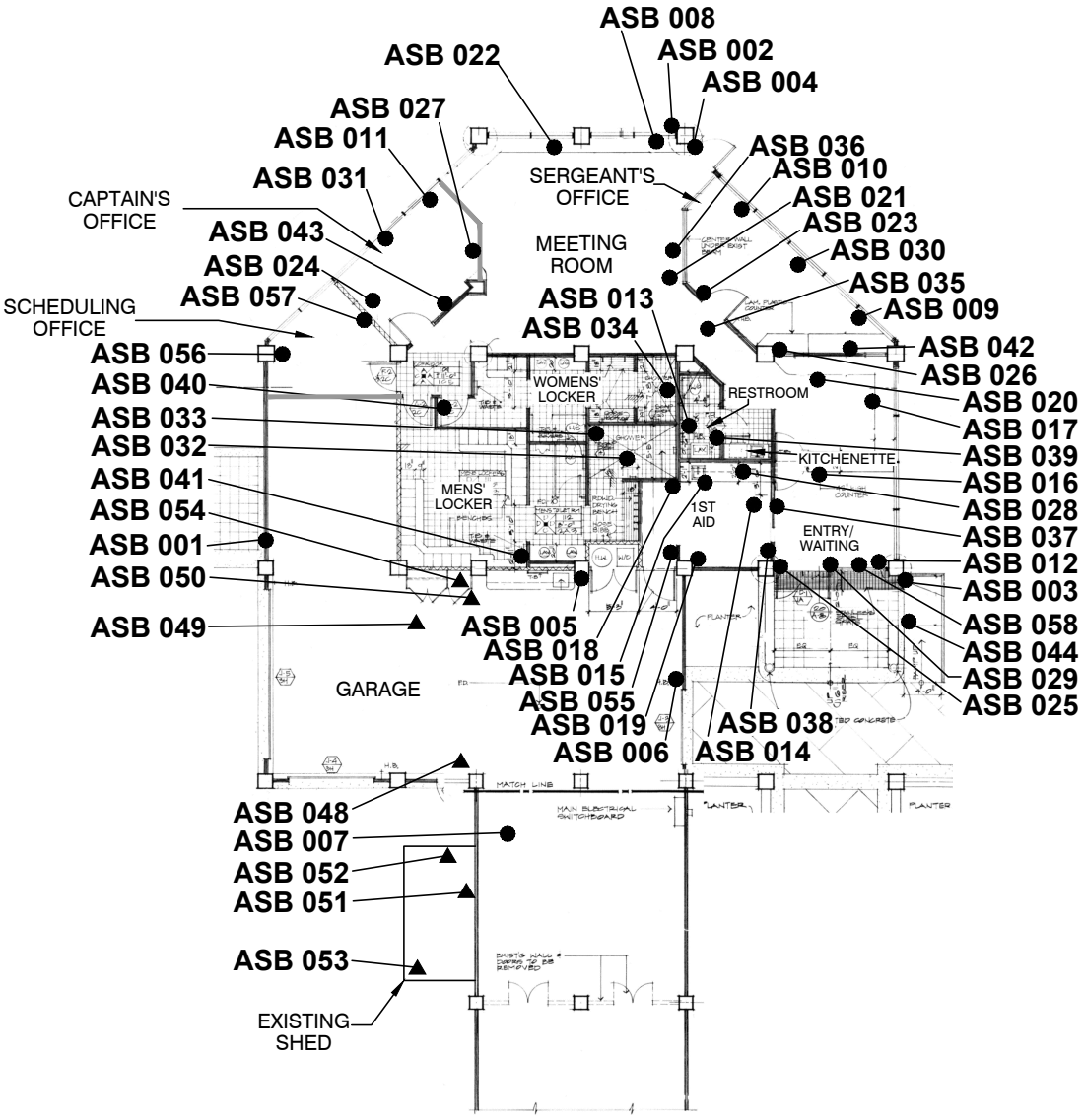
FIGURE 2

SITE PLAN

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 | 5/21

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



LEGEND

● **ASB 058** ASBESTOS SAMPLE

▲ **ASB 054** ASBESTOS ROOF SAMPLE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: DANIELSON DESIGN GROUP, DATED 9/17/85.

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3 109214001 SPL LIFEGUARD.DWG AOB

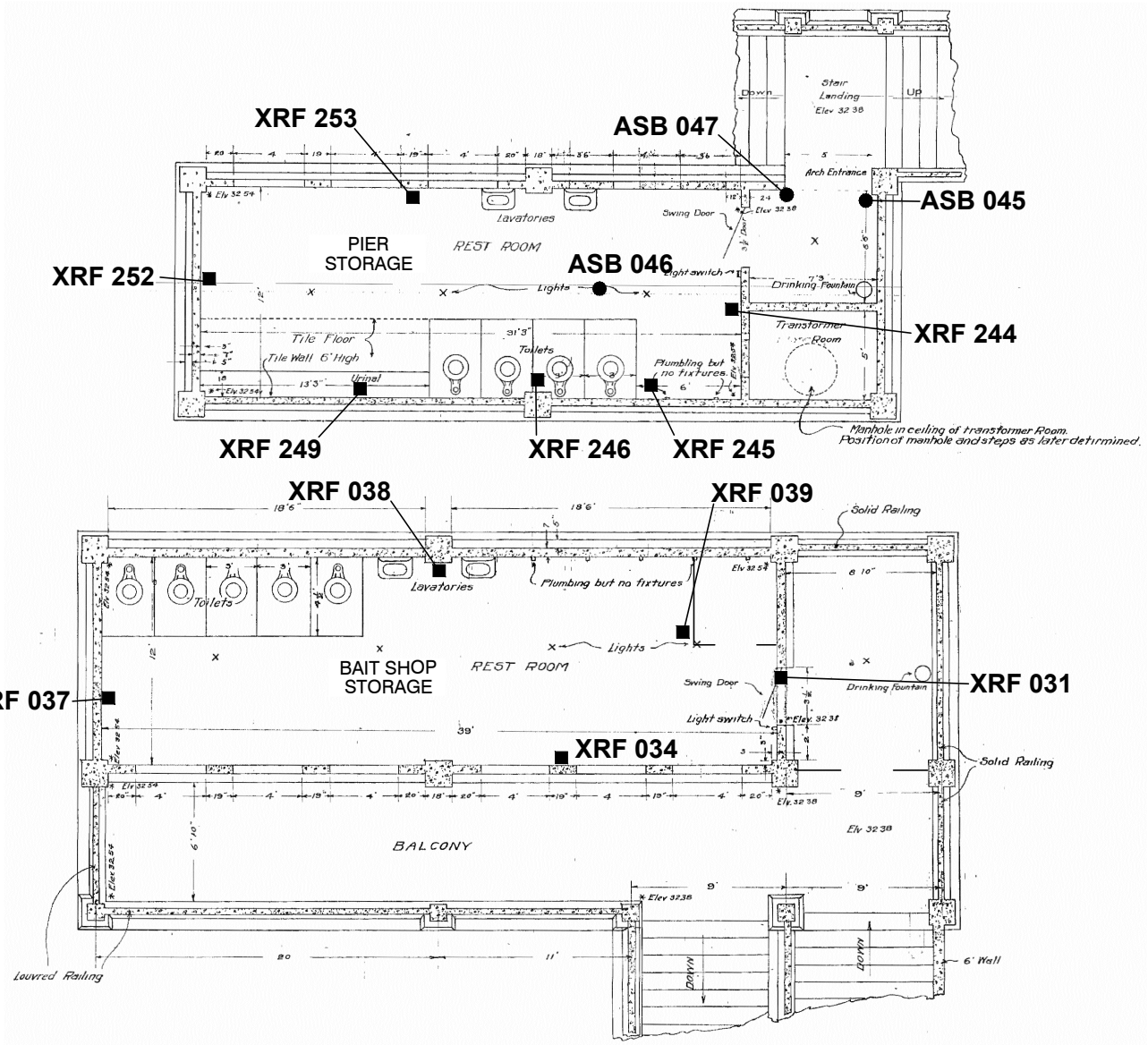
FIGURE 3

SAMPLE LOCATIONS, LIFEGUARD HEADQUARTERS

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

109214001 I 5/21



LEGEND

● **ASB 047** ASBESTOS SAMPLE

■ **XRF 253** XRF ASSAY IN EXCESS OF 1.0 mg/cm^2

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.
REFERENCE: CITY OF OCEANSIDE, DATED 1926.

N

FEET
0 10 20

FIGURE 4

SAMPLE LOCATIONS, BAIT SHOP AND PIER STORAGE

PIER VIEW WAY BRIDGE AND LIFEGUARD HEADQUARTERS
301 THE STRAND NORTH, OCEANSIDE, CALIFORNIA

109214001 I 5/21

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

4 109214001 SPL STORAGE.DWG AOB

TABLES

Table 1 - Asbestos Survey Results

Sample No.	Bldg. No.	Room No.	Sample Location	Sample Description	Approx. Quantity [1]	Friable Y / N	Condition	Asbestos Content
ASB-001	Lifeguard HQ	Exterior	South wall	Brown concrete	--	N/A	N/A	ND
ASB-002	Lifeguard HQ	Exterior	West wall	Gray/white stucco	--	N/A	N/A	ND
ASB-002A	Lifeguard HQ	Exterior	West wall	Brown concrete	--	N/A	N/A	ND
ASB-003	Lifeguard HQ	Exterior	North wall	Gray/white stucco	--	N/A	N/A	ND
ASB-003A	Lifeguard HQ	Exterior	North wall	Brown concrete	--	N/A	N/A	ND
ASB-004	Lifeguard HQ	Exterior	West doorway	Gray door sealant	--	N/A	N/A	ND
ASB-005	Lifeguard HQ	Bay Area	West wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-006	Lifeguard HQ	Bay Area	North wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-007	Lifeguard HQ	Bay Area	South ceiling under ramp, over concrete	White texture material	--	N/A	N/A	ND
ASB-008	Lifeguard HQ	Meeting	West wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-009	Lifeguard HQ	Sergeants' Office	East wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-010	Lifeguard HQ	Sergeants' Office	West wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-011	Lifeguard HQ	Captain's Office	West wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-012	Lifeguard HQ	Waiting	East wall, over concrete	Gray texture material	--	N/A	N/A	ND
ASB-013	Lifeguard HQ	Restroom	South ceiling	2'x4' tan/white acoustic ceiling panel	--	N/A	N/A	ND
ASB-014	Lifeguard HQ	First Aid	North ceiling	2'x4' tan/white acoustic ceiling panel	--	N/A	N/A	ND
ASB-015	Lifeguard HQ	First Aid	West sink	White undercoating	--	N/A	N/A	ND
ASB-016	Lifeguard HQ	Waiting	East floor, under carpet	12"x12" tan vinyl floor tile	--	N/A	N/A	ND
ASB-016A	Lifeguard HQ	Waiting	East floor, under carpet	Black mastic	--	N/A	N/A	ND
ASB-017	Lifeguard HQ	Waiting	North floor, under carpet	12"x12" tan vinyl floor tile	--	N/A	N/A	ND
ASB-017A	Lifeguard HQ	Waiting	North floor, under carpet	Black mastic	--	N/A	N/A	ND
ASB-018	Lifeguard HQ	First Aid	West floor	12"x12" blue vinyl floor tile	--	N/A	N/A	ND
ASB-018A	Lifeguard HQ	First Aid	West floor	Black mastic	--	N/A	N/A	ND
ASB-019	Lifeguard HQ	First Aid	East floor	12"x12" blue vinyl floor tile	--	N/A	N/A	ND
ASB-019A	Lifeguard HQ	First Aid	East floor	Black mastic	--	N/A	N/A	ND
ASB-020	Lifeguard HQ	Waiting	West floor	Gold carpet glue	--	N/A	N/A	ND
ASB-021	Lifeguard HQ	Meeting	North floor	Gold carpet glue	--	N/A	N/A	ND
ASB-022	Lifeguard HQ	Meeting	West floor	Gold carpet glue	--	N/A	N/A	ND
ASB-023	Lifeguard HQ	Sergeants' Office	East floor	Gold carpet glue	--	N/A	N/A	ND
ASB-024	Lifeguard HQ	Captain's Office	South floor	Gold carpet glue	--	N/A	N/A	ND
ASB-025	Lifeguard HQ	Waiting	East lower wall	Tan covebase glue	--	N/A	N/A	ND
ASB-026	Lifeguard HQ	Sergeants' Office	East lower wall	Tan covebase glue	--	N/A	N/A	ND

Table 1 - Asbestos Survey Results

Sample No.	Bldg. No.	Room No.	Sample Location	Sample Description	Approx. Quantity [1]	Friable Y / N	Condition	Asbestos Content
ASB-027	Lifeguard HQ	Captain's Office	North lower wall	Tan covebase glue	--	N/A	N/A	ND
ASB-028	Lifeguard HQ	First Aid	West lower wall	Tan covebase glue	--	N/A	N/A	ND
ASB-029	Lifeguard HQ	Waiting	East windows	Gray window sealant	--	N/A	N/A	ND
ASB-030	Lifeguard HQ	Sergeants' Office	West windows	Gray window sealant	--	N/A	N/A	ND
ASB-031	Lifeguard HQ	Captain's Office	West windows	Gray window sealant	--	N/A	N/A	ND
ASB-032	Lifeguard HQ	Men's Shower	Center ceiling	Gray/tan plaster	--	N/A	N/A	ND
ASB-033	Lifeguard HQ	Men's Shower	West ceiling	Gray/tan plaster	--	N/A	N/A	ND
ASB-034	Lifeguard HQ	Women's Shower	North ceiling	Gray/tan plaster	--	N/A	N/A	ND
ASB-035	Lifeguard HQ	Meeting/Corridor	North ceiling	Gray/tan plaster	--	N/A	N/A	ND
ASB-036	Lifeguard HQ	Meeting	West wall	Gray/tan plaster	--	N/A	N/A	ND
ASB-037	Lifeguard HQ	Waiting	South wall	Brown drywall	--	N/A	N/A	ND
ASB-037A	Lifeguard HQ	Waiting	South wall	White joint compound	--	N/A	N/A	ND
ASB-037B	Lifeguard HQ	Waiting	South wall	Tan/green tape	--	N/A	N/A	ND
ASB-038	Lifeguard HQ	First Aid	North wall	White drywall	--	N/A	N/A	ND
ASB-038A	Lifeguard HQ	First Aid	North wall	White joint compound	--	N/A	N/A	ND
ASB-038B	Lifeguard HQ	First Aid	North wall	Tan/purple tape	--	N/A	N/A	ND
ASB-039	Lifeguard HQ	Restroom	North wall	Brown drywall	--	N/A	N/A	ND
ASB-039A	Lifeguard HQ	Restroom	North wall	White joint compound	--	N/A	N/A	ND
ASB-039B	Lifeguard HQ	Restroom	North wall	Tan/green tape	--	N/A	N/A	ND
ASB-040	Lifeguard HQ	Women's Shower	South wall	Brown drywall	--	N/A	N/A	ND
ASB-040A	Lifeguard HQ	Women's Shower	South wall	Beige joint compound	--	N/A	N/A	ND
ASB-040B	Lifeguard HQ	Women's Shower	South wall	Tan/green tape	--	N/A	N/A	ND
ASB-041	Lifeguard HQ	Men's Shower	East wall	Brown drywall	--	N/A	N/A	ND
ASB-041A	Lifeguard HQ	Men's Shower	East wall	Tan joint compound	--	N/A	N/A	ND
ASB-042	Lifeguard HQ	Sergeants' Office	North wall	Brown drywall	--	N/A	N/A	ND
ASB-042A	Lifeguard HQ	Sergeants' Office	North wall	White joint compound	--	N/A	N/A	ND
ASB-042B	Lifeguard HQ	Sergeants' Office	North wall	Tan/green tape	--	N/A	N/A	ND
ASB-043	Lifeguard HQ	Captain's Office	East wall	White drywall	--	N/A	N/A	ND
ASB-043A	Lifeguard HQ	Captain's Office	East wall	White joint compound	--	N/A	N/A	ND
ASB-043B	Lifeguard HQ	Captain's Office	East wall	Tan/green tape	--	N/A	N/A	ND
ASB-044	**Lifeguard HQ**	**Exterior**	**North pipe**	**Gray transite pipe (6" diameter)**	**Unknown (1 LF visible)**	**N**	**Fair**	**12% chrysotile 4% crocidolite**

Table 1 - Asbestos Survey Results

Sample No.	Bldg. No.	Room No.	Sample Location	Sample Description	Approx. Quantity [1]	Friable Y / N	Condition	Asbestos Content
ASB-045	Pier Stor.	Entry	North wall	Tan/white stucco	--	N/A	N/A	ND
ASB-045A	Pier Stor.	Entry	North wall	Gray concrete	--	N/A	N/A	ND
ASB-046	Pier Stor.	Main Stor.	Center ceiling	Tan/white stucco	--	N/A	N/A	ND
ASB-046A	Pier Stor.	Main Stor.	Center ceiling	Gray concrete	--	N/A	N/A	ND
ASB-047	Pier Stor.	Entry	North doorway	White door sealant	--	N/A	N/A	ND
ASB-048	Lifeguard HQ	Roof	East roof	White/black roofing	--	N/A	N/A	ND
ASB-048A	Lifeguard HQ	Roof	East roof	Black tar felt	--	N/A	N/A	ND
ASB-049	Lifeguard HQ	Roof	Southwest roof	White/black roofing	--	N/A	N/A	ND
ASB-049A	Lifeguard HQ	Roof	Southwest roof	Black tar felt	--	N/A	N/A	ND
ASB-050	Lifeguard HQ	Roof	West roof	White/black roofing	--	N/A	N/A	ND
ASB-050A	Lifeguard HQ	Roof	West roof	Black tar felt	--	N/A	N/A	ND
ASB-051	Lifeguard HQ	Shed Roof	North roof	Gray/black shingle	--	N/A	N/A	ND
ASB-051A	Lifeguard HQ	Shed Roof	North roof	Black tar paper	--	N/A	N/A	ND
ASB-052	Lifeguard HQ	Shed Roof	West roof	Gray/black shingle	--	N/A	N/A	ND
ASB-052A	Lifeguard HQ	Shed Roof	West roof	Black tar paper	--	N/A	N/A	ND
ASB-053	Lifeguard HQ	Shed Roof	East roof	Gray/black shingle	--	N/A	N/A	ND
ASB-053A	Lifeguard HQ	Shed Roof	East roof	Black tar paper	--	N/A	N/A	ND
ASB-054	Lifeguard HQ	Roof	West roof	Gray/white edge sealant	--	N/A	N/A	ND
ASB-055	Lifeguard HQ	First Aid	East ceiling	2'x4' tan/white acoustic ceiling panel	--	N/A	N/A	ND
ASB-056	Lifeguard HQ	Scheduling Office	Southwest wall, over concrete	White texture material	--	N/A	N/A	ND
ASB-057	Lifeguard HQ	Scheduling Office	North lower wall	Tan covebase glue	--	N/A	N/A	ND
ASB-058	Lifeguard HQ	Waiting	East floor	12"x12" tan vinyl floor tile	--	N/A	N/A	ND
ASB-058A	Lifeguard HQ	Waiting	East floor	Black mastic	--	N/A	N/A	ND

NOTES:

Bulk asbestos sample analysis via EPA 600/R-93/116 method using polarized light microscopy, unless otherwise noted.

Results in **BOLD** are ACM, as defined by EPA and the State of California, and results in *ITALICS* are ACCM, as defined by the State of California.

[1] **= Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.**

LF = Linear feet

N/A = Not applicable

ND = None detected

HQ = Headquarters

Stor. = Storage

Table 2 - Summary of Asbestos-Containing Materials

Sample No.(s)	ACM Location [1]	ACM Description	Approx. Quantity [2]	Friable Y / N	Condition	Asbestos Content
ASB-044	Northeast of Lifeguard Headquarters - Emerging from sand	Transite pipe (6" diameter)	Unknown (1 LF visible)	N	Fair	12% chrysotile 4% crocidolite

NOTES:

[1] = ACM locations are based upon Ninyo & Moore's visual observations during survey activities. Materials that are uniform in color, texture, construction or application date, and/or general appearance to materials found to be asbestos-containing, should be presumed to be asbestos-containing.

[2] = Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.

LF = Linear feet

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity (1)	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
1	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	0.9	0.3
2	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.1	0.3
3	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.1	0.3
4	--	Blank Calibration Check								--	-0.3	0.3
5	--	Blank Calibration Check								--	-0.3	0.3
6	--	Blank Calibration Check								--	-0.1	0.3
7	Lifeguard HQ	1	B	Women's Locker	Wall	Drywall	Intact	White	NEG	--	0.1	0.3
8	Lifeguard HQ	1	C	Women's Locker	Door	Metal	Intact	Beige	NEG	--	0.0	0.3
9	Lifeguard HQ	1	C	Women's Locker	Door vent	Metal	Intact	White	NEG	--	0.0	0.3
10	Lifeguard HQ	1	C	Women's Locker	Door jamb	Metal	Intact	Beige	NEG	--	0.0	0.3
11	Lifeguard HQ	1	C	Women's Locker	Locker	Metal	Intact	Beige	NEG	--	0.0	0.3
12	Lifeguard HQ	1	C	Women's Locker	Soffit	Metal	Intact	Beige	NEG	--	0.1	0.2
13	Lifeguard HQ	1	C	Women's Locker	Soffit	Metal	Intact	White	NEG	--	-0.1	0.3
14	Lifeguard HQ	1	C	Women's Locker	Cabinets	Wood	Intact	White	NEG	--	0.0	0.3
15	Lifeguard HQ	1	C	Women's Locker	Wall	Metal	Intact	Beige	NEG	--	-0.3	0.3
16	Lifeguard HQ	1	C	Women's Locker	Wall	Metal	Intact	Blue	NEG	--	-0.6	0.3
17	Lifeguard HQ	1	--	Women's Locker	Ceiling	Plaster	Intact	White	NEG	--	-0.1	0.3
18	Lifeguard HQ	1	--	Women's Shower	Ceiling	Plaster	Intact	White	NEG	--	0.0	0.3
19	Lifeguard HQ	1	D	Women's Shower	Wall	Metal	Intact	Beige	NEG	--	-0.4	0.3
20	Lifeguard HQ	1	A	Women's Locker	Wall	Drywall	Intact	White	NEG	--	0.0	0.3
21	Lifeguard HQ	1	--	Women's Locker	Floor	Metal	Intact	Beige	NEG	--	0.3	0.2
22	Lifeguard HQ	1	--	Women's Locker	Floor	Metal	Intact	Beige	NEG	--	0.2	0.2
23	Lifeguard HQ	1	A	Women's Locker	Toilet	Metal	Intact	White	NEG	--	-0.2	0.3
24	Lifeguard HQ	1	A	Women's Locker	Baseboard	Metal	Intact	Beige	NEG	--	-0.2	0.3
25	Bait Shop Stor.	2	A	Entry	Wall	Concrete	Intact	White	NEG	--	0.2	0.2
26	Bait Shop Stor.	2	B	Entry	Door	Metal	Intact	White	NEG	--	0.0	0.3
27	Bait Shop Stor.	2	B	Entry	Door stop	Metal	Intact	White	NEG	--	0.1	0.3
28	Bait Shop Stor.	2	B	Entry	Wall	Wood	Intact	White	NEG	--	0.1	0.3
29	Bait Shop Stor.	2	B	Entry	Wall	Wood	Intact	White	NEG	--	-0.2	0.3
30	Bait Shop Stor.	2	B	Entry	Wall	Concrete	Intact	White	NEG	--	0.2	0.2
31	**Bait Shop Stor.**	**2**	**C**	**Entry**	**Door frame**	**Wood**	**Intact**	**White**	**POS**	**2 EA**	**6.7**	**0.3**
32	Bait Shop Stor.	2	C	Entry	Wall	Concrete	Intact	White	NEG	--	0.1	0.3
33	Bait Shop Stor.	2	D	Entry	Wall	Wood	Intact	White	NEG	--	-0.2	0.3
34	**Bait Shop Stor.**	**2**	**B**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**1,100 SF**	**4.2**	**0.3**
35	Bait Shop Stor.	2	B	Main Storage	Window frame	Wood	Intact	White	NEG	--	-0.3	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity [1]	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
36	Bait Shop Stor.	2	C	Main Storage	Wall	Concrete	Intact	White	NEG	--	0.9	0.2
37	**Bait Shop Stor.**	**2**	**C**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 34**	**2.5**	**0.3**
38	**Bait Shop Stor.**	**2**	**D**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 34**	**3.8**	**0.3**
39	**Bait Shop Stor.**	**2**	**D**	**Main Storage**	**Wall**	**Wood**	**Intact**	**White**	**POS**	**75 SF**	**1.2**	**0.3**
40	Bait Shop Stor.	2	D	Main Storage	Door	Wood	Intact	White	NEG	--	0.0	0.3
41	**Bait Shop Stor.**	**2**	**A**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 34**	**1.5**	**0.3**
42	Bait Shop Stor.	2	--	Main Storage	Ceiling	Concrete	Intact	White	NEG	--	0.2	0.2
43	Bait Shop Stor.	2	--	Main Storage	Ceiling	Concrete	Intact	White	NEG	--	0.3	0.2
44	Bait Shop Stor.	2	D	Closet	Rafter/framing	Wood	Intact	White	NEG	--	-0.3	0.3
45	Bait Shop Stor.	2	D	Closet	Rafter/framing	Wood	Intact	White	NEG	--	-0.3	0.3
46	Bait Shop Stor.	2	A	Closet	Shelf	Wood	Intact	White	NEG	--	-0.1	0.3
47	Bait Shop Stor.	2	A	Closet	Shelf	Wood	Intact	White	NEG	--	-0.2	0.3
48	Bait Shop Stor.	2	B	Closet	Door	Wood	Intact	Green	NEG	--	-0.1	0.3
49	Bait Shop Stor.	2	B	Closet	Door	Wood	Intact	Green	NEG	--	-0.3	0.3
50	Bridge	3	A	South Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.1	0.3
51	Bridge	3	D	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
52	Bridge	3	D	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
53	Bridge	3	D	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.1	0.3
54	Bridge	3	B	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.1	0.3
55	Bridge	3	B	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.5	0.2
56	Bridge	3	B	South Bridge	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
57	Bridge	3	D	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
58	Bridge	3	B	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
59	Bridge	3	B	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
60	Bridge	3	B	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
61	Bridge	3	D	South Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.5	0.2
62	Bridge	3	B	South Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.5	0.2
63	Bridge	3	B	South Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.2	0.2
64	Bridge	3	D	South Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.3	0.3
65	Bridge	3	D	South Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.1	0.3
66	Bridge	3	D	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
67	Bridge	3	B	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
68	Bridge	3	B	South Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.3	0.2

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity [1]	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
69	Bridge	3	D	South Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.3	0.2
70	Bridge	3	D	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
71	Bridge	3	B	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.3	0.2
72	Bridge	3	C	South Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
73	Bridge	3	D	South Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.3	0.3
74	Bridge	3	D	South Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.2	0.3
75	Bridge	3	C	North Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.2	0.3
76	Bridge	3	C	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
77	Bridge	3	C	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
78	Bridge	3	C	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
79	Bridge	3	C	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.3
80	Bridge	3	B	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
81	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.3	0.2
82	Bridge	3	D	North Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.4	0.2
83	Bridge	3	D	North Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.2	0.2
84	Bridge	3	B	North Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.2	0.2
85	Bridge	3	B	North Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.4	0.3
86	Bridge	3	B	North Bridge	Light post	Metal	Intact	Blue	NEG	--	0.0	0.3
87	Bridge	3	B	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
88	Bridge	3	B	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
89	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.3
90	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.3	0.2
91	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.0	0.3
92	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
93	Bridge	3	D	North Bridge	Baseboard	Concrete	Intact	White	NEG	--	0.3	0.2
94	Bridge	3	D	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
95	Bridge	3	B	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
96	Bridge	3	B	North Bridge	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
97	Bridge	3	B	North Bridge	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
98	Bridge	3	D	North Bridge	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
99	Bridge	3	D	North Bridge	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
100	Bridge	3	B	North Bridge	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
101	Bridge	3	B	North Bridge	Light post	Metal	Intact	Blue	NEG	--	-0.1	0.3
102	Bridge	2	D	Center Ramp	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
103	Bridge	2	D	Center Ramp	Pedestal	Concrete	Intact	White	NEG	--	0.0	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity [1]	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
104	Bridge	2	B	Center Ramp	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
105	Bridge	2	B	Center Ramp	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
106	Bridge	2	A	Center Ramp	Light post	Metal	Intact	Blue	NEG	--	0.0	0.3
107	Bridge	2	A	Center Ramp	Light post	Metal	Intact	Blue	NEG	--	-0.1	0.3
108	Bridge	1	D	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.2	0.2
109	Bridge	1	D	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.2	0.2
110	Bridge	1	D	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.1	0.2
111	Bridge	1	D	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.3	0.2
112	Bridge	1	D	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.1	0.3
113	Bridge	1	B	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.2	0.2
114	Bridge	1	B	Ground Level, along Strand	Pipe, vertical	Metal	Intact	White	NEG	--	0.5	0.2
115	Bridge	1	B	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.1	0.2
116	Bridge	1	B	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.3	0.2
117	Bridge	1	B	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.2	0.2
118	Bridge	1	B	Ground Level, along Strand	Bent/column	Concrete	Intact	White	NEG	--	0.5	0.2
119	Bridge	1	B	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.0	0.3
120	Bridge	1	D	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
121	Bridge	1	D	South Bridge Stairs	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
122	Bridge	1	D	South Bridge Stairs	Light post	Metal	Intact	Blue	NEG	--	-0.2	0.3
123	Bridge	1	D	South Bridge Stairs	Light post	Metal	Intact	Blue	NEG	--	0.0	0.3
124	Bridge	1	B	South Bridge Stairs	Baseboard	Concrete	Intact	White	NEG	--	0.3	0.2
125	Bridge	1	D	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
126	Bridge	1	D	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
127	Bridge	2	A	South Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.2	0.2
128	Bridge	2	D	South Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.0	0.3
129	Bridge	2	D	South Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.1	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity [1]	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
130	Bridge	2	C	South Bridge Stairs	Pedestal	Concrete	Intact	White	NEG	--	0.5	0.2
131	Bridge	2	C	South Bridge Stairs	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
132	Bridge	2	D	South Bridge Stairs	Door	Concrete	Intact	White	NEG	--	0.0	0.3
133	Bridge	2	C	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
134	Bridge	3	C	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.1	0.2
135	Bridge	3	C	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.1	0.2
136	Bridge	3	A	South Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.1	0.2
137	Bridge	3	A	South Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.1	0.3
138	Bridge	3	A	At sidewalk	Railing	Concrete	Intact	White	NEG	--	0.0	0.3
139	Bridge	3	A	At sidewalk	Railing	Concrete	Intact	White	NEG	--	0.1	0.3
140	Bridge	3	A	At sidewalk	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
141	Bridge	3	A	At sidewalk	Pedestal	Concrete	Intact	White	NEG	--	0.1	0.2
142	Bridge	3	D	At sidewalk	Bollard	Metal	Intact	Blue	NEG	--	0.0	0.3
143	Bridge	2	D	North Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.1	0.3
144	Bridge	2	D	North Bridge Stairs	Light post	Metal	Intact	Blue	NEG	--	0.0	0.3
145	Bridge	2	B	North Bridge Stairs	Door	Metal	Intact	White	NEG	--	0.0	0.3
146	Bridge	2	B	North Bridge Stairs	Door casing	Wood	Intact	White	NEG	--	-0.4	0.3
147	Bridge	2	B	North Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.5	0.2
148	Bridge	2	B	North Bridge Stairs	Wall	Concrete	Intact	White	NEG	--	0.3	0.2
149	Bridge	2	D	North Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.1	0.2
150	Bridge	2	D	North Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.2	0.2
151	Bridge	2	B	North Bridge Stairs	Railing	Concrete	Intact	White	NEG	--	0.3	0.2
152	Bridge	2	B	North Bridge Stairs	Pedestal	Concrete	Intact	White	NEG	--	0.2	0.2
153	Bridge	2	D	North Bridge Stairs	Light post	Metal	Intact	Blue	NEG	--	0.0	0.3
154	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
155	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.1	0.3
156	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
157	--	Blank Calibration Check								--	-0.3	0.3
158	--	Blank Calibration Check								--	-0.3	0.3
159	--	Blank Calibration Check								--	-0.2	0.3
160	Lifeguard HQ	1	A	First Aid	Column	Concrete	Intact	Beige	NEG	--	0.2	0.2
161	Lifeguard HQ	1	A	First Aid	Wall	Drywall	Intact	Beige	NEG	--	-0.2	0.3
162	Lifeguard HQ	1	A	First Aid	Door	Metal	Intact	Gray	NEG	--	0.0	0.3
163	Lifeguard HQ	1	A	First Aid	Door casing	Metal	Intact	Gray	NEG	--	0.0	0.3
164	Lifeguard HQ	1	C	First Aid	Wall	Drywall	Intact	Beige	NEG	--	0.0	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity (1)	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
165	Lifeguard HQ	1	C	First Aid	Cabinets	Wood	Intact	Beige	NEG	--	-0.1	0.3
166	Lifeguard HQ	1	C	First Aid	Cabinets	Wood	Intact	Beige	NEG	--	0.0	0.3
167	Lifeguard HQ	1	C	First Aid	Countertop	Wood	Intact	Blue	NEG	--	0.0	0.3
168	Lifeguard HQ	1	D	First Aid	Wall	Drywall	Intact	Beige	NEG	--	-0.1	0.3
169	Lifeguard HQ	1	D	First Aid	Door casing	Metal	Intact	White	NEG	--	0.0	0.3
170	Lifeguard HQ	1	D	First Aid	Sliding door	Metal	Intact	Pink	NEG	--	0.0	0.3
171	Lifeguard HQ	1	D	First Aid	Door jamb	Metal	Intact	Pink	NEG	--	0.1	0.3
172	Lifeguard HQ	1	A	Waiting/Reception	Double door	Wood	Intact	Brown	NEG	--	-0.2	0.3
173	Lifeguard HQ	1	B	Waiting/Reception	Wall	Drywall	Intact	White	NEG	--	0.1	0.3
174	Lifeguard HQ	1	C	Waiting/Reception	Countertop	Wood	Intact	Brown	NEG	--	0.0	0.3
175	Lifeguard HQ	1	D	Waiting/Reception	Cabinets	Wood	Intact	Beige	NEG	--	0.0	0.3
176	Lifeguard HQ	1	D	Waiting/Reception	Wall	Concrete	Intact	Beige	NEG	--	0.1	0.3
177	Lifeguard HQ	1	A	Corridor	Cabinets	Wood	Intact	White	NEG	--	-0.2	0.3
178	Lifeguard HQ	1	A	Corridor	Cabinets	Wood	Intact	Brown	NEG	--	-0.1	0.3
179	Lifeguard HQ	1	A	Corridor	Cabinets	Wood	Intact	White	NEG	--	0.0	0.3
180	Lifeguard HQ	1	A	Corridor	Countertop	Wood	Intact	White	NEG	--	0.0	0.3
181	Lifeguard HQ	1	B	Corridor	Door	Metal	Intact	Beige	NEG	--	0.0	0.3
182	Lifeguard HQ	1	B	Corridor	Door casing	Metal	Intact	Beige	NEG	--	0.1	0.3
183	Lifeguard HQ	1	--	Corridor	Floor	Metal	Intact	Beige	NEG	--	0.3	0.2
184	Lifeguard HQ	1	A	Restroom	Wall	Metal	Intact	Beige	NEG	--	0.2	0.2
185	Lifeguard HQ	1	A	Restroom	Wall	Metal	Intact	Blue	NEG	--	-0.4	0.3
186	Lifeguard HQ	1	A	Restroom	Sink	Metal	Intact	White	NEG	--	-0.2	0.3
187	Lifeguard HQ	1	B	Restroom	Wall	Drywall	Intact	Beige	NEG	--	0.1	0.3
188	Lifeguard HQ	1	C	Restroom	Toilet	Metal	Intact	White	NEG	--	0.0	0.3
189	Lifeguard HQ	1	--	Restroom	Floor	Metal	Intact	Beige	NEG	--	0.3	0.2
190	Lifeguard HQ	1	A	Sergeants' Office	Wall	Drywall	Intact	Beige	NEG	--	-0.2	0.3
191	Lifeguard HQ	1	B	Sergeants' Office	Wall	Drywall	Intact	Beige	NEG	--	0.1	0.3
192	Lifeguard HQ	1	D	Sergeants' Office	Wall	Concrete	Intact	Beige	NEG	--	0.2	0.2
193	Lifeguard HQ	1	A	Meeting	Wall	Drywall	Intact	Beige	NEG	--	0.0	0.3
194	Lifeguard HQ	1	A	Meeting	Column	Concrete	Intact	Beige	NEG	--	0.2	0.2
195	Lifeguard HQ	1	A	Meeting	Countertop	Wood	Intact	Blue	NEG	--	0.0	0.3
196	Lifeguard HQ	1	A	Meeting	Cabinets	Wood	Intact	White	NEG	--	0.2	0.2
197	Lifeguard HQ	1	B	Meeting	Wall	Drywall	Intact	White	NEG	--	0.0	0.3
198	Lifeguard HQ	1	B	Meeting	Wall	Drywall	Intact	White	NEG	--	-0.1	0.3
199	Lifeguard HQ	1	C	Meeting	Door	Metal	Intact	White	NEG	--	0.1	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity (1)	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
200	Lifeguard HQ	1	A	Captain's Office	Wall	Drywall	Intact	White	NEG	--	-0.1	0.3
201	Lifeguard HQ	1	B	Captain's Office	Wall	Concrete	Intact	Beige	NEG	--	0.4	0.2
202	Lifeguard HQ	1	D	Captain's Office	Door	Metal	Intact	White	NEG	--	0.0	0.3
203	Lifeguard HQ	1	B	Scheduling Office	Column	Concrete	Intact	Beige	NEG	--	0.1	0.2
204	Lifeguard HQ	1	--	Scheduling Office	Ceiling	Drywall	Intact	Brown	NEG	--	0.1	0.3
205	Lifeguard HQ	1	A	Men's Locker	Locker	Wood	Intact	Brown	NEG	--	0.1	0.3
206	Lifeguard HQ	1	A	Men's Locker	Locker	Wood	Intact	White	NEG	--	0.0	0.3
207	Lifeguard HQ	1	A	Men's Locker	Locker	Wood	Intact	Beige	NEG	--	0.0	0.3
208	Lifeguard HQ	1	A	Men's Locker	Rafter/framing	Wood	Intact	Brown	NEG	--	-0.2	0.3
209	Lifeguard HQ	1	B	Men's Locker	Shelf	Metal	Intact	Beige	NEG	--	0.1	0.2
210	Lifeguard HQ	1	C	Men's Locker	Door casing	Metal	Intact	Beige	NEG	--	0.0	0.3
211	Lifeguard HQ	1	C	Men's Locker	Wall	Drywall	Intact	White	NEG	--	0.1	0.3
212	Lifeguard HQ	1	C	Men's Locker	Countertop	Wood	Intact	Gray	NEG	--	0.0	0.3
213	Lifeguard HQ	1	C	Men's Locker	Urinal	Metal	Intact	White	NEG	--	0.0	0.3
214	Lifeguard HQ	1	C	Men's Locker	Toilet	Metal	Intact	White	NEG	--	0.0	0.3
215	Lifeguard HQ	1	D	Men's Locker	Wall	Metal	Intact	Blue	NEG	--	-0.5	0.3
216	Lifeguard HQ	1	D	Men's Locker	Wall	Metal	Intact	Beige	NEG	--	-0.5	0.3
217	Lifeguard HQ	1	--	Men's Locker	Floor	Metal	Intact	Beige	NEG	--	0.2	0.2
218	Lifeguard HQ	1	--	Men's Shower	Ceiling	Plaster	Intact	Brown	NEG	--	-0.2	0.3
219	Lifeguard HQ	1	A	Garage	Ceiling	Plaster	Intact	White	NEG	--	0.5	0.2
220	Lifeguard HQ	1	A	Garage	Ceiling	Concrete	Intact	White	NEG	--	0.1	0.3
221	Lifeguard HQ	1	A	Garage	Floor	Concrete	Intact	Red	NEG	--	0.3	0.2
222	Lifeguard HQ	1	A	Garage	Wall	Drywall	Intact	Beige	NEG	--	0.0	0.3
223	Lifeguard HQ	1	A	Garage	Wall	Wood	Intact	Beige	NEG	--	0.0	0.3
224	Lifeguard HQ	1	A	Garage	Door	Metal	Intact	Gray	NEG	--	0.0	0.3
225	Lifeguard HQ	1	A	Garage	Door casing	Metal	Intact	Gray	NEG	--	0.0	0.3
226	Lifeguard HQ	1	B	Garage	Wall	Metal	Intact	White	NEG	--	-0.4	0.3
227	Lifeguard HQ	1	B	Garage	Rafter/framing	Wood	Intact	Beige	NEG	--	-0.2	0.3
228	Lifeguard HQ	1	C	Garage	Cabinets	Wood	Intact	Brown	NEG	--	0.0	0.3
229	Lifeguard HQ	1	C	Garage	Cabinets	Wood	Intact	Brown	NEG	--	-0.1	0.3
230	Lifeguard HQ	1	B	Exterior	Wall	Plaster	Intact	White	NEG	--	0.1	0.2
231	Lifeguard HQ	1	B	Exterior	Column	Concrete	Intact	White	NEG	--	0.2	0.2
232	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.1	0.3
233	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
234	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	0.9	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity (1)	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
235	--	Blank Calibration Check								--	-0.2	0.3
236	--	Blank Calibration Check								--	0.0	0.3
237	--	Blank Calibration Check								--	-0.2	0.3
238	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
239	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
240	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
241	--	Blank Calibration Check								--	-0.3	0.3
242	--	Blank Calibration Check								--	-0.2	0.3
243	--	Blank Calibration Check								--	-0.1	0.3
244	**Pier Stor.**	**1**	**A**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**900 SF**	**3.5**	**0.3**
245	**Pier Stor.**	**1**	**B**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 244**	**3.7**	**0.3**
246	**Pier Stor.**	**1**	**B**	**Main Storage**	**Column**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 244**	**4.3**	**0.3**
247	Pier Stor.	1	B	Main Storage	Wall	Brick	Intact	White	NEG	--	0.5	0.2
248	Pier Stor.	1	B	Main Storage	Wall	Brick	Intact	White	NEG	--	0.9	0.2
249	**Pier Stor.**	**1**	**B**	**Main Storage**	**Wall**	**Ceramic**	**Intact**	**White**	**POS**	**90 SF**	**7.2**	**0.3**
250	Pier Stor.	1	B	Main Storage	Floor	Metal	Intact	White	NEG	--	0.1	0.3
251	Pier Stor.	1	B	Main Storage	Floor	Metal	Intact	White	NEG	--	0.4	0.2
252	**Pier Stor.**	**1**	**C**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 244**	**3.2**	**0.3**
253	**Pier Stor.**	**1**	**D**	**Main Storage**	**Wall**	**Concrete**	**Intact**	**White**	**POS**	**See Reading 244**	**3.5**	**0.3**
254	Pier Stor.	1	D	Main Storage	Wall	Wood	Intact	White	NEG	--	-0.3	0.3
255	Pier Stor.	1	--	Main Storage	Ceiling	Concrete	Intact	White	NEG	--	0.2	0.2
256	Pier Stor.	1	B	Small Storage	Wall	Concrete	Intact	White	NEG	--	0.5	0.2
257	Pier Stor.	1	C	Small Storage	Wall	Concrete	Intact	White	NEG	--	0.3	0.2
258	Pier Stor.	1	A	Entry Vestibule	Wall	Concrete	Intact	White	NEG	--	0.0	0.3
259	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
260	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.0	0.3
261	--	PCS Standard Calibration Check - 1.04 +/- 0.064mg/cm^2								--	1.1	0.3

Table 3 - XRF Data Sheet

Reading No.	Building	Floor	Side	Room / Area	Source / Component	Substrate	Condition	Color	Results (POS / NEG)	Approx. Quantity [1]	Lead Reading (mg/cm^2)	Precision (+/- mg/cm^2)
262	--				Blank Calibration Check					--	-0.1	0.3
263	--				Blank Calibration Check					--	-0.1	0.3
264	--				Blank Calibration Check					--	-0.1	0.3

NOTES:

XRF assays were collected using a portable Viken Detection Pb200i XRF Lead Paint Analyzer.

Results in **BOLD** are LCS, as defined by CDPH and HUD.

[1] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.

PCS = Performance Characteristic Sheet, as maintained by HUD. A device-specific document outlining acceptable operating specifications for an XRF analyzer.

POS = Positive

NEG = Negative

INCOM = Incomplete

EA = Each

SF = Square feet

mg/cm^2 = milligrams per square centimeter

Table 4 - Summary of Lead-Containing Surfaces [1]

Reading No.(s)	Room / Area [2]	Source / Component	Substrate	Condition	Color(s)	Lead Reading(s) (mg/cm^2)	Approximate Quantity [3]
Pier Storage Spaces (Formerly Restrooms)							
31	Storage Rooms	Door frame (At former swinging door)	Wood	Intact	White	6.7	2 EA
34, 37, 38, and 41	Bait Shop Storage (South Storage) Main Room	Interior walls (including arches / columns)	Concrete	Intact, but deteriorated at substrate failure	White	1.5-4.2	1,100 SF
39	Bait Shop Storage (South Storage) Main Room	Interior wall at closet	Wood	Intact	White	1.2	75 SF
244, 245, 246, 252, and 253	Pier Storage (North Storage) Main Room	Interior walls (including arches / columns)	Concrete	Intact, but deteriorated at substrate failure	White	3.2-4.3	900 SF
249	Pier Storage (North Storage) Main Room - Southwest corner at former urinals	Interior wall tiles	Ceramic	Intact	White	7.2	90 SF

NOTES:

[1] = Note that the LCS in this table are materials that meet or exceed the criteria of CDPH. LCS in this table does not necessarily identify all materials that could contain lead at concentrations less than 1.0 mg/cm^2 or 5,000 milligrams per kilogram (mg/kg), which could trigger the Cal-OSHA lead in construction standard.

[2] = LCS locations are based upon Ninyo & Moore's visual observations during survey activities.

[3] = Surface quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at the site.

EA = Each
SF = Square feet
mg/cm^2 = milligrams per square centimeter

Table 5 - Summary of Other Potential Hazardous Building Materials [1]

Building	Fluorescent Light Tubes	Fluorescent Light Ballasts	Non-Incandescent Lights	Smoke Detectors	Mercury Thermostats and Switches	A/C Units	Tritium-Powered Exit Signs	Freon Refrig. Systems	Wet Transformers	Cooling Towers	Lead Acid Batteries	Halon Fire Suppression Systems	Other
Lifeguard Headquarters	44	32	10	8	--	--	--	3	--	--	--	--	Gas/oil storage
Pier Storage Spaces	20	10	4	2	--	--	--	5	--	--	--	--	Paint & gas/oil storage
Exterior	--	--	35	--	--	--	--	--	--	--	--	--	--

NOTES:

[1] = Materials summarized are limited to the areas of the buildings that were in the scope of this survey.

Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at subject site.

A/C = Air Conditioning

Table 5 - Summary of Other Potential Hazardous Building Materials [1]

Building	Fluorescent Light Tubes	Fluorescent Light Ballasts	Non-Incandescent Lights	Smoke Detectors	Mercury Thermostats and Switches	A/C Units	Tritium-Powered Exit Signs	Freon Refrig. Systems	Wet Transformers	Cooling Towers	Lead Acid Batteries	Halon Fire Suppression Systems	Other
Lifeguard Headquarters	44	32	10	8	--	--	--	3	--	--	--	--	Gas/oil storage
Pier Storage Spaces	20	10	4	2	--	--	--	5	--	--	--	--	Paint & gas/oil storage
Exterior	--	--	35	--	--	--	--	--	--	--	--	--	--

NOTES:

[1] = Materials summarized are limited to the areas of the buildings that were in the scope of this survey.

Material quantities are approximate and are not intended to be used or interpreted as actual quantities. It is the contractor's responsibility to confirm material quantities prior to bid submittals and initiating renovation and/or demolition activities at subject site.

A/C = Air Conditioning

APPENDIX A

Suspect Asbestos-Containing Materials Sampling Protocol

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

SUSPECT ASBESTOS-CONTAINING MATERIALS SAMPLING PROTOCOL

Personal Protection Equipment

Inhalation of asbestos fibers during asbestos survey poses a serious health and safety hazard, the use of personal protection equipment (PPE) by building inspectors is recommended during sampling activities. Our building inspectors generally wear a respirator (either a full- or half-face mask) equipped with high-efficiency disposable filter cartridges. If utilized, full-face masks will also prevent eye irritation from dust, fibers, and debris released during sampling activities. When necessary, disposable clothing is worn during sampling activities. Our building inspectors utilize plastic bags to handle the disposal of drop cloths, protective clothing, wet cloths, and debris.

Sampling Equipment

Our building inspector(s) will need various tools and materials to accomplish their sampling tasks, including those listed below:

- A ladder to access areas and a flash light to aid visibility,
- Airtight, sampling containers (e.g., resealable plastic bags),
- A plastic spray bottle, filled with amended water, to wet the material to be sampled,
- Plastic drop cloths to spread beneath the area to be sampled,
- A utility knife, linoleum cutter, or other tool appropriate for collecting samples,
- A caulking gun and compound for filling holes once a sample has been extracted,
- Spray acrylic or adhesive to encapsulate the small areas from which samples were collected,
- Duct tape for repairing thermal system insulation jackets,
- Cloths and cleaner for decontaminating tools,
- A vacuum cleaner equipped with high efficiency particulate air (HEPA) filters, when necessary,
- Indelible ink pen for labeling sample containers, and
- Camera for photographic documentation, and
- Chain-of-Custody documentation forms.

Sampling Procedures

ACM are divided into three categories: Surfacing Materials, Thermal System Insulation (TSI), and Miscellaneous Materials. The procedures for sampling these three types of materials are as follows:

Surfacing Materials

1. Select a location where the material has been previously damaged or a low profile area.
2. Spread a plastic drop cloth on the floor and set up other equipment, (e.g., ladder).
3. Put on protective equipment (respirator at all times when sampling friable material and protective clothing, when needed).
4. Moisten area where sample is to be collected (spray the area with amended water).
5. Collect sample using a clean knife or other tool appropriate to cut out or scrape off a small piece of the material. Care is taken to ensure that all layers of material are collected, without disturbing any adjacent material.
6. Place the sample in the labeled container and tightly seal it.
7. Wipe the exterior of the container with a wet wipe to remove any residue which may have adhered to the container it during sampling.
8. Clean tools with wet wipes and vacuum area with a HEPA vacuum to clean all debris.
9. Fill hole with caulking compound or appropriate filler (to minimize subsequent fiber release and for appearance).
10. Label container with its sample identification number and fill out location and type of material being sampled on a Chain-of-Custody documentation form.
11. Mark the location and sample identification number on the sample location map.
12. Repeat the above steps at each sample location. Place sample containers in plastic bags.
13. Discard protective clothing, rags, and drop cloth in a plastic bag.

Thermal System Insulation

Sampling TSI follows the same procedural sequence as laid out above. Obtain samples from exposed or damaged areas, if possible. However, random sampling will require sampling of some intact material. Sampling holes can be patched with plastic spackling, caulk, or fibrous glass.

Miscellaneous Materials

Sampling miscellaneous materials follows the same procedural sequence as laid out above, making sure that a cross section of the materials have been obtained.

Forwarding Samples to Laboratory

The samples are transferred, using standard chain-of-custody procedures, to a laboratory accredited in the National Voluntary Laboratory Accreditation Program (NVLAP), for bulk asbestos fiber analysis. The samples are analyzed using polarized light microscopy with dispersion staining (PLM/ds) for the presence and quantification of asbestos fibers, in general accordance with either United States Environmental Protection Agency (USEPA) Method 600/M4-82-020 or USEPA Method 600/R-93/116. The lower limit of reliable detection for asbestos using the PLM/ds method is approximately 1% by volume. California regulations require certain worker protection standards and have certain contractor requirements for disturbing those materials having an asbestos content of greater than one tenth of 1% (0.1%).

APPENDIX B

Laboratory Analytical Report and Chain-of-Custody Records

EMSL Analytical, Inc.

6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120
Tel/Fax: (702) 931-3532 / (702) 931-3533
http://www.EMSL.com / lasvegaslab@EMSL.com

EMSL Order: 312101438
Customer ID: 32NIN63
Customer PO:
Project ID:

Attention: Brian Ford
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123

Phone: (858) 761-7067
Fax: (858) 576-9600
Received Date: 05/10/2021 10:30 AM
Analysis Date: 05/10/2021
Collected Date: 05/03/2021

Project: 109214001 / OCEANSIDE, CA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ASB-001 *312101438-0001* *Only concrete present within sample.*	STUCCO & CONCRETE	Brown Non-Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
ASB-002-Stucco *312101438-0002*	STUCCO & CONCRETE	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-002-Concrete *312101438-0002A*	STUCCO & CONCRETE	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-003-Stucco *312101438-0003*	STUCCO & CONCRETE	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-003-Concrete *312101438-0003A*	STUCCO & CONCRETE	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-004 *312101438-0004*	DOOR SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-005 *312101438-0005*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-006 *312101438-0006*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-007 *312101438-0007*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-008 *312101438-0008*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-009 *312101438-0009*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-010 *312101438-0010*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-011 *312101438-0011*	TEXTURE MATERIAL CONCRETE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-012 *312101438-0012*	TEXTURE MATERIAL CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-013 *312101438-0013*	2X4 ACP	Tan/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected
ASB-014 *312101438-0014*	2X4 ACP	Tan/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (Other)	None Detected

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http://www.EMSL.com / lasvegaslab@EMSL.com

EMSL Order: 312101438
Customer ID: 32NIN63
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ASB-015 *312101438-0015*	SINK COATING	White Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-016-Vinyl Floor Tile *312101438-0016*	12X12 VFT W MASTIC	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-016-Mastic *312101438-0016A*	12X12 VFT W MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-017-Vinyl Floor Tile *312101438-0017*	12X12 VFT W MASTIC	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-017-Mastic *312101438-0017A*	12X12 VFT W MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-018-Vinyl Floor Tile *312101438-0018*	12X12 VFT W MASTIC	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-018-Mastic *312101438-0018A*	12X12 VFT W MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-019-Vinyl Floor Tile *312101438-0019*	12X12 VFT W MASTIC	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-019-Mastic *312101438-0019A*	12X12 VFT W MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-020 *312101438-0020*	CARPET GLUE	Gold Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-021 *312101438-0021*	CARPET GLUE	Gold Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-022 *312101438-0022*	CARPET GLUE	Gold Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-023 *312101438-0023*	CARPET GLUE	Gold Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-024 *312101438-0024*	CARPET GLUE	Gold Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-025 *312101438-0025*	COVEBASE GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-026 *312101438-0026*	COVEBASE GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-027 *312101438-0027*	COVEBASE GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-028 *312101438-0028*	COVEBASE GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-029 *312101438-0029*	WINDOW SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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http://www.EMSL.com / lasvegaslab@EMSL.com

EMSL Order: 312101438
Customer ID: 32NIN63
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ASB-030 *312101438-0030*	WINDOW SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-031 *312101438-0031*	WINDOW SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-032 *312101438-0032* *Result includes inseparable base coat and skim coat.*	PLASTER	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-033 *312101438-0033* *Result includes inseparable base coat and skim coat.*	PLASTER	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-034 *312101438-0034* *Result includes inseparable base coat and skim coat.*	PLASTER	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-035 *312101438-0035* *Result includes inseparable base coat and skim coat.*	PLASTER	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-036 *312101438-0036* *Result includes inseparable base coat and skim coat.*	PLASTER	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-037-Drywall *312101438-0037*	DRYWALL/JOINT COMPOUND/TAPE	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-037-Joint Compound *312101438-0037A*	DRYWALL/JOINT COMPOUND/TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-037-Tape *312101438-0037B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Green Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-038-Drywall *312101438-0038*	DRYWALL/JOINT COMPOUND/TAPE	White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
ASB-038-Joint Compound *312101438-0038A*	DRYWALL/JOINT COMPOUND/TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-038-Tape *312101438-0038B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Purple Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-039-Drywall *312101438-0039*	DRYWALL/JOINT COMPOUND/TAPE	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-039-Joint Compound *312101438-0039A*	DRYWALL/JOINT COMPOUND/TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-039-Tape *312101438-0039B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Green Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected

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EMSL Order: 312101438
Customer ID: 32NIN63
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ASB-040-Drywall *312101438-0040*	DRYWALL/JOINT COMPOUND/TAPE	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-040-Joint Compound *312101438-0040A*	DRYWALL/JOINT COMPOUND/TAPE	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-040-Tape *312101438-0040B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Green Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-041-Drywall *312101438-0041* *Joint compound not present within sample.*	DRYWALL/JOINT COMPOUND/TAPE	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-041-Tape *312101438-0041A*	DRYWALL/JOINT COMPOUND/TAPE	Tan Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-042-Drywall *312101438-0042*	DRYWALL/JOINT COMPOUND/TAPE	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASB-042-Joint Compound *312101438-0042A*	DRYWALL/JOINT COMPOUND/TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-042-Tape *312101438-0042B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Green Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-043-Drywall *312101438-0043*	DRYWALL/JOINT COMPOUND/TAPE	White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
ASB-043-Joint Compound *312101438-0043A*	DRYWALL/JOINT COMPOUND/TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-043-Tape *312101438-0043B*	DRYWALL/JOINT COMPOUND/TAPE	Tan/Green Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
ASB-044 *312101438-0044*	TRANSITE 6 IN PIPELINE	Gray Fibrous Homogeneous		84% Non-fibrous (Other)	12% Chrysotile 4% Crocidolite
ASB-045-Stucco *312101438-0045*	STUCCO & CONCRETE	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-045-Concrete *312101438-0045A*	STUCCO & CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-046-Stucco *312101438-0046*	STUCCO & CONCRETE	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-046-Concrete *312101438-0046A*	STUCCO & CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-047 *312101438-0047*	DOOR SEALANT	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-048-Roofing *312101438-0048*	ROOF ASSEMBLY	White/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected

Initial report from: 05/10/2021 19:44:19

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EMSL Order: 312101438
Customer ID: 32NIN63
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

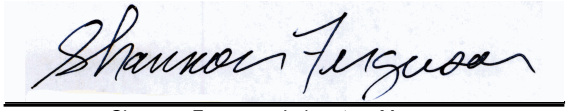
			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ASB-048-Tar Felt *312101438-0048A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
ASB-049-Roofing *312101438-0049*	ROOF ASSEMBLY	White/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
ASB-049-Tar Felt *312101438-0049A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
ASB-050-Roofing *312101438-0050*	ROOF ASSEMBLY	White/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
ASB-050-Tar Felt *312101438-0050A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
ASB-051-Shingle *312101438-0051*	ROOF ASSEMBLY	Gray/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
ASB-051-Tar Paper *312101438-0051A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
ASB-052-Shingle *312101438-0052*	ROOF ASSEMBLY	Gray/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
ASB-052-Tar Paper *312101438-0052A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
ASB-053-Shingle *312101438-0053*	ROOF ASSEMBLY	Gray/Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
ASB-053-Tar Paper *312101438-0053A*	ROOF ASSEMBLY	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
ASB-054 *312101438-0054*	EDGE SEALANT	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-055 *312101438-0055*	2X4 ACP	Tan/White Fibrous Homogeneous	70% Cellulose 10% Glass	20% Non-fibrous (Other)	None Detected
ASB-056 *312101438-0056*	TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-057 *312101438-0057*	COVEBASE GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-058-Vinyl Floor Tile *312101438-0058*	12X12 VFT W MASTIC	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ASB-058-Mastic *312101438-0058A*	12X12 VFT W MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order:	312101438
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Project ID:	

Analyst(s)
Lori Grenier (86)



Shannon Ferguson, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV NVLAP Lab Code 600140-0, AZ 0953, CA 3002, NV 050132018-1

Initial report from: 05/10/2021 19:44:19

№ 312101438 Sheet 1 of 4

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 5710 Ruffin Road San Diego, CA 92123 Tel: (858) 576-1000 Fax: (858) 576-9600	**Project Name: Pier View Way Bridge** Project No.: 109214001 Project Manager: NSM Site Address: Oceanside, CA EMAIL TO KMARINELLO@NINYOANDMOORE.COM	Date Sampled: 5/3/21 Sampled By: BKF Analyze via EPA Method 600/R-93/116 Please analyze all layers independently	**Laboratory:** EMSL Analytical, Inc. 8145 Ronson Rd., Ste. B San Diego, CA 92111 Tel: (858) 499-1303

CHAIN OF CUSTODY INFORMATION: - 50 Samples -

Relinquished By: (sign / print)	Company	Date	Time (24-hr.)	Received By: (sign / print)	Laboratory
Bryan Ford BF	Ninyo & Moore	5/3/21	5 DAY TAT	Kim Marinello 5/3/21	Ninyo-Moore
Kim Marinello	KM	5/5/2021	11:30	Kim Stimson 5.5.2021 @ 11:38am	EMSL-SD

Sample ID	Building Number	Room Number	Sample Location	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
ASB-001	Lifeguard H.Q	Exterior	South Wall	Stucco & Concrete		N	Good
ASB-002			West Wall				
ASB-003			North Wall				
ASB-004			West Door	Door Sealant		N	Good
ASB-005		Bay Area	West Wall	Texture Material		N	Good
ASB-006		Bay Area	North Wall	Concrete			
ASB-007		Bay Area	South Ceiling				
ASB-008		Meeting 2	West Wall				
ASB-009		Office	East Wall				
ASB-010		Office 1	West Wall				Good
ASB-011		Office 2	West Wall				
ASB-012		Waiting	East Wall				
ASB-013		Rest Room	South Ceiling	2x4 ACP		N	Good
ASB-014		First Aid	North Ceiling				
ASB-015		First Aid	West Sink	Sink Coating		N	Good

Relinquished By: KStimson 5.07.2021 @ 3:22 pm ROW ID: 10039686

Asbestos Sample

OrderID: 312101438

Page 1 Of 4

№ 312101438 Sheet 2 of 4

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 5710 Ruffin Road San Diego, CA 92123 Tel: (858) 576-1000 Fax: (858) 576-9600	**Project Name: Pier View Way Bridge** Project No.: 109214001 Project Manager: NSM Site Address: Oceanside, CA	Date Sampled: 5/3/21 Sampled By: BKF Analyze via EPA Method 600/R-93/116 Please analyze all layers independently	**Laboratory:** EMSL Analytical, Inc. 8145 Ronson Rd., Ste. B San Diego, CA 92111 Tel: (858) 499-1303

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign / print)	Company	Date	Time (24 hr.)	Received By: (sign / print)	Laboratory
Brianford B. S	Ninyo & Moore	5/3/21	5DAYS	AA 5/10/21 1030	EMSL-LV
				VX	

Sample ID	Building Number	Room Number.	Sample Location	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
ASB-016	Lifeguard H.Q.	waiting	East under carpet Floor	12x12 FT w MASTIC		N	Good
ASB-017		waiting	North under carpet Floor				
ASB-018		First Aid	West Floor				
ASB-019		First Aid	East Floor				
ASB-020		waiting	West Floor	Carpet Glue		N	Good
ASB-021		breeting	North Floor				
ASB-022			West Floor				
ASB-023		office 1	East Floor				
ASB-024		office 2	South Floor				
ASB-025		waiting	West Wall	Cove base Glue		N	Good
ASB-026		office 1	East Wall				
ASB-027		office 2	North Wall				
ASB-028		First Aid	West Wall				
ASB-029		waiting	East Window	Window Sealant			
ASB-030		office 1	West Window				

OrderID: 312101438

ASBESTOS BULK SAMPLE DATA SHEET

№312101438

Ninyo & Moore 5710 Ruffin Road San Diego, CA 92123 Tel: (858) 576-1000 Fax: (858) 576-9600	**Project Name: Pier View Way Bridge** Project No.: 109214001 Project Manager: NSM Site Address: Oceanside, CA	Date Sampled: 5/3/21 Sampled By: BKF Analyze via EPA Method 600/R-93/116 Please analyze all layers independently	**Laboratory:** EMSL Analytical, Inc. 8145 Ronson Rd., Ste. B San Diego, CA 92111 Tel: (858) 499-1303

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign / print)	Company	Date	Time (24 hr.)	Received By: (sign / print)	Laboratory
Bradford Bell	Ninyo & Moore	5/3/21	5DAYS		
				VR	

Sample ID	Building Number	Room Number	Sample Location	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
ASB-031	Lifeguard H.Q.	office 2	WEST Window	window Sealant		N	Good
ASB-032		MEN Shower	Center Ceiling	Plaster			
ASB-033		MEN Shower	West Ceiling				
ASB-034		WOMEN Shower	North Ceiling				
ASB-035		MEETING	North Ceiling			✓	✓
ASB-036		✓	WEST WALL			N	Good
ASB-037		WAITING	South WALL	DRYWALL w/ JOINT COM. TAPE		N	Good
ASB-038		FIRST AID	North WALL				
ASB-039		REST ROOM	North WALL				
ASB-040		WOMEN Shower	South WALL				
ASB-041		MEN Shower	EAST WALL				
ASB-042		office	North WALL				
ASB-043	✓	office 2	EAST WALL	✓		✓	✓
ASB-044	✓	EXTERIOR	North under pipeline	TRANSITE 6INCH pipeline		N	Good
ASB-045	Pool Storage	INT.	North STAIRCASE WALL	STUCCO & CONCRETE		N	Good

OrderID: 312101438

ASBESTOS BULK SAMPLE DATA SHEET

312101438 Sheet 4 of 4

Ninyo & Moore 5710 Ruffin Road San Diego, CA 92123 Tel: (858) 576-1000 Fax: (858) 576-9600	**Project Name: Pier View Way Bridge** Project No.: 109214001 Project Manager: NSM Site Address: Oceanside, CA	Date Sampled: 5/3/21 Sampled By: BCF Analyze via EPA Method 600/R-93/116 Please analyze all layers independently	**Laboratory:** EMSL Analytical, Inc. 8145 Ronson Rd., Ste. B San Diego, CA 92111 Tel: (858) 499-1303

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign / print)	Company	Date	Time (24 hr.)	Received By: (sign / print)	Laboratory
Brian Ford BCF	Ninyo & Moore	5/3/21	5DA/5		
				VK	

Sample ID	Building Number	Room Number	Sample Location	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
ASB-046	Pier Storage	Int.	Center Ceiling	Stucco w/ Concrete		N	Good
ASB-047	↓	↓	North Door	Door Sealant		N	Good
ASB-048	Lifeguard H.Q	Roof	EAST Roof	Roof Assembly		N	Good
ASB-049		Roof	Southwest Roof				
ASB-050		Roof	WEST Roof				
ASB-051		Roof	North Skylight Roof				
ASB-052		Roof	WEST Roof				
ASB-053		Roof	EAST Roof	↓		↓	↓
ASB-054		Roof	WEST Roof	Edge Sealant		N	Good
ASB-055		First Aid	EAST Ceiling	2x4 ACP		N	Good
ASB-056		office 3	Southwest Wall	Texture		N	Good
ASB-057		↓	North Wall	Cove Base Glue		N	Good
ASB-058		Waiting	EAST Floor	12x12 VFT w/ Mastic		N	Good
ASB-059							
ASB-060	↓						

Page 4 Of 4

OrderID: 312101438

Asbestos Sample

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

County of San Diego – Rule 1206 Requirements

(d) (5) (i) Facility Information

- Name of Building(s):
  Pier View Way Bridge and Lifeguard Headquarters
  Oceanside Municipal Pier

- Address of Building(s):
  301 The Strand North
  Oceanside, CA 92054

- Building Owner:
  City of Oceanside
  Engineering Division
  300 North Coast Highway
  Oceanside, CA 92054
  760-435-5106

(d) (5) (ii) Consultant Information

- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

  EPA AHERA Building Inspector
  Design For Health Training Center – Cert. No. 0221BIR188557
  Expires February 19, 2022

(d) (5) (iii) Facility Survey Date

- May 3 & 5, 2021

(d) (5) (vi) Suspect Materials Information

- See Tables 1 and 2

(d) (5) (v) Analytical Laboratory Information

- EMSL Analytical, Inc.
  6325 Harrison Drive, Suites 3 & 4
  Las Vegas, NV 89120
  702-931-3532

(d) (5) (vi) Analytical Laboratory Qualifications

- Laboratory qualification documents can be found on their website below - https://www.emsl.com/Locations.aspx?laboratoryid=64

(d) (5) (vii) Analytical Test Method Used

- Asbestos Analysis of Bulk Materials via EPA Method 600/R-93/116 using Polarized Light Microscopy

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

After a visual assessment, accessible painted surfaces were screened for lead content with a Viken Detection Pb200i XRF Lead Paint Analyzer. Correction for paint matrix and substrate effects is performed automatically by the XRF analyzer.

XRF readings were made on testing combinations in all room equivalents in an effort to test typical materials that are representative of the room equivalent. Testing combinations were tested non-destructively by holding the shutter of the XRF against the surface being tested. At each XRF assay location, the trigger is depressed to open the shutter, and one reading was made using the standard paint testing mode. Results of each assay were recorded in the memory of the XRF spectrum analyzer and downloaded via the software provided by the manufacturer. In addition, the results of each assay were read and recorded on the XRF Data Sheet field data sheet.

The XRF testing orientation is depicted on the attached sample location maps. The “A” direction was initially assigned to the direction of the street, and the subsequent directions (“B”, “C”, and “D”) were assigned clockwise from the “A” direction. Should the subject site be located on the corner of two streets, the “A” direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three calibration checks were made using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the green 1.06 mg/cm^2 Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST).

In addition to the three starts up tests, calibration readings are collected between each building, after four hours, and at the completion of XRF testing. Results of each calibration reading were recorded within the memory of the XRF spectrum analyzer and on the XRF Data Sheet. The quality control tests taken during testing at the subject site were within the acceptable performance range prescribed by the XRF equipment manufacturer. Documentation of the quality control calibration check is included in the XRF Data Sheet, Table 3.

State of California—Health and Human Services Agency | California Department of Public Health

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 05/03-05/2021

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
301 The Strand N. (Pier Bridge & Lifeguard HQ)	Oceanside	San Diego	92054

Construction date (year) of structure	Type of structure		Children living in structure?	
1926-1985	☐ Multi-unit building	☐ School or daycare	☐ Yes	☑ No
	☐ Single family dwelling	☑ Other Muni. Pier Bridge	☐ Don't Know	

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
City of Oceanside - Engineering Div.	760-435-5106

Address [number, street, apartment (if applicable)]	City	State	Zip Code
300 N. Coast Highway	Oceanside	CA	92054

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Nicholas Marinello	858-576-1000

Address [number, street, apartment (if applicable)]	City	State	Zip Code
5710 Ruffin Road	San Diego	CA	92123

CDPH certification number	Signature	Date
LRC-00003568		5/6/2021

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (6/07)

APPENDIX C

County of San Diego – Rule 1206 Requirements

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

County of San Diego – Rule 1206 Requirements

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  Oceanside, CA 92054

- Building Owner:
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  300 North Coast Highway
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  760-435-5106

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- Name and Title:
  Nicholas Marinello
  Project Environmental Scientist

- Company:
  Ninyo & Moore
  5710 Ruffin Road
  San Diego, CA 92123
  858-576-1000

- Qualifications:
  Certified Asbestos Consultant No. 17-6117
  Expires December 13, 2021

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(d) (5) (vii) Analytical Test Method Used

- Asbestos Analysis of Bulk Materials via EPA Method 600/R-93/116 using Polarized Light Microscopy

APPENDIX D

XRF Testing Methodology

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

XRF TESTING METHODOLOGY

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APPENDIX E

CDPH Form 8552 – Lead Hazard Evaluation Report

State of California—Health and Human Services Agency | California Department of Public Health

LEAD HAZARD EVALUATION REPORT

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Name	Telephone number
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Nicholas Marinello	858-576-1000

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CDPH certification number	Signature	Date
LRC-00003568		5/6/2021

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

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850 Marina Bay Parkway, Building P, Third Floor
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CDPH 8552 (6/07)



5710 Ruffin Road | San Diego, California 92123 | p. 858.576.1000

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

ATTACHMENT 11:

LETTERS OF SUPPORT (SOHO; MILFORD WAYNE DONALDSON)

Save Our Heritage Organisation
Protecting San Diego's architectural and cultural heritage since 1969

Monday, September 27, 2021

Mayor Esther Sanchez
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Re: Oceanside Pier View Way Bridge Restoration/Replacement project

Dear Mayor Sanchez,

Save Our Heritage Organisation has reviewed the Oceanside Pier View Way Bridge Restoration and Replacement project. We support the overall goal to develop a replacement strategy for the 93-year-old concrete bridge and Lifeguard Headquarters while preserving the historic character of the pier. The primary issues to resolve are: 1) the future of the lifeguard facility; 2) sea level rise; 3) ADA access; 4) public access to the pier; 5) accommodation of nearby businesses; 6) environmental permitting; 7) compliance with California Coastal Commission regulations; and 8) reconstruction of historic features.

While currently at a high level of conceptual design, SOHO understands the design development will continue based on the input received. SOHO appreciates the proposed design is a reconstruction of the concrete bridge structure that matches the original 1927 aesthetic, which will be able to accommodate the lifeguard headquarters and provide increased ADA access. This historic reconstruction should include maintaining the historic proportions and character of the bridge structure; replicating the wood bathroom windows, the exposed board-formed concrete finish, and the original pre-cast concrete light-posts and balustrades; and, with code compliant modifications, replicating the historic pipe railing.

The design illustrates the lifeguard headquarters will occupy an area based on the original municipal dining room plan and that new structures are proposed between the two bridges to accommodate increased lifeguard requirements, which includes a new view deck and ADA access elevator. Due to the opportunity for restoration, SOHO requests mitigation for the original dining room windows to be returned since the lifeguard headquarters will be in the same space. While needing to be flood proof for sea level rise, the architectural design firm believes this would be possible.

SOHO has the additional following recommendations. The pier's reconstruction should be in-kind regarding the current size, dimensions and components, including the original board-formed concrete finish and color, and follow the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction (Standards). The Standards recommend recreating the appearance of visible features of the historic structural system, such as posts and beams, trusses, and summer beams. Also, contemporary methods and materials may be used for the reconstructed building's structural system.

The California Historical Building Code (CHBC) should be used for all code mitigation and appeals can be made to the State Historical Building Safety Board (SHBSB) if there are disagreements. One example is the main ramp with a 6% slope. Installing handrails on both sides will meet the intent of the CHBC and is a shallower grade than the 8.33% within the regular code. However, if the intent is to lessen the grade through

the reconstruction effort, the original character of the pier would greatly change. Working with local ADA advocacy groups, an appeal could be made for the SHBSB to accept the 6% slope, especially as ADA codes recognize alternatives in meeting the exact intent. Another recommendation is to keep the elevator infrastructure from being visible above the top of the pier. It should stop below the ramp walkway and provide a short ramp to access the pier. Additionally, the middle ramp to the beach is a character-defining feature and should be replicated as close as possible to the original. It should not be narrowed or modified in any significant way. The Standards state complying with life-safety codes (including requirements for impact-resistant glazing, security, and seismic retrofit) should be done in such a manner that the restoration-period exterior features, interior spaces and finishes, and features of the site and setting are preserved or impacted as little as possible.

Sea rise is part of the consideration in planning, especially along the Strand. In addressing resilience to natural hazards, the Standards explain: 1) when planning to adapt for natural hazards, all feasible alternatives are to be considered; 2) options requiring the least alteration to the restoration-period character of the property are to be considered first; and 3) use special exemptions and variances when adaptive treatments would negatively impact the restoration-period character of the building, its site, or setting.

At this conceptual stage of development, SOHO supports the general direction of the project with the additional identified recommendations. The reconstruction of the pier appears to be in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Thank you for the opportunity to comment,



Bruce Coons
Executive Director
Save Our Heritage Organisation

A R C H I T E C T M I L F O R D W A Y N E D O N A L D S O N FAIA

Mayor Esther Sanchez
300 North Coast Highway
Oceanside, CA 92054

Comments following the Public Hearing, Reconstruction of the Oceanside Pier, August 24, 2021

Dear Mayor Sanchez,

Mr. Donaldson is president of award-winning Architect Milford Wayne Donaldson, FAIA, (ArchMWD**)** since 1978, specializing in historic preservation services. He is currently licensed to practice architecture in California, Nevada and Arizona and holds a certified license from the National Council of Architectural Registration Boards. Over the last 44 years, Mr. Donaldson has established himself as a leader in Historic Preservation and adaptive reuse of existing structures. His depth of knowledge unites nineteenth century building methods with state-of-the-art twenty-first century construction technologies. In 1991, The California Council of the American Institute of Architects acknowledged Mr. Donaldson for his statewide leadership as Chairman and in the interpretation of the California Historical Building Code that allowed the rehabilitation of historic buildings. In 1992, the American Institute of Architects inducted Mr. Donaldson into the College of Fellows. Mr. Donaldson also served on the City of San Diego Historical Resources Board. Mr. Donaldson served as California's State Historic Preservation Office from 2004-2012 and served as the Chairman of the Advisory Council on Historic Preservation from 2010-2019, appointed by President Obama. Mr. Donaldson grew up in South Oceanside, as his father was a Navy Field Corpsman attached to the Marines at Camp Pendleton and his mother was a Navy nurse. In addition, Mr. Donaldson and his wife, Laurie own property at 1744 So. Pacific Street, Unit 103, Oceanside, CA 92054.

As presented at the public hearing on August 24, 2021, the overall project goals are to develop a replacement strategy for the 93-year-old concrete bridge and the Lifeguard HQ. The historic characteristics of the pier are to be preserved. The primary issues to be resolved are the following: future of the lifeguard facility; sea level rise; ADA access; pier access by the public; accommodation of nearby businesses; environmental permitting; compliance with California Coastal Commission regulations and the reconstruction of those historic features.

The project currently appears to be at a high level of conceptual design. It was noted at the August 24th meeting that the development will continue based on the input received along with input taken from a meeting scheduled for Tuesday August 31 involving the beachfront improvement project.

Heritage Architecture & Planning's proposed design consists of a reconstruction of the concrete bridge structure to match the original 1927 aesthetic which shall accommodate the lifeguard headquarters and provide increased ADA access. The historic reconstruction of the bridge shall include maintaining the historic proportions and character of the bridge structure; replicating the wood windows at the bathrooms and the exposed board-formed concrete finish; replication of the original pre-cast concrete light-posts; the individual pre-cast concrete balustrades; and the historic pipe railing with code compliant modifications.

The design incorporates the lifeguard headquarters that will occupy a layout based on the original municipal dining room layout. Some new structures are proposed by RNT Architects in-between the two bridges to accommodate increased lifeguard HQ requirements, including a new view deck at Pacific Street, and an ADA access elevator.

The following concerns and recommendations are noted:

The reconstruction shall be in-kind in terms of matching the current size and dimensions of the pier and its components, including the original board-formed concrete finish and color and shall follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Reconstruction*, (*Standards).* The *Standards* recommend: *Recreating the appearance of visible features of the historic structural system, such as posts and beams, trusses, summer beams, vigas, cast-iron columns, above-grade masonry foundations, or load-bearing brick or stone walls. Contemporary methods and materials may be used for the actual structural system of the reconstructed building.*

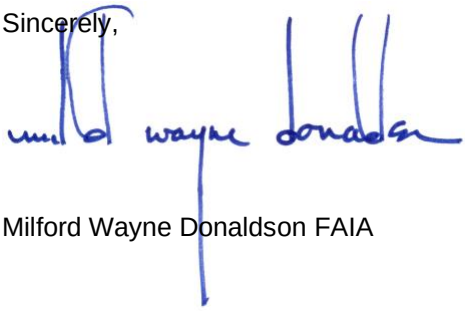
The current edition of the *California Historical Building Code* (CHBC) shall be used for all code mitigation. Appeals can be made to the State Historical Building Safety Board (SHBSB) if there are disagreements between the client and the Building Department or other regulatory agencies. In particular, the main ramp is 6% slope. With handrails on both sides this meets the intent of the SHBC and is less steep than the 8.33% of the regular code. However, if the intent is to lessen it through the reconstruction effort this would greatly change the original character of the pier. Working with local ADA advocacy groups, an appeal could be made the SHBSB to accept the 6% slope. ADA codes also recognize variants in meeting the exact specifications of the act. It is also recommended to keep the elevator housing from sticking above the grade on top of the pier and let the stop fall below the ramp walkway and provide a short ramp for access. Additionally, the middle ramp to the beach is a character defining feature and should be replicated as close as possible to the original and should not be narrowed or modified in any significant way. The *Standards* note: *Complying with life-safety codes (including requirements for impact-resistant glazing, security, and seismic retrofit) in such a manner that the restoration-period exterior features, interior spaces, features, and finishes, and features of the site and setting are preserved or impacted as little as possible.*

Sea-rise is a consideration in the planning, especially along the Strand. The *Standards* note in the section Resilience to Natural Hazards: *Ensuring that, when planning work to adapt for natural hazards, all feasible alternatives are considered, and that the options requiring the least alteration to the restoration-period character of the property are considered first. Using special exemptions and variances when adaptive treatments to protect buildings from known hazards would otherwise negatively impact the restoration-period character of the building, its site, or setting.*

At this stage and development, the project appears to be heading in a good direction for the reconstruction of the pier in conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties.*

Please call on me if I can be of assistance.

Sincerely,



Milford Wayne Donaldson FAIA

7754 GREENRIDGE WAY, FAIR OAKS, MWDONALDSON13@YAHOO.COM CA 95628 916 532 8004

ATTACHMENT 12:

CORRESPONDENCE WITH CALIFORNIA COASTAL COMMISSION

CALIFORNIA COASTAL COMMISSION
SAN DIEGO DISTRICT OFFICE
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4402
VOICE (619) 767-2370
FAX (619) 767-2384

Sent via email on April 21, 2023

Shannon Vitale
City of Oceanside Planning
300 N Coast Highway
Oceanside, Ca 92064

Re: Pier View Way Bridge and Lifeguard Headquarters Restoration/Replacement Project

Dear Shannon:

This letter provides Coastal Commission staff's comments regarding the Pier View Way Bridge and Lifeguard Headquarters Restoration/Replacement Project proposed by the City of Oceanside. The development proposed includes reconstruction of the existing lifeguard station located immediately west of The Strand and at the base of Oceanside Pier; construction of a new complex located directly east of The Strand to include approximately 5,300 sq. ft. of additional lifeguard facilities, 700 sq. ft. commercial space, and a 1,083 sq. ft. public viewing deck (eastern building); and reconstruction of the Pier View Way Bridge or the easternmost portion of the Municipal Pier (see attachment #1 - aerial with labels).

The City has indicated that the current lifeguard headquarters facility needs major repairs and does not provide enough space to accommodate current and future essential lifeguard needs. As proposed, the existing lifeguard structure will be significantly repaired/replaced, maintaining the existing location, footprint and accessory improvements including an existing rock revetment surrounding the building and a concrete parking area located on the southern side of the lifeguard station.

The project location bisects Coastal Commission and City of Oceanside Coastal Development Permit (CDP) jurisdictions and will ultimately be reviewed by the Coastal Commission through a consolidated CDP process. Commission staff are generally supportive of the project, do not have significant comments on bridge replacement portion of the project, acknowledge the lifeguard station is necessary to protect public safety, and can support the new development proposed on the eastern side of The Strand; however, staff requests the following comments be considered by the City as evaluation of the project continues.

1. Alternatives Analysis.

The existing lifeguard station is located in a hazardous location and is currently subject to wave action on a regular basis. This will be further exacerbated with changes to sea level associated with climate change. The City has indicated that reconstruction of the existing station in the same location is necessary given the line-of-sight needs of the lifeguards

including closely watching beachgoers and especially riptides that often develop directly underneath the pier. However, based on the plans provided by the City, the portions of the structure located closest to the water and likely to provide the most expansive views of the ocean will be used as meeting space and private offices and will not be utilized for observing the ocean. Additionally, the City has indicated that the building cannot be moved further inland because the lifeguard station utilizes portions of the existing pier that are now considered historic, and the building cannot be reconstructed further inland. However, the information provided by the City indicates that the lifeguard station was not constructed until 1980 and would therefore not be considered historic. Given the hazardous location, additional information regarding the location of the redeveloped western lifeguard station should be considered, including relocating non-essential portions of the station (meeting rooms, offices, etc.) into the new eastern building in order to minimize the footprint of the western lifeguard station building. Additional analysis should also be conducted to determine whether the historic portions of the existing western building can be kept in place and the non-historic building can be reconstructed further inland in a less hazardous location.

2. Site-Specific Adaptive Management Plan.

The existing lifeguard station is located in a hazardous location and will likely become additionally threatened over time. The information provided by the City to date indicates that the new structure will be designed with an elevated floor height to accommodate the rising sea levels, however at some point in the future portions of the building will need to be vacated, and eventually the entire structure will need to be abandoned. The project description should make clear that while reconstruction of the lifeguard headquarters is being proposed in the same hazardous location at this time, future hazards will be addressed through a site-specific Adaptive Management Plan which establishes triggers for when measures will be implemented to address hazards, including abandonment and removal of portions of the structure most at-risk. The plan should also evaluate future relocation opportunities for the entire lifeguard station, including expansion of the eastern building.
‘

3. Waiver of Future Shoreline Protection.

The western portion of the development is located in a known hazardous location which is protected by an existing rock revetment. While the City has indicated relocation of the entire structure is not feasible at this time, reconstruction of the structure should not include additional shoreline protection. To address this, the City should confirm that it will waive its rights to any future shoreline protection for the reconstructed lifeguard building. Additionally, the at-grade parking lot is not a principle structure and thus does not warrant shoreline protection. Please note that all or portions of the parking lot may be required to be removed as part of the subject development proposal.

4. Full Geotechnical Evaluation.

Commission staff has reviewed the 2022 Preliminary Foundation Report drafted by Earth Mechanics Inc. and can generally support the proposed grading of the bluff located east of The Strand to facilitate construction of the proposed eastern building. However, a full geotechnical analysis will need to be provided in order to determine whether the other components of the proposed development can be supported. City staff should consider potential alternatives for the eastern building that include a "no grading" or "minimal grading" option. Additionally, the reconstruction of the new bridge is proposed to be supported on deep pile foundations and while these are necessary for the stability of the structure; there is the potential that the deep piles would likely be abandoned in place at the end of the design life of the pier and could conceivably be a nuisance or hazard if exposed on a future beach.

4. Full Sea Level Rise Analysis.

Staff has reviewed the April 6, 2022, memo provided by Moffit and Nichol titled “100-year design Water Elevations with Sea Level Rise” as a part of the project review and while this memo does provide critical information, a full Sea Level Rise Analysis for the proposed development is necessary given the hazardous location of the project. Additionally, given that the proposed development includes critical components of the Oceanside Municipal Pier, the sea level rise analysis should be drafted incorporating the recommendations of the Commission’s Sea Level Rise Guidance for Critical Infrastructure to the maximum extent practicable. A full wave runup analysis is also necessary and should clearly identify the amount of shoreline protection necessary to protect the existing lifeguard station, as well as the new eastern building. Analysis should also address potential hazards associated with changes in ground water including liquefaction as well as future potential tsunami hazards.

5. Retention of At-Grade Parking Lot.

Current development on the site includes an at-grade concrete parking lot located immediately west of The Strand and south of the western building (shown in purple on the attached aerial). In previous discussions, the City indicated that retention of the parking lot is necessary as it provides essential fire truck and trailer turnaround area, however, this seems contrary to Google imagery showing the area as fully parked (see Attachment #2). Removal of the concrete parking area should be re-evaluated by the City, as this could open additional sandy beach area for the public.

6. Public Use of New Eastern Building.

The proposed eastern building is intended to provide additional lifeguard facilities as well as new commercial space and a public viewing deck. The area where the development is proposed is currently zoned for Open Space, and portions of the development area currently include public space. Therefore, any area proposed outside of the lifeguard headquarters should be open and available to the public on a regular basis. Additionally, it appears that the new eastern building may occupy a space beneath the pier currently developed with the Tin Fish Restaurant. The LCP protects that structure as a lower-cost

food establishment and any new commercial space replacing Tin Fish should have a menu that meets this requirement.

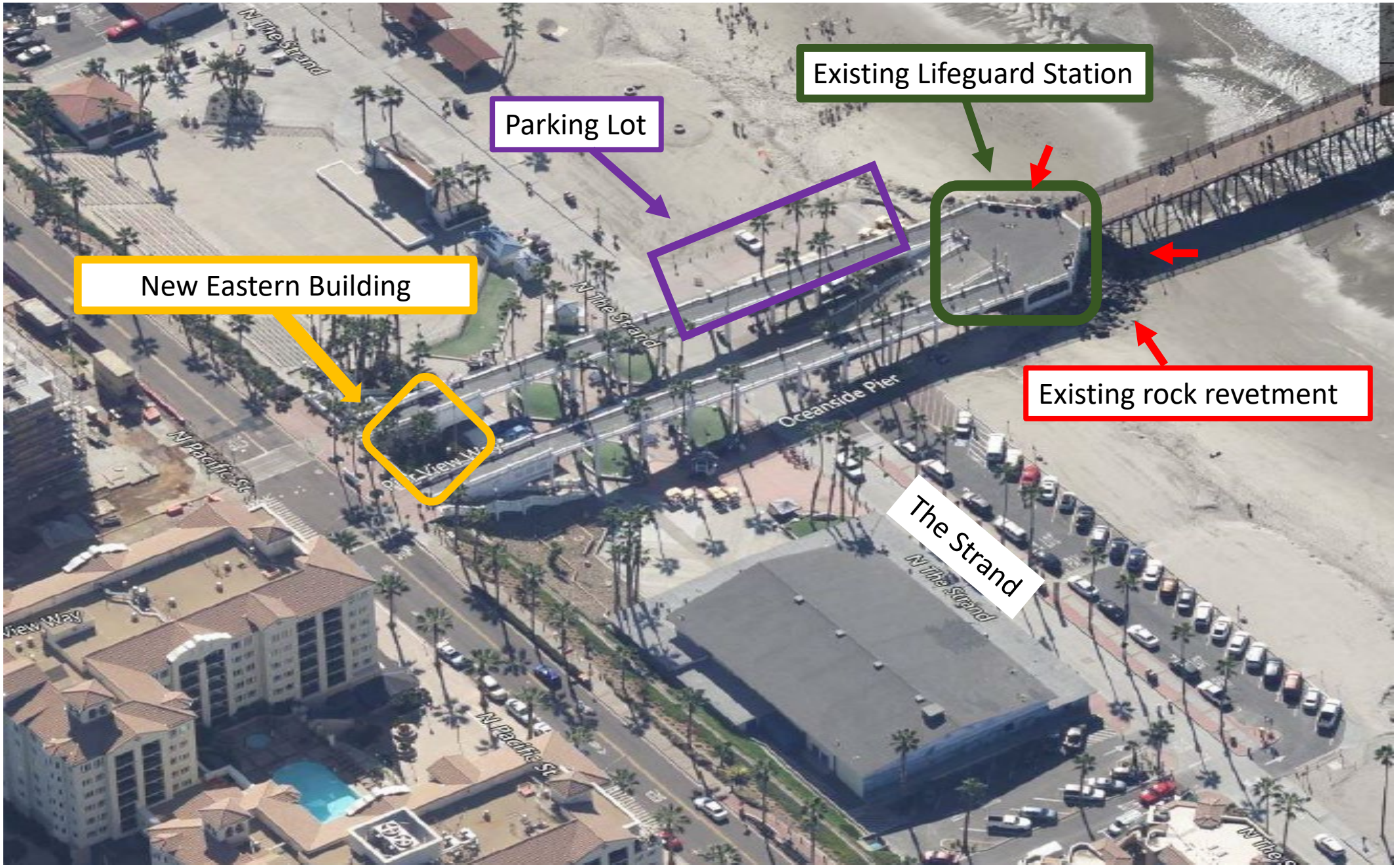
To conclude, Commission staff greatly appreciates the time and effort the City has already undertaken to get the project to this point and would like to thank the City for their patience as Commission staff reviewed this project. At this time, staff are generally in support of the development proposed, but would need to re-evaluate the project with the inclusion of the above requested items prior to providing full support of the project design. Staff welcomes additional discussion regarding the proposed development.

Sincerely,

Toni Ross
Coastal Planner

Cc: Diana Lilly
Kanani Leslie
Jonathon Borrego
Darlene Nicandro
Dara Woods

Attachment 1




Oceanside Pier
Oceanside Pier
Oceanside Pier
Oceanside
Lifeguard Services
Oceanside Pier
Pier

ATTACHMENT 13:

PIER VIEW WAY BRIDGE SEISMIC DEFICIENCIES LETTER

moffatt & nichol

1660 Hotel Circle North, Suite 500
San Diego, CA 92108

(619) 220-6050
www.moffattnichol.com

February 7, 2019

City of Oceanside
Public Works Department
Engineering Division
300 North Coast Highway

Attn: David Toschak, P. E., Senior Civil Engineer

Subject: Pier View Way Bridge at Oceanside Pier- Summary of Seismic Deficiencies Letter

Dear David:

The purpose of this letter is to provide a summary of seismic deficiencies inherent within the existing Pier View Way concrete bridge structure. The work is being performed as part of an assessment of the status of the bridge to assist in programmatic decisions for rehabilitation or replacement.

SCOPE OF WORK - Specific requirements for this effort are as follows:

Task 3 - Seismic Assessment Letter

> *Prepare a brief letter of up to three (3) pages providing a generalized assessment on the potential seismic deficiencies of the structure based on the original design shown on the record drawings, in comparison to current practices. This assessment will be based on the experience of senior bridge design engineers, not detailed engineering analysis, calculations, or considerations of existing conditions.*

BACKGROUND INFORMATION

The Oceanside Municipal Pier is located at the foot of Pier View Way. The pier structure is composed of two separate elements, 1) the Concrete Bridge, and, 2) the Timber Pier. The Concrete Bridge was designed by the Oceanside City Engineer R.L. Loucks, C.E. in 1926 and consists of north and south lanes with a vehicle ramp in between that leads from The Strand North up to the timber pier. The structure has overall dimensions of 68 ft wide by 340 ft long (not including stairs).

The concrete bridge features a set of north and south concrete stairs on the east side that lead from Pier View Way down to the beach. Incorporated into the north and south lanes, and directly adjacent to the associated north and south stairways, were rest room/changing room areas that now function as storage rooms. In the mid-1980s a significant concrete repair project was completed, and lifeguard headquarters were created as infill beneath the westward three bents of the structure. See Reference Document No. 1 for an in-depth depiction of the bridge.

REFERENCES

The following reference contains source information pertinent to this Scope of Work:

1. Construction Drawings (Sheets 1-12) titled “Municipal Pleasure Pier”, dated 1926, prepared by R.L. Loucks, C.E., City Engineer of Oceanside. These are the original drawings for the concrete bridge and the 1926 timber pier.

LIST OF DEFICIENCIES

A summary of deficiencies is listed in the table below. The deficiencies are listed in approximate-order of significance as to seismic performance. Refer to the annotated slides and record drawings provided in the Appendix.

Deficiency/Issue	Seismic Performance	Other Comment	Annotated Slide No.
1. Column connections at deck, braces, and foundation.	Columns are very lightly reinforced and appear to be insufficiently sized to function as moment frame elements. There are insufficient ties to properly confine the concrete and provide ductility. Under a major earthquake, column connections will fail in a brittle manner.	Joint failure will result in excessive deformation of structure.	**1**
2. Stiffness of restroom structure – transverse and longitudinal direction. Columns beneath restroom under-designed.	Stiffness of the restroom walls are combined with short unbraced lengths of columns at the east end of the bridge. This condition will attract excessive lateral load from a major earthquake.	This condition, combined with Issue No. 1 will result in excessive deformation of the columns.	**2**
3. Longitudinal bracing of northeast stairs	The diagonal pattern of the northeast stairs structure acts as a brace, attracting lateral load from a major earthquake. Lateral load will be transferred to the adjacent bridge columns.	This condition, will result in excessive deformation of the columns. .	**3**
4. Longitudinal bracing action of ramp, lack of ductility at ramp/column joints	The diagonal pattern of the ramp acts as a brace, attracting lateral load from a major earthquake. Lateral load will be transferred to the adjacent bridge columns.	This condition, will result in excessive deformation of the columns.	**4**

	Deficiency/Issue	Seismic Performance	Other Comment	Annotated Slide No.
5.	Pile/footing beneath Lifeguard Station. Uplift at pile/footing connection and unbraced condition of the pile cap.	The specific connection of the timber piles to the concrete footing is unknown. The connection likely has minimal uplift capacity. The piles caps should be braced about both longitudinal and transverse axes. The drawings show no longitudinal grade beam.	This condition could result in excessive foundation movement under a major earthquake.	**5**
6.	Lifeguard infill	The lifeguard facility exterior and interior walls are constructed from brittle infill (steel stud/stucco/drywall, concrete masonry, and glazing). Under a major earthquake, excessive deformation from the bridge structure could result in significant failure of this construction.	Potential threat to public and City Employee safety due to falling partitions, equipment, broken windows, etc.	**5**
7.	Transverse movement of ramp	The planametric arrangement of the ramp relative to the adjacent bridges and bridge-head structure is not complementary. Under a major earthquake it is expected that the ramp bridge head intersection would suffer significant damage	Potential threat to public and City Employee safety.	**6**
8.	Pier/bridge seismic interaction	The natural period of vibration for the rigid bridge structure in comparison to the more flexible timber/steel pipe-braced structure are incompatible. Under a major earthquake - particularly one acting and the longitudinal direction - the two structures would likely suffer damage from “pounding”, and/or significant distress at the intersection of both structures.		**6**
9.	Age/condition	The concrete bridge is 92 years old and is beyond its operational and design service life. Funds have been expended in a recent patching project oriented towards repair of obvious damage to the concrete from corroding reinforcing steel.	Patches of this type have a limited service life, and it is expected that the bridge will continue to deteriorate.	**--**

Deficiency/Issue	Seismic Performance	Other Comment	Annotated Slide No.
10. Loss of soil at east end columns.	The ability to sustain lateral load by the column foundations is dependent on the development of passive pressure for the footings buried in the ground. Over the 92 years of service life, this open slope has eroded considerably, minimizing the ability to develop lateral earth passive pressure.	This condition minimizes the capacity of the bridge structure to resist both vertical and lateral loads induced from a major earthquake.	--
11. Seismic details for utility connections.	Utility transitions occur at the earthen slope adjacent to Pacific Street and at the intersection between the concrete bridge and timber pier. The exact configuration of these utility connections (potable water, sewer, electrical, natural gas) is unknown but it is doubtful that there is sufficient flexibility in the connections to resist a major earthquake.	This condition could contribute to potential for fire or pollution.	--

The opportunity to present these concepts is appreciated. Should you have any questions or need for follow-up please do not hesitate to call.

Sincerely,

MOFFATT & NICHOL

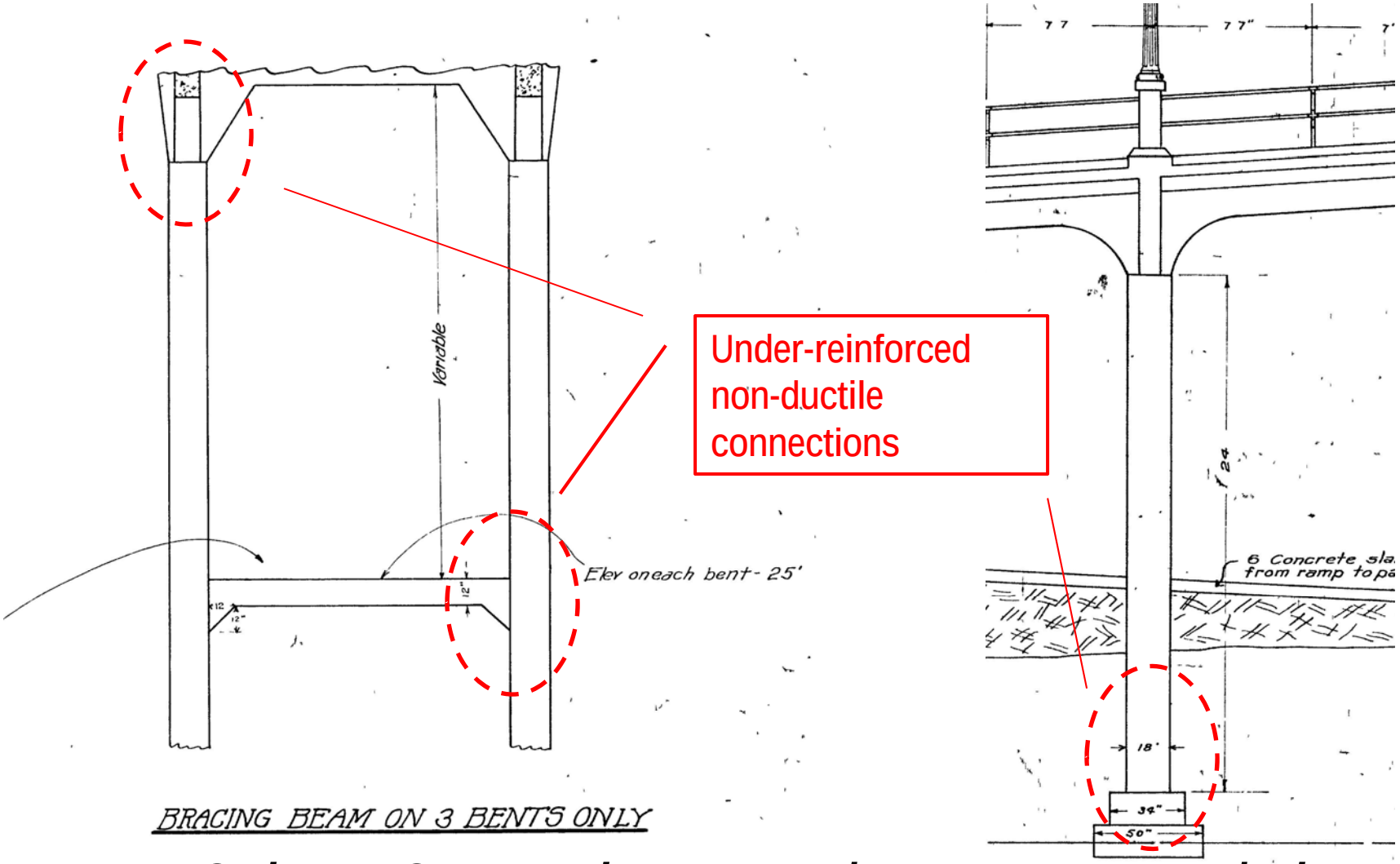


Matthew N. Martinez, S.E.
Vice President: MNM/jc/bd

Enclosures

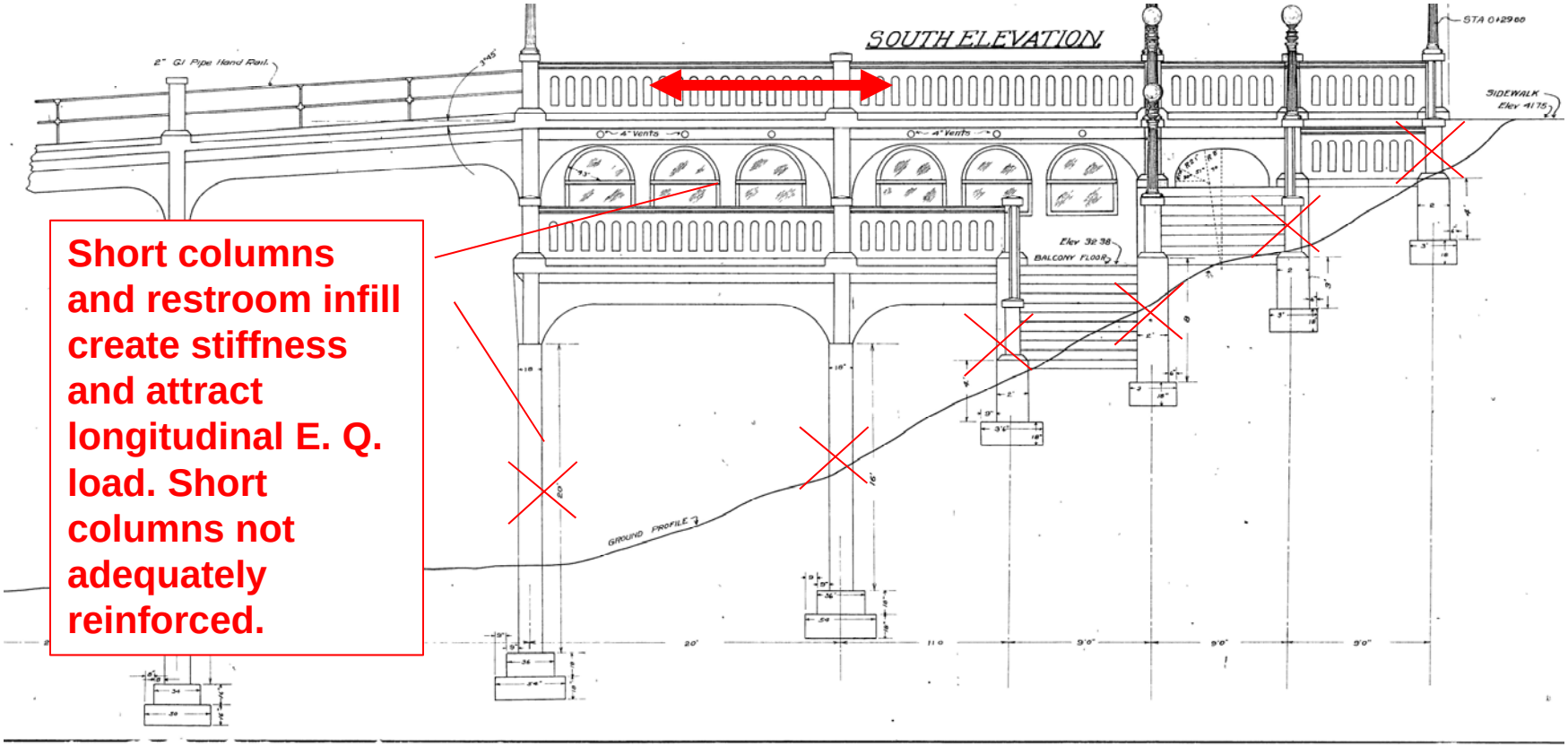
Q:\SD\9970 OCEANSIDE PIER VIEW WAY BRIDGE\SEISMIC DEFICIENCIES LETTER\FINAL\02-06-19 PIER VIEW WAY SEISMIC DEFICIENCIES LETTER - FINAL - REV. 1.DOCX

Pier View Way Bridge Seismic Deficiencies



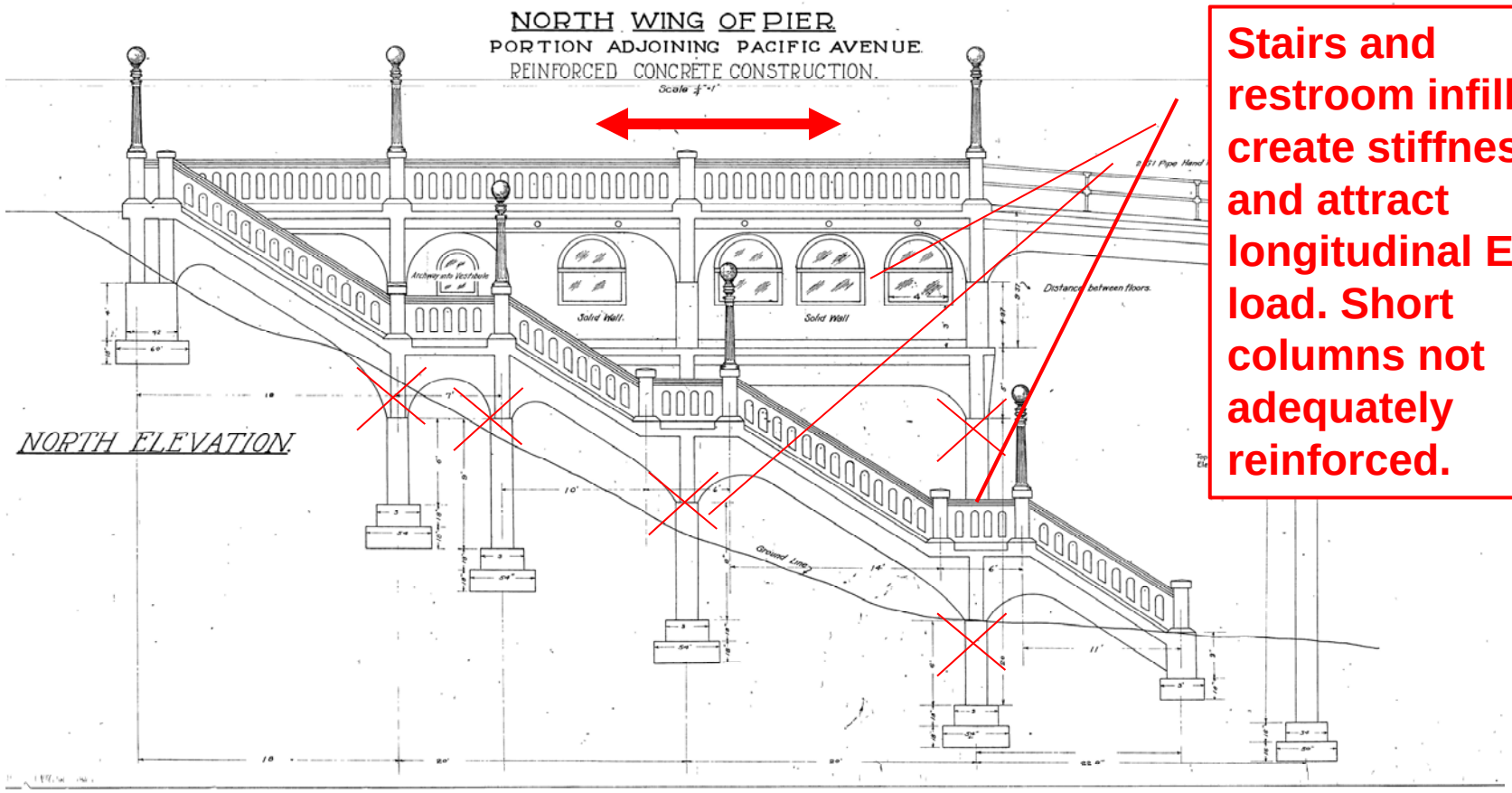
1. Column Connections – Deck, Braces, Foundation

Pier View Way Bridge Seismic Deficiencies



2. Stiffness of restroom structure –Columns beneath restroom. Bracing of northeast stairs

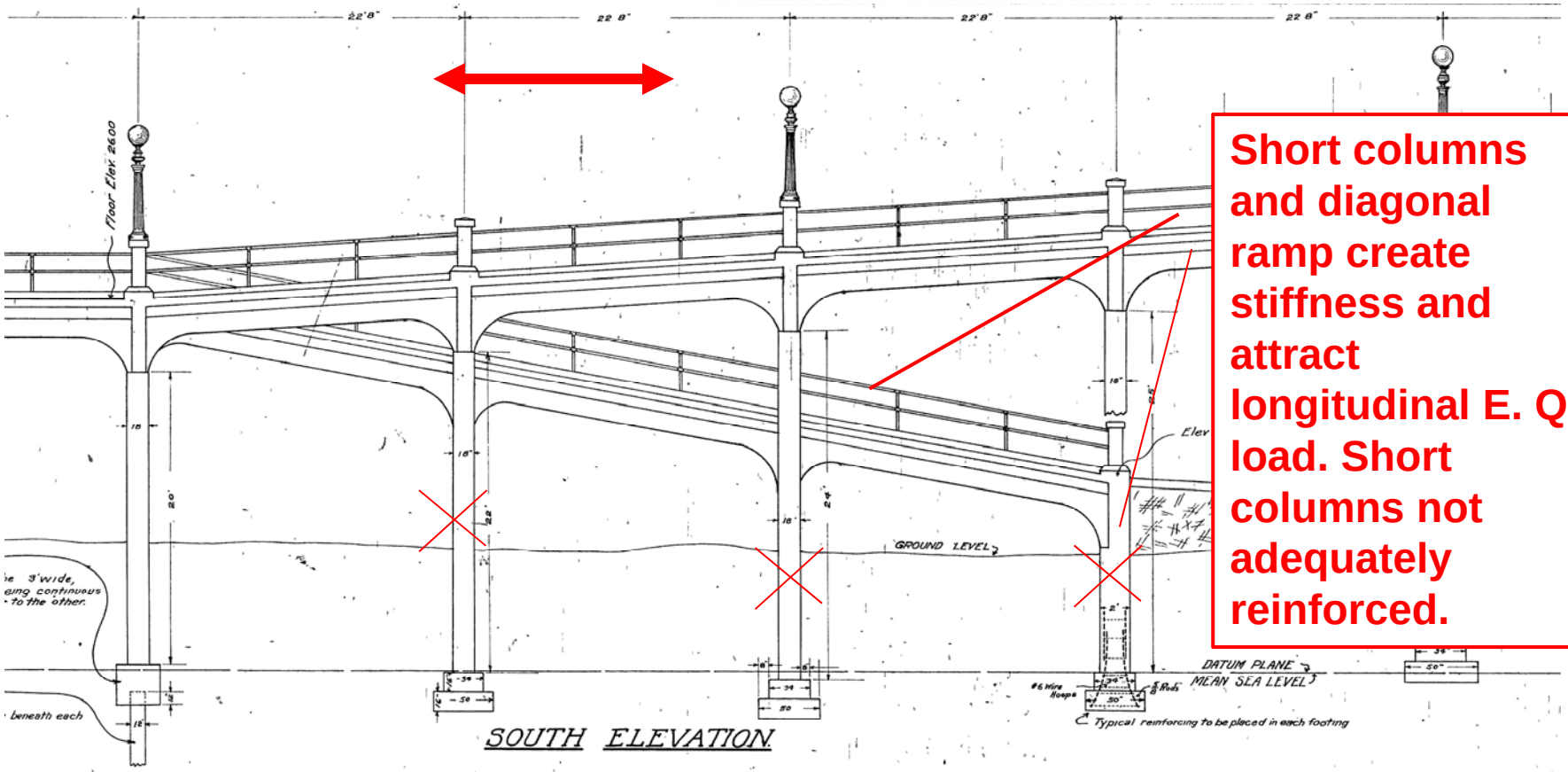
Pier View Way Bridge Seismic Deficiencies



Stairs and restroom infill create stiffness and attract longitudinal E. Q. load. Short columns not adequately reinforced.

3. Longitudinal bracing of northeast stairs

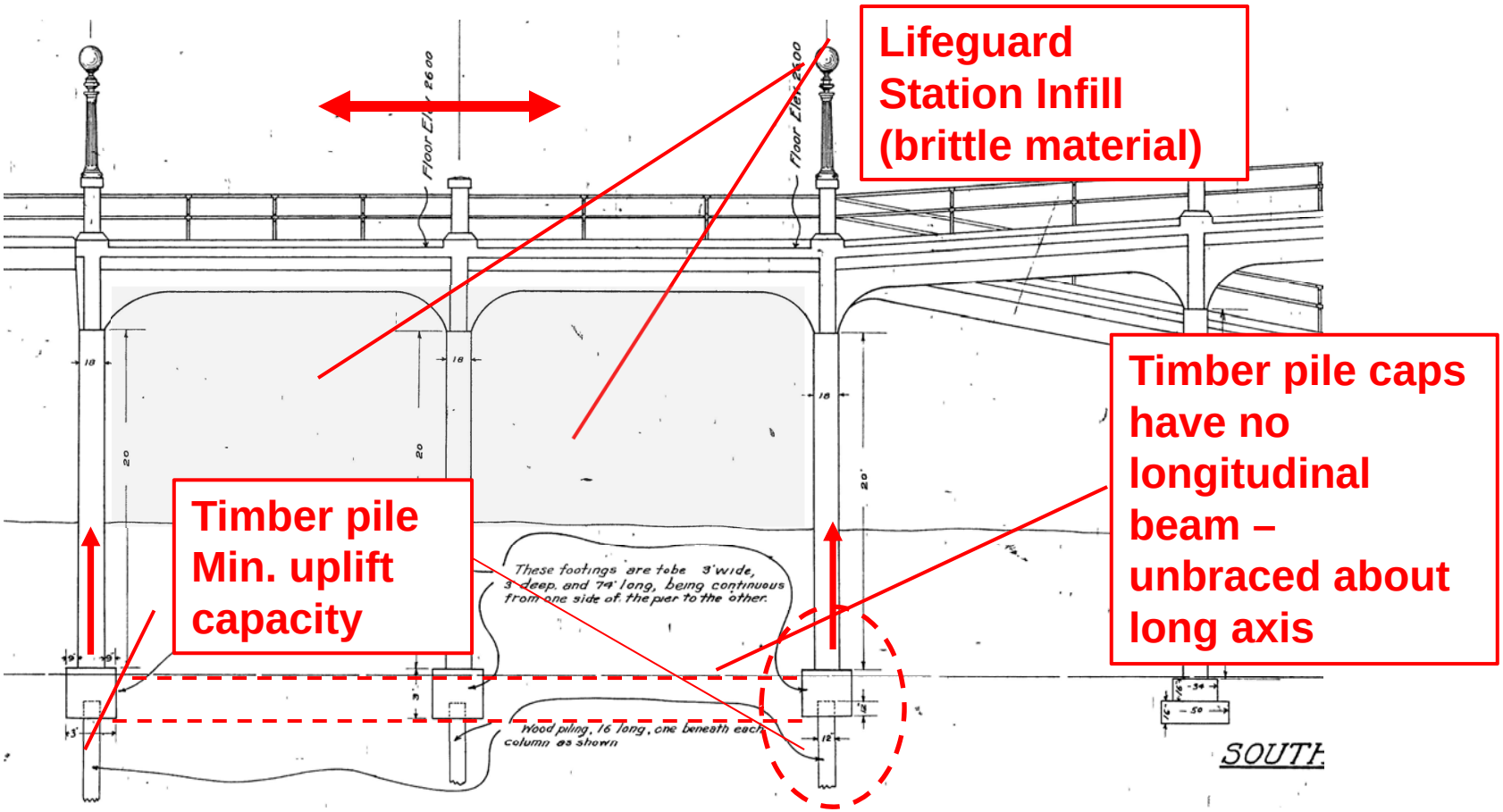
Pier View Way Bridge Seismic Deficiencies



Short columns and diagonal ramp create stiffness and attract longitudinal E. Q. load. Short columns not adequately reinforced.

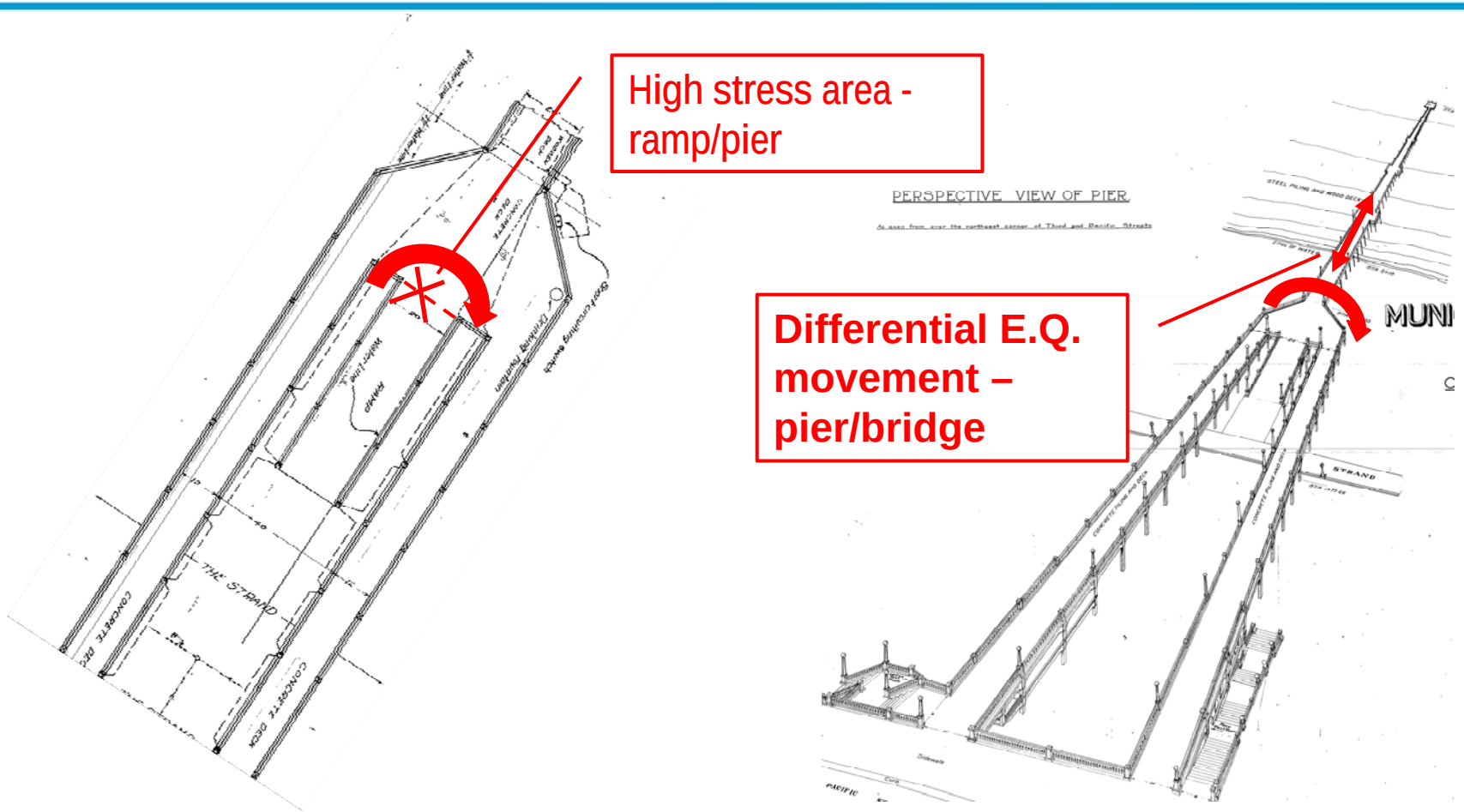
4. *Longitudinal Bracing action of ramp , ductility of ramp/column joints*

Pier View Way Bridge Seismic Deficiencies



5&6. Pile/footing beneath Lifeguard Station. Uplift and unbraced condition / Brittle Lifeguard Station infill

Pier View Way Bridge Seismic Deficiencies



7&8 Transverse Movement of ramp / Pier/bridge seismic interaction

PERSPECTIVE VIEW OF PIER.

As seen from over the northeast corner of Third and Pacific Streets



Pier/bridge seismic interaction

Transverse Movement

MUNICIPAL PLEASURE PIER.

FOR THE CITY OF

OCEANSIDE, CALIFORNIA.

DESIGNED BY AND BUILT UNDER THE SUPERVISION OF } P.L. Loucks C.E., City Engineer of Oceanside. 1926.

Drawn by - C.S. Seabrook

CONTENTS OF PLANS.

SHEET	SUBJECT
1.	Title and perspective
2.	General Plan (concrete section)
3.	" " (steel section)
4.	South Rest Room
5.	North Rest Room
6.	Rest Rooms to steel structure
7	Concrete details
8.	" "
9.	" "
10.	Steel details
11.	" "
12.	Pier end

BOARD OF TRUSTEES

E.A. Walsh (PRESIDENT)
Bernard Macdonald
C.D. Merrill
H.D. Brodie
H.F. Crandell
J.H. Landes (CLerk)

3-B-1

MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA
Sheet 2 of 12 Sheets
R.L Loucks - City Engineer

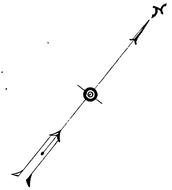
GENERAL · PLAN · AND · ELEVATION.
PART - 1
REINFORCED CONCRETE SECTION.

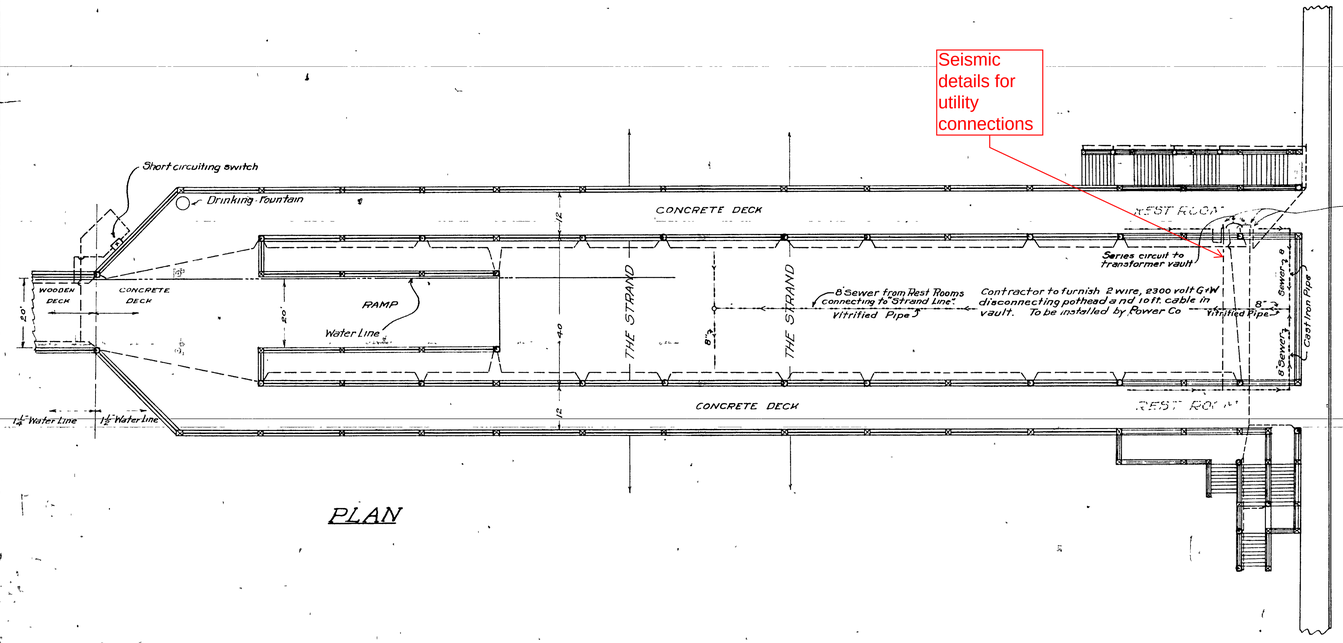
NOTE.

No details or dimensions to be taken from either this drawing or part 2, with the exception of the stationing of parts of pier marked hereon

Scale 1"=20'

Heavy dash lines - Light wiring diagram



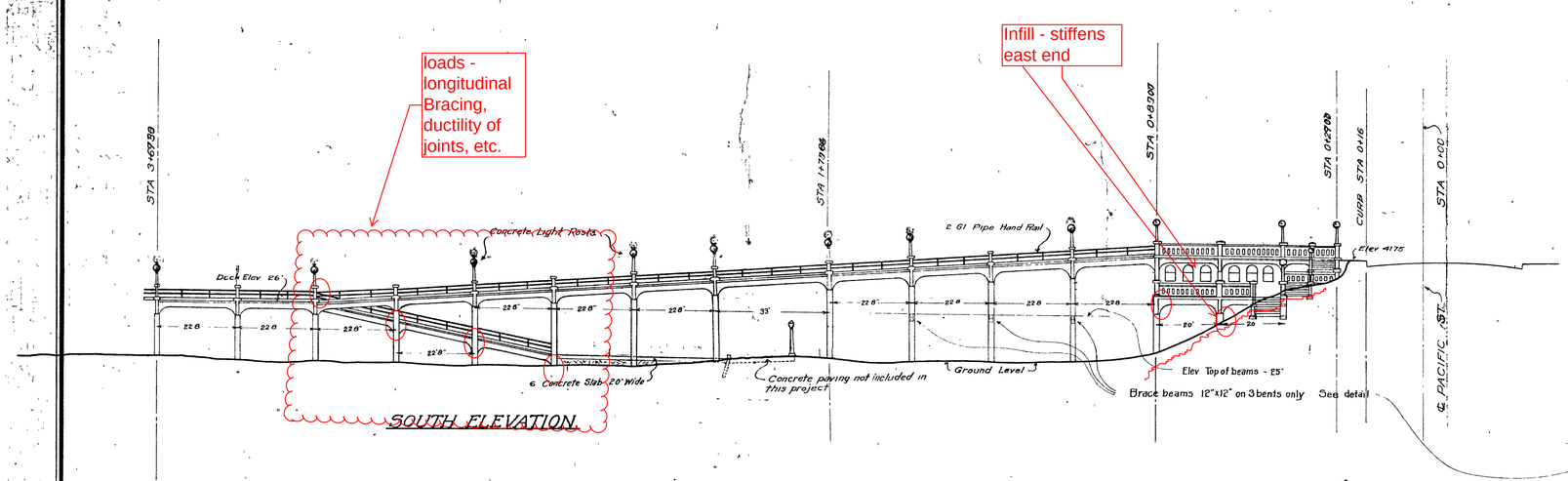


PLAN

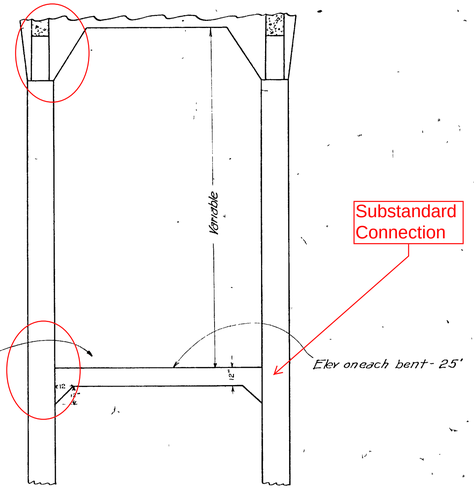
Seismic details for utility connections

Multiple circuits as shown.
Panel board mounted on outside transformer vault wall
All multiple outlets for 100 watt switches on main panel only.

THIRD STREET



SOUTH ELEVATION.

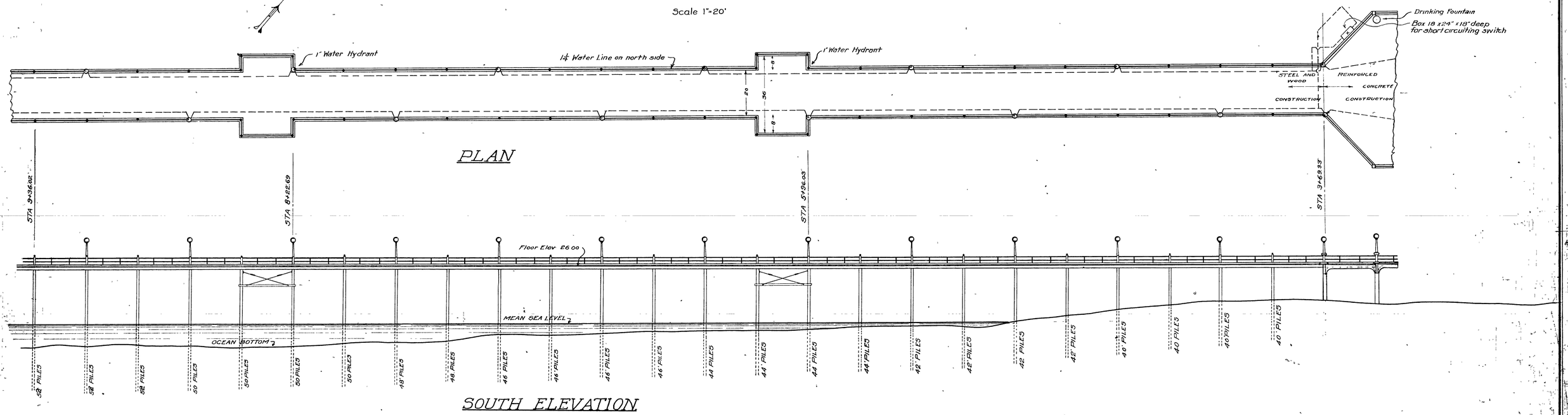


BRACING BEAM ON 3 BENTS ONLY

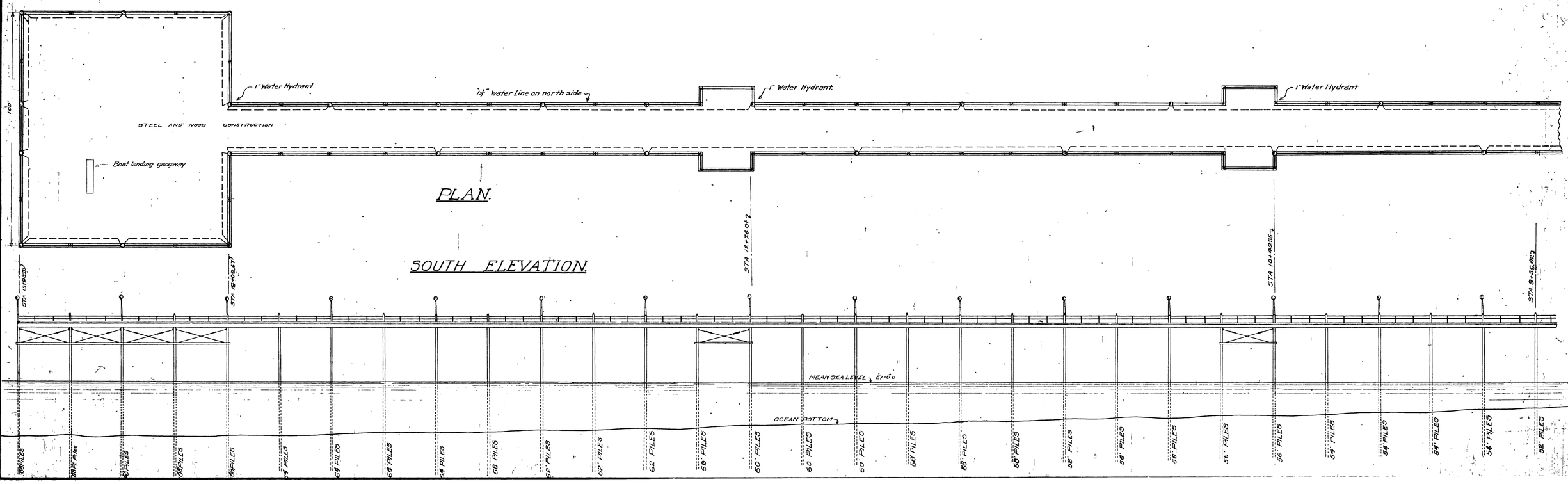
MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA.
Sheet 3 of 12 Sheets
R.L. Loucks - City Engineer.

GENERAL PLAN AND ELEVATION.
PART - 2.
STEEL AND WOOD SECTION.

Scale 1"=20'



NOTE
All bents on this sheet 22'6" c-c.



MUNICIPAL PLEASURE PIER.
OCEANSIDE CALIFORNIA.

Sheet 4 of 12 Sheets.

R.L. Loucks - City Engineer

REST ROOM

CONCRETE DECK
Elevation 41.75

BALCONY
Elev 32.38

Elev 41.75

CONCRETE SIDEWALK

WEST CURB LINE OF PACIFIC STREET

PACIFIC STREET

PLAN.

STA 0+89.06

Elev 37.38'

STA 0+29.00

STA 0+16

SOUTH WING OF PIER.
PORTION ADJOINING PACIFIC STREET.
REINFORCED CONCRETE CONSTRUCTION.

Scale 1"=4'

Lights and light posts as shown on general plan

SOUTH ELEVATION.

2" GI Pipe Hand Rail.

4" Vents

4" Vents

SIDEWALK
Elev 41.75

CURB

Elev 32.38
BALCONY FLOOR

Top of 12"x12" brace
Elev 23

GROUND PROFILE

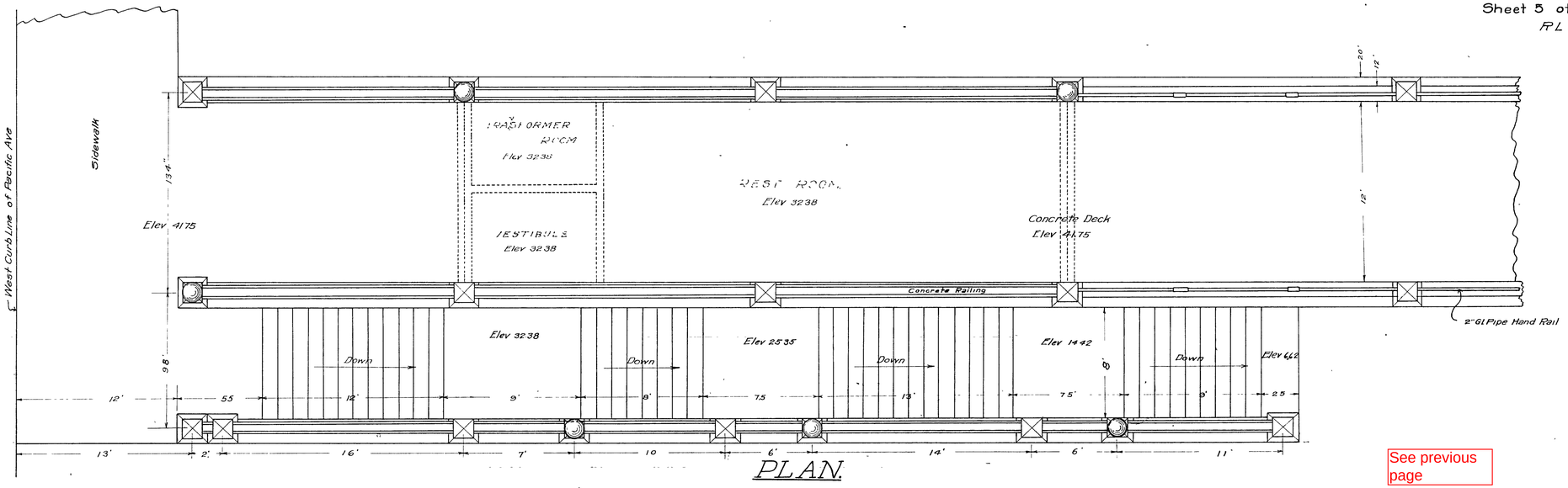
Passive resistance diminshed

22'6" 22'8" 20' 11'0 9'0" 9'0" 9'0"

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.

Sheet 5 of 12 Sheets.

R L Loucks - City Engineer

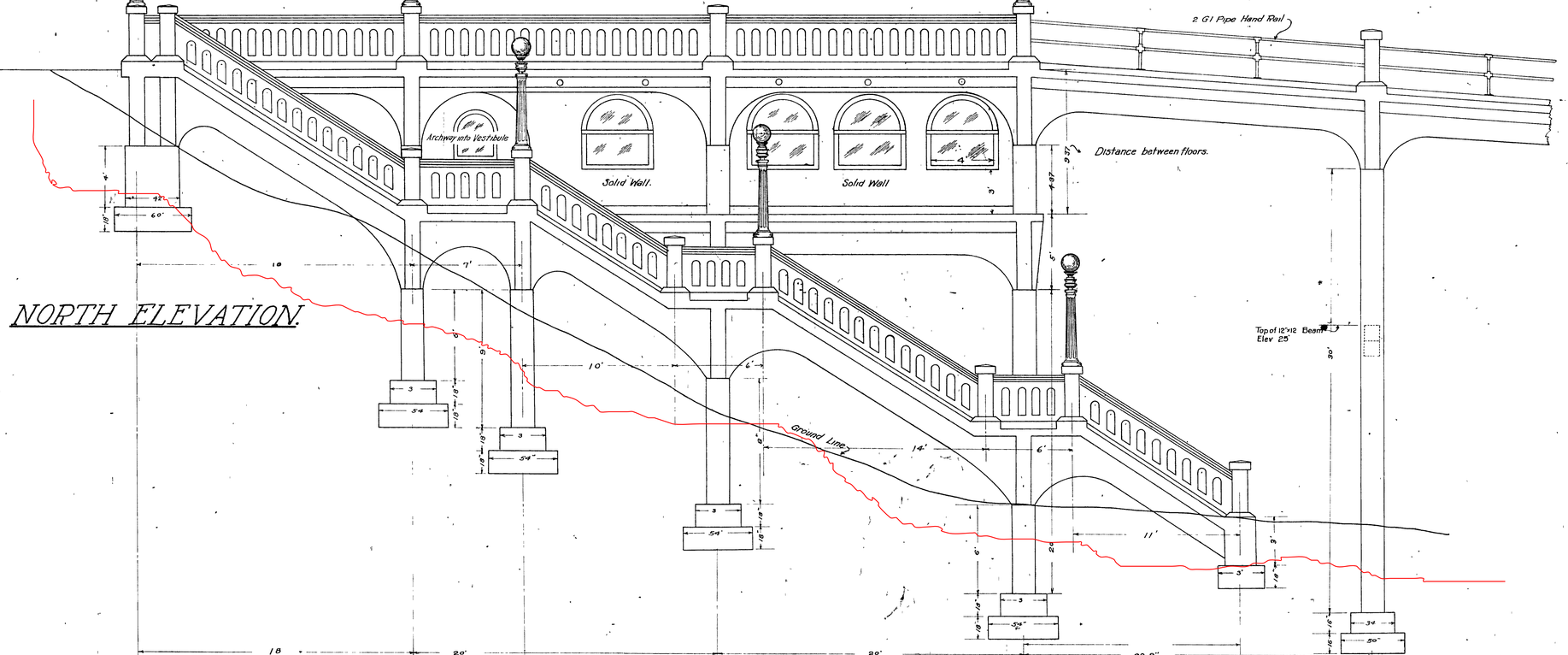


PLAN.

See previous page

NORTH WING OF PIER
PORTION ADJOINING PACIFIC AVENUE.
REINFORCED CONCRETE CONSTRUCTION.

Scale 4"=1'



NORTH ELEVATION.

E & PACIFIC ASE STA 0+00

MUNICIPAL PLEASURE PIER
OCEANSIDE, CALIFORNIA.

Sheet 6 of 12 Sheets.

R.L. Loucks, City Engineer.

PORTION OF PIER
INCLUDING RAMP

Steel and Wood Construction

Reinforced Concrete Construction

Drinking Fountain

WALK

CONCRETE DECK

12'

10'

20'

10'

12'

CONCRETE

CONCRETE

Wood Deck Concrete Deck

Dotted Circles indicating wooden piling beneath footing

67'4"

Elev 26.00

CONCRETE RAMP

TO PIER

TO BEACH

CONCRETE WALK TO STRAND

CONCRETE

DECK

CONCRETE

DECK

PLAN

22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 22'8" 33'

7'7" 7'7" 7'7" 7'7" 7'7" 8'3" 9'3"

Floor Elev 26.00

Floor Elev 26.00

Brittle infill

Pile to footing connection - no uplift capacity; pile condition?; pile unbraced about the long. axis; Performance w/ Scour?

These footings are to be 3' wide, 3' deep, and 7'4" long, being continuous from one side of the pier to the other.

Wood piling, 16' long, one beneath each column as shown

GROUND LEVEL

EARTH FILL

Elev 12.90

6" Concrete slab, 20' long extending from ramp to point on The Strand.

THE STRAND.

DATUM PLANE MEAN SEA LEVEL

#6 Wire Hoops

5/8" Rods

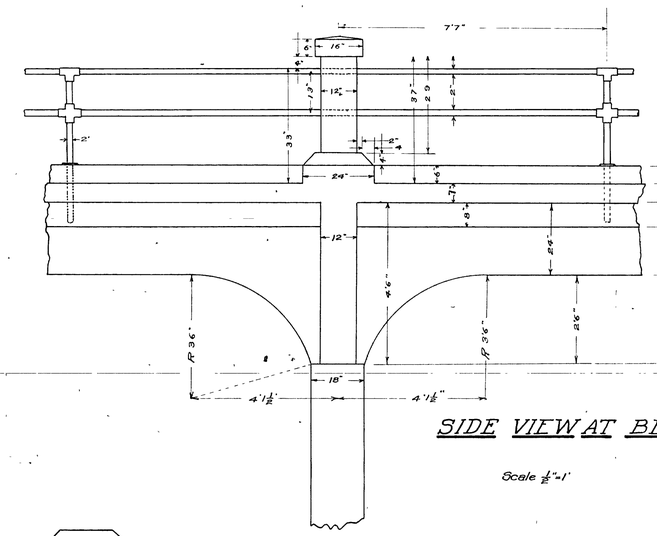
Typical reinforcing to be placed in each footing

SOUTH ELEVATION

DETAILS

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 7 of 12 Sheets.

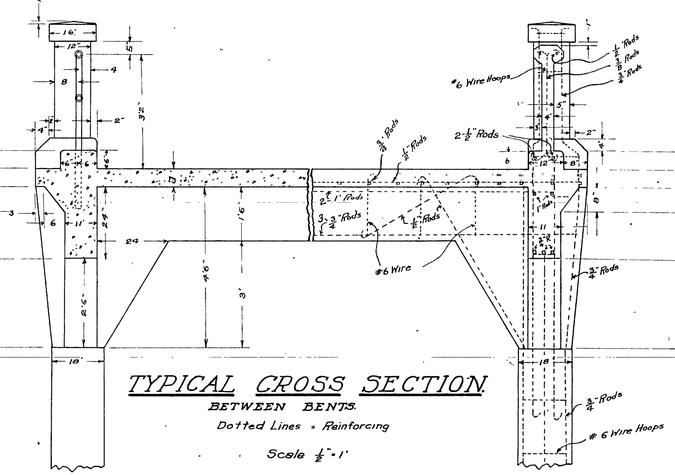
P.L. Loucks - City Engineer.



SIDE VIEW AT BENT

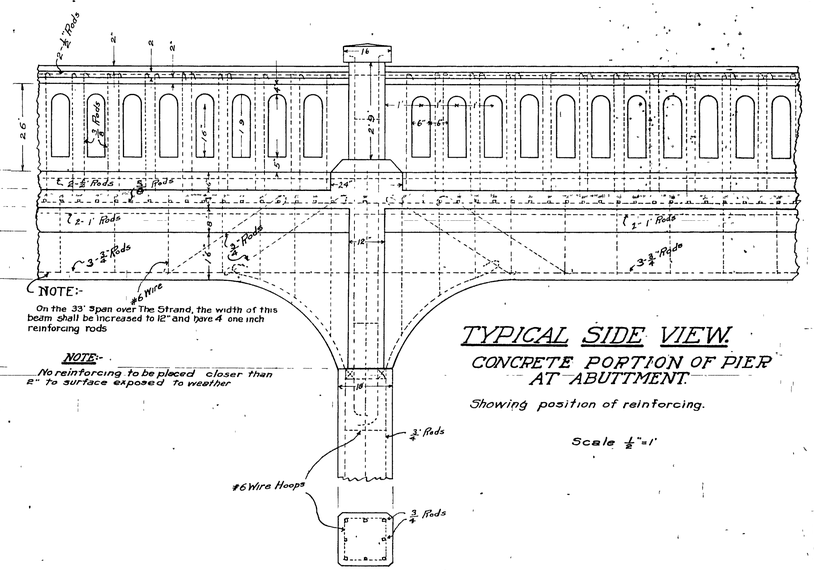
Scale ½"=1'

PIPE HAND RAIL — CONCRETE HAND RAIL



TYPICAL CROSS SECTION
BETWEEN BENTS.
Dotted Lines = Reinforcing

Scale ½"=1'

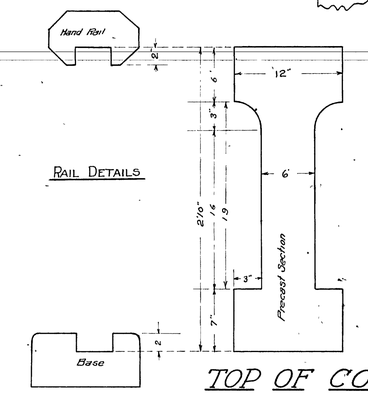


NOTE:-
On the 33' Span over The Strand, the width of this beam shall be increased to 12" and have 4 one inch reinforcing rods

NOTE:-
No reinforcing to be placed closer than 2" to surface exposed to weather

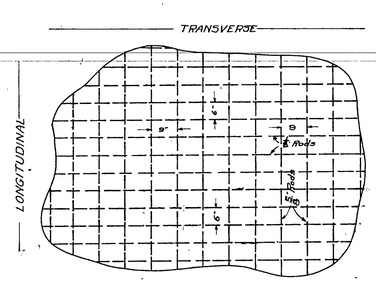
TYPICAL SIDE VIEW.
CONCRETE PORTION OF PIER AT ABUTTMENT.
Showing position of reinforcing.

Scale ½"=1'



RAIL DETAILS

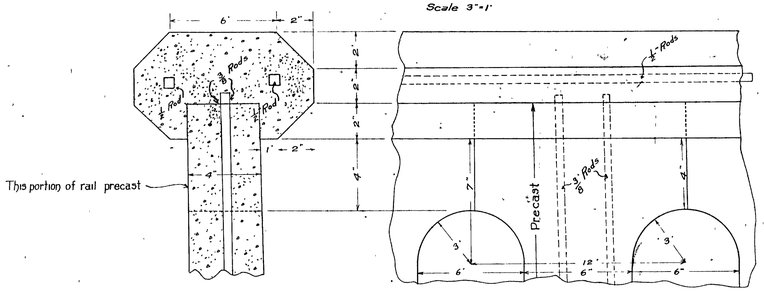
TRANSVERSE



SECTION OF FLOOR showing REINFORCING.

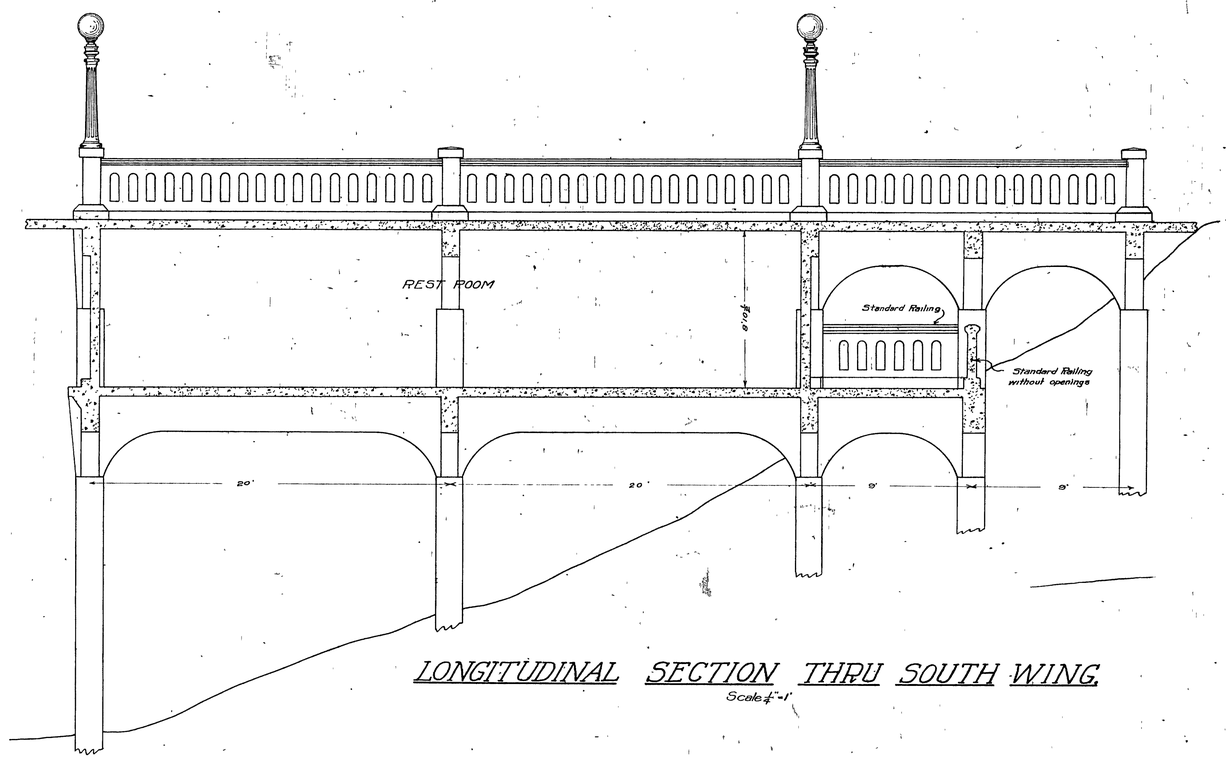
TOP OF CONCRETE RAILING.

Scale 3"=1'



CROSS SECTION

SIDE VIEW.



LONGITUDINAL SECTION THRU SOUTH WING.

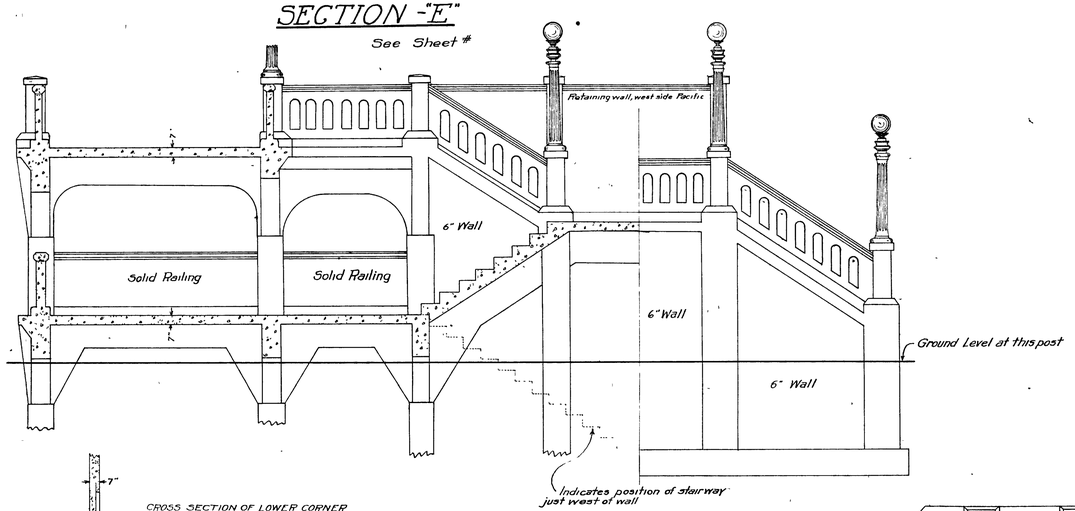
Scale ¼"=1'

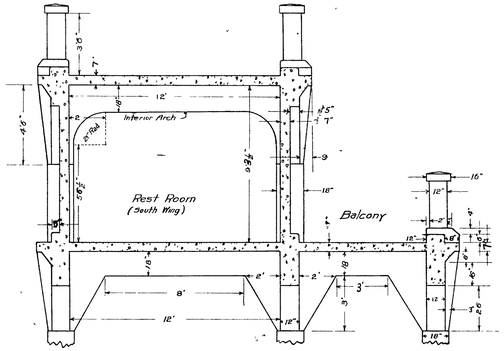
MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 8 of 12 Sheets.
R L Loucks - City Engineer

DETAILS.

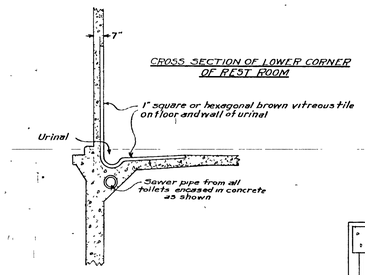
SECTION -"E"

See Sheet #

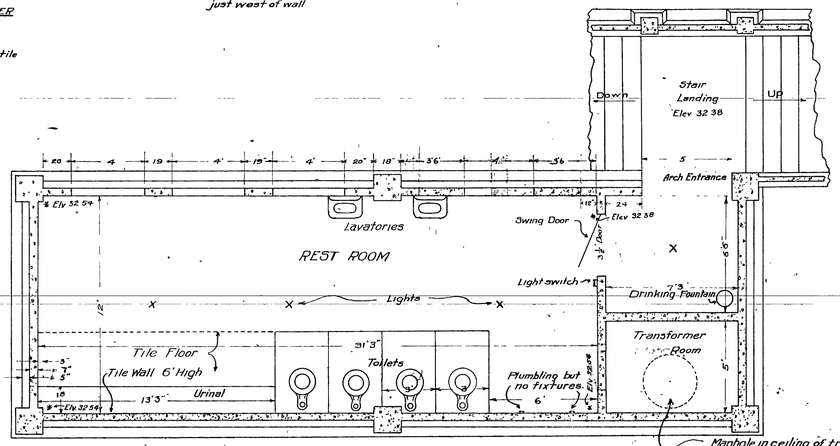




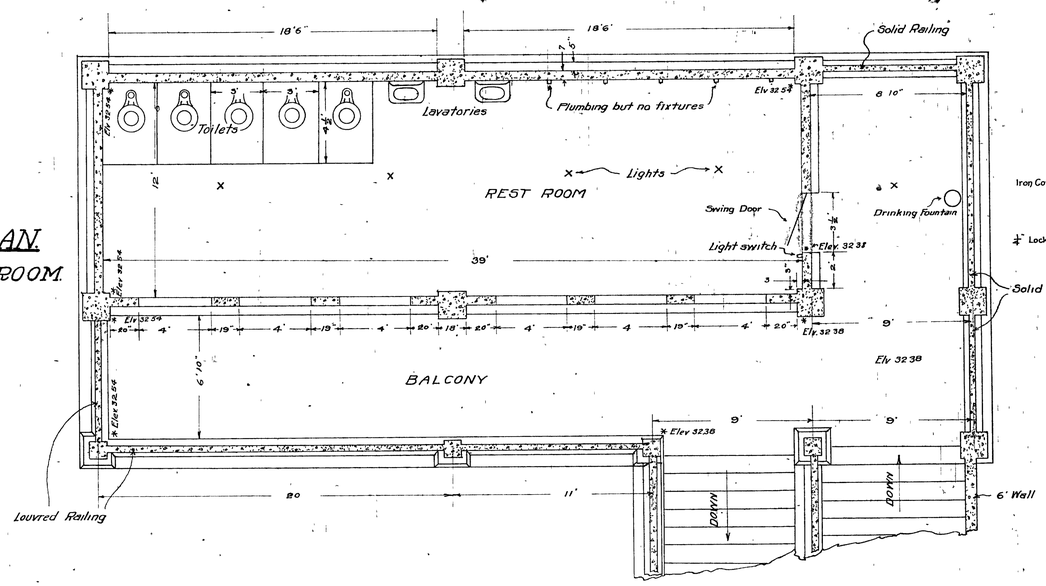
TYPICAL SECTION.
SOUTH WING REST ROOM.
Scale ¼"-1'



FLOOR PLAN.
NORTH REST ROOM.
Scale ¼"-1

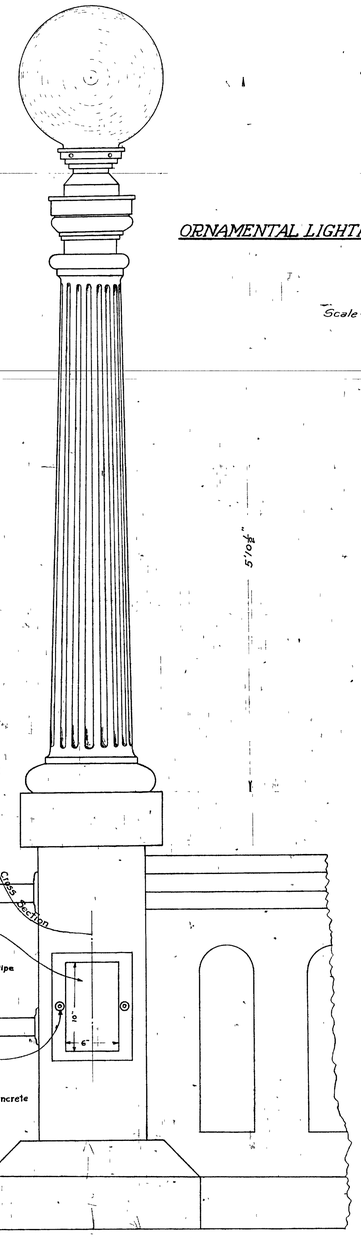


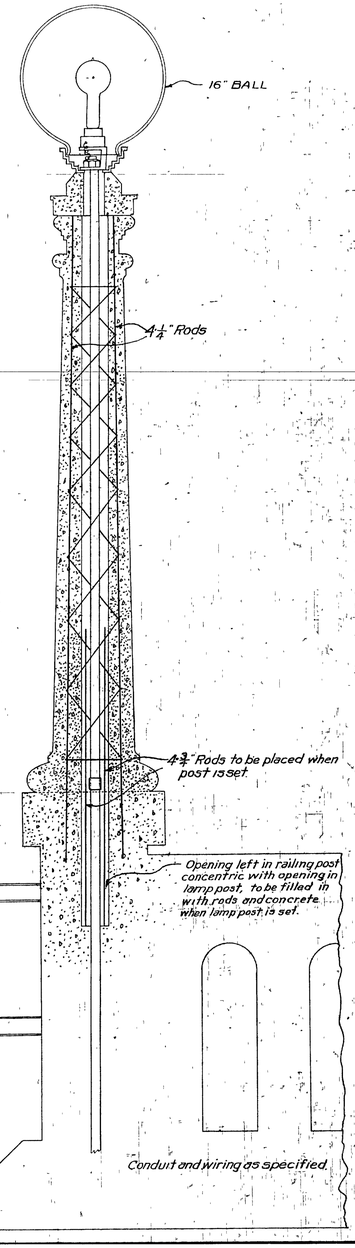
FLOOR PLAN.
SOUTH REST ROOM.
Scale ¼"-1'



ORNAMENTAL LIGHTING STANDARD.

Scale - 1½"-1'

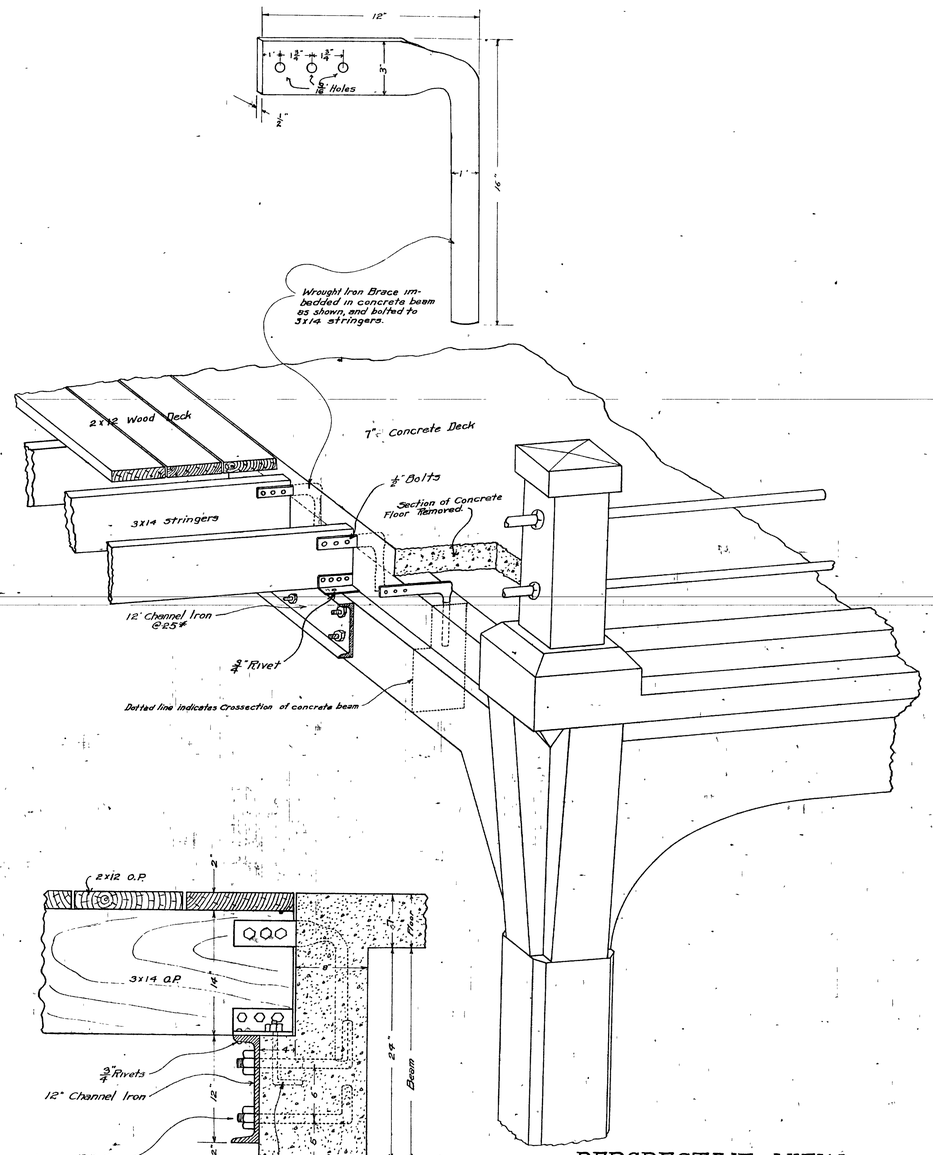




MUNICIPAL PLEASURE PIER
OCEANSIDE CALIFORNIA
Sheet 9 of 12 Sheets.

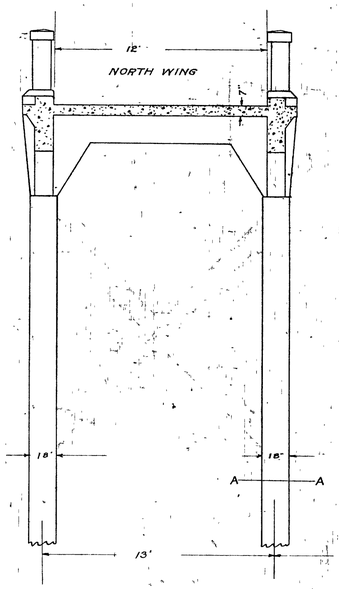
H.L. Loucks. City Engineer.

DETAILS.



PERSPECTIVE VIEW.
JUNCTION OF CONCRETE AND STEEL AND WOOD.

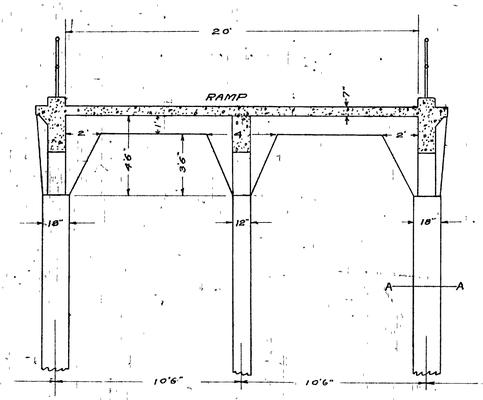
CROSS SECTION.
Scale 1 1/2" = 1'



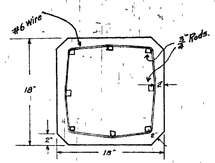
SECTION OF PIER THRU RAMP

SHOWING TRUSSES AND GENERAL CONSTRUCTION.

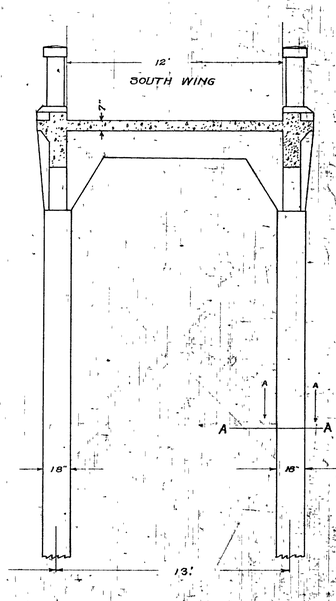
Scale 1/4" = 1'



Standard, Single footings as shown on general plan.



SECTION AA



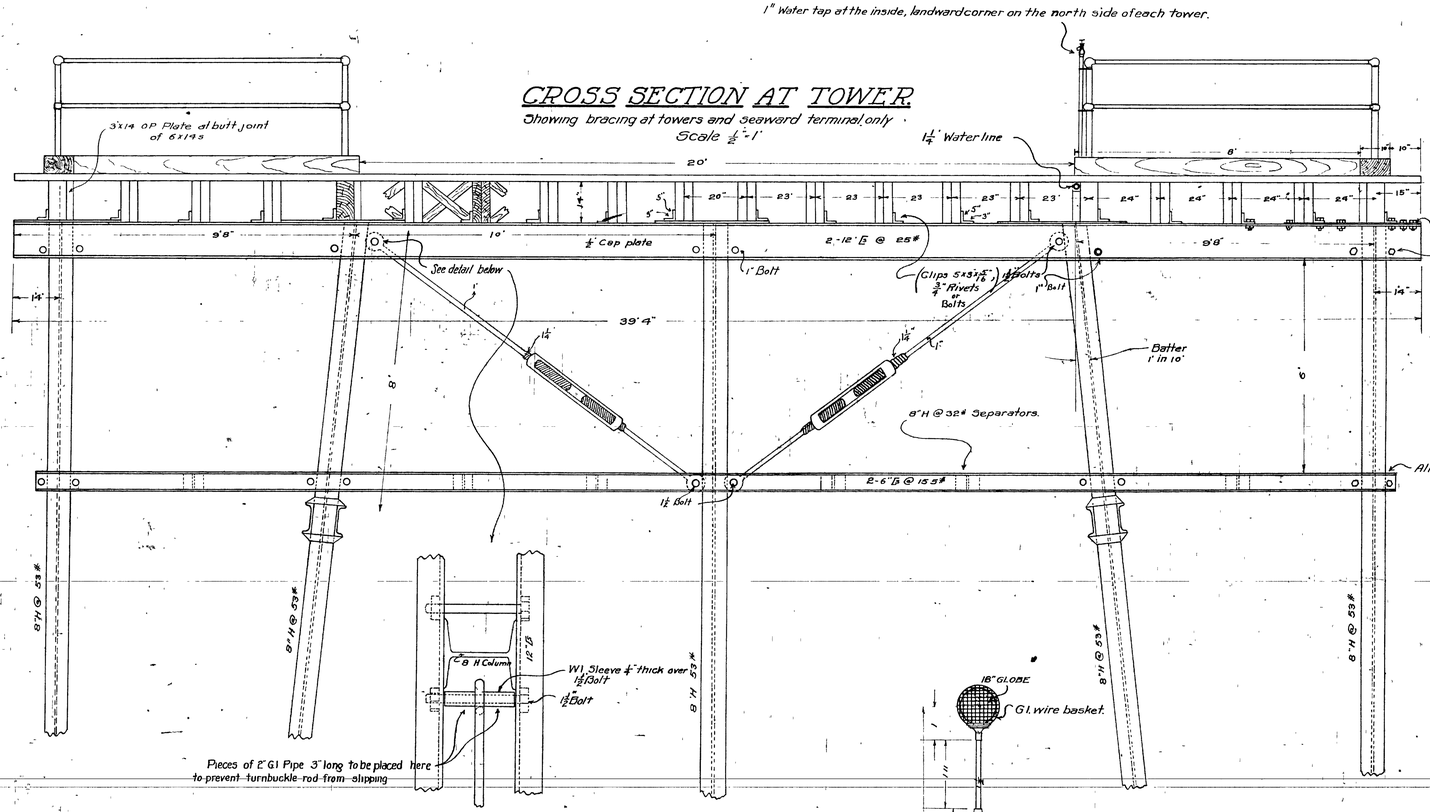
MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.

Sheet 19 of 12 Sheets.

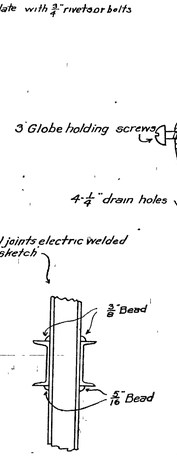
R.L. Loucks - City Engineer

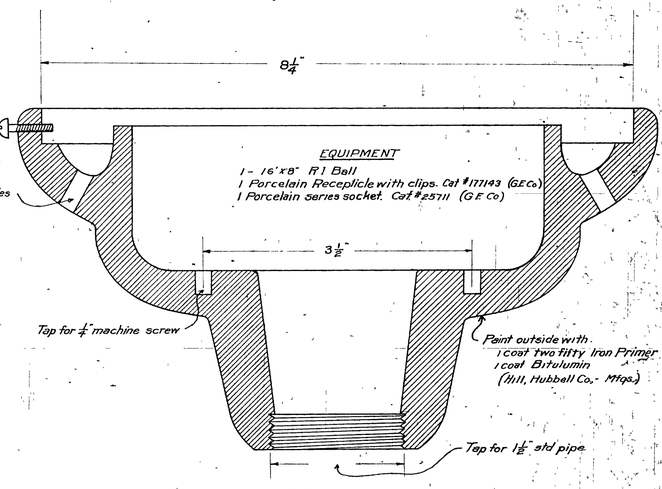
CROSS SECTION AT TOWER.

Showing bracing at towers and seaward terminal only.
Scale ½"-1'



DETAIL SHOWING TURNBUCKLE ROD ANCHOR.

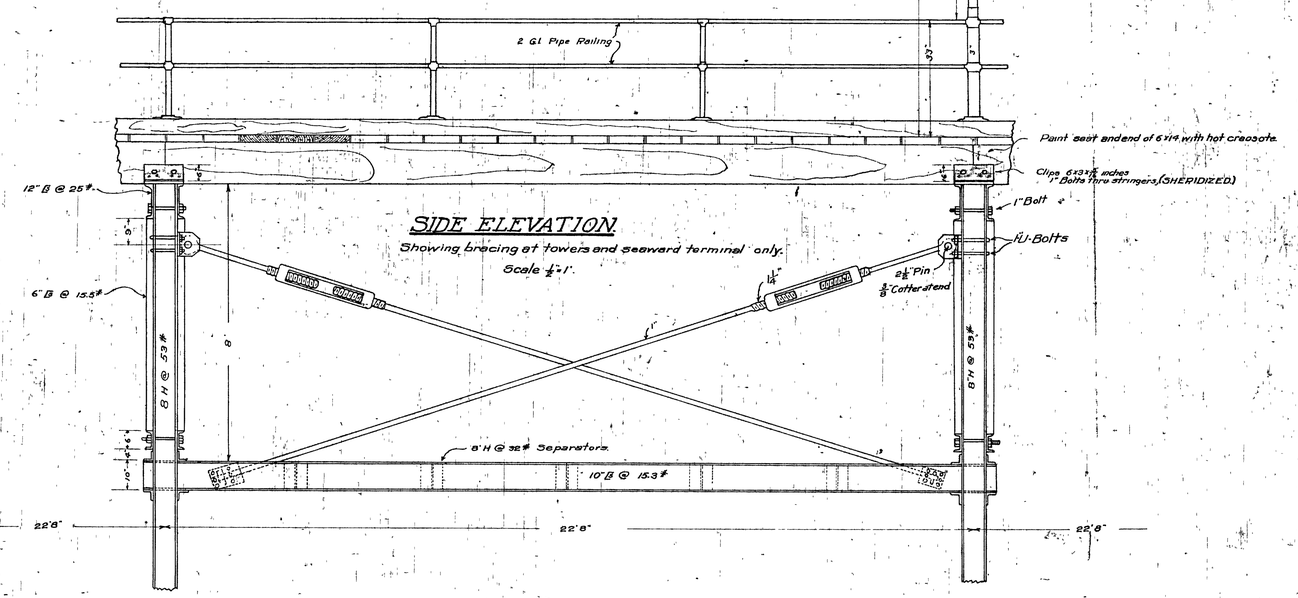


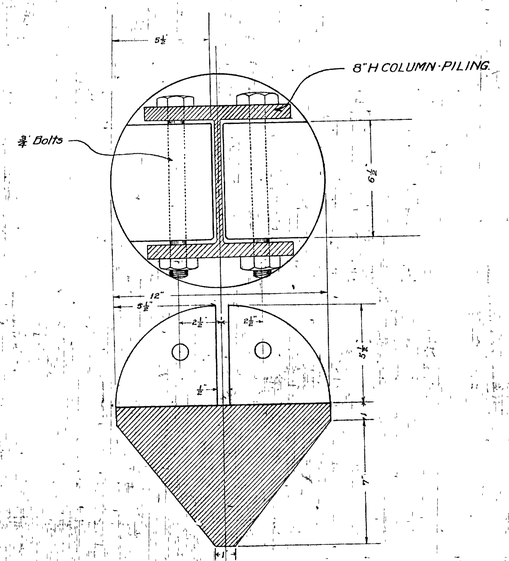


SECTION.

GLOBE HOLDER FOR PIPE LAMP POST.

Scale - Full Size.





JET NOZZLE AND SHOE FOR PILES.

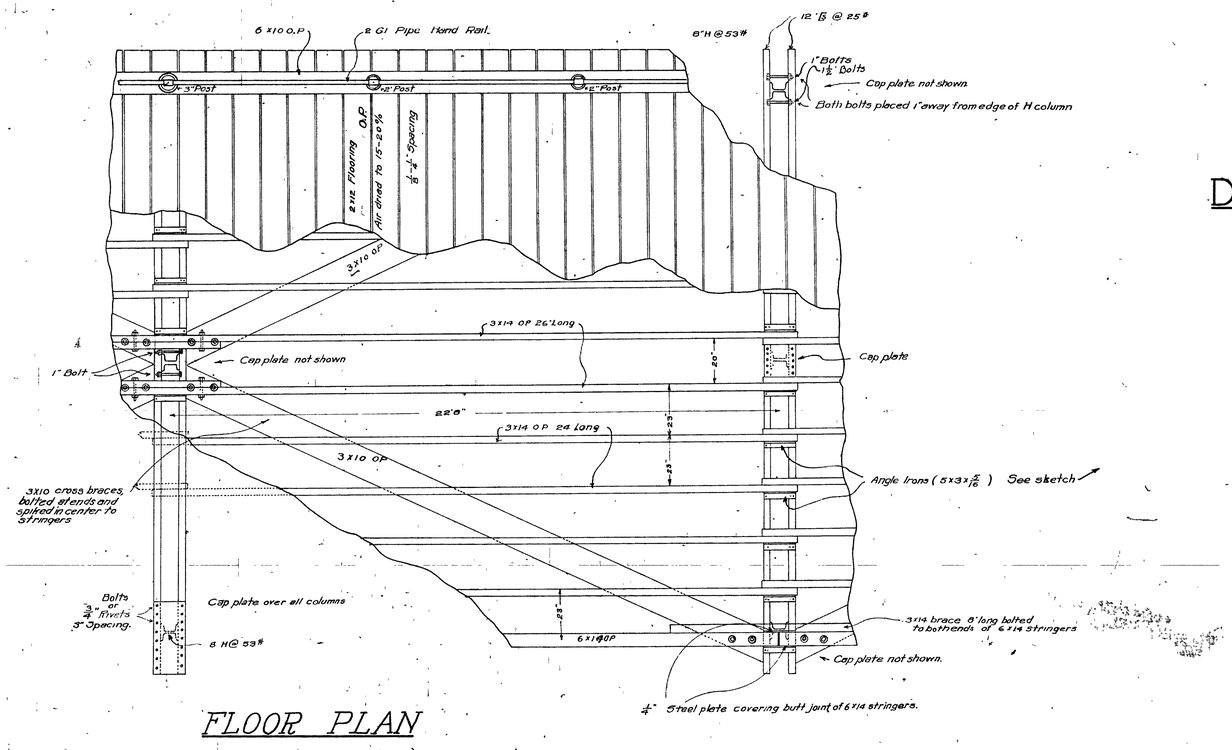
Scale ½"-1"

To be made of Cast Iron.

MUNICIPAL PLEASURE PIER.
OCEANSIDE, CALIFORNIA.
Sheet 11 of 12 Sheets
R.L. Loucks - City Engineer.

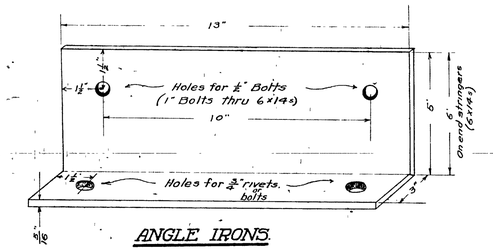
DETAILS OF STEEL AND WOOD STRUCTURE.

(PORTION OF PIER OVER THE WATER)

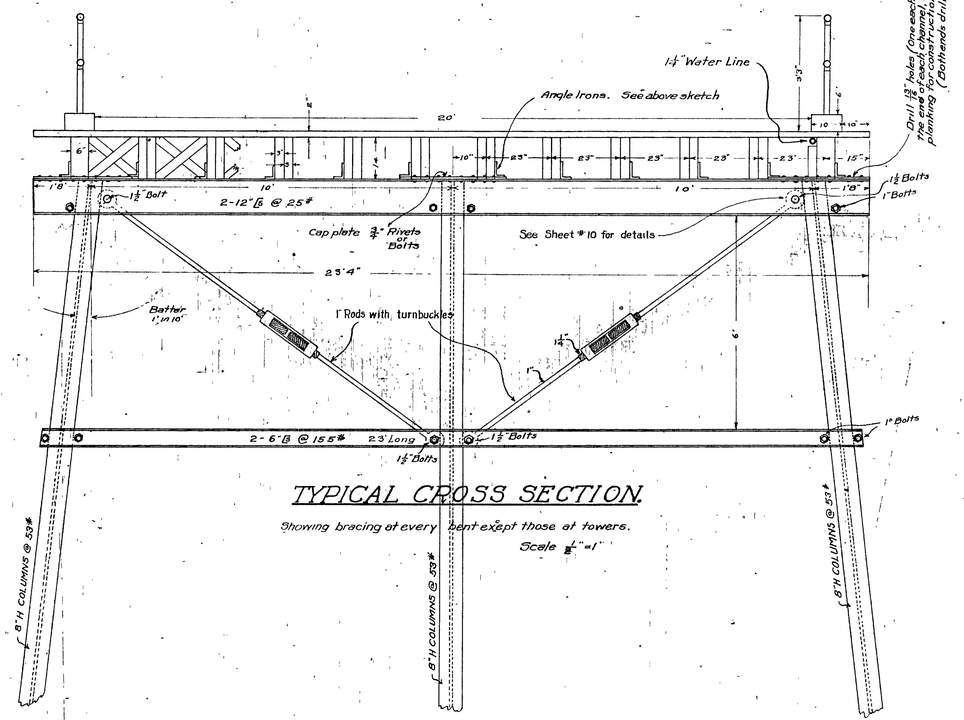


FLOOR PLAN

Scale 1" = 2'8" (⅜" = 1')



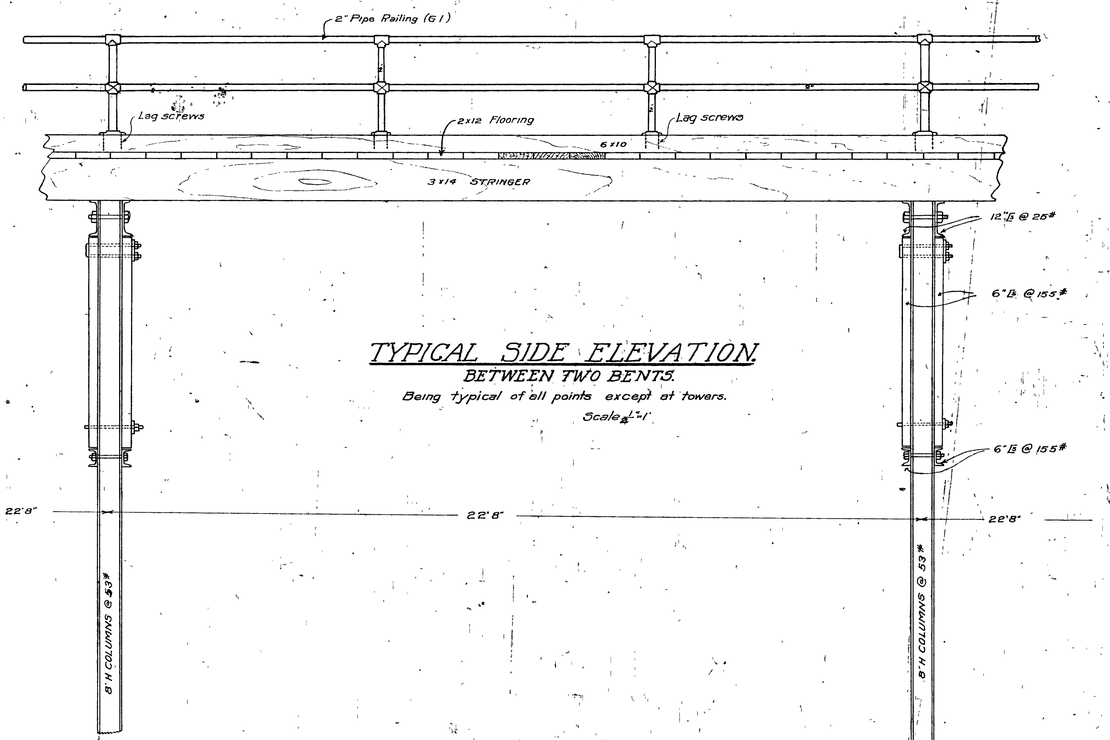
ANGLE IRONS.



TYPICAL CROSS SECTION.

Showing bracing at every bent except those at towers.

Scale ½" = 1'



TYPICAL SIDE ELEVATION.

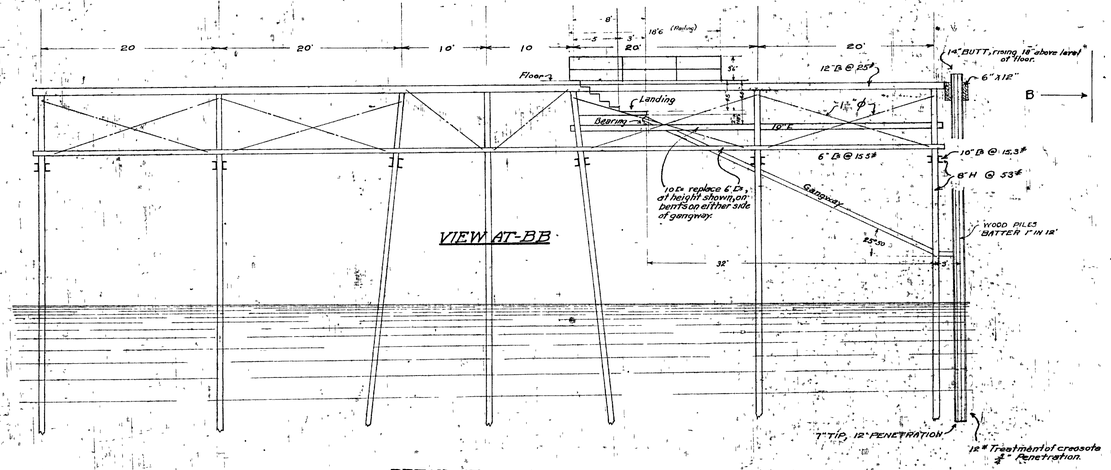
BETWEEN TWO BENTS.

Being typical of all points except at towers.

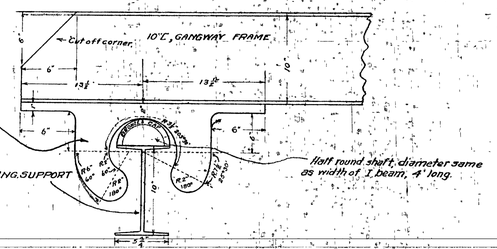
Scale ½" = 1'

SEAWARD TERMINAL OF PIER.

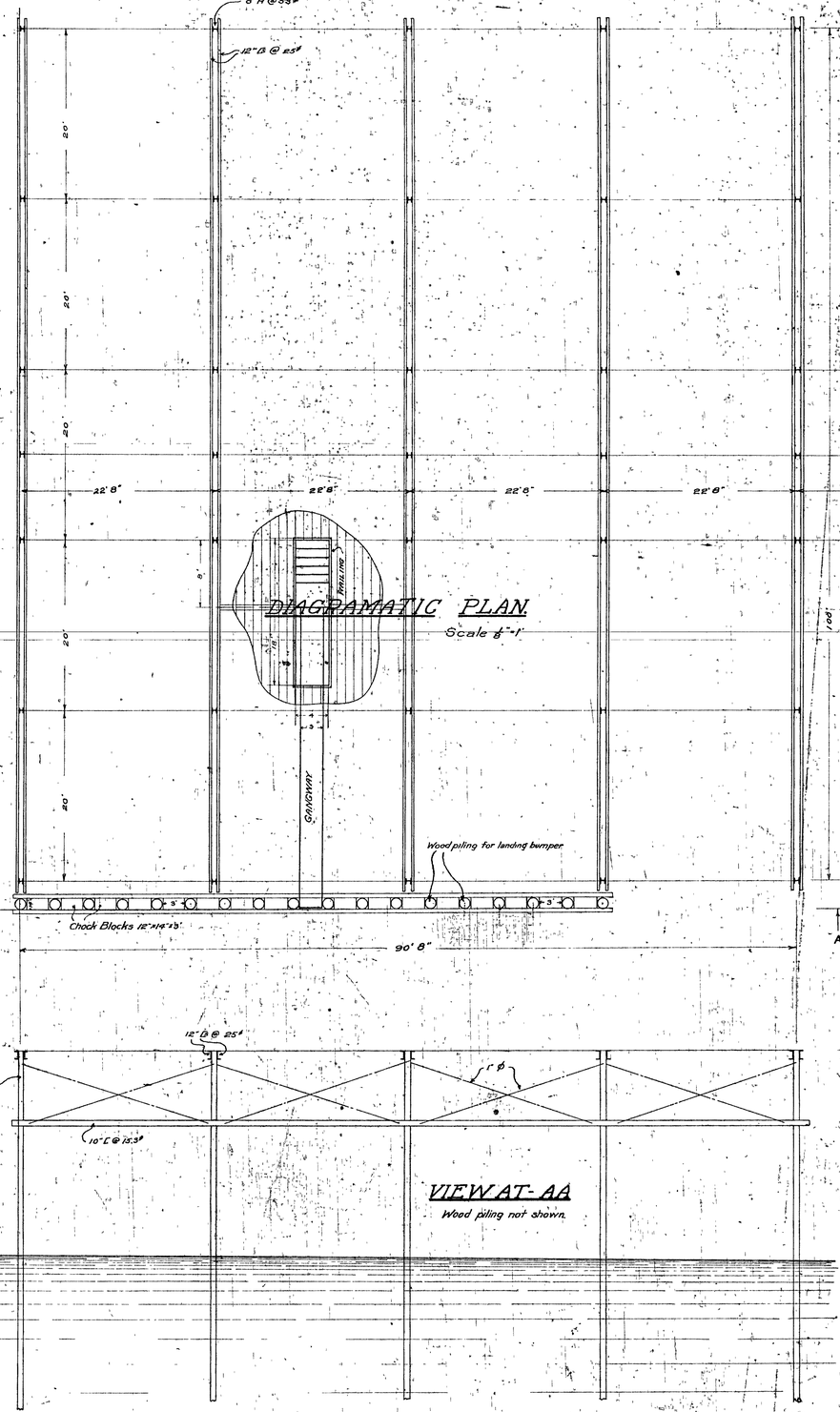
MUNICIPAL PLEASURE PIER
OCEANSIDE, CALIFORNIA
Sheet 12 of 12 Sheets
P.L. Lovette, City Engineer



DETAIL OF GANGWAY BEARING.



PERSPECTIVE OF GANGWAY.



BRACING OF 100 Ft SQUARE PLATFORM.

The line of bents continuous with the main portion of pier and running thru the center of the hundred foot platform will be braced laterally, duplicating the construction of all other similar bents. The rest of the said hundred foot platform will be braced as shown on this sheet with 1" turnbuckle rods forming triangular trusses all around the outside, but on the outside only. The one exception will be the portion enclosing the gangway which will be braced as shown on this sheet.

ATTACHMENT 14:

PIER VIEW WAY BRIDGE AT OCEANSIDE PIER – SUMMARY OF COST ESTIMATE COMPARISONS

moffatt & nichol

1660 Hotel Circle North, Suite 500
San Diego, CA 92108

(619) 220-6050
www.moffattnichol.com

February 6, 2019

City of Oceanside
Public Works Department
Engineering Division
300 North Coast Highway

Attn: David Toschak, P. E., Senior Civil Engineer

Subject: Pier View Way Bridge at Oceanside Pier - Summary of Cost Estimate Comparisons

Dear David:

The purpose of this letter is to provide a summary of the attached cost comparison information (see Attachment) for the existing Pier View Way concrete bridge structure. The work is being performed as part of an assessment of the status of the bridge to assist in programmatic decisions for rehabilitation or replacement.

SCOPE OF WORK - Specific requirements for this effort are as follows:

Task 4 – Spreadsheet Comparison of Options
Prepare a spreadsheet (Excel or similar) that provides rough-order-of-magnitude (ROM) cost comparisons for 1) "Historic" rehabilitation and retrofit (salvaging portions of the bridge); 2) Total in-kind bridge replacement; 3) Temporary repairs; 4) Bridge removal; and 5) Close and cordon-off existing bridge with the installation of shoring. Confirm assumptions regarding inclusion of bathrooms, Lifeguard Headquarters, and elevators with the City. A summary letter will preface the spreadsheet and include a concise narrative of the comparison and an engineering recommendation for the City's consideration.*

* Historic rehabilitation and retrofit is the option preferred by the City of Oceanside.

BACKGROUND INFORMATION

The Oceanside Municipal Pier is located at the foot of Pier View Way. The pier structure is composed of two separate elements, 1) the Concrete Bridge, and, 2) the Timber Pier. The Concrete Bridge was designed by the Oceanside City Engineer R.L. Loucks, C.E. in 1926 and consists of north and south lanes with a vehicle ramp in between that leads from the Strand North up to the timber pier. The structure has overall dimensions of 68 ft wide by 340 ft long (not including stairs).

The concrete bridge features a set of north and south concrete stairs on the east side that lead from Pier View Way down to the beach. Incorporated into the north and south lanes, and directly adjacent to the associated north and south stairways, were rest room/changing room areas that now function as storage rooms. In the mid-1980s a significant concrete repair project was completed, and lifeguard headquarters were created as infill beneath the westward three bents of the structure.

A program of maintenance-type concrete patching was performed between 2016 and 2018. The work mitigates potential danger from falling concrete for a five-year period. The patching should not be confused with measures necessary to adequately strengthen the structure to meet modern earthquake requirements. In general, the concrete structure has reached the end of its useful service life and needs to be replaced, retrofitted, or removed. The City wishes to make every effort to preserve the structure and address the historic value as seen by Oceanside residents.

SUMMARY

M&N has provided a table that describes retrofit and rehabilitation of the Pier View Way Bridge. This table can be found on Page Two of the Attachment. It is understood that that the City would prefer to preserve the historic aspects of the existing structure. This approach is reflected in Scenario 1 "Historic Rehabilitation and Retrofit". A cost-loaded schedule (Task 5 in the scope of work) is provided for the Scenario 1 approach (see Page One of the Attachment).

A rehabilitation and retrofit scenario would cost approximately $26.5M. This scenario would substantially preserve the existing structure. Subtle changes in the appearance are likely to accompany the seismic retrofit as a result of strengthening and/or enlarging certain existing structural elements – particularly the bridge columns. Additional bracing and/or new structural elements might be required to bring the bridge into compliance with current seismic criteria. Based on the age and condition of the existing bridge, the retrofit and rehabilitation is expected to be extensive.

The retrofitted and rehabilitated structure would comply with current design criteria and seismic standards. Since the existing salvaged building materials will be 90 years old, the bridge would not be expected to last as long as a bridge built from all new material. This study assumes the retrofitted and rehabilitated structure would have a service life of approximately 50 years.

Scenario 2 in the Attachment is for an "in-kind replacement" at an estimated cost of $19M. Scenario 2 provides a service life of 75 years. If desired, the appearance of this structure could closely mirror that of the existing structure.

Three other scenarios are included in the attached comparison. They primarily address temporary alternatives.

Note that cost numbers differ significantly from the estimates delivered in past years. Please refer to the Caltrans data at the top of Page 3 of the Attachment for more information.

The opportunity to present these concepts is appreciated. Should there be any questions or need for follow-up please do not hesitate to call.

Sincerely,

MOFFATT & NICHOL



Bill Dubbs, PE
BD/mnm

Enclosures: Attachment

Q:\SD\9970 OCEANSIDE PIER VIEW WAY BRIDGE\ESTIMATES\UT REVISION\2-6-19 COST COMPARISON SUMMARY REV.2.DOCX

ATTACHMENT

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge
Item: Bridge Rehab/Replacement Scenarios

Engineer: T. Sánchez
Checked by: P. Schacht
Date: 11/14/2018

Cost Loaded Schedule for Scenario 1, Rehab and Retrofit Bridge

No.	Phase	Scope	Year	Est. Cost	Est. Cost/year
1	PID	Project Initiation. Hire a consultant. Scope and budget for the project. Apply for grants and funding. Complete a PES form.	2019	$ 250,000	$ 250,000
2	PA/ED	Project Approval. Develop bridge repair and rehabilitation concepts. Perform seismic analysis and develop seismic retrofit strategy. Perform environmental studies and prepare environmental document. Perform preliminary geotechnical engineering and prepare preliminary foundation report.	2020	$ 650,000	$ 650,000
3	PS&E	Perform final design and develop construction documents including; 35% Structure Type Selection, 65% Unchecked Details. Includes subsurface investigation, geotechnical engineering and draft foundation report.	2021	$ 1,900,000	$ 1,900,000
		Continue with PS&E including; 90%, 100%, and Final PS&E submittals. Includes final foundation report.	2022	$ 1,900,000	$ 1,900,000
4	Constr.	Bid and award project, CM, inspection, admin	2023	$ 1,500,000	$ 10,000,000
		Construction year 1		$ 8,500,000	
		CM, inspection, admin	2024	$ 1,400,000	$ 11,800,000
		Construction year 2		$ 10,400,000	
					$ 26,500,000

By Phase			
PE	$	4,700,000	25%
CON	$	18,900,000	
CE	$	2,900,000	15%

Note:
1. Costs shown are in 2018 dollars and do not include estimate of future year escalation.

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge
Item: Bridge Rehab/Replacement Scenarios

Engineer: T. Sánchez
Checked by: P. Schacht
Date: 11/14/2018

Scenario Cost Summary

Scenario		Description	ROM Cost	Est. Service Life	Notes
1	Rehab and Retrofit	Remove unsound concrete and deteriorated rebar. Replace deck. Rebuild Columns. Extract chlorides or use cathodic protection. Retrofit columns and foundations to current seismic safety standards. (Work would be similar to N. Torrey Pines Bridge over RR). Does not include new bathrooms or elevator. Includes new lifeguard station.	$ 26,500,000	50 to 60 years	
2	Replace In-Kind	Demolish and remove existing bridge and replace with new bridge built to current standards. New bridge can match historical appearance if desired, or can be a modern state of the art design. Bridges would be built to max 5% grade to meet current ADA standards. Estimate includes new lifeguard station, bathrooms, bridge lighting, and elevator for ADA access.	$ 19,000,000	75 to 100 years	
3	Temporary Repairs	Address only the most significant structural and safety issues. Remove unsound concrete and patch. Encase columns. Rebuild some beams. Bridge would not meet current seismic standards.	$ 9,700,000	10 to 15 years	Not recommended. Does not adequately address public safety issues.
4	Remove Bridge	Demolish and remove existing bridge. Can keep ramp open for access to pier.	$ 1,700,000	n/a	Good short-term solution.
5	Close and Cordon Off	Close north and south bridges to ped and vehicular traffic. Install shoring under span at the Strand to provide access for vehicles and pedestrians. Fence off other spans to keep people from walking under bridge. Keep ramp open for access to pier.	$ 410,000	n/a	Good short-term solution.

Notes:
1. Costs shown are in 2018 dollars and do not include estimate of future year escalation.
2. Please see Caltrans Cost Index figures on "ROM Costs" worksheet for escalation since 2016.

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge
Item: Bridge Rehab/Replacement Scenarios

Engineer: T. Sánchez
Date Originated: 3/14/2016
Date Updated: 11/14/2018

ROM Costs

Caltrans Bridge Cost Index, 3/2016 =	452
Caltrans Bridge Cost Index, 9/2018 =	727
Escalation Factor =	1.61

Scenario 1, Rehab & Retrofit

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost
Rehab Ped Bridge	13,700	SF	$ 577	$ 928	$ 12,714,000
Replace ramp on grade	1,000	SF	$ 50	$ 80	$ 80,000
Replace Stairs	1,700	SF	$ 200	$ 322	$ 547,000
Elevator	1	EA	$ 100,000	$ 161,000	$ 161,000
Restrooms	2	EA	$ 100,000	$ 161,000	$ 322,000
Replace Lifeguard Station	1	EA	$ 500,000	$ 800,000	$ 800,000
Demolition (included)	1	LS	$ -	$ -	$ -
Haz Mat (lead paint)	1	LS	$ 300,000	$ 482,522	$ 483,000
				Subtotal	$ 15,107,000
			25%	Contingency	$ 3,776,750
				Total	$ 18,883,750
				For budget purposes, say	$ 18,900,000 CON
			40%	Soft Costs	$ 7,560,000
				Total	$ 26,460,000
				Total ROM Project Cost	**$ 26,500,000**

Scenario 2, Replacement

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost
Ped Bridge	13,700	SF	$ 350	$ 563	$ 7,712,000
Ramp on grade	1,000	SF	$ 50	$ 80	$ 80,000
Stairs	1,700	SF	$ 200	$ 322	$ 547,000
Elevator	1	EA	$ 100,000	$ 161,000	$ 161,000
Restrooms	2	EA	$ 100,000	$ 161,000	$ 322,000
Lifeguard Station	1	LS	$ 500,000	$ 800,000	$ 800,000
Bridge Lighting	1	LS	$ 100,000	$ 161,000	$ 161,000
Demolition	1	LS	$ 350,000	$ 563,000	$ 563,000
Haz Mat (lead paint)	1	LS	$ 300,000	$ 483,000	$ 483,000
				Subtotal	$ 10,829,000
			25%	Contingency	$ 2,707,250
				Total	$ 13,536,250
				For budget purposes, say	$ 13,600,000 CON
			40%	Soft Costs	$ 5,440,000
				Total	$ 19,040,000
				Total ROM Project Cost	**$ 19,000,000**

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge
Item: Bridge Rehab/Replacement Scenarios

Engineer: T. Sánchez
Date Originated: 3/14/2016
Date Updated: 11/14/2018

Scenario 3, Temporary Repairs

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost	
Ped Bridge	13,700	SF	$ 200	$ 322	$ 4,407,035	
Stairs	1,700	SF	$ 100	$ 161	$ 273,429	
Demolition	1	LS	$ 200,000	$ 321,681	$ 321,681	
Haz Mat (lead paint)	1	LS	$ 300,000	$ 482,522	$ 482,522	
				Subtotal	$ 5,484,668	
			25%	Contingency	$ 1,371,167	
				Total	$ 6,855,835	
				For budget purposes, say	$ 6,900,000	CON
			40%	Soft Costs	$ 2,760,000	
				Total	$ 9,660,000	
				Total ROM Project Cost	**$ 9,700,000**	

Scenario 4, Remove Bridge

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost	
Demolition	1	LS	$ 350,000	$ 562,942	$ 562,942	
Haz Mat (lead paint)	1	LS	$ 300,000	$ 482,522	$ 482,522	
				Subtotal	$ 1,045,465	
			25%	Contingency	$ 261,366	
				Total	$ 1,306,831	
				For budget purposes, say	$ 1,310,000	CON
			30%	Soft Costs	$ 393,000	
				Total	$ 1,703,000	
				Total ROM Project Cost	**$ 1,700,000**	

Scenario 5, Close Bridge

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost	
F/W over Strand	2,100	SF	$ 60	$ 97	$ 203,000	
Fencing	700	LF	$ 25	$ 40	$ 28,000	
				Subtotal	$ 231,000	
			25%	Contingency	$ 57,750	
				Total	$ 288,750	
				For budget purposes, say	$ 290,000	CON
			40%	Soft Costs	$ 116,000	
				Total	$ 406,000	
				Total ROM Project Cost	**$ 410,000**	

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge
Item: Bridge Rehab/Replacement Scenarios

Engineer: T. Sánchez
Date Originated: 3/14/2016
Date Updated: 11/14/2018

Scenario 6A, Shoring and Fencing

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost	
F/W under all spans	13,700	SF	$ 80	$ 129	$ 1,763,000	
Fencing	700	LF	$ 25	$ 40	$ 28,000	
				Subtotal	$ 1,791,000	
			25%	Contingency	$ 447,750	
				Total	$ 2,238,750	
				For budget purposes, say	$ 2,240,000	CON
			30%	Soft Costs	$ 672,000	
				Total	$ 2,912,000	
				Total ROM Project Cost	**$ 2,900,000**	

Scenario 6B, Shore south bridge, fence north bridge

Item	Quant.	Units	Unit Cost (2016)	Unit Cost (2018)	Cost	
F/W under south bridge and north bridge over Strand	7,900	SF	$ 80	$ 129	$ 1,017,000	
Fencing	500	LF	$ 25	$ 40	$ 20,000	
				Subtotal	$ 1,037,000	
			25%	Contingency	$ 259,250	
				Total	$ 1,296,250	
				For budget purposes, say	$ 1,300,000	CON
			30%	Soft Costs	$ 390,000	
				Total	$ 1,690,000	
				Total ROM Project Cost	**$ 1,700,000**	

Moffatt & Nichol

Client: City of Oceanside
Project: Pier View Way Bridge — Engineer: T. Sánchez
Item: Bridge Rehab/Replacement Scenarios — Date: 3/14/2016

Rough Quantities

Bridges	Length	Width	Area
North bridge	295.00	15.33	4,523
South bridge	295.00	15.33	4,523
Platform, 1	22.67	67.33	1,526
Platform, 2	22.67	67.33	1,527
Ramp on structure	23.33	68.00	1,587
			13,687

Ramp on Grade	Length	Width	Area
Ramp on grade	20.00	50.00	1,000
			1,000

Stairs	Length	Width	Area
North Stairs	72.00	12.00	864
South Stairs	72.00	12.00	864
			1,728

Restrooms	Length	Width	Area
North restroom	45.33	15.33	695
South restroom	45.33	15.33	695
			1,390