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City of Newport Beach - Ocean Piers Inspection and Design Services

July 31, 2024

City of Newport Beach Attn: Ellis Petersen, Associate Civil Engineer Transmitted electronically via City of Newport Beach PlanetBids Portal

#### Subject: Request for Proposals (RFP NO. 24-83) Ocean Piers Assessment and Design Services

Dear Mr. Petersen,

It is our understanding that for the past 30 years the City of Newport Beach (City) has kept to a bi-annual schedule to inspect and/or rehabilitate both of the City's ocean piers. To keep to this schedule and formulate strategies to rehabilitate each pier the City requires an experienced firm specializing in coastal engineering and marine structures to perform condition assessment studies on the Newport and Balboa Piers. We understand the City of Newport Beach is planning improvements to the Newport and Balboa Piers to correct existing deficiencies in an effort to improve the overall condition ratings and safety. To facilitate this work, the City is seeking to conduct onsite assessment surveys of each pier as a basis for formulating its rehabilitation strategy.

To achieve this goal, M&N has developed a detailed scope of work that includes providing pre-field work for general project planning and coordination prior to conducting on-site investigations, field work to conduct on-site evaluation of existing structural conditions and provide an assessment of damage and deterioration, and summarizing findings into a report.

Given our in-depth knowledge from similar pier infrastructure rehabilitation projects, we understand that the project will adapt from inspection, to design of repairs, and into construction. Our team is ready and available to provide additional services for design of repairs and construction support to rehabilitate, restore, and maintain the facility for continued use into the future should the need arise.

M&N has a long history of working with the City on Newport Pier and will leverage its familiarity with the local environment, inspection procedures, and wave climate when assessing Balboa Pier to maximize efficiency and minimize cost. Having prepared the Newport Pier 2015 End Platform Pier Inspection and Condition Assessment Study, M&N has an in-depth knowledge of the Pier's structural components, recommended maintenance program, and proposed improvement strategies. More recently, we provided engineering services to evaluate Conceptual End Platform Improvement Alternatives for the preliminary restaurant building design in 2019. This previous effort provided the City with options for capital improvements that helped guide the preferred building location, which is to be situated on the end platform. In addition, we are currently working with the City to prepare designs for the Newport Pier restaurant demolition and end platform rehabilitation that implement previous inspection and restaurant feasibility studies into a construction action plan.

As our proposal demonstrates, M&N knows timber piers and is intimately familiar with both Balboa and Newport piers. We have developed a strong track record in the design, repair, inspection, and construction support of open-ocean and recreational/municipal piers, including timber structures and piers of historic significance. In California alone, we have been involved in the inspection, design, repair, and refurbishment of over 42 such piers, including the 2020 Newport Pier Restaurant Demolition and Platform Rehabilitation Design Services which are currently underway and are directly relevant to the inspection and assessment services requested under this RFP.

M&N offers the City a team of familiar experts, led by Project Manager Jerry Holcomb, PE, who currently is project manager for the Newport Pier Restaurant Demolition and Platform Rehabilitation project. Jerry specializes in structural design and marine construction along California's coast and has recent project experience in pier and

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wharf inspection and improvements for the Newport Pier, Redondo Beach Sportfishing Pier, Seal Beach Pier, Santa Monica Pier, Goleta Pier, and Manhattan Beach Pier. As part of the previous 2015 and 2019 Newport Pier End Platform Inspection and Conceptual Analysis, Mr. Holcomb conducted structural modeling and served as QA/QC manager for review of the technical findings in the conceptual reports. Our Inspection and Rehabilitation Lead, Bill Dubbs, PE, has 20 years of pier inspection and marine infrastructure design experience throughout Southern California.

With M&N, the City has a committed project partner who knows your piers, understands how to work with the City's project team, and fully prioritizes the importance of maintaining pier operations during field work. The City has relied on M&N in the past for engineering services to develop cost-effective solutions that support the long-term sustainable use of Newport Beach's piers. We believe our performance and delivery track record provides justification to the City to entrust this specialized and quick-turnaround project to M&N.

#### **Proposal Statements**

- Our fee schedule to complete the following Scope of Work is provided in a separate attachment.
- We are available to start work immediately and anticipate completing the site inspections and condition assessment reports well within the allotted 75-working days project schedule, pending weather and tide/surf conditions.
- M&N has reviewed the Sample Agreement within the Appendix and is in general agreement with the terms and conditions.
- This proposal is valid for 180 days from date of submittal.
- M&N acknowledges receipt of Addenda 1 and 2. Acknowledgements of Addenda are located in Appendix C.

We appreciate the opportunity to continue our professional relationship with the City and we look forward to working with you. Please contact Project Manager Jerry Holcomb at (562) 317-3476 or via email at jholcomb@ moffattnichol.com any time to answer any questions or provide additional information.

Sincerely,

**MOFFATT & NICHOL** 

Omar Jaradat, PhD, PE

Vice President and Project Principal

Jerry Holcomb, PE Project Manager

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Founded in 1945, M&N's specialized expertise in the inspection, rehabilitation, and engineering design of waterfront facilities have helped public agencies and other clients plan, build, and maintain marine structures for 75 years. With more than 75% of our revenue coming from marine and waterfront projects, M&N is the largest dedicated marine planning and engineering firm in North America.

M&N's story begins with the company's founders designing the original timber piers and wharves for Southern California naval facilities during World War II. However, by the mid-1950s, M&N's experience and expertise in marine terminal engineering readily translated to support the growing demand for recreational waterfront piers, wharves, and small craft harbors and marinas—as well as the revitalization of aging timber structures.

Today, M&N is a top industry leader for the assessment, inspection, design, and construction of recreational, open-ocean coastal piers—including new and revitalized timber structures. Clients, including the City, have relied on M&N for engineering services and cost-effective solutions to develop strategies for rehabilitation to maintain use of their piers, wharfs, and other overwater structures. Our team will draw on our expertise in waterfront facilities construction to incorporate the site inspection data into cohesive Piers Inspection Reports the City can leverage to formulate its strategy to rehabilitate and correct existing deficiencies on each pier in an effort to improve the overall condition ratings and safety.

#### **M&N EXPERIENCE WITH THE CITY & NEWPORT PIER**

The City has entrusted M&N to complete the current Newport Pier Restaurant Demolition and Platform Rehabilitation project, as well as the previous conceptual tasks that laid the groundwork for that project. M&N has the most current understanding and knowledge of the Newport Pier, allowing for quick mobilization of the proposed inspection team and efficient completion the assessment work required. The team's on-going work on the Newport Pier project provides the City with a team that needs no learning curve and will save time due to their in-depth understanding of the current pier structure, constraints, and operations.

The City has depended on M&N in the past for inspection guidance and engineering services to develop cost-effective solutions that support long-term sustainable use of the Newport Pier. In addition, the M&N team has a wealth of experience through other City projects including, engineering, inspection services, environmental services and permitting – providing the ability to leverage working relationships with City staff and key stakeholders to expedite this project, avoid project hang-ups, and quickly respond to urgent requests.



For decades, M&N personnel have been industry leaders in waterfront infrastructure structural inspection and design, providing cost-effective and resilient solutions for California's open-ocean piers. Our teams inspection experience includes all aspects of above and underwater inspections including piles, bracings, cap beams, stringers, and other support members. M&N specializes in the assessment, design, and construction of recreational, open-ocean coastal piers—including new and revitalized timber structures. This experience could prove invaluable when it comes time to start strategizing and designing rehabilitation work, with currently scheduled restoration work to commence in 2021. Figure 1 below clearly illustrates M&N's experience working on more than 45 piers and wharfs throughout California. We have supported inspection and design services on over 80% of the recreational piers in California.

Our team has performed similar-to-identical services for numerous projects within the last five years. In Figure 1, we have highlighted in **blue** pier and wharf projects M&N has worked on in the last five years. On the following pages are select relevant projects representative of our experience inspecting and assessing ocean piers and supporting efforts to improve and rehabilitate these recreational piers.

#### FIGURE 1 - M&N RECREATIONAL OPEN-OCEAN AND COASTAL PIER EXPERIENCE IN CALIFORNIA

#### **LISTED NORTH TO SOUTH**

Crescent City- Citizens Wharf "C" Street Pier Trinidad Pier Napa Street Pier Valero Pier Martinez Pier Chevron Richmond Wharf

Hyde Street Pier Ferry Point Pier

Port of San Francisco Piers 1, 80,15/17, 40, & 45 Embarcadero Wharf Pier 1 U.S. Coast Guard Pier

Pacifica Pier Romeo Pier Johnson Pier Santa Cruz Wharf Capitola Wharf

Seacliff Pier Del Mar Wharf

Moss Landing North Harbor Wharf

Morro Bay T-Pier Pismo Beach Pier Goleta Pier Stearns Wharf Gaviota Pier

Emma Woods State Beach Seawall

Ventura Pier Malibu Pier

Santa Monica Pier

Marina Del Rey Seawall Port of Long Beach

**Port of Los Angeles** Hermosa Beach Pier

Manhattan Beach Pier

**Redondo Beach Pier** 

Rainbow Pier

Belmont/Veteran's Memorial Pier

**Seal Beach Pier** 

Huntington Beach Wetlands Overlook Pier

Huntington Beach Pier

Balboa Island Seawall Structural

Assessment

**Newport Beach Pier** 

Dana Point Ocean Institute Pier

North Light Pier **Oceanside Pier** 

Ocean Beach Fishing Pier

**Ocean Beach Pier Renewal** 

San Diego Unified Port District

Scripps Institute Pier Crystal Pier

**Broadway Pier** "B" Street Pier

**Mission Beach Seawall** 

**Imperial Beach Pier** 

PIERS/WATERFRONT STRUCTURE ASSESSMENTS IN SOUTHERN **CALIFORNIA** 

PIERS/WHARFS IN CALIFORNIA

ANT PROPOSAL

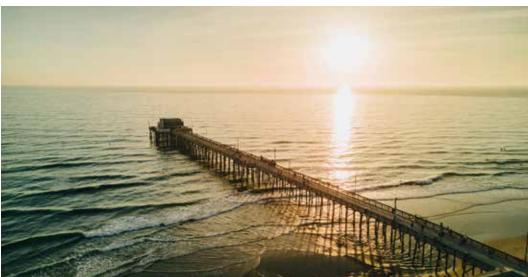
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The City of Newport Beach selected M&N to perform evaluations of the Newport Pier end platform for potential replacement of the existing restaurant structure with a proposed new restaurant building. The City requested an engineering evaluation by M&N to determine any necessary pier repairs or upgrades that may be required as a result of the replacement of the existing end platform restaurant two-story building.

M&N performed a complete above and underwater inspection on the end platform of the Newport Pier and issued a condition assessment report. The platform was then analyzed for support of a proposed two-story restaurant building for vertical loads from the building as well as wind and earthquake loads transferred from the building to the pier based on the current California Building Code requirements. The type and magnitude of required pier modifications for structural elements were determined, including decking, stringers, pile caps, and piles. A report was then issued detailing the modification recommendations, along with an opinion of probable construction costs.

In early 2020, M&N was selected by the City to complete the the restaurant demolition and end platform rehabilitation project.

In 2022, M&N, as part of the SWA team, was selected to prepare the Newport Pier and McFadden Plaza Rehabilitation Plan. M&N conducted on-site interviews with City maintenance and operations staff to help identify site conditions. The team developed conceptual layout alternativdes based on City planning needs and community engagement results. M&N was responsible for coordinating waterside and landside elements, e.g., pier access, public access points, commercial facilities, etc. Three conceptual layout alternatives were developed including cost estimates and technical memorandum for each facilty.

In 2023, M&N was selected to provide engineering and inspection services for the Newport City Wide Seawall Rehabilitation and Replacement project. M&N is desiging and permitting seawall replacements solutions for eight sewall locations within Newport Harbor.

**CLIENT** City of Newport Beach

#### RELEVANT PROJECT **FEATURES** Timber

construction Above- and below-water

inspection

Piles, bracings, cap beams, stringers, and other support members

Structural assessment

Load analysis for 2-story building

Pier repair recommendations

Geotechnical Investigations for existing pile capacities

#### **TEAM MEMBERS** INVOLVED

Jerry Holcomb **Matthew Martinez** Omar Jaradat Ben Brock Bill Dubbs

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# **SANTA MONICA PIER**

## **MASTER PLAN, INFRASTRUCTURE INSPECTION & ASSESSMENT STUDY**



The Santa Monica Pier supports diverse activities, including local business enterprise, community recreation, and tourism. To maintain this valuable infrastructure, M&N updated the previous Pier Infrastructure Assessment Study (PIAS), also prepared by M&N, as well as developed design alternatives and providing construction support to retrofit the Pier West-End and upgrade Pier Areas 2 and 10.

Updates to the 2018 Pier Infrastructure Assessment Study (PIAS), include inspection of the entire pier including original timber portions, concrete support foundations for amusement structures, and off-shore concrete waffle slab supported end platform. In all, the inspection included more than 2,000 piles, over 300,000 sq. ft. of deck, and materials including from timber, concrete, and steel.

Services included providing design and construction documents for designated repairs to the pier that were recommended during inspection and evaluation phases. These included new timber deck elements at the topside parking lot for film crew truck access, and structural retrofit of

concrete deck waffle slab areas to allow for firetruck access to end of pier. Waffle slab upgrades will include state-of-the-art carbon fiber wrapping to increase strength and add longevity.

In 2023, the City contract M&N to conduct a facility inspection and prepare an update to the Pier's Master Plan. M&N's scope of work includes:

- 1. Conduct above water and underwater inspection for the existing pier and prepare condition assessment study to validate existing pier conditions.
- 2. Create a Pier Structural Capital Plan that identifies the sequencing, phasing, and funding necessary to conduct proposed Pier repairs and/or upgrades.
- 3. Prepare plans, specifications, estimates (PS&E) construction document for improvements to the Pier.
- 4. Provide optional services to prepare a maintenance program for City staff to implement for regular preventative maintenance.

# CLIENT

# **RELEVANT PROJECT**

Pier evaluation

Assessment reports & data

Piles, bracings, cap beams, stringers,

Engineering design & recommendations Pier-end building

**KEY TEAM MEMBERS** 

Bill Dubbs

Mike Breitenstein **Matthew Martinez Omar Jaradat** 

## City of Santa Monica

# **FEATURES**

Timber construction

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and other support members

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# **SEAL BEACH PIER**

## FIRE DAMAGE INSPECTION AND IMPROVEMENTS



For more than five decades, the City of Seal Beach has called on M&N for engineering support to protect and maintain the Seal Beach Pier and its adjacent beaches. These services have included emergency and maintenance-related repairs to the historic timber pier structure, as well as dredging and beach sand nourishment. Pier assessments and repairs have been implemented for numerous different projects in response to two major fires, commonly occurring large south swell storm events, and regular preventative maintenance.

Recently, M&N provided engineering services for a multi-year upgrade of the pier deck and a structural assessment of the outer platform in conjunction with renovations to support a two-story restaurant at the end of the pier. M&N completed construction documents for full pier restoration including required electrical system improvements and structural upgrades. However, before improvements could be made, work was interrupted when a major fire destroyed the end platform. M&N stepped in to provide emergency inspection and design services and construction of pier repairs

due to the fire damage and upgrades to accommodate a new restaurant building structure were complete in 2019.

Previous emergency response efforts included post-event support when surf with reported 20-foot swells battered the pier overnight, breaking loose two fender piles. M&N immediately deployed structural inspection crews and engineer-divers and performed above and underwater inspections within 48 hours of notification, following the guidelines established in the American Society of Civil Engineers (ASCE)'s Underwater Investigations Standard Practice Manual.

Open-ocean pier Timber

Above and underwater inspection structural assessment

Piles, bracings, cap beams, stringers, and other support members

Engineering analysis

reports & data compilation Cost estimate for recommended

Jerry Holcomb Mike Breitenstein **Omar Jaradat** 

# City of Seal Beach

**RELEVANT PROJECT FEATURES** 

construction

Assessment

repairs

**KEY TEAM MEMBERS** INVOLVED

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# **SPORTFISHING PIER & REDONDO BEACH MAIN TIMBER PIER**

PIER REPLACEMENT - INSPECTION, EVALUATION, AND REHABILITATION ENGINEERING **SERVICES** 



M&N provide inspection, evaluation, and rehabilitation engineering services for the Sport Fishing Pier and Redondo Beach Main Timber Pier. That contract laid the groundwork for a replacement project, providing Redondo Beach with the necessary alternatives and recommendations to advance the project.

M&N is currently providing services for public outreach, grant support, environmental CEQA process, regulatory permitting, engineering design, and construction support services to facilitate a marine construction project for replacement of the existing Sportfishing Pier Facilities. Project buildouts include a new pile-supported pier up-to 10,000 sq. ft. to replace the existing pier that has fallen into disrepair, which will serve as a recreational and commercial hub within King Harbor.

The project also includes potential replacement of pier building facilities with up to 5,000 sq. ft. of build space for restaurant, recreational, and other adaptive needs. Public outreach focused on developing conceptual replacement alternatives to promote uses desired by the local community. Environmental and regulatory permitting will focus on selfmitigating features to identify zero-tolittle negative impacts. Structural design tasks include vessel structural mooring and fender systems, driven concrete pile foundation systems, utility system design, and coordination with architectural design consultants. Grant funding streams will be pursued to offset construction costs for public facilities. The estimated \$6 million Sportfishing Pier Replacement is expected to start construction in 2021.

City of Redondo Beach

#### **RELEVANT PROJECT FEATURES**

Open-ocean pier

Timber construction

Above and underwater inspection structural assessment

Piles, bracings, cap beams, stringers, and other support members

Engineering analysis

Assessment reports & data compilation

Cost estimate for recommended repairs

# **KEY TEAM MEMBERS**

Jerry Holcomb Miké Breitenstein Omar Jaradat

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## **MANHATTAN BEACH PIER INSPECTIONS AND IMPROVEMENTS**



Since 1992, M&N has held contracts with the City of Manhattan Beach for inspection, evaluation, and upgrade and repair design services for the Manhattan Beach Pier. The most recent assessment completed by M&N included inspection and evaluation of structural elements and utilities above-deck, below-deck, and underwater. Based on the findings, M&N assembled a condition assessment report and provided rehabilitation recommendations and cost estimates to the City of Manhattan Beach. M&N completed repair design and oversaw the construction of pier repair recommendations.

To improve the safety and aesthetics of the Manhattan Beach Pier, the City of Manhattan Beach chose to remove and replace the existing pier railing system on the perimeter of the entire

pier, beach access stairs, and bike path, as well as the pier's entrance security gate. M&N provided design, public outreach, environmental document processing, regulatory agency permitting, and construction support for the replacement. Public outreach efforts focused on gaining community input on railing designs including color schemes, maintaining historic integrity, and selection of materials to reduce on-going maintenance.



#### RELEVANT PROJECT FEATURES

Above and below water inspection Structural

assessment

On-pier building

#### **KEY TEAM MEMBERS** INVOLVED Jerry Holcomb

## City of Manhattan Beach

Open-ocean pier

Engineering analysis

facilities

# Mike Breitenstein

**Omar Jaradat** 

# PORT OF LOS ANGELES BERTHS 57-60 2024 ABOVE WATER AND UNDERWATER STRUCTURAL

REPAIR DESIGN INSPECTION



The Port of Los Angeles Berths 57-60, located along the east side of the East Channel (see Figure 1 1), was constructed in 1913 with a wharf expansion addition that was constructed in 1938. The facility is approximately 2,535 ft. long and consists of 16 inspection units with approximately 2,250 piles

The inspection was conducted from January 18th through April 15th, 2024 by engineer-divers from Moffatt and Nichol (M&N). The inspection included a repair design level inspection and condition assessment including piles, pile caps, beams, topside deck, deck soffit, mooring bollards and hardware, exposed bulkhead wall/retaining structure, slope protection and revetment and other visible structural components.

The intent of this inspection was to perform a thorough inspection on all wharf structural components to determine the existing physical condition compared with the original as-built condition. A visual inspection was performed on the above water structural

components. A Level I inspection effort was performed on all submerged piles, bulkhead and slope protection. In accordance with the Scope of Work, Level Il inspection efforts were also performed on 20% of the piles (approximately 450 piles). Level III inspection efforts were not required under this scope of work. In addition, repair recommendations, estimated repair sizes and a cost estimate were made based on the inspection findings. A vertical load capacity analysis (uniform and concentrated) was also performed in its original as-built condition and the vertical loads were downgraded based on the wharves damaged condition. A bollard capacity analysis was also performed in its original as-built condition and the bollard capacity loads were downgraded based on the damaged condition.

M&N prepared recommendations and qualntities based on the inspection reports. This repair estimate includes construction costs for the repairs to piles, caps beam, deck and bulkhead.

CLIENT 04-14-20; The Port of Los **Angeles** 

## RELEVANT PROJECT FEATURES

Open-ocean pier Above and below water inspection Structural assessment Engineering analysis On-pier building facilities

# **KEY TEAM MEMBERS** Benjamin Brock

Adrian Lee Armando Gonzalez

Louis Baeza Mike Breitenstein **Omar Jaradat** 

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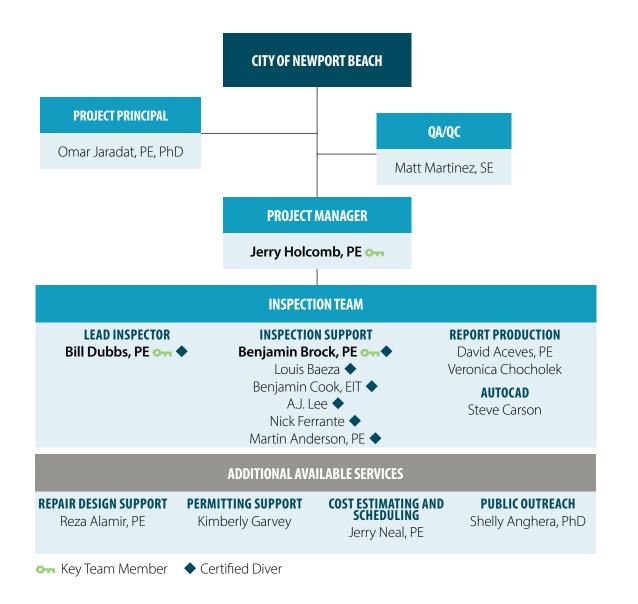
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# 2. Proposed Personnel

Project success depends on the individuals assigned to lead and serve. M&N will provide the City with the benefit of team members who already understand the City's piers. The proposed team below is comprised of timber pier experts that understand the Newport Pier's current condition and site constraints, the City's goals and concerns for the Newport and Balboa Piers rehabilitations, and on-pier operations and users. They combine their current and previous City pier experience with the most recent pier platform design work completed in Southern California. As a result, our team has the experience, expertise, capacity, and current pier operational experience to quickly and effectively meet deadlines.

Led by Project Manager, Jerry Holcomb, PE, we bring familiar faces from our current work with the City, with the intention to quickly and efficiently provide the necessary services for the Newport and Balboa Pier inspections and assessments. Lead Inspector, Bill Dubbs, PE, brings a wealth of timber pier rehabilitation knowledge from 20 years of waterfront inspection and design experience. Full resumes for our key team members can be found on the following pages.



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# JERRY HOLCOMB, PE Project Manager

Over the past ten years, Jerry has worked with the City on several projects related to the pier at Newport Beach. He led the inspection, evaluation, design, and analyses for fixed pier and pile-supported wharf structures for City of Newport Beach projects. He is a known and trusted partner to City staff, having served as project manager and lead engineer on many recent projects within the City. Because of his direct experience on similar projects, he is able to easily communicate assessment results, design needs, and engineering concepts to City staff, design team members, regulators, and in public outreach settings with local communities. Jerry's 15 years of marine structural design experience, proven project management skills.

#### **Firm**

> Moffatt & Nichol

#### **Years of Experience**

> 15

#### **Education**

 BS, Civil Engineering with Structural Emphasis, California State Polytechnic University, Pomona

#### Registrations/ Certifications

> Professional Engineer: CA

#### **Affiliations**

- American Society of Civil Engineers (ASCE)
- > State Organization for Boating Access (SOBA)
- California Association of Harbor Master and Port Captains, Annual Conference
- Marina Recreation
   Association, ADA Standards
   Workshop
- American Institute of Steel Construction (AISC)

#### REPRESENTATIVE PROJECT EXPERIENCE

**Newport Pier Restaurant Demolition and Platform Rehabilitation Project, Newport Beach, CA.** Serving as Project Manager and leading the current work being completed by M&N for the Newport Pier end platform rehabilitation and design to support a new modernized restaurant building. Jerry is responsible for managing the projects day-to-day activities. He is overseeing the above water and underwater inspection and preparation of a condition assessment study to validate preliminary design concepts.

#### Newport Pier Inspection and Assessment, Newport Beach, CA.

Conducted structural modeling and served as QA/QC manager for review of the technical findings in the conceptual reports for the inspection and condition assessment of the end platform of the Newport Pier. The platform was analyzed for support of a proposed two-story restaurant building for vertical loads from the building as well as wind and earthquake loads transferred from the building to the pier based on the current California Building Code. In April of 2019, the firm completed an alternative concept for a smaller restaurant and bar on a new platform on the side of the pier.

**Seal Beach Pier End Platform Building Code Upgrade Analyses, Seal Beach, CA.** Project engineer for determining necessary building code-required upgrades to Seal Beach Pier End Platform. Due to a change in lease-holder of the restaurant located on the existing pier and severe damage sustained to the pier from an electrical fire, M&N was contracted to provide several alternatives for pier upgrades to accommodate a future end platform restaurant building. Code-required upgrades and cost analyses were developed for each alternative. Tasks included building code development, structural analyses of existing timber pier capacity, and investigating necessary pier repair/upgrade options.

**City of Santa Monica Pier Condition Assessment and Improvements, Santa Monica, CA.** Project manager to provided inspection, evaluation, and rehabilitation engineering services for the Santa Monica Timber and Concrete Pier facilities. The scope included the structural evaluation of Santa Monica Municipal Pier, including amusement structure foundations, and end building platforms. We provided recommendations for repair or replacement based on existing conditions and provided estimates of probable construction costs. In addition, we provided designs and construction documents for previously budgeted repair phases which included new timber deck elements at the topside parking lot for film crew truck access, and structural retrofit of concrete deck waffle slab areas to allow for firetruck access to end of pier.

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**Redondo Beach Pier Structural Evaluation, Redondo Beach, CA.** Project manager who provided inspection, evaluation, and rehabilitation engineering services for the Redondo Beach Timber Pier facilities. The scope included the structural evaluation of Redondo Beach Main Timber Pier and Redondo Beach Sport Fishing Pier. We provided recommendations for repair or replacement based on existing conditions and provided estimates of probable construction costs.

**Manhattan Beach Pier Condition Assessment, Manhattan Beach, CA.** Project engineer who assisted in organizing and participated in above water field inspection activities, including management of equipment, personnel, and documentation. Analyzed inspection results and developed repair/rehabilitation recommendations. Produced investigation report, rehabilitation recommendations and repair drawings.

**Dana Point Harbor Sailing and Events Center/Cover Pier ADA Access, Dana Point, CA.** Project manager for the replacement of the existing facility floating docks and ADA access improvements. The proposed facilities serve as an educational small craft boating center and also provides non-motorized public boat launch capabilities. Responsibilities included preliminary alternatives analyses and regulatory permit coordination, development of construction drawings and specifications, ADA accessibility upgrades, and coordination with design team for concurrent Dana Point Harbor dredge construction project.

**'The Wharf' Pier 4 Extension and Seismic Retrofit, Washington, DC.** Project manager in charge of leading engineering design, permitting, and construction support services to facilitate a construction project as part of the Washington DC waterfront revitalization. Project buildouts include new 5,000 sq. ft. pile supported pier extension that serve as dinner cruise home berth facilities, and rehabilitation of the existing 28,000 sq. ft. Pier 4 facilities that were seismically retrofitted and upgraded to support a new 15,000 sq. ft. three-story office building. Responsible tasks include design of vessel mooring systems, pile foundation systems, and coordination with utility systems and architectural design consultants.

**Ocean Institute Waterfront Rehabilitation, Dana Point, CA.** Project engineer to provide planning, engineering design, construction documents, and permit applications to facilitate a marine construction project including a new 5,500 sq. ft concrete dock system and 100 ft x 30 ft concrete pier all maritime themed for learning and education purposes. Tasks included complete design of all structural systems, driven precast concrete pile foundation systems, and assistance with utilities and electrical systems.

**Marina Park Harbor Development, Newport Beach, CA.** Project engineer for design of concrete sheet-pile bulkhead system, layout and design of floating docks, and dredge quantities estimates. Developed design of the dock and anchor systems (Piles), design of dock utilities, development of construction drawings and specifications, and ensuring compatibility with the appropriate building code standards.

Rhine Wharf Transient Dock Facilities, Newport Beach, CA. Project engineer as part of the design-build team working directly with the marine contractor for engineering services for the transient vessel mooring facilities and ADA improvements. The project consisted of new fixed gangway pier platform, new 80 ft. long ADA access gangway, and 1,000 sq. ft. of floating dock for transient vessel use. Responsible tasks included structural design for gangway platform pile-supported pier structure, floating dock guide pile design, and construction support services and review of contractor submittals. The estimated construction for supply and installation of all waterside facilities was approximately \$1 million.

**American Legion Bulkhead Wall Improvements, Newport Beach, CA.** Project manager for the inspection, permitting, design, and construction support to provide improvements to the existing American Legion Yacht Club facilities within Newport Harbor. Design services include retrofit of existing bulkhead wall with grouted tie-back anchors, new ADA gangway and platform upgrades, site drainage improvements, and floating dock upgrades. Project involved extensive planning with City staff for seal level rise, identifying building code requirements, and environmental best management practices.

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## BILL DUBBS, PE | Lead Inspector

Bill has extensive training and experience in marine structural condition assessment, civil engineering, construction management, and commercial diving. His experience includes topside/underwater structural inspections & condition assessments as well as design and construction management/inspection of repairs, rehabilitations, and modernization / design for a wide range of infrastructure. Typical projects include piers, wharves, marine oil terminals, bulkheads, seawalls, moorings, bridges, fender systems, floating docks, dams, culverts, and slope protection systems. As a member of the company safety committee, Bill has implemented new safety equipment and standards and coordinated the field equipment and employee certification to comply with constantly changing industry regulations. He developed safe-diving practices for underwater engineer-diver inspection teams.

#### **Years of Experience**

> 20

#### **Education**

 BS, Structural Engineering, UCSD

#### Registrations

> Professional Engineer: CA

#### Certifications

- Merchant Mariner DocumentUSA000040313
- > (100GT Master)
- Construction Quality
   Management U.S. Army
   Corps of Engineers and
   NAVFAC
- DBIDS Navy Contractor Base Access ID
- > Bridge Inspector National Highway Institute
- EM-385 40-hr Construction Hazard Awareness Safety Training
- OSHA 30-hr ConstructionSafety and Health
- ADCI Commercial Diver and Supervisor (USA)
- DCBC Commercial Diver (Eur/ Asia)
- > ADAS Commercial Diver and Chamber Operator (Aus/NZ)
- Current CPR/1st-Aid/ Emergency Oxygen Administration

#### REPRESENTATIVE PROJECT EXPERIENCE

#### Manhattan Beach Pier Condition Assessment, Manhattan Beach,

**CA.** As facility investigation Team Leader, organized and performed in above water and underwater field inspection activities, including management of equipment, personnel, and documentation. Primary point of contact with City Engineer. Operated snooper inspection vehicle. Analyzed inspection results and developed repair/rehabilitation recommendations. Produced investigation report and rehabilitation recommendations. Provided QA/QC for repair drawings.

**Santa Monica Public Pier, Santa Monica, CA.** Responsible for underwater dissolved oxygen testing of wrapped timber piles, as well as the operation of the submersible pneumatic timber coring device to determine the integrity of the remaining timber piles.

## Seal Beach Municipal Pier Fire Damage Assessment, Seal Beach,

**California.** Team leader for a post-event inspection of the Seal Beach Pier following a storm that brought unusually large surf and obvious damage to the pier. The team conducted above- and below-water inspections to determine the extent of damage, as well as the urgency for repair. Provided the client with a Post-Event Condition Rating of the timber pier and recommended actions for remediation of the structure.

**Broadway Pier, San Diego, CA.** Involved in eight separate above- and below-water repair construction inspections to ensure quality control specifications were in compliance. Also authored "Guide to Inspecting Pile Repairs at Broadway Pier," an instructional pamphlet providing the client with inspection guidance for their in-house divers.

### Port of Los Angeles Conoco Philips Berths 148-151, Los Angeles, CA.

Boat operator and diver for the underwater inspection of over 300 concrete and timber piles. He was responsible for the acquisition and analyses for the dissolved oxygen tests and the timber cores. This terminal is a high risk facility subject to Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). Inspection included 100% Level 1, 10% Level 2, and 5% Level 3 testing consisted of dissolved oxygen testing and underwater timber coring.

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**Port of Los Angeles Vopak Berth 101, Los Angeles, CA.** Boat operator, dive supervisor and diver for the underwater inspection of over 700 feet of steel sheet pile bulkhead. This terminal is a Medium Risk Facility subject to Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). Inspection included 100% Level 1, 10% Level 2, and 5% Level 3. Level 3 testing was used to establish a corrosion profile which consisted of ultrasonic thickness measurements and electrical potential survey.

**Port of Long Beach Pier G Redevelopment, Long Beach, CA.** Responsible for the design of a replacement bulkhead, as well as the adjacent grading and pavement. The project includes redevelopment of an active container terminal. The entire site will be redesigned including all major utilities, grading and drainage, arrival/departure gates, rail yards and main line, street improvements, new land creation, wharf design, electrical systems, and paving. An early component of the design for the west gate and rail yard affects the circulation for the local roadway and within the terminal that requires phased construction. New regulatory constraints dealing with the grading material and provisions for cold iron retrofit of existing berths add further complications to site layout and phasing.

**GP Gypsum Manufacturing, Long Beach, CA.** Led an inspection of the area, analyzed the existing capacities of the steel plate flooring system, and recommended remediation to restore the floor to safe operating condition. The GP Gypsum Manufacturing building in Long Beach suffered structural deficiencies on the second floor, which impeded their ability to operate heavy equipment in that region.

**Naval Air Station North Island Berth Lima Conversion (P-704), San Diego, CA.** Engineer-diver for a major project involving facility repairs and berth deepening of an historic NASNI facility. The project included design of buildings; revetment; and major utility infrastructure.

**Seaport San Diego Development Project, San Diego, CA.** Currently serving as waterfront structural lead on preliminary planning efforts for this multi-billion-dollar marquee project. The project includes redesigning the recreational component of San Diego's signature waterfront. Project is currently under agency review.

**National City Marine Terminal Berth 24-11 Rehabilitation, San Diego Unified Port District, San Diego, CA.** Currently serving as lead engineer on a major berth rehabilitation project for the Port. The berth services primarily Ro-Ro ships. The project includes modifications to the existing structural system, repairs to existing concrete piles, a new deck, an improved fender system, and electrical upgrades that will supply shore power for ships and charging systems for dockside electrical equipment. The project will modernize the existing berth and extend the service life an additional 30 years. The project will culminate in construction documents including plans, specifications, and cost estimate.

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## **BENJAMIN BROCK, PE** INSPECTION SUPPORT

Ben has nine years of experience in underwater and above water inspection, analysis, rehabilitation, and design of bridges and various waterfront structures. He has previously served as a Project Manager and Staff Inspector/Engineer on for on-call statewide bridge inspection and load rating contracts with multiple Department of Transportations, and has experience in project management, leading inspections, performing load calculations, and preparing and reviewing reports in accordance with the multiple DOT's policies and procedures. Ben is also experienced in all manner of waterfront design and inspections from commercial shipping terminals, ferry terminals and residential private docks. He is an ADCI certified commercial diving supervisor with experience using both surface supplied and commercial scuba diving equipment

#### **Firm**

> Moffatt & Nichol

#### **Years of Experience**

> 9

#### **Education**

> BS, Civil Engineering, University of New Hampshire

#### Registrations/ Certifications

- > Professional Engineer, NH, CO, WY, MT, NM
- > National Association of Underwater Instructors (NAUI), Open Water, E5RERC, 2018
- > Association of Diving Contractors International (ADCI), Dive Supervisor, 66771, 2023
- > FHWA-NHI, 130055-Safety of Inspection of In-Service Bridges, 202

#### **Training**

- > OSHA 10-Hour Construction Safety, 2020
- > First Aid/CPR/AED, 2020
- > Confined Space Entry, 2023
- > Nondestructive Testing ASNT. Level II Ultrasonic

#### REPRESENTATIVE PROJECT EXPERIENCE

Port of Long Beach (POLB) On Call Waterfront Facilities Inspection, **Long Beach, CA.** Engineer-diver for above and underwater inspection and condition assessment of POLB waterfront facilities. Underwater inspection tasks performed included Levels I and II. Additionally, assisted in preparing dive supervisor notebook, safety documents, and inspection reports.

POLA Marine Improvements, Los Angeles, CA, Berth 57-60 Above

Water and Underwater Structural Repair Design Inspection and **Rehabilitation.** Assistant project manager and Team Leader for Berth 57-60 wharf structural inspection and rehabilitation. Above and underwater inspections were performed in accordance with American Association of Divers International (ADCI) Standards and ASCE Waterfront Inspection Manual No. 130 Standards. Inspections of all above and underwater elements and structural rehabilitation plans are being developed. Responsible for leading the inspection team and reviewing the inspection report.

Seal Beach Naval Weapons Station P-224/226, Seal Beach, CA. Team member who supports the construction efforts for the structures and utilities on both the pier and the backland side. Performed quality control inspections of underwater elements, and recommended repairs for out of specification defects. Responsible for underwater inspections of piles, reporting findings and to the Navy and recommending repairs.

#### **Buckeye St Lucia Terminal, Underwater Inspection, Castries, St**

**Lucia.** Project engineer/diver for the underwater inspection of two docking facilities at the Buckeye St. Lucia Terminal. The inspections were performed in general conformance with American Association of Divers International (ADCI) Standards and ASCE Waterfront Inspection Manual No. 130 Standards. A report was issued for each structure that provided detailed locations of observed deficiencies, an evaluation and assessment, and provided conceptual recommendations for repair. Responsible for performing the inspection and assisting in reporting of the findings to the client under the supervision of a professional engineer.

#### Marathon Amorco Marine Oil Terminal Inspection, Martinez, CA.

Engineer/diver for the underwater inspection as a subconsultant for Simpson Gumpertz & Heger (SGH). The objective of the underwater inspection was to document the overall existing condition of the Marathon Amorco Marine Terminal from the channel bottom to Mean Lower Low Water (MLLW), with particular attention given to any observed areas of deterioration or apparent distress. Responsible for conducting underwater field inspection and reviewing the inspection report. City of Newport Beach - Ocean Piers Inspection and Design Services

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**SPS New England Kernwood Bridge Fender System Repair Beverly, MA.** Project manager/dive supervisor for team that was directed by SPS New England Inc. (SPS) to inspect the fender system elements that support the existing utility cables that facilitate operation of the draw bridge. The fender system/utility walkway that supports the utility cables for the draw bridge is approximately 100 feet long and runs from beyond the west facia to the east facia of the bridge and attaches to the draw pier. The inspection extended from channel bottom to the top of the fender system deck. Based on inspection findings, repairs were designed for the failing fender system. Permitting services were also performed. Responsibilities included project management, performing inspections, permitting, reviewing inspection report, oversight of repair designs and construction management.

**Buckeye Port Reading Inspection, New Haven, CT.** Project engineer/diver for project that included field investigations, documenting and assessing the general physical condition of the structural, electrical and mechanical components of the Magellan Midstream Partners' New Haven Terminal waterfront facilities. Work consisted of underwater and above water inspection of structural components; review of existing facility drawings; review and annotation of previous inspection information and recommendation of appropriate remediation actions; documentation of assessment findings; and production or validation of CAD models. Responsible for performing the inspection and assisting in reporting of the findings to the client under the supervision of a professional engineer.

**Lloyd Engineering, 2020 Underwater Inspections of Various Buckeye Terminals, CT, NY, NJ.** Project engineer for underwater inspection of the Buckeye Partners' Terminals in Albany, New York, Pennsauken, New Jersey, and New Haven, Connecticut. The terminals consist of barge docks, manifold structures, mooring and berthing cells, shoreline revetments and access trestles. Responsible for developing comprehensive inspection reports and report figures utilizing AutoCAD software.

**Fisher Island Inspection, Miami, FL.** Project engineer/diver for above and underwater inspection of structural components, including 12,000 linear feet of bulkhead. Work included a Level I and Level II underwater inspection utilizing commercial scuba diving equipment. An analysis was completed to support field observations. Recommendations and associated costs were provided. Responsible for performing the inspection and assisting in reporting of the findings to the client under the supervision of a professional engineer.

**Massachusetts DOT, UW Inspections Rail and Transit, Statewide, MA.** Project engineer/diver for underwater inspection of bridges for MassDOT Rail and Transit as a subconsultant for STV, Inc. The contract is a Task Order contract under STV Task Order contract with MassDOT. Reports for each bridge were completed in MassDOTs 4-D program. Task Order 1 included 5 bridges located throughout western Massachusetts. Most consisted of small single-span bridges in less than 10 feet of water. One bridge was a 9-span bridge over the Connecticut River. Responsible for performing the underwater inspections and developing inspection reports.

**Port of Port Arthur, Berth 6 Expansion, Port Arthur, TX.** Project engineer for the design of a 1000-foot by 62-foot Berth 6 expansion. Work included design of the bulkhead, deck, mooring bollards, 50-foot gage crane rail, rail tracks, and an elastomeric fender system. Design live loads include AASHTO HS20-44, 45-Ton Gantry Crane, 40-Ton Container Lift Truck, 200-Ton Mobile Truck Crane, a uniform live load of 1,200 psf and other material handling equipment used at the port. Responsible for preparing calculations, checking calculations, drafting structural details, quantity takeoffs and construction submittal review.

**Port of Port Arthur, Berth 5 Expansion, Port Arthur, TX.** Project engineer for the design of backland improvements along the 600-linear foot Berth 5 wharf. The project includes design of a concrete approach slab to transition from the paved backland to the wharf structure and design of modifications to the wharf's concrete deck to accept and support the approach slab. Design live loads include AASHTO HS20-44, 40-ton container lift truck, shiploader and other material handling equipment used at the port. Responsible for preparing calculations, checking calculations, drafting structural details and quantity takeoffs.

**Crocker's Boat Yard Marina, Manchester, MA.** Project engineer for preliminary design, draft and final design, and construction phase services for a dock expansion in Manchester, Massachusetts. The design included developing design loads for determining pile layout, providing sketches and narratives to support regulatory permit applications, developing construction documents, and performing periodic site visits to verify

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City of Newport Beach - Ocean Piers Inspection and Design Services

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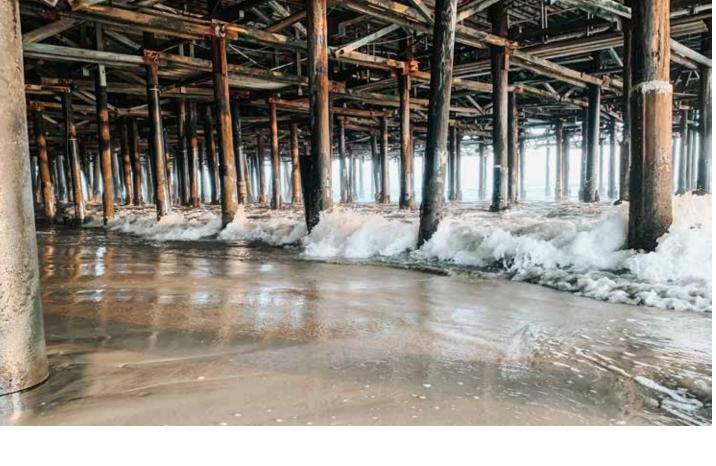
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City of Redondo Beach **City of Santa Monica City of Manhattan Beach** Alisha Flores, Project Engineer Gilbert Gamboa, Senior Civil Geraldine Trivedi, Project **Engineer** 310-458-2201 (Ex. 2317) **Engineer** (310) 318-0661 x2036 (310) 802-5356 Alisha.Flores@santamonica.gov Geraldine.trivedi@redondo.org ggamboa@citymb.info **2018 Pier Infrastructure Assessment Study** and **Redondo Beach Sport Fishing Manhattan Beach Pier Railing Master Plan Assessment & Replacement** Replacement City of Seal Beach City of Newport Beach **David Spitz, Associate Tom Sandefur, Assistant City Engineer Engineer** (949) 644-3321 (562) 431-2527 dspitz@sealbeachca.gov tsandefur@newportbeachca.gov **Seal Beach Pier Inspection & Newport Beach Pier** Repairs **Inspection and Design** Services

**Pier Structural Evaluation &** 



# 4. Advance Notice Requirements Statement

M&N confirms that our Southern California staff and the proposed team have the ability to provide services to the City on short notice. Our firm is composed of experts located in Southern California that are familiar to the City and can effectively assist the City in meetings and urgent requests. M&N has proven this before, responding immediately to the City of Seal Beach to provide emergency inspection and design services after a fire completely destroyed the end platform of the Seal Beach Pier. If awarded, M&N has the capacity and availability of local staff to respond to the City's short notice needs pertaining to its ocean piers.

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# 5. Work Plan

#### **SCOPE**

The City of Newport Beach is planning improvements to the Newport and Balboa Piers to correct existing deficiencies in an effort to improve the overall condition ratings and safety. To facilitate this work, the City is seeking to conduct on-site assessment surveys of each pier as a basis for formulating its rehabilitation strategy. One report for each pier, detailing above and below water conditions and deficiencies for support members and attachment hardware, will be provided. It is understood that time is of the essence, and tasks are to be performed and completed within seventy-five (75) working days of NTP.

Aside from simply conducting the inspections, M&N employs an in-house team of waterfront engineers, who specialize with rehabilitation of offshore timber piers, have prior relevant experience specific to the Newport and Balboa Pier facilities, and are ready and capable to develop any necessary repair recommendations to meet the City's planned restoration work in 2021. Furthermore, Moffatt & Nichol's involvement in the 2020 Newport Pier Restaurant Demolition and Platform Rehabilitation Design Services project allows our team to rely on previous inspection results to potentially reduce the scope of work and utilize existing City contacts to help streamline coordination efforts. These added benefits allow our team the potential to reduced inspection fees, as currently on-going end-platform inspection results are likely accurate for an additional 1-2 years. In addition, we can reduced overall project schedule by utilizing existing contracts to coordinate on-site inspections and reduce any pier closures or operational impacts.

Based on our understanding of the RFP and answers to questions, the project is comprised of the following three (3) main tasks, in addition to overall project management.

- 1. Pre-Field Work
- 2. Field Work
- 3. Reports and Submittals

The outline of tasks is presented in the following section to illustrate M&N's overall project work plan. Descriptions have been provided for each task, with details and assumptions of our approach to completing a successful project.

#### **PROJECT APPROACH**

Communication among stakeholders will be key to successfully developing the assessment surveys and deliverables that will become the basis for the City's rehabilitation plan to correct existing deficiencies in an effort to improve the overall condition ratings and safety. Our recent experience with similar pier inspection and improvements to support a new building structure for the City of Redondo Beach involved communicating complex technical findings with residential and tenant stakeholders, and facilitating communication with building architects and the City, which helped to keep the project on track to meet established project goals and budget. Should the City elect to employ M&N to design the rehabilitation strategies, close coordination and communication with all stakeholders will result in the most effective design and development for the inspection, retrofit, and upgrades associated with the proposed project.

#### INDUSTRY LEADERS IN MARINE INFRASTRUCTURE INSPECTION AND REHABILITATION.

Our team members literally wrote the book on waterfront facility inspections. M&N team members have served on ASCE committees to prepare design standards for the waterfront inspections and deigns of piers and wharves. This includes the ASCE - Manual 130 "Waterfront Facilities Inspection and Assessment" standard practices that is used industry-wide. Their knowledge and unique understanding of the evaluation of existing facilities and recommendations for repairs is essential to optimize design and meet project objectives.

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Any structural additions, including piles, will be subject to review from regulatory and local permitting agencies. M&N's permitting specialists are engineers that have experience in providing thoughtful mitigation measures that allow for flexibility in the ultimate design and construction. More flexibility will allow for more competitive and creative bids that will provide cost savings to the City. In addition, the M&N team has experience in communicating adaptation strategies to account for sea level rise (SLR), which has become a recent focal point for some state and local agencies. Our team recently included SLR considerations in the design of the Seal Beach Pier fire damage improvements project, in which the height of the end platform structure was increased to account for SLR projections while still maintaining ADA pedestrian access.

# PLAN AND PHASE THE PROJECT TO PROVIDE THE COMMUNITY CONTINUOUS SAFE ACCESS TO PIER DURING INSPECTION AND CONSTRUCTION

M&N understands that one of the most important concerns of local community groups and residents is maintaining pier access throughout the duration of the project. During inspection services, investigations will be phased to focus on smaller portions of the pier at a time, providing continued and safe public access to the pier and reducing eye pollution. Also, a phased construction methodology may be suitable during construction to ensure continued access to the pier. In fact, this approach was used successfully during the recent Seal Beach Pier fire damage improvements project.

#### TASK 1 – PRE-FIELD WORK

This task will include general project planning and coordination necessary prior to conducting on-site investigations. M&N will work with the City to collect relevant existing data, review and approve project planning documents, and distribute notification materials to stakeholders prior to investigations.

#### ATTEND KICKOFF MEETING

M&N will attend one (1) kickoff meeting to establish project goals. It is assumed two (2) staff will attend and meeting is 90-minutes in duration.

#### **DATA COLLECTION & REVIEW**

M&N Data collection and review efforts will include gathering data and potential site constraints for the existing pier facilities, collecting relevant data from existing City archives, and identifying other relevant existing data useful in developing a basis for the proposed infrastructure condition survey. This data includes plans and specifications of previous nearby relevant projects, existing surveys (if available), and previous permit requirements.

#### **DEVELOP PROJECT WORK PLAN**

M&N will develop a project work plan for submittal and approval by the City of Newport Beach Project Manager. The work plan will include inspection safety protocols, inspection staging and access plans. Before the project's study phase launches, a customized Project Work Plan will be prepared that includes the following elements:

- Activity Hazards Analyses (Both underwater and above water inspections)
- Dive Operations Plan (including site specific above and underwater inspection emergency management plan, safety plan, and emergency contact list)
- All aspects of the field investigations will be analyzed, and risks mitigated by M&N's Safety Officers. This
  comprehensive safety plan will be provided to the City of Newport Beach, prior to commencing field
  inspection, including M&N's Health Safety & Environment Manual and Safe Diving Practice Manual
- Staging and access plan for all equipment showing location of any potential impacts to pier access during inspections
- Distribute City provided project information to Ruby's and other establishments within 750' of the base of the project(s)
- Inspection schedule

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The goal of this task is to provide on-site evaluation of structural conditions; structural engineering assessment of damage and deterioration; and recommendations of practical solutions to rehabilitate, restore or maintain the facility for continued use into the future. Efforts include a routine-level inspection program to identify deficiencies that require repair to correct existing deficiencies in an effort to improve the overall condition ratings and safety.

#### TASKS:

- Above and below water inspection.
- Structure condition assessments.
- Development of alternatives for repairs
- Recommendation of practical solutions; cost effective, constructible and phased to maintain operability and accommodate new improvements.

#### INSPECTION PERSONNEL AND EQUIPMENT MOBILIZATION/DEMOBILIZATION

For the Newport and Balboa Pier inspection project, M&N will mobilize all personnel and gear from Southern California. Except for a pier snooper crane, which would be rented and delivered to the site, all Surface Supplied Air (SSA) and SCUBA diving gear, boats and inspection equipment are maintained in-house by M&N. Crew mobilization and demobilization will occur from our dive locker located in Long Beach, CA and includes equipment preparation, travel expenses, and initial site setup.

#### **ABOVE WATER INSPECTION**

Inspection schedules may vary depending upon final agreed upon scope. M&N staff will work with the City Project Manager to identify an above water site inspection program specific to the project needs. The above water inspection methods are based upon ASCE – Manual 130 "Waterfront Facilities Inspection and Assessment" standard practices. M&N's inspection team will perform the routine above water inspection in such a manner as to be least disruptive to pedestrian and/or vehicle access. It is anticipated pier access will be maintained during the inspection, with proper traffic control measures. M&N will conduct a visual inspection on all above water wooden pier support members and above concrete deck perimeter railings, and below deck catwalks and lifeguard ramp and hoists. It is understood that top-side buildings are excluded from the Scope of Work, however, any observed issues will be noted. The inspection techniques to be used will conform to the ASCE Waterfront Inspection manual.

The visual inspection of the below-deck above-water portion of the structure will be conducted to inspect all accessible components to assess the overall condition. The inspection will include timber deck members, deck slabs, piles from pile cap/beam to mudline, pile wraps, attachment hardware, and pile-to-beam/cap connections. Also, M&N will identify where shims are needed. Where appropriate and feasible, the underdeck inspection of structural members will be performed using a snooper crane system that will be selected to not exceed the allowable load capacity of the deck in its existing condition. Using a snooper is recommended and is routinely used to gain access to deck components not accessible from a boat, due to the pier deck height. In conjunction with existing catwalks, this will allow us to gain access to most of the under-deck substructure. Additional above water inspection will be done by boat and free swimmers as necessary.

#### **UNDERWATER INSPECTION**

Inspection schedules may vary depending upon final agreed upon scope. M&N staff will work with the City Project Manager to identify an underwater site inspection program specific to the project needs.

Underwater inspection will be performed using engineer-divers. The underwater inspection methods are based upon ASCE – Manual 130 "Waterfront Facilities Inspection and Assessment" standard practices. In accordance with

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- Level I Inspection Effort 100% of the piles. Includes visual inspection.
- Level II inspection effort a minimum of 10% of the piles. Includes timber pile diameter measurements, clean marine growth in 12-inch wide bands at top-middle-and bottom of piles.
- Level III Inspection Not anticipated to be performed as part of this effort. Includes destructive or partially destructive testing methods (timber core sampling). However, these services can be performed if deemed necessary by inspection teams after Level I and Level II observations.

The underwater portion of the structure is considered to extend from the mudline to approximately +3.0 feet elevation, relative to the Mean Lower Low Water (MLLW) datum. The underwater inspection will be conducted using surface-supplied air from a M&N equipped diving vessel moored adjacent to the pier. The underwater inspections will be coordinated with a low-surf window to take advantage of improved below-water visibility. The inspection of the piles in the surf zone will be performed at high tide for the outboard piles and at low tide for the near shore and inshore piles. It is assumed that unforeseeable delays due to weather or environmental factors which may affect inspection safety may require additional effort not considered as part of this proposal. M&N's inspection team will perform the underwater inspection in a manner that existing environmental and wave conditions will safely allow.

Attend weekly progress meetings at thirty (30) minutes per week

Additionally, the M&N team will attend weekly progress meetings to ensure quality communication among stakeholders with the goal of successfully developing the assessment surveys and deliverables that will become the basis for the City's rehabilitation plan to correct existing deficiencies in an effort to improve the overall condition ratings and safety.

#### **PROGRESS MEETINGS**

Attend weekly progress meetings at thirty (30) minutes per week to ensure quality communication among stakeholders with the goal of successfully developing the assessment surveys and deliverables that will become the basis for the City's rehabilitation plan to correct existing deficiencies in an effort to improve the overall condition ratings and safety.

#### **DELIVERABLES**

- Field inspection notes
- Weekly meeting minutes

#### TASK 3 - REPORTS AND SUBMITTALS

Report preparation will be performed in a format acceptable to the City of Newport Beach. One (1) report will be generated for each pier, organizing the information as follows:

- 1. Executive summary,
- 2. Detailed list of findings organized from Bent 1 seaward, and
- 3. Findings will be transferred onto a map or drawings for visual aid

Additionally, the report will contain a clear narrative, accurate figures, photos, identified deficiencies, and supporting documentation. The report will include evaluation of the overall condition of the pier as well as individual elements. Finally, itemized deficiencies will be given for the short-term (immediate to 1 year), midterm (2 to 5 years), and long term (5-10 plus years) directives. The objective would be to develop, if possible, a maintenance plan to extend the service life of the existing facilities in accordance with the City's planned capital improvements program. Identified deficiencies will be recommended for repair considering the following criteria:

- Expected remaining service life of the pier structure;
- Opportunities to minimize environmental impacts;

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- Maintaining facility access; if possible, repairs should be configured for implementation with minimal or no pier closures; and
- Ease of maintenance; maintenance personnel should be involved with review of the repair concepts with a goal of minimizing maintenance.

Although not stated to be included in the scope of work, M&N can also develop cost estimates for the rehabilitation and structural repairs. This will allow the City to plan capital improvement budgets that align with most critical infrastructure improvement needs. In addition, if required by the City the M&N team is capable of preparing full plans, specifications, estimates (PS&E) construction document packages for the pier infrastructure repairs. Having a single cohesive team conduction on-site evaluations and developing design documents for recommended repairs is essential in identifying the most cost-effective solutions. M&N can provide a supplemental proposal for these services once the scope is better defined.

#### **PROGRESS MEETINGS**

• Attend progress meetings including two (2) each one (1) hour progress meetings; and provide up to five (5) each fifteen (15) minute phone calls

#### **DELIVERABLES**

Inspection and Condition Assessment Report (65%, 80%, and Final Milestones)

#### **EXCLUSIONS**

- The proposal excludes inspection of utilities, landside, and other above-deck pier support facilities including, but not limited to: Buildings, Landside Concrete Abutments and/or, Bulkhead Walls, Shoreline Protection & Rock Revetments, Breakwater/Wave Protection, and Utilities.
- Level III Inspection efforts and Destructive Testing (timber core sampling) are not anticipated to be performed as part of this effort but can be performed if deemed necessary after Level I and Level II observations.
- M&N has excluded the following items from our proposal. Once the scope of work is better defined following initial inspections, M&N can provide a supplemental proposal for these services:
  - Preparing full plans, specs, and estimates for the identified repairs
  - Support during bidding
  - Support during construction

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We are confident in our schedule as presented below. Given our prior experience working with the City, we are ready to begin work immediately and will work diligently to meet the proposed deadlines.

TASK/MILESTONE	WORKING WEEKS															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TASK 1 - PRE-FIELD WORK																
NTP + Pre-Kickoff																
Data Collection & Review																
Submit Draft Project Work Plan																
City Review																
Submit Final Project Work Plan																
TASK 2 – FIELD WORK																
Perform Site Inspections and Assessment																
Above Water Inspection																
Underwater Inspection																
TASK 3 – REPORTS AND	SUBMI	TTALS														
Prepare Inspection and Condition Assessment Report(s)																
Submit Draft Inspection & Condition Assessment Report																
City Review																
Submit Final Inspection & Condition Assessment Report													Avail	able Sch	nedule F	loat
Submittal Deadline																

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#### FINAL - SANTA MONICA MUNICIPAL PIER

Infrastructure Inspection & Assessment Study - 2018 Update

Submittal Date:

M&N Project No.:

City of Santa Monica Project No.:

December 12, 2018 Revised: February 11, 2020 10225-00

SP2473



Santa Monica Municipal Pier, Santa Monica, CA

#### Prepared for:



The City of Santa Monica
Public Works Department, Civil
Engineering Division
1437 4th Street, Room 300
Santa Monica, CA 90401
(310) 458-2201

#### Prepared by:



#### moffatt & nichol

Moffatt & Nichol
Waterfront Inspection & Engineering
4225 E. Conant Street
Long Beach, CA 90808
(562) 590-6500



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#### **Executive Summary**

Moffatt & Nichol (M&N) was retained by the City of Santa Monica (City) to perform inspection, assessment, and rehabilitation engineering services for the Santa Monica Municipal Pier (Pier) facilities, in the City of Santa Monica, California. This waterfront inspection report is part of a design repair project that will identify potential Pier defects and associated rehabilitation options.

This report is intended to provide updates to the previous Santa Monica Pier Infrastructure Assessment Study performed in 2008 (PIAS-2008), by M&N and associate subconsultants. Efforts for this updated 2018 Pier Infrastructure Assessment Study (PIAS-2018) are focused on providing condition assessment and rehabilitation concepts for the Pier to correct defects identified in existing structural elements. This scope of work included: existing Pier piles, pile caps, stringers, lateral and transverse bracing, and deck elements. In addition, studies were performed to evaluate the need for future recommended upgrades for a variety of reasons including: providing an allowable load rating for emergency vehicles, minimizing on-going maintenance within the offshore splash zone, and to maintain existing operations.

The scope of services for this PIAS-2018 excluded some items previously considered as part of the PIAS-2008 and/or are not included in the scope of work at the request of the City. Excluded items include existing electrical and wet utilities not limited to: Pier lighting, shore power, tie-ins to existing buildings, potable water, sewage, fire water, storm drains, and other existing landside utilities. The scope of work also excluded landside and above-deck Pier facilities (Topside Buildings and Amusement Structures, Topside Architectural Furnishings (benches, light poles, etc.), Landside Concrete Abutments and/or Bulkhead Walls, and Waterside Shore Protection & Rock Revetments.

This report consists of two study phases. Phase 1 provides observations and assesses the existing condition of the various structural infrastructure systems of the Pier. Rehabilitation studies are then provided for the various deficiencies noted and construction cost estimates developed for those proposed repairs. Phase 2 presents potential upgrades and maintenance programs to be implemented into the future 10-year improvement plan. Evaluations are given on the existing load rating of the Pier, and cost estimates developed to outline construction costs for the proposed upgrades.

#### Phase 1 – Observations Summary and Repair Cost Estimate

The inspection and assessment were performed to support the development of repair recommendations for the Pier. The repair recommendations are presented below in a prioritized manner considering severity of damage, location, and impact of damage to the overall Pier structural integrity, and operational use of the facilities. An attempt has also been made to categorize the deficiencies that will allow the City to choose a maintenance or replacement program that best suits their needs and budget.

The inspection report focuses on identification of deficiencies as part of a future design repair project. Providing engineering bid documents (repair plans, details, and specifications) for the recommended repairs are outside the scope of this inspection report. Due to the nature and configuration of repairs necessary, required repairs will likely entail water-based construction operations. Various techniques may be employed to conduct these repairs; however, it is recommended construction plans and details be developed prior to construction.



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It is recommended future Pier inspections be conducted at regular intervals according to normal industry standard, every five (5) to ten (10) years or following a significant storm wave or other significant event.

#### Priority Repairs Summary (Immediate Repair / Replacement)

Consistent with the "priority-repair" recommendations, the repairs defined in this section are recommended to be accomplished as soon as feasible. Defects included were categorized with "Severe" damage. Refer to Table E-1 below.

Table E-1: Priority Repair Summary

	CANTA MONICA MUNICIPAL DIED INCRESTION CUMMARY									
	SANTA MONICA MUNICIPAL PIER INSPECTION SUMMARY									
Priority Repairs (Immediate Repair/Replacement)										
ZONE 1 - Timber East-End Pier Segment (Bent 0 – Bent 53)  COMPONENT ID CONDITION RATING & NUMBER OF DEFECTS IDENTIFIED COMMENTS										
	COMPONENT ID						COMMENTS			
Item No.	Description Timber Diles	ND*	MN*	MD*	МЈ*	SV*	il iil c			
1	Timber Piles Timber Pile Caps				Not Included in Priority Repairs	18	• 28 piles with Severe defects			
2	Timber/Steel Lateral and	.⊑ .≌	Not included in Priority Repairs	Not Included in Priority Repairs		7	• 7 pile caps with Severe defects.			
3	Transverse Bracing	luded				46	•46 brace members (38 timber / 8 steel) with Severe defects.			
4	Timber Stringers	Not Included in Priority Repairs				2	•2 stringer area locations with Severe defects.			
5	Timber Decking	4				0	•0 decking area locations with Severe defects.			
	TOTAL =		N/A	N/A	N/A	73	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 2 - Con									
	COMPONENT ID		N RATING &				COMMENTS			
Item No.	Description	ND*	MN*	MD*	МЈ*	SV*				
6	Concrete Piles	- 10	- 10	- 10	- 10	0	•0 piles with Severe defects.			
7	Concrete Pile Capitals	d in	d in	d in	din	0	o pile capitals with Severe defects.			
8	Concrete Pile Caps	Rep	Rep	Rep	Rep	2	•2 pile caps with Severe defects.			
9	Timber Stringers	Not Included in Priority Repairs	0	•0 stringer area locations with Severe defects.						
10	Timber Decking	žā			žā	0	•0 decking area locations with Severe defects.			
	TOTAL =	N/A	N/A	N/A	N/A	2	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 3 - Cor									
Harris N.L.	COMPONENT ID		N RATING &				COMMENTS			
Item No.	Description	ND*	MN*	MD*	МЈ*	SV*				
11	Concrete Piles	.⊑ છ	.E &	드모	.⊑ છ	0	piles with Severe defects.			
12	Concrete Pile Caps	. baj	bed a	bed a	ba led	0	pile caps with Severe defects.			
10	Timbor Stringore	y Re	Not Included in Priority Repairs	Not Included in Priority Repairs	Not Included in Priority Repairs	0	o stringer area locations with Severe			
13	Timber Stringers	Not Included in Priority Repairs					defects.     O decking area locations with Severe			
14	Timber Decking	No Pri					defects.			
	TOTAL =	N/A	N/A	N/A	N/A	0	NUMBER OF DEFECTS IDENTIFIED			
						nt 60 – Be				
	ZONE 4 - Concrete West-End Platform Pier Segment (Bent 60 – Bent 103)  COMPONENT ID CONDITION RATING & NUMBER OF DEFECTS IDENTIFIED COMMENTS									
Item No.	Description	ND*	MN*	MD*	МЈ*	SV*				
15	Concrete Piles					0	•0 piles with Severe defects.			
16	Concrete Waffle Slabs	ded in epairs	Not Included in Priority Repairs	Not Included in Priority Repairs	ded in epairs	0	•0 waffle slab locations with Severe defects.			
17	Timber Sleepers	Not Included in Priority Repairs			Not Included in Priority Repairs	0	•0 stringer/sleeper area locations with Severe defects.			
18	Timber Decking		No Pri	No	No	0	•0 decking area locations with Severe defects.			
	TOTAL =	N/A	N/A	N/A	N/A	0	NUMBER OF DEFECTS IDENTIFIED			
	TC	TAL PRIC	RITY REP	AIRS IDEN	ITIFIED =	75				

<sup>\*</sup> ND = "No Defect", MN = "Minor Defect", MD = "Moderate Defect", MJ = "Major Defect", SV = "Severe Defect"



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#### Short-term Repairs Summary (Within 1-5 Years)

Consistent with the "short-term repair" recommendations, the repairs defined in this section are recommended to be accomplished as soon as feasible but may be delayed for the first 1-5 years while the City appropriates funds. Defects included were categorized with "Major" damage. Refer to Table E-2 below.

**Table E-2: Short-term Repair Summary** 

SANTA MONICA MUNICIPAL PIER INSPECTION SUMMARY										
Short-Term Repairs (Within 1-5 Years)										
ZONE 1 - Timber East-End Pier Segment (Bent 0 – Bent 53)										
	COMPONENT ID		CONDITION RATING & NUMBER OF DEFECTS ID				COMMENTS			
Item No.	Description	ND	MN	MD	MJ	SV				
1	Timber Piles				87	Not Included in Short-Term Repairs	•87 piles with Major defects.			
2	Timber Pile Caps	d in epairs	Not Included in Short-Term Repairs	Not Included in Short-Term Repairs	25		•25 pile caps with Major defects.			
	Timber/Steel Lateral and				400		•123 brace members (111 timber / 12			
3	Transverse Bracing	ude n R			123		steel) with Major defects.			
4	Timber Stringers	Not Included in Short-Term Repairs			11		•11 stringer locations with Major defects			
5	Timber Decking	• •			5		•5 decking locations with Major defects.			
	TOTAL =	N/A	N/A	N/A	251	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 2 - Cor									
Item No.	Description	ND	MN KATING &	MD MD	MJ MJ	SV	COMMENTS			
6	Concrete Piles				1		a 1 miles with Maries defeats			
7	Concrete Pile Capitals	airs	airs	airs	0	airs	piles with Major defects.     opile capitals with Major defects.			
8	Concrete Pile Capitals	e bi	e p	e b		epa ir	pile capitals with Major defects.      pile caps with Major defects.			
0	Concrete File Caps	n a	a a	3 % 3 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4			•3 pile caps with Major defects.			
9	Timber Stringers	Not Included in Short-Term Repairs	Not Included in Short-Term Repairs	Not Included in Short-Term Repairs	0	Not Included in Short-Term Repairs	•0 stringer locations with Major defects.			
10	Timber Decking	Sho			0		decking locations with Major defects.			
10	TOTAL =	N/A	N/A	N/A	4	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 3 - Cor									
	COMPONENT ID			NUMBER O	COMMENTS					
Item No.	Description	ND	MN	MD	MJ	SV				
11	Concrete Piles	-	-	-	0	_	piles with Major defects.			
12	Concrete Pile Caps	. ∃ g	Not Included in Short-Term Repairs	ë E	0	Not Included in Short-Term Repairs	pile caps with Major defects.			
13	Timber Stringers	Not Included in Short-Term Repairs		Not Included in Short-Term Repairs	0		stringer locations with Major defects.			
14	Timber Decking	_		_	0		•0 decking locations with Major defects.			
<u> </u>	TOTAL =	N/A	N/A	N/A	0	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 4 - Co									
Item No.	COMPONENT ID  Description			NUMBER O			COMMENTS			
15	Concrete Piles	ND	MN	MD	MJ 0	SV	•0 piles with Major defects.			
10	CONCIECE FILES	n airs	n airs	n airs	U	n airs	•o piles with iviajor defects.			
16	Concrete Waffle Slabs	uded ii m Repi	Not Included in Short-Term Repairs	luded ii m Rep	0	Not Included in Short-Term Repairs	waffle slab locations with Major defects.     ostringer/sleeper locations with Major			
17	Timber Sleepers	Not included in Short-Term Repairs		Not Included in Short-Term Repairs	0		defects.			
18	Timber Decking	Sho		Sho	0		decking locations with Major defects.			
	TOTAL =	N/A	N/A	N/A	0	N/A	NUMBER OF DEFECTS IDENTIFIED			
				AIRS IDEN		255	The state of the s			
Ļ	No Defect". MN = "Minor Defect". N						- 6 ."			

<sup>\*</sup> ND = "No Defect", MN = "Minor Defect", MD = "Moderate Defect", MJ = "Major Defect", SV = "Severe Defect"



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#### Long-term Repairs Summary (Within 5-10 Years)

Consistent with the "long-term repair" recommendations, the repairs defined in this section are to be accomplished as soon as feasible but may be delayed until the City's next maintenance cycle (5 to 10 years). Defects included were categorized with "Moderate" damage. Refer to Table E-3 below.

**Table E-3: Long-term Repair Summary** 

SANTA MONICA MUNICIPAL PIER INSPECTION SUMMARY										
Long-Term Repairs (Within 5-10 Years)										
ZONE 1 - Timber East-End Pier Segment (Bent 0 – Bent 53)										
	COMPONENT ID			NUMBER O		COMMENTS				
Item No.	Description	ND	MN	MD	MJ	SV				
1	Timber Piles			387			•387 piles with Moderate defects.			
2	Timber Pile Caps	irs i	€ <u>1</u>	110	ed in	<u>د تع</u>	•110 pile caps with Moderate defects			
	Timber/Steel Lateral and	d i	uded ir n Repa			Not Included in Long-Term Repairs	•475 brace members (461 timber / 14			
3	Transverse Bracing	n Re		475	n Re		steel) with Moderate defects.			
4	Timber Stringers	Not Included in ong-Term Repairs	Not Included in ong-Term Repairs	25	Not Included in ong-Term Repairs		•25 stringer locations with Moderate defects.			
5	Timber Decking		Lor N	4	1		•4 decking locations with Moderate defects.			
	TOTAL =	N/A	N/A	1001	N/A	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 2 - Cor									
	COMPONENT ID			NUMBER O			COMMENTS			
Item No.	Description	ND	MN	MD	MJ	SV				
6	Concrete Piles			32			•32 piles with Moderate defects.			
L		in airs	in airs	4	in airs	in airs				
7	Concrete Pile Capitals	ed ge	ed Se p		ed Se p	ed Se b	•4 pile capitals with Moderate defects.			
8	Concrete Pile Caps	E G	P E	9	P F	E E	•9 pile caps with Moderate defects.			
9	Timber Stringers	Not Included in ong-Term Repairs	Not Included in Long-Term Repairs	0	Not Included in ong-Term Repairs	Not Included in ong-Term Repairs	•0 stringer locations with Moderate defects.			
10	Timber Decking	Lo 2		0	Lo	Lo 2	decking locations with Moderate defects.			
	TOTAL =	N/A		45	N/A	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 3 - Cor	crete Wes	t-End Appr	oach Pier S	egment (Be	ent 42 – Be	nt 59.8)			
	COMPONENT ID	CONDITIO	N RATING &	NUMBER O	COMMENTS					
Item No.	Description	ND	MN	MD	MJ	SV				
11	Concrete Piles	n is	- Si	0	n airs	- is	•0 piles with Moderate defects.			
12	Concrete Pile Caps	ed i	ed i	1	ed i	ed i	•1 pile caps with Moderate defects			
13	Timber Stringers	Not Included in Long-Term Repairs	Not Included in Long-Term Repairs	0	Not Included in Long-Term Repairs	Not Included in Long-Term Repairs	•0 stringer locations with Moderate defects.			
14	Timber Decking		Not Long-		_	_	•0 decking locations with Moderate defects.			
	TOTAL =	N/A	N/A	1	N/A	N/A	NUMBER OF DEFECTS IDENTIFIED			
	ZONE 4 - Co				<u> </u>					
	COMPONENT ID	CONDITIO	N RATING &	NUMBER O	DENTIFIED	COMMENTS				
Item No.	Description	ND	MN	MD	MJ	SV				
15	Concrete Piles	in airs	in airs	2	Not Included in ong-Term Repairs	Not Included in ong-Term Repairs	•2 piles with Moderate defects.			
16	Concrete Waffle Slabs	Not Included in ong-Term Repairs	Not Included in ong-Term Repairs	1			•1 waffle slab areas with Moderate defects.			
17	Timber Sleepers	Not Inc ng-Ter		0	Not Inc ng-Ter		stringer/sleeper locations with Moderate defects.			
18	Timber Decking		_	2	_	_	•2 deck areas with Moderate defects.			
	TOTAL =	N/A	N/A	5	N/A	N/A	NUMBER OF DEFECTS IDENTIFIED			
	TOTA	L LONG-T	ERM REP	AIRS IDEN	NTIFIED =	1052				
2002										

<sup>\*</sup> ND = "No Defect", MN = "Minor Defect", MD = "Moderate Defect", MJ = "Major Defect", SV = "Severe Defect"



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APPENDIX B – CONSULTANT PROPOSAL

#### 4. Municipal Pier Inspection Observations

#### 4.1. General Observations

Visual inspection was performed on the pile-supported substructure and related structural components. General arrangements of buildings on the top-side of the pier and additional pier appurtenances, were noted but not considered a part of this inspection. All structural elements were rated on a scale discussed in Section 3.1, "Element Damage and Overall System Condition Assessment Ratings," and detailed in Appendix A. The results are summarized in the following observation and recommendation portions of this report. Only a summary of the observed conditions is noted in the body of this report, refer to Appendix E for a full summary of element defects and damage ratings.

To achieve acceptable and safe results, M&N used two four-person teams for the Above Water (AW) and Underwater (UW) inspections. AW inspections took place between July 24 and September 7, 2018. UW inspections took place between August 27 and August 31, 2018. For the underwater portion of the inspection, inspectors used SSA (Surface Supplied Air) from our company boat, and inspectors used all necessary safety equipment and precautions when preforming the inspections. In addition, two iPads were utilized to gather digital data entry for both the UW and AW inspections. The Pier inspection went from Bent 0 though Bent 103, splitting up the inspection into four sections, as shown in Figure 4-1.

The existing Pier is configured in a general rectangular shape on the larger landside portion and transitions to a narrower waterside approach and platform. Bents 0 through 53 form the larger landside abutment area while Bent 53 through 103 makeup the approach walkway that leads to the end platform and the west-end platform itself. The number of total piles that support the pier is approximately 2,180. The existing Pier has various previous repairs visible, which have been completed at various intervals in the past. This condition is typical for similar pier structures with regular maintenance cycles. Photos depicting the different Pier framing systems are provided below.

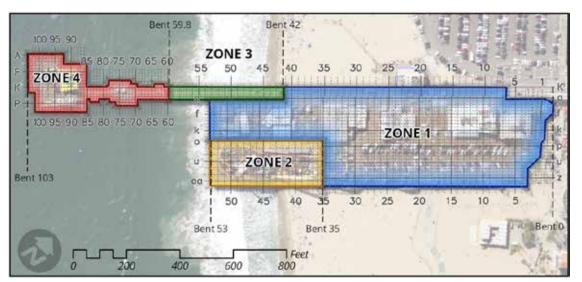


Figure 4-1: Pier Area Identification System



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#### 4.2.ZONE 1 - Timber East-End Pier Segment (Bent 0 – Bent 53)

This area of the Pier represents the remaining timber portion of the Pier; the newer concrete portions will be addressed later in the report. The Pier substructure and structural elements within this portion of the Pier include timber piles, timber pile caps, timber stringers, timber and steel lateral and transverse bracing, and timber deck elements. This portion of the Pier extends from Bent 0 from a concrete retaining wall to Bent 53, which includes in-water portions. Refer to Figure 4-2 below.

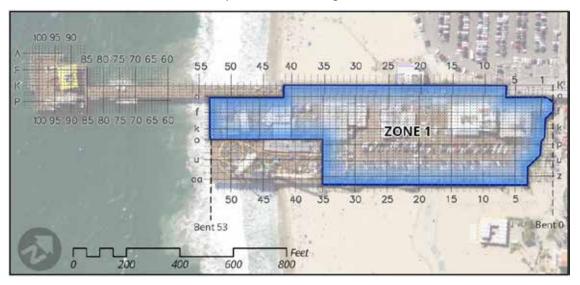


Figure 4-2: ZONE 1 Site Plan - Timber East-End Portion of Pier

#### 4.2.1. Item 1- Timber Piles

The timber piles were inspected above and below water. Below water inspection comprised a Level I effort on all piles, and Level II effort on 10% of all piles. Level I effort is defined as visual inspection only, and Level II involves the removal of marine growth in three 1-foot wide bands near the waterline, at middepth, and near the mudline, as seen in Photo 4-7.



Photo 4-7: Typical timber pile condition under water (Level II inspection effort).



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**ZONE 1 - Timber Pile Severe Defect,** Photo 4-8: Pile 11.5q



Pile 47i.7



Photo 4-10: ZONE 1 - Timber Pile Major Defect, Pile 46f



Photo 4-11: ZONE 1 - Timber Pile Moderate Defect, Pile 47c

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### 5. Repair Observations Summary and Cost Estimate

The inspection and assessment were performed to support the development of repair recommendations for the Pier. The repair recommendations are presented below in a prioritized manner considering severity of damage, location, and impact of damage to the overall Pier structural integrity and operational use of the facilities. An attempt has also been made to categorize the deficiencies that will allow the City to choose a maintenance or replacement program that best suits their needs and budget. No attempt has been made to discuss environmental permitting requirements for the recommended repairs at this time.

This inspection report focuses on identification of deficiencies as part of an overall design repair project. Providing engineering bid documents (repair plans, details, and specifications) for the recommended repairs are outside the scope of this inspection report. Based on input from the City of which repairs they would like to continue forward with, M&N can develop plans, details, and specifications for the necessary repairs identified under a separate task if desired. Due to the nature and configuration of repairs necessary, required repairs will likely entail water-based construction operations. Various techniques may be employed to conduct these repairs; it is recommended construction details be developed prior to construction.

Based on the structural element deficiencies identified in the observation portion of this report, it is our recommendation that reparative or further extensive replacement options are necessary to prevent future potential worsening of present Pier defects.

#### 5.1. Geographic Information System (GIS) Database

The digital inspection records detailing the existing pier condition ratings and observations are provided as an ESRI (Environmental Systems Research Institute) file GIS geodatabase. The geodatabase contains the geometry of the Pier elements, inspection records, and inspection photographs. Relationships configured within the geodatabase link the structural elements to the inspection photographs. The ESRI file geodatabase must be viewed using ESRI software such as ArcMap and ArcGIS Pro. The inspection photos are also provided separately, as a zip file, so they can be viewed outside of the ESRI software suite. Refer to figures in Appendix B for a summary.

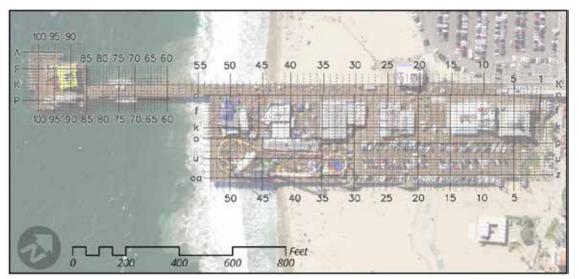


Figure 5-1: Site Plan - GIS Map Used for Field Investigations



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#### **CONSULTANT PROPOSAL WORKSHEET**

Please fill out and submit this worksheet along with the proposal or scope of work.

Company Information					
Legal Business Name:	Moffatt & Nichol				
Project Manager:	Jerry Holcomb, P.E.				
	Primary Address (For Legal Notices)	Mailing Address (For invoices, letters etc.):			
	☐ Use address from the attached proposal				
Address Line 1:	4225 E. Conant Street				
Address Line 2:					
City, State, Zip:	Long Beach, CA 90808				
•					

#### Type of Business (select one):

- O Limited Partnership/Limited Liability Partnership
- Sole Proprietorship

- Limited Liability Corporation
- General Partnership
- Other

For corporations without a resolution designating the binding contracting authority, two (2) officers of the corporation must sign the contract: one from column A, and one from column B (Below). For single signatories, the resolution must also be attached.

#### Column A Column B Secretary President Vice President Chief Financial Officer Chairman of the Board Any Assistant Secretary Any Assistant Treasurer Vice President and Principal-in-Charge Omar Jaradat, PhD, PE Signatory 1: (Print Name) Secretary Signatory 2: David Huchel (Print Name)

**Proposal Worksheet** 

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## **ACKNOWLEDGEMENT OF CITY'S STANDARD AGREEMENT TERMS & CONDITIONS**

The Consultant acknowledges that they have reviewed the terms and conditions of the attached Sample Draft Agreement, including all insurance provisions, with no exceptions taken.

ranna funs Signature

07/09/2024

Date

Omar Jaradat, PhD, PE, Vice President and Principal-in-Charge

David Huchel, Secretary

Printed Name and Title

Moffatt & Nichol

Company Name

Enclosure: Standard Template Draft – Professional Services Agreement with the City

Proposal Worksheet

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5 WORK PLAN

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## APPENDIX C - ACKNOWLEDGMENT OF CITY'S STANDARD TERMS & CONDITIONS

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# REQUIRED CITY FORMS FOR BID/PROPOSAL SUBMITTAL

A bid/proposal that does not include the completed and signed forms from this section shall be deemed incomplete and materially nonresponsive, and shall not be considered.



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#### BIDDER/PROPOSER CONTACT INFORMATION

Bidder/Proposer Firm Name: MOFFATT AND NICHOL

Address for Notices: 4225 E Conant Street

State: CA ZIP Code: 90808 City: Long Beach

Main Contact Name and Title: Jerry Holcomb, Project Manager

Email: JHolcomb@moffattnichol.com

Telephone: (562) 590-6500 Fax: (562) 377-5106

#### BIDDER/PROPOSER SIGNATURE AUTHORIZATION AND CERTIFICATION

Per the California Corporate Code, Business and Processions Code, the Bidder's/ Proposer's Bylaws/Operating Agreement and/or the attached Board Resolutions (if applicable), I/we hereby verity that I/we am/are (an) authorized signatory(ies) for the aforementioned Bidder/Proposer and as such am/are authorized to sign and bind the Bidder/Proposer to contract with the City of Newport Beach.

(1) Signature:	Date: <b>July 9, 2024</b>			
(1) Print Name: Omar Jaradat	Title: Vice President			
(2) Signature:	Date: <b>July 9, 2024</b>			
(2) Print Name: <b>David Huchel</b>	Title: Secretary			
BIDDER/PROPOSER AUTHORITY IS PROVIDED IN ACCORDANCE WITH:				

Bidder/Proposer's Bylaws/Operating Agreement Section:

Corporate or Business Professions Code \*\*

IMPORTANT NOTE: If the signature authorization status of any individual changes during the term of the contract, it is the responsibility of the Bidder/Proposer to contact the RFP Administrator regarding the change and to complete and submit a new Bidder/Proposer Information Form. Incorrect information on file may delay the processing of any of the documents submitted.

**Board Resolution** 

Copy Attached

Copy Attached

<sup>\*\*</sup> If Bidder/Proposer is a corporation, two (2) authorized signatures will be required on all documents submitted, unless specified in the organization's Bylaws or corporate resolution.

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#### CERTIFICATE OF SECRETARY

#### MOFFATT & NICHOL

I, David W. Huchel, hereby certify that I am now and at all times relevant hereto have been the duly elected and acting Secretary of Moffatt & Nichol, a California corporation, (the Corporation).

I further certify that Omar Jaradat, Vice President, duly appointed by the Board of Directors, by resolution dated June 24, 2024, is authorized to execute various written agreements and instruments on behalf of the Corporation as a sole signatory, which would include the proposal documentation and the City of Newport Beach Professional Services Agreement ("PSA") related to the City's Request for Proposal ("RFP") No. 24-83 that is for the "Ocean Piers Inspection and Design Services" project as well as any ancillary instruments necessary to affect said RFP and/or PSA.

The undersigned does further certify that the foregoing resolution has not been revoked, amended or modified, and is in full force and effect as of the date hereof.

**IN WITNESS WHEREOF,** the undersigned has affixed his signature and the corporate seal of Moffatt & Nichol this 9th day of July, 2024.

David W. Huchel, Secretary



(SEAL)

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WORK PLAN

The undersigned declares that the Proposal submitted to provide Ocean Piers Inspection And Design Services, as described in, and in response to City of Newport Beach RFP No. 24-83 was prepared in strict compliance with the instructions, conditions, and terms listed in the RFP, Scope of Services and Draft Agreement, with exceptions listed below, if applicable. **At least one box for each item must be checked.** 

RFP Instructions and Terms & Conditions (Check One)				
Exceptions Taken				
Scope of Services (Check One)				
Exceptions Taken				
Insurance Requirements (Check One)				
Exceptions Taken				
No Exceptions for Changes to the Draft Contract Agreement Terms and Conditions Shall be Allowed  Acknowledgment				

If any exceptions are taken, this Statement of Compliance shall include a narrative that identifies each item to which the Bidder/Proposer is taking exception or is recommending change, including the suggested rewording of the contractual obligations or suggested change in the RFP, and identifies the reasons for submitting the proposed exception or change. When available, please reference specific line item numbers as provided in the RFP. The City reserves the right to rule as non-responsive and reject any Proposals that are not accompanied with the required documentation as described above.

Signature

Date

Omar Jaradat

Print Name

Vice President

Title

[Attach a separate sheet(s) detailing each exception being taken, if applicable]

That the attached bid/proposal has been prepared by the bidder/proposer independently and has been submitted without collusion with and without any agreement, understanding, or planned common course of action with any other firm or entity designed to limit fair and open competition;

That the contents of the bid/proposal response have not been communicated by the bidder/proposer or its employees or agents to any person not an employee or agent of the bidder/proposer and will not be communicated to any such persons prior to the official opening of the solicitation responses; and

The bidder/proposer does not and shall not discriminate, will provide equal employment practices, and will adhere to an affirmative action program to ensure that in their employment practices, persons are employed and employees are treated equally and without regard to or because of race, religion, ancestry, national origin, sex, sexual orientation, age, disability, marital status or medical condition.

I certify that the statements in this affidavit are true and accurate.

Aws	
Signature	<u>July 9, 2024</u> Date
Omar Jaradat Print Name	<u>Vice President</u> Title

CL

COVER LETTER

2 | PROPOSED PERSONNEL

## AFFIDAVIT OF NON-FEDERAL LOBBYIST REQUIREMENTS CERTIFICATION

Address: 4225 E Conant Street, Long Beach, CA					
State: <b>CA</b>	ZipCode:_	90808	Phone No.:	(562) 5	90-6500
Acting on behalf of	the above-name	d firm, as it	s Authorized Offic	ial, I certit	fy as follows:
person for influencing Congress, an office connection with the	ng or attempting to er or employee of e awarding of any	influence a of Congress / Federal c	an officer or employs, or an employee ontract, the making	vee of any of a Me g of any	pove named firm to an agency, a Member ember of Congress Federal grant, loan or modification thered
influencing or attem an officer or emplo this Federal contract	pting to influence yee of Congress, ct, grant, loan, or	an officer o or an empl cooperative	r employee or any loyee of a Member agreement, the ab	agency, a of Congr ove name	paid to any person for Member of Congressin connection with a decordance with its paid to the part of
award documents t	or all sub-awards	at all tiers	(including subcont	racts, sub	tion be included in the p-grants, and contract and certify and disclos
transaction was ma- entering into the tra	de or entered into nsaction imposed fication shall be su	Submission by Section	n of this certification 1352, Title 31, U.S	n is a prer . Code. Ai	vas placed when thi requisite for making o ny person who fails t 000 and not more tha
<u>J</u>	m/		<b>July 9, 2</b> Date	024	
Omar Jaradat Print Name			<u>Vice Pre</u> Title	sident	

5 WORK PLAN

B

2 PROPOSED PERSONNEL

**Vendor Phone Number** 

5 WORK PLAN

CL

COVER LETTER

All vendors interested in conducting business with the City of Newport Beach must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors must comply with the conflict of interest policies stated below.

Failure to disclose potential conflicts of interest shall result in disqualification from doing business with the City.

The vendor named below has none of the following conflicts of interest:

**Vendor Name** 

- 1. No City of Newport Beach official or employee or City of Newport Beach employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract;
- 2. No retired or separated City of Newport Beach official or employee who has been retired or separated from the organization for less than one (1) year has an ownership interest in vendor's company;
- 3. No City of Newport Beach official or employee is contemporaneously employed or prospectively to be employed with the vendor; and
- 4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City of Newport Beach official or employee to obtain or maintain a contract.

If a vendor has a relationship with a City of Newport Beach official or employee or an immediate family member of a City of Newport Beach official or employee, the vendor shall disclose the information required below.

MOFFATT AND NICHOL	(562) 590-6500			
Conflict of Interest Disclosure				
Name(s) of City of Newport Beach employees, elected officials, or immediate family members with whom there maybe a potential conflict of interest.	Relationship to employee			
NONE	Other			
I certify that the information provided is true and o	July 9, 2024  Date			
Omar Jaradat	Vice President			
Print Name	Title			

CL

**COVER LETTER** 

Name of Firm: **MOFFATT AND NICHOL** 

I, the undersigned, a duly authorized representative of the above-named firm ("Consultant") to the best of my knowledge and belief, certify as follows:

Consultant, including its principals:

- 1. Is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency, and not does not have a proposed debarment pending;
- 2. Has not within the three-year period preceding this certification been convicted of or had a civil judgment rendered against it for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction, contract, or subcontract under a public transaction; for violation of federal or state antitrust statutes; or for commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
- 3. Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (2) above;
- 4. Has not within the three-year period preceding this certification had one or more public transactions (federal, state or local) terminated for cause or default; and
- 5. Consultant further certifies that Consultant, including its principals, is not listed on the government-wide exclusions in the System for Award Management (SAM.gov).
- I acknowledge that falsely providing this certification may result in criminal prosecution or administrative sanctions, and that this certification is a required component of all proposals in response to this RFP.

A proposal that does not include a completed and signed version of this certification will be deemed incomplete and materially nonresponsive, and will not be considered.

Signature

July 9, 2024

Date

Omar Jaradat

Print Name

**Vice President** 

Title

5 WORK PLAN

APPENDIX B – CONSULTANT PROPOSAL

## CITY OF NEWPORT BEACH PUBLIC WORKS DEPARTMENT



#### ADDENDUM NO. 1

## OCEAN PIERS INSPECTION AND DESIGN SERVICES

RFP No. 24-83

DATE: July 18, 2024

BY:

City Engineer

TO: ALL PROPOSERS

The "Terms and Conditions" included in the body of the RFP document shall be ignored and the "Terms and Conditions" provided below shall govern.

Proposers must sign this Addendum No. 1 and attach it to their Proposal. Proposals may not be considered unless this signed Addendum No. 1 is attached.

I have carefully examined this Addendum

#### **Omar Jaradat**

Proposer's Name (Please Print)

July 24, 2024

Date

**Vice President** 

**Authorized Signature & Title** 

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APPENDIX B — CONSULTANT PROPOSAL

## CITY OF NEWPORT BEACH PUBLIC WORKS DEPARTMENT



#### ADDENDUM NO. 2

## OCEAN PIERS INSPECTION AND DESIGN SERVICES

RFP No. 24-83

DATE: July 22, 2024

BY:

TO: ALL PROPOSERS

Due to the global CrowdStrike/Microsoft IT outage, the deadline for submitting Proposals is extended from 7/24/24 @ 3:00 p.m. to 7/31/24 @ 3:00 p.m.

Proposers must sign this Addendum No. 2 and attach it to their Proposal. Proposals may not be considered unless this signed Addendum No. 2 is attached.

I have carefully examined this Addendum

#### **Omar Jaradat**

Proposer's Name (Please Print)

July 24, 2024

Date

Vice President

**Authorized Signature & Title** 



#### **Contact:**

Jerry Holcomb, PE Moffatt & Nichol 555 Anton Blvd. Suite 400 Costa Mesa, CA 92620 562.317.3476 E jholcomb@moffattnichol.com

moffattnichol.com

