Port of Astoria

Board of Commissioners

422 Gateway Ave, Suite 100
Astoria, OR 97103
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www.portofastoria.com

Workshop Session

May 21, 2024 at 4:00 PM
10 Pier 1, Suite 209

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*This meeting will also be accessible via Zoom. Please see page 2 for login instructions.

Agenda

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. CHANGES/ADDITIONS TO THE AGENDA
5. PUBLIC COMMENT:
   This is an opportunity to speak to the Commission for 3 minutes regarding any topic. In person, those wishing to speak must fill out a public comment form. Those participating via Zoom may raise their hands during the public comment period.
6. ADVISORY:
   a. Boatyard Master Plan – Presentation by MFA 3
7. ACTION:
   a. Application – Byproduct Recovery Center Feasibility Study 88
   b. Pier 2 West Engineering Services Contract Amendment 92
8. COMMISSION COMMENTS
9. EXECUTIVE DIRECTOR COMMENTS
10. UPCOMING MEETING DATES:
    a. Budget Committee – May 22, 2024 at 1:00 PM
    b. Regular Session – June 4, 2024 at 4:00 PM
    c. Workshop Session – June 18, 2024 at 4:00 PM
11. ADJOURN

Please Note:
Agenda packets are available online at: https://www.portofastoria.com/CommissionMeetings/AgendaMinutes.aspx
Please allow time for the normal posting procedure for agendas and meeting packets.

Port of Astoria

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HOW TO JOIN THE ZOOM MEETING:

Online: Direct link: https://us02web.zoom.us/j/86905881635?pwd=amhtTTBFcE9NUElxNy9hYTFPQTIzQT09
Or go to Zoom.us/join and enter Meeting ID: 869 0588 1635, Passcode: 422

Dial In: (669) 900-6833, Meeting ID: 869 0588 1635, Passcode: 422

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MAUL FOSTER ALONGI

Port of Astoria Boatyard

Final Plan and Implementation Strategy

Port of Astoria Boatyard

Final Plan and Implementation Strategy

Prepared for:

Port of Astoria

May 16, 2024
Project No. M0475.02.019

Prepared by:

Maul Foster & Alongi, Inc.
3140 NE Broadway, Portland, OR 97232

MAUL FOSTER ALONGI

Port of Astoria Boatyard

Final Plan and Implementation Study

The material and data in this report were prepared under the supervision and direction of the undersigned.

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Staff Planner

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Abbreviations

Boatyard	Port of Astoria's Pier 3 Boatyard
City	City of Astoria
EDA	U.S. Economic Development Administration
EDA TA	EDA Technical Assistance
EDA EAA	EDA Economic Adjustment Assistance
feasibility study	Port of Astoria Boatyard and East Basin Plan
MARAD	USDOT Marine Administration
MFA	Maul Foster & Alongi, Inc.
MT	metric ton
PIDP	Port Infrastructure Development Program
PPMF	Business Oregon Port Planning and Marketing Fund
Port	Port of Astoria
SPWF	Business Oregon Special Works Fund
SF	square foot
TIF	tax increment financing
USDOT	U.S. Department of Transportation

Summary

The Port of Astoria (Port) recently completed its *Port of Astoria Boatyard and East Basin Plan* (feasibility study, BST 2022) that demonstrated clear justification for the expansion of services, infrastructure, and footprint at the Port's Pier 3 Boatyard (Boatyard) in the City of Astoria in Clatsop County. The Port engaged Maul Foster & Alongi, Inc. (MFA), to develop a master plan that will bolster the financial health of the Boatyard and support the development of the Port's infrastructure to better serve vessel owners in the region.

Purpose

This final plan and implementation strategy summarizes the master planning process and includes a description of site conditions, stakeholder feedback, and the alternative refinement process, then presents the Preferred Alternative with an implementation strategy that includes a funding strategy. The purpose of this document is not to be the final specific design but rather to develop a framework for future development of the Boatyard.

Process

An existing conditions report completed as a part of the master planning process summarizes site conditions and identifies existing opportunities and constraints with respect to physical and economic characteristics of the Boatyard. Existing plans and market studies justify growth and expansion of services at the Boatyard. Upgrades to utilities and other Boatyard infrastructure are necessary for future vertical construction and other developments.

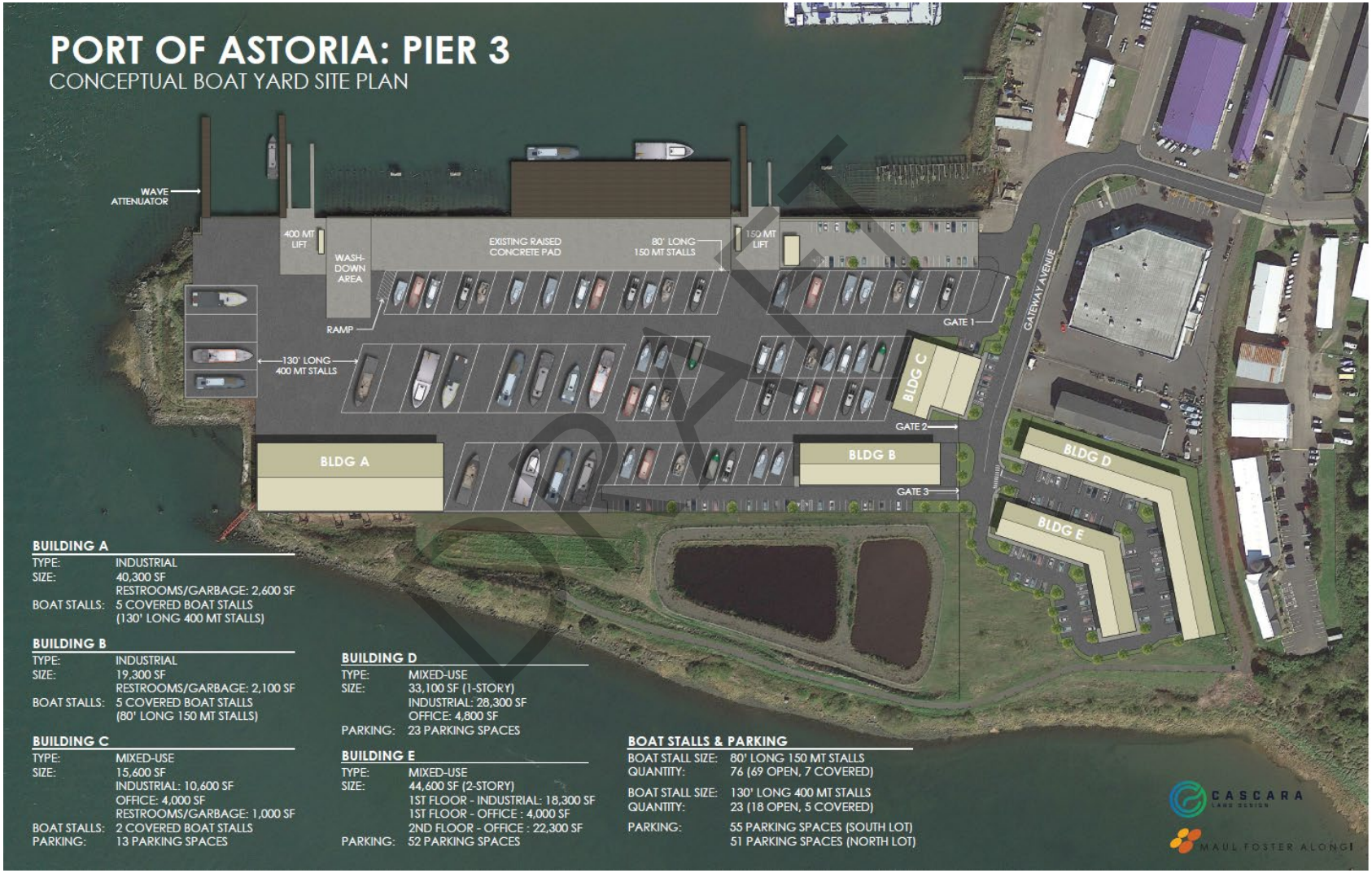
The Port established an advisory group of key Boatyard stakeholders to participate in the Boatyard master planning process. The advisory group includes commercial fishermen, service vendors, boat suppliers, and a yacht broker. The advisory group convened twice during the master planning process to both imagine and refine alternative Boatyard concepts and identify a Preferred Alternative Concept. Port staff and MFA further refined the Preferred Alternative Concept to a more detailed design (Refined Concept) following the creation of the Preferred Alternative Concept.

Vision

> **The Port and its advisory group aspire to develop the best boatyard on the West Coast to serve small- to-medium-sized commercial fishing and recreational vessels. The Port can achieve this vision by developing structures that allow for year-round vessel servicing, by offering additional industrial and commercial vendor space, and by increasing lift capacity.**

The Refined Concept includes necessary improvements to utilities, the in-water working dock, the bulkhead, and other site infrastructure; vertical construction of office, commercial, and industrial space; and new mobile boat hoists. Planned improvements are estimated to cost up to $57.8 million which can be funded and financed through various state and federal programs. Figure ES-1 shows a thumbnail view of the Refined Concept.

Figure ES-1. Refined Concept



1 Introduction

The Port of Astoria (Port) recently completed *Port of Astoria Boatyard and East Basin Plan* (feasibility study, BST 2022) that demonstrated clear justification for the expansion of services, infrastructure, and footprint at the Port's Pier 3 Boatyard (Boatyard) in the City of Astoria in Clatsop County. The Port engaged Maul Foster & Alongi, Inc. (MFA), to develop a master plan that would bolster the financial health of the Boatyard and support the development of Port infrastructure to better serve vessel owners in the region. This final plan and implementation strategy summarizes the master planning process and includes a description of site conditions, stakeholder feedback, and the alternative refinement process, then presents the Preferred Alternative with an implementation strategy that includes a funding strategy. The purpose of this document is not to outline the final specific design but rather to develop a framework for future development of the Boatyard.

2 Existing Conditions

An existing conditions memorandum (Appendix A), completed as a part of the master planning process, identifies existing opportunities and constraints with respect to physical and economic characteristics of the Boatyard. Existing plans and market studies justify growth and expansion of services at the Boatyard. City zoning and comprehensive planning documents support the Boatyard improvements considered in the current master planning process. Stakeholder outreach conducted as a part of the existing conditions memorandum recorded support of Boatyard improvements from key Boatyard users. Boatyard utilities, including power and sanitary sewer, need to be upgraded to accommodate vertical construction. Table 2-1 summarizes key findings and the implications of existing conditions for Boatyard master planning. A full existing conditions report is attached as Appendix A for greater detail.

Table 2-1. Key Findings and Implications from the Existing Conditions Memo

Section	Findings
Infrastructure & Site Conditions	• Existing power and sanitary sewer utilities will need to be upgraded and expanded to accommodate future development at the Boatyard. • Repairs to the east dock, the bulkhead, and storage area pavement on the north side of the Boatyard may be required prior to, or during development of the Boatyard. • There is a lack of geotechnical and environmental information available regarding the conditions in dredge spoil piles.

Section	Findings
Market / Economics	• The Boatyard is geographically well-positioned to capture vessel maintenance projects from all over the West Coast. • Recreational boating and commercial fishing have significant economic impacts in the area and create a market for future Boatyard developments. • There is an increase in Boatyard and haulout activity in Clatsop County which indicates future demand for the Boatyard. • The majority (51 percent) of existing Boatyard users are recreational power or sailboat users. The Boatyard can strategically invest in amenities for this type of boat user to maximize market capture.
Plans & Regulations	• Traffic caused by the mixed-use developments envisioned in the *Port of Astoria Waterfront Master Plan* (Port 2022) may impact future Boatyard activity. • Most elements of the *Port of Astoria Boatyard and East Basin Plan* (feasibility study) Preferred Alternative are supported by the advisory group besides maintenance of the existing 80 metric ton lift. • Zoning and comprehensive planning documents support Boatyard improvements and activity considered in the current master planning process. • In-water work required by any projects recommended in this plan will trigger the requirement for environmental permits, the time and cost of which must be incorporated early into the project schedule and scope. • Future developments within the 100-year floodplain will be required to adhere to specific development standards that will make development more expensive.
Community and Advisory Group Outreach	• There is strong support among Boatyard users for a higher-capacity lift and for work buildings at the Port. • The community of local vendors and suppliers will lease space and contribute to future Boatyard buildings. • The Boatyard is losing business it would otherwise attract if it contained a larger capacity lift and work buildings. • Work buildings or shelters and more accessible and adequate power sources could significantly improve efficiency and job times for vendors and vessel owners.

3 Stakeholder Feedback

3.1 Existing Conditions

The Port established an advisory group of key Boatyard stakeholders to participate in the Boatyard master planning process at the onset of the project. The advisory group included commercial fishermen, service vendors, boat suppliers, and a yacht broker. Six of the advisory group members were first interviewed over the phone during completion of the existing conditions report and were asked a series of questions related to the existing conditions and future use of the Boatyard.

Both recreational and commercial boaters have several options for boat storage and servicing along the West Coast. Advisory group members generally consider the Boatyard's location and

convenience of access as its main appeal. Some advisory group members also consider the do-it-yourself character and access to local small-business vendors as key benefits for existing users. Existing commercial and recreational boaters of the advisory group enjoy the proximity of Englund Marine for readily available boat materials. Local vendors and suppliers would have the opportunity and capacity to grow with future Port investments.

Members of the advisory group recognize Boatyard challenges, including insufficient lift capacity, lack of adequate infrastructure, and lack of covered and enclosed work areas. Several advisory group members believe the Port is losing crucial business to other West Coast ports—such as Port Townsend, Ilwaco, Port Angeles, Blaine, and Bellingham, in Washington, and Reedsport, Newport, and Toledo in Oregon—with larger lift and storage capacity. Existing vendors and boat owners are limited in their ability to complete repair and maintenance work, including sand blasting, washing, and painting, due to the lack of shelter from year-round windy conditions in Astoria. Existing users also mentioned the lack of access to power sources with adequate voltage for tool operation as a drawback of the existing Boatyard. Advisory group members viewed some shifts in Port leadership, goals, and vision as an impediment to cohesive progress for Boatyard development.

3.2 Charette and Advisory Group Workshops

On November 15, 2023, the advisory group met in Astoria to identify a clear vision for the Boatyard expansion and design. The group aspires to develop the best boatyard on the West Coast to serve small-to-medium-sized commercial fishing and recreational vessels. The Port can achieve this vision by developing structures that allow for year-round vessel servicing, by offering additional industrial and commercial vendor space, and by increasing lift capacity. Taking into consideration existing conditions, opportunities, constraints, and aspirations, the advisory group worked to develop three design concepts.

Figure 2-1. Advisory Group Workshop

The concepts imagined in this workshop are the basis for the three alternative concepts described in Section 4 of this report. The advisory group convened again on February 20, 2024, to further refine the design concepts and identify a preferred alternative. In the February meeting, the advisory group identified desirable elements from each Boatyard concept to be integrated into a Preferred Alternative Concept. Figure 2-1 captures advisory group members and Port staff sharing ideas on alternative concept designs.

4 Alternatives Analysis

4.1 Alternatives Concepts

MFA produced three alternative Boatyard design concepts based on input gathered at the November charette. Each concept includes a 400 metric ton (MT) boat lift, a 150 MT boat lift, a variety of small and large vessel[1] stalls, indoor/covered working spaces, commercial and industrial buildings, and other complementary Boatyard elements. Cost estimates for the alternatives are based on an engineer's preliminary opinion of probable cost and account for site preparation, belowground utilities, infrastructure, design and project management, and contingency. Thumbnail figures of the site plans are provided below. The full-sized conceptual design plans and associated costs for each concept can be found in Appendix B.

4.1.1 Concept 1

Alternative Concept 1 (Concept 1) provides small (30 × 80 foot [ft]) and large (50 × 110 ft) boat stalls. The 150 MT lift is positioned on the south half of Pier 3, in Slip 2 (Figure 4-1). The majority (38) of uncovered boat stalls are dedicated to small vessels and are on the south half of the Boatyard, adjacent to the 150 MT lift. There are ten covered workspaces dedicated to small vessels bordering the stormwater facility on the southwest side of the site. Circulation for vehicles servicing small vessels on the south half of the site is accommodated by 40 ft travel lanes. Access is provided off Gateway Avenue by three gate-controlled lanes.

The 400 MT lift is positioned on the north end of Pier 3, in Slip 2. Four covered working spaces for large vessels and bathrooms are located on the north tip of the Pier. In Concept 1, 37 uncovered boat stalls are dedicated to boats hoisted from the 400 MT lift. Circulation for vehicles on the northern portion of the site is provided by 60 ft travel lanes. Table 4-1 summarizes the Boatyard elements incorporated in Concept 1.

Concept 1 includes three separate buildings that enclose a shared parking area. The buildings consist of 15,000 square feet (sf) of dedicated industrial space and 41,400 sf of dedicated commercial space. The remaining 50,200 sf of onsite industrial space is accounted for in the covered workspaces on the northwest and southwest portions of the site. Table 4-1 shows the quantity and dimensions of most Boatyard elements.

[1] Large vessels are those hoisted by the 400 MT lift and small vessels are those lifted by the 150 MT lift.

Figure 4-1. Alternative Concept 1

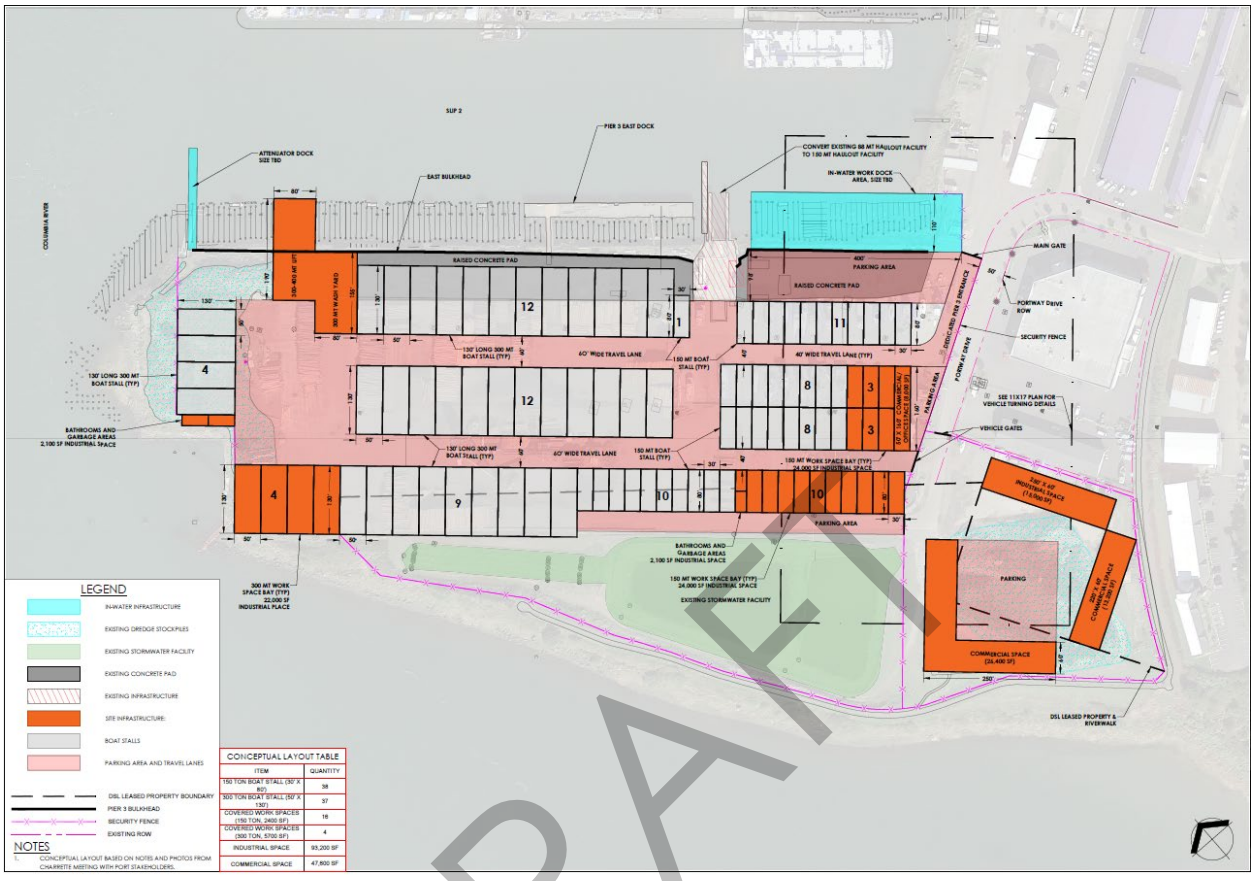


Table 4-1. Concept 1 Layout Table

Item	Quantity
150 MT Boat Stall (30' × 80')	38
400 MT Boat Stall (50' × 80')	12
400 MT Boat Stall (50' × 90')	12
400 MT Boat Stall (50' × 100')	12
400 MT Boat Stall (50' × 110')	1
Covered Workspaces (150 MT, 2400 sf)	10
Covered Workspaces (400 MT, 5500 SF)	4
Industrial Space	65,200 sf
Commercial Space	41,400 sf

Notes
sf= square foot. MT = metric ton.

Concept 1 is the least expensive alternative with a total anticipated cost of $37.1 million, as it requires the least square footage of vertical construction. Structural infrastructure that includes the in-water working dock, buildings, and lifts accounts for the largest expense ($19.9 million). Table 4-2 details the feasibility-level cost estimate summary for Concept 1. A full accounting of feasibility-level cost estimates can be found in Appendix B.

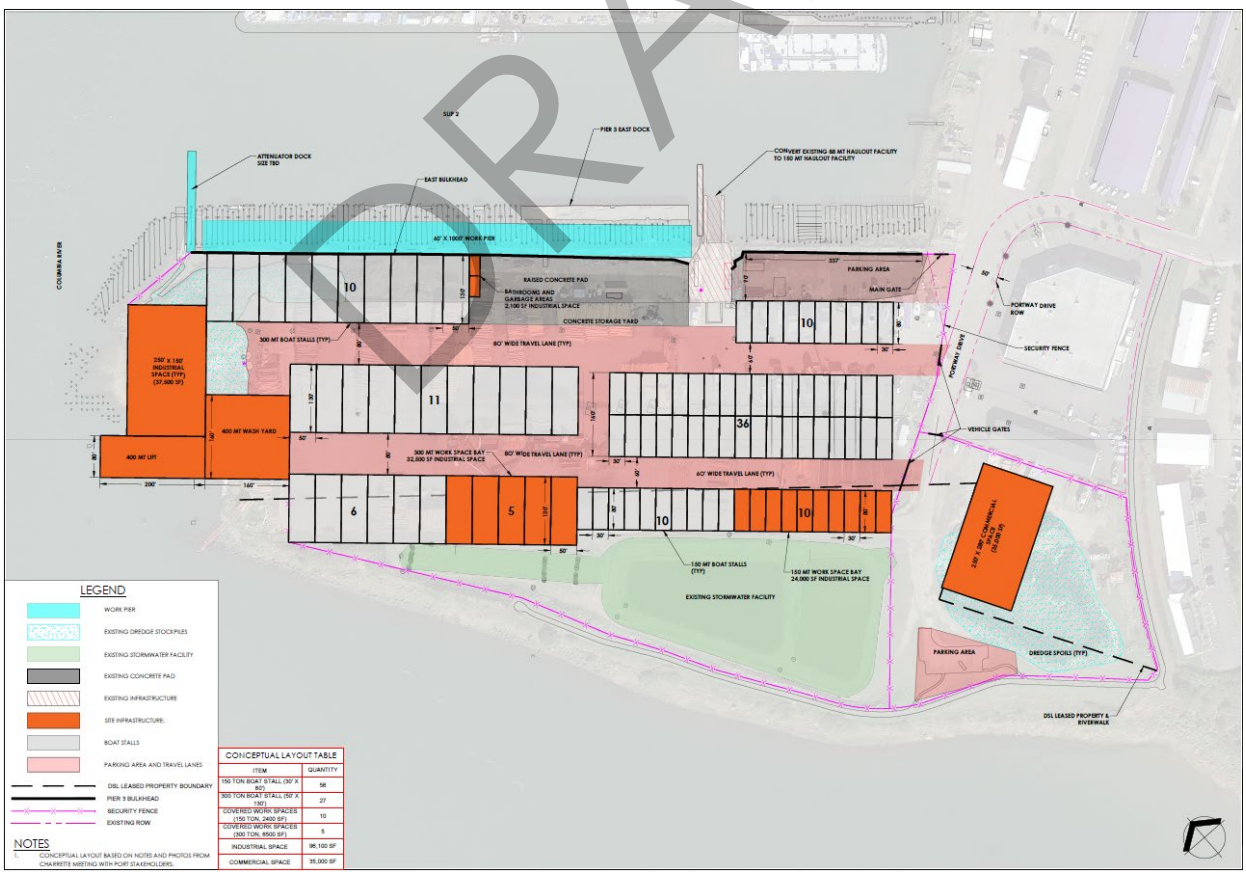
Table 4-2. Concept 1 Feasibility-Level Cost Estimate Summary

Schedule	Cost
Schedule A – Site Preparation	$3,553,000
Schedule B – Belowground Utilities	$315,000
Schedule C – Nonstructural Infrastructure	$2,196,000
Schedule D – Structural Infrastructure	$19,850,000
Schedule E – Design and Project Management	$2,592,000
Schedule F – Contingency	$8,552,000
Total	**$37,058,000**

4.1.2 Concept 2

Alternative Concept 2 (Concept 2) includes two boat stall sizes, (30 × 80 ft) and (50 × 130 ft). Most boat stalls in the Boatyard are dedicated to commercial fishing vessels that can be lifted by the 150 MT lift, which is positioned on the south half of Pier 3, in Slip 2 (Figure 4-2). There are 56 uncovered boat stalls in the south half of the Boatyard that are dedicated to small vessels. Ten covered workspaces dedicated to small vessels border the stormwater facility on the southwest side of the site. Circulation for vehicles servicing smaller vessels on the south half of the site is accommodated by 60 ft travel lanes. Access is provided off Gateway Avenue by three gate-controlled lanes. The main access gate faces east and leads to a parking area on the southeast corner of the Boatyard.

Figure 4-2. Alternative Concept 2



The 400 MT lift is positioned in the Columbia River on the north end of Pier 3. The associated boat wash is just south of the lift, adjacent to a 35,000 sf industrial building. Five covered working spaces dedicated to large vessels are located on the west side of the Boatyard. In Concept 2, 27 uncovered boat stalls are dedicated to boats hoisted from the 400 MT lift. Circulation for vehicles on the northern portion of the site is provided by 80 ft travel lanes. Concept 2 has the largest conceptual in-water working dock (60 × 1000 ft) that stretches from the Attenuator Dock down to the 150 MT lift. Table 4-3 summarizes the Boatyard elements included in Concept 2.

Concept 2 includes one 35,000 sf commercial building with a parking area in the southwest corner of the site. The 96,100 sf of onsite industrial space is located in a large structure at the northern tip of the site and among the covered working space structures on the west side of the Boatyard.

Table 4-3. Concept 2 Layout Table

Item	Quantity
150 MT Boat Stall (30' × 80')	56
400 MT Boat Stall (50' × 130')	27
Covered Workspaces (150 MT, 2400 sf)	10
Covered Workspaces (400 MT, 6500 sf)	5
Industrial Space	96,100 sf
Commercial Space	35,000 sf

Notes
sf = square foot. MT = metric ton.

Concept 2 is the most expensive alternative with a total anticipated cost of $39.5 million because it has the greatest square footage of vertical construction. Structural infrastructure that includes the in-water working dock, buildings, and lifts accounts for the largest expense ($21.2 million). Table 4-4 details the feasibility-level cost estimate summary for Concept 2. A full accounting of feasibility-level cost estimates can be found in Appendix B.

Table 4-4. Concept 2 Feasibility-Level Cost Estimate Summary

Schedule	Cost
Schedule A – Site Preparation	$3,635,000
Schedule B – Below Ground Utilities	$315,000
Schedule C – Non Structural Infrastructure	$2,540,000
Schedule D – Structural Infrastructure	$21,146,000
Schedule E – Design and Project Management	$2,764,000
Schedule F – Contingency	$9,120,000
Total	**$39,520,000**

4.1.3 Concept 3

Alternative Concept 3 (Concept 3) includes two boat stall sizes including (30 × 80 ft) for small vessels and (50 × 180 ft) for large vessels. Most boat stalls in the Boatyard are dedicated to commercial fishing vessels that can be lifted by the 150 MT lift that is positioned on the south half of Pier 3, in Slip 2 (Figure 4-3). There are 43 uncovered boat stalls in the south half of the Boatyard dedicated to small vessels. Seven covered workspaces dedicated to small vessels border the

stormwater facility on the southwest side of the Boatyard. Concept 3 includes a Port office positioned just north of the 150 MT lift. Circulation for vehicles servicing smaller vessels on the south half of the site is accommodated by 50 ft travel lanes. Access is provided off Gateway Avenue by three gate-controlled lanes. The main access gate faces east and leads to a parking area on the southeast corner of the Boatyard.

Figure 4-3. Alternative Concept 3

The 400 MT lift that bisects two 6,000 SF in-water working docks is positioned in the middle of Pier 3 in Slip 2. Four covered working spaces for larger vessels and bathrooms are located on the northwest corner of Pier 3. In Concept 3, 18 uncovered boat stalls are dedicated to boats hoisted from the 400 MT lift. Circulation for vehicles on the northern portion of the site is provided by 90 ft travel lanes. Table 4-5 summarizes the Boatyard elements included in Concept 3.

Concept 3 includes one 37,500 sf commercial building with a parking area in the southwest corner of the site. A 5,200 sf industrial/commercial building fronts Gateway Avenue near the main entrance on the south side of the Boatyard. Covered working space structures on the west side of the Boatyard account for 84,100 sf of industrial space.

Table 4-5. Concept 3 Layout Table

Item	Quantity
150 MT Boat Stall (30' × 80')	43
400 MT Boat Stall (50' × 180')	18
Covered Workspaces (150 MT, 2,400 sf)	7
Covered Workspaces (400 MT, 9,000 sf)	4
Industrial Space	84,100 sf
Commercial Space	37,500 sf

Notes sf= square foot. MT = metric ton.

Concept 3 has a total anticipated cost of $37.7 million. Structural infrastructure that includes the in-water working dock, buildings, and lifts accounts for the largest expense ($26.3 million). Table 4-6 details the feasibility-level cost estimate summary for Concept 3. A full accounting of feasibility-level cost estimates can be found in Appendix B.

Table 4-6. Concept 3 Feasibility-Level Cost Estimate Summary

Schedule	Cost
Schedule A – Site Preparation	$3,573,000
Schedule B – Belowground Utilities	$315,000
Schedule C – Nonstructural Infrastructure	$2,174,000
Schedule D – Structural Infrastructure	$26,331,000
Schedule E – Design and Project Management	$2,634,000
Schedule F – Contingency	$8,690,000
Total	**$37,655,000**

4.2 Preferred Alternative Concept

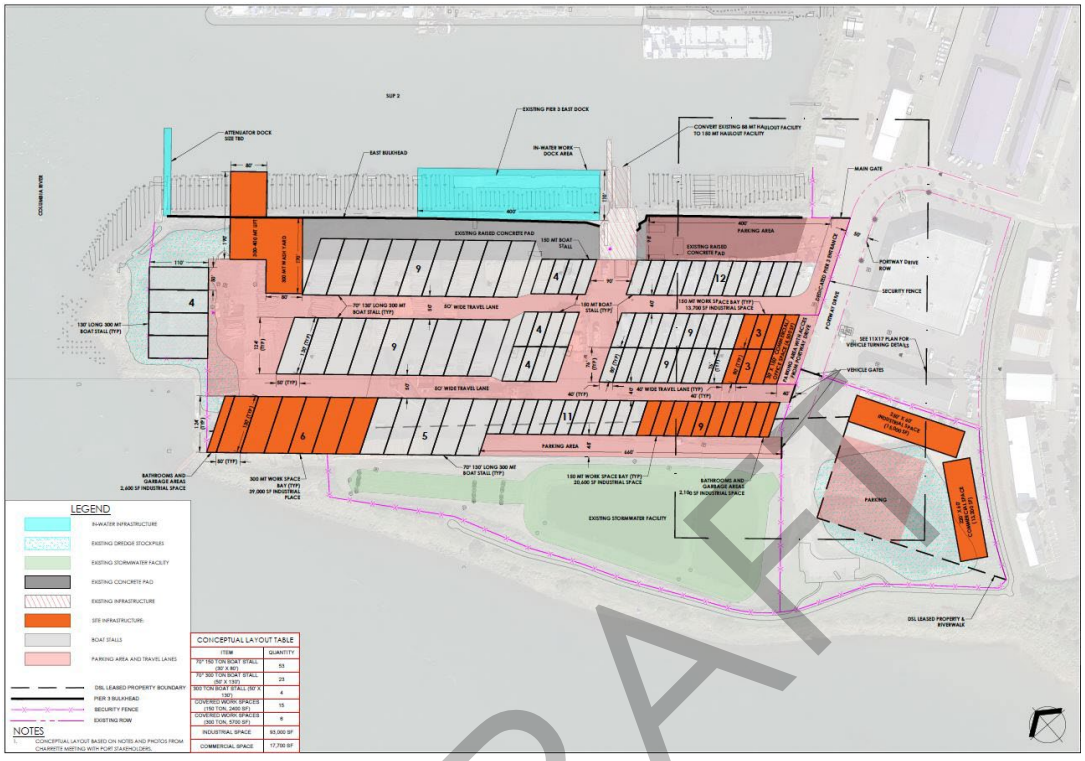
A final advisory group meeting was convened on February 20, 2024, to reach a consensus on the Preferred Alternative Concept for the Boatyard. In the meeting, advisory group members and Port staff identified desirable elements from each Boatyard concept to be implemented in the Preferred Alternative. A Preferred Alternative Concept design was drafted based upon the results of advisory group discussions.

The Preferred Alternative Concept includes elements from each Alternative Concept. The Preferred Alternative Concept includes 53 30 × 80 ft uncovered boat stalls in the south half of the Boatyard dedicated to small vessels. The small lift is positioned in the location of the existing lift on the south half of Pier 3, in Slip 2 (Figure 4-4). Nine covered workspaces bordering the stormwater facility on the southwest side of the site are dedicated to small vessels. Circulation for vehicles servicing smaller vessels on the south half of the site is accommodated by 40 ft travel lanes. Access is provided off Gateway Avenue by three gate-controlled lanes. The main access gate faces east and leads to a parking area on the southeast corner of the Boatyard.

The Preferred Alternative Concept includes angled stalls to maximize space. The front-facing commercial/office building along Gateway Avenue acts as a gateway to the Boatyard and includes an on-street parking area and adjoining indoor workspaces. There are two mixed-use buildings positioned on the southwest corner of the Boatyard, outside of the DSL property boundary. The in-water working dock is located north of the 150 MT lift to accommodate future development of the

south end of Slip 2. The full-size conceptual design plans and associated costs for the Preferred Alternative Concept can be found in Appendix B.

Figure 4-4. Preferred Alternative Concept



The 400 MT lift and wash is positioned in Slip 2, on the northeast corner of Pier 3. Six covered working spaces for larger vessels with adjoining bathrooms are located on the northwest corner of the Pier. In the Preferred Alternative Concept, 27 50 × 130 ft uncovered boat stalls are dedicated to boats hoisted from the 400 MT lift. Circulation for vehicles on the northern portion of the site is provided by 50 ft travel lanes. A wider travel lane is implemented between the 400 MT lift and large indoor working areas to accommodate cross-pier vessel transport. Table 4-7 summarizes the Boatyard elements included in the Preferred Alternative Concept.

Table 4-7. Preferred Alternative Layout Table

Item	Quantity
Angled 150 MT Boat Stall (30' × 80')	53
Angled 400 MT Boat Stall (50' × 130')	23
400 MT Boat Stall (50' × 130')	4
Covered Workspaces (150 MT, 2,400 sf)	15
Covered Workspaces (400 MT, 5,700 sf)	6
Commercial/Office Space	14,000 sf
Industrial Space	93,000 sf
Commercial Space	17,700 sf

Notes
sf= square foot. MT = metric ton.

The Preferred Alternative Concept has a total anticipated cost of $32.3 million. Structural infrastructure that includes the in-water working dock, buildings, and lifts accounts for the largest expense ($22.6 million). Table 4-8 details the feasibility-level cost estimate summary for the Preferred Alternative Concept. A full accounting of feasibility-level cost estimates can be found in Appendix B.

Table 4-8. Preferred Alternative Concept Feasibility-Level Cost Estimate Summary

Schedule	Cost
Schedule A – Site Preparation	$3,395,000
Schedule B – Belowground Utilities	$315,000
Schedule C – Nonstructural Infrastructure	$2,201,000
Schedule D – Structural Infrastructure	$22,599,000
Schedule E – Design and Project Management	$2,260,000
Schedule F – Contingency	$7,458,000
Total	**$32,317,000**

4.2.1 Refined Concept

MFA further refined the Preferred Alternative Concept to a more detailed design concept (Refined Concept) based on input from Port staff. The Refined Concept includes the same large and small lift placement and in-water work dock as the Preferred Alternative Concept. The Refined Concept differs from the Preferred Alternative Concept mostly in building size and orientation. The industrial/office building fronting Gateway Avenue (Building C in Figure 4-5) is smaller than in the Preferred Alternative Concept and includes only two indoor working spaces for small vessels. The enclosed work structures (Buildings A and B in Figure 4-5) both contain five covered boat stalls and are aligned with the site boundary, not Gateway Avenue. Figure 4-5 shows a thumbnail of the Refined Concept. Detailed renderings of the Refined Concept can be found in Appendix C.

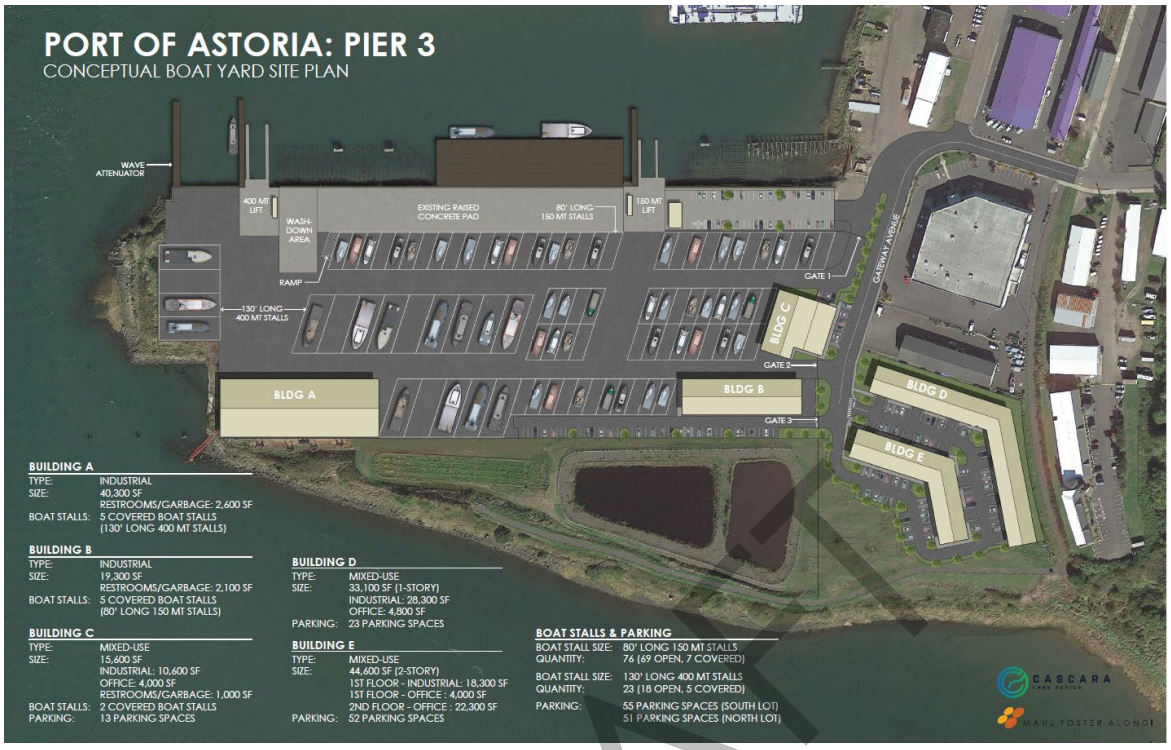
In the Refined Concept, there are two mixed-use buildings positioned on the southwest corner of the Boatyard. The southernmost building (Building D in Figure 4-5) includes six loading bays and is designed to be outside of the DSL property, while the northern building (Building E in Figure 4-5) includes five loading bays and is designed to be within the DSL boundary. Table 4-9 summarizes the Boatyard elements included in the Refined Concept.

Table 4-9. Refined Concept Layout Table

Item	Quantity
Angled 150 MT Boat Stall (30' × 80')	69
Angled 400 MT Boat Stall (50' × 130')	14
400 MT Boat Stall (50' × 130')	4
Enclosed Vessel Work Structures (150 MT, 19,300 sf)	7
Enclosed Vessel Work Structures (400 MT, 40,300 sf)	5
Port Office	15,600 sf
Mixed-Use (Building D)	33,100 sf
Mixed-Use (Building E)	44,600 sf

Notes: sf= square foot. MT = metric ton.

Figure 4-5. Refined Concept



The Refined Concept has a total anticipated cost of $80 million. Structural infrastructure that includes the in-water working dock, bulkhead repair, buildings, and lifts accounts for the largest expense ($47.1 million). The cost estimate for the Refined Concept includes higher estimates for site preparation, structural infrastructure, design and project management, and contingency that are higher than the estimates for the Alternative Concepts. Most of the additional costs result from the development of additional mixed-use building space in the southwest corner of the site and more accurate costs for the bulkhead repair and lifts. Table 4-10 details the feasibility-level cost estimate summary for the Refined Concept. A full accounting of feasibility-level cost estimates for the Refined Concept can be found in Appendix D.

Table 4-10. Refined Concept Feasibility-Level Cost Estimate Summary

Schedule	Cost
Schedule A – Site Preparation	$5,483,367
Schedule B – Belowground Utilities	$315,000
Schedule C – Nonstructural Infrastructure	$3,030,543
Schedule D – Structural Infrastructure	$47,137,500
Schedule E – Design and Project Management	$5,596,641
Schedule F – Contingency	$18,468,915
Total	**$80,031,967**

5 Implementation Strategy

Strategic and coordinated actions need to be identified and pursued to sequence the Boatyard improvements identified in the Refined Concept. This section identifies possible funding opportunities and recommends next steps for implementation of Boatyard improvements.

5.1 Funding

The funding sources summarized in Table 5-1 can fund planning, design, engineering, permitting, and construction of both infrastructure and buildings. Funding strategies and sources should be examined and updated throughout early steps, as grants and loans that flow from federal sources (either directly or through state programs) are updated monthly, sometimes weekly. Appendix E provides more information on the funding opportunities listed in the table below.

Table 5-1. Funding Opportunities

Funding Source	Amount	Allowable Uses	Match
Oregon			
Business Oregon Special Public Works Fund	$10,000,000	Finances capital improvement (acquisition, preliminary and final design, and engineering) or planning projects (technical and financial feasibility studies) that assist in developing industrial lands, supporting an immediate job creation/retention/expansion opportunity, or replacement of essential community facilities.	Low interest rate is offered over a 30-year term.
Business Oregon Port Planning and Marketing Fund	$50,000	Funds the planning or marketing project necessary for improving the port's ability to carry out its authorized functions or activities related to trade and commerce which includes port strategic plans.	None required.
Federal			
Economic Development Administration Public Works and Economic Adjustment Assistance Programs	Grant funding from $100,000 to $30 million. $3M to $5M typical.	Funds the planning and construction of infrastructure improvements, site acquisition, site preparation, and construction.	50% match.
EDA Planning and Local Technical Assistance	$300,000	Funds planning and engineering of infrastructure improvements.	50% match.
USDOT MARAD Small Shipyards Grants	Average $1 Million	Planning and construction for boatyard elements such as travel lifts, fire suppression systems, floating docks, and wash equipment.	25% match.
USDOT MARAD Port Infrastructure Development Program	No maximum	Supports the operational improvements at a port and infrastructure that supports seafood and seafood-related businesses.	20% match.

Notes
MARAD= USDOT Marine Administration.
USDOT = U.S. Department of Transportation.

5.1.1 Astor-West Urban Renewal District

The study area is in the Astor-West Urban Renewal District, which allows for the use of tax increment financing (TIF) for financing improvements. TIF allows a jurisdiction to issue bonds to fund public improvements to support development activities within a designated increment area. As development occurs and the assessed values of the properties in the increment area increase, the future increased tax revenues pay off the debt on the improvements. TIF can be used to pay the costs of planning, design, acquisition, studies and surveys, site preparation, and the construction and installation of public improvements and other directly related costs.

The City of Astoria (City) is currently updating its Astor-West Urban Renewal District Plan with an estimated completion date in the third quarter of 2024. MFA recommends that Port staff coordinate with City planning staff to include Boatyard improvements such as site preparation and utility upgrades as target projects in the updates to the upcoming Astor-West Urban Renewal District Plan.

5.2 Implementation

The implementation plan that follows (Table 5-2) includes project actions with general timing and details linked to potential funding sources. Design and permitting for Boatyard improvements can start as early as the third quarter of 2024 and last until the beginning of 2029. Vertical construction of the enclosed work structures and mixed-use buildings can begin at the beginning of 2026 following the completion of utility upgrades and site preparation. In-water improvements, such as the bulkhead and east dock repair are programmed later in the schedule to account for a permitting period with the Army Corps of Engineers and Department of State Lands. An effective marketing plan should begin early to properly advertise key actions as they are completed through the Boatyard improvement period. Figure 5-2 provides a planning-level timeline of the critical paths for these efforts—some of which will be pursued in parallel. Worksheets detailing the steps of the implementation plan can be found in Appendix F.

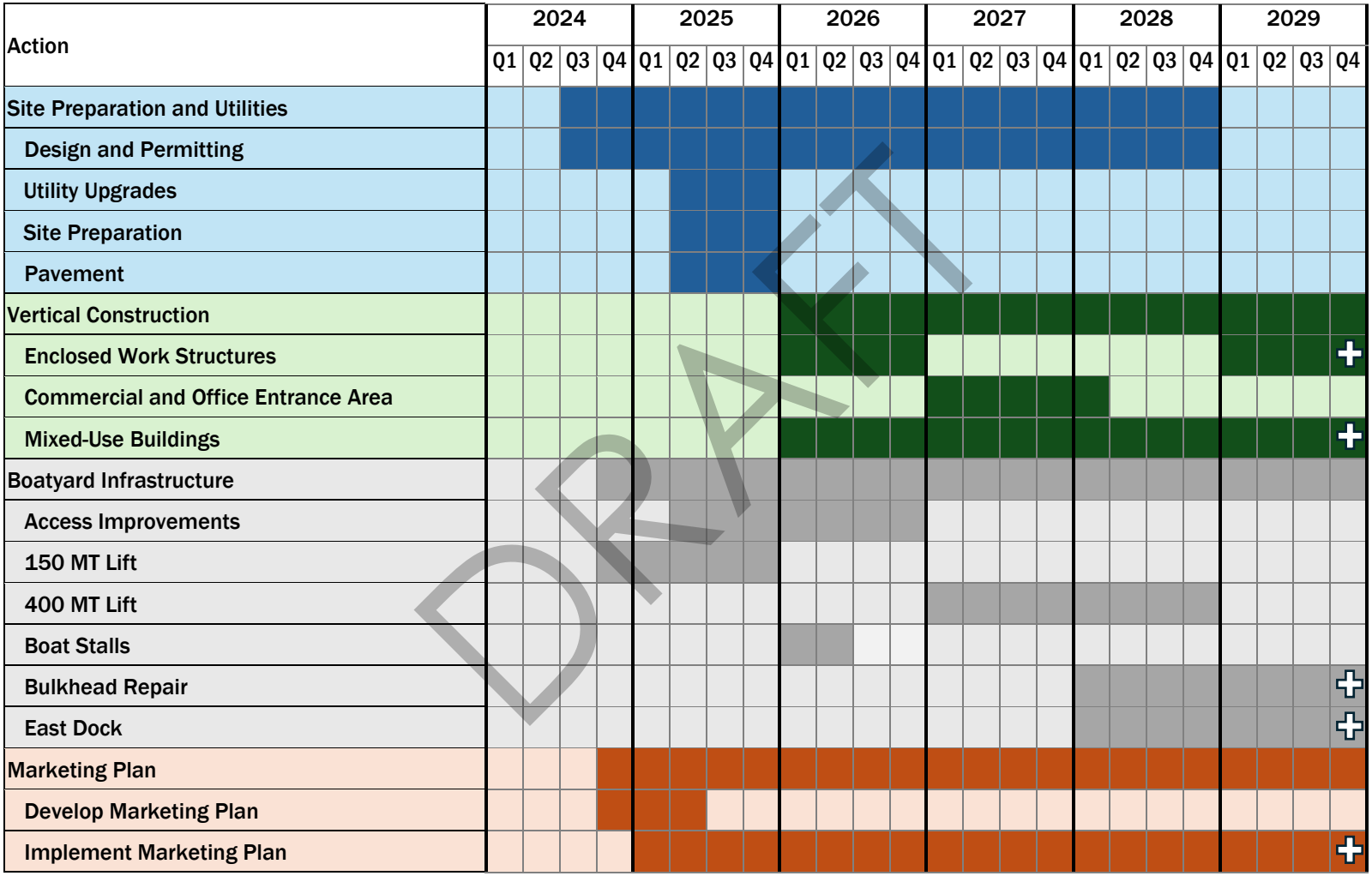
Table 5-2. Key Actions by Category

Action	Description	Potential Funding Source	Timing/Status
Planning and Regulatory			
Plan Updates and Development	Update upcoming strategic plan with projects and plans for the Boatyard. Formally commit the site to Boatyard use.	PPMF, Port, TIF	Short Term
Update Capital Improvement	Add targeted Boatyard improvements to Capital Facilities Plan.	PPMF, Port	Short Term
Develop Site Plan	Generate planning and engineering documents for site improvements.	EDA TA, EDA EAA, SPWF, TIF	Short Term
Permitting	Initiate permitting process with the City and U.S. Army Corps of Engineers.	Port	Short Term
Infrastructure			
Site Preparation	Initiate erosion control, sediment disposal, and demolition of inadequate surfaces.	PIDP, SPWF, EDA TA, EDA EAA, TIF	Short Term
Utility Upgrades	Extend water, sanitary sewer, and electrical utilities throughout site.	PIDP, SPWF, EDA TA, EDA EAA, TIF	Short Term

Action	Description	Potential Funding Source	Timing/Status
Paving and striping	Repave site, and stripe or paint boat stalls.	PIDP, SPWF, EDA TA, EDA EAA, TIF	Short Term
150 MT Lift	Procure and install small boat lift.	PIPD, MARAD SSG	Short Term
Enclosed work structure (small vessel)	Construct small enclosed work structure.	PIDP, SPWF, EDA TA, EDA EAA, MARAD SSG	Short Term
Bulkhead Repair	Repair bulkhead on east side of the Boatyard.	PIDP, SPWF, EDA TA, EDA EAA, MARAD SSG	Short Term
East Dock Repair	Repair East Dock in existing location.	PIDP, SPWF, EDA TA, EDA EAA, MARAD SSG	Medium Term
Commercial and Office Entrance Area	Construct building fronting Gateway Avenue.	EDA TA, EDA EAA, MARAD SSG	Medium Term
Mixed-Use Building (South)	Construct southern mixed-use building.	EDA TA, EDA EAA, MARAD SSG, TIF	Medium Term
400 MT Lift	Procure and install large boat lift including necessary Boatyard structural improvements.	PIPD, MARAD SSG	Long Term
Enclosed work structures (large vessel)	Construct large enclosed work structure.	PIDP, SPWF, EDA TA, EDA EAA, MARAD SSG	Long Term
Mixed-Use Building (North)	Construct northern mixed-use building.	EDA TA, EDA EAA, MARAD SSG	Long Term
Funding			
Apply for Planning and Infrastructure Grants	Research and develop applications for grants for roadway and utility infrastructure improvements.	Port	Short Term
Astor-West Urban Renewal District	Coordinate with City planning staff to include targeted improvements in upcoming Astor-West plan update.	Port	Short Term
Apply for construction and procurement grants.	Research and develop applications for grants for procurement of travel lifts and Boatyard improvements including vertical construction.	Port	Medium Term
Marketing			
Develop Marketing Plan	Prepare a draft marketing plan framework.	PPMF	Medium Term

Notes
City = City of Astoria.
EAA = Economic Adjustment Assistance from EDA.
EDA = U.S. Economic Development Administration.
EDA TA= EDA Technical Assistance.
EDA EAA= EDA Economic Adjustment.
Long Term= 5+ years.
MARAD SSG = USDOT Marine Administration Small Shipyard Grant.
MT = metric ton.
PIDP = Port Infrastructure Development Program.
Port = Port of Astoria.
PPMF= Business Oregon Port Planning and Marketing Fund.
Short Term- 1–2 years.
SPWF= Business Oregon Special Works Fund.
TIF= tax increment financing.

Figure 5-2. Action Plan Timeline



Note
✚ = Action items that are expected to last beyond the six-year period shown on the table.

Table 5-3 shows the opportunities and constraints identified in the existing conditions report and the associated Boatyard improvements and implementation actions that address them. All basic site needs, such as improved pavement and utilities, will be prioritized in the project schedule. The development of enclosed work structures and upgraded lift capacities address the majority of the structural constraints identified in the existing conditions report. Permitting concerns are addressed in cost and schedule considerations for each proposed improvement. All proposed Boatyard improvements in the Refined Concept enhance the marketability of the Boatyard and its ability to capture more of the West Coast boating market.

Table 5-3. Implementation Actions to Address Opportunities and Constraints

Identified Opportunity/Constraint	Implementation Actions
Existing power and sanitary sewer utilities will need to be upgraded and expanded to accommodate future development at the Boatyard.	• Site preparation • Utility upgrades
Repairs to the east dock, the bulkhead, and storage area pavement on the north side of the Boatyard may be required prior to, or during, development of the Boatyard.	• East dock repair • Bulkhead repair • Site preparation • Paving and striping
There is a lack of geotechnical and environmental information available regarding the conditions in dredge spoil piles.	• Site preparation
The Boatyard is geographically well-positioned to capture vessel maintenance projects from all over the West Coast.	• All proposed improvements
Recreational boating and commercial fishing have significant economic impacts in the area and create a market for future Boatyard developments.	• All proposed improvements
The majority (51 percent) of existing Boatyard users are recreational power or sailboat users. The Boatyard can strategically invest in amenities for this type of boat user to maximize market capture.	• 150 MT Lift • 400 MT Lift • Enclosed work structures
Traffic caused by the mixed-use developments envisioned in the *Port of Astoria Waterfront Master Plan* may interfere with future Boatyard activity.	• Access improvements
Most elements of the *Port of Astoria Boatyard and East Basin Plan* (feasibility study) Preferred Alternative Concept are supported by the advisory group besides maintenance of the existing 80 MT lift.	• 150 MT lift • 400 MT lift
Zoning and comprehensive planning documents support Boatyard improvements and activity considered in the current master planning process.	• All proposed improvements
In-water work required by any projects recommended in this plan will trigger the requirement for environmental permits - the time and cost of which must be incorporated early into the project schedule and scope.	• Permitting
Future developments within the 100-year floodplain will be required to adhere to specific development standards that will make development more expensive.	• Permitting
There is strong support among Boatyard users for a higher-capacity lift and for work buildings at the Port.	• 150 MT lift • 400 MT lift • Enclosed work structures

Identified Opportunity/Constraint	Implementation Actions
The community of local vendors and suppliers will lease space and contribute to future Boatyard buildings.	• Enclosed work structures • Mixed-use buildings • Commercial and office entrance area
The Boatyard is losing business it would otherwise attract if it contained a larger capacity lift and work buildings.	• 150 MT lift • 400 MT lift
Work buildings or shelters and more accessible and adequate power sources could significantly improve efficiency and job times for vendors and vessel owners.	• Enclosed work structures

Note
MT = metric ton.

References

Port. 2022. *Port of Astoria Waterfront Master Plan.* Port of Astoria & City of Astoria: Astoria, Oregon. March.

BST. 2022. *Port of Astoria Boatyard and East Basin Plan.* Port of Astoria: Astoria, Oregon. September 2.

Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Appendix A

Existing Conditions Report

MAUL FOSTER ALONGI

Technical Memorandum

To:	Matt McGrath, Port of Astoria	Date:	November 10, 2023
From:	Garrett Augustyn, MFA	Project No.:	M0475.02.019
Re:	Port of Astoria Pier 3 Boatyard Background Memo		

Introduction and Key Findings

The Port of Astoria (Port) recently completed a Boatyard Feasibility Study that demonstrated clear justification for the expansion of services, infrastructure, and footprint at the Port's Pier 3 Boatyard (Boatyard). The Port engaged Maul Foster & Alongi, Inc. (MFA) to develop a master plan that will bolster the financial health of the Boatyard and support the development of Port infrastructure to better serve vessel owners in the region. This memo analyzes existing conditions including infrastructure and utilities, existing plans, public outreach, and code and policy framework, then identifies existing opportunities and constraints with respect to physical and economic characteristics of the Boatyard. Table 1 summarizes key findings and implications for Boatyard master planning.

Table 1. Key Findings and Implications for the Boatyard Master Plan

Section	Findings
Infrastructure & Site Conditions	• Existing power and sanitary sewer utilities are lacking and may not accommodate future development at the Boatyard. • Repairs to the east dock, the bulkhead, and storage area pavement on the north side of the Boatyard may be required prior to, or during development of the Boatyard. • There is a lack of geotechnical and environmental information available regarding the conditions in dredge spoil piles.
Market / Economics	• The Boatyard is geographically well-positioned to capture vessel maintenance projects from all over the West Coast. • Recreational boating and commercial fishing have significant economic impacts in the area and create a market for future Boatyard developments. • There is an increase in boatyard and haulout activity in Clatsop County which indicates future demand for the Boatyard. • The majority (51 percent) of existing Boatyard users are recreational power or sailboat users. The Boatyard can strategically invest in amenities for this type of boat user to maximize market capture.

Section	Findings
Plans & Regulations	• Traffic caused by the mixed-use developments envisioned in the Waterfront Master Plan may interfere with future Boatyard activity. • Most elements of the Boatyard and East Basin Plan (feasibility study) preferred alternative are supported by the advisory group besides maintenance of the existing 88 metric ton lift. • Zoning and comprehensive planning documents support Boatyard improvements and activity considered in the current master planning process. • In-water work required by any projects recommended in this plan will trigger the requirement for environmental permits - the time and cost of which must be incorporated early into the project schedule and scope. • Future developments within the 100-year floodplain will be required to adhere to specific development standards that will make development more expensive.
Community and Advisory Group Outreach	• There is strong support among Boatyard users for a higher capacity lift and work buildings at the Port. • The community of local vendors and suppliers will lease space and contribute to future Boatyard buildings. • The Boatyard is losing business it may otherwise attract if it contained a larger capacity lift and work buildings. • Work buildings or shelters and more accessible and adequate power sources could significantly improve efficiency and job times for vendors and vessel owners

Study Area

The Study Area is the Port's existing Boatyard located on Pier 3, the westernmost of three Port-owned piers situated on the Columbia River (see Figure 1). The 16-acre Boatyard includes a haulout facility, bulkheads, dredge spoil piles, the east dock, and a DSL leased parcel containing a stormwater facility and riverwalk (See Figure 2). The Boatyard is currently used for haulout, maintenance, and storage. Services offered include an 88-ton travel lift, long-term boat and trailer parking, upland vessel storage, short-term vessel project areas (powered), and equipment rental. The Boatyard is a do-it-yourself (DIY) facility where Port staff operate the Travelift and washdown, but vessel owners and vendors perform the maintenance and repair work. Other elements of the existing Boatyard include the following:

- Fifty boat stations with electricity
- A washdown pad
- A drive-out service pier, accessed via a single trestle, that can be used to move supplies on and off vessels. This pier is currently limited due to cabling for fishing vessels and does not have the capacity to adequately serve vessels.

Infrastructure

The following sections provide background information and data on the current state of the Boatyard and supporting infrastructure based on CAD data, GIS maps, and a site visit on August 16, 2023. The Boatyard is orientated at an angle relative to the cardinal points and extends in a northwest direction into the Columbia River. For purposes of this document, the northwest section of Pier 3 will be referred to as the northern section, while the southeast section be deemed the southern section.

Utilities

The Boatyard contains both operational and abandoned utilities (see Figure 1). The abandoned utilities are located in the southeast section, adjacent to Portway Drive. The abandoned utilities include water and sanitary sewer lines that were part of a former Port warehouse building (Former Building) that was present on the site during the mid-20th century (Port GIS 2023).

The operational utilities at the Boatyard include the following:

Water Mains: The water mains are located on the northeast and southeast sections of the Boatyard. Approximately 2,600 linear feet of ductile iron water mains ranging from 6 to 10 inches in diameter supply potable water to existing facilities and boat stations, as measured from the Port of Astoria GIS webmap (Port GIS 2023).

Electrical Conduit: The conduit lines are located on the southwest and southeast sections of the Boatyard. Approximately 1,300 linear feet of electrical conduit house the electrical lines that provide electricity to 50 boat stations (Port GIS 2023).

Stormwater Pipe: The stormwater conveyance system for the Boatyard is located throughout the paved areas of the Boatyard.

The stormwater conveyance system consists of approximately 2,800 linear feet of gravity fed pipe ranging from 12 to 30 inches in diameter, 1,500 linear feet of pressurized 16-inch HDPE pipe, multiple catch basins and manholes, and a lift station (Port GIS 2023).

The stormwater conveyance system transports stormwater runoff from paved areas of the Boatyard to a stormwater treatment facility (The Stormwater Facility, see the Stormwater Facility section of this report).

The pressurized stormwater pipe and approximately 800 linear feet of gravity stormwater pipe were added to the site in 2016 as part of a Tier 2 stormwater improvement project. The 2016 updates allow the stormwater conveyance system to safely handle a 2-year, 24-hour storm event.

Haulout Facility

The Pier 3 haulout facility is located on the southeast section of the site (see Figure 2).

The haulout facility includes an 88 metric-ton (MT) lift, haulout piers consisting of concrete-filled steel piles topped with continuous concrete pile caps to hold the 88 MT lift, and a designated boat wash facility with supporting infrastructure located adjacent to the haulout piers (Port 2022a).

The haulout facility is designed to transfer vessels with maximum beams of 26 feet from Slip 2 to the designated boat wash facility before the vessel is transported to a workspace for storage/repair. The haulout facility was constructed in 2004 and 2005.

Pier 3 East Dock

The Pier 3 east dock is located just north of the haulout facility and runs in-water along the east side of Pier 3 (see Figure 2).

The Pier 3 east dock was once 90-feet wide and 1,400 feet long, but only a 25-foot wide by 300-foot section of the dock remains in operation (Port GIS 2023). The wood piles from the removed sections of the east dock remain in place, though most of the dock is in poor condition. The east dock can be

accessed from the Boatyard by either a small walkway located along the south side of the dock, or a larger gangway located on the north side of the dock.

A small portion on the north end of the east dock currently services vessels in need of minor in-water repairs, maintenance, or cabling.

Bulkhead and Dredge Spoils

Bulkhead: The Pier 3 bulkhead is located along the entire eastern side, as well as a shorter section on the northern side, of Pier 3 – the latter being the remains of what was once a barge slip (see Figure 2).

The bulkhead is made of timber planks that are believed to be held together with steel rods and is designed to prevent erosion of Pier 3 from wave action. Large sections of the bulkhead located north of the east dock have collapsed, whereas the bulkhead section located south of the east dock remains intact. No visual inspection was made of the bulkhead located on the northern side of Pier 3.

Dredge Spoils: Dredge spoil piles are located on the northern and southwestern sections of Pier 3. The pile in the northern section is approximately 1.7 acres in area and 9 feet in height and the southwestern pile is 1.25 acres in area and averages approximately 10 feet in height (see Figure 2).

The dredge spoils are from sediment removal operations around Port property. As of 2023, no sampling data can be found for the dredge spoil pile. Approximately 1,600 cubic yards of dredge spoils are in the organized piles.

Storage Areas

The Boatyard has storage space located throughout the paved and gravel surface areas of the site (see Figure 2).

Storage space is located on approximately 13 acres of paved surface and approximately 1 acre of gravel surface. 50 marked boat stations are located on the paved surface along with an unknown number of additional unmarked boat stations. The gravel surface includes a limited number of workshop spaces in the form of containers. There is a lack of fencing around the entire property.

The paved portion of Pier 3 began servicing vessels between 2004 and 2005. About half of the paved portion of Pier 3 was leased to a logging company for lumber storage between 2011 and 2019. After 2019, the paved portion of Pier 3 that was once used for lumber storage has mainly remained empty, with a small portion being used for long term vessel storage.

Stormwater Facility

The Stormwater Facility is located on the southwest section of the Boatyard (see Figure 2).

The Stormwater Facility was constructed in 2016 and consists of a 0.4-acre forebay, a 0.7-acre settling pond, four parallel vegetated swales that are 14 feet in width and 340 feet in length, and supporting manholes and pipes that convey treated stormwater to a site outfall located on the west side of Pier 3.

Stormwater enters the forebay inlet from a pressurized pipe, where sediment is separated from the stormwater. The sediment settles at the bottom of the forebay, while the stormwater discharges from the forebay into the treatment pond, where additional settling occurs. Upon additional settling, the stormwater discharges through oyster mat shell filters before entering a series of biofiltration swales.

After percolating through the biofiltration swales, the treated stormwater enters a conveyance system that transports the stormwater to an outfall located on the west side of Pier 3, where it discharges into the Columbia River. This process cleans the stormwater and removes surface-based contamination.

DSL Leased Property & Riverwalk

A public park is located on a parcel that runs along the west side of the Boatyard (see Figure 2).

The parcel is 10.41 acres in size and includes a 7,000 square foot paved parking lot with 10 parking stalls, along with 1,300 feet of paved pedestrian trails extending along the western shoreline of Pier 3. The Stormwater Facility is also located within the parcel.

The parcel was leased by the Port from the Department of State Lands (DSL) in 2006 and is currently in the 17th year of a 20-year lease agreement with DSL.

Market Analysis

BST Associates and PBS Engineering and Environmental authored the Port of Astoria Boatyard and East Basin Plan (feasibility study) to inform future development decisions at the Boatyard (Port 2022a). The plan includes a preliminary buildout plan for recommended site improvements for cost estimating purposes, and preliminary development cost estimates based on stakeholder outreach, a market analysis, and an analysis of both commercial and recreational boating activities. The plan alternatives consider construction and improvement of Boatyard elements including an environmental building (to protect vessels from the elements), additional dock space, covered workshop/storage space, a restroom building, and boat lifts with capacities ranging from the existing 88 MTs to 500 MTs.

Boatyard Trends and Potential Market

The Boatyard increased in activity between 2017 and 2021 and reached its all-time peak in 2021 with 228 haulouts. The revenue generated from the Boatyard increased by an average 8.1 percent per year between 2011 and 2021 and the operating cost only increased by an average of 4 percent annually during the same period. In 2021, recreational power boats brought in the most revenue (39 percent) among Boatyard users, followed by commercial fishing boats (32 percent), recreational sailboats (19 percent), and other users (10 percent). The Boatyard faces a disadvantage to competition that can serve boats requiring greater lift capacity.

Commercial Fishing Trends

The commercial fishing industry is concentrated in a few ports across the state, one of which is Astoria (Port 2022a). Market analysis of commercial fishing trends reveals that the total number of commercial fishing boats in Oregon, Washington, and Alaska have declined over recent decades. The Astoria Port commercial fishing group (consisting of Astoria/Hammond) generates an economic impact in the region amounting to 1,440 jobs and $697 million in total output annually.

Recreational Boating Trends

The recreational boating fleet has also experienced a decline in numbers over the past two decades (Port 2022a). This decline in the recreational fleet, however, is made up mostly of smaller boats, The number of large boats has increased at the Port over the past two decades. Clatsop County had more boating activity than any other region in the state in the third quarter of 2017 (Port 2022a). Recreational fishing is a major driver of recreational boating. The local economic impact of the Buoy 10 recreational salmon fishery, a major driver of recreational boat use in Astoria, was $7.8 million in

2021. Businesses that service recreational boats generated an estimated output of $297 million and 1,051 jobs in 2020.

Recommendations

The feasibility study recommends maintaining use of the existing 88 MT lift and providing support facilities such as an environmental work building upgraded electrical infrastructure, a restroom, service pier, and a storage/workshop space. The feasibility study found that increasing the size of the lift would currently be financially infeasible due to the cost of support infrastructure and recommends upgrades to or replacement of the existing lift pier and lift with a new lift of with the same capacity. The feasibility study recommends implementing a 300 MT lift if the Port chooses to add a larger lift and has the resources for lift infrastructure improvements in the future.

Plans and Regulations

This section summarizes the relevant plans. zoning code, and policy that may influence the development of the Boatyard Master Plan.

Port of Astoria Waterfront Master Plan

The 2022 Waterfront Master Plan provides a roadmap for investment and development for the Pier 1 study area, a Port owned industrial waterfront site along the Columbia River approximately 0.2 miles east of the Boatyard study area (Port 2022b). The Pier 1 study area currently consists of the west Mooring Basin, Bornstein Seafoods Facility, the Astoria Riverwalk Inn, The Red Building, The Cannery Pier Hotel, and the Chinook Building (Port 2022b). The plan provides strategies for attracting new industrial and commercial development with emphasis on the working waterfront and connection to marine heritage. The plan identifies the aging population of the area, lack of affordable housing for workers, and low-income levels as the main economic considerations for redevelopment. The following goals are provided as criteria for successful implementation of the framework plan (Port 2022b):

- Strengthen Astoria's working waterfront with a mix of uses and ongoing private investment.
- Make a place for Astorians.
- Establish long-term community support.
- Contribute to the financial stability and prosperity of the Port, City, and region.
- Support living wage jobs.
- Establish an enduring framework plan that is flexible to new opportunities and resilient to changing economic conditions.

The Master Plan envisions a mixed-use development at the Pier 1 waterfront site that would include industrial, hotel, market, and public uses as well as transportation improvements to roadways, pedestrian paths, and the waterfront trolley. The impacts of pedestrian and vehicle traffic generated by future Pier 1 developments on future Boatyard use should be considered during the Boatyard Master planning development.

Zoning

The study area is located in the Marine Industrial Shorelands zone, which has been implemented by the City of Astoria to "manage shorelands in urban and urbanizable areas especially suited for water-

dependent uses and to protect these shorelands for water-dependent industrial, commercial and recreational use" (Astoria Development Code Section 2.650).

Marine Industrial Shorelands (S1)

Land uses that are either permitted outright or allowed and conditionally in the S1 Zone are shown in Table 3, below.

Table 3. Marine Industrial Shoreland Permitted Uses

Permitted Outright	Conditionally Permitted
• Water-dependent industrial use • Water-dependent commercial use • Water-dependent recreational facilities, including boat ramp, dock, moorage and marina for commercial and recreational marine craft. • Other water-dependent commercial and recreational uses • Shoreline stabilization. • Navigational aide • Temporary dike for emergency flood protection limited to 60 days, subject to State and Federal regulations. • Water-related commercial and industrial use • Transportation facilities.	• Retail trade facility for the sale of products such as ice, bait, tackle, charts, gasoline or other products incidental to, or used in conjunction with a water-dependent use. • Eating and drinking establishment which provides a view of the waterfront, and which is in conjunction with a water-dependent use such as a marina or seafood processing plant. • Water-related recreational use. • Aquaculture facility. • on-water-dependent and non-water-related use which is accessory to and in conjunction with permitted water-dependent and water-related use. • Non-water dependent and non-water related uses may be located in existing, under-utilized buildings provided the use does not preclude future water-dependent or water related uses.

Source: Astoria Development Code Sections 2.655-2.600

The following development standards and procedural requirements are relevant to the development considered under the Boatyard Master Plan (Astoria Development Code Section 2.665):

- Water-dependent recreation and water-dependent commercial uses shall be located so as not to interfere with water-dependent marine industrial uses of areas.
- There shall be no height limitation for structures sited within the Marine Industrial Shorelands Zone.
- Accessory structures in the Marine Industrial Shorelands Zone are limited in size to a maximum of ten percent of the lot or parcel size.
- All uses shall comply with applicable lighting standards in Section 3.128.
- All uses shall comply with the requirements of Section 3.215 for outdoor storage areas.

Urban Renewal District (Astor-West)

The study area is located in the Astor-West Urban Renewable district which allows for the use of Tax Incremental Financing (TIF) for financing improvements.

Comprehensive Plan

The City of Astoria Comprehensive Plan provides a framework to guide specific land use regulations and development patterns throughout the City. This is accomplished by adopting land use policies specific to various natural, built, and social environments, consistent with state-wide planning goals. As this document relates to the study area, The City of Astoria has adopted policies and regulations

specifically for development that may occur in the City of Astoria's estuarian and shoreland environments. These policies and regulations are contained in Comprehensive Plan sections 130-186 (Aquatic and Shoreland). While this document outlines allowed uses and other development considerations, it should be noted that pertinent regulations increase in specificity when codified in the municipal code; therefore, allowed uses and development standards should be taken from the municipal code and the Comprehensive Plan should only be referenced as needed to demonstrate on a policy scale that specific uses or plans for development of the study area are allowed.

According to the City of Astoria Comprehensive Plan section 165, the study area is regulated by policies and standards contained in the Port of Astoria Subarea Plan. This plan includes shorelands and aquatic areas around the Port of Astoria piers, along with the rest of the City's waterfront. Policies contained in this plan that may be relevant to development in the study area include the following:

- Comprehensive Plan 165(G)(2) - The 10-acre aquatic development parcel west of Pier 3 may be developed as part of a specific proposal to fully utilize the filled area inclusive of slip 2, the 2.1-acre fill, Pier 3, and the existing filled area adjacent to Pier 3.
- Comprehensive Plan 165(G)(3) - The 10-acre aquatic development area shall be developed using piling to the maximum extent feasible.
- Comprehensive Plan 165(G)(4) - Filling shall only be allowed for water-dependent uses. Specific proposals for the extent of fill or pile in the area west of Pier 3 must be justified at the time of permit application, specifically addressing physical and biological effects on the area west of Pier 3.

While filling of the aquatic area adjacent to Pier 3 isn't specifically in the master plan, it is worth noting that the City of Astoria has considered an allowance for this type of development action in the event that future redevelopment determines the need for additional land necessary for port operations.

In-Water Development Regulations

The master plan does not currently propose work below the Mean Higher High Water Mark (otherwise considered as in-water work) of the Columbia River; however, this section will briefly discuss the regulatory environment applicable to in-water work in the event that in-water work becomes necessary to support buildout of the development aspects contained in the master plan, or to accommodate future development plans.

In-water work is regulated at all three levels of government – federal (Section 10 and 404 of the Clean Water Act [CWA]), state – Oregon Department of State Lands and Oregon Department of Environmental Quality, and local – City of Astoria. Federal regulations are administered by the United States Army Corps of Engineers (the USACE). The USACE has strict permitting requirements for any structure (Section 10 CWA) or discharge of fill material (Section 404 CWA) that is placed in-water. The permitting process is led by the USACE, who will coordinate with other federal and state agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon State Historic Preservation Office, Local Tribes, etc.) to ensure that in-water development would not impact aquatic resources, historic or cultural artifacts, or disrupt a Tribes usual and accustomed use of the shoreline. The permitting process required by the USACE can be lengthy, and oftentimes exceed well over a year for review.

State agencies will also review the permitting package prepared for the USACE. This package is collectively referred to as a Joint Permit Application. The state agencies will review the package for compliance with state-level regulations for the protection of ecological function and value of shorelines. Often, the primary difference in expectation between the regulations of federal government and state government is the best management practices proposed during construction to protect aquatic environments and life, and mitigation measures proposed to offset any detrimental impact to the environment or aquatic species. The challenge here is that the state agencies typically require intensive best management practices and mitigation measures, so developing construction practices and a mitigation plan that meets both federal and state requirements should be a key goal for expedited permit review when preparing the permit application packages. While the federal permitting pathway typically has the longest prevailing review time, the state follows close behind with permit review times often ranging from 9-12 months.

The City regulations are those discussed in the section above. The Marine Industrial Shorelands zone in which the study area is located allows in-water work either outright or conditionally. The in-water work permitting process at the local level is typically much quicker as the federal and state agencies review the project for potential impacts to aquatic species and habitats, which is the primary issue for in-water work. The city will review for compliance with development standards, which is typically a streamlined process that can be completed (land use review) in 4-6 months.

Floodplain Development

According to FEMA flood insurance rate map, panels 41007C0228E and 41007C0236E, and City of Astoria online GIS mapping, portions of the study area are within Zone AE (100-year floodplain) where there is a base flood elevation of 12 feet North American Vertical Datum of 1988 (NAVD 88). Please see Figure 4 for the areas of 100-year floodplain that intersect with the study area.

Development in the 100-year floodplain is regulated at the local level by the City of Astoria. All proposed structures and development activities at or below elevation 12 feet NAVD 88 would be subject to regulation under City of Astoria Development Code, Article 14: Flood Hazard Overlay Zone (14.520-14.545). These regulations include special requirements for all development activities, such as anchoring all substantial improvements to minimize impacts from floodwaters, use of certain building materials that are waterproof, restrictions on the type of subgrade improvements that are allowed, etc. The City of Astoria will review a development proposal's compliance with these floodplain regulations under a flood zone permit application.

Community Outreach

BST conducted outreach as a part of the Boatyard and East Basin Plan. Feedback was sought from over 30 stakeholders including vessel owners, service providers, Port staff, Port Commissioners, and others to determine the main characteristics and needs of the Boatyard. Based on stakeholder feedback, key characteristics and considerations of the Boatyard include the Boatyard as an important community and commercial asset, the importance of the Boatyard to facilitation of service providers, the need for buildings to shelter vessels from the elements, the size limitations of the existing lift, and the importance of fiscal responsibility in Port decision making and investments.

An online survey was conducted as a part of the Boatyard and East Basin Plan outreach process. The respondents of the survey include owners of commercial fishing boats, owners of recreational power and sail boats, fishing guides, and other boat owners. Responses determine existing Boatyard customers use the Boatyard mainly because of convenience and proximity, not because of the accessibility and quality of services offered. The survey also reflects the existing Boatyard users'

desire for covered boat storage and larger lifts at the Boatyard. Additional survey responses reflect a need for improved security and a concern for cost increase as a result of improvements made at the Boatyard.

Advisory Group Feedback

The Port established an advisory group of key Boatyard stakeholders to participate in the current Boatyard master planning process. The advisory group includes commercial fishermen, service vendors, boat suppliers, and a yacht broker. Six of the advisory group members were interviewed and asked a series of questions related to the existing conditions and future use of the Boatyard. This section summarizes the feedback collected during the advisory group outreach process. The questions posed to advisory group interviewees are included as an Attachment.

Both recreational and commercial boaters have several options for boat storage and servicing along the West Coast. Advisory group members generally consider the Boatyard's location and convenience of access as its main appeal. Some advisory group members also consider the do-it-yourself (DIY) character and access to local small-business vendors as key benefits for existing users. Existing commercial and recreational boaters of the advisory group enjoy the proximity of Englund Marine for readily available boat materials. Local vendors and suppliers have the opportunity and capacity to grow with future Port investments.

Members of the advisory group recognize Boatyard drawbacks including insufficient lift capacity, lack of adequate infrastructure, and inconsistency of Port direction. Several advisory group members believe the Port is losing crucial business to other West Coast Port's such as Port Townsend, Reedsport, Newport, Ilwaco, Toledo, Port Angeles, Blaine, Bellingham, and others with larger lift and storage capacity. Existing vendors and boat owners are limited in their ability to complete repair and maintenance work including sand blasting, washing, and painting due to the lack of shelter from year-round windy conditions. Existing users also state the lack of access to power sources with adequate voltage for tool operation as a drawback of the existing Boatyard. Advisory group members view some shifts in Port leadership, goals, and vision as an impediment to cohesive progress for Boatyard development. Table 2 summarizes advisory group feedback related to opportunities and constraints of the existing Boatyard and recommendations for future boatyard planning and development.

Table 2. Summary of Advisory Group Feedback

Opportunities	Constraints	Recommendations
• Convenience and ease of access • Support for local vendors, small and local businesses, and do-it yourself boat maintenance • Good and long-standing relationship with the Port • Existing lift capacity suits needs • Affordability	• Lack of lift capacity • Lack of boat shelter, storage, and workspace • Lack adequate vendors/staff to satisfy service needs • Lack of vendor workspace, offices, and storage • Shortage of access to adequate power supply for both vendors and DIY maintenance • Inconsistency of Port commission direction • Lack of safety measures for vendors (fire suppression hoses and eye wash)	• Increase lift capacity to capture more of the West Coast market. • Build a boat storage and maintenance facility. • Build a facility to host vendor workspaces, storage space, and offices so that more work can be done in the winter. • Create a one-stop-shop: hire a boatyard management company to run all services, supplies, and vending. • Increase marketing for services and new investments.

Summary of Opportunities and Constraints

Opportunities

Site

The site is well positioned for convenient access to commercial and recreational boaters living in the region. DIY boat maintenance and small service vendors are an attraction and keep the cost down for Boatyard customers. Port customers have ready access to supplies from Englund Marine, across the street from the Boatyard.

The Boatyard has a flat, paved and graveled surface with flexibility for various future development options. Existing stormwater and potable water infrastructure are adequate to serve new development at the Boatyard. The lease to the Department of State lands ends in three years, providing an opportunity to expand future development and activities at the Boatyard.

Economics

Recreational and commercial boat users have a significant and growing economic impact on the Port and City of Astoria, The Port is well-positioned to build on marine economic development through its investments at the Boatyard and to capture more of the West Coast regional business. This growth would support local businesses such as existing Boatyard vendors, Englund Marine, and others.

Policy

The Port's vision for the Boatyard aligns with the allowed uses under zoning law and comprehensive planning in the study area. The feasibility study conducted in the Boatyard and East Basin Plan shows that most investments in infrastructure at the Port are in demand and financially feasible. The Port can utilize TIF to finance future Boatyard projects because it is in the Astor-West Urban Renewal district.

Constraints

Site

The Boatyard requires infrastructure investment to accommodate future Boatyard development. The Boatyard will require improvements to sanitary sewer and electrical utilities. The timber use in the north part of the storage area left pavement in poor condition. The bulkhead requires repair and will continue leading to erosion until repairs are made. The dredge spoils at the Boatyard have not yet been characterized for environmental contamination or geotechnical integrity. The cost of removal of dredge spoils and magnitude of liability to the Port are contingent on the characterization of the dredge material.

Most existing vendors do not have adequate shelter to conduct work during poor weather conditions. Many West Coast boat users opt to use other boatyards because of the Boatyard's lack of lift capacity and storage and maintenance facilities. Some boat users are not even aware of the Boatyard because of its lack of marketing.

Economics

The decrease in fleet size, especially in the number of small vessels, will mean there are fewer boats to utilize the Port's lower-capacity travel lift. The growing number of larger boats in commercial and recreational fleets will require storage and service at boatyards with larger lift capacity. The Port is in favor of developing larger lift capacity, but the Boatyard and East Basin Plan found that increasing the capacity of the lift by any amount is currently financially infeasible.

Policy

Any future in-water work will require extensive and lengthy federal and state permitting processes through Section 10 and Section 404 of the CWA and Joint Permit Applications. Development in the Boatyard will also be subject to floodplain management regulations which will influence building standards and development costs.

Attachments

References

Limitations

Figures

Advisory Group Interview Questions

References

Port. 2022a. *Port of Astoria Boatyard and East Basin Plan.* Port of Astoria. Astoria, Oregon. September 2.

Port. 2022b. *Port of Astoria Waterfront Master Plan.* Port of Astoria & City of Astoria. Astoria, Oregon. March.

Port GIS. 2023. *Port of Astoria 2023*. (n.d.). map. Retrieved October 5, 2023, from https://gis.cartomation.com/portofastoria/gis/ .

Limitations

The services undertaken in completing this technical memorandum were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This technical memorandum is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this technical memorandum apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this technical memorandum.

Figures

Legend

- Site Boundary
- Tax Lot

Data Sources
Aerial photograph obtained from the State of Oregon (2022; tax lot data obtained from Clatsop County (2023).

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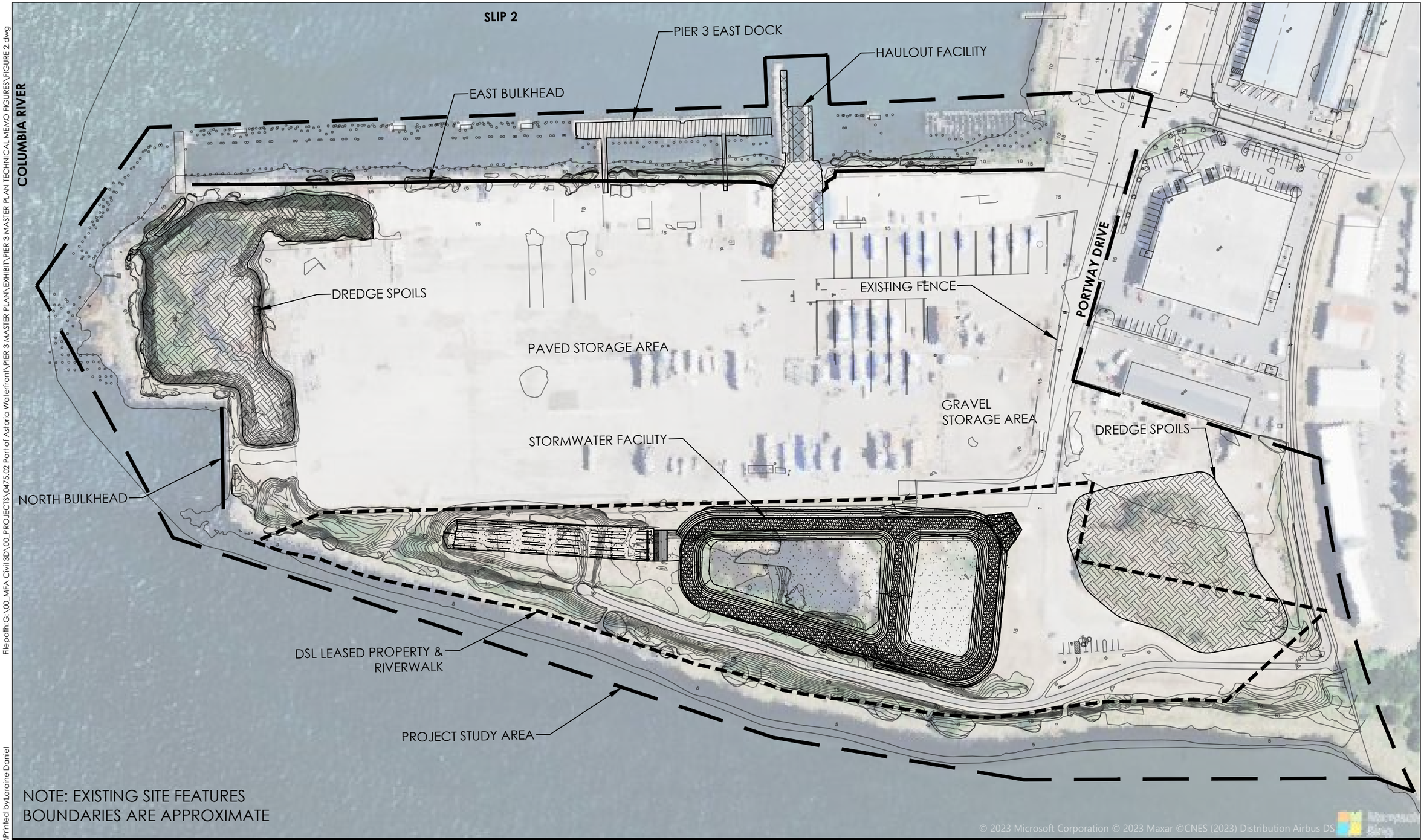
Figure 1
Context Map

Port of Astoria
Pier 3 Master Plan
Astoria, OR

0 200 400
Feet



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0 150' 300'

NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

Figure 2
Existing Site Features
Port of Astoria Pier 3 Master Plan Project
Astoria, Oregon

Filepath:G:\00_MFA Civil 3D\00_PROJECTS\0475.02 Port of Astoria Waterfront\PIER 3 MASTER PLAN\EXHIBIT\PIER 3 MASTER PLAN TECHNICAL MEMO FIGURES\FIGURE 2.dwg
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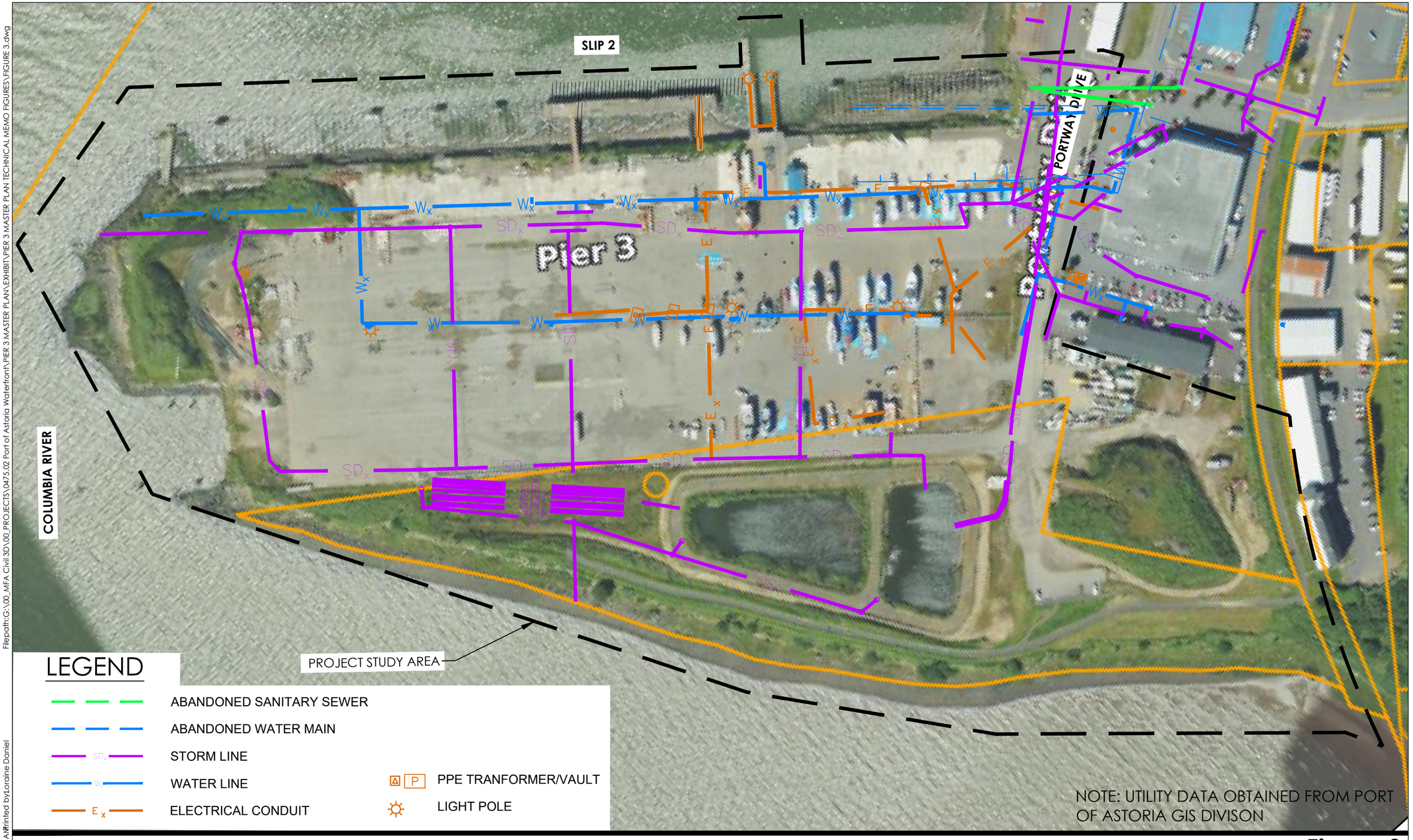

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0 150' 300'

NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

Figure 3
Existing Utilities Map
Port of Astoria Pier 3 Master Plan Project
Astoria, Oregon

Filepath:G:\00_MFA Civil 3D\00_PROJECTS\0475.02 Port of Astoria Waterfront\PIER 3 MASTER PLAN\EXHIBIT\PIER 3 MASTER PLAN TECHNICAL MEMO FIGURES\FIGURE 3.dwg
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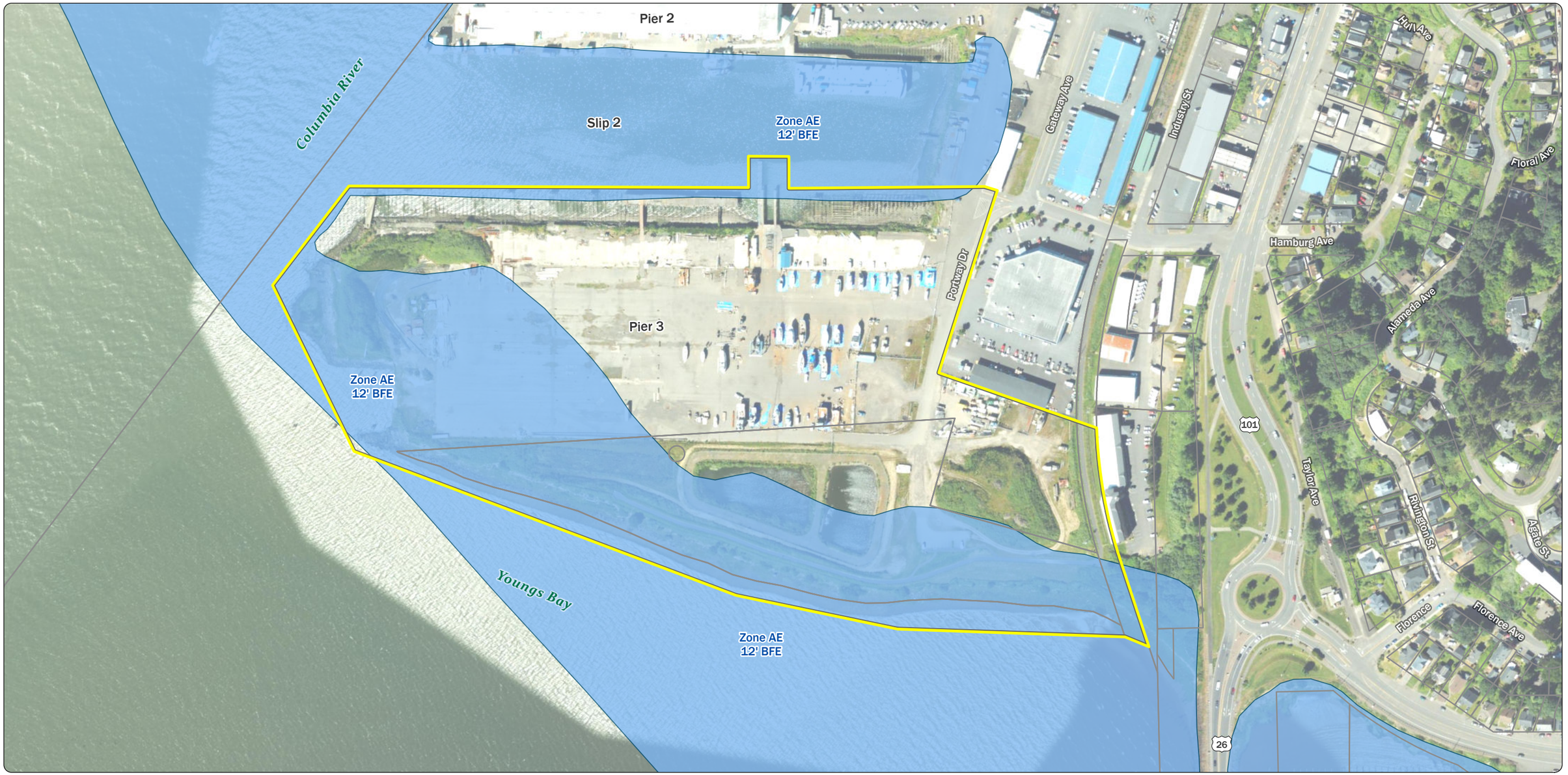

Notes
Flood elevations are relative to the North American Vertical Datum of 1988.
BFE = base flood elevation.
FEMA = Federal Emergency Management Agency.

Data Sources
Flood zones obtained from the FEMA (effective 3/17/2010); aerial photograph obtained from the State of Oregon (2022; tax lot data obtained from Clatsop County (2023).

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Legend
- Site Boundary
- Tax Lot
- FEMA 100-Year Flood Zone

Figure 4
FEMA Flood Zones

Port of Astoria
Pier 3 Master Plan
Astoria, OR

0 130 260
Feet

Attachment

Advisory Group Interview Questions

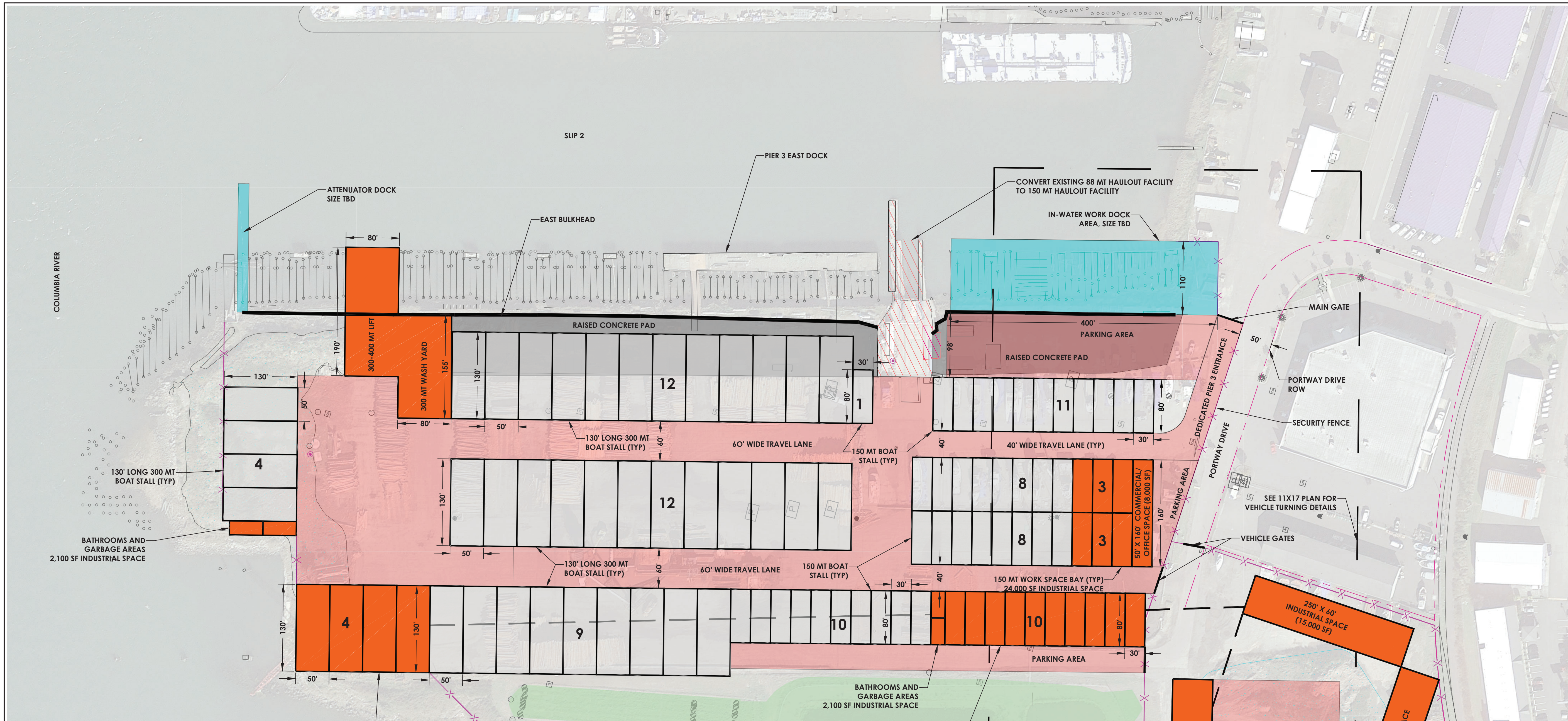
MAUL FOSTER ALONGI

Advisory Group Interview Questions

1. What type of Boatyard user are you? (commercial, recreational, service etc.?)
2. What are the primary reasons that you use this Port/Marina?
3. For commercial vessel owners: how many trips/off-loads do you conduct per season?
4. What existing services do you like at the Boatyard? What missing services would you like to see at the Boatyard?
5. What additional buildings or infrastructure would benefit Boatyard users?
6. Would the lack of electrical hook-ups at a Boatyard force you to use an alternate boatyard?
7. If you own a vessel that the existing lift cannot handle, where do you have your vessel hauled out?
8. Would you use Pier 3 to haul out your [larger] vessel if the Port had a larger lift? If not, why?
9. What are the greatest opportunities at the boatyard? What are the greatest constraints?

Appendix B

Alternative Concept Designs



SLIP 2
PIER 3 EAST DOCK
ATTENUATOR DOCK SIZE TBD
EAST BULKHEAD
CONVERT EXISTING 88 MT HAULOUT FACILITY TO 150 MT HAULOUT FACILITY
IN-WATER WORK DOCK AREA, SIZE TBD
COLUMBIA RIVER
RAISED CONCRETE PAD
300-400 MT LIFT
300 MT WASH YARD
400'
PARKING AREA
RAISED CONCRETE PAD
MAIN GATE
PORTWAY DRIVE ROW
SECURITY FENCE
DEDICATED PIER 3 ENTRANCE
PORTWAY DRIVE
12
1
11
130' LONG 300 MT BOAT STALL (TYP)
60' WIDE TRAVEL LANE
150 MT BOAT STALL (TYP)
40' WIDE TRAVEL LANE (TYP)
4
130' LONG 300 MT BOAT STALL (TYP)
8
3
50' X 160' COMMERCIAL/ OFFICE SPACE (8,000 SF)
PARKING AREA
SEE 11X17 PLAN FOR VEHICLE TURNING DETAILS
VEHICLE GATES
BATHROOMS AND GARBAGE AREAS 2,100 SF INDUSTRIAL SPACE
150 MT BOAT STALL (TYP)
150 MT WORK SPACE BAY (TYP) 24,000 SF INDUSTRIAL SPACE
250' X 60' INDUSTRIAL SPACE (15,000 SF)
9
10
PARKING AREA
300 MT WORK SPACE BAY (TYP) 22,000 SF INDUSTRIAL PLACE
BATHROOMS AND GARBAGE AREAS 2,100 SF INDUSTRIAL SPACE
150 MT WORK SPACE BAY (TYP) 24,000 SF INDUSTRIAL SPACE
EXISTING STORMWATER FACILITY
PARKING
220' X 60' COMMERCIAL SPACE (13,200 SF)
COMMERCIAL SPACE (26,400 SF)
250'
DSL LEASED PROPERTY & RIVERWALK

LEGEND

- IN-WATER INFRASTRUCTURE
- EXISTING DREDGE STOCKPILES
- EXISTING STORMWATER FACILITY
- EXISTING CONCRETE PAD
- EXISTING INFRASTRUCTURE
- SITE INFRASTRUCTURE:
- BOAT STALLS
- PARKING AREA AND TRAVEL LANES
- DSL LEASED PROPERTY BOUNDARY
- PIER 3 BULKHEAD
- SECURITY FENCE
- EXISTING ROW

NOTES

1. CONCEPTUAL LAYOUT BASED ON NOTES AND PHOTOS FROM CHARRETTE MEETING WITH PORT STAKEHOLDERS.

CONCEPTUAL LAYOUT TABLE

ITEM	QUANTITY
150 TON BOAT STALL (30' X 80')	38
300 TON BOAT STALL (50' X 130')	37
COVERED WORK SPACES (150 TON, 2400 SF)	16
COVERED WORK SPACES (300 TON, 5700 SF)	4
INDUSTRIAL SPACE	93,200 SF
COMMERCIAL SPACE	47,600 SF

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PORT OF ASTORIA PIER 3 MASTER PLAN
PORT OF ASTORIA
ASTORIA, OREGON

ISSUE	DATE	DESCRIPTION

PROJECT: 0475.02.19
DESIGNED: MFA
DRAWN: MFA
CHECKED: MFA
SCALE: 0 80' 160'
NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

SHEET TITLE
PORT OF ASTORIA PIER 3 MASTER PLAN CONCEPT 1

SHEET
FIGURE 1

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST
Maul Foster Alongi, Inc.

Concept 1

Schedule A - Site Prep					
Description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
A.1	Mobilization	5%			$ 1,234,000
A.2	Erosion Control	1	LS	$ 50,000	$ 50,000
A.3	Sediment Disposal	21,366	TON	$ 50	$ 1,068,300
A.4	Demo of Inadegaute Surfaces	60,000	SY	$ 20	$ 1,200,000
				Subtotal Schedule A:	**$ 3,553,000**

Schedule B - Below Ground Utilities					
Schedule B description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
B.1	Water	600	LF	$ 125	$ 75,000
B.2	Storm	500	LF	$ 100	$ 50,000
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000.0	$ 100,000
B.4	Electrical	3,000	LF	$ 30	$ 90,000
				Subtotal Schedule B:	**$ 315,000**

Schedule C - Non Structural Infrastructure					
Schedule C description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
C.1	150 MT Boat Stalls (Stripes or Paint)	8,360	LF	$ 2	$ 16,720
C.5	130' 300 MT Boat Stalls (Stripes or Paint)	13,320	LF	$ 2	$ 26,640
C.6	Security Fencing	3,900	LF	$ 35	$ 136,500
C.7	Access Gates	4	EA	$ 4,000	$ 16,000
C.8	Concrete Pads	-	SF		$ -
C.9	New Pavement (8" thick HMA)	13,333	TON	$ 150	$ 2,000,000
				Subtotal Schedule C:	**$ 2,196,000**

Schedule D - Structural Infrastructure					
Schedule D description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
D.1	Bulkhead Repair	1,000	LF	$ 550	$ 550,000
D.2	150 Ton Lift and Wash Area	1	EA	$ 1,500,000	$ 1,500,000
D.3	300 Ton Lift and Wash Area	1	EA	$ 6,500,000	$ 6,500,000
D.4	East Dock	44,000	SF	$ 50	$ 2,200,000
D.5	150 Ton Covered Work Area	38,400	SF	$ 25	$ 960,000
D.6	300 Ton Covered Work Area	26,000	SF	$ 25	$ 650,000
D.7	Port Office	8,000	SF	$ 115	$ 920,000
D.8	Industrial Buildings	19,200	SF	$ 105	$ 2,016,000
D.9	Commercial Buildings	39,600	SF	$ 115	$ 4,554,000
				Subtotal Schedule D:	**$ 19,850,000**
				Construction Subtotal:	**$ 25,914,000**

Schedule E - Design and Permitting					
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
E.5	Design and Permitting	10%			$ 2,591,400
				Subtotal Schedule E:	**$ 2,592,000**

Schedule F - Contingency					
Schedule F description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
F.1	Contingency (30%)	30%		-	$ 8,552,000
				Subtotal Schedule 'F':	**$ 8,552,000**

				PROJECT TOTAL:	**$ 37,058,000**

Schedule G - Additional Items from The Port					
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
E.1					$ -
E.2					$ -
E.3					$ -
E.4					$ -
E.5					$ -
E.6					$ -
E.7					$ -
E.8					$ -
E.9					$ -
E.10					$ -
E.11					$ -
				Subtotal Schedule E:	**$ -**

LEGEND

- WORK PIER
- EXISTING DREDGE STOCKPILES
- EXISTING STORMWATER FACILITY
- EXISTING CONCRETE PAD
- EXISTING INFRASTRUCTURE
- SITE INFRASTRUCTURE:
- BOAT STALLS
- PARKING AREA AND TRAVEL LANES
- DSL LEASED PROPERTY BOUNDARY
- PIER 3 BULKHEAD
- SECURITY FENCE
- EXISTING ROW

NOTES

1. CONCEPTUAL LAYOUT BASED ON NOTES AND PHOTOS FROM CHARRETTE MEETING WITH PORT STAKEHOLDERS.

CONCEPTUAL LAYOUT TABLE

ITEM	QUANTITY
150 TON BOAT STALL (30' X 80')	56
300 TON BOAT STALL (50' X 130')	27
COVERED WORK SPACES (150 TON, 2400 SF)	10
COVERED WORK SPACES (300 TON, 6500 SF)	5
INDUSTRIAL SPACE	96,100 SF
COMMERCIAL SPACE	35,000 SF

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PORT OF ASTORIA PIER 3 MASTER PLAN

PORT OF ASTORIA

ASTORIA, OREGON

ISSUE	DATE	DESCRIPTION

PROJECT: 0475.02.19
DESIGNED: MFA
DRAWN: MFA
CHECKED: MFA
SCALE
0 80' 160
NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

SHEET TITLE

PORT OF ASTORIA
PIER 3 MASTER PLAN
CONCEPT 2

SHEET

FIGURE 2

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PLOTTED ON: 2024-02-14 12:28 PM

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST
Maul Foster Alongi, Inc.

Concept 2

Schedule A - Site Prep					
Description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
A.1	Mobilization	5%			$ 1,316,000
A.2	Erosion Control	1	LS	$ 50,000	$ 50,000
A.3	Sediment Disposal	21,366	TON	$ 50	$ 1,068,300
A.4	Demo of Inadeqaute Surfaces	60,000	SY	$ 20	$ 1,200,000
				Subtotal Schedule A:	**$ 3,635,000**

Schedule B - Below Ground Utilities					
Schedule B description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
B.1	Water	600	LF	$ 125	$ 75,000
B.2	Storm	500	LF	$ 100	$ 50,000
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000	$ 100,000
B.4	Electrical	3,000	LF	$ 30	$ 90,000
				Subtotal Schedule B:	**$ 315,000**

Schedule C - Non Structural Infrastructure					
Schedule C description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
C.1	150 MT Boat Stalls (Stripes or Paint)	12,320	LF	$ 2	$ 24,640
C.2	130' 300 MT Boat Stalls (Stripes or Paint)	9,720	LF	$ 2	$ 19,440
C.3	Security Fencing	3,700	LF	$ 35	$ 129,500
C.4	Access Gates	4	EA	$ 4,000	$ 16,000
C.5	Concrete Pads	20,000	SF	$ 5	$ 100,000
C.6	New Pavement (8" thick HMA)	15,000	TON	$ 150	$ 2,250,000
				Subtotal Schedule C:	**$ 2,540,000**

Schedule D - Structural Infrastructure					
Schedule D description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
D.1	Bulkhead Repair	1,000	LF	$ 550	$ 550,000
D.2	150 Ton Lift and Wash Area	1	EA	$ 1,500,000	$ 1,500,000
D.3	300 Ton Lift and Wash Area	1	EA	$ 6,500,000	$ 6,500,000
D.4	East Dock	60,000	SF	$ 50	$ 3,000,000
D.5	150 Ton Covered Stalls	24,000	SF	$ 25	$ 600,000
D.6	300 Ton Covered Stalls	32,500	SF	$ 25	$ 812,500
D.7	Port Office		EA		$ -
D.8	Industrial Buildings	39,600	SF	$ 105	$ 4,158,000
D.9	Commercial Buildings	35,000	SF	$ 115	$ 4,025,000
				Subtotal Schedule D:	**$ 21,146,000**
				Construction Subtotal:	**$ 27,636,000**

Schedule E - Design and Permitting					
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
E.1	Design and Permitting	10%			$ 2,763,600
				Subtotal Schedule E:	**$ 2,764,000**

Schedule 'F' - Contingency					
Schedule F description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
F.1	Contingency (30%)	30%		-	$ 9,120,000
				Subtotal Schedule 'F':	**$ 9,120,000**

				PROJECT TOTAL:	**$ 39,520,000**

Schedule E - Additional Items from The Port					
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
E.1					$ -
E.2					$ -
E.3					$ -
E.4					$ -
E.5					$ -
E.6					$ -
E.7					$ -
E.8					$ -
E.9					$ -
E.10					$ -
E.11					$ -
				Subtotal Schedule E:	**$ -**

SLIP 2

ATTENUATOR DOCK
SIZE TBD

EAST BULKHEAD

CONVERT EXISTING 88 MT HAULOUT FACILITY
TO 150 MT HAULOUT FACILITY

COLUMBIA RIVER

80'

60' X 460' WORK PIER (TYP)

60' X 460' WORK PIER (TYP)

290'

400 MT LIFT

400 MT WASH YARD

PIER OFFICE
(SIZE TBD)

PARKING AREA

MAIN GATE

50'

PORTWAY DRIVE
ROW

SECURITY FENCE

30'

80'

10

180'

160'

3

5

BATHROOMS AND
GARBAGE AREAS
2,100 SF INDUSTRIAL SPACE

PORTWAY DRIVE

50'

300 MT BOAT STALLS
(TYP)

90'

90' WIDE TRAVEL LANE

150 MT BOAT STALLS
(TYP)

8

20

130' X 40' INDUSTRIAL SPACE
5,200 SF

VEHICLE GATES

50'

50' WIDE TRAVEL LANE (TYP)

4

8

7

300' X 80'
INDUSTRIAL
SPACE
(24,000 SF)

30' WIDE TRAVEL LANE

250' X 150' COMMERCIAL
(37,500 SF)

150 MT WORK SPACE BAY
16,800 SF INDUSTRIAL SPACE

EXISTING STORMWATER FACILITY

PARKING AREA

300 MT WORK SPACE BAY
36,000 SF INDUSTRIAL SPACE

DSL LEASED PROPERTY &
RIVERWALK

LEGEND

- WORK PIER
- EXISTING DREDGE STOCKPILES
- EXISTING STORMWATER FACILITY
- EXISTING CONCRETE PAD
- EXISTING INFRASTRUCTURE
- SITE INFRASTRUCTURE:
- BOAT STALLS
- PARKING AREA AND TRAVEL LANES
- DSL LEASED PROPERTY BOUNDARY
- PIER 3 BULKHEAD
- SECURITY FENCE
- EXISTING ROW

NOTES

1. CONCEPTUAL LAYOUT BASED ON NOTES AND PHOTOS FROM CHARRETTE MEETING WITH PORT STAKEHOLDERS.

CONCEPTUAL LAYOUT TABLE

ITEM	QUANTITY
150 TON BOAT STALL (30' X 80')	43
300 TON BOAT STALL (50' X 180')	18
COVERED WORK SPACES (150 TON, 2400 SF)	7
COVERED WORK SPACES (300 TON, 9000 SF)	4
INDUSTRIAL SPACE	84,100 SF
COMMERCIAL SPACE	37,500 SF

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PORT OF ASTORIA PIER 3 MASTER PLAN

PORT OF ASTORIA
ASTORIA, OREGON

ISSUE	DATE	DESCRIPTION

PROJECT: 0475.02.19
DESIGNED: MFA
DRAWN: MFA
CHECKED: MFA
SCALE: 0 80' 160'

NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

SHEET TITLE

PORT OF ASTORIA
PIER 3 MASTER PLAN
CONCEPT 3

SHEET

FIGURE 3

PLOTTED BY: Garrick Kalmeta FILENAME: G:\05_MFA Civil\30-05_PROJECTS\0475.02 Port of Astoria Waterfront\PIER 3 MASTER PLAN\Exhibit\PIER 3 MASTER PLAN CONCEPT 3.dwg
PLOTTED ON: 2024-02-14 12:09 PM

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST
Maul Foster Alongi, Inc.

Concept 3

Schedule A - Site Prep						
Description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
A.1	Mobilization	5%	LS		$	1,253,800
A.2	Erosion Control	1	LS	$ 50,000	$	50,000
A.3	Sediment Disposal	21,366	TON	$ 50	$	1,068,300
A.4	Demo of Inadeqaute Surfaces	60,000	SY	$ 20	$	1,200,000
				Subtotal Schedule A:	**$**	**3,573,000**

Schedule B - Below Ground Utilities						
Schedule B description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
B.1	Water	600	LF	$ 125	$	75,000
B.2	Storm	500	LF	$ 100	$	50,000
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000	$	100,000
B.4	Electrical	3,000	LF	$ 30	$	90,000
				Subtotal Schedule B:	**$**	**315,000**

Schedule C - Non Structural Infrastructure						
Schedule C description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
C.1	150 MT Boat Stalls (Stripes or Paint)	9,460	LF	$ 2	$	18,920
C.2	180' 300 MT Boat Stalls (Stripes or Paint)	9,660	LF	$ 2	$	19,320
C.3	Security Fencing	3,400	LF	$ 35	$	119,000
C.4	Access Gates	4	EA	$ 4,000	$	16,000
C.5	Concrete Pads	-	SF		$	-
C.6	New Pavement (8" thick HMA)	13,333	TON	$ 150	$	2,000,000
				Subtotal Schedule C:	**$**	**2,174,000**

Schedule D - Structural Infrastructure						
Schedule D description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
D.1	Bulkhead Repair	1,000	LF	$ 550	$	550,000
D.2	150 Ton Lift and Wash Area	1	EA	$ 1,500,000	$	1,500,000
D.3	300 Ton Lift and Wash Area	1	EA	$ 6,500,000	$	6,500,000
D.4	East Dock	50,000	SF	$ 50	$	2,500,000
D.5	150 Ton Covered Stalls	16,800	SF	$ 25	$	420,000
D.6	300 Ton Covered Stalls	36,000	SF	$ 25	$	900,000
D.7	Port Office	1	EA	$ 300,000	$	300,000
D.8	Industrial Buildings	31,300	SF	$ 105	$	3,286,500
D.9	Commercial Buildings	37,500	SF	$ 115	$	4,312,500
				Subtotal Schedule D:	**$**	**20,269,000**
				Construction Subtotal:	**$**	**26,331,000**

Schedule E - Design and Permitting						
Schedule E description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
E.1	Design and Permitting	10%			$	2,633,100
				Subtotal Schedule E:	**$**	**2,634,000**

Schedule 'F' - Contingency						
Schedule F description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
F.1	Contingency (30%)	30%		-	$	8,690,000
				Subtotal Schedule 'F':	**$**	**8,690,000**

				PROJECT TOTAL:	**$**	**37,655,000**

Schedule E - Additional Items from The Port						
Schedule E description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
E.1					$	-
E.2					$	-
E.3					$	-
E.4					$	-
E.5					$	-
E.6					$	-
E.7					$	-
E.8					$	-
E.9					$	-
E.10					$	-
E.11					$	-
				Subtotal Schedule E:	**$**	**-**

LEGEND

- IN-WATER INFRASTRUCTURE
- EXISTING DREDGE STOCKPILES
- EXISTING STORMWATER FACILITY
- EXISTING CONCRETE PAD
- EXISTING INFRASTRUCTURE
- SITE INFRASTRUCTURE:
- BOAT STALLS
- PARKING AREA AND TRAVEL LANES
- DSL LEASED PROPERTY BOUNDARY
- PIER 3 BULKHEAD
- SECURITY FENCE
- EXISTING ROW

NOTES

1. CONCEPTUAL LAYOUT BASED ON NOTES AND PHOTOS FROM CHARRETTE MEETING WITH PORT STAKEHOLDERS.

CONCEPTUAL LAYOUT TABLE

ITEM	QUANTITY
70° 150 TON BOAT STALL (30' X 80')	53
70° 300 TON BOAT STALL (50' X 130')	23
300 TON BOAT STALL (50' X 130')	4
COVERED WORK SPACES (150 TON, 2400 SF)	15
COVERED WORK SPACES (300 TON, 5700 SF)	6
INDUSTRIAL SPACE	93,000 SF
COMMERCIAL SPACE	17,700 SF

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PORT OF ASTORIA PIER 3 MASTER PLAN

PORT OF ASTORIA
ASTORIA, OREGON

DESCRIPTION	DATE	ISSUE

PROJECT: 0475.02.19
DESIGNED: MFA
DRAWN: MFA
CHECKED: MFA
SCALE
0 80' 160
NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

SHEET TITLE
PORT OF ASTORIA PIER 3 MASTER PLAN PA CONCEPT

SHEET
FIGURE 1

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST

Maul Foster Alongi, Inc.

Preferred Alternative Concept

Schedule A - Site Prep						
Description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
A.1	Mobilization	5%			$	1,076,100
A.2	Erosion Control	1	LS	$ 50,000	$	50,000
A.3	Sediment Disposal	21,366	TON	$ 50	$	1,068,300
A.4	Demo of Inadeqaute Surfaces	60,000	SY	$ 20	$	1,200,000
				Subtotal Schedule A:	**$**	**3,395,000**

Schedule B - Below Ground Utilities						
Schedule B description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
B.1	Water	600	LF	$ 125	$	75,000
B.2	Storm	500	LF	$ 100	$	50,000
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000	$	100,000
B.4	Electrical	3,000	LF	$ 30	$	90,000
				Subtotal Schedule B:	**$**	**315,000**

Schedule C - Non Structural Infrastructure						
Schedule C description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
C.1	70° 150 MT Boat Stalls (Stripes or Paint)	11,660	LF	$ 2	$	23,320
C.2	70° 300 MT Boat Stalls (Stripes or Paint)	8,395	LF	$ 2	$	16,790
C.3	130' 300 MT Boat Stalls (Stripes or Paint)	1,440	LF	$ 2	$	2,880
C.4	Security Fencing	4,050	LF	$ 35	$	141,750
C.5	Access Gates	4	EA	$ 4,000	$	16,000
C.6	Concrete Pads	-	SF		$	-
C.7	New Pavement (8" thick HMA)	13,333	TON	$ 150	$	2,000,000
				Subtotal Schedule C:	**$**	**2,201,000**

Schedule D - Structural Infrastructure						
Schedule D description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
D.1	Bulkhead Repair	1,000	LF	$ 550	$	550,000
D.2	150 Ton Lift and Wash Area	1	EA	$ 1,500,000	$	1,500,000
D.3	400 Ton Lift and Wash Area	1	EA	$ 6,500,000	$	6,500,000
D.4	East Dock	44,000	SF	$ 50	$	2,200,000
D.5	150 Ton Covered Work Area	34,350	SF	$ 25	$	858,750
D.6	300 Ton Covered Work Area	39,000	SF	$ 25	$	975,000
D.7	Port Office	4,500	SF	$ 115	$	517,500
D.8	Industrial Buildings	19,700	SF	$ 105	$	2,068,500
D.9	Commercial Buildings	13,200	SF	$ 115	$	1,518,000
				Subtotal Schedule D:	**$**	**16,688,000**
				Construction Subtotal:	**$**	**22,599,000**

Schedule E - Design and Permitting						
Schedule E description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
E.5	Design and Permitting	10%			$	2,259,900
				Subtotal Schedule E:	**$**	**2,260,000**

Schedule F - Contingency						
Schedule F description		*Quantity*	*Unit*	*Unit Cost*		*Total Cost*
F.1	Contingency (30%)	30%		-	$	7,458,000
				Subtotal Schedule 'F':	**$**	**7,458,000**

	PROJECT TOTAL:	**$ 32,317,000**

Appendix C

Refined Concept Renderings

PORT OF ASTORIA: PIER 3

CONCEPTUAL BOAT YARD SITE PLAN

WAVE ATTENUATOR

400 MT LIFT

WASH-DOWN AREA

EXISTING RAISED CONCRETE PAD

80' LONG 150 MT STALLS

150 MT LIFT

RAMP

GATE 1

GATEWAY AVENUE

130' LONG 400 MT STALLS

BLDG C

GATE 2

BLDG A

BLDG B

BLDG D

GATE 3

BLDG E

BUILDING A

TYPE:	INDUSTRIAL
SIZE:	40,300 SF
	RESTROOMS/GARBAGE: 2,600 SF
BOAT STALLS:	5 COVERED BOAT STALLS
	(130' LONG 400 MT STALLS)

BUILDING B

TYPE:	INDUSTRIAL
SIZE:	19,300 SF
	RESTROOMS/GARBAGE: 2,100 SF
BOAT STALLS:	5 COVERED BOAT STALLS
	(80' LONG 150 MT STALLS)

BUILDING C

TYPE:	MIXED-USE
SIZE:	15,600 SF
	INDUSTRIAL: 10,600 SF
	OFFICE: 4,000 SF
	RESTROOMS/GARBAGE: 1,000 SF
BOAT STALLS:	2 COVERED BOAT STALLS
PARKING:	13 PARKING SPACES

BUILDING D

TYPE:	MIXED-USE
SIZE:	33,100 SF (1-STORY)
	INDUSTRIAL: 28,300 SF
	OFFICE: 4,800 SF
PARKING:	23 PARKING SPACES

BUILDING E

TYPE:	MIXED-USE
SIZE:	44,600 SF (2-STORY)
	1ST FLOOR - INDUSTRIAL: 18,300 SF
	1ST FLOOR - OFFICE : 4,000 SF
	2ND FLOOR - OFFICE : 22,300 SF
PARKING:	52 PARKING SPACES

BOAT STALLS & PARKING

BOAT STALL SIZE:	80' LONG 150 MT STALLS
QUANTITY:	76 (69 OPEN, 7 COVERED)
BOAT STALL SIZE:	130' LONG 400 MT STALLS
QUANTITY:	23 (18 OPEN, 5 COVERED)
PARKING:	55 PARKING SPACES (SOUTH LOT)
	51 PARKING SPACES (NORTH LOT)

CASCARA LAND DESIGN

MAUL FOSTER ALONGI

Appendix D

Refined Concept Cost Estimates

Title:	**Refined Concept - Anticipated Cost**	
Project:	Port of Astoria Pier 3 Master Plan	
Client:	Port of Astoria	
Project #/Task:	M0475.02.19	Initial
Prepared By:	G. Kalmeta	GK
Checked By:	S. Frost	SF
Date:	5/15/2024	
Revision #.:	4	

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Cost Estimate Summary - Feasibility Level

Schedule 'A' - Site Preparation	$	5,483,367
Schedule 'B' - Below Ground Utilities	$	315,000
Schedule 'C' - Non Structural Infrastructure	$	3,030,543
Schedule 'D' - Structural Infrastructure	$	47,137,500
Schedule 'E' - Design and Project Management	$	5,596,641
Schedule 'F' - Contingency	$	18,468,915
Total:	**$**	**80,031,967**

Assumptions:

1. This opinion of probable costs is based on a conceptual facility design and is intended for planning purposes only.
2. This cost estimate assumes that the existing gravel surfacing will be adequate for reuse as a base for new asphalt pavement.
3. The cost estimate assumes that the stockpiled dredge spoils has no market value.
4. This cost estimate assumes all new pavement surfacing for the entire site.
5. This cost estimate uses new pavement in place of concrete foundations for proposed structures.
6. The costs represented in the estimate are for fully installed improvements.
7. Costs are based on prevailing wages.
8. Contingency costs include permitting fees, system development charges, inflation, regionality, and construction materials variance.
9. Miscellaneous Bulkhead costs include construction and removal of temporary retaining wall, furnishing and installation of steel anchor piles, furnishing and installation of pile system, and installation of bull rail and cap beam.
10. The costs associated with the bulkhead repair obtained from the Rehab Bulk Repair Project for Pier 2. That project did not include quantity estimates, so total costs were broken down to a per liner foot cost and mutiplied by the projected length of the pier 3 bulkhead repair.

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST
Maul Foster Alongi, Inc.

Schedule A - Site Prep					
Description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
A.1	Mobilization	5%			$ 2,665,067
A.2	Erosion Control	1	LS	$ 50,000	$ 50,000
A.3	Sediment Disposal	21,366	TON	$ 50	$ 1,068,300
A.4	Demo of Inadequate Surfaces	85,000	SY	$ 20	$ 1,700,000
				Subtotal Schedule A:	**$ 5,483,367**

Schedule B - Below Ground Utilities					
Schedule B description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
B.1	Potable Water Main	600	LF	$ 125	$ 75,000
B.2	Storm Drainage Collection and Conveyance	500	LF	$ 100	$ 50,000
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000	$ 100,000
B.4	Electrical	3,000	LF	$ 30	$ 90,000
				Subtotal Schedule B:	**$ 315,000**

Schedule C - Non Structural Infrastructure					
Schedule C description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
C.1	80' Length Angled Boat Stalls (Stripes or Paint)	15,180	LF	$ 2	$ 30,360
C.2	130' Length Angled Boat Stalls (Stripes or Paint)	5,110	LF	$ 2	$ 10,220
C.3	130' Length Boat Stalls (Stripes or Paint)	1,440	LF	$ 2	$ 2,880
C.4	Security Fencing	4,050	LF	$ 35	$ 141,750
C.5	Access Gates	3	EA	$ 4,000	$ 12,000
C.6	New Pavement (8" thick HMA)	18,889	TON	$ 150	$ 2,833,333
				Subtotal Schedule C:	**$ 3,030,543**

Schedule D - Structural Infrastructure					
Schedule D description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
D.1	Furnish and Install Bulkhead Wall	1,000	LF	$ 5,200	$ 5,200,000
D.2	Structural Backfill for Bulkhead Wall	1,000	LF	$ 2,900	$ 2,900,000
D.3	Miscellaneous Bulkhead Costs	1,000	LF	$ 3,000	$ 3,000,000
D.4	150 MT Lift and Wash Area Pile System	1	EA	$ 1,300,000	$ 1,300,000
D.5	150 MT Lift Dredging	1	EA	$ 70,000	$ 70,000
D.6	150 MT Lift and Wash Area Bracing and Slab	1	EA	$ 450,000	$ 450,000
D.7	150 MT Lift and Wash Area Accessories	1	EA	$ 100,000	$ 100,000
D.8	150 MT Lift	1	EA	$ 1,500,000	$ 1,500,000
D.9	400 MT Lift and Wash Area Pile System	1	EA	$ 1,700,000	$ 1,700,000
D.10	400 MT Lift Dredging and Timber Pile Removal	1	EA	$ 100,000	$ 100,000
D.11	400 MT Lift and Wash Area Bracing and Slab	1	EA	$ 900,000	$ 900,000
D.12	400 MT Lift and Wash Area Accessories	1	EA	$ 150,000	$ 150,000
D.13	400 MT Lift	1	EA	$ 5,500,000	$ 5,500,000
D.14	East Dock	44,000	SF	$ 162	$ 7,128,000
D.15	Attenuator	3,000	SF	$ 150	$ 450,000
D.16	150 MT Enclosed Work Structure (BLDG B)	19,300	SF	$ 100	$ 1,930,000
D.17	400 MT Enclosed Work Structure (BLDG A)	40,300	SF	$ 100	$ 4,030,000
D.18	Port Office (BLDG C)	15,600	SF	$ 115	$ 1,794,000
D.19	Mixed Use Building (BLDG D)	33,100	SF	$ 115	$ 3,806,500
D.20	Mixed Use Building (BLDG E)	44,600	SF	$ 115	$ 5,129,000
				Subtotal Schedule D:	**$ 47,137,500**
				Construction Subtotal:	**$ 55,966,411**

Schedule E - Design and Permitting					
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
E.5	Design and Permitting	10%			$ 5,596,641
				Subtotal Schedule E:	**$ 5,596,641**

Schedule F - Contingency					
Schedule F description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*
F.1	Contingency (30%)	30%		-	$ 18,468,915
				Subtotal Schedule 'F':	**$ 18,468,915**

PROJECT TOTAL:		**$ 80,031,967**

Appendix E

Funding Matrix

Category	Federal/State	Funding Agency	Grant	Website	Match Required	Maximum Award	Timing	Contact	Uses
Grants									
Infrastructure	Federal	US Department of Transportation	Port Infrastructure Development Program	https://www.grantsolutions.gov/gs/preaward/previewPublicAnnouncement.do?id=109944	20% required match	No maximum award size	5/10/2024	Wade Morefield PIDPgrants@dot.gov 202–366–6025	Funding for operational improvements and infrastructure that supports seafood and seafood-related businesses.
Infrastructure	Federal	US Department of Transportation Maritime Marine Administration	Small Shipyard Grants	https://www.maritime.dot.gov/grants-finances/small-shipyard-grants	At least 25% of grant project costs	Average is $1 million, $8,750,000 is currently in the fund	8/5/2024	David M. Heller smallshipyardgrants@dot.gov	Provides funding for: •Qualified shipyard facilities that will be effective in fostering efficient, competitive operations, and quality ship construction, repair, and reconfiguration. •Training of workers in shipbuilding, ship repair, and associated industries •Boatyard elements such as travel lifts, fire suppression systems, floating docks, wash equipment.
Infrastructure	Federal	US Department of Transportation	Rebuilding American Infrastructure with Sustainability and Equity Grant Program	https://www.grants.gov/search-results-detail/351205	20% required match	$25 million	FY 2025 Deadline: 01/13/2025	Andrea Jacobson RAISE Program Manager andrea.jacobson@dot.gov	Funding to support the planning, engineering, and construction of Port infrastructure.
Planning and Marketing	State	Business Oregon	Port Planning and Marketing Fund	https://www.oregon.gov/biz/programs/PPMF/Documents/2022%20PPMF%20Guide%20Final.pdf	None required	$50,000	Rolling	Melanie Olson 503-801-7155 melanie.olson@biz.oregon.gov	Funds the planning or marketing project necessary for improving the port's ability to carry out its authorized functions or activities related to trade and commerce. The fund also supports updates to Port Strategic Plans.
Planning and Engineering	Federal	Economic Development Agency	Planning and Local Technical Assistance Program	https://grants.gov/search-results-detail/332127	EDA Investment Rate for Planning Awards The Federal share of a Planning award generally may not exceed 50% of the total cost of the project.	$300,000	Applications are accepted on a continuing basis and processed as received. This Planning and Local Technical Assistance opportunity will remain in effect until superseded by a future announcement.	J. Wesley Cochran jcochran@eda.gov (206) 561-6646	Funds planning and engineering of infrastructure improvements.
Planning, Engineering, and Construction	Federal	Economic Development Agency	Public Works and Economic Adjustment Assistance Programs	https://grants.gov/search-results-detail/346815	50% required match	$100,000 up to $300 million	Applications are accepted on a continuing basis and processed as received. This Adjustment Assistance Program opportunity will remain in effect until superseded by a future announcement.	J. Wesley Cochran jcochran@eda.gov (206) 561-6647	Funds the planning and engineering of infrastructure improvements, site acquisition, site preparation, and construction.
Financing									
Infrastructure	State	Business Oregon	Special Public Works Fund	https://www.oregon.gov/biz/Publications/SPWF.pdf	Low-cost financing	$10 million	Rolling	503-986-0123 business.oregon@oregon.gov	Provides funds for capital improvement (acquisition, preliminary and final design, & engineering) or planning projects (technical and financial feasibility studies) that assist in developing industrial lands, supporting an immediate job creation/retention/expansion opportunity, or replacement of essential community facilities.

Appendix F

Implementation Worksheets

MAUL FOSTER ALONGI

Phasing Assumptions
Short-term: 1-2 years Medium-term: 2-5 years Long-term: 5+ years
Cost Assumptions
See Cost Assumptions sheet

Note: Estimated Costs include design and permitting costs.

Name	Description	Estimated Cost	Timing
Utility Upgrades	Upgrades to site utilities are necessary to accommodate proposed improvements in the Boatyard Master Plan. Necessary upgrades include installation of 600 LF of 12" Ductile Iron Pipe for water conveyance, 500 LF of 12" Schedule A Storm Pipe, and 3,000 LF of Electrical Conduit. Utility upgrades will be completed in conjunction with site preparation and development build-out.	$346,500	Short-term
Site Preparation	Preparation for site development includes mobilization, erosion control, sediment disposal, and demolition of inadequate surfaces. Site preparation will be completed in conjunction with utility upgrades and development build-out.	$6,031,924	Short-term
Access Improvements	Site access is provided along Gateway Drive. Proposed improvements to access include four new vehicle gates and security fencing.	$169,125	Short-term
Pavement	Existing pavement at the Boatyard is damaged due to years of use as a timber lay down area. Development of new boat stalls and other Boatyard improvements, including parking areas, will require 18,889 tons of new pavement across the site.	$3,116,667	Short-term
Boat Stalls	The Boatyard will include a variety of striped or painted open-aired boat stalls including angled 150 MT (80' long) Boat Stalls, angled 400 (130' long) MT Boat Stalls, and no-angle 400 (130' long) MT Boat Stalls.	$47,806	Short-term
Small Lift	A 150-Metric Ton (MT) Boat Lift (Small Lift) will replace the existing 80-MT Lift. Construction of the new lift will require dredging and installation of a bracing slab, a pile system, and the lift with accessories. The upgraded lift capacity will allow for safer lift of larger vessels and expanded boatyard services.	$3,762,000	Short-term
Large Lift	The northern portion of the Boatyard will be dedicated to ships hoisted by the 400-MT Boat Lift (Large Lift). Construction of the new lift will require dredging and installation of a bracing slab, a pile system, and the lift with accessories. The upgraded lift capacity will allow for larger vessels and expanded potential boatyard services.	$9,185,000	Long-term
Bulkhead Repair	The Pier 3 bulkhead extends along the pier's entire eastern side and a section of its northern side. Large sections of the bulkhead located north of the east dock have collapsed, whereas the bulkhead section located south of the east dock remains intact. The bulkhead requires repair and will continue to erode until repairs are made.	$12,210,000	Short-term
Enclosed Work Structures	Enclosed work structures will expand available services at the Boatyard and attract more users. There are two enclosed work structures proposed for the Boatyard. One structure will include five covered working spaces totaling 19,300 SF dedicated to small boats and the other structure will provide five covered working spaces totaling 40,300 SF dedicated to large boats.	$6,556,000	Medium-term
East Dock Repair and Attenuator	The Pier 3 east dock is located just north of the existing haulout facility and runs in-water along the east side of the pier. The existing dock is small and in poor condition. A 400' x 110' dock will be constructed in the location of the existing dock for in water work.	$8,335,800	Medium-term
Commercial and Office Entrance Area	15,600 SF of commercial/office space with a parking area fronting Gateway Drive will provide an office location for the Port and other vendors. The building will be branded with the Port logo and act as an entrance to the site.	$1,973,400	Short-term
Mixed Use Buildings	Two buildings containing industrial and commercial space will be constructed on the southwest corner of the Boatyard. The mixed use building will expand available services at the Boatyard and attract more users.	$9,829,050	Medium-term
Marketing	Actively marketing available commercial, office, and industrial space to attract vendors to the Boatyard. The expansion of services and capabilities offered at the Boatyard will attract new users.	$50,000	Short-term

Title:	**Refined Concept - Anticipated Cost**	
Project:	Port of Astoria Pier 3 Master Plan	
Client:	Port of Astoria	
Project #/Task:	M0475.02.19	Initial
Prepared By:	G. Kalmeta	GK
Checked By:	S. Frost	SF
Date:	5/15/2024	
Revision #.:	4	

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Cost Estimate Summary - Feasibility Level

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Schedule 'C' - Non Structural Infrastructure		$	3,030,543
Schedule 'D' - Structural Infrastructure		$	47,137,500
Schedule 'E' - Design and Project Management		$	5,596,641
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Assumptions:

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8. Contingency costs include permitting fees, system development charges, inflation, regionality, and construction materials variance.
9. Miscellaneous Bulkhead costs include construction and removal of temporary retaining wall, furnishing and installation of steel anchor piles, furnishing and installation of pile system, and installation of bull rail and cap beam.
10. The costs associated with the bulkhead repair obtained from the Rehab Bulk Repair Project for Pier 2. That project did not include quantity estimates, so total costs were broken down to a per liner foot cost and mutiplied by the projected length of the pier 3 bulkhead repair.

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST
Maul Foster Alongi, Inc.

Schedule A - Site Prep						NOTES
Description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
A.1	Mobilization	5%			$ 2,665,067	Assumed 5% of total construction costs from Schedules A through D
A.2	Erosion Control	1	LS	$ 50,000	$ 50,000	Estimate assumes both upland and in-water erosion controls, including but not limited to catch basin inserts, sediment fences, and in-water booms.
A.3	Sediment Disposal	21,366	TON	$ 50	$ 1,068,300	Quantity from CAD. Volume is from assumed area multiplied by a height of 10 ft. Unit Cost from WSDOT Bid Tab Line Item 0408 (Select Borrow including Haul in Southwest Region)
A.4	Demo of Inadequate Surfaces	85,000	SY	$ 20	$ 1,700,000	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 0332 (Southwest Region Average Low Bid for Pavement Repair Excavation Removal and Haul)
				Subtotal Schedule A:	**$ 5,483,367**	

Schedule B - Below Ground Utilities						
Schedule B description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
B.1	Potable Water Main	600	LF	$ 125	$ 75,000	Quantity is Engineers Estimate. Unit Cost is from WSDOT Bid Tab Line Item 3869 (Northwest Region Average Low Bid for 12" Ductile Iron Pipe installation)
B.2	Storm Drainage Collection and Conveyance	500	LF	$ 100	$ 50,000	Quantity is Engineers Estimate. Unit Cost is from WSDOT Bid Tab Line Item 3541 (Olympic Region Average Low Bid for 12" Schedule A Storm Pipe installation)
B.3	Sanitary Sewer Grinder Pump Station	4	EA	$ 25,000	$ 100,000	Quantity is Engineers Estimate. Unit Cost is from RSMeans Line Item 333111203020, Portland Region, 2024 Union based pricing.
B.4	Electrical	3,000	LF	$ 30	$ 90,000	Quantity is Engineers Estimate. Unit Cost is from RSMeans Line Item 337119151060, Portland Region, 2024 Union based pricing. Cost is doubled to include excavation and backfill
				Subtotal Schedule B:	**$ 315,000**	

Schedule C - Non Structural Infrastructure						
Schedule C description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
C.1	80' Length Angled Boat Stalls (Stripes or Paint)	15,180	LF	$ 2	$ 30,360	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 6818 (Average Low Bid for Southwest Region for Plastic Wide Line)
C.2	130' Length Angled Boat Stalls (Stripes or Paint)	5,110	LF	$ 2	$ 10,220	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 6818 (Average Low Bid for Southwest Region for Plastic Wide Line)
C.3	130' Length Boat Stalls (Stripes or Paint)	1,440	LF	$ 2	$ 2,880	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 6818 (Average Low Bid for Southwest Region for Plastic Wide Line)
C.4	Security Fencing	4,050	LF	$ 35	$ 141,750	Quantity from CAD. Unit Cost is from RSMeans Line Item 337119151060 (Unit price, open shop, Portland Area, 2024 pricing)
C.5	Access Gates	3	EA	$ 4,000	$ 12,000	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 7118 (Average Low Bid for Southwest Region for 20' double wide gate). Cost doubled to account for larger proposed gates
C.6	New Pavement (8" thick HMA)	18,889	TON	$ 150	$ 2,833,333	Quantity from CAD. Unit Cost is from WSDOT Bid Tab Line Item 5767 (Average Low Bid for Southwest Region for HMA CL1/2IN.PG).
				Subtotal Schedule C:	**$ 3,030,543**	

Schedule D - Structural Infrastructure						
Schedule D description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
D.1	Furnish and Install Bulkhead Wall	1,000	LF	$ 5,200	$ 5,200,000	Quantity from CAD. Unit Cost is from Project Budget for Pier 2 West Rehab Bulkhead Repair Project. Total costs were broken down to a per linear foot cost and multiplied by the projected length of the pier 3 bulkhead repair.
D.2	Structural Backfill for Bulkhead Wall	1,000	LF	$ 2,900	$ 2,900,000	Quantity from CAD. Unit Cost is from Project Budget for Pier 2 West Rehab Bulkhead Repair Project. Total costs were broken down to a per linear foot cost and multiplied by the projected length of the pier 3 bulkhead repair.
D.3	Miscellaneous Bulkhead Costs	1,000	LF	$ 3,000	$ 3,000,000	Quantity from CAD. See note 9 on assumptions.
D.4	150 MT Lift and Wash Area Pile System	1	EA	$ 1,300,000	$ 1,300,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes installation of sheet piling for bulkhead, wingwalls, walers, and tie back, and structural supports.
D.5	150 MT Lift Dredging	1	EA	$ 70,000	$ 70,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes dredging of lift area.
D.6	150 MT Lift and Wash Area Bracing and Slab	1	EA	$ 450,000	$ 450,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes bracing, girders, fendering system, and concrete slab
D.7	150 MT Lift and Wash Area Accessories	1	EA	$ 100,000	$ 100,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes miscellaneous items (i.e rails, cleats, life rings, ladders, lights, controls, etc.)
D.8	150 MT Lift	1	EA	$ 1,500,000	$ 1,500,000	Cost reference from Port during advisory meeting on 02/20/24
D.9	400 MT Lift and Wash Area Pile System	1	EA	$ 1,700,000	$ 1,700,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes installation of sheet piling for bulkhead, wingwalls, walers, and tie back, and structural supports.
D.10	400 MT Lift Dredging and Timber Pile Removal	1	EA	$ 100,000	$ 100,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes dredging and pile removal of lift area.
D.11	400 MT Lift and Wash Area Bracing and Slab	1	EA	$ 900,000	$ 900,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes bracing, girders, fendering system, and concrete slab
D.12	400 MT Lift and Wash Area Accessories	1	EA	$ 150,000	$ 150,000	Based on obtained cost estimate from Bergerson Construction for structural design and construction of lift. Cost includes miscellaneous items (i.e rails, cleats, life rings, ladders, lights, controls, etc.)
D.13	400 MT Lift	1	EA	$ 5,500,000	$ 5,500,000	Cost reference from Port during advisory meeting on 02/20/24
D.14	East Dock	44,000	SF	$ 162	$ 7,128,000	Quantity from CAD. Unit Cost is from RSMeans Line Item 061333500460 (Unit price, open shop, Portland Area, 2024 pricing)
D.15	Attenuator	3,000	SF	$ 150	$ 450,000	Quantity from CAD. Unit Cost is from RSMeans Line Item 061333500460 (Unit price, open shop, Portland Area, 2024 pricing)
D.16	150 MT Enclosed Work Structure (BLDG B)	19,300	SF	$ 100	$ 1,930,000	Cost estimate based on analysis of industrial building code and data provided by Hellisgo Construction.
D.17	400 MT Enclosed Work Structure (BLDG A)	40,300	SF	$ 100	$ 4,030,000	Cost estimate based on analysis of industrial building code and data provided by Hellisgo Construction.
D.18	Port Office (BLDG C)	15,600	SF	$ 115	$ 1,794,000	Quantity from CAD. Unit Cost is from RSMeans Line Item 133419500180 (Unit price, open shop, Portland Area, 2024 pricing). Double cost to include interior components
D.19	Mixed Use Building (BLDG D)	33,100	SF	$ 115	$ 3,806,500	Quantity from CAD. Unit Cost is from RSMeans Line Item 133419500180 (Unit price, open shop, Portland Area, 2024 pricing). Double cost to include interior components
D.20	Mixed Use Building (BLDG E)	44,600	SF	$ 115	$ 5,129,000	Quantity from CAD. Unit Cost is from RSMeans Line Item 133419500180 (Unit price, open shop, Portland Area, 2024 pricing). Double cost to include interior components
				Subtotal Schedule D:	**$ 47,137,500**	
				Construction Subtotal:	**$ 55,966,411**	

Schedule E - Design and Permitting						
Schedule E description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
E.5	Design and Permitting	10%			$ 5,596,641	
				Subtotal Schedule E:	**$ 5,596,641**	Summary of design and permitting costs for all implementation actions.

Schedule F - Contingency						
Schedule F description		*Quantity*	*Unit*	*Unit Cost*	*Total Cost*	
F.1	Contingency (30%)	30%		-	$ 18,468,915	Standard 30% contigency cost added for conceptual level estimate
				Subtotal Schedule 'F':	**$ 18,468,915**	

	PROJECT TOTAL:	**$ 80,031,967**

Utility Upgrades

Work Description	
Upgrades to site utilities are necessary to accommodate proposed improvements in the Boatyard Master Plan. Necessary upgrades include installation of 600 LF of 12" ductile iron pipe for water conveyance, 500 LF of 12" Schedule A storm pipe, and 3,000 LF of electrical conduit. Utility upgrades will be completed in conjunction with site preparation and development build-out.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Select contractor; if public funding utilized, selection will occur through a competitive bid process. •Communicate work timeline to existing Boatyard users.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Potable Water Main	Installation of 600 LF of 12" ductile iron pipe	$75,000
Storm Drainage Collection and Conveyance	Installation of 500 LF of 12" Schedule A storm pipe	$50,000
Sanitary Sewer Grinder Pump Station	Construction of pump station	$100,000
Electrical Infrastructure	Installation of 3,000 LF of electrical conduit	$90,000
Subtotal		$315,000
Design and Permitting	10% of total work	$31,500
Total		**$346,500**

Funding Opportunities	•USDOT Port Infrastructure Development Program •Business Oregon Special Public Works Fund •EDA Planning and Local Technical Assistance Program •EDA Public Works and Economic Adjustment Assistance Programs
Notes	The existing water line will be extended to serve the proposed mixed use buildings on the southwest corner of the site and the covered working areas on the west side of the site. Similarly, electrical conduit will need to extend from the existing lines in the center of the site to serve the mixed use buildings and covered vessel work buildings. A new stormwater pipe will be installed to serve the mixed use buildings and parking areas on the southwest corner of the site. A new sanitary sewer pump station and piping with connection to the sanitary sewer line on Gateway Avenue will serve new restroom areas across the site.
Phasing	Short-term (1-2 years)

Site Preparation

Work Description

Preparation for site development includes:
- Mobilization of workforce and equipment.
- Characterization and disposal of soil from dredge spoil piles.
- Demolition of inadequate surfaces in the area of previous lumber storage.
- Erosion control for sediment disposal and demolition activities.

Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Construction, preferably to occur during summer months (May-September). •Select contractor through a competitive bid process. •Communicate work timeline to existing Boatyard users.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Mobilization	Assumed 5% of total construction costs	$2,665,267
Erosion Control	Estimate assumes both upland and in-water erosion controls.	$50,000
Sediment Disposal	Removal of roughly 21,366 tons of soil from existing dredge spoil piles.	$1,068,300
Demolition of Inadequate Surfaces	Removal of 85,000 SY of material	$1,700,000
Subtotal		$5,483,567
Design and Permitting	10% of total work	$548,357
Total		**$6,031,924**

Funding Opportunities	•Business Oregon Special Public Works Fund •USDOT Port Infrastructure Development Program •EDA Public Works and Economic Adjustment Assistance Programs •EDA Planning and Local Technical Assistance Program
Notes	Dredge spoil pile removal will require characterization for environmental contaminants prior to disposal. Consultation with local DEQ representative is recommended. Site preparation will be completed in conjunction with utility upgrades and development build-out.
Phasing	Short-term (1-2 years)

Access Improvements

Work Description	
Site access is provided along Gateway Avenue. Proposed improvements to access include three new vehicle gates and security fencing.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses all transportation planning and engineering considerations. •Select contractor through a competitive bid process.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Security Fencing	Installation of 4,050 LF of security fencing.	$141,750
Access Gates	Installation of three 20' double wide gates.	$12,000
Subtotal		$153,750
Design and Permitting	10% of total work	$15,375
Total		**$169,125**

Funding Opportunities	•Business Oregon Special Public Works Fund •USDOT Port Infrastructure Development Program •EDA Public Works and Economic Adjustment Assistance Programs •EDA Planning and Local Technical Assistance Program
Notes	Drive access and security fencing should be designed in coordination with DSL and Englund Marine. Consider location of semi truck idling area adjacent to the westernmost Englund Marine Building during first phase of design.
Phasing	Short-term (1-2 years)

Pavement

Work Description	
Existing pavement at the Boatyard is damaged due to years of use as a timber lay down area. Development of new boat stalls and other Boatyard improvements including parking areas will require 18,889 tons of new pavement across the site.	
Implementation Steps/key developments	•Determine funding source. •Construction, preferably to occur during summer months (May-September). •Select contractor through a competitive bid process. •Communicate work timeline to existing users.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
New Pavement	Placement of 18,889 Tons of 8" thick HMA pavement.	$ 2,833,333
Subtotal		$ 2,833,333
Design and Permitting	10% of total work	$283,333
Total		**$3,116,667**

Funding Opportunities	•USDOT Port Infrastructure Development Program •EDA Public Works and Economic Adjustment Assistance Programs •EDA Planning and Local Technical Assistance Program
Notes	Additional funding pending ongoing lawsuit with Astoria Forest Products.
Phasing	Short-term (1-2 years)

Boat Stalls

Work Description	
The Boatyard will include a variety of striped or painted open-aired boat stalls including angled 150 MT (80' long) Boat Stalls, angled 400 (130' long) MT Boat Stalls, and no-angle 400 (130' long) MT Boat Stalls.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Construction, preferably to occur during summer months (May-September). •Select a contractor.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Angled 150 MT (80' long)Boat Stalls (Stripes or Paint)	Striping or painting of 15,180 LF of boat stalls.	$30,360
Angled 400 MT (130' long) Boat Stalls (Stripes or Paint)	Striping or painting of 5,110 LF of boat stalls.	$10,220
No-angle 400 MT (130' long) Boat Stalls (Stripes or Paint)	Striping or painting of 1,440 LF of boat stalls.	$2,880
Subtotal		$43,460
Design and Permitting	10% of total work	$4,346
Total		**$47,806**

Funding Opportunities	•USDOT Port Infrastructure Development Program •EDA Public Works and Economic Adjustment Assistance Programs •EDA Planning and Local Technical Assistance Program
Notes	
Phasing	Short-term (1-2 years)

150- Metric Ton Lift and Wash Area

Work Description

A 150 Metric Ton (MT) Boat Lift (Small Lift) will replace the existing 80 MT Lift. Construction of the Small Lift will require dredging and installation of a bracing slab, a pile system, and the lift with accessories. The upgraded lift capacity will allow for safer lift of larger vessels and expand potential boatyard services.

Implementation Steps/key developments	•Determine funding source. •Select Vendor

Key Developments and Estimated Costs

Description	Work Assumptions	Cost
150 MT Lift	Procurement and installation of mobile boat hoist.	$1,500,000
150 MT Lift and Wash Area Pile System	Installation of sheet piling for bulkhead, wingwalls, walers, and tie back, and structural supports	$1,300,000
150 MT Lift Dredging	Dredging of the lift area.	$70,000
150 MT Lift and Wash Area Bracing and Slab	Installation of bracing, girders, fendering system, and concrete slab.	$450,000
150 MT Lift and Wash Area Accessories	Installation of rails, cleats, life rings, ladders, lights, controls, and other miscellaneous items.	$100,000
Subtotal		$3,420,000
Design and Permitting	10% of total work	$342,000
Total		**$3,762,000**

Funding Opportunities	• USDOT Port Infrastructure Development Program • MARAD Small Shipyard Grants
Notes	Small Lift will be implemented in the location of the existing lift.
Phasing	Short-term (1-2 years)

400- Metric Ton Lift and Wash Area

Work Description

The northern portion of the Boatyard will be dedicated to ships hoisted by the 400 MT Boat Lift (Large Lift). The Large Lift will require excavation of the pier to accommodate the lift way, construction of a wash area, and structural support to operate on the northeast corner of the Boatyard.

Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Select contractor through a competitive bid process.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
400 MT Lift	Procurement and installation of mobile boat hoist.	$ 5,500,000
400 MT Lift and Wash Area Pile System	Installation of sheet piling for bulkhead, wingwalls, walers, and tie back, and structural supports	$ 1,700,000
400 MT Lift Dredging and Timber Pile Removal	Dredging of the lift area.	$ 100,000
400 MT Lift and Wash Area Bracing and Slab	Installation of bracing, girders, fendering system, and concrete slab.	$ 900,000
400 MT Lift and Wash Area Accessories	Installation of rails, cleats, life rings, ladders, lights, controls, and other miscellaneous items.	$ 150,000
Subtotal		$ 8,350,000
Design and Permitting	10% of total work	$ 835,000
Total		**$9,185,000**

Funding Opportunities	• USDOT Port Infrastructure Development Program • MARAD Small Shipyard Grants
Notes	Installation of the large lift requires additional structural support on the northeast corner of Pier 3. As vessel sizes trend larger, the new large lift will allow the Boatyard to capture a greater portion of the market.
Phasing	Long- term (5+ years)

Bulkhead Repair

Work Description	
The Pier 3 bulkhead extends along the pier's entire eastern side and a section of its northern side. Large sections of the bulkhead located north of the east dock have collapsed, whereas the bulkhead section located south of the east dock remains intact. The bulkhead requires repair and will continue to erode until repairs are made.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Initiate Section 404 and Section 10 permitting process with U.S. Army Corps of Engineers. •Select contractor through a competitive bid process.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Furnish and Install Bulkhead Wall	Furnish and repair of 1,000 LF of bulkhead wall.	$5,200,000
Structural Backfill for Bulkhead Wall	Backfill for 1,000 LF of bulkhead wall.	$2,900,000
Miscellaneous Bulkhead Costs		$3,000,000
Subtotal		$11,100,000
Design and Permitting	10% of total work	$1,110,000
Total		**$12,210,000**

Funding Opportunities	•USDOT Port Infrastructure Development Program (PIDP) •Business Oregon Special Public Works Fund •MARAD Small Shipyard Grants •EDA Public Works and Economic Adjustment Assistance Programs •EDA Planning and Local Technical Assistance Program
Notes	The Port is working on repairs of the Pier 2 bulkhead concurrently with Boatyard improvements. Repairs of both bulkheads should be coordinated.
Phasing	Medium-term (2-5 years)

Enclosed Work Structures

Work Description	
Enclosed work structures will expand available services at the Boatyard and attract more users. There are two enclosed work structures proposed for the Boatyard. One structure will include five covered working spaces totaling 19,300 SF dedicated to small boats and the other structure will provide five covered working spaces totaling 40,300 SF dedicated to large boats.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Select contractor and vendors; if public funding utilized, selection will occur through a competitive bid process. •Begin marketing outreach to potential vendors.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
150 MT Enclosed Work Structure	Construction of 19,300 SF of shop space, including interior components.	$ 1,930,000
400 MT Enclosed Work Structure	Construction of 40,300 SF of shop space, including interior components.	$ 4,030,000
Subtotal		$ 5,960,000
Design and Permitting	10% of total work	$596,000
Total		**$6,556,000**

Funding Opportunities	•USDOT Port Infrastructure Development Program •MARAD Small Shipyard Grants •EDA Planning and Local Technical Assistance Program •EDA Public Works and Economic Adjustment Assistance Programs
Notes	Several covered working spaces on the west side of the site are on DSL-owned land. Commercial activity that takes place on DSL-owned land will need to be negotiated with DSL. Potential outcomes of negotiations are revenue share, renegotiated leasing terms, or outright acquisition of the land.
Phasing	Medium-term (2-5 years)

East Dock Repair and Attenuator

Work Description

The Pier 3 east dock is located just north of the existing haulout facility and runs in-water along the east side of the pier. The existing dock is small and in poor condition. A 400' x 110' dock will be constructed in the location of the existing dock for in-water work. A wave attenuator dock will be installed in Slip 2, north of the 400 MT lift.

Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Initiate Section 404 and Section 10 permitting process with U.S. Army Corps of Engineers. •Construction, preferably to occur during summer months (May-September). •Select contractor through a competitive bid process.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
East Dock	Installation of 44,000 SF dock	$7,128,000
Attenuator	Installation of 3,000 SF attenuator	$450,000
Subtotal		$7,578,000
Design and Permitting	10% of total work	$757,800
Total		**$8,335,800**

Funding Opportunities	•Business Oregon Special Public Works Fund • USDOT Port Infrastructure Development Program • MARAD Small Shipyard Grants •EDA Public Works and Economic Adjustment Assistance Programs
Notes	Demolition of existing dock structure is required. Most piles can be left in place under the existing dock. Any additional water coverage will need to be mitigated, which may be somewhat offset by the trench-in concept for the Large Lift. Replacement of the existing dock should be coordinated with demolition of the Riverwalk Inn and Chinook Building on the Central Waterfront to capture over-water credits for the National Marine Fisheries Service.
Phasing	Medium-term (2-5 years)

Commercial and Office Entrance Area

Work Description

A 15,500 SF commercial/office space with a parking area fronting Gateway Drive will provide an office location for the Port and other vendors. The building will be branded with the Port logo and act as an entrance to the site.

Implementation Steps/key developments	•Determine funding source. •Produce an engineering and architectural plan set that encompasses the targeted phase of development. •Construction, preferably to occur during summer months (May-September). •Select contractor; if public funding is utilized, selection will occur through a competitive bid process. •Begin marketing outreach to potential vendors.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Port Industrial and Office Building (BLDG C)	Construction of Port Industrial and Office Building.	$ 1,794,000
Subtotal		$ 1,794,000
Design and Permitting	10% of total work	$179,400
Total		**$1,973,400**

Funding Opportunities	•MARAD Small Shipyard Grants •EDA Planning and Local Technical Assistance Program •EDA Public Works and Economic Adjustment Assistance Programs
Notes	Access to the building will be provided by a parking area on Gateway Drive.
Phasing	Short-term (1-2 years)

Mixed Use Buildings

Work Description	
Two buildings containing industrial and commercial space will be constructed on the southwest corner of the Boatyard. The mixed use building will expand available services at the Boatyard and attract more users.	
Implementation Steps/key developments	•Determine funding source. •Produce an engineering plan set that encompasses the targeted phase of development. •Remove dredge spoil pile in southwest corner of Boatyard. •Select contractor through a competitive bid process. •Begin marketing outreach to potential vendors.

Key Developments and Estimated Costs

Description	**Work Assumptions**	**Cost**
Mixed Use Building (BLDG D)	Construction of 33,100 of open shop space, including interior components.	$3,806,500
Mixed Use Building (BLDG E)	Construction of 44,600 of open shop space, including interior components.	$5,129,000
Subtotal		$8,935,500
Design and Permitting	10% of total work	$893,550
Total		**$9,829,050**

Funding Opportunities	•MARAD Small Shipyard Grants •EDA Planning and Local Technical Assistance Program •EDA Public Works and Economic Adjustment Assistance Programs
Notes	Removal of the dredge spoil pile is required prior to building construction. Phasing of buildout should reflect DSL land lease: the mixed use building designed outside of the DSL property boundary should be constructed first. Commercial activity that takes place on DSL-owned land will need to be negotiated with DSL. Potential outcomes of negotiations are revenue share, renegotiated leasing terms, or outright acquisition of the land.
Phasing	Medium-term (5-10 years)

Marketing

Work Description	
Actively market available commercial, office, and industrial space to attract vendors to the Boatyard. The expansion of services and capabilities offered at the Boatyard will attract new users.	
Implementation Steps/key developments	•Determine funding source. •Develop marketing plan.
Key Developments and Estimated Costs	
Marketing	$50,000
Total	**$50,000**
Funding Opportunities	Business Oregon Port Planning and Marketing Fund
Notes	The Boatyard is traditionally a "word-of-mouth" facility. Active marketing and outreach can attract new vendors and users to maximize return on investment.
Phasing	Short-term (1-5 years)

General Application

775 Summer St NE, Suite 200
Salem, OR 97301-1280

Applicant

Port of Astoria Name	93-6001827 Federal Tax ID Number
422 Gateway Ave, Suite 100, Astoria, OR 97103 Street Address	422 Gateway Ave, Suite 100, Astoria, OR, 97103 Mailing Address

Organization Type:

☐ City ☐ County ☒ Special District under ORS 777 ☐ Port District under ORS _____ ☐ Tribe

Matt McGrath Contact Name (Person we should contact with project questions)	Deputy Director Title

503 298 0909 Phone Number	503 741 3345 Fax Number	mmcgrath@portofastoria.com Email Address

Representation (Information may be found at www.leg.state.or.us/findlegsltr)

16 Senate District Number	Suzanne Weber Senator's Name
32 House District Number	Cyrus Javadi Representative's Name

Project Information

Pier 2 Byproduct Recovery Center
Project Name: (e.g., Stayton Water System Improvements)

Opportunity/Problem
Briefly describe the opportunity or problem facing the applicant:
DEQ is pushing separate processors into potentially disparate wastewater processing requirements which will dramatically increase inefficiency and cost. The Port is seeking to consolidate 900-J permit requirements under one permit for which Port bears responsibility. This would require a Byproduct Recovery Center ("BRC") which would be constructed, owned and operated by the Port.

Response to Opportunity/Problem

Briefly describe the major alternatives considered to address this opportunity or problem:

Current processing operations require multiple permits for each of the seafood processors located on Pier 2: Da Yang Seafoods and Bornstein's Seafoods. Permits are also disparate, in that Da Yang Seafoods is not currently operating under a permit, rather DEQ authorization. Though Da Yang's permit is currently in process by DEQ, the Port has been working with Regional Solutions personnel to pause the permitting process so that the Port may investigate a better long-term solution for processors, regulators, and the Port. The construction of a BRC at the south end of Pier 2 would allow consolidation of permits and potentially present one permit holder in the Port of Astoria. This consolidation would allow the Port to access different funding sources typically unavailable to processors.

Detailed Project Description

Clearly describe the proposed project work to be accomplished:

TASK 1 - Characterize the flow and quality of wastewater to the BRC (from data from the sources potentially sending water to the BRC);
TASK 2 - Identify infrastructure requirements to transport wastewater to the BRC and from the BRC to the outfall
TASK 3 - Prepare a conceptual layout for BRC faclity and wastewater transport infrastructure (working with PND Engineers currently working on Pier 2 West Rehabilitation project);
TASK 4 -Assess potential impacts from the BRC discharge to the Columbia River (mixing zone study);
TASK 5 - Assess environmental permitting requirements (DEQ, USACE, NMFS) including discussions with agencies, if relevant; and
TASK 6 - Assess infrastructure requirements for treatment systems, such as space requirements, foundation requirements, and other infrastructure needs

Project Work Plan

List project activity milestones with estimated start and completion dates. Identify estimated date of first cash draw:

Activity	Estimated Date	
	Start	Completion
Tasks 1-2	Jul 1, 2024	Sep 30, 2024
Task 3	Jul 1, 2024	Oct 31, 2024
Task 4	Aug 1, 2024	Nov 30, 2024
Tasks 5-6	Aug 1, 2024	Dec 31, 2024

Estimated First Draw Date: Aug 15, 2024

Project Budget
List individual project budget line items with requested budgeted amounts by IFA and non-IFA funding sources. Change budget column labels to identify the specific requested IFA funding sources. Non-IFA sources are those funds other than those requested from IFA. **Please be aware that the award loan amount will be subject to a less than 1% issuance fee if the loan is included in the Oregon Bond Bank. Please contact Business Oregon for additional information.**

Budget Line Item (Adjust budget items to suit the project) *Below are general items most used*	**IFA Funding**		**Non-IFA**	
	Source 1	**Source 2**	**Funds**	**Total**
Engineering/Architecture	**$60,000**	**$0**	$20,000	**$80,000**
Construction				**0**
Construction Contingency				**0**
Land Acquisition				**0**
Legal				**0**
Construction Management				**0**
Other (Specify)				**0**
Other (Specify)				**0**
Other (Specify)				**0**
Other (Specify)				**0**
Totals	**60,000**	**0**	**20,000**	**80,000**

Details of Non-IFA Funds

Source of Non-IFA Funds	**Amount**	**Status: C-Committed, A-Application S-Submitted, AI-Application Invited, PS-Potential Source**	**Dates Required Funds will be Committed and Available**
Port of Astoria	$15,000	C	**1-Aug-24**
WSPCA	5,000	PS	**30-Sep-24**
Totals	**20,000**		

If "Non-IFA funds" include USDA Rural Development funding that will require interim financing, please indicate the source of the interim financing.

General Certification

I certify to the best of my knowledge all information, contained in this document and any attached supplements, is valid and accurate. I further certify that, to the best of my knowledge:

1. The application has been approved by the governing body or is otherwise being submitted using the governing body's lawful process, and
2. Signature authority is verified.

Check one:

☒ Yes, I am the highest elected official. (e.g., Mayor, Chair or President)

☐ No, I am not the highest elected official so I have attached documentation that verifies my authority to sign on behalf of the applicant. (Document such as charter, resolution, ordinance or governing body meeting minutes must be attached.)

The department will only accept applications with proper signature authority documentation.

	5/21/24
Signature	Date
Robert Stevens	Commission President
Printed Name	Printed Title

FOR BUSINESS OREGON USE ONLY

Concept Number	Intake Approval Date

Project Type:

☐ Planning ☐ Construction ☐ Other:

☐ Design ☐ Design & Construction

AMENDMENT
to
PND Engineers, Inc. (PND)
Standard Form of Agreement
for
Professional Engineering Services

This agreement ("Amendment") amends that agreement entered into by and between the Port of Astoria ("Client") and PND Engineers, Inc. ("Engineer") dated October 18, 2023 ("Agreement"), for certain design and engineering work for the 2 West Rehabilitation Project ("Project"). This Amendment shall be effective as of the date of last signature below ("Effective Date").

RECITALS

WHEREAS, by and through the Agreement, Client engaged Engineer to complete design and engineering work for the Project to the 60% stage, which work has been partially performed up to the 30% stage; and

WHEREAS, pursuant to Oregon Revised Statutes ("ORS") 279C.115(2), Client intends to engage Engineer to continue design and engineering work for the Project from 30% to 100% completion (hereinafter, "Additional Work"); and

WHEREAS, since entering into the Agreement the Port has been awarded federal grant funds ("Grant") for the Project, and conditions of the Grant require certain terms and conditions to be incorporated into all primary contractor agreements for which the Port will seek reimbursement under the Grant; and

WHEREAS, Client intends to seek reimbursement under the Grant for compensation paid to Engineer for the Additional Work; and

WHEREAS, Client and Engineer desire to amend the Agreement to include the Additional Work, and to incorporate certain terms and conditions required to be included in order for Client to seek reimbursement from Grant funds for the Additional Work;

NOW THEREFORE, the Agreement is hereby amended as set forth herein.

1. Addendum A

1.1 Replacement

Addendum A and Addendum C to the Agreement are hereby replaced and superseded by Addendum A, Parts 1, 2, and 3 (respectively, "Port of Astoria Pier 2 West Rehabilitation Post 30% Design – Revised Scope and Fee"; "30% Design Drawings"; and "Detailed Fee/Hours Breakdown by Task"), attached hereto and incorporated herein by this reference.

1.2 Scope of Additional Work

The Additional Work defined by Addendum A to this Amendment includes: i) a restatement of the 31% to 60% design and engineering work that was included in Addendum A & C to the Agreement; ii) continuing work for 61% to 100% design and engineering work on the Project; and iii) engineer's construction phase administration and oversight during construction of the Project.

1.3 Compensation

Engineer hereby acknowledges receipt of payment from Client in the amount of $504,226.93, and agrees that such amount comprises payment in full for services performed under the Agreement for completed design and engineering work up through the 30% design stage. Engineer further acknowledges and certifies that the remaining amount of $458,773.07 due under the Agreement will apply to post-30% design and engineering work that is included in and will be paid by Client pursuant to this Amendment and any applicable addenda.

2. Section 2.01

2.1 Reference to "Addendum A" in Section 2.01(C) of the Agreement is hereby deleted and replaced with "Addendum A, Part 3 (Detailed Fee/Hours Breakdown by Task)."

2.2 Reference to "Addendum A" in Section 2.01(D) of the Agreement is hereby deleted and replaced with "Addendum A, Part 1 (Port of Astoria Pier 2 West Rehabilitation Post 30% Design – Revised Scope and Fee)."

2.3 The last sentence of Section 2.01(D) of the Agreement, "Any inconsistency in fees as between Addendum A and Addendum C ("Detailed Fee Proposal") shall be resolved in favor of Addendum A," is hereby deleted.

2.4 The compensation stated in the Agreement is hereby replaced and superseded by the compensation amounts set forth in Part 1 of the attached Addendum A, "Port of Astoria Pier 2 West Rehabilitation Post 30% Design – Revised Scope and Fee," including, to the extent applicable, the standard rates set forth in Supplement 2 included therein ("PND ENGINEERS, INC. SEATTLE STANDARD RATE SCHEDULE EFFECTIVE FEBRUARY 2023").

3. Section 3.01

3.1 Section 3.01(A) of the Agreement is hereby deleted in its entirety and replaced with the following: "If authorized by Client in writing, Engineer shall furnish services in addition to those set forth in Addendum A."

3.2 Section 3.01(B) of the Agreement is hereby deleted in its entirety and replaced with the following: "If Client authorizes Engineer to perform additional services under this section, unless an alternative method of payment is otherwise agreed to in writing by the parties, Client agrees to pay Engineer an amount equal to the Engineer's employees' cumulative hours charged to the Project by each class of employee times Engineer's current standard hourly rates for each applicable billing class, plus reimbursable expenses, and Engineer's consultants' charges, if any, plus markup.

4. Section 4.01

4.1 The following is hereby appended to the end of Section 4.01(B.2) of the Agreement: "Both Parties acknowledge and agree that absent a duly executed amendment in accordance with Section 12.01, this Agreement is a Fixed Fee or Lump Sum contract."

5. Section 12.01

5.1 Section 12.01 of the Agreement is hereby deleted in its entirety and replaced with the following:

"This Agreement together with any expressly incorporated addenda, exhibits, supplements, or appendices constitutes the entire Agreement between Client and Engineer and supersedes all prior written agreements or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument. The following documents are expressly incorporated into this Agreement: Addendum A ("Port of Astoria Pier 2 West Rehabilitation Post 30% Design – Revised Scope and Fee" [Part 1], 30% Design Drawings [Part 2], and Detailed Fee/Hours Breakdown by Task [Part 3]); Addendum B ("SUPPLEMENT AND AMENDMENT TO THE TERMS AND CONDITIONS OF THE Agreement"); Addendum C ("U.S. DEPARTMENT OF TRANSPORTATION MARITIME ADMINISTRATION, GENERAL TERMS AND CONDITIONS UNDER THE FISCAL YEAR 2023 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM GRANTS"), dated January 29, 2024; Addendum D ("U.S. DEPARTMENT OF TRANSPORTATION MARITIME ADMINISTRATION EXHIBITS TO MARAD GRANT AGREEMENTS UNDER THE FISCAL YEAR 2023 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM GRANTS"), dated January 2, 2024; Addendum E ("Federal Supplement"); and Supplement 2 ("PND ENGINEERS, INC. SEATTLE STANDARD RATE SCHEDULE EFFECTIVE FEBRUARY 2023").

6. "Project" Changed to "Agreement"

6.1 The word "Project" shall be changed to "Agreement" in the following sections of the Agreement: 1.01; 2.01(B)(2nd ¶); 4.01(A); 4.01(B.2); 6.01(A); 6.01(B); 7.01(A); 7.01(F)(2nd instance only); 7.01(I)(1st ¶, 1st instance only)(2nd ¶, last instance only); 8.01(B)(2nd instance only)

Except as expressly provided in this Amendment, the Agreement is hereby affirmed and ratified as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment:

CLIENT:	ENGINEER:
PORT OF ASTORIA	**PND ENGINEERS, INC.**
_____	_____
Signature	*Signature*
_____	_____
Print Name	*Print Name*
_____	_____
Date	*Date*

Addendum A, Part 1: Port of Astoria Pier 2 West Rehabilitation Post 30% Design – Revised Scope and Fee

ENGINEERS, INC.

April 30, 2024 234038

Mr. Matt McGrath
Deputy Director
Port of Astoria
422 Gateway Ave. Suite 100
Astoria, OR 97103

SUBJECT: Port of Astoria Pier 2 West Rehabilitation Post-30% Design – Scope and Fee Proposal

Mr. McGrath:

PND Engineers, Inc. (PND) is are pleased to present this scope and fee proposal for engineering services for the Port of Astoria's (Port) Pier 2 West project for Post 30% Design services. Our Team includes GeoEngineers, Inc. (Geo), Harbor Power Engineers (HPe), Appledore Marine Engineering (AME), Wells Electrical Contracting (WEC), and Global Geophysics for the Post-30% design work. This work includes design phases for 60% design, 90% design, 100% design and bid support, and construction administration and observation.

The following sections outline our team's project understanding, scope, fee basis, proposed schedule, and deliverables.

PROJECT UNDERSTANDING

The Port has identified the need to rehabilitate Pier 2 West. The existing timber pile supported pier has reached the end of its useful design life: vehicle traffic and surface loading are severely restricted. Bornstein Seafoods and DaYang Seafoods are the current commercial tenants on Pier 2 West. The pier will need to be renovated to stabilize the slope, create a resilient structure that allows flexible vehicle access and surface loading, and support new berthing/mooring features for current and future vessels. The rehabilitated pier will be outfitted with utilities including a stormwater and process water collection and conveyance system. The pier will also include water lines and electrical conduits to provide the tenant will flexibility to build out the leased areas to suit operations.

The PND Team has worked with the Port to develop a 30% design for the Pier rehabilitation. The project is being funded by multiple sources include federal funds through MARAD.

The pier replacement is approximately 820 feet long and 64 feet wide, though the width varies. Refer to Figure 1 below for a general overview of the project site. The pier rehabilitation will have a design life of 75 years.

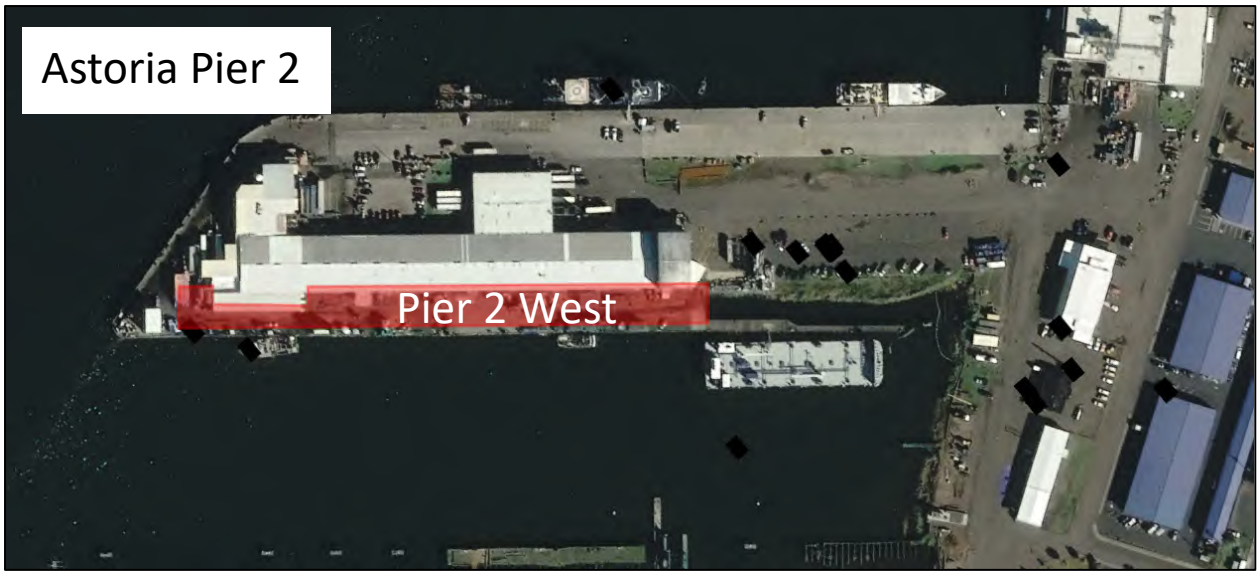


Figure 1. Port of Astoria Pier 2 – (Google Earth Aerial Photo October 2019)

The construction of this project is expected to occur in three phases to align with the in-water work windows in 2025-2026, 2026-2027, and 2027-2028. The Port is being supported in the development of the project by Bergerson Construction Incorporated (BCI), serving as the project CM/GC. Additionally, environmental permitting is being develop under a separate contract by Campbell Environmental, LLC (Campbell).

PND has developed the rehabilitation design to a 30% level based on the design alternative 2 which KPFF evaluated in their report on August 27, 2021. Our Team has developed the design of a filled steel sheet pile structure to a 30% level using the OPEN CELL Bulkhead. This design accommodates earth retention loads, live loads, and seismic/liquefaction forces at the site. The OPEN CELL Bulkhead 30% design layout is depicted in the plan view in Figure 2 below.

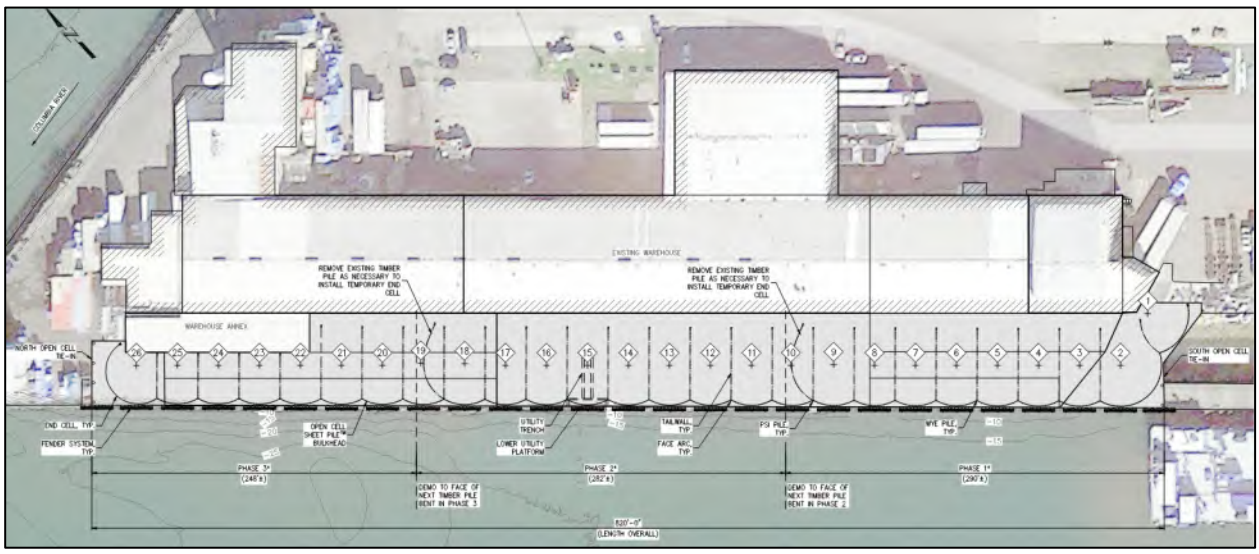


Figure 2. Pier 2 West Plan with OPEN CELL Bulkhead

The engineering work has been divided into tasks. The 30% project management, site evaluation, and 30% design were tracked previously under Tasks 1, 2, and 3; respectively.

The scope of work, anticipated schedule, exclusions, assumptions, and fee summary for the tasks going forward are outlined below.

4. 60% DESIGN

60% design will not commence until our team receives written notice to proceed from the Port.

This task consists of advancing the design to a 60% level based on feedback from the 30% design and draft geotechnical report. The Design Team will develop the 60% design for Pier 2 West in conjunction with the finalized geotechnical exploration and analysis. The 60% design will include the following intermediate design tasks:

- Project management and coordination meetings
- Finalization of stormwater report for the project
- Final site evaluation(s)
- Coordination of final environmental joint permit application documents
- Design/construction phasing coordination meetings with the site tenants
- Construction planning and phasing including construction phasing plans
- Final geotechnical design (including settlement and liquefaction mitigation)
- 60% design of:
    - OPEN CELL Bulkhead and pier structure
    - Site civil, utility, and stormwater system
    - Warehouse shoring/stabilization
    - Electrical system

The 60% design will be reviewed for a final time by AME as an independent technical review. The 60% design will be submitted to the CM/GC team and environmental team for constructability review and cost estimating as well as permitting compliance based on agency feedback.

Task 4 Deliverable(s):

- Final geotechnical report
- 60% drawings
- 60% specifications
- Construction phasing drawings
- Written overview of project requirements
- Response to comments from Port, ITR, BCI, and Campbell
- 60% Engineer's construction cost estimate

Task 4 Schedule:

60% Design for Review	3 months after notice to proceed on this task

Task 4 Budget:

The cost of this task shall be $459,000.

5. 90% DESIGN

90% design will not commence until our team receives written notice to proceed from the Port.

This task consists of advancing the design to a 90% level based on feedback from the 60% design and final geotechnical report. The 90% design will include the following tasks:

- Project management and coordination meetings
- Coordination environmental agency comments
- Design/construction phase coordination meetings with the site tenants
- 90% design of:
  - OPEN CELL Bulkhead and pier structure
  - Site civil, utility, and stormwater system
  - Warehouse shoring/stabilization
  - Electrical system
- 90% Engineer's construction cost estimate

90% design will be submitted to the CM/GC team and environmental team for constructability review and cost estimating as well as permitting compliance based on agency feedback.

Task 5 Deliverable(s):

- 90% drawings
- 90% specifications
- Written overview of project requirements
- Response to comments from Port, BCI, and Campbell
- 90% Engineer's construction cost estimate

Task 5 Schedule:

90% Design for Review 3 months after notice to proceed on this task

Task 5 Budget:

The cost of this task shall be $375,000.

6. 100% DESIGN AND BID SUPPORT

100% design and bid support will not commence until our Team receives written notice to proceed from the Port. Sub-tasks under this work task will be the following:

- Project management and coordination meetings

- Incorporation of the final permit conditions into the final drawings and specifications
- Design/construction phasing coordination meetings with the site tenants
- Issued for Bid Design of:
  - OPEN CELL Bulkhead and pier structure
  - Site civil, utility, and stormwater system
  - Warehouse shoring/stabilization
  - Electrical system
- Final Engineer's construction cost estimate
- Development of bid packages for construction

Task 6 Schedule:

100% Design — 2 months after notice to proceed on this task

Task 6 Deliverable(s):

- Issued-for-bid drawings
- Issued-for-bid specifications
- Written overview of project requirements
- Statement of work, if necessary
- Final Engineer's construction cost estimate

Task 6 Budget:

The cost of Task 3 shall be $268,000.

7. CONSTRUCTION ADMINISTRATION AND OBSERVATION

The anticipated scope of work to be completed under this phase of the project shall include the following:

- Meetings and Coordination: Attend project meetings as necessary including the preconstruction meeting and weekly coordination/progress meetings. Coordinate with Port and CM/GC personnel and on-site inspection staff as required during progression of the work. Scope assumes all meetings will be attended via video or telephone, unless noted otherwise.
- Submittal Reviews: Review all submittals and shop drawings to ensure conformance with the project requirements.
- Project Documents: Review and respond to Contractor developed RFIs, Design Verification/Change Requests (DCVRs), development of letters, drawings and/or technical memoranda as required to support the Department project team.
- Periodic Fabrication Observation: Perform periodic fabrication observation for critical phases of work. PND has assumed a total of 6 trips (1 day each) to the fabricator within 90 miles of Astoria, Seattle, or Portland in development of this scope of work.
- Full-time On-site Construction Observation for Pile Driving Construction: Perform full-time on-site construction observation
- Periodic Onsite Construction Observation for Non-Pile Driving Construction: Perform periodic onsite construction observation including critical phases of work, substantial completion and final

completion inspection. PND has assumed a total of 21 trips (1 day each) in development of this scope of work.

- Design and Permit Modifications: Develop revised project design documents as required prior to and/or during construction. Review and provide direction on Contractor developed substitution requests or proposed changes. Support Department in development of permit document modifications, if required.
- As-Built Preparation and O&M Manuals: PND will update the design drawings to reflect any changes made during construction and provide As-Built Drawings for project records. This scope includes development of a project Operations and Maintenance (O&M) manual.

Task 7 Schedule:

Aligned with construction of Pier 2 West Rehabilitation with in-water construction anticipated for 3 months starting in 2025, 2026, and 2027.

Task 7 Budget:

The cost of Task 3 shall be $594,000.

Fee Basis Summary

PND will provide these post-30% design services on a fixed-fee basis for a total of $1,696,000, with the estimated breakdown as shown below. Actual amounts for each Task may differ from the breakdown below, but PND shall not exceed the contract total.

Any additional work can be negotiated with the Port using PND's current standard rate schedule. PND's current standard rates are included as Supplement 2.

4.	**60% Design and Construction Phasing**	**$459,000**
5.	**90% Design**	**$375,000**
6.	**100% Design and Bid Support**	**$268,000**
7.	**Construction Administration**	**$594,000**

Total: $1,696,000

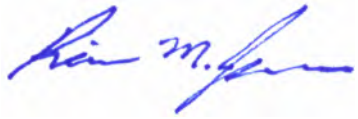
Assumptions and Exclusions

- Scope based on the extent of design outline in PND's 30% design drawings dated March 6, 2024 and included in Attachment A.
- PND standard rate schedule subject to change after 2024.

Thank you for the opportunity to provide this fee proposal. Feel free to let me know if you have any questions on this proposal.

Sincerely,

PND Engineers, Inc. | Seattle Office



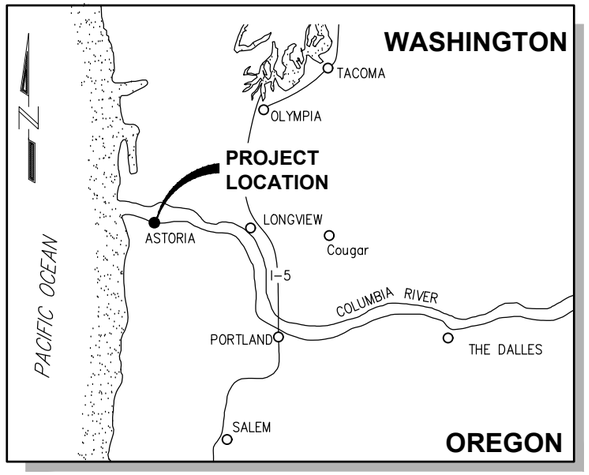
Rian M. Johnson, P.E.*, S.E.**

Vice President

*P.E. in Oregon and others; **S.E. in Washington State, California and other.

Addendum A, Part 2: 30% Design Drawings

PORT OF ASTORIA
PIER 2 WEST REHABILITATION
ASTORIA, OR



VICINITY MAP

NOT TO SCALE

LOCATION MAP

NOT TO SCALE

SHEET INDEX

VERTICAL DATUMS AND TIDAL INFORMAITON

HIGHEST MEASURED TIDE (HMT)	+12.00'
HIGHEST ASTRONOMICAL TIDE (HAT) * PROXY FOR HIGH TIDE LINE (HTL)	10.72'
MEAN HIGHER HIGH WATER (MHHW)	8.61'
MEAN HIGH WATER (MHW)	7.94'
MEAN SEA LEVEL (MSL)	4.51'
MEAN LOWER LOW WATER (MLLW)	0.0'
NAVD88	−0.47' MLLW
LOWEST OBSERVED TIDE	−3.85'

HORIZONTAL DATUM		OREGON STATE PLAN COORDINATE SYSTEM
46° 11' 18.91" N	=	46.1886 N
123° 51' 44.25" W	=	−123.8622 W

PND ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

30% DESIGN

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE: TITLE SHEET AND SHEET INDEX

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	G1.01
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

3/6/2024 3:11 PM K:\2023\234038 Astoria Pier 2 West\30% Design (Draft)\234038.G1.01.dwg

GENERAL NOTES

APPLICABLE CODES AND STANDARDS

1. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 7-16 EDITION".
2. AMERICAN SOCIETY FOR CIVIL ENGINEERS (ASCE) 61-14, SEISMIC DESIGN OF PIERS AND WHARVES.
3. OREGON STRUCTURAL SPECIALTY CODE (OSSC) 2022.
4. NAVAL ENGINEERING COMMAND FOUNDATION AND EARTH STRUCTURES (DM 7.02) (1986).
5. UNIFIED FACILITIES COMMAND (UFC) 4-152-01 DESIGN OF PIERS AND WHARVES.
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "MANUAL OF STEEL CONSTRUCTION, FIFTEENTH EDITION".
7. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS, CURRENT EDITION.
8. AMERICAN ASSOCIATION OF STATE HIGHWAY BRIDGES (AASHTO), "LRFD BRIDGE DESIGN SPECIFICATION; NINTH EDITION 2020"
9. AMERICAN WELDING SOCIETY (AWS), "D1.1 STRUCTURAL WELDING CODE – STEEL, CURRENT EDITION".
10. AMERICAN CONCRETE INSTITUTE (ACI), "318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
11. UNITED STATES ARMY CORPS OF ENGINEERS (USACE) EM 1110-2-2906 DESIGN OF PILE FOUNDATION, 1991.
12. EM 1110-2-2503 DESIGN OF SHEET PILE CELLULAR STRUCTURE COFFERDAMS AND RETAINING STRUCTURES (1989).
13. EM 1110-2-2502 RETAINING AND FLOOD WALLS (1989).
14. EM 1110-2-1902 SLOPE STABILITY.

THE INFORMATION CONTAINED IN THESE GENERAL NOTES IS IN ADDITION TO THE DETAILS AND THE NOTES PROVIDED ON THE INDIVIDUAL PLAN SHEETS. IN CASE OF CONFLICT BETWEEN NOTATION IN THE ABOVE REFERENCES, THESE GENERAL NOTES, AND NOTES AND DETAILS ON INDIVIDUAL SHEETS, THE FOLLOWING PRIORITY SHALL BE FOLLOWED:

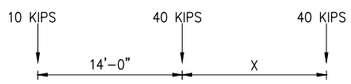
1. ALL PROJECT PERMIT REQUIREMENTS.
2. NOTES ON INDIVIDUAL PLAN SHEETS.
3. DETAILS AND CALLOUTS ON INDIVIDUAL PLAN SHEETS.
4. THESE GENERAL NOTES.
5. LOCAL CODES.
6. THE SPECIFICATIONS AND STANDARDS LISTED ABOVE IN ORDER OF APPEARANCE.

DESIGN CRITERIA
THE FOLLOWING LOADS HAVE BEEN USED FOR PIER 2 WEST.

DESIGN LIFE:
STRUCTURES HAVE A DESIGN LIFE OF 75 YEARS.

DEAD LOAD:
WEIGHT OF ALL MATERIALS OF CONSTRUCTION

LIVE LOAD:
- UNIFORM LIVE LOAD WITHOUT VEHICLE = 500 PSF
- VEHICLE: HS-25 AASHTO VEHICLE (PER VEHICLE FIGURE BELOW)



VEHICLE
(WHEEL SPACING – 6'-0",
AXLE SPACING X=14'-0" TO 30'-0")

- CONCENTRATED LOAD: 150,000 LBS (SPREAD OVER 4'x4' AREA)

SNOW LOAD:
GROUND SNOW LOAD OF 11 PSF PER ASCE 7-16

WIND LOAD:
3-SECOND GUST, EXPOSURE CATEGORY D
V_{NON-OP} = 135 MPH [117 KNOTS] (NON-OPERATIONAL)
V_{OP} = 60 MPH [53 KNOTS] (OPERATIONAL)

MOORING LOAD:
50 TONS PER MOORING BOLLARD

WAVE:
SIGNIFICANT WAVE
HEIGHT: H_S = 3.2 FEET
PERIOD: T_P = 3.8 SECONDS

SEA LEVEL RISE:
2.4 FEET AT END OF 75 YEAR DESIGN LIFE

DESIGN VESSEL:
LARGE FISHING VESSEL
- LOA: 300 FT
- BEAM: 45 FT
- DISPLACEMENT: 5,600 LT
- VELOCITY: V_B 0.30 FT/SEC
- APPROACH ANGLE: 5 DEGREES

100x400 BARGE
- LOA: 400 FT
- BEAM: 100 FT
- DISPLACEMENT: 12,500 LT
- VELOCITY: V_B 0.30 FT/SEC
- APPROACH ANGLE: 10 DEGREES

BERTHING/ACCIDENTAL IMPACT:
A 1.75 FACTOR OF SAFETY IS APPLIED FOR ACCIDENTAL BERTHING.
MINIMUM BERTHING ENERGY: 34.4 KIP-FT

SEISMIC LOAD:
SITE CLASS E
DESIGN RISK CATEGORY: II
DESIGN SEISMIC CATEGORY: D
CONTINGENCY LEVEL EARTHQUAKE (CLE):
S_S = 0.213 g
S_1 = 0.075 g
F_A = 2.4
F_V = 4.2
PGA_M = 0.24 g

DESIGN LEVEL EARTHQUAKE (DE):
S_S = 1.332 g
S_1 = 0.663 g
F_A = 0.9
F_V = 2.4
PGA_M = 0.48 g

CORROSION
DESIGN INCLUDES AN 1/8" CORROSION LOSS ON ALL BEARING PILES AND SHEET PILES. FENDER PILES DO NOT ACCOUNT FOR CORROSION LOSS.

AS-BUILT RECORDS:
THE CONTRACTOR SHALL MAINTAIN AN UPDATED SET OF RED-LINE AS-BUILT DRAWINGS AT THE PROJECT SITE. THE AS-BUILT DRAWINGS SHALL INCLUDE ALL SURVEYED DIMENSION FOR NEW WORK ITEMS TIED HORIZONTALLY AND VERTICALLY TO EXISTING MONUMENTS OR PROMINENT FEATURES. AS-BUILT DRAWINGS SHALL BE SUBMITTED UPON REQUEST TO THE ENGINEER AT ANYTIME THROUGHOUT THE PROJECT AND UPON SUBSTANTIAL COMPLETION.

30% DESIGN

PND ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

TITLE: **GENERAL NOTES**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: **G1.02**
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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MATERIALS

ALL MATERIAL AND EQUIPMENT INCORPORATED INTO THIS PROJECT SHALL BE NEW UNLESS OTHERWISE NOTED ON THE PLANS. MATERIAL NOT SPECIFICALLY NOTED IN THESE GENERAL NOTES OR ELSEWHERE ON THE DRAWINGS SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL BY THE ENGINEER. APPROVAL WILL BE BASED ON CONFORMANCE TO CURRENT STANDARDS UTILIZED BY THE ENGINEER. ALL MATERIALS SHALL CONFORM TO GOOD WORKMANSHIP, ACCEPTABLE INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

STRUCTURAL STEEL:
WIDE FLANGE SHAPES SHALL BE A572 GRADE 50.
HP SHAPES SHALL BE A572 GRADE 50.

PLATE AND FLAT BAR SHALL BE A572 GRADE 50, UNLESS OTHERWISE NOTED.
RECTANGULAR AND SQUARE HSS SHALL BE ASTM A500 GRADE B/C, F_y =46 KSI MIN.
ROUND HSS SHALL BE ASTM A500 GRADE B OR C, UNLESS NOTED OTHERWISE
PIPE SECTIONS WITH 12" O.D. OR LESS SHALL BE ASTM A53 GRADE B, TYPE E OR S.
CHANNELS SHALL BE MINIMUM ASTM A36
ANGLES SHALL BE MINIMUM ASTM A36.

BOLTS AND OTHER HARDWARE:
ALL CONNECTING BOLTS FOR STEEL TO STEEL SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM THE SHEAR PLANE. ALL STEEL TO CONCRETE ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 55, OR AS OTHERWISE SPECIFIED IN THE DRAWINGS. ALL BOLTS SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.

ALL STAINLESS STEEL BOLTS, SCREWS, NUTS, WASHERS, AND MISCELLANEOUS HARDWARE CALLED OUT AS STAINLESS STEEL (S.S.) SHALL BE TYPE 316.

WASHERS ARE REQUIRED UNDER BOTH HEAD AND NUT OF ALL BOLTS UNLESS OTHERWISE NOTED. WASHERS SHALL BE STANDARD FLAT WASHERS AS SPECIFIED IN THESE DRAWINGS. THREADED SLEEVES SHALL HAVE COMPATIBLE THREADS TO THE FASTENER BEING ATTACHED. SLEEVES SHALL BE ABE TO DEVELOP THE FULL STRENGTH OF THE FASTENERS BEING ATTACHED.

PRETENSION ALL BOLTS IN ACCORDANCE WITH RCSC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 3.

CAST-IN-PLACE (C.I.P.) CONCRETE:
CEMENT SHALL CONFORM TO ASTM C150 TYPE 1L WITH TRI-CALCIUM ALUMINATE CONTENT BELOW 8%. AGGREGATE SHALL CONFORM TO ASTM C33 WITH MAXIMUM SIZE OF 3/4". CONCRETE SHALL BE STANDARD WEIGHT, PORTLAND CEMENT CONCRETE APPROPRIATELY PROPORTIONED TO MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS FOR STRENGTH AND SERVICEABILITY:

1. MINIMUM 28 DAY COMPRESSIVE STRENGTH F'C = 6000 PSI
2. MINIMUM CEMENT CONTENT = 6 SACKS PER CUBIC YARD
3. MAXIMUM WATER CEMENT RATIO = 0.40
4. AIR ENTRAINMENT = 6.5% ± 1.5%

ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4", UNLESS NOTED OTHERWISE.

REINFORCING STEEL:
REINFORCING STEEL SHALL CONFORM TO ASTM A615M, MINIMUM YIELD STRENGTH = 60 KSI DEFORMED BARS, UNLESS NOTED OTHERWISE. REINFORCING STEEL THAT IS TO BE WELDED SHALL BE ASTM A706M, GRADE 60 DEFORMED BARS.

LAP SPLICES FOR REINFORCING STEEL SHALL BE FOLLOWS:

1. #6 BAR AND SMALLER = 34 BAR DIAMETERS.
2. #7 BAR AND LARGER = 43 BAR DIAMETERS.

SHEAR STUDS:
SHEAR STUDS SHALL CONFORM TO ASTM A108M, GRADE 1015, WELDED FULL-STRENGTH.

UHMW:
ALL ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE SHALL BE TIVAR® UV RESISTANT OR APPROVED EQUAL, AND BE SUITABLE FOR THE MARINE ENVIRONMENT. UHMW COMPONENTS SHALL BE BLACK IN COLOR, UNLESS OTHERWISE NOTED.

COIL INSERTS:
COIL INSERTS SHALL BE TYPE B16 PLAIN STANDARD COIL LOOP INSERTS MANUFACTURED BY DAYTON SUPERIOR OR ENGINEER APPROVED EQUIVALENT.

ADHESIVE ANCHORS:
ADHESIVE ANCHORS SHALL BE HILTI HIT-HY 500 ADHESIVE AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, UNLESS NOTED OTHERWISE.

NON-SLIP SURFACE:
ALL NON-SLIP/NON-SKID STEEL WALKING SURFACES NOTED SHALL BE THERMAL SPRAYED WITH DURALCAN 90/10 AS MANUFACTURED BY ALCOTEC, TRAVERSE CITY, MI (231-941-4111), OR APPROVED EQUAL, TO OBTAIN A SLIP RESISTANT SURFACE. PREPARE SURFACE AND APPLY PER MANUFACTURER'S RECOMMENDATIONS. COATING THICKNESS SHALL BE 10 MILS MINIMUM. SEAL AND TOP COAT PER MANUFACTURER'S RECOMMENDATIONS. SUBMIT SAMPLES OF SURFACE TEXTURE FOR APPROVAL TO ENGINEER.

THE FOLLOWING ITEMS SHALL HAVE NON-SLIP SURFACES UNLESS OTHERWISE NOTED:

1. TRANSITION PLATES
2. OTHER SPECIFICALLY NOTED ITEMS

ELASTOMERIC BEARINGS:
ELASTOMERIC BEARINGS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 18.2 OF AASHTO M 251, AND ASTM D4014-03. THE ELASTOMERIC COMPOUND USED IN THE CONSTRUCTION OF A BEARING SHALL CONTAIN ONLY EITHER NATURAL RUBBER OR CHLOROPRENE RUBBER AS THE RAW POLYMER, WITH A SHEAR MODULUS BETWEEN 0.080 AND 0.175, AND COLOR BLACK. INTERNAL STEEL LAMINATES SHALL BE OF ROLLED MILD STEEL AND SHALL HAVE ALL EDGES MACHINE BEVELED TO A 1/32"RADIUS. STEEL- AND PTFE-LAMINATED BEARINGS SHALL BE MOLDED AS A SINGLE UNIT UNDER PRESSURE AND HEAT. ALL BONDING OF ELASTOMER TO STEEL LAMINATES AND TO EXTERNAL LOAD PLATES SHALL BE CARRIED OUT DURING MOLDING. BEARING COMPRESSION TESTS, COMPRESSION STIFFNESS, VISUAL INSPECTION, QUALITY CONTROL PROPERTIES, SHEAR MODULUS, OZONE RESISTANCE, AND LOW-TEMPERATURE GRADE TESTS SHALL BE PERFORMED TO CONFORM TO THE SPECIFIED REQUIREMENTS.

COATINGS
ALL STEEL SECTIONS MAY BE UNCOATED UNLESS NOTED OTHERWISE. ALL BOLTS AND HARDWARE SHALL BE GALVANIZED.

FILLER FOR EXPANSION JOINTS
PREMOLDED JOINT FILLER (ALSO CALLED ELASTOMERIC JOINT FILLER) FOR EXPANSION JOINT APPLICATIONS SHALL CONFORM TO THE SPECIFICATIONS FOR "PREFORMED EXPANSION JOINT FILLERS FOR CONCRETE PAVING AND STRUCTURAL CONSTRUCTION", AASHTO M 213.

CONCRETE CRACK CONTROL
CONTRACTOR TO PROVIDE 2 INCHES DEEP SAWCUTS AT 17 FT MAXIMUM SPACING OR AT THE LOCATIONS SHOWN; TO BE FILLED WITH JOINT SEALANT. SUBMIT SAWCUT PLAN AND JOINT SEALER MATERIAL TO ENGINEER FOR APPROVAL.

EXPANSION JOINT MATERIAL
MATERIAL SHALL BE PREMOLDED, NON-EXTRUDING TYPE, "SEALTIGHT FIBER EXPANSION JOINT FILLER" BY W.R. MEADOWS, OR APPROVED EQUAL, AND SHALL CONFORM TO ASTM D1751 OR ASTM D1752.

SEAL EXPANSION JOINTS WITH "SOF-SEAL" LOW MODULUS HORIZONTAL SEALANT AS MANUFACTURED BY W.R. MEADOWS, OR APPROVED EQUAL, AND INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.

JOINT SEALANT
FOR NORMAL CONDITIONS USE ONE COMPONENT, GUN GRADE, POLYURETHANE TYPE "SIKAFLEX 1A" BY SIKA CHEMICAL CORPORATION OR APPROVED EQUAL.

WHERE CONSTANT WET CONDITIONS EXIST, USE "SIKAFLEX-2C NS/SL" 2 COMPONENT SEALANT WITH BACKER ROD, BY SIKA CHEMICAL CORPORATION OR APPROVED EQUAL. PRIME WITH "SIKAFLEX PRIMER 429" OR APPROVED EQUAL BEFORE APPLYING SEALANT.

BOND BREAKER
USE 15 LB. ASPHALT SATURATED FELT IN ACCORDANCE WITH ASTM D226, OR APPROVED EQUAL.

CONSTRUCTION

SURVEY CONTROL:
TBD

STEEL WELDING:
ALL FIELD AND SHOP STEEL WELDING SHALL CONFORM PER AWS D1.1 STRUCTURAL WELDING CODE – STEEL, CURRENT EDITION.

DEPOSITED FILLER METAL SHALL MEET CHARPY REQUIREMENTS OF 20 FT-LBS AT 0 DEGREES F AND HAVE CHEMISTRY SIMILAR TO THE BASE METAL AS APPROVED BY THE ENGINEER. FILLER METALS SHALL ONLY BE USED IN WELDING POSITIONS RECOMMENDED BY THE MANUFACTURER. WELDING CONSUMABLES SHALL BE STORED AND THE CONDITION SHALL BE MAINTAINED PER AWS SECTION 5.

PRE-HEAT SHALL BE BASED ON MATERIAL GRADE AND THICKNESS SHOWN HEREWITH, PER AWS TABLES. UNIFORMITY OF PRE-HEAT SHALL CONFORM TO AWS STIPULATIONS.

WELDING PERSONNEL SHALL BE QUALIFIED PER AWS TO WELD PROCEDURES AND WELD POSITIONS NECESSARY FOR THE JOINT DETAILS SPECIFIED HEREWITH. ALL STEEL FABRICATION SHOP DRAWINGS SHALL REFERENCE THE WELD PROCEDURE SPECIFICATION FOR EACH WELD DETAILED. WELD PROCEDURE SPECIFICATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS. SUBMITTALS VERIFYING WELDER QUALIFICATIONS MUST BE TRANSMITTED TO THE OWNER FOR APPROVAL PRIOR TO ANY WELDING.

NO WELDING THROUGH COATING SHALL BE PERFORMED. THE COATING WITHIN 2" OF THE WELD ROOT SHALL BE REMOVED PRIOR TO WELDING AND REPAIRED AS DISCUSSED IN COATING REPAIR.

ALL WELDS SHALL BE VISUALLY INSPECTED TO COMPLY WITH THE VISUAL INSPECTION CRITERIA, FOR STATICALLY LOADED NON-TUBULAR AND TUBULAR CONNECTIONS PER AWS SECTION 6. NON-DESTRUCTIVELY TEST WELDS USING VT, RT, MT AND UT METHODS, PER AWS SECTION 6. ACCEPTABLE CRITERIA SHALL BE FOR NON-CYCLIC LOADING. WELDS FAILING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, WHICH WILL ALSO INCLUDE ALL COSTS FOR RETESTING, TO ACHIEVE PASSING INSPECTION TEST.

ALL WELDS AND STEEL EDGES EXPOSED TO PUBLIC CONTACT SHALL BE GROUND SMOOTH REMOVING ALL BURRS AND WELD SPLATTER.

C.I.P. CONCRETE CONSTRUCTION JOINTS:
C.I.P. CONCRETE CONSTRUCTION JOINTS DESCRIBED HEREIN SHALL REFER TO CONCRETE CAST AGAINST CURED OR HARDENED CONCRETE. THE SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED OF ALL MATERIAL THAT INHIBIT BOND. MATERIALS SUCH AS CURING COMPOUNDS, LAITANCE, SAW DUST, WOOD, DIRT, POLYETHYLENE, PIPE TAPE COATING, AND PAPER SHALL BE REMOVED. CONCRETE SHALL BE ROUGHENED TO PRODUCE A SURFACE TEXTURE OF PLUS OR MINUS 1/4". CONCRETE SURFACES SHALL BE WETTED WITH CLEAN POTABLE WATER AND STANDING WATER REMOVED IMMEDIATELY BEFORE NEW CONCRETE OR CLOSURE GROUT IS PLACED. UNLESS OTHERWISE CALLED OUT IN THE DRAWINGS, A BONDING AGENT SHALL BE USED PRIOR TO PLACING THE CONCRETE OR GROUT.

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

TITLE: **STRUCTURAL GENERAL NOTES**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	G1.03
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

OPEN CELL GENERAL NOTES

THE INFORMATION CONTAINED IN THESE GENERAL NOTES IS IN ADDITION TO THE DETAILS AND NOTES PROVIDED ON THE INDIVIDUAL PLAN SHEETS, OPEN CELL™ BULKHEAD SPECIFICATION, AND SUPPLEMENT OTHER PROJECT REQUIREMENTS. OTHER ITEMS OF WORK SHALL BE COORDINATED WITH THE OPEN CELL™ BULKHEAD WORK. ANY DISCREPANCIES DISCOVERED AMONG THE DRAWINGS, SPECIFICATIONS, SITE CONDITIONS AND THE GENERAL NOTES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

IN CASE OF CONFLICT BETWEEN NOTATION IN THESE GENERAL NOTES AND NOTES AND DETAILS ON INDIVIDUAL SHEETS, THE FOLLOWING PRIORITY SHALL BE FOLLOWED:

1. ALL PROJECT PERMIT REQUIREMENTS (PND SHALL BE NOTIFIED IN CASE OF CONFLICT WITH PROJECT PERMIT REQUIREMENTS AND DESIGN DOCUMENTS)
2. NOTES ON INDIVIDUAL PLAN SHEETS
3. DETAILS AND CALLOUTS ON INDIVIDUAL SHEETS
4. THESE GENERAL NOTES
5. OPEN CELL SHEET PILE BULKHEAD SPECIFICATION
6. PROJECT TECHNICAL SPECIFICATIONS
7. NATIONAL CODES

MATERIALS & CONSTRUCTION

FLAT SHEET PILES, WYE PILE, AND ANCHOR PILE MATERIALS
SEE OPEN CELL SHEET PILE BULKHEAD SPECIFICATION.

OPEN CELL SHEET PILE DRIVING
SEE OPEN CELL SHEET PILE BULKHEAD SPECIFICATION.

SURFACE RUBBLE:
THE CONTRACTOR IS RESPONSIBLE TO VISIT THE SITE AND MAKE OWN ASSESSMENT OF PILE INSTALLATION INTERFERENCES.

OPEN CELL FILLING AND MOVEMENT
AFTER DRIVING THE SHEET PILES, THE SHEET PILE CELLS WILL ACT AS A FLEXIBLE MEMBRANE STRUCTURE THAT WILL EXPAND DURING FILLING, VIBRACOMPACTION, AND PRE-LOADING OPERATIONS. THE AMOUNT OF EXPANSION DEPENDS UPON VARIABLES INCLUDING MATERIAL TYPE, METHODS OF INSTALLATION AND COMPACTION, ETC.

THE FILL SHALL BE PLACED AND COMPACTED IN EVEN LIFTS WITHIN THE CELLS UP TO FINAL ELEVATION PER DRAWINGS. THE ELEVATION OF FILL IN ADJACENT CELLS SHALL NOT DIFFER BY MORE THAN 5-FEET AT ANY TIME DURING CONSTRUCTION OPERATIONS TO AVOID DISTORTION OF THE CELLS.

THE CONTRACTOR SHOULD BE AWARE THAT DURING AND AFTER FILLING, THE WYE PILES ARE EXPECTED TO MOVE OUTWARD AND THE CELL FACES WILL BELLY-OUT TO A FIXED, FINAL POSITION AS DEPICTED IN THE ANTICIPATED CELL EXPANSION DIAGRAM.

SURFACE PAVEMENT, CAP, FENDERS, AND ANODES SHALL NOT BE INSTALLED PRIOR TO VIBRACOMPACTION AND THE CESSATION OF WALL MOVEMENT.

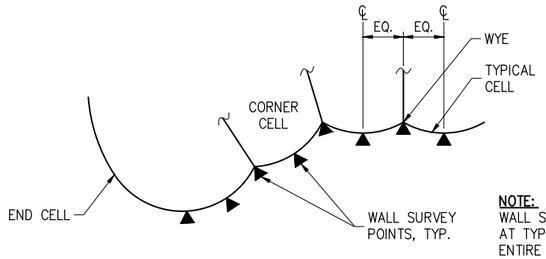
CELL SURVEY MONITORING
CELL MOVEMENT WILL CONSIST OF OUTWARD EXPANSION OF THE WYE PILES IN EACH CELL, TIGHTENING AND BELLYING OF THE FACE SHEETS, AND VERTICAL SETTLEMENT OF THE FACE SHEETS AND WYE PILES. WALL MOVEMENT IS EXPECTED TO OCCUR DURING FILLING AND DREDGING.

CELL MONITORING SHALL CONSIST OF WALL MOVEMENT SURVEYS, TO BE PERFORMED BY THE CONTRACTOR. SEE TYPICAL WALL SURVEY LOCATIONS FOR SURVEY POINT LOCATIONS.

WALL MOVEMENT SURVEYS SHALL TAKE PLACE:
- -WEEKLY DURING FILLING
- -EVERY OTHER DAY AFTER FILL PLACEMENT AND VIBROCOMPACTION UNTIL MOVEMENT IS LESS THAN 6MM IN ONE WEEK.
- -FINAL INSPECTION – INCLUDING LAYOUT OF WYE AND APEX LINE.

MEASUREMENT OF THE SURVEY LOCATIONS SHALL INCLUDE BOTH THE HORIZONTAL AND VERTICAL MOVEMENT.

ALL DATA COLLECTED FROM THE SURVEYS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 24 HOURS FOR REVIEW TO VERIFY WHETHER ANY MOVEMENT IS OBSERVED BEYOND THE EXPECTED LIMITS DESCRIBED IN THE FILL SECTION ABOVE. THE ACCURACY OF THE SURVEY SHALL BE +/- 1/8-INCH.



NOTE:
WALL SHALL BE SURVEYED AT TYPICAL POINTS ALONG ENTIRE LENGTH OF WALL.

TYPICAL WALL SURVEY MONITORING LOCATIONS

NOT TO SCALE

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

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PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
OPEN CELL GENERAL NOTES

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	G1.04
DRAWN BY:	WL	DATE:	MARCH 2024		
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PIPE PILE GENERAL NOTES

THE FOLLOWING PILE NOTES ARE APPLICABLE AND SHALL BE CONSIDERED PART OF THIS SPECIFICATION FOR ALL DRAWING SHEETS. CONDITIONS OF THESE NOTES ARE IN ADDITION TO THE GENERAL NOTES. IN AREAS OF CONFLICT THE PILE NOTES CONTROL.

GENERAL:
ALL MATERIAL AND EQUIPMENT INCORPORATED INTO THIS PROJECT SHALL BE NEW UNLESS OTHERWISE NOTED ON THE PLANS. MATERIAL NOT SPECIFICALLY NOTED IN THESE PILE GENERAL NOTES OR ELSEWHERE ON THE DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER. APPROVAL WILL BE BASED ON CONFORMANCE TO CURRENT STANDARDS UTILIZED BY THE OWNER. ALL MATERIALS SHALL CONFORM TO GOOD WORKMANSHIP, ACCEPTABLE INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

STEEL PIPE PILES:

A. UNLESS OTHERWISE NOTED HEREIN, ALL PILES SHALL CONFORM TO ASTM A252 WITH THE ADDITIONS AND MODIFICATIONS AS DETAILED WITHIN THIS SPECIFICATION.

1. MATERIAL
   - 1.1. MINIMUM YIELD STRENGTH SHALL BE PER PILE SCHEDULE
   - 1.2. FOR THE PURPOSES OF WELDING AND PREQUALIFICATION OF BASE METAL, STEEL PIPE PILE DESIGNATED AS ASTM A252 MAY BE TREATED AS PREQUALIFIED PROVIDED THAT THE CHEMICAL COMPOSITION CONFORMS TO A PREQUALIFIED BASE METAL CLASSIFICATION LISTED IN TABLE 3.1 OF THE AWS D1.1, LATEST EDITION, STRUCTURAL WELDING CODE, AND THE GRADE OF PIPE PILING MEETS OR EXCEEDS THE GRADE SPECIFIED IN THE PLANS.
   - 1.3. THE CHEMICAL COMPOSITION FOR THE CARBON ELEMENT SHALL BE LIMITED TO 0.26% MAXIMUM AND THE CARBON EQUIVALENCY (CE) SHALL NOT EXCEED 0.45 BASED ON THE FOLLOWING FORMULA:

$$CE = C + \frac{(MN+SI)}{6} + \frac{(CR+MO+V)}{6} + \frac{(N+CU)}{15}$$

2. DIMENSIONS
   - 2.1. THE OUTSIDE DIAMETER SHALL NOT VARY MORE THAN +0.75% FROM THE OUTSIDE DIAMETER SHOWN ON THE PLANS.
   - 2.2. THE STRAIGHTNESS OF THE PIPE SHALL NOT VARY MORE THAN +1.0% OVER THE LENGTH OF THE PIPE.

3. WELDING
   - 3.1. ALL GROOVE WELDS SHALL CONFORM TO AWS D1.1.
   - 3.2. RADIAL OFFSET – THE RADIAL OFFSET OF WELDED SEAMS SHALL NOT EXCEED THE LIMITATIONS OF AWS WELD NOR A MAXIMUM OF 10% OF THE PIPE WALL THICKNESS, NOR 1/16 INCHES. THE OFFSET SHALL BE TRANSITIONED WITH A TAPER WELD AND THE SLOPE SHALL BE A 4 TO 1 TRANSITION PER AWS D1.1 SECTION 5.22.3.1
   - 3.3. DEFECTS IN WELDS SHALL BE REPAIRED OR THE PIECE REJECTED AT THE OPTION OF THE MANUFACTURER. REPAIRS OF THIS NATURE SHALL BE MADE BY COMPLETELY REMOVING THE DEFECT, CLEANING THE CAVITY, AND THEN RE–WELDING.

4. ULTRASONIC TESTING
   - 4.1. PERFORM ULTRASONIC TESTING ON 10% OF ALL PILE SPLICES. ENTIRETY OF SPLICE SHALL BE TESTED.
   - 4.2. IN THE EVENT OF A FAILED TEST, ALL SPLICES PERFORMED SINCE LAST PASSING TEST SHALL BE UT.
   - 4.3. UT SHALL BE PERFORMED IN ACCORDANCE WITH API 5L SECTION E5 AWS, DM, OR ASTM 53 SECTION 9

B. ALL STEEL PIPE PILES SHALL BE FURNISHED, COMPLETE WITH PILE TIPS, IN THE LENGTHS INDICATED ON THE PLANS. PILES SHALL BE DELIVERED FULL LENGTH OR FIELD SPLICED IN ACCORDANCE WITH APPROVED WELDING PROCEDURES. SPLICES SHALL BE A MINIMUM OF 40–FEET APART, UNLESS OTHERWISE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR SPLICING PILES TO MAKE UP THE PILE LENGTHS SHOWN ON THE PLANS.

SURFACE RUBBLE:
THE CONTRACTOR IS RESPONSIBLE TO VISIT THE SITE AND MAKE OWN ASSESSMENT OF PILE INSTALLATION INTERFERENCES.

PILE DRIVING:
GENERAL:
ALL PILE INSTALLATION SHALL BE CONDUCTED WITH THE ENGINEER PRESENT. THE CONTRACTOR SHALL ASSIST THE ENGINEER IN MONITORING THE PILE INSTALLATION. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL MARK EACH PILE WITH 1–FOOT INCREMENT, WITH EVERY 5–FOOT INCREMENT NUMBERED. THE MARKS SHALL BE VISIBLE AND READABLE FROM ALL SIDES OF THE PILE.

EQUIPMENT:
IMPACT HAMMERS SHALL BE SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO MOBILIZING TO THE SITE. THE IMPACT HAMMER SHALL BE SINGLE ACTING AND ADEQUATELY SIZED TO ACHIEVE THE STATED ULTIMATE BEARING CAPACITIES AND MINIMUM TIP ELEVATIONS AS STATED ON THE PILE SCHEDULES.

THE CONTRACTOR SHALL PERFORM A DRIVABILITY ANALYSIS BASED ON THE ACTUAL HAMMER THAT WILL BE USED FOR THE PROJECT AND SHALL BE PREPARED TO ADDRESS THE POTENTIAL FOR OVERSTRESSING THE PILE DURING DRIVING. THE CONTRACTOR SHALL SUBMIT THE RESULTS OF THEIR DRIVABILITY ANALYSIS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.

ANY HAMMER THAT CAUSES DAMAGE TO THE PILES DURING DRIVING OPERATIONS SHALL BE SUBSTITUTED WITH AN ACCEPTABLE ALTERNATIVE HAMMER AT NO ADDITIONAL EXPENSE TO THE OWNER. IMPACT HAMMER SHALL BE SUPPLIED WITH NEW CAP BLOCK CUSHIONS, WHICH SHALL BE CHANGED AT THE MANUFACTURER'S RECOMMENDED CYCLE. THE CONTRACTOR'S DRIVING PLAN SHALL INCLUDE MANUFACTURER'S RECOMMENDATIONS AND INFORMATION ON HAMMER CUSHIONS.

INSTALLATION:
UNLESS OTHERWISE NOTED, ALL PILES MAY BE INITIALLY DRIVEN TO REFUSAL WITH A VIBRATORY HAMMER. ALL PILES SHALL THEN BE DRIVEN WITH AN IMPACT HAMMER APPROPRIATELY SIZED FOR THAT PILE. IMPACT HAMMER DRIVING SHALL CONTINUE UNTIL THE PILE IS FIRMLY SEATED AND REFUSAL OCCURS AS DETERMINED BY THE ENGINEER.

ALL PILES SHALL BE DRIVEN ADEQUATELY TO ACHIEVE BOTH THE STATED BEARING CAPACITIES AND MINIMUM TIP ELEVATIONS AS SPECIFIED ON THE PILE SCHEDULE.

CONTRACTOR SHALL WORK WITH ENGINEER AND HAMMER MANUFACTURER TO ENSURE PILES ARE NOT OVERSTRESSED DURING INSTALLATION.

ACCEPTANCE:
PILE ACCEPTANCE SHALL BE DETERMINED BY ENGINEER. ACCEPTANCE CRITERIA WILL BE BASED ON THE ULTIMATE COMPRESSION/TENSION CAPACITY AND MINIMUM EMBEDMENT REQUIREMENTS AS STATED ON THE PILE SCHEDULE OR AS OTHERWISE APPROVED BY ENGINEER.

THE TENSION CAPACITY WILL BE VERIFIED BY ENGINEER BASED ON THE LAST 10–FEET OF IMPACT INSTALLATION DATA (I.E. BLOW COUNTS, ENERGY, PDA DATA). THE COMPRESSIVE CAPACITY WILL BE VERIFIED ON–SITE BY ENGINEER BASED ON THE RESULTS ATTAINED FROM THE DYNAMIC PILE TEST PROGRAM.

FOR ALL PILES, CONTRACTOR SHALL COORDINATE WITH ENGINEER TO VERIFY ACCEPTANCE PRIOR TO CUTTING OFF EXCESS PILE. OTHERWISE, CONTRACTOR PROCEEDS AT OWN RISK.

PILE LOCATION SURVEY
PLAN LOCATIONS OF THE PILES AS DRIVEN SHALL BE SURVEYED BY THE CONTRACTOR AND A WRITTEN AS–DRIVEN LOCATION PLAN SHALL BE SUBMITTED TO THE ENGINEER WITHIN 72 HOURS OF THE COMPLETION TIME OF EACH DRIVEN PILE.

FINAL PILE POSITION:
ALL PILES SHALL BE INSTALLED WITHIN 1% OF SPECIFIED VERTICAL ALIGNMENT AND WITHIN 2 INCHES OF SPECIFIED LOCATION AT CUTOFF, UNLESS OTHERWISE NOTED.

PILES MAY BE ADJUSTED LATERALLY AFTER REVIEW AND APPROVAL BY ENGINEER AT THE DIRECTION OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER. IF PILES ARE OUT OF TOLERANCE AND DO NOT MEET THE REQUIREMENTS AS STATED ABOVE, POSSIBLE REPAIRS AT NO ADDITIONAL COST TO THE OWNER MAY INCLUDE THE FOLLOWING:

1. PILES MAY BE PULLED AND REDRIVEN.
2. PILE CAPS MAY BE MODIFIED.
3. PILES MAY BE ADJUSTED LATERALLY BY JACKING OR LOADING. THIS OPTION IS ONLY AVAILABLE IF IT DOES NOT COMPROMISE THE STRUCTURES IN ALL REPAIR SCENARIOS, CONTRACTOR SHALL CONSULT THE ENGINEER.

STEEL WELDING
SEE STRUCTURAL GENERAL NOTES.

PILE CUTOFF
DURING CONSTRUCTION, PILE CUTOFF MATERIAL IS PROPERTY OF THE OWNER AND MAY BE USED TO SPLICE ADDITIONAL LENGTH ONTO PROJECT PILES IN UNFORESEEN CIRCUMSTANCES. REFERENCE PILE ACCEPTANCE CRITERIA FOR MAXIMUM PILE CUTOFF REQUIREMENTS. AT THE END OF CONSTRUCTION, ALL REMAINING PILE CUTOFFS BECOME PROPERTY OF THE CONTRACTOR.

COATING
ALL PILES MAY BE BARE.

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PORT OF ASTORIA

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REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
PILE GENERAL NOTES

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**G1.05**
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STRUCTURAL SPECIAL INSPECTIONS STATEMENT
(PER OREGON STRUCTURAL SPECIAL CODE (OSSC))

STRUCTURAL SPECIAL INSPECTION WILL BE PROVIDED BY THE ENGINEER, ENGINEER'S AUTHORIZED REPRESENTATIVE, OR ENGINEER–APPROVED THIRD PARTY INSPECTION.COORDINATE STRUCTURAL SPECIAL INSPECTION WITH THE ENGINEER.

OSSC TABLE 1705.2 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION/ INSPECTION TYPE	FREQUENCY		OTHER CODE OR STANDARD REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
1. MATERIAL VERIFICATION OF HIGH–STRENGTH BOLTS, NUTS AND WASHERS				
a. IDENTIFICATION MARKING TO CONFORM TO ASTM STANDARDS AND SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	–	X	AISC 360, SECTION A3.3 AND APPLCABLE ASTM MATERAL STANDARDS	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	–	X	–	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
2. INSPECTION OF HIGH–STRENGTH BOLTING				
a. SNUG TIGHT JOINTS	–	X	AISC 360 SECTION M2.5	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
b. PRETENSION AND SLIP–CRITICAL JOINTS USING TURN–OF–NUT WITH MATCHMARKING, TWIST–OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION	–	X		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL				
a. FOR STRUCTURAL STEEL IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	–	X	AISC 360 SECTION N2.1	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
b. FOR OTHER STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENT	–	X	APPLICABLE ASTM MATERIAL STANDARDS	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
c. MANUFACTURER'S CERTIFIED TEST REPORTS	–	X	–	ENGINEER
4. MATERIAL VERIFICATION OF COLD–FORMED STEEL DECK				
a. MANUFACTURER'S CERTIFICATED TEST REPORTS	–	X	–	ENGINEER
5. MATERIAL VERIFICATION OF WELD FILTER MATERIALS				
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	–	X	AISC 360. SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	–	X	–	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
6. INSPECTION OF WELDING				
a. STRUCTURAL STEEL	X	–	AWS D1.1	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	X	–		
2) MULTIPASS FILLET WELDS	X	–		
3) SINGLE–PASS FILLET WELDS > 5/16"	X	–		
4) PLUG AND SLOT WELDS	X	–		
5) SINGLE–PASS FILLET WELDS > 5/16"	–	X		
b. REINFORCING STEEL				
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	–	X	AWS D1.4 ACI 318 SECTION 36.6.4	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENTS FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT	X	–		
3) SHEAR REINFORCEMENT	X	–		
4) OTHER REINFORCEING STEEL	–	X		
7. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE				
a. DETAILS SUCH AS BRACING AND STIFFENING	–	X	–	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
b. MEMBER LOCATION	–	X		
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	–	X		

OSSC TABLE 1705.3 REQUIRED SPECIAL INSPECTION AND TESTS OF CONCRETE CONSTRUCTION

VERIFICATION/ INSPECTION TYPE	FREQUENCY		OTHER CODE OR STANDARD REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	–	X	ACI 318 CH 20.25.2 25.3 26.6.1 – 26.6.3	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
2. REINFORCING BAR WELDING			AWS D1.4 ACI 318: 26.6.4	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A705	–	X		
b. INSPECT SINGLE–PASS FILLET WELDS, MAXIMUM 5/16"	–	X		
c. INSPECT ALL OTHER WELDS	X	–		
3. INSPECT ANCHORS CAST IN CONCRETE	–	X	ACI 318: 17.2.5	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
4. INSPECT ANCHORS CAST IN CONCRETE				ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALITY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	–	ACI 318: 17.2.5	
b. MECHANCAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4a.	–	X	ACI 318: 17.2.5	
5. VERIFY USE OF REQUIRED DESIGN MIX	–	X	ACI 318 CH.19, 26.4.3, 26.4.4 IBC: 1940.1, 1940.2	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF CONCRETE	X	–	ASTM C31 ASTM C172 ACI 318: 26.5, 26.12	ENGINEER
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	–	ACI 318: 26.5	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X	ACI 318: 26.5.3–26.5.5	ENGINEER OR ENGINEER'S APPROVED REPRESENTATIVE

OSSC TABLE 1705.7 REQUIRED SPECIAL INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS

VERIFICATION/ INSPECTION TYPE	FREQUENCY		OTHER CODE OR STANDARD REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	X	–	–	PERFORMED BY THE ENGINEER
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	X	–	–	PERFORMED BY THE ENGINEER
OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X	–	–	FINAL DRIVEOUT PERFORMED BY THE ENGINEER WITH FULL RECORDS MAINTAINED BY ENGINEER'S APPROVED REPRESENTATION
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT	X	–	–	PERFORMED BY THE ENGINEER

OSSC ADDITIONAL SPECIAL INSPECTIONS FOR WIND AND SEISMIC RESISTANCE

VERIFICATION/ INSPECTION TYPE	FREQUENCY		OTHER CODE OR STANDARD REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
SPECIAL INSPECTIONS FOR WIND RESISTANCE	–	–	OSSC 1705.12	NON REQUIRED SINCE DESIGN WIND SPEED, V IS LESS THAN 140 MPH
SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE	–	–	OSSC 1705.13.1.2.2, OSSC 1705.14.1.1, OSSC 1705.14.1.2	FINGER PIER ASSIGNED SEISMIC DESIGN CATEGORY D, SPECIAL INSPECTION OF STRUCTURAL STEEL ELEMENTS ARE NOT REQUIRED FOR SEISMIC FORCE RESISTING SYSTEMS DETAILED PER AISC 360 PER ASCE 7, TABLE 15.4–1

STRUCTURAL SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON–DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE OWNER A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1. THE CONTRACTOR SHALL SECURE AND PAY FOR THE SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.
2. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO ENGINEER, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

STRUCTURAL OBSERVATIONS

1. STRUCTURAL OBSERVATIONS SHALL CONFORM TO CHAPTER 17 OF THE OSSC 2022.
2. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY ENGINEER'S REPRESENTATIVE UNLESS OTHERWISE APPROVED.
3. THE ENGINEER SHALL OBSERVE THE INDICATED WORK FOR GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE OBSERVATION REPORTS.
4. THE ENGINEER SHALL FURNISH OBSERVATION REPORTS FOR EACH SITE OBSERVATION TO THE CONTRACTOR AND OWNER. A FINAL OBSERVATION REPORT INDICATING THE REQUIRED SITE OBSERVATIONS WERE MADE AND TO THE BEST OF THE DESIGN PROCESSIONAL'S KNOWLEDGE THE WORK IS IN GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **SPECIAL INSPECTION NOTES**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	G1.06
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

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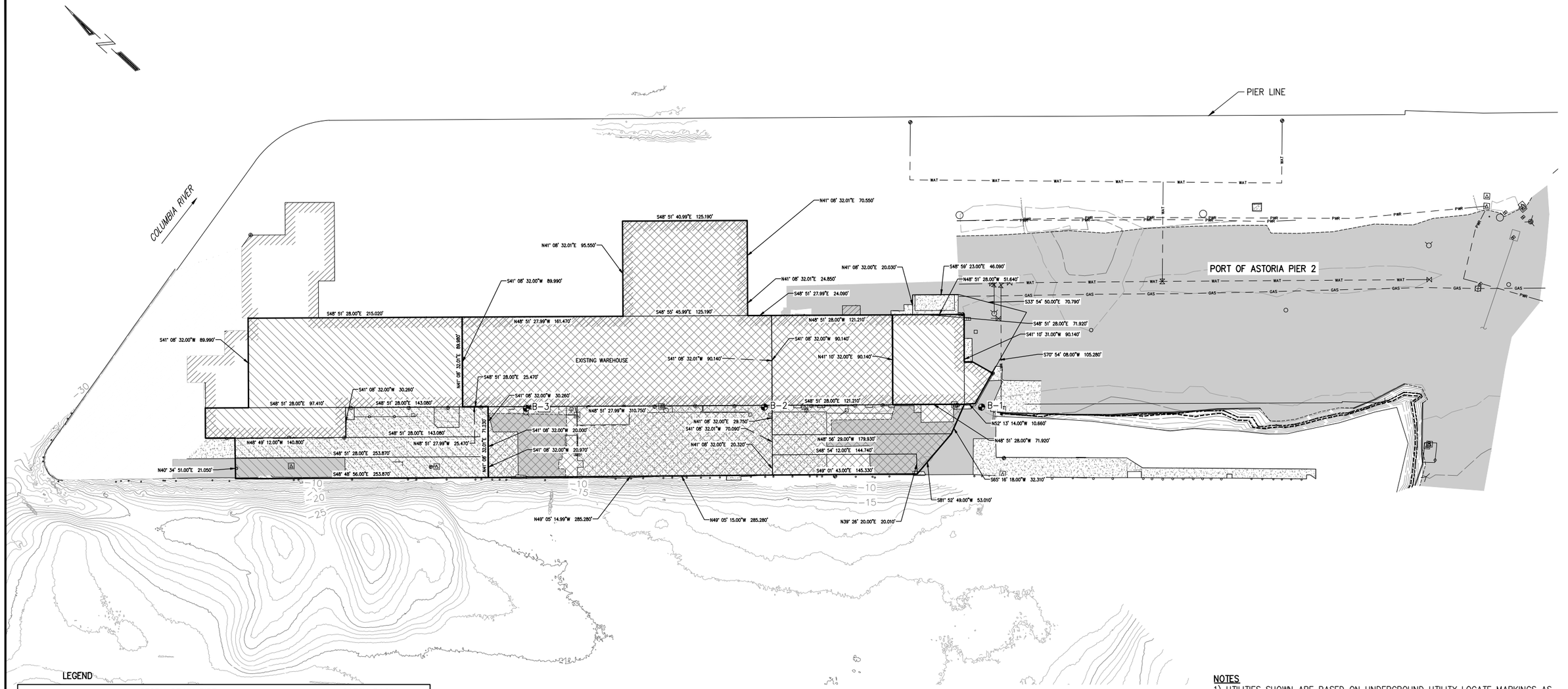

LEGEND

SD — STORM DRAIN PIPE	CATCH BASIN
WAT — WATER LINE	MANHOLE
GAS — NATURAL GAS LINE	OPEN CELL
PWR — POWER LINE	GATE VALVE
FM — FORCEMAIN	FIRE HYDRANT
EXISTING GRADE CONTOUR	2019 GRI BORINGS
DA YANG SEAFOOD LEASE SPACE	
BORNSTEIN LEASE SPACE	

PLAN

0 20 50 100 150 FT.

NOTES

1) UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBER 20231018. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES PRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2) UPLAND FIELD WORK WAS CONDUCTED OCTOBER 23–27, 2023 BY AKS SURVEY AND FORESTRY, INC.
3) BATHYMETRY SURVEY DATA COLLECTED MARCH 8, 2023 BY NORTHWEST HYDRO, INC.
4) LEASE DELINEATION DATA COLLECTED DECEMBER 9, 2016 AND SEPTEMBER 6, 2018 BY MENDENHALL SURVEY.
5) HORIZONTAL DATUM: COORDINATES ARE BASED ON OREGON STATE PLANE NORTH
6) UPLAND VERTICAL DATUM: ELEVATIONS ARE BASED ON NATIONAL GEODETIC SURVEY BENCHMARK NO. SC1002,. LOCATED AT THE INTERSECTION OF HAMBURG STREET AND INDUSTRY STREET. ELEVATION – 16.36 FEET (NAVD 88).
7) CONTOUR INTERVAL IS 1.00 FOOT.

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PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
EXISTING SITE SURVEY AND PROPERTY BOUNDARIES

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	G2.01
CHECKED BY:	LS	SCALE:	NOTED	

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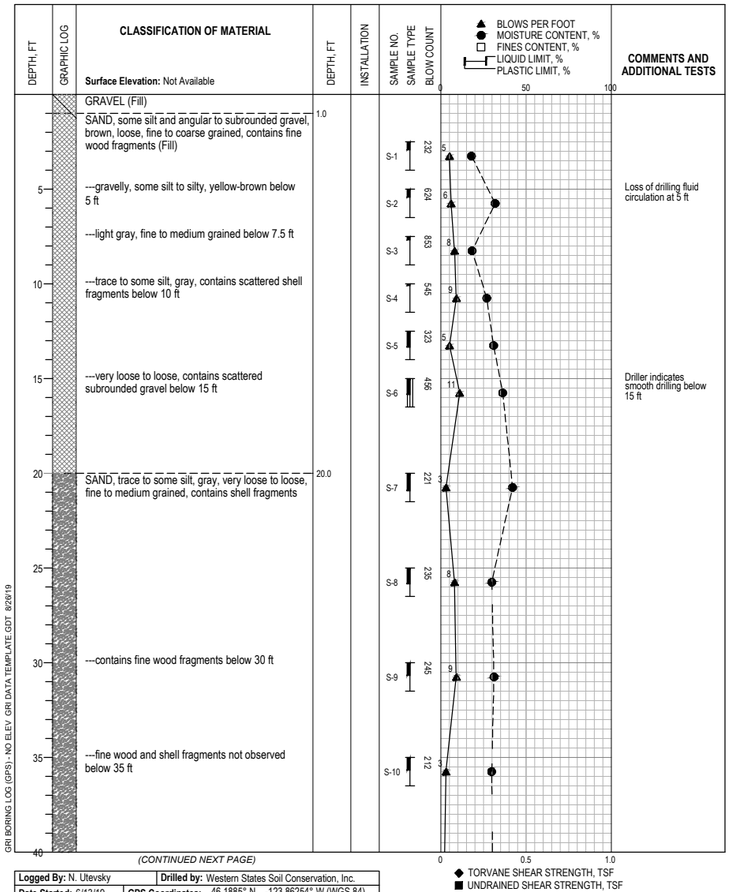
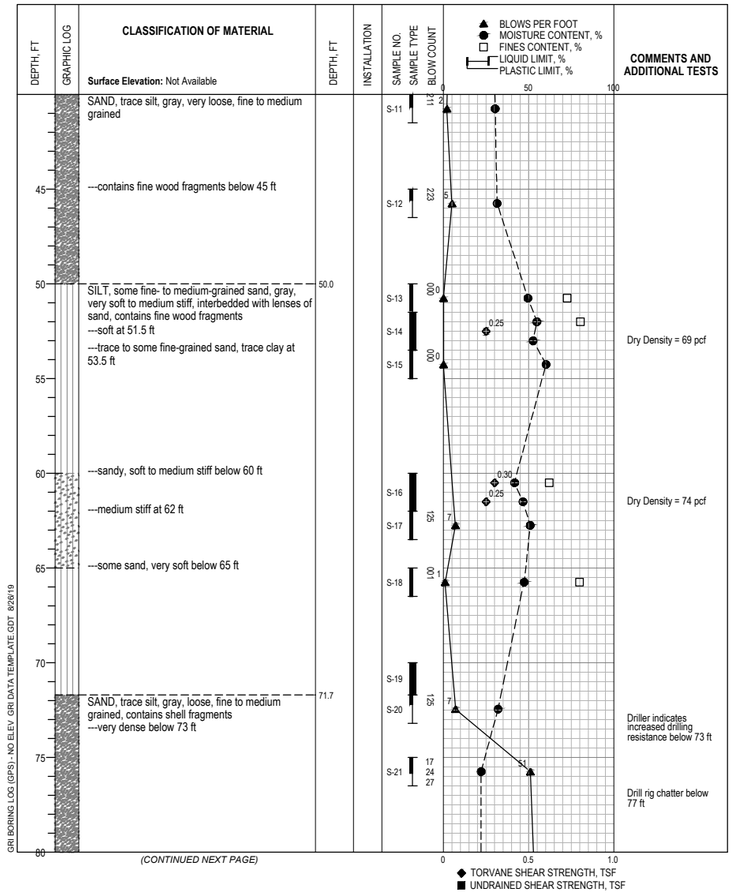


Logged By: N. Utevsky	**Drilled by:** Western States Soil Conservation, Inc.
Date Started: 6/13/19	**GPS Coordinates:** 46.1885° N -123.86254° W (WGS 84)
Drilling Method: Mud Rotary **Equipment:** Geoprobe 7822DT **Hole Diameter:** 5 in.	**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** Not Available
Note: See Legend for Explanation of Symbols	

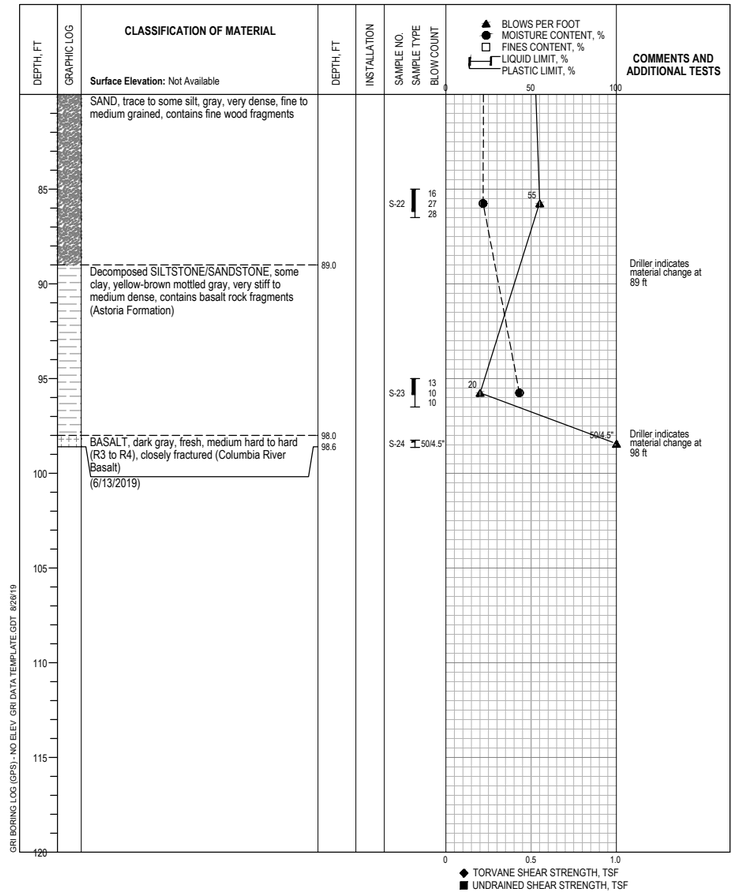
BORING B-1

AUG. 2019 JOB NO. 5960 FIG. 1A



BORING B-1

AUG. 2019 JOB NO. 5960 FIG. 1A



BORING B-1

AUG. 2019 JOB NO. 5960 FIG. 1A

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PORT OF ASTORIA

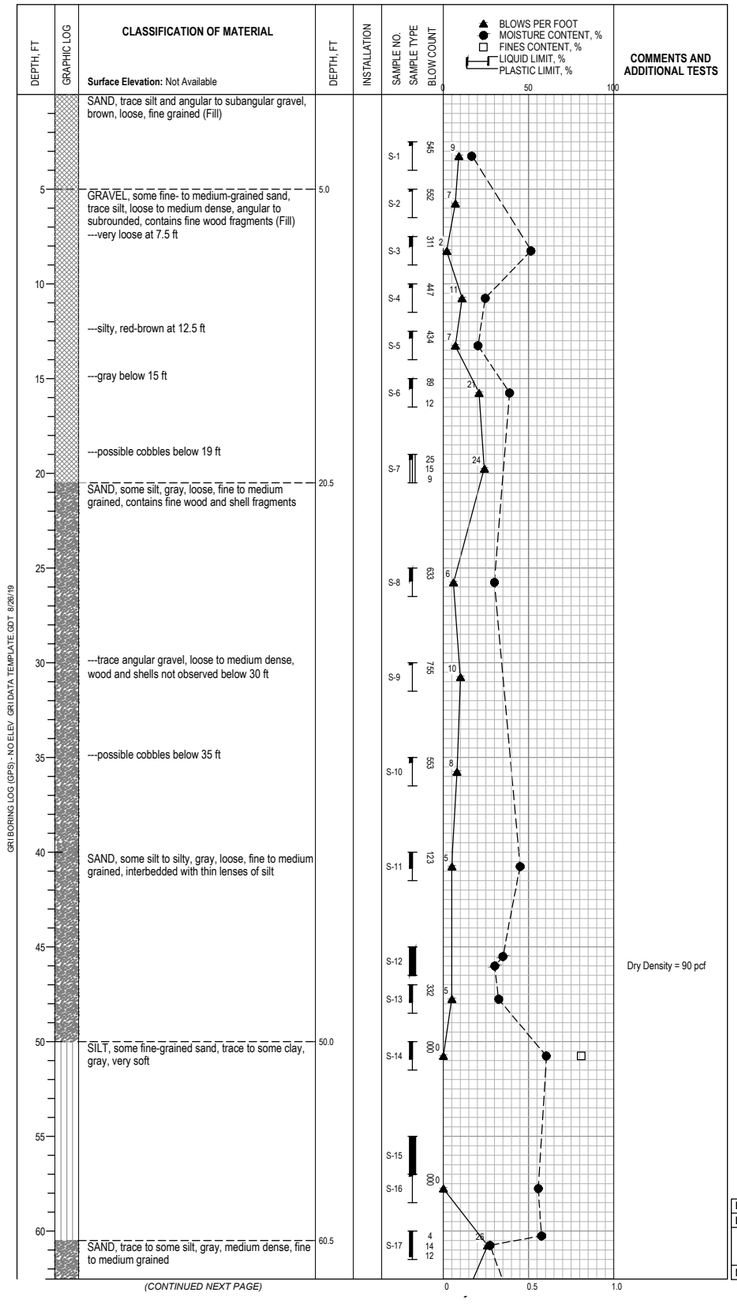
REVISIONS		
REV	DATE	DESCRIPTION

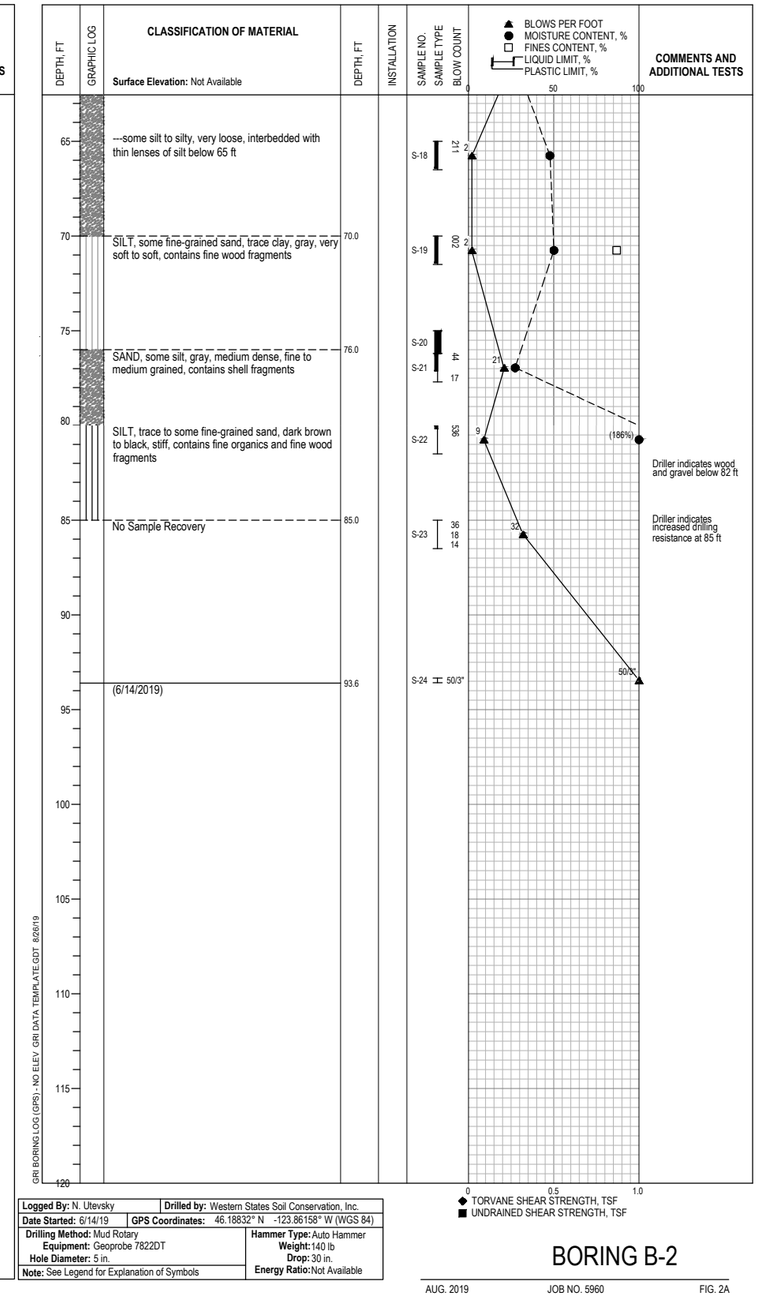
PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

TITLE: **EXISTING SOIL BORING PROFILES (1 OF 2)**

DESIGNED BY:	RJ	PROJECT NO:	234038
DRAWN BY:	WL	DATE:	MARCH 2024
CHECKED BY:	LS	SCALE:	NOTED

SHEET NO: **G2.02**

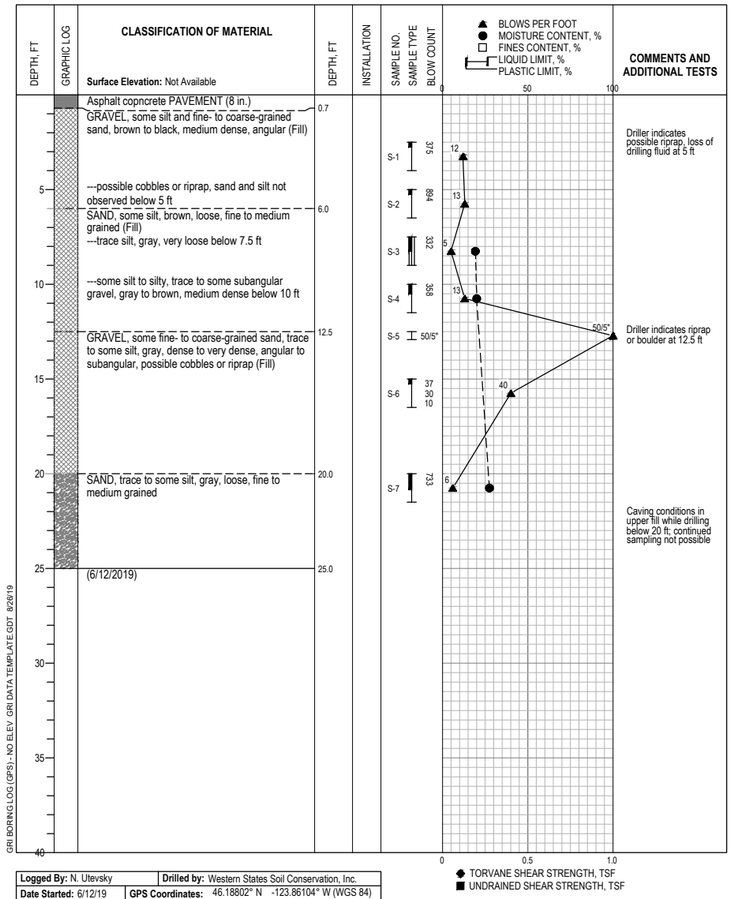




Logged By: N. Utevsky | Drilled by: Western States Soil Conservation, Inc.
Date Started: 6/14/19 | GPS Coordinates: 46.18832° N -123.86158° W (WGS 84)
Drilling Method: Mud Rotary | Hammer Type: Auto Hammer
Equipment: Geoprobe 7822DT | Weight: 140 lb
Hole Diameter: 5 in. | Drop: 30 in.
Note: See Legend for Explanation of Symbols | Energy Ratio: Not Available

BORING B-2

AUG. 2019 JOB NO. 5960 FIG. 2A



Logged By: N. Utevsky | Drilled by: Western States Soil Conservation, Inc.
Date Started: 6/12/19 | GPS Coordinates: 46.18802° N -123.86104° W (WGS 84)
Drilling Method: Mud Rotary | Hammer Type: Auto Hammer
Equipment: Geoprobe 7822DT | Weight: 140 lb
Hole Diameter: 5 in. | Drop: 30 in.
Note: See Legend for Explanation of Symbols | Energy Ratio: Not Available

BORING B-3

AUG. 2019 JOB NO. 5960 FIG. 3A

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PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **EXISTING SOIL BORING PROFILES (2 OF 2)**

DESIGNED BY:	RJ	PROJECT NO:	234038
DRAWN BY:	WL	DATE:	MARCH 2024
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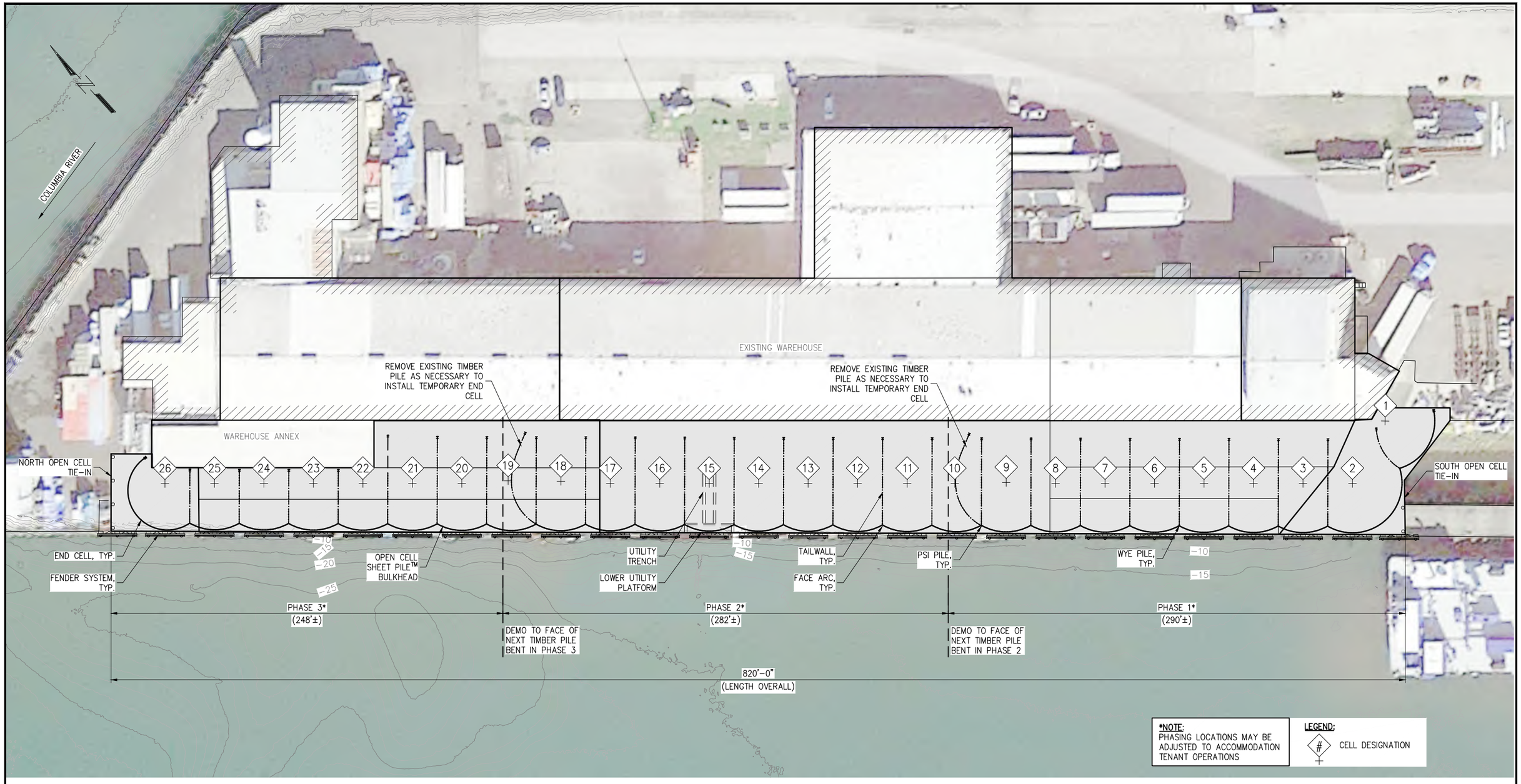
SHEET NO: **G2.03**



PLAN

0 10 20 30 60 90 FT.

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PORT OF ASTORIA

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REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
OVERALL SITE PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	G3.01
DRAWN BY:	WL	DATE:	MARCH 2024		
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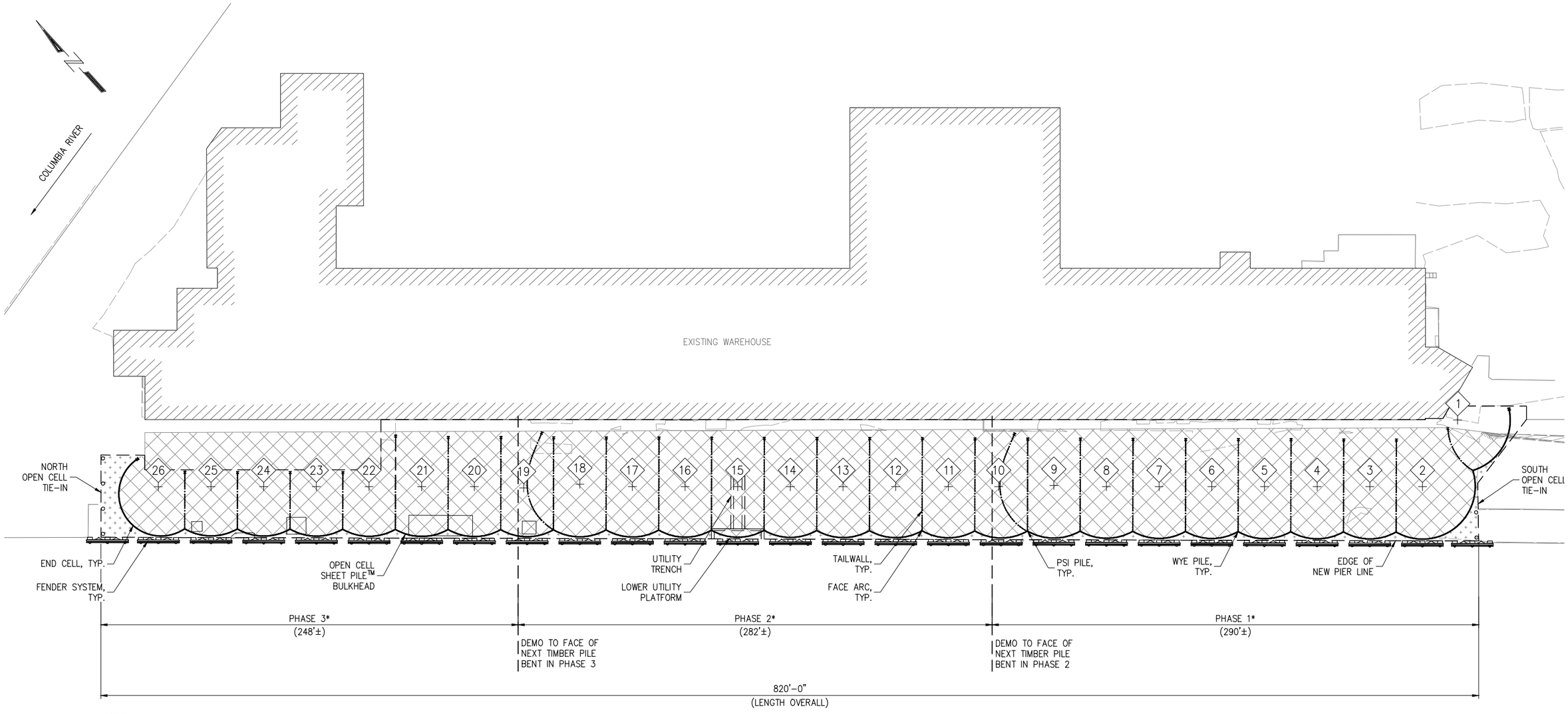

LEGEND:

- # CELL DESIGNATION
- REPLACEMENT OVERWATER COVERAGE (TOTAL AREA 45,274 SQUARE FEET [INCLUDING FILL AREA])
- NEW FILL AREA (VOLUME 18,713 CUBIC YARDS BELOW HMT)

***NOTE:**
PHASING LOCATIONS MAY BE ADJUSTED TO ACCOMMODATION TENANT OPERATIONS

PLAN

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PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
OPEN CELL FILL PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: G3.02
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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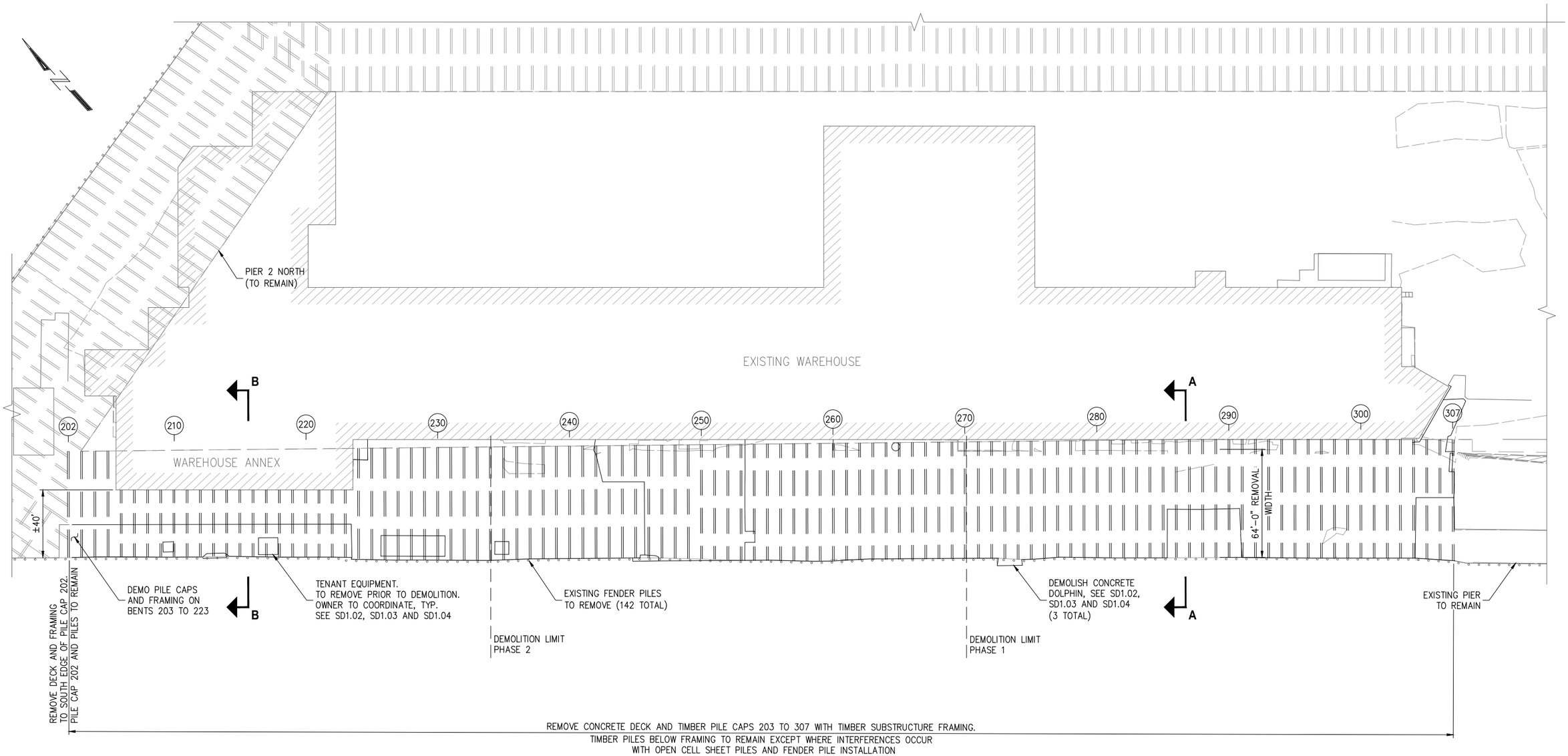

PLAN

0 10 20 30 60 90 FT.

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
DEMOLITION PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	SD1.01
CHECKED BY:	LS	SCALE:	NOTED	

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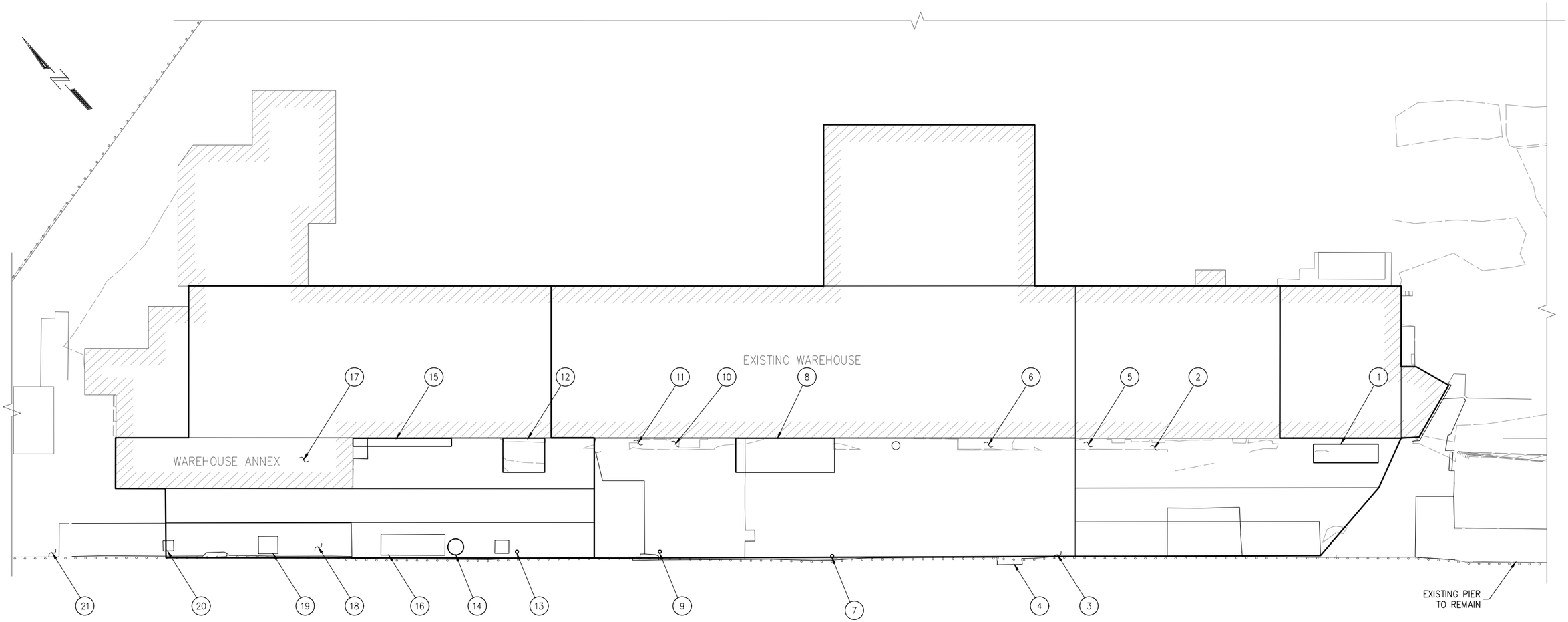

LEGEND:

(#) DECK EQUIPMENT ITEM. SEE ITEM PHOTO AND DESCRIPTION ON SD1.03 AND SD1.04

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
EQUIPMENT REMOVAL OVERVIEW

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: SD1.02
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

PHOTO #	DESCRIPTION OF ITEM TO REMOVE	ACTION	RESPONSIBLE PARTY
1	40' SHIPPING CONTAINER	TO REMOVE	TBD
2	AUGERS AND CRATES	TO REMOVE	TBD
3	STEEL FRAME AND ELECTRICAL STAND	TO REMOVE	TBD
4	CONCRETE DOLPHIN	TO REMOVE	TBD
5	CONCRETE ACCESS RAMP	TO REMOVE	TBD
6	PROCESSING EQUIPMENT	TO REMOVE	TBD
7	1000 LB JIB CRANE	TO REMOVE	TBD
8	PROCESSING EQUIPMENT AND SHED	TO REMOVE	TBD
9	CRAB POT CRANE	TO REMOVE	TBD
10	COMPRESSOR	TO REMAIN	N/A
11	FIRE HYDRANT	TO REMAIN	N/A
12	PROCESSING EQUIPMENT	TO REMOVE	TBD
13	1000 LB JIB CRANE AND SHED	TO REMOVE	TBD

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6

PHOTO 7

PHOTO 8

PHOTO 9

PHOTO 10

PHOTO 11

PHOTO 12

PHOTO 13

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
EQUIPMENT REMOVAL PHOTOS (1 OF 2)

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**SD1.03**
CHECKED BY:	LS	SCALE:	NOTED	

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PHOTO #	DESCRIPTION OF ITEM TO REMOVE	ACTION	RESPONSIBLE PARTY
14	WATER TANK	TO REMOVE	TBD
15	COOLING FANS	TO REMOVE	TBD
16	ICE HOUSE	TO REMOVE	TBD
17	ANNEX BUILDING	TO REMOVE	TBD
18	DIFFUSER	TO REMOVE	TBD
19	SHED	TO REMOVE	TBD
20	SHACK	TO REMOVE	TBD
21	1000 LB JIB CRANE	TO REMAIN	N/A

PHOTO 14

PHOTO 15

PHOTO 16

PHOTO 17

PHOTO 18

PHOTO 19

PHOTO 20

PHOTO 21

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
EQUIPMENT REMOVAL PHOTOS (2 OF 2)

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**SD1.04**
CHECKED BY:	LS	SCALE:	NOTED	

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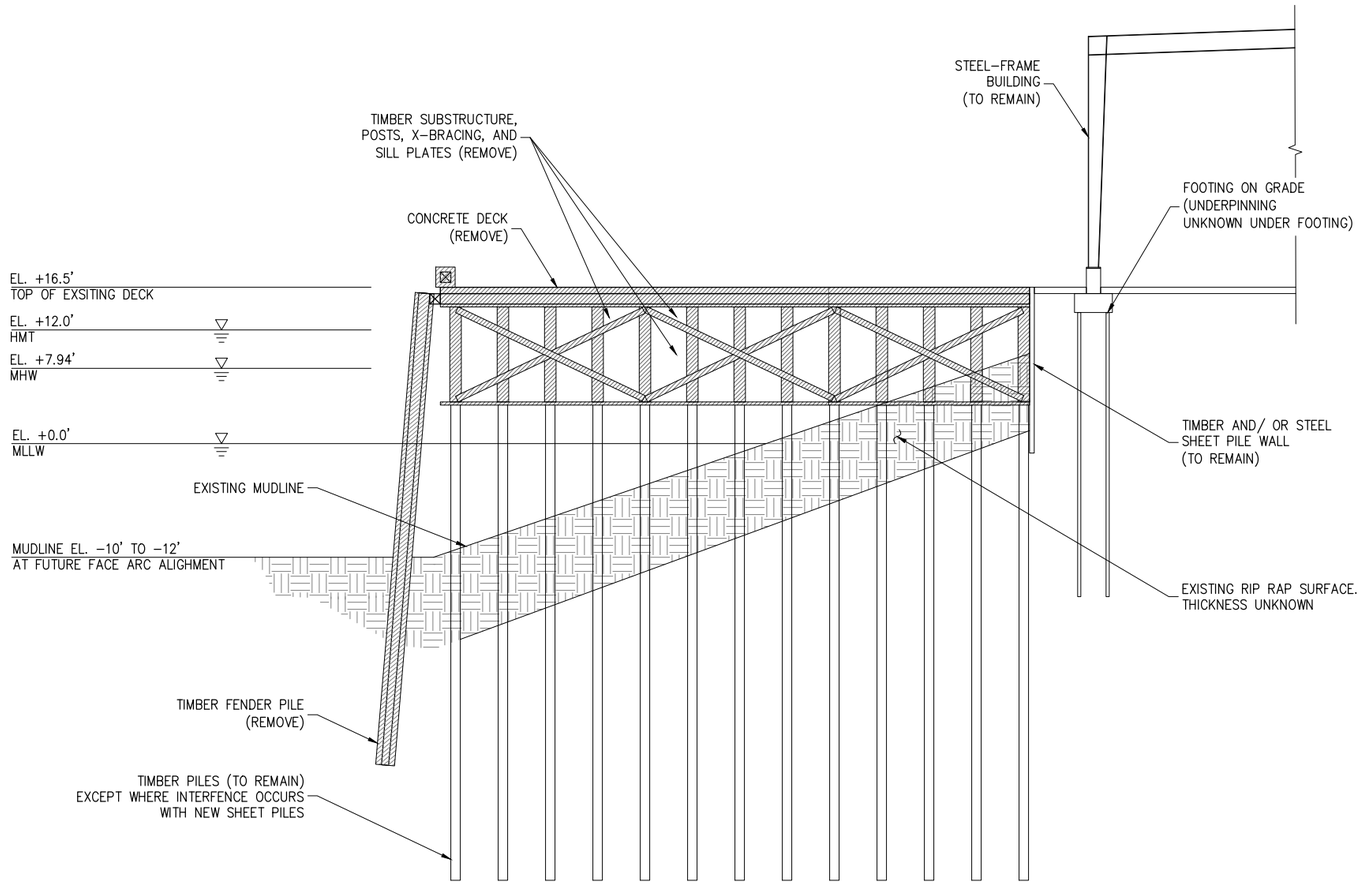

LEGEND:

DEMOLISH

DEMOLITION SECTION A-A

30% DESIGN

PND ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE: DEMOLITION SECTION A-A

DESIGNED BY:	RJ	PROJECT NO:	234038
DRAWN BY:	WL	DATE:	MARCH 2024
CHECKED BY:	LS	SCALE:	NOTED

SHEET NO: SD2.01

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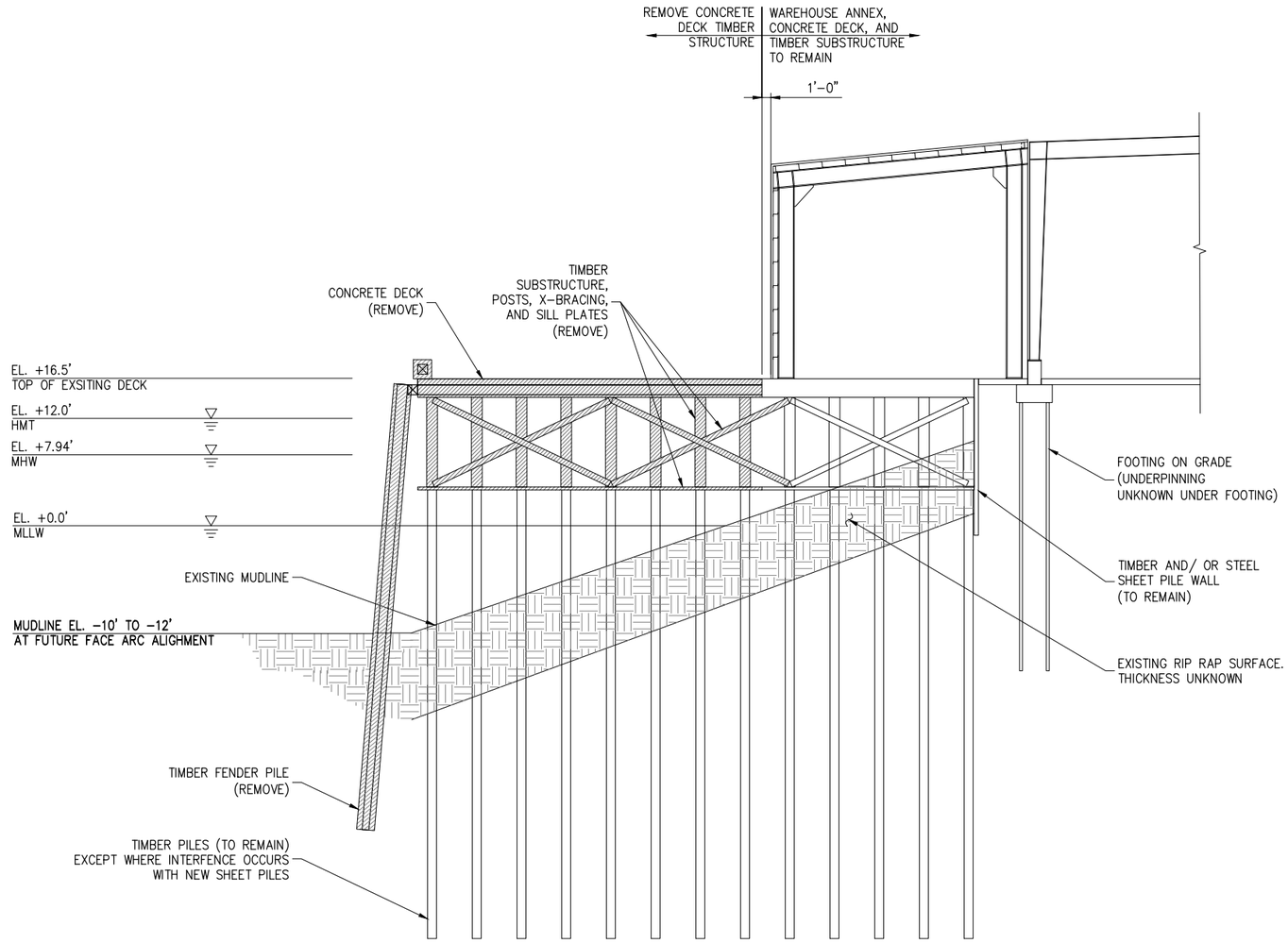

LEGEND:

DEMOLISH

DEMOLITION SECTION B-B

30% DESIGN

PND ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE: DEMOLITION SECTION B-B

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: SD2.02
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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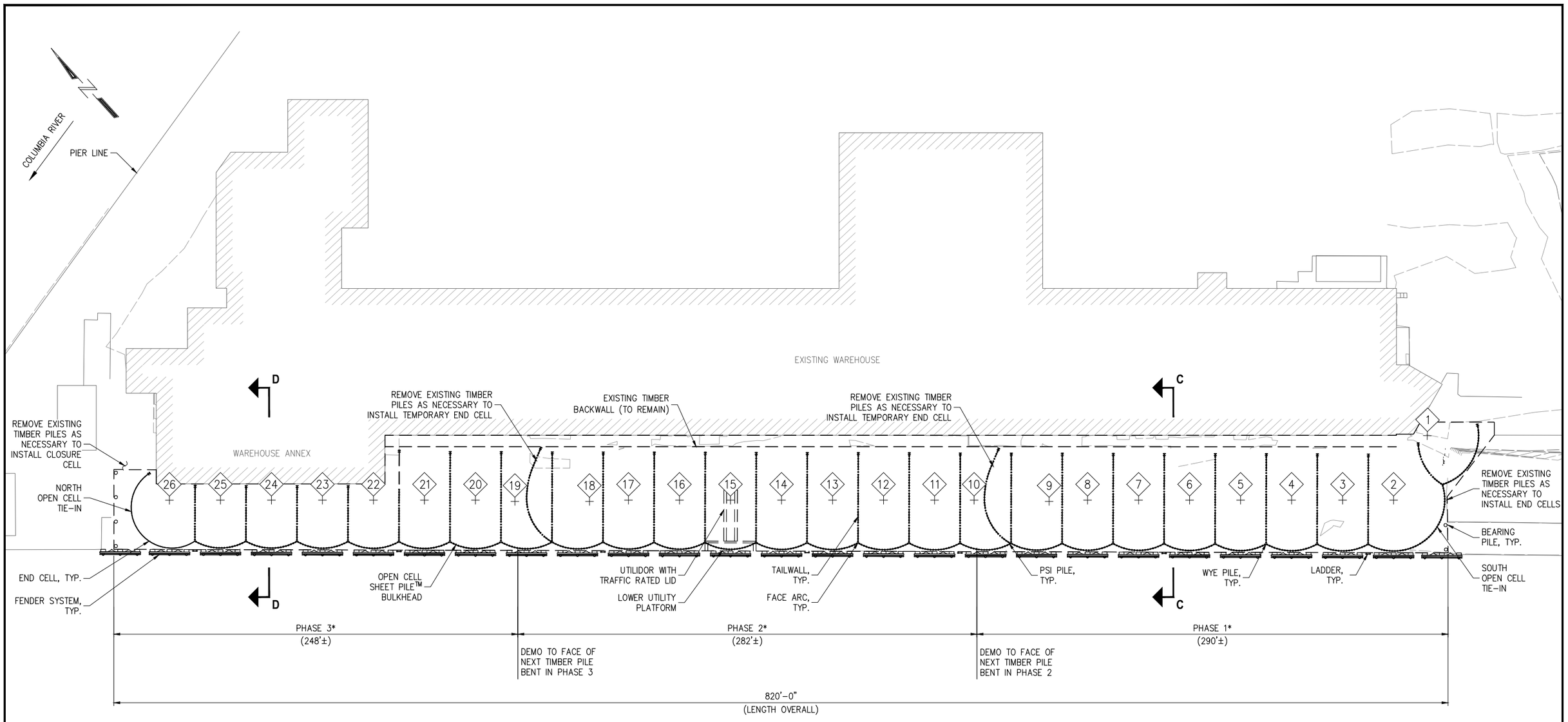

***NOTE:**
PHASING LOCATIONS MAY BE ADJUSTED TO ACCOMMODATION TENANT OPERATIONS

LEGEND:
CELL DESIGNATION

PLAN

0 10 20 30 60 90 FT.

30% DESIGN

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3240 Eastlake Avenue E
Seattle, Washington 98102
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PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
SHEET PILE PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S1.01**
CHECKED BY:	LS	SCALE:	NOTED	

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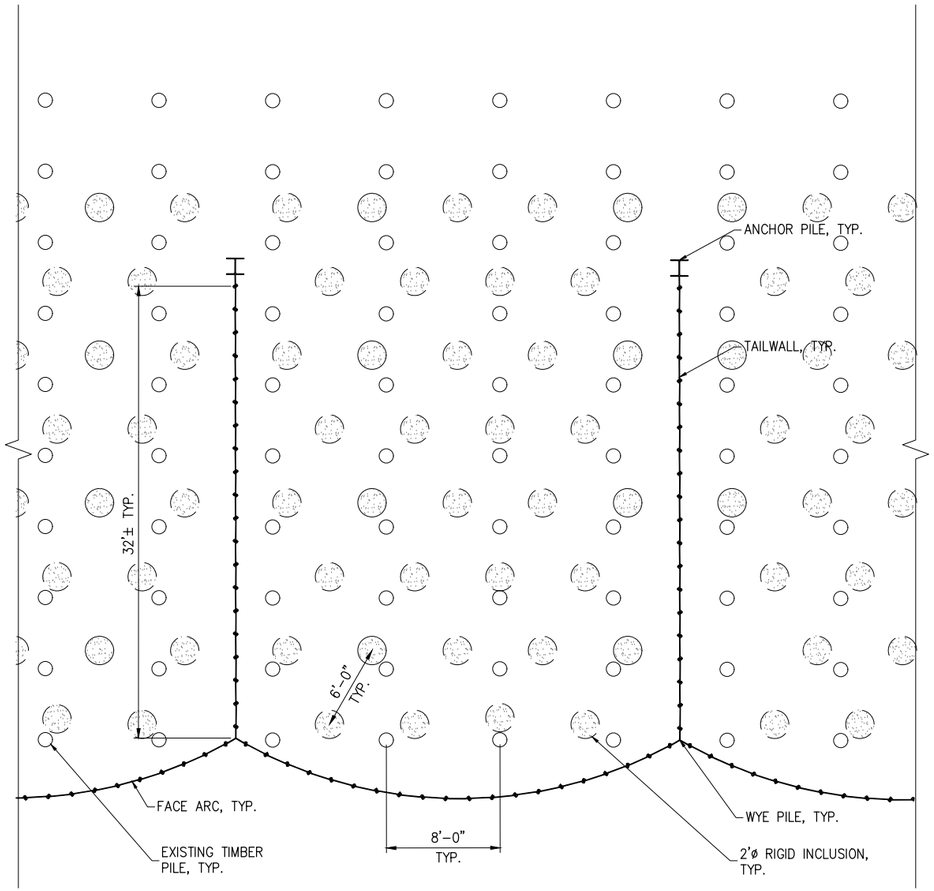
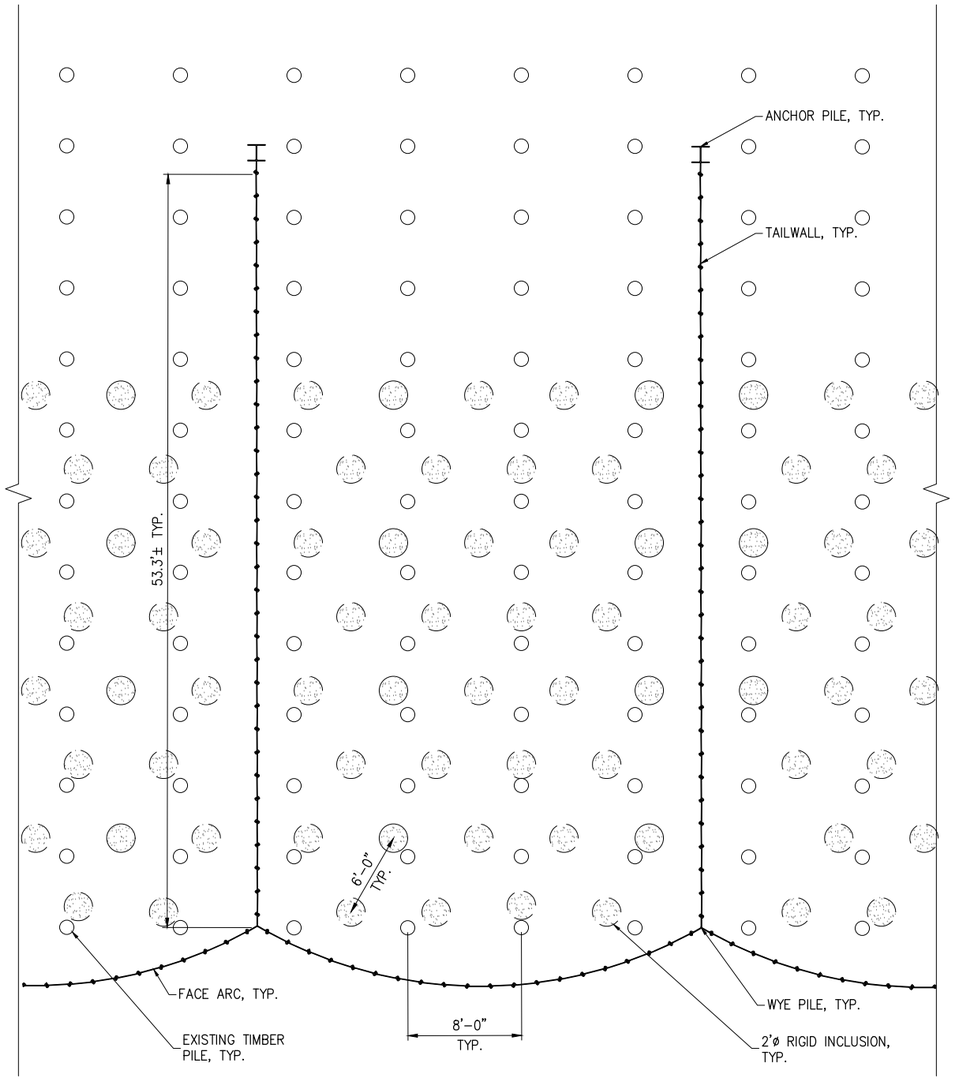


GROUND IMPROVEMENT LAYOUT (AT ANNEX)

CONTRACTOR TO SUBMIT ALTERNATE LAYOUT FOR APPROVAL



GROUND IMPROVEMENT LAYOUT (STANDARD)

CONTRACTOR TO SUBMIT ALTERNATE LAYOUT FOR APPROVAL.

30% DESIGN

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3240 Eastlake Avenue E
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www.pndengineers.com

PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
PIER GROUND IMPROVEMENT PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S1.02**
CHECKED BY:	LS	SCALE:	NOTED	

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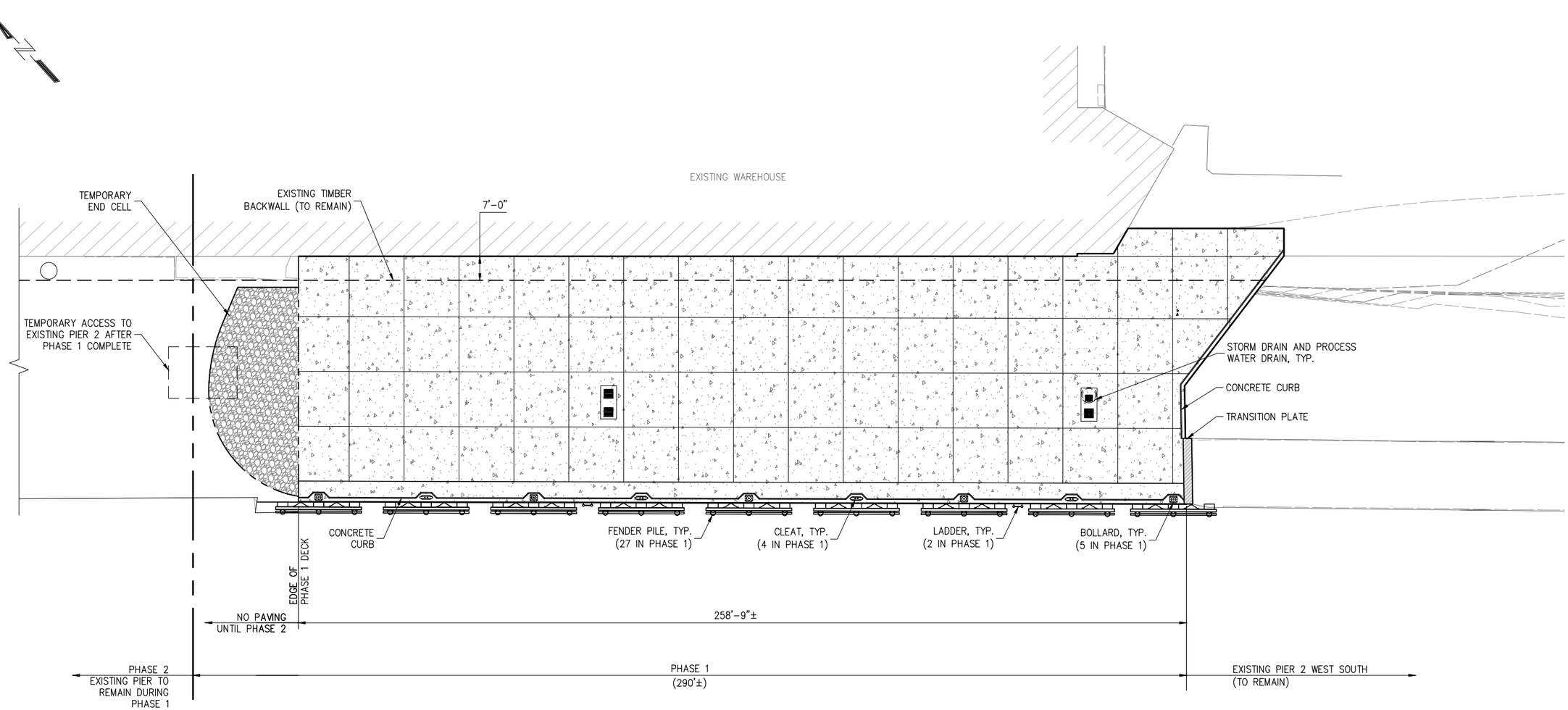

PHASE 1 DECK PLAN

0 4 8 16 32 48 FT.

30% DESIGN

ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
PHASE 1 DECK PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S1.03**
CHECKED BY:	LS	SCALE:	NOTED	

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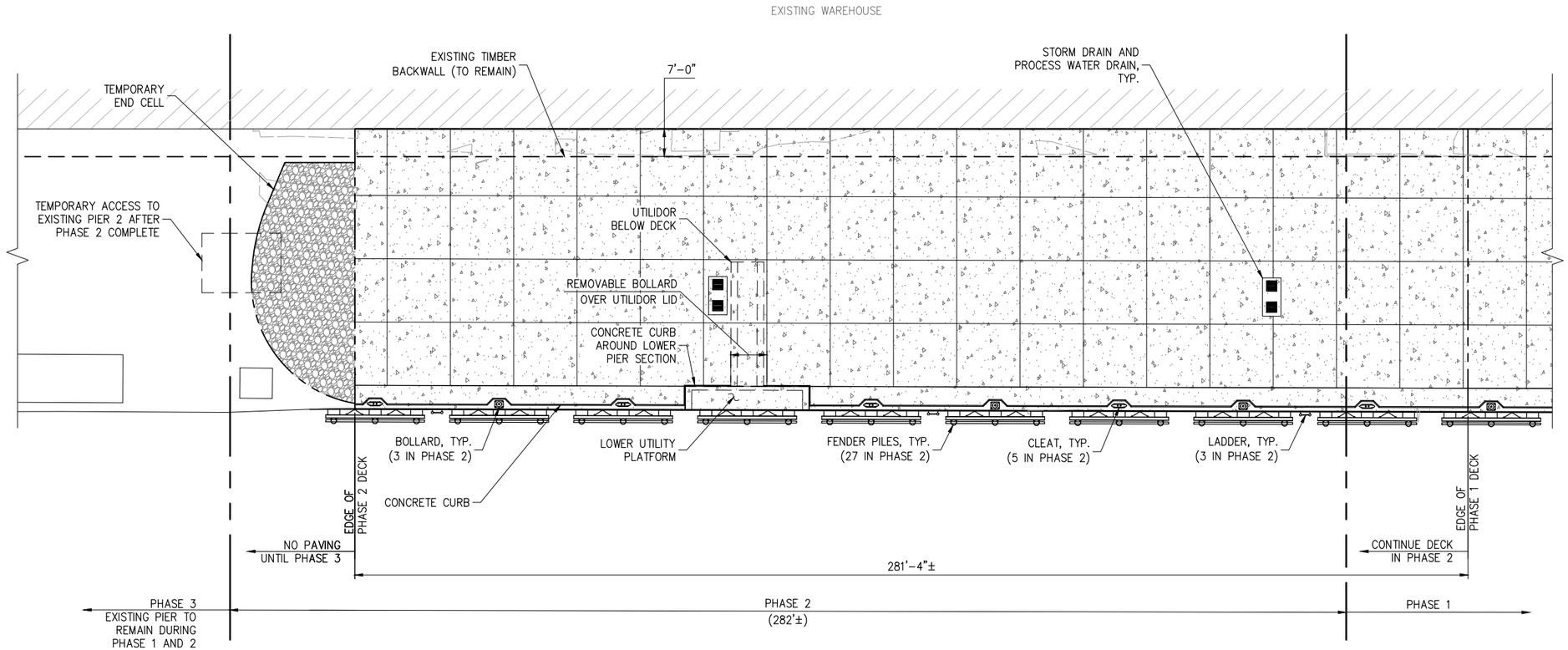

PHASE 2 DECK PLAN

0 4 8 16 32 48 FT.

30% DESIGN

P N D ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **PHASE 2 DECK PLAN**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: **S1.04**
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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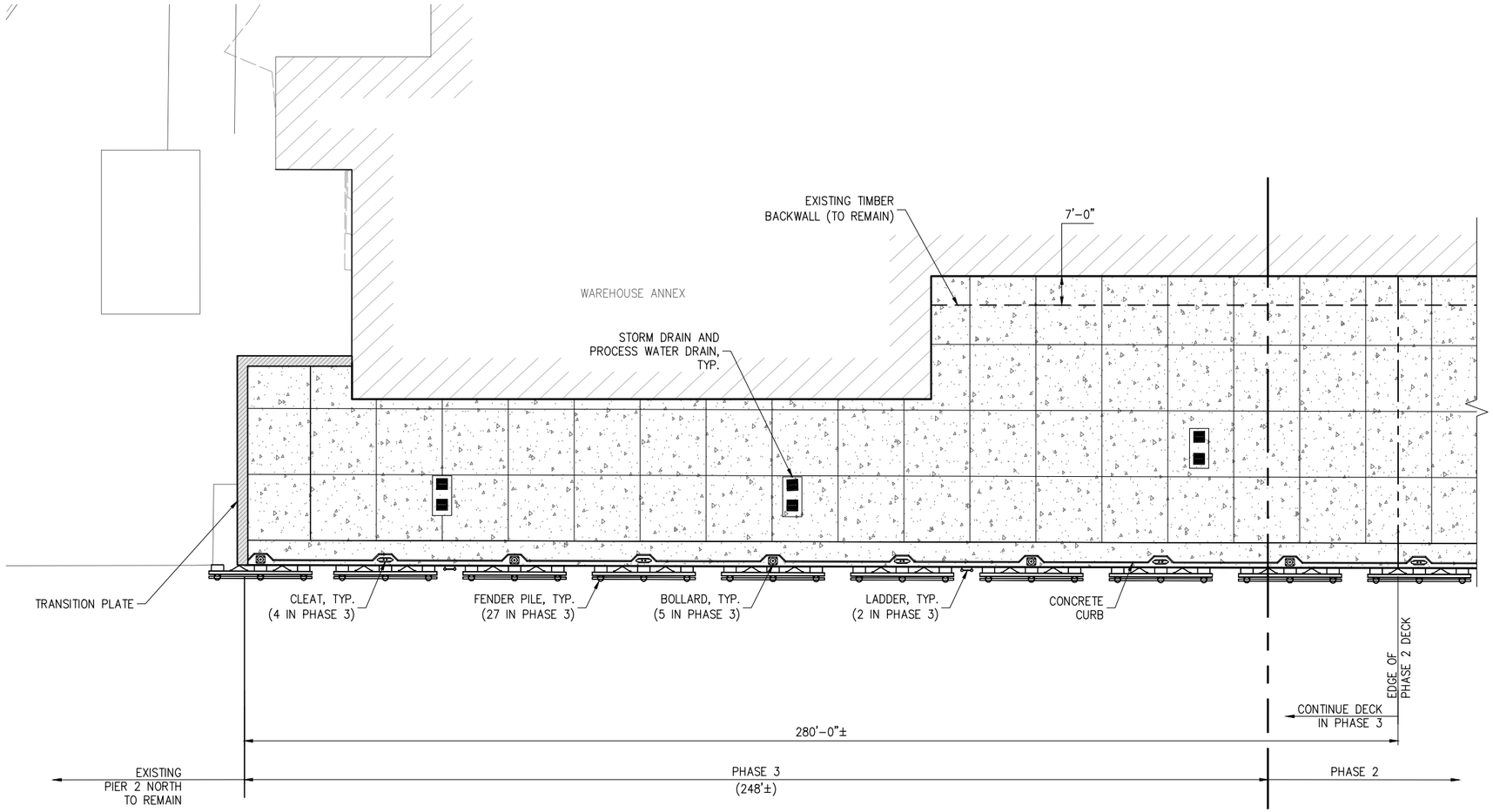

PHASE 3 DECK PLAN

0 4 8 16 32 48 FT.

30% DESIGN

ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
PHASE 3 DECK PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S1.05**
CHECKED BY:	LS	SCALE:	NOTED	

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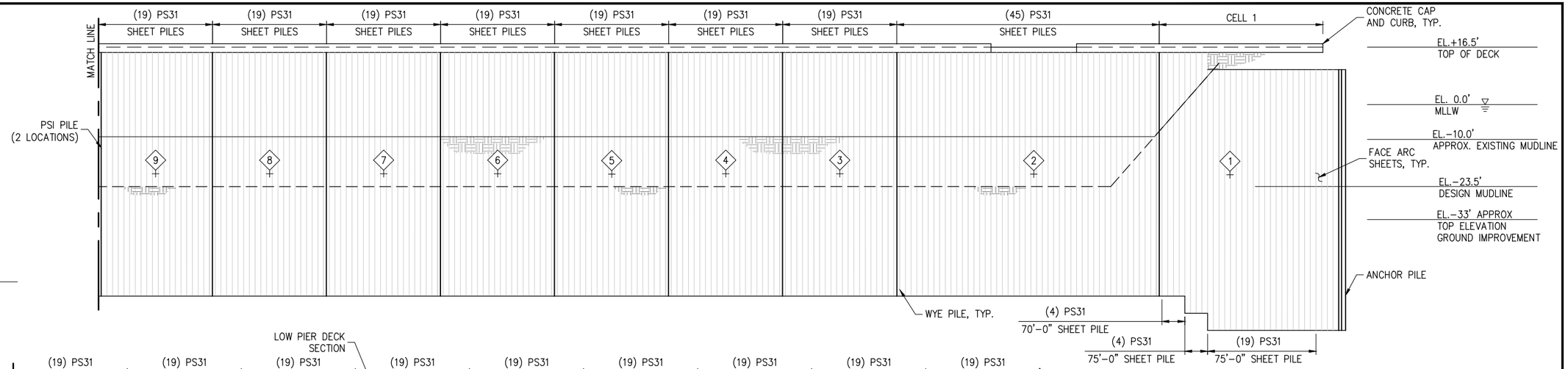
LEGEND

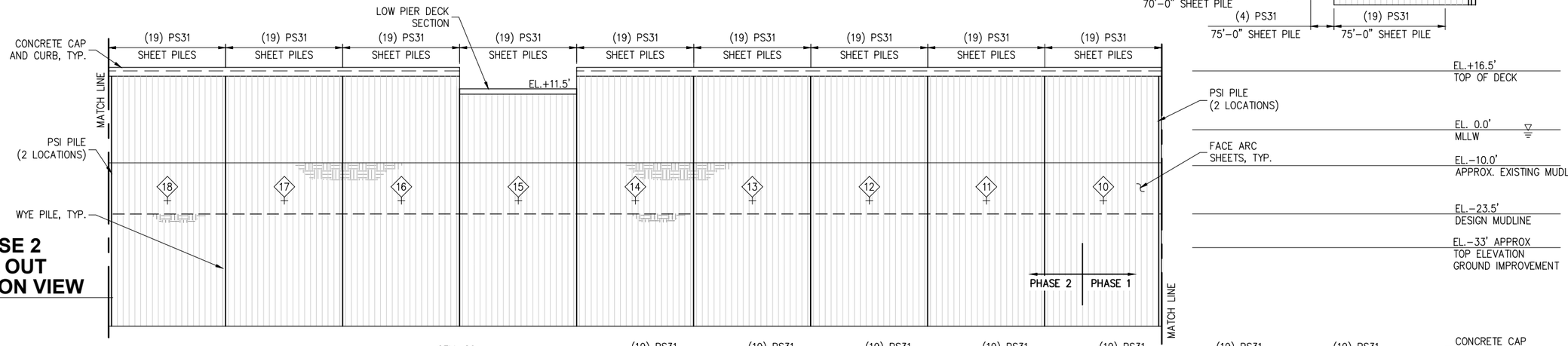
X CELL DESIGNATION

NOTE:
ALL SECTIONS ARE 1V:1H SCALE. FENDER PILES NOT SHOWN FOR CLARITY

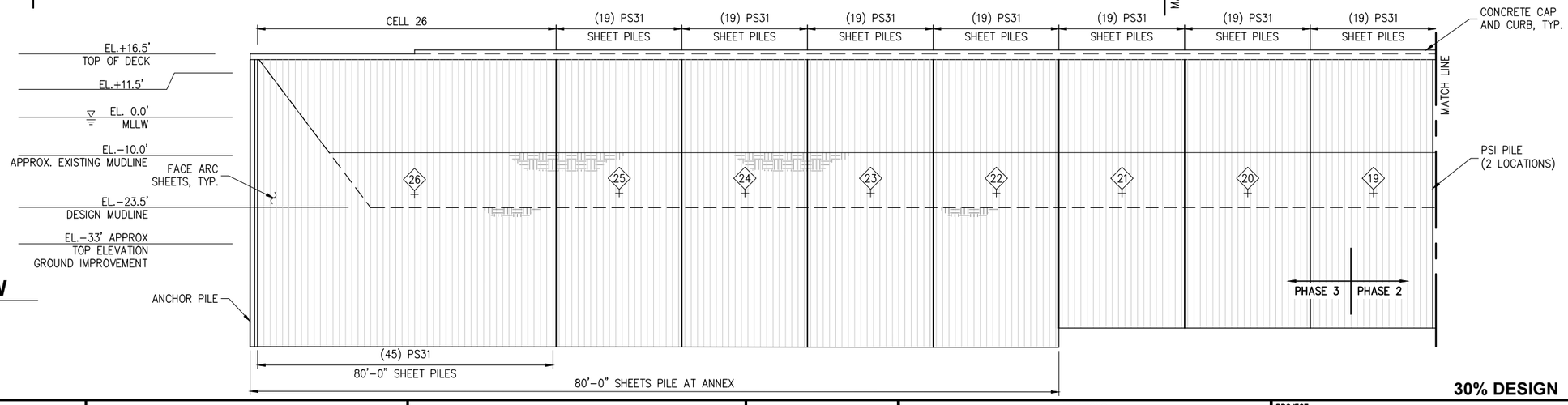
PHASE 1 ROLL OUT ELEVATION VIEW



PHASE 2 ROLL OUT ELEVATION VIEW



PHASE 3 ROLL OUT ELEVATION VIEW



30% DESIGN

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PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
SHEET PILE ROLL-OUT VIEW

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S2.01
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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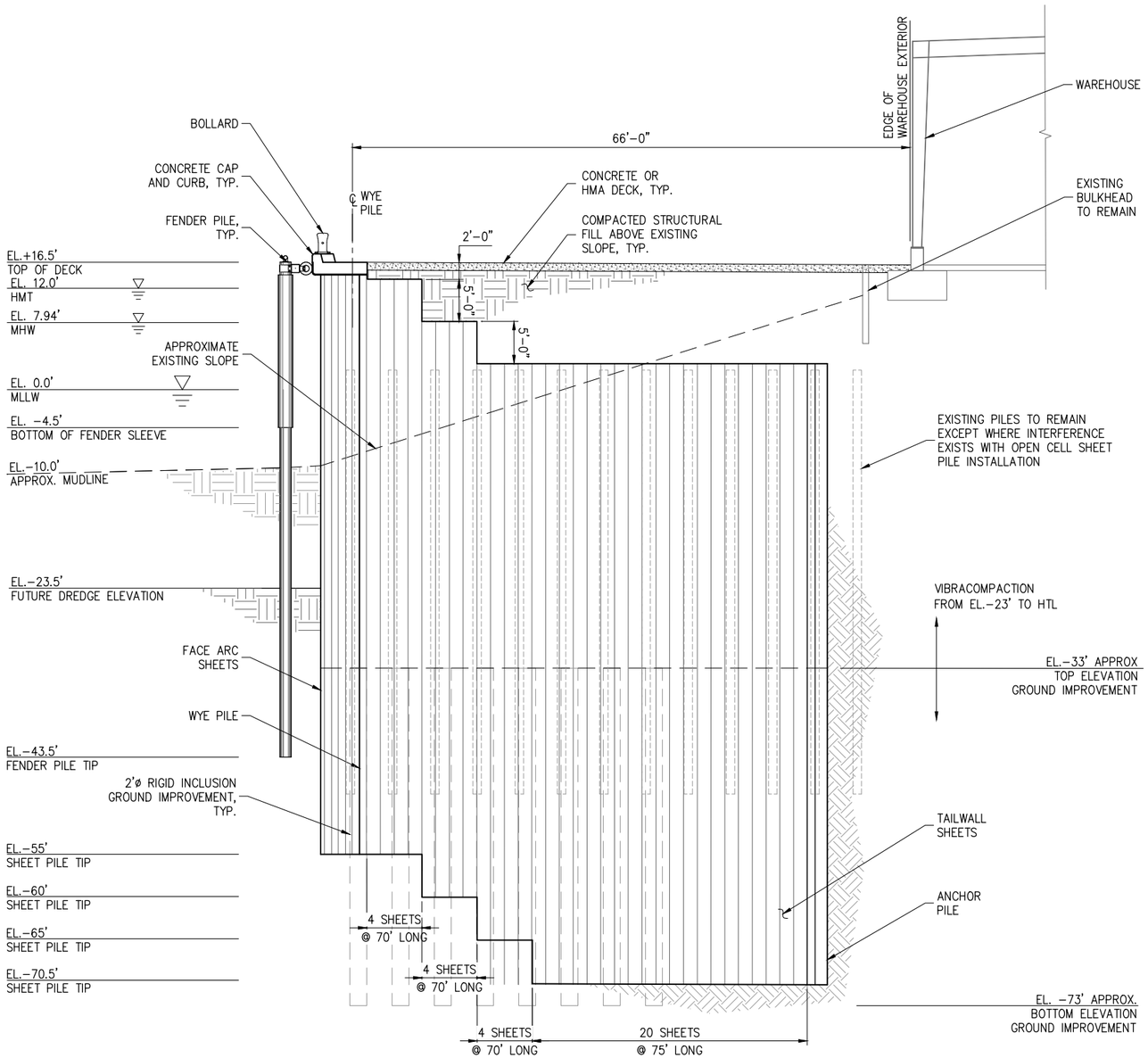

TYPICAL TAILWALL SECTION C-C

30% DESIGN

P N D ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE: OPEN CELL SHEET PILE SECTION (1 OF 2)

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S2.02
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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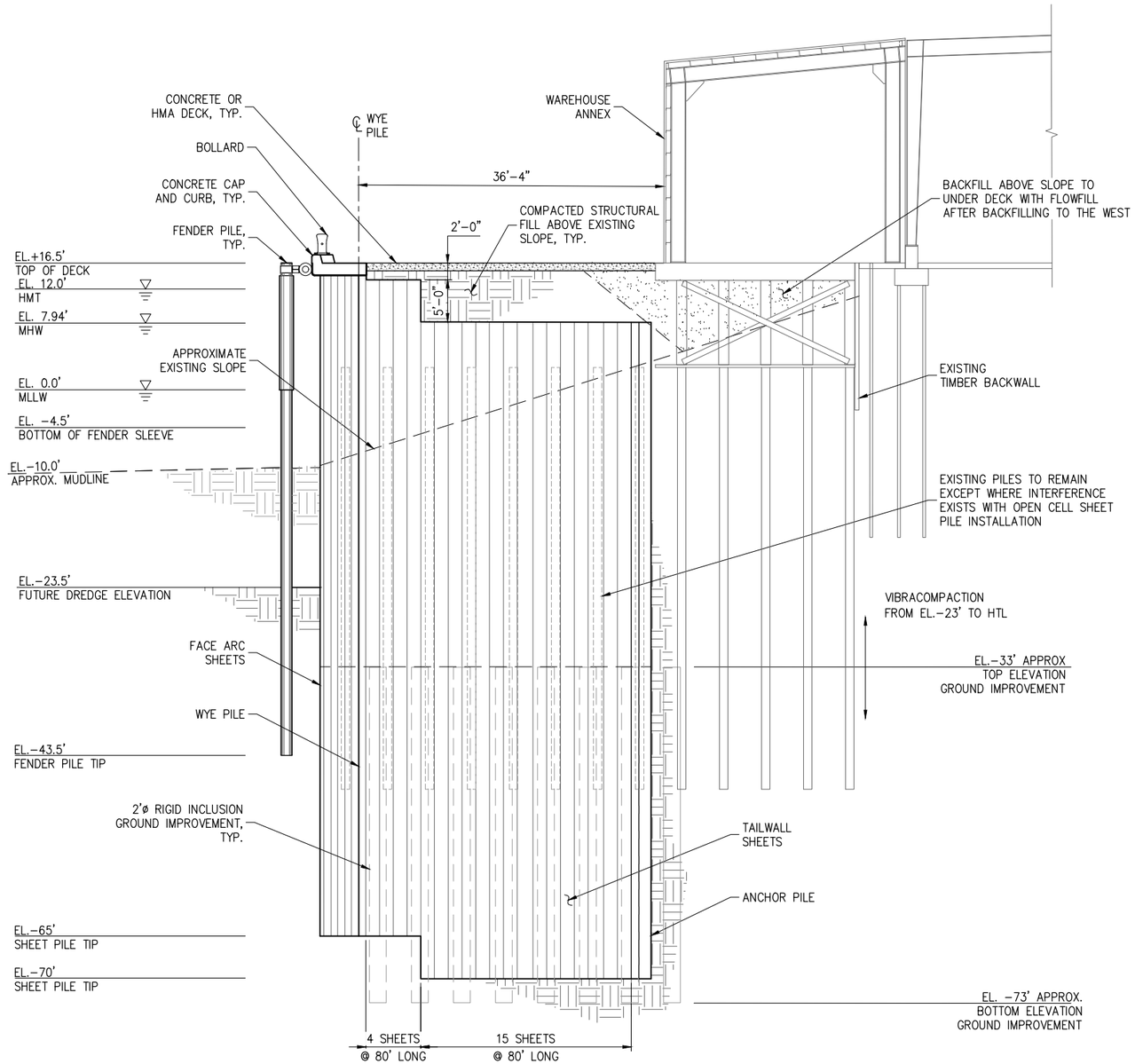

TAILWALL SECTION D-D AT BUILDING ANNEX

30% DESIGN

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3240 Eastlake Avenue E
Seattle, Washington 98102
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www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **OPEN CELL SHEET PILE SECTION (2 OF 2)**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S2.03
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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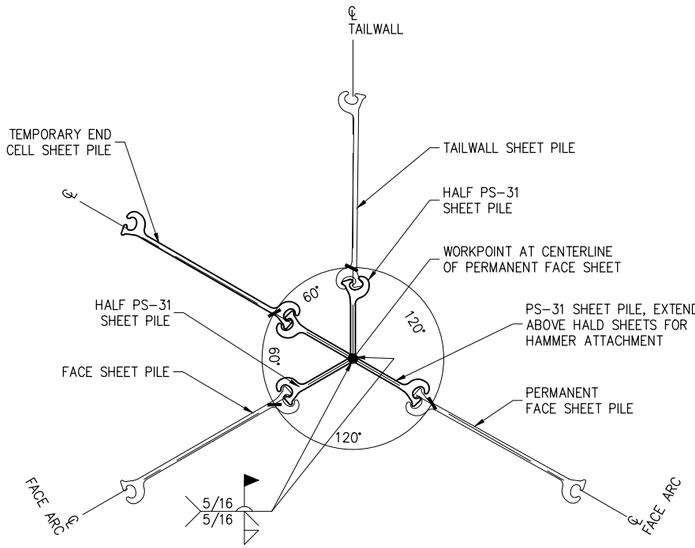
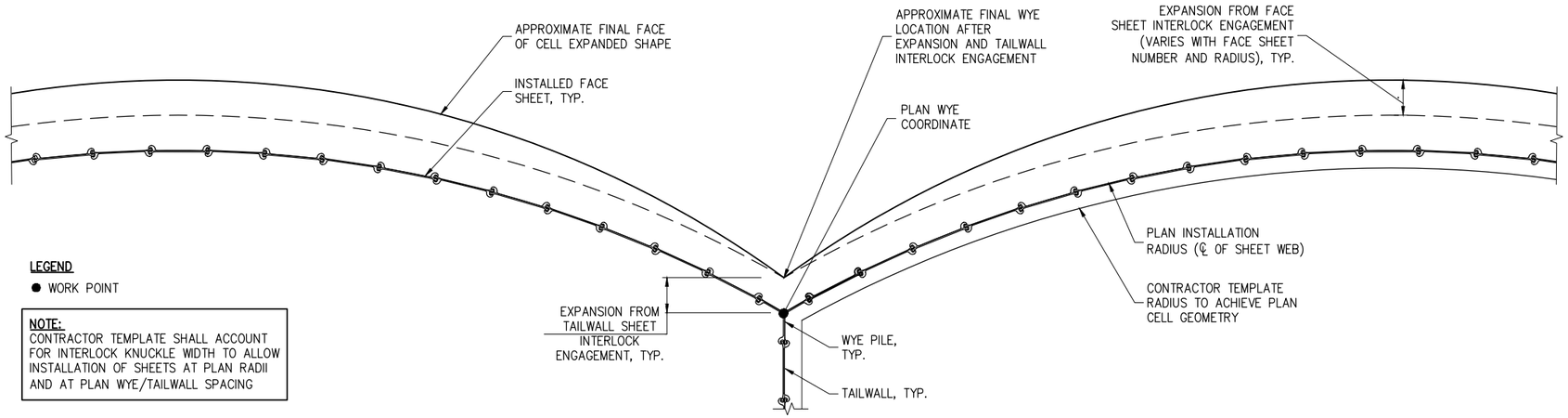


PSI PILE



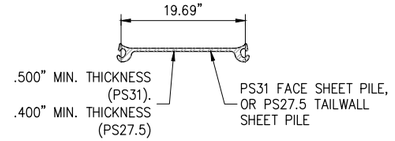
LEGEND

● WORK POINT

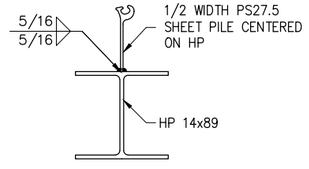
NOTE:
CONTRACTOR TEMPLATE SHALL ACCOUNT FOR INTERLOCK KNUCKLE WIDTH TO ALLOW INSTALLATION OF SHEETS AT PLAN RADII AND AT PLAN WYE/TAILWALL SPACING

TYPICAL CELL DETAIL

NTS

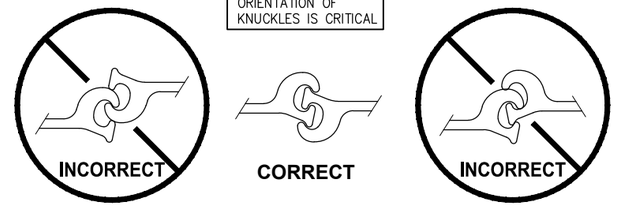


TYPICAL SHEET PILE

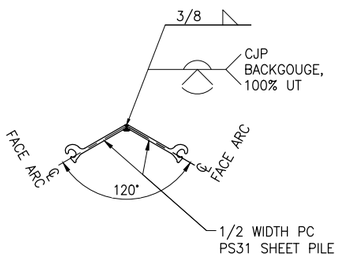


TYPICAL ANCHOR PILE SECTION

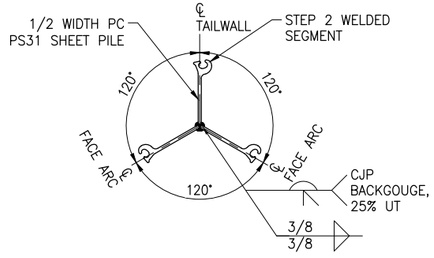
NOTE:
ORIENTATION OF KNUCKLES IS CRITICAL



SHEET PILE INTERLOCK TYPICAL DETAIL



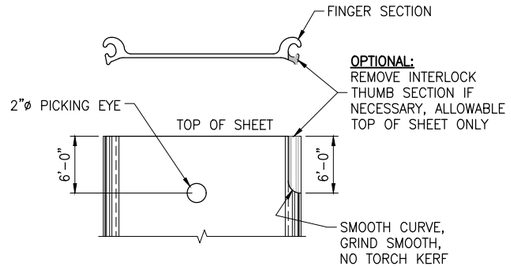
STEP 1



STEP 2

TYPICAL WELDED WYE PILE

NOTE:
ORIENTATION OF INTERLOCKS IS CRITICAL, VIEW SHOWN FROM TOP. ALTERNATE WYE CONFIGURATIONS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.



SHEET PICKING/ SNIPE DETAIL

30% DESIGN

ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
OPEN CELL TYPICAL DETAILS

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	**S2.04**
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

OPEN CELL SHEET PILE SCHEDULE

MEMBER TYPE			FACE SHEET – PS 31			TAILWALL SHEET – PS 31			WYE PILE		PSI PILE	ANCHOR PILE	
SHEET LENGTH			70	75	80	70	75	80	70	80	70	75	80
CELL OR TAILWALL DESIGNATION	PHASE 1	1	4	23								1	
		1–2				12	5		1			1	
		2	45										
		2–3				12	20		1			1	
		3	19										
		3–4				12	20		1			1	
		4	19										
		4–5				12	20		1			1	
		5	19										
		5–6				12	20		1			1	
		6	19										
		6–7				12	20		1			1	
		7	19										
		7–8				12	20		1			1	
		8	19										
		8–9				12	20		1			1	
		9	19								1		
		9–10				12	20					1	
		9T				8	30					1	
	PHASE 2	10	19										
		10–11				12	20		1			1	
		11	19										
		11–12				12	20		1			1	
		12	19										
		12–13				12	20		1			1	
		13	19										
		13–14				12	20		1			1	
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		15	19										
		15–16				12	20		1			1	
		16	19										
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		17	19										
		17–18				12	20		1			1	
		18	19								1		
		18–19				12	20					1	
		18T				8	30					1	
	PHASE 3	19	19										
		19–20				12	20		1			1	
		20	19										
		20–21				12	20		1			1	
		21	19										
		21–22				12	20		1			1	
		22			19								
		22–23						19		1			1
		23			19								
		23–24						19		1			1
		24			19								
		24–25						19		1			1
		25			19								
		25–26						19		1			1
		26			19			26					1
TOTAL QUATITY			410	23	95	242	405	102	19	4	2	24	5
TOTAL LENGTH (FT)			28700	1725	7600	16940	30375	8160	1330	320	140	1800	400
WEIGHT PER FT.			50.9	50.9	50.9	50.9	50.9	50.9	76.6	76.6	102	111.55	111.55
WEIGHT (TON)			730	44	193	431	773	208	51	12	7	100	22
TOTAL WT (TONS)			2571										

LEGEND:

##	TEMPORARY SHEETS TO REMOVE AND REINSTALL IN SUBSEQUENT PHASE. NOT INCLUDED IN TOTAL QUANTITIES.

30% DESIGN

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3240 Eastlake Avenue E
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www.pndengineers.com

PORT OF ASTORIA

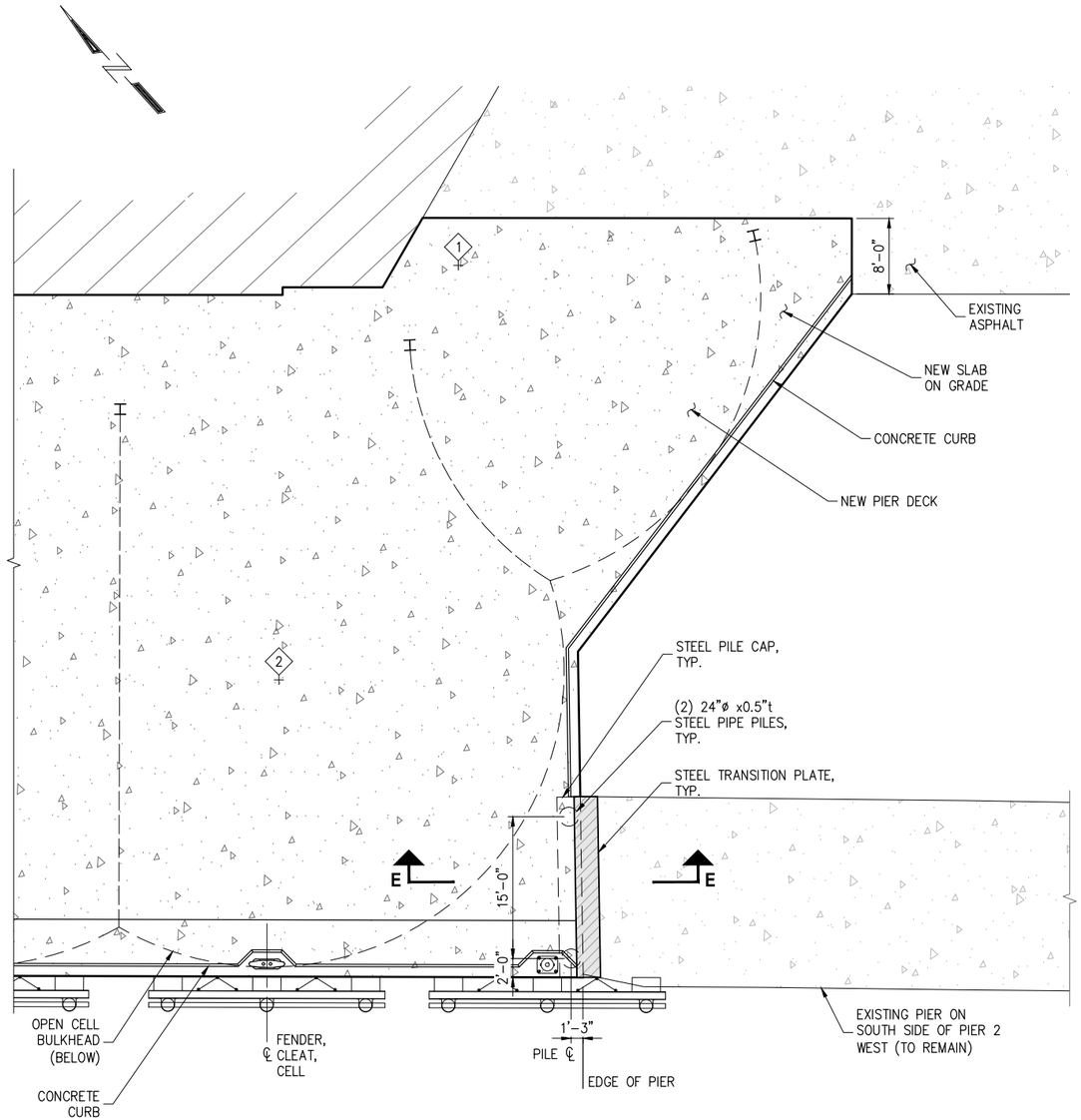
REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

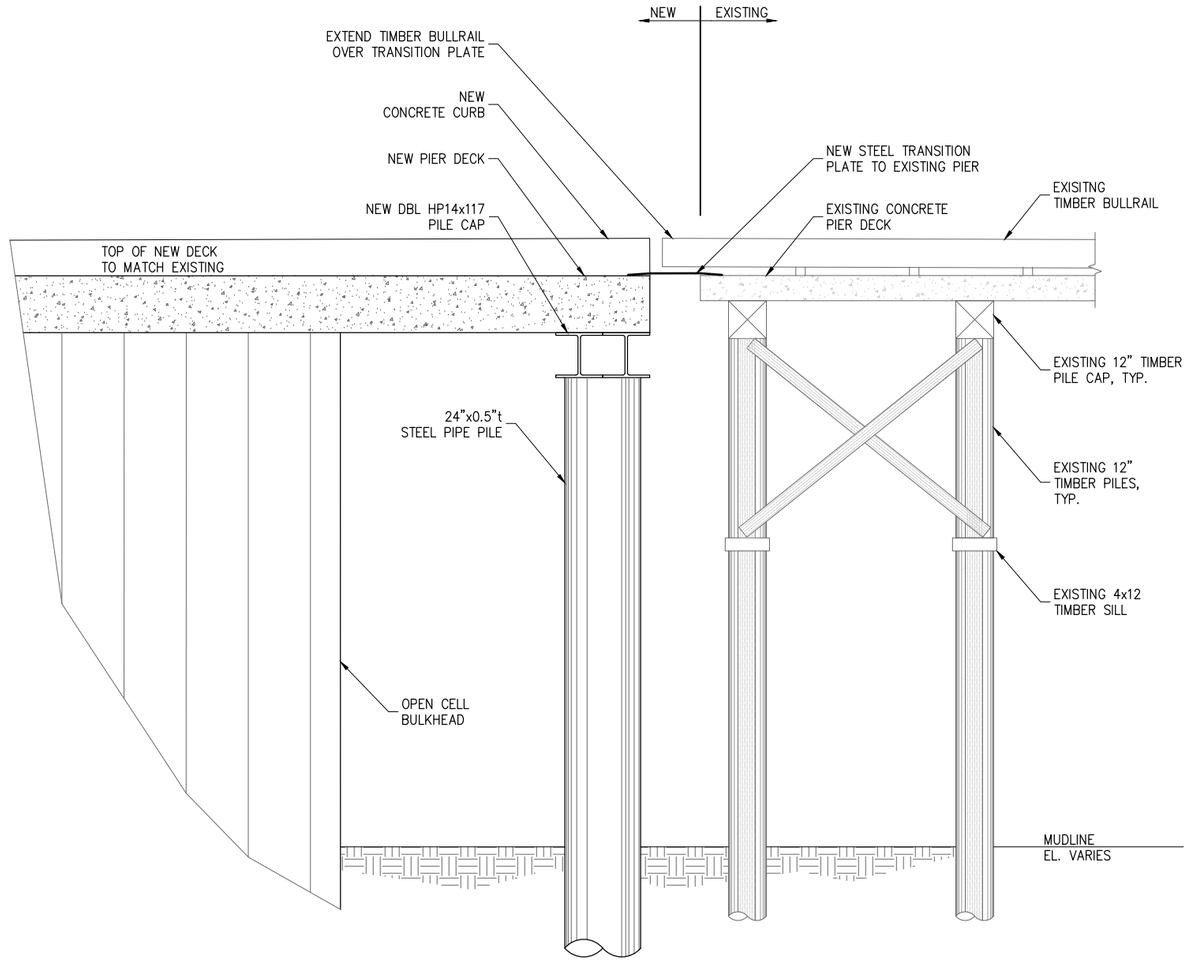
TITLE:
OPEN CELL SHEET PILE SCHEDULE

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	**S2.05**
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		



SOUTH OPEN CELL TIE-IN PLAN

NOTE: FENDER DETAILS NOT SHOWN FOR CLARITY



SECTION E-E

NORTH TIE-IN BEARING SCHEDULE				
TYPE	DIAMETER (IN)	WALL THICKNESS (IN)	LENGTH (FT)	QUANTITY
PILE TYPE	24	0.500	120	2

30% DESIGN

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3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **SOUTH OPEN CELL TIE-IN DETAILS**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	S3.01
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

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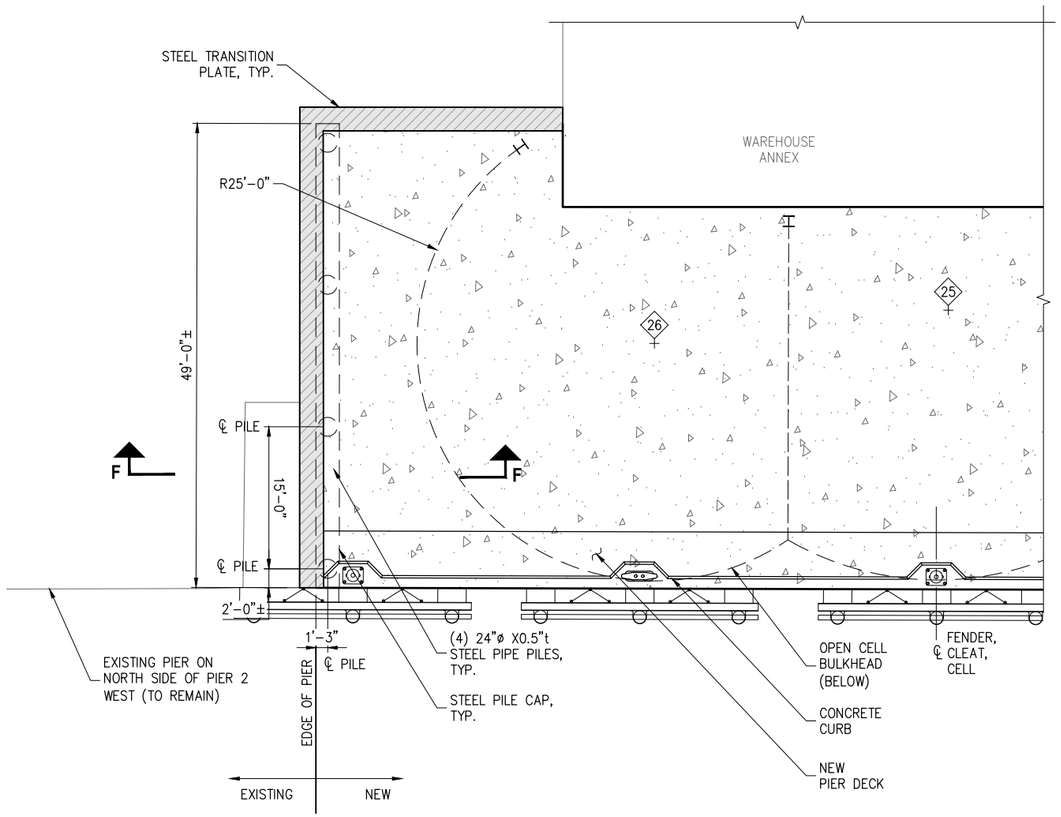
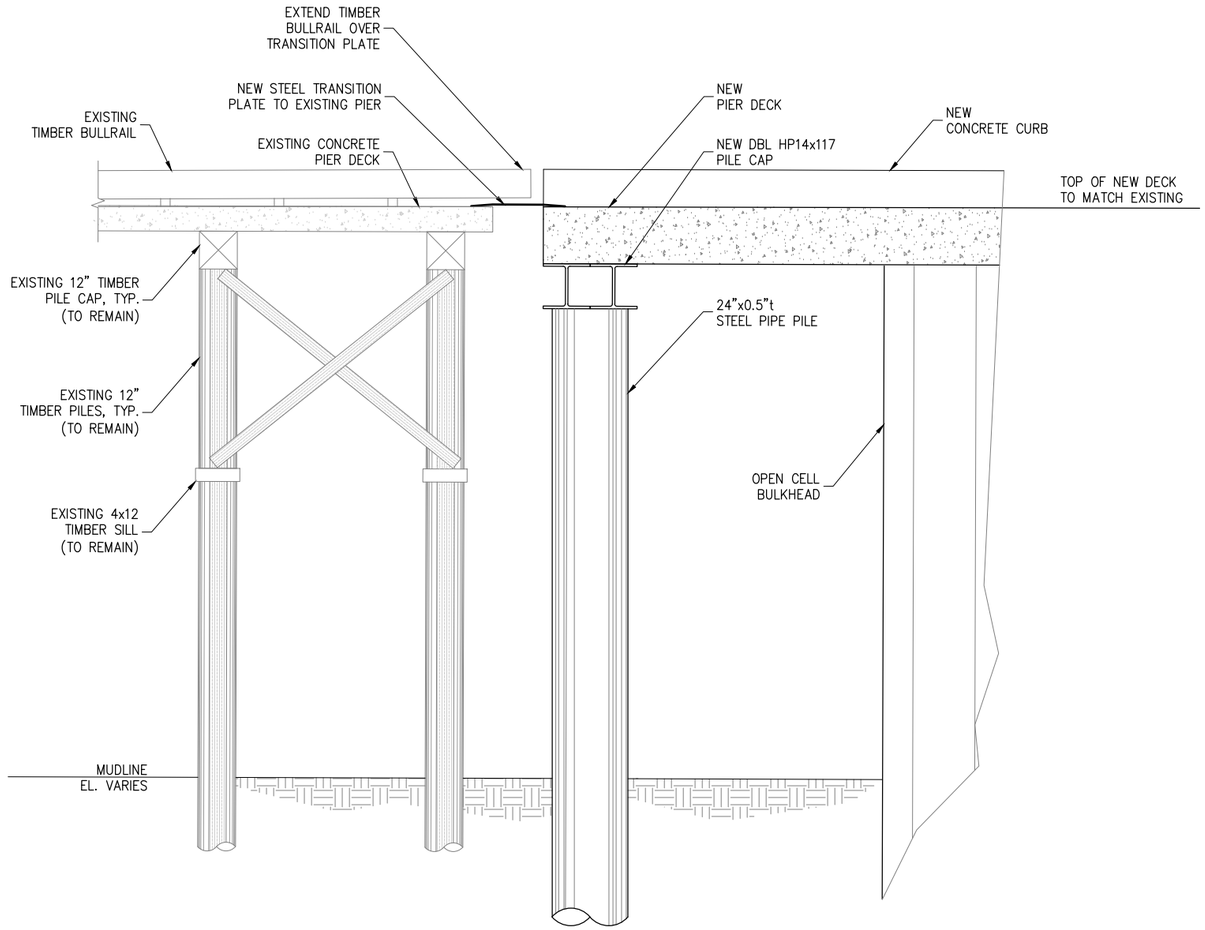


NORTH OPEN CELL TIE-IN PLAN

NOTE: FENDER DETAILS NOT SHOWN FOR CLARITY



SECTION F-F

SOUTH TIE-IN BEARING SCHEDULE				
TYPE	DIAMETER (IN)	WALL THICKNESS (IN)	LENGTH (FT)	QUANTITY
PILE TYPE	24	0.500	120	4

30% DESIGN

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3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
www.pndengineers.com

PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **NORTH OPEN CELL TIE-IN DETAILS**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S3.02
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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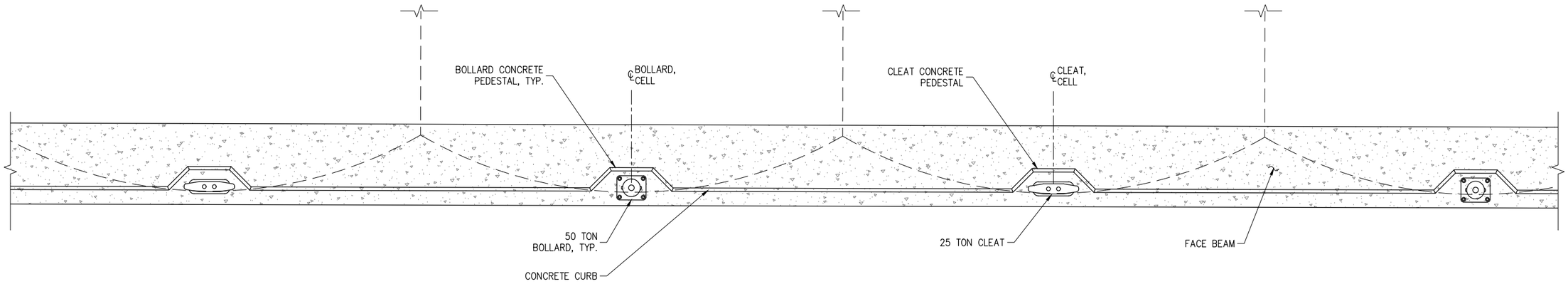
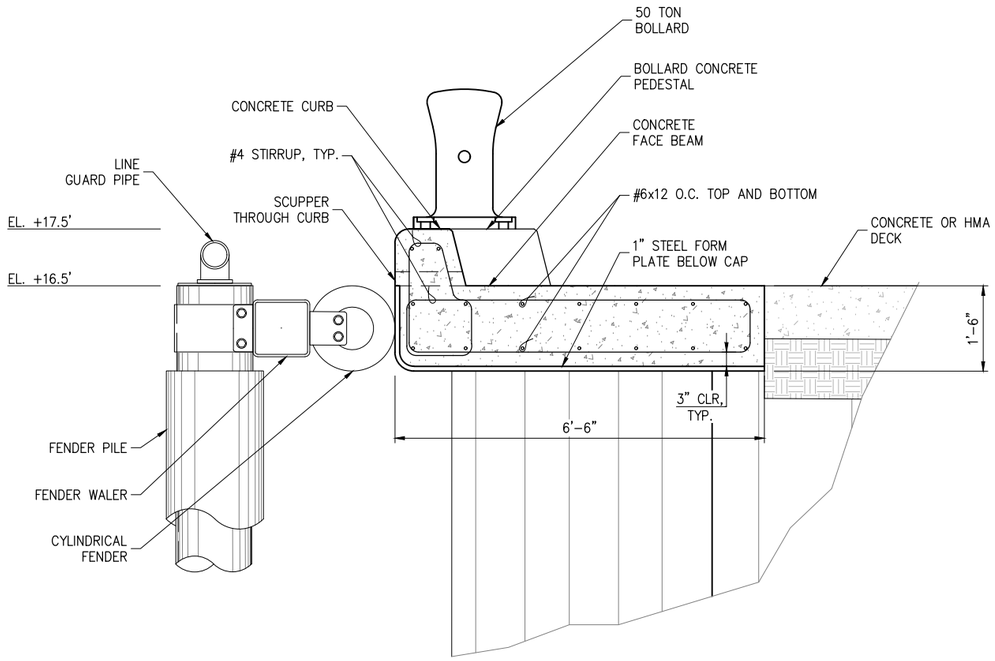
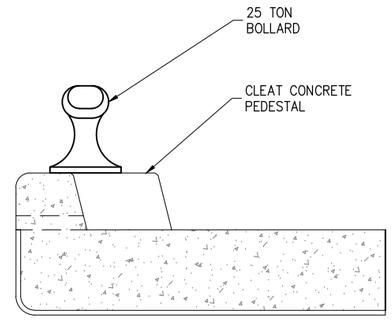


FACE BEAM PLAN DETAILS



FACE BEAM DETAILS



25 TON CLEAT

NOTE: ALL OTHER DETAILS SIMILAR TO FACE BEAM DETAILS

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
FACE BEAM DETAILS

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S3.03**
CHECKED BY:	LS	SCALE:	NOTED	

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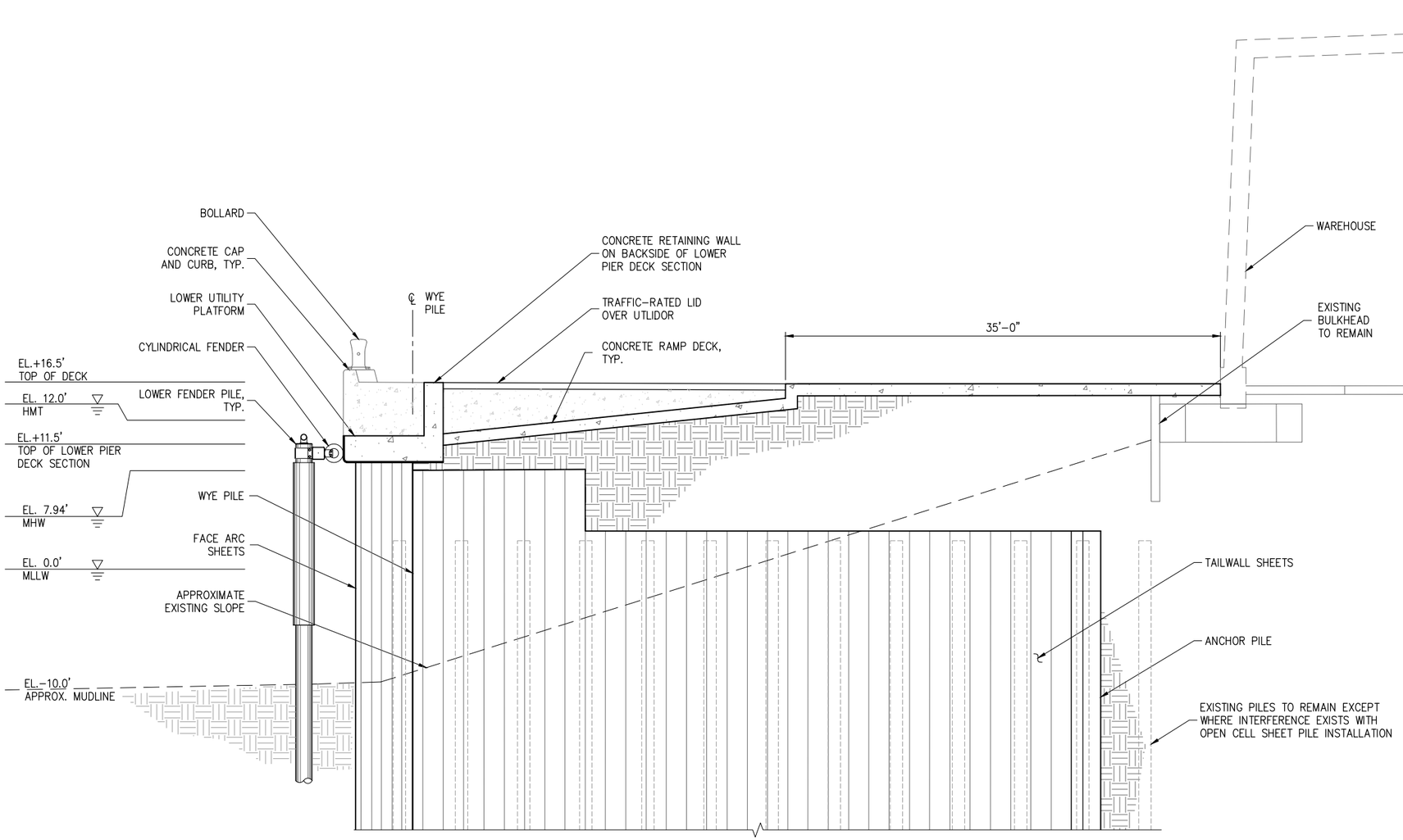
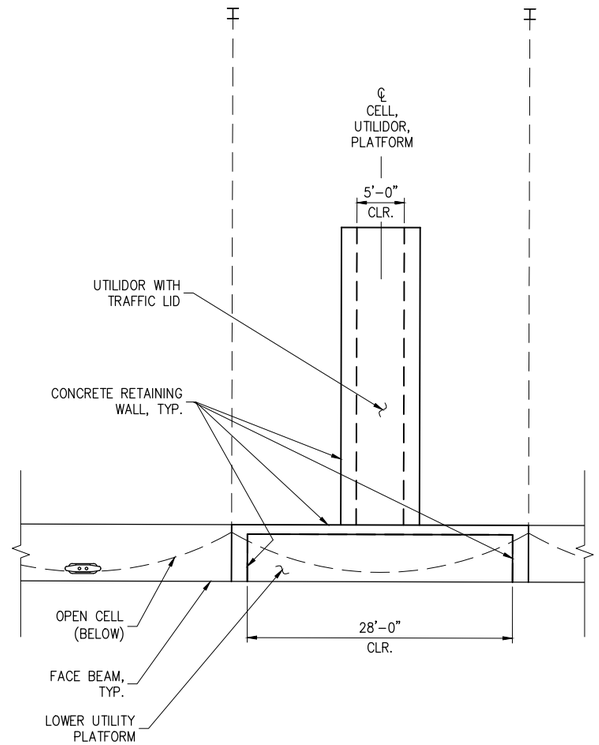


LOWER UTILITY PLATFORM SECTION



UTILITY PLATFORM PLAN

NOTE: FENDER NOT SHOWN FOR CLARITY

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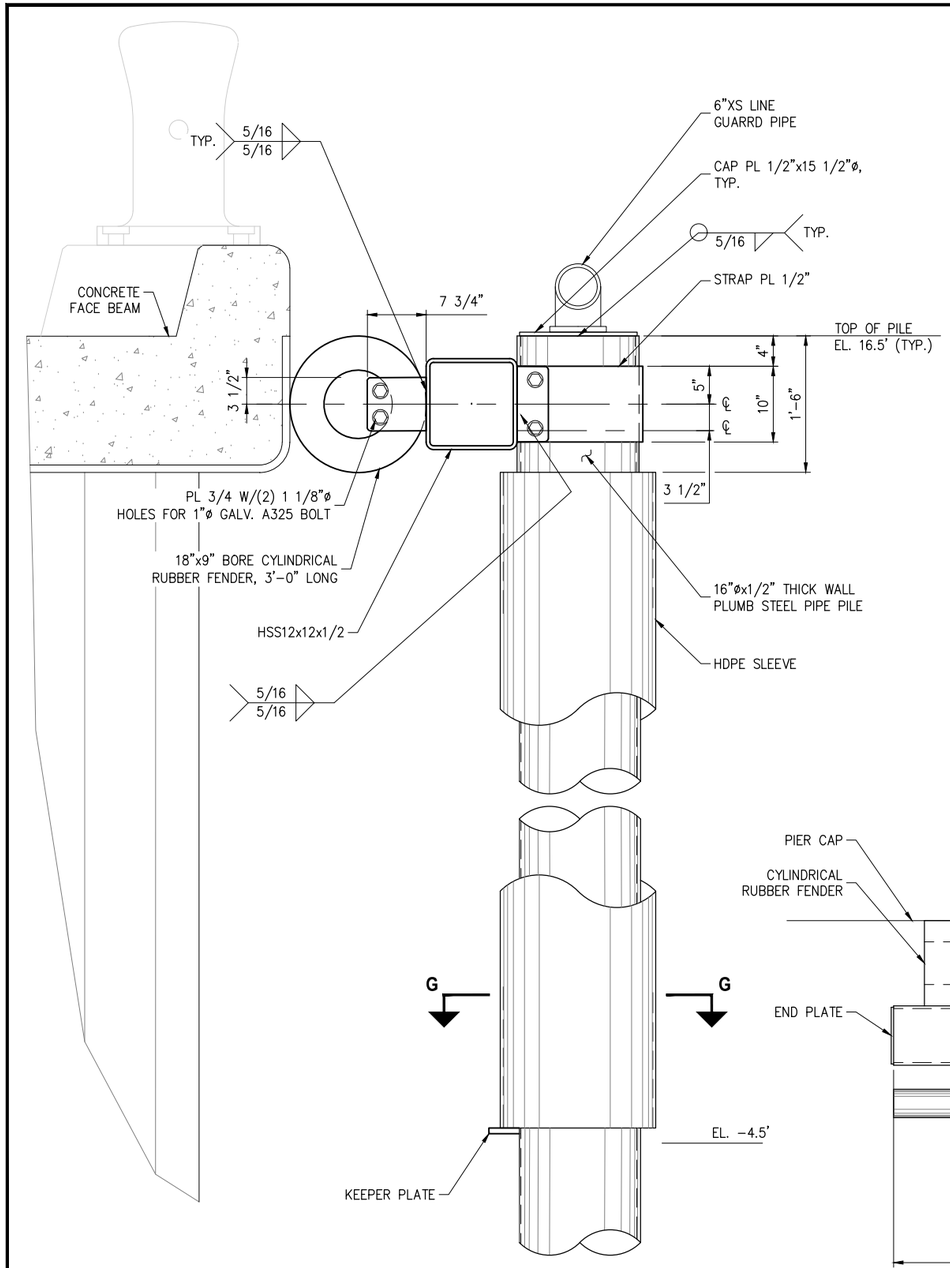
PORT OF ASTORIA

REVISIONS		
REV	DATE	DESCRIPTION

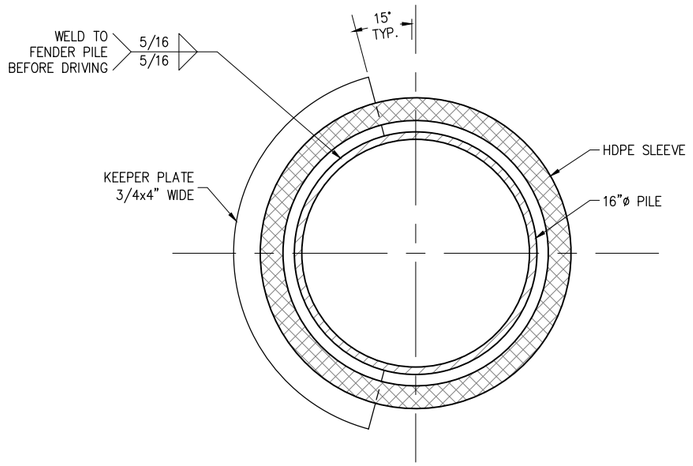
PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **LOWER UTILITY PLATFORM DETAILS**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: **S3.04**
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	



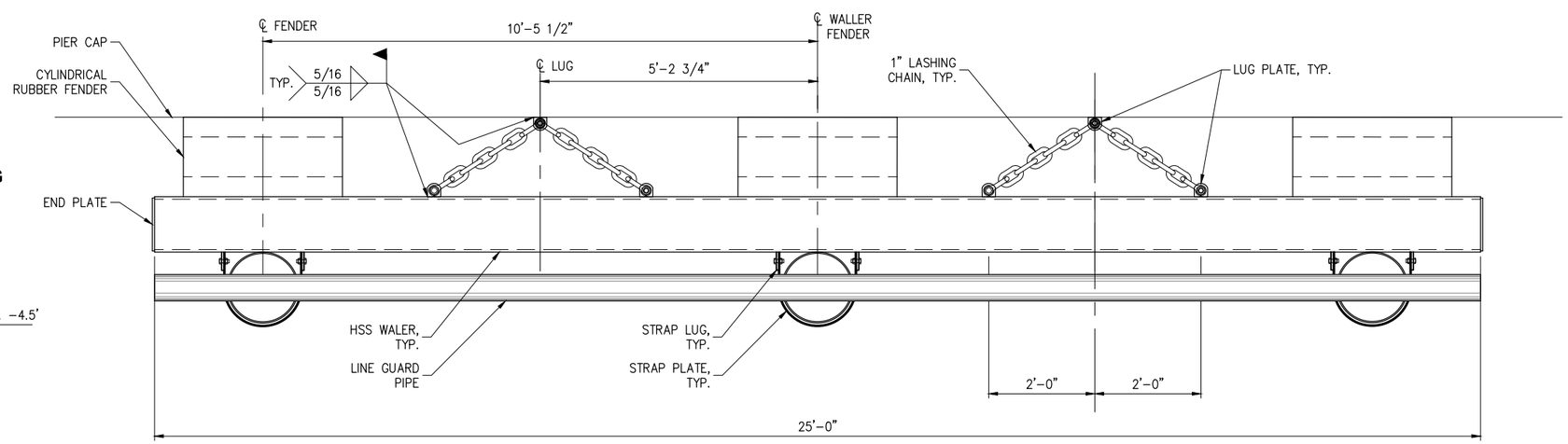
FENDER PILE CONNECTION DETAILS



HDPE KEEPER

SECTION G-G

FENDER PILE SCHEDULE				
TYPE	DIAMETER (IN)	WALL THICKNESS (IN)	LENGTH (FT)	QUANTITY
PILE TYPE	16	0.500	60	81



FENDER PANEL PLAN

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
FENDER PILE DETAILS AND SCHEDULE

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S3.05
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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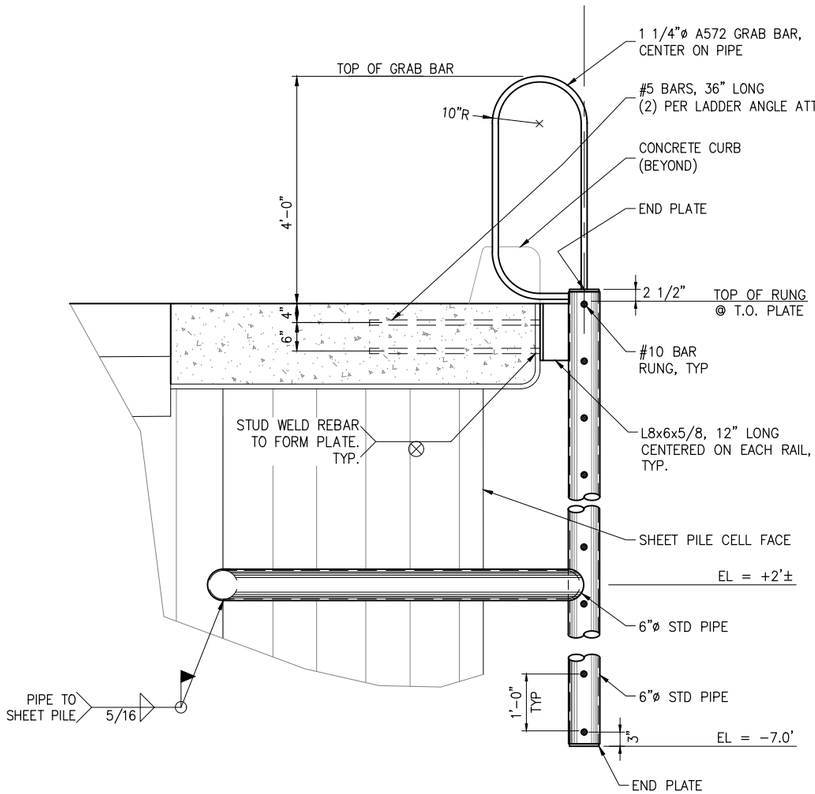
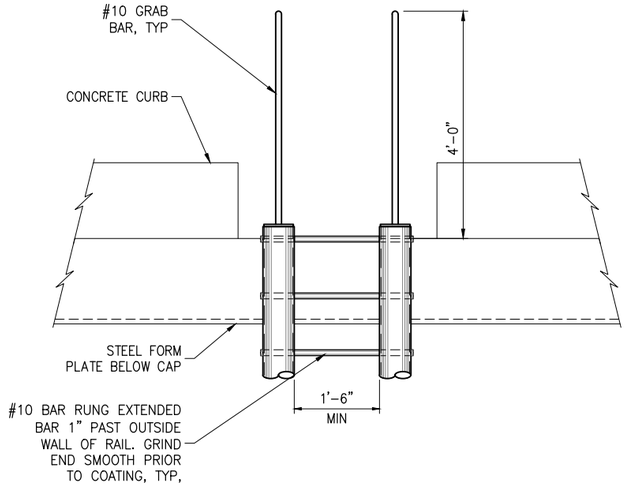
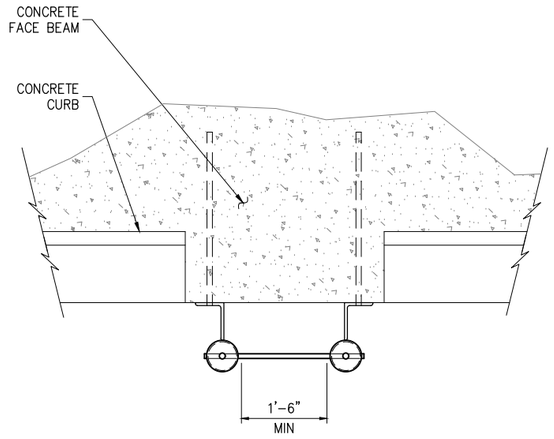


SECTION



ELEVATION



PLAN

NOTE: GRAB BAR NOT SHOWN FOR CLARITY

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PORT OF ASTORIA

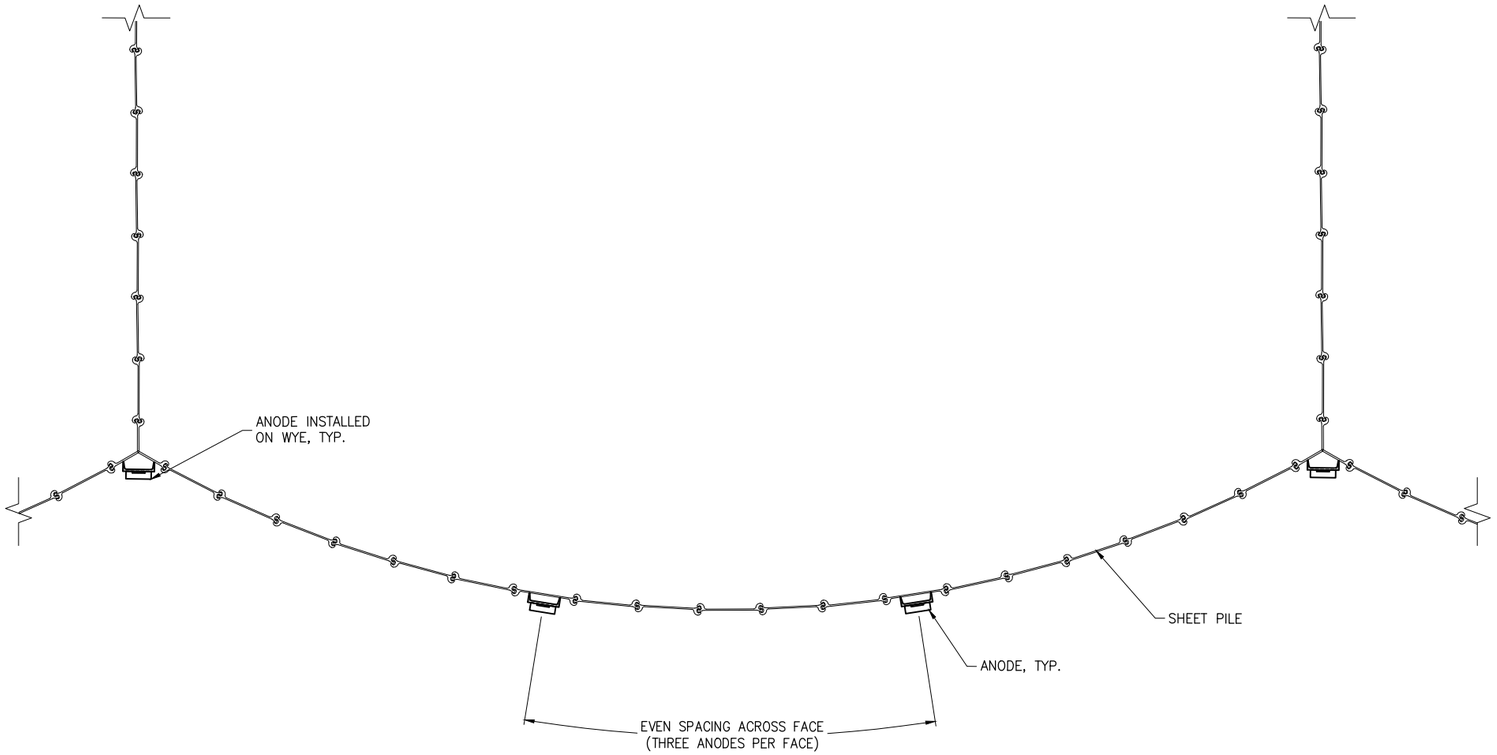
REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

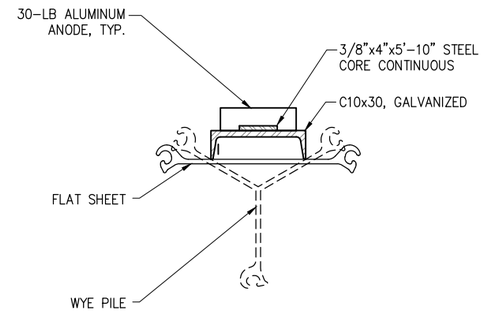
TITLE:
LADDER DETAILS

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	WL	DATE:	MARCH 2024	**S3.06**
CHECKED BY:	LS	SCALE:	NOTED	



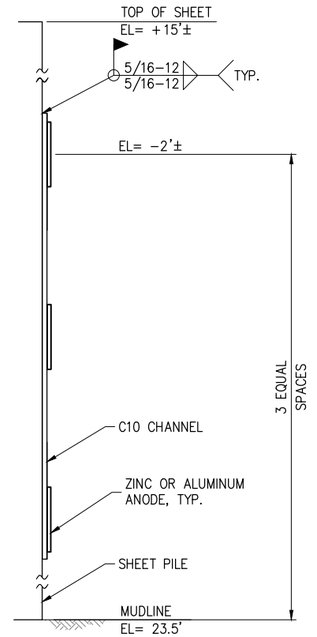
ANODE LAYOUT

CONTRACTOR TO SUBMIT
LAYOUT PLAN FOR APPROVAL.



ADODE DETAIL

NTS



ANODE ELVATION

NTS

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

TITLE: **ANODE DETAILS**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: S3.07
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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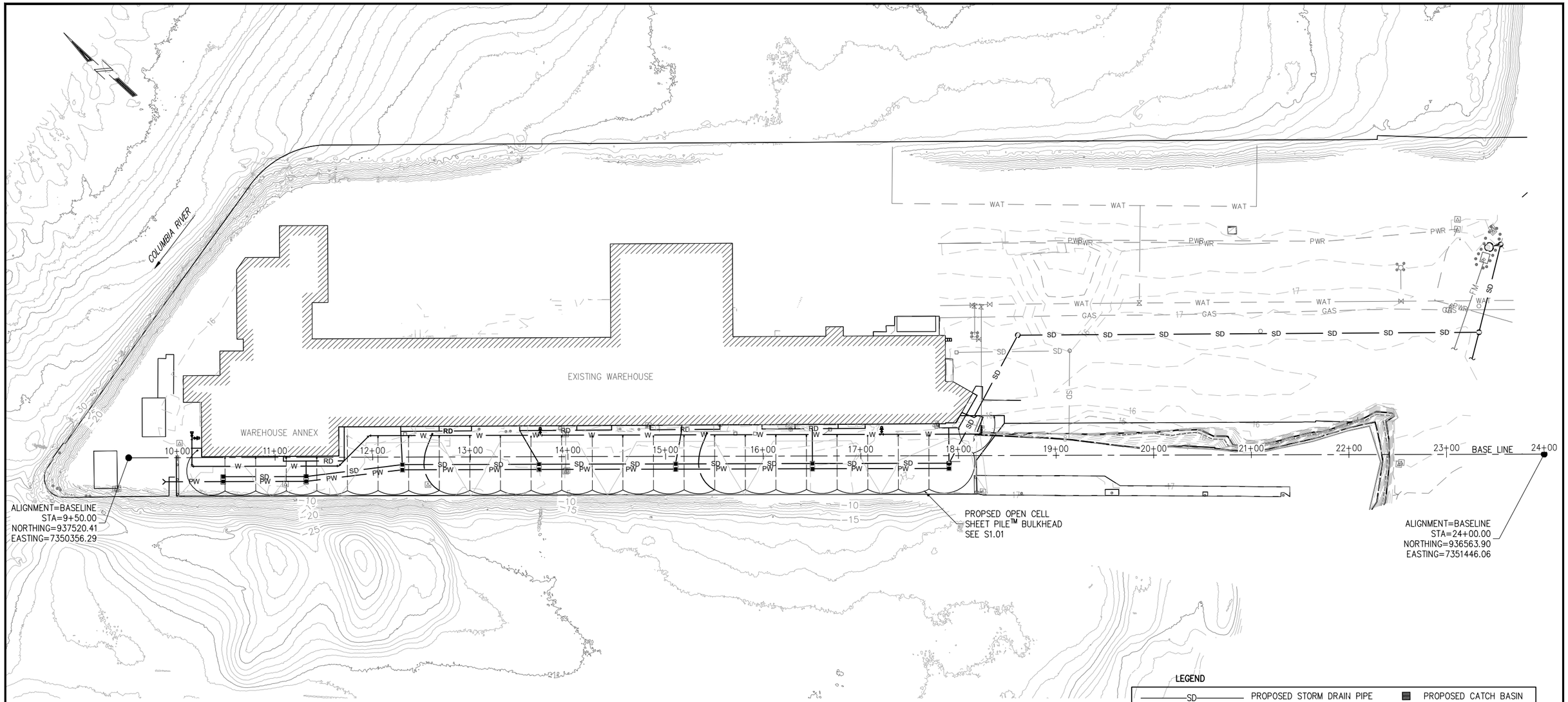

PLAN

0 20 50 100 150 FT.

LEGEND

SD — PROPOSED STORM DRAIN PIPE	PROPOSED CATCH BASIN
RD — PROPOSED ROOF DRAIN	PROPOSED MANHOLE
PW — PROPOSED PROCESS WATER	PROPOSED OPEN CELL
W — PROPOSED WATER LINE	PROPOSED GATE VALVE
WAT — WATER LINE	PROPOSED FIRE HYDRANT
GAS — NATURAL GAS LINE	
PWR — POWER LINE	
FM — FORCEMAIN	
EXISTING GRADE CONTOUR	
FINISHED GRADE CONTOUR	

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:

PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:

CIVIL SITE PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: C1.01
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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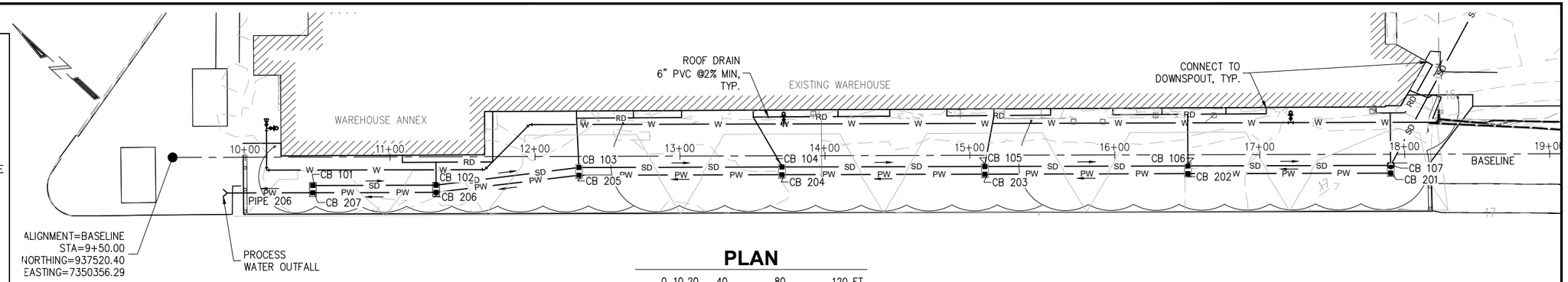
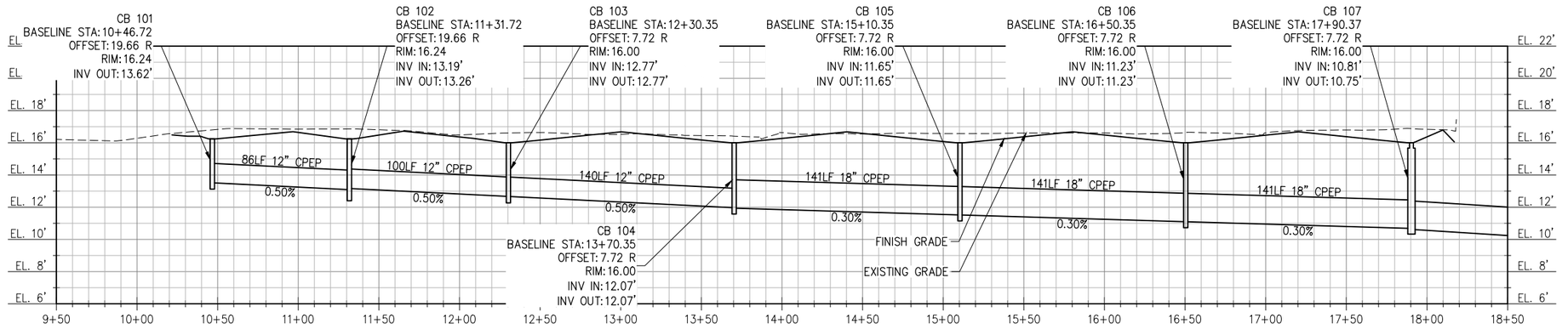
LEGEND

- WAT — WATER LINE
- GAS — NATURAL GAS LINE
- PWR — POWER LINE
- FM — FORCEMAIN
- EXISTING GRADE CONTOUR
- FINISHED GRADE CONTOUR
- SD — PROPOSED STORM DRAIN PIPE
- RD — PROPOSED ROOF DRAIN
- PW — PROPOSED PROCESS WATER
- W — PROPOSED WATER LINE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED OPEN CELL
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT



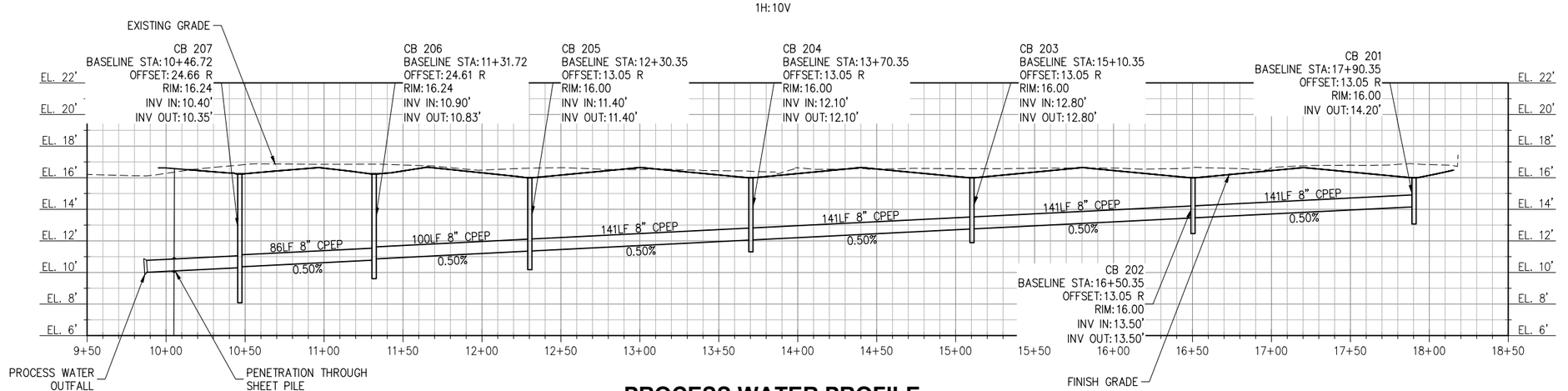
PLAN

0 10 20 40 80 120 FT.



STORM DRAIN PROFILE

1H: 10V



PROCESS WATER PROFILE

1H: 10V

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

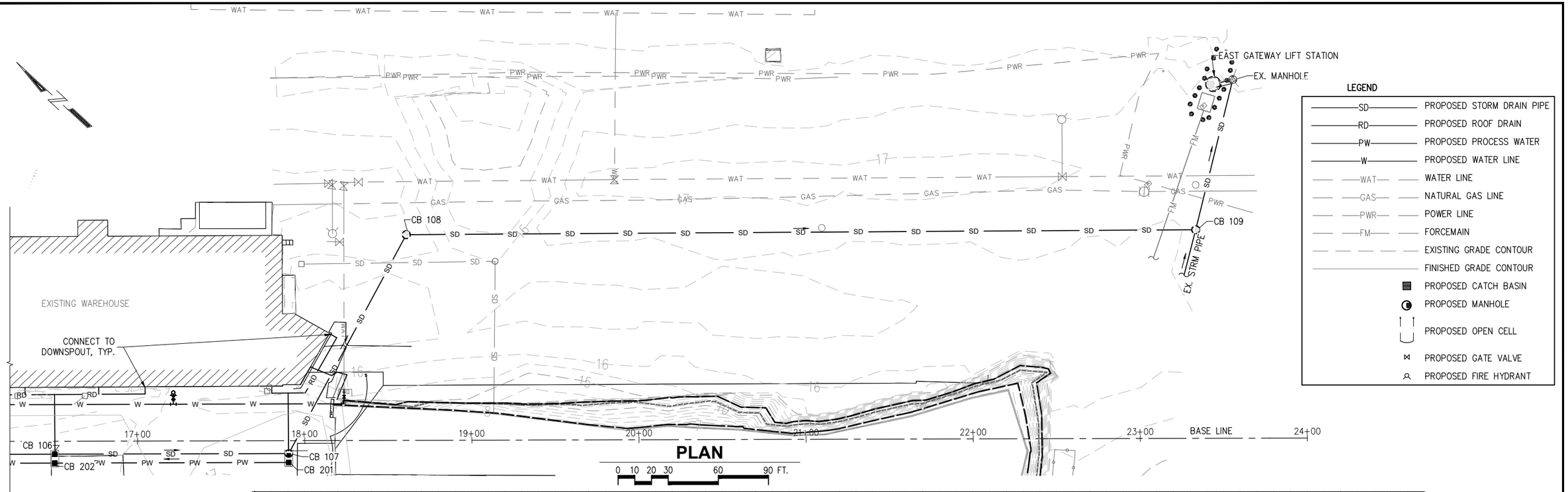
PROJECT: 30% DESIGN

PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

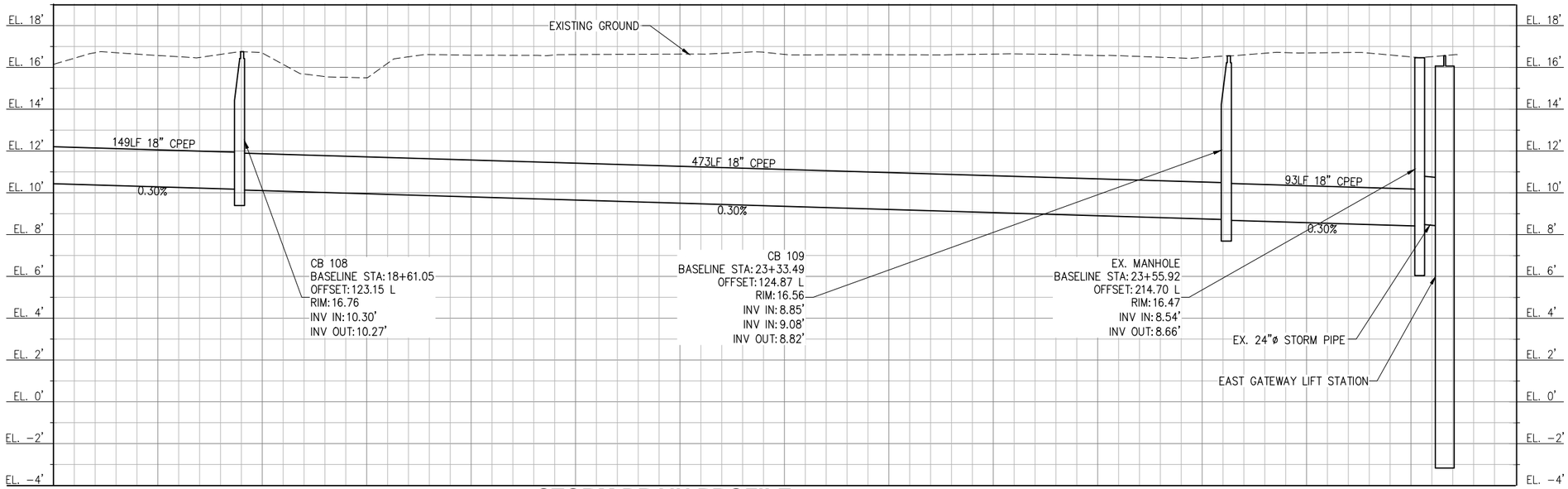
TITLE: **STORMWATER PLAN AND PROFILE (1 OF 2)**

DESIGNED BY:	RJ	PROJECT NO:	234038
DRAWN BY:	WL	DATE:	MARCH 2024
CHECKED BY:	LS	SCALE:	NOTED

SHEET NO: **C1.02**



PLAN



STORM DRAIN PROFILE

1H: 10V

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **STORMWATER PLAN AND PROFILE (2 OF 2)**

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: C1.03
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

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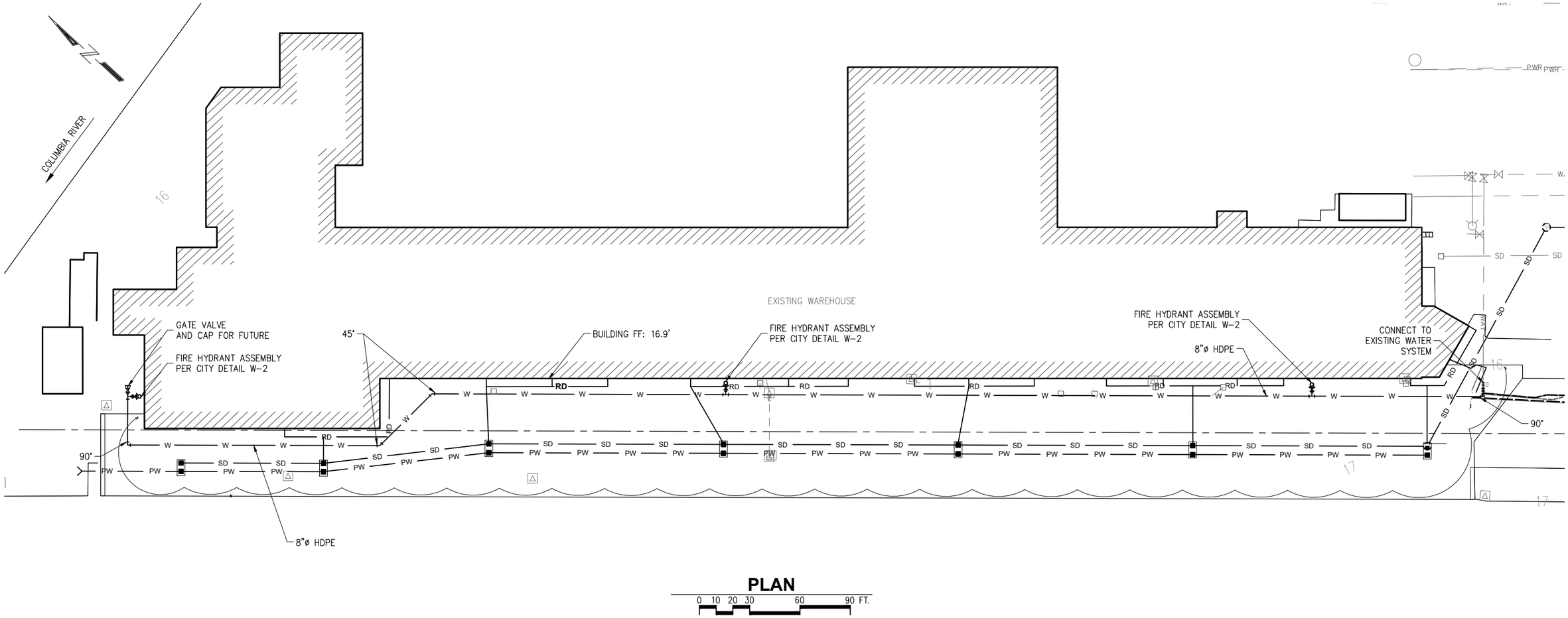

PLAN

0 10 20 30 60 90 FT.

LEGEND

SD — PROPOSED STORM DRAIN PIPE	PROPOSED CATCH BASIN
RD — PROPOSED ROOF DRAIN	PROPOSED MANHOLE
PW — PROPOSED PROCESS WATER	PROPOSED OPEN CELL
W — PROPOSED WATER LINE	PROPOSED GATE VALVE
WAT — WATER LINE	PROPOSED FIRE HYDRANT
GAS — NATURAL GAS LINE	
PWR — POWER LINE	
FM — FORCEMAIN	
EXISTING GRADE CONTOUR	
FINISHED GRADE CONTOUR	

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
WATER PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	C1.04
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

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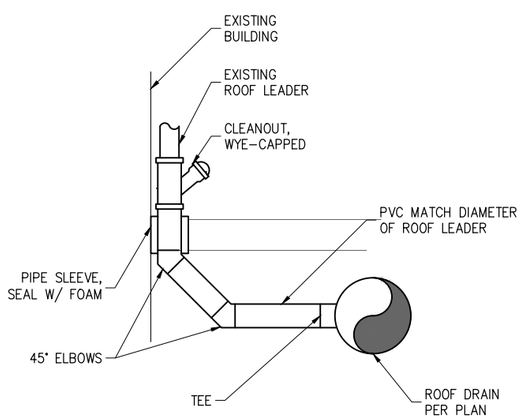
STORM DRAIN - STRUCTURE TABLE

NAME	TYPE	STA	OFFSET	NORTHING	EASTING
CB 101	ODOT TYPE 3	BASELINE STA:10+46.72	19.66 R	937441.83	7350416.01
CB 102	ODOT TYPE 3	BASELINE STA:11+31.72	19.66 R	937385.76	7350479.90
CB 103	ODOT TYPE 3	BASELINE STA:12+30.35	7.72 R	937329.67	7350561.91
CB 104	ODOT TYPE 3	BASELINE STA:13+70.35	7.72 R	937237.32	7350667.12
CB 105	ODOT TYPE 3	BASELINE STA:15+10.35	7.72 R	937144.96	7350772.34
CB 106	ODOT TYPE 3	BASELINE STA:16+50.35	7.72 R	937052.61	7350877.56
CB 107	48" MANHOLE WITH INLET	BASELINE STA:17+90.37	7.72 R	936960.24	7350982.79
CB 108	48" MANHOLE	BASELINE STA:18+61.05	123.15 L	937011.97	7351122.24
CB 109	48" MANHOLE	BASELINE STA:23+33.49	124.87 L	936701.62	7351478.45
EAST GATEWAY LIFT STATION	96" MANHOLE	BASELINE STA:23+44.21	212.09 L	936760.10	7351544.03
EX. MANHOLE	48" MANHOLE	BASELINE STA:23+55.92	214.70 L	936754.34	7351554.56

*CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS FOR EXISTING STRUCTURES.

PROCESS WATER - STRUCTURE TABLE

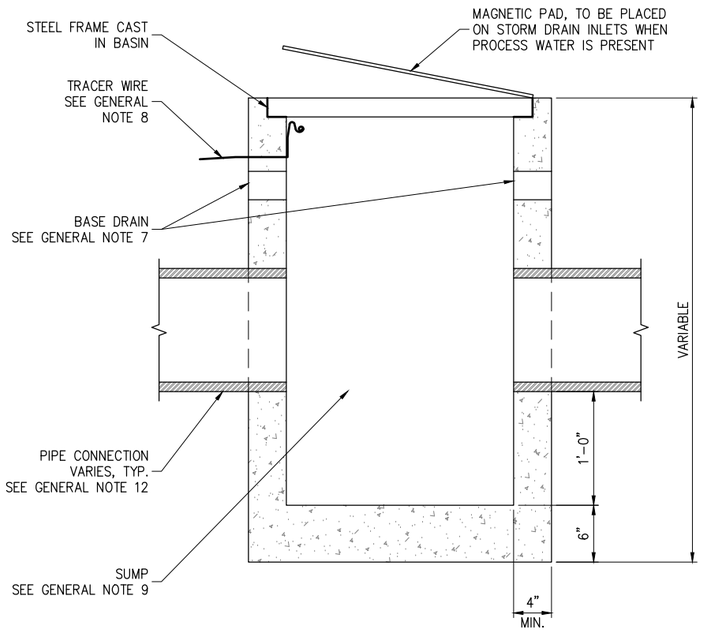
NAME	TYPE	STA	OFFSET	NORTHING	EASTING
CB 201	ODOT TYPE 3	BASELINE STA:17+90.35	13.05 R	936956.26	7350979.26
CB 202	ODOT TYPE 3	BASELINE STA:16+50.35	13.05 R	937048.60	7350874.04
CB 203	ODOT TYPE 3	BASELINE STA:15+10.35	13.05 R	937140.96	7350768.82
CB 204	ODOT TYPE 3	BASELINE STA:13+70.35	13.05 R	937233.31	7350663.60
CB 205	ODOT TYPE 3	BASELINE STA:12+30.35	13.05 R	937325.66	7350558.39
CB 206	ODOT TYPE 3	BASELINE STA:11+31.72	24.61 R	937382.04	7350476.64
CB 207	ODOT TYPE 3	BASELINE STA:10+46.72	24.66 R	937438.07	7350412.72

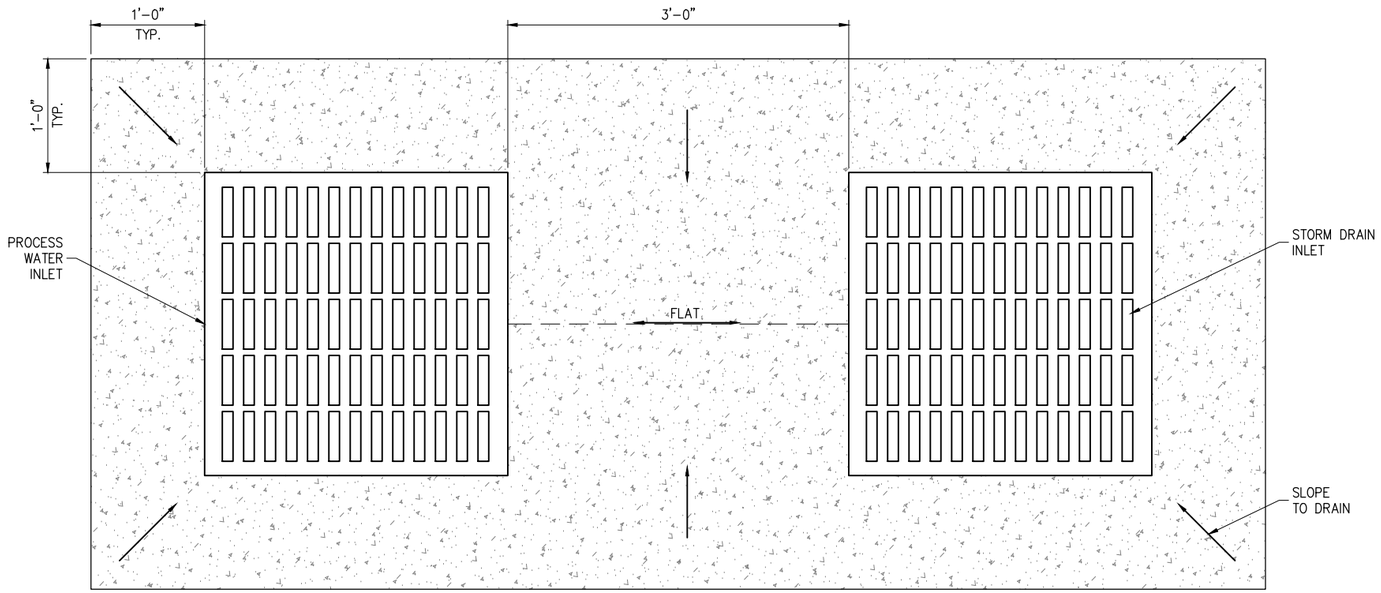


ROOF DRAIN CONNECTION DETAIL

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET

1. CATCH BASIN AND GRATE SHALL MEET H20 LOADING
2. ALL CONCRETE SHALL BE COMMERCIAL GRADE CONCRETE
3. PRECAST WALLS SHALL BE A MINIMUM OF 4" THICK
4. FOR USE BY LOCAL AGENCIES ON LOW VOLUME RESIDENTIAL FACILITIES AS DIRECTED
5. DEPRESS GUTTER FLOWLINE AND TRANSITION GUTTER AS SHOWN IN STD. DWG. ED366 PERSPECTIVE VIEW.
6. KNOCKOUTS ALLOWED FOR PRECAST OPTION.
7. IF DIRECTED, INSTALL 3" DIA. BASE DRAIN WITH FIELD INSTALLED MASH SCREEN FOR SUBGRADE DRAINAGE
8. SEE STD. DWG. RD336 FOR TRACER WIRE DETAILS, OR APPROVED ALTERNATE.
9. PROVIDE SUMP ONLY WHERE SHOWN ON PLANS, AND ALLOWED BY JURISDICTION.
   FOR SUMP DETAILS, SEE STD. DWG. RD364
10. MAX. PIPE DIAMETER VARIES WITH PIPE MATERIAL
11. ALL PRECAST INLETS SHALL CONFORM TO REQUIREMENTS OF ASTM C913.
12. SEE STD. DWG. RD339 FOR PIPE TO STRUCTURE CONNECTIONS.
13. SEE PROJECT PLAN FOR DETAILS NOT SHOWN.





STORM AND PROCESS WATER INLET DETAIL

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PORT OF ASTORIA

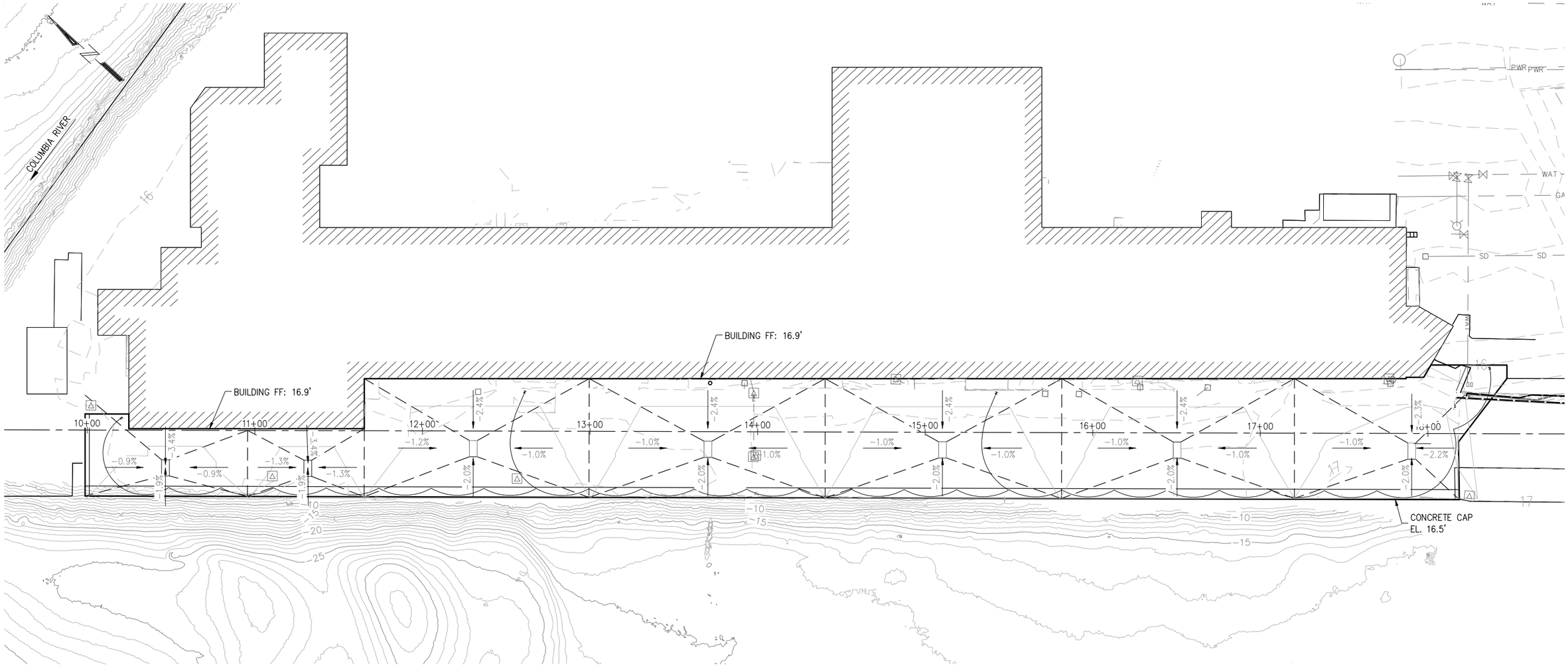
REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
UTILITY DETAILS

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: C1.05
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	



PLAN

0 10 20 30 60 90 FT.

LEGEND

SD — PROPOSED STORM DRAIN PIPE	CATCH BASIN
RD — PROPOSED ROOF DRAIN	MANHOLE
PW — PROPOSED PROCESS WATER	OPEN CELL
W — PROPOSED WATER LINE	GATE VALVE
WAT — WATER LINE	FIRE HYDRANT
GAS — NATURAL GAS LINE	
PWR — POWER LINE	
FM — FORCEMAIN	
EXISTING GRADE CONTOUR	
FINISHED GRADE CONTOUR	

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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
GRADING PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	C1.06
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

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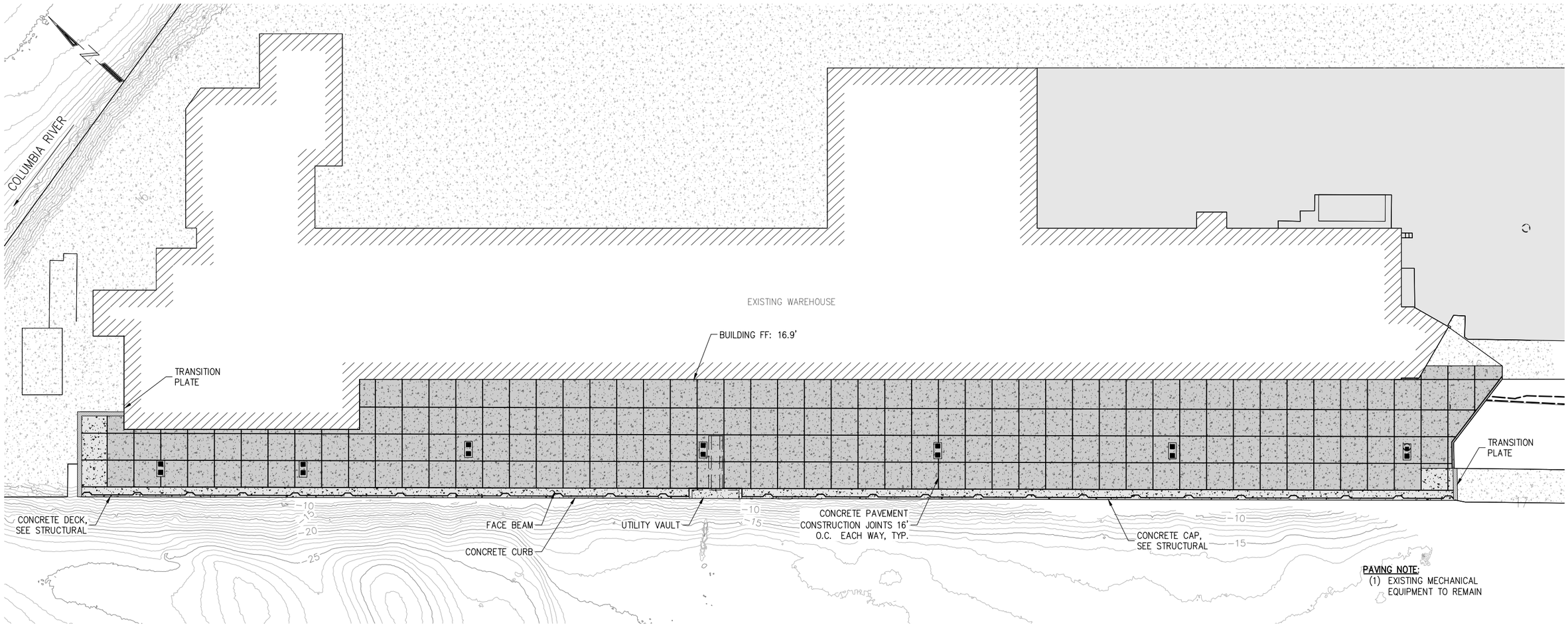
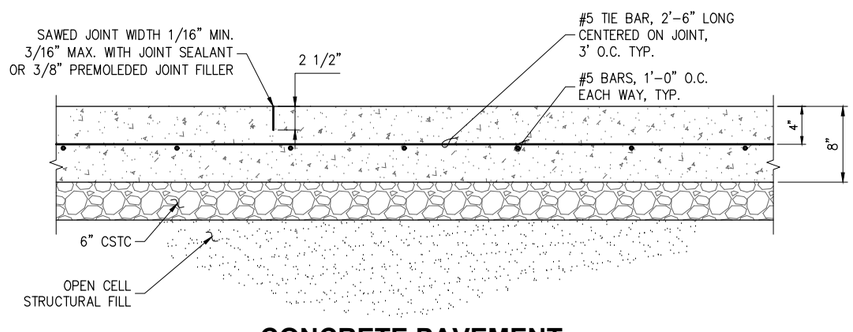
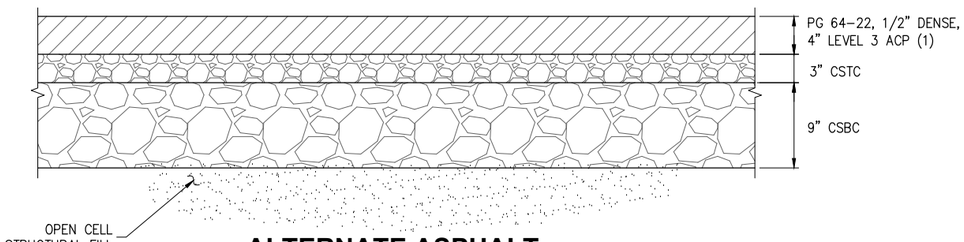




CONCRETE PAVEMENT SECTION

CONCRETE PAVEMENT PLAN

0 10 20 30 60 90 FT.



ALTERNATE ASPHALT SURFACE SECTION

LEGEND

- CONCRETE PAVING
- CONCRETE CAP/ DECK
- EX. HMA PAVING
- EX. CONCRETE PAVING
- CATCH BASIN
- GRADE BREAK
- EXISTING GROUND CONTOUR
- FINISHED GRADE CONTOUR

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PORT OF ASTORIA

REVISIONS

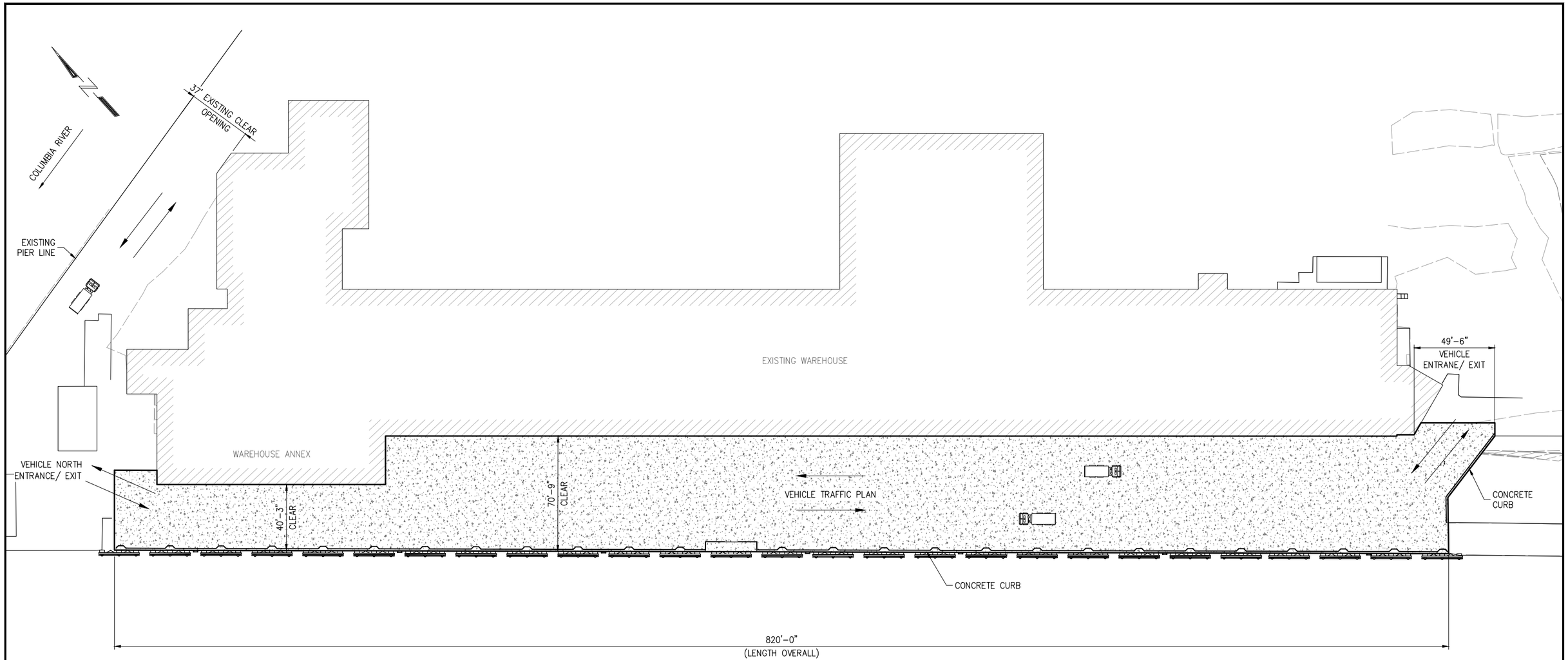
REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
PAVING PLAN AND DETAILS

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO:	C1.07
DRAWN BY:	WL	DATE:	MARCH 2024		
CHECKED BY:	LS	SCALE:	NOTED		

2/12/2024 2:46 PM K:\2023\234038 Astoria Pier 2 West\30% Design (Draft)\234038.C1.07.dwg



PLAN

0 10 20 30 60 90 FT.

30% DESIGN

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3240 Eastlake Avenue E
Seattle, Washington 98102
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PORT OF ASTORIA

REVISIONS

REV	DATE	DESCRIPTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
LOCAL TRAFFIC CIRCULATION PLAN

DESIGNED BY:	RJ	PROJECT NO:	234038	SHEET NO: C1.08
DRAWN BY:	WL	DATE:	MARCH 2024	
CHECKED BY:	LS	SCALE:	NOTED	

PROJECT NOTES

1. GENERAL: WORK SHALL BE DONE IN ACCORDANCE WITH CODES AS ADOPTED BY THE CITY OF ASTORIA, CLATSOP COUNTY, AND THE STATE OF OREGON.

2. LOCATIONS OF ELECTRICAL EQUIPMENT, DEVICES, LIGHTING FIXTURES, ETC., INDICATED ON CIVIL AND STRUCTURAL PLANS - INCLUDING SECTIONS, ELEVATIONS, NOTES, OR OTHER INDICATORS - TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.

3. REFER TO CIVIL, STRUCTURAL, ETC., DRAWINGS FOR WORK IN OTHER DIVISIONS. INFORMATION CONVEYED WITHIN THE ELECTRICAL DRAWINGS ILLUSTRATING OR REFERENCING WORK OF OTHER DIVISIONS IS FOR REFERENCE ONLY. SPECIFICATION BY THE RELEVANT DIVISIONS SHALL APPLY.

4. GENERAL NOTES ARE SHOWN ON SHEETS MOST RELEVANT TO SPECIFIC NOTE; HOWEVER, GENERAL NOTES ON EACH SHEET SHALL APPLY IN PRACTICE TO ALL ELECTRICAL DRAWINGS.

5. NOT ALL COMPONENTS OF THE ELECTRICAL SYSTEMS ARE SHOWN (FOR SIMPLICITY). PROVIDE MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

6. STAINLESS STEEL HARDWARE: MATERIALS USED FOR THE MOUNTING AND SUPPORT OF BOXES CABLES, RACEWAYS, LIGHT FIXTURES, OUTLETS, AND OTHER ELECTRICAL EQUIPMENT, SHALL BE 316 STAINLESS STEEL. THIS REQUIREMENT APPLIES TO THE AFOREMENTIONED COMPONENTS WHEN INSTALLED OUTSIDE ABOVE GRADE.

7. LOCATIONS OF ELECTRICAL SYSTEMS COMPONENTS, INCLUDING BUT NOT LIMITED TO, LUMINAIRES, DISTRIBUTION EQUIPMENT, CONDUIT, JUNCTION BOXES, VAULTS, ETC., MAY BE REVISED PRIOR TO CONSTRUCTION. CHANGES MADE BY THE OWNER IN LOCATING ELECTRICAL COMPONENTS OF UP TO THIRTY FEET HORIZONTALLY (AND/OR VERTICALLY) IS A PART OF THIS CONTRACT. CHANGES IN LOCATION MAY BE IMPLEMENTED, AT NO CHARGE TO THE OWNER, WHEN MADE PRIOR TO ROUGH-IN OF EQUIPMENT BEING RELOCATED.

8. COORDINATE LOCATIONS OF ELECTRICAL AND COMMUNICATION CHASES AND CONDUITS WITH OTHER TRADES. ADJUST LOCATIONS AS NECESSARY TO AVOID CONFLICTS.

9. CONDUCTORS SHALL BE LABELED IN JUNCTION BOXES AND AT TERMINATIONS.

10. SCOPE OF WORK: THE SCOPE OF WORK FOR THIS PROJECT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

    A. PERMITS: GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT TAXES, FEES AND OTHER COSTS IN CONNECTION WITH THIS WORK. OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION OF THE WORK AND DELIVER SAME TO THE ENGINEER AT THE TIME OF SUBSTANTIAL COMPLETION AND BEFORE REQUEST FOR FINAL PAYMENT.

    B. POWER OUTAGES: POWER OUTAGES SHALL BE LIMITED TO THE HOURS OF 6:00PM TO 7:00AM WEEKDAYS. OUTAGES SHALL BE REQUESTED IN WRITING TO THE OWNER 7-DAYS PRIOR TO THE DESIRED DATE AND TIME. NO OUTAGE SHALL OCCUR WITHOUT THE PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE. OUTAGES SHALL NOT EXCEED (8) CONSECUTIVE HOURS.

    C. TEMPORARY POWER: PROVIDE TEMPORARY POWER AS NEEDED BY ALL TRADES DURING THE EXECUTION OF THIS CONTRACT.

ABBREVIATIONS

A, AMP	AMPERES	EMT	ELECTRICAL METALLIC TUBING	LCP	LIGHT CONTROL PANEL	PNL	PANEL
AF	AMPERE (RATED) FUSES	ENCL	ENCLOSURE	MAX	MAXIMUM	POE	PORT OF EVERETT
AFF	ABOVE FINISHED FLOOR	EOL	END OF LINE	MCA	MINIMUM CIRCUIT AMPERES	+,POS	POSITIVE
AFG	ABOVE FINISHED GRADE	EPA	EFFECTIVE PROJECTED AREA	MFR	MANUFACTURER	PRI	PRIMARY
AL	ALUMINUM (ALLOY)	ESPL.	ESPLANADE	MIN	MINIMUM	PUD	PUBLIC UTILITY DISTRICT
ALC	AUTOMATED LIGHTING CONTROL	EUC	ELECTRICAL UTILITY CENTER	MISC	MISCELLANEOUS	REQD	REQUIRED
AS	AMPERE (RATED) SWITCH	EWC	ELECTRIC WATER COOLER	MLO	MAIN LUGS ONLY	RNC	RIGID NONMETALLIC CONDUIT (PVC)
ATS	AUTOMATIC TRANSFER SWITCH	EWH	ELECTRIC WATER HEATER	MTD	MOUNTED		
AUTO	AUTOMATIC	FA	FIRE ALARM	MOB	MARINE OPERATIONS BUILDING	RR	REMOVE AND REPLACE
AUX	AUXILIARY	FAA	FIRE ALARM ANNUNIATOR	MTR	MOTOR	SEC	SECONDARY
AWG	AMERICAN WIRE GAUGE	FC	FOOT CANDLES	-N-	NEUTRAL (GROUNDED CONDUCTOR)	SNOPUD	SNOHOMISH COUNTY PUD
BAT	BATTERY	FLA	FULL LOAD AMPERES	NC	NORMALLY CLOSED	SPDT	SINGLE POLE DOUBLE THROW
BFG	BELOW FINISHED GRADE	FLEX	FLEXIBLE	NEC	NATIONAL ELECTRICAL CODE	SPST	SINGLE POLE SINGLE THROW
C	CONDUIT (CIRCULAR RACEWAY)	FTB	FLUIDIZED THERMAL BACKFILL	-,NEG	NEGATIVE	SURF	SURFACE
CAB	CABINET	FU	FUSE	NEMA	NATIONAL ELECTRICAL MANUFACTURE'S ASSOC.	SWBD	SWITCHBOARD
CB	CIRCUIT BREAKER	GEN	GENERATOR			SWGR	SWITCHGEAR
CFM	CUBIC FEET PER MINUTE	GFI	GROUND FAULT CIRCUIT INTERRUPTER	NIC	NOT IN CONTRACT	TB	TERMINAL BOARD
CKT	CIRCUIT			NL	NIGHT LIGHT (UNSWITCHED)	TC	TIMECLOCK
CLG	CEILING	GND	GROUND	NO	NORMALLY OPEN	TEL	TELEPHONE
CO	CONDUIT ONLY	GRC	GALVANIZED RIGID STEEL CONDUIT	NTS	NOT TO SCALE	TYP	TYPICAL
CONT.	CONTINUATION	GRD	IN-GROUND	OC	ON CENTER	UL	UNDERWRITERS LAB
CU	COPPER	HP	HORSEPOWER	OD	OUTSIDE DIAMETER	UON	UNLESS OTHERWISE NOTED
DC	DIRECT CURRENT	HZ	HERTZ (CYCLES PER SECOND)	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	V	VOLTS
DISC	DISCONNECT	IES	ILLUMINATING ENGINEERING SOCIETY			VA	VOLT-AMPERES
DIA	DIAMETER	ID	INSIDE DIAMETER	OFOI	OWNER FURNISHED, OWNER INSTALLED	VFD	VARIABLE FREQUENCY DRIVE
DIV	DIVISION	IG	ISOLATED GROUND			W	WATT
DP	DISTRIBUTION PANEL	IN	INCANDESCENT	OS	OCCUPANCY SENSOR	W/	WITH
DPDT	DOUBLE POLE DOUBLE THROW	IMC	INTERMEDIATE METAL CONDUIT	P	POLE	W/O	WITHOUT
DPST	DOUBLE POLE SINGLE THROW	K	KEY OPERATED	PB	PUSH-BUTTON	WP	WEATHERPROOF
DWG	DRAWING	KCM	THOUSAND CIRCULAR MILS	PEND	PENDANT	XFMR	TRANSFORMER
EXIST	EXISTING	KO	KNOCK OUT	PH	PHASE	", IN	INCHES
EF	EXHAUST FAN	KW	KILOWATTS	PLP	POWER/LIGHTING PEDESTAL	', FT	FEET
		KVA	KILO VOLT-AMPERES			~	PHASE

ELECTRICAL LEGEND*

DIAGRAMS

SYMBOL	DESCRIPTION
TX	UTILITY XFMR – POLE MOUNTED KVA, VOLTAGE, PHASE + "A–xxx" (UTILITY # IF APPLICABLE)
	XFMR – (MOUNTING) KVA, VOLTAGE, PHASE "A–xxx" (UTILITY # IF APPLICABLE)
M PF K KVAR	METER W/CURRENT TRANSFORMER M = UTILITY CO. APPROVED SOCKET WITH METER PF = POWER FACTOR METER KW/KVAR = COMBINATION KILOWATTHOUR/KVAR
	CURRENT TRANSFORMER
GF	GROUND FAULT RELAY
xxx/y	CIRCUIT BREAKER xxx = AMPACITY, y = POLES
xx	SWITCH xxx = AMPACITY
	FUSE
xx	DISCONNECT SWITCH xx = AMPACITY
xx	DISCONNECT SWITCH – FUSED xx = AMPACITY
J	JUNCTION BOX
M P	MOTOR OR PUMP, AS NOTED
	SPECIAL RECEPTACLE
LTG. TC	LIGHTING CONTROLLER TC = TIMECLOCK CONTROLLED HOA = HAND–OFF–AUTO SWITCH CONTROLLED
IRRIG	IRRIGATION SYSTEM CONTROLLER
SECUR	SECURITY/CCTV SYSTEM CONTROLLER
FA	FIRE ALARM CONTROLLER
ELR	END OF LINE RESISTOR

WIRING DIAGRAMS

SYMBOL / DESCRIPTION	
OH	12.47KV OVERHEAD LINE
P	12.47KV UNDERGROUND LINE
	CONDUIT OR RACEWAY
	UNDERGROUND CONDUIT
	CONDUIT LINE WEIGHT
	CONDUIT EXISTING LINE WEIGHT
E	CONDUIT RACEWAY STUB–OUT

REFERENCE SYMBOLS

SYMBOL	DESCRIPTION
X EX.XX	REFER TO DETAIL NO. ON DRAWING INDICATED NOT ALL DETAIL REFERENCES ARE SHOWN. ALL DETAILS APPLY TO ALL APPLICABLE SITUATIONS, UON.
X EX.XX	ELEVATION TAG: REFER TO NUMBER AND SHEET INDICATED
X EX.XX	SECTION TAG: REFER TO DETAIL NO. ON DRAWING. NOT ALL DETAIL REFERENCES ARE SHOWN. ALL DETAILS APPLY.
X	SHEET NOTE REFERENCE
X	IMAGE/PHOTO REFERENCE. REFER TO ADJACENT OR ASSOCIATED DETAILS FOR LOCATION
P–HV	12.47KV H.V. CABLE CURRENT OR FUTURE. PROVIDE WIRE AND RACEWAY WHERE SHOWN
30.3	FEEDER TAG: NOMINAL AMPACITY & TYPE: SEE FEEDER SCHEDULE
2.0"C 30.3	CONDUIT IN SIZE SHOWN WITH FEEDER AS INDICATED
2.0"C 30.3 30.3	CONDUIT IN SIZE SHOWN WITH MULTIPLE FEEDERS AS INDICATED
2–2.0"C 30.3 30.3	CONDUIT IN QUANTITY/SIZE SHOWN WITH MULTIPLE FEEDERS AS INDICTED. ROUTE CIRCUITS AS REQUIRED. REFER TO PLANS AND DETAILS FOR INFORMATION
R12, 8EL–1	FIXTURE TAG: FIXTURE TYPE, PANEL–CIRCUIT
R12 8EL–1	FIXTURE TAG: FIXTURE TYPE PANEL–CIRCUIT
FH1 A3–14 8EH–1	POLE TAG:AREA/POLE NUMBER POLE TYPE PANEL–CIRCUIT (NOTE: SEE 'UNDERGROUND PULL BOX/MANHOLE' FOR SYSTEM ABBREVIATIONS)

LIGHTING - EXISTING

SYMBOL	DESCRIPTION
	POLE MOUNTED LUMINAIRE WITH FIXTURE ARM
	SPORTS–FIELD LUMINAIRE
	LIGHT POLE WITH POST TOP LUMINAIRE
	LIGHT POLE WITH TWO ARMS AND FIXTURES
	FLOODLIGHT FIXTURE,
	LIGHTING POLE WITH TOP/CENTER MOUNTED FIXTURE
	LIGHTED BOLLARD
	SURFACE OR RECESSED FIXTURE (IE.. PROMENADE LIGHTING)
	SIGN LIGHTING FLOODLIGHT

LIGHTING

SYMBOL	DESCRIPTION
	POLE MOUNTED LUMINAIRE
	LIGHT POLE; WITH POST TOP LUMINAIRE
	LIGHTED BOLLARD
	WALL MOUNTED LUMINAIRE
	FLOODLIGHT
	CAST IN PLACE FIXTURE – LED
	CAST IN PLACE, LIGHTING FIXTURE,
	CAST IN PLACE, GRADE LIGHTING FIXTURE,
	CAST IN PLACE, PATH LIGHTING FIXTURE,
	SURFACE MOUNTED LINEAR STRIP – LED
	CAST IN PLACE, STAIR LIGHT
	LANDSCAPE WELL UP–LIGHT FIXTURE,

SITE ELECTRICAL EQUIPMENT - EXISTING

SYMBOL	DESCRIPTION
	UTILITY POLE WITH ARM
	UNDERGROUND PULL BOX/MANHOLE a = SYSTEM COM – COMMUNICATIONS D – DATA E – ELECTRICAL P – PUD HV POWER TEL – TELEPHONE CBL– CABLE TX – UTILITY TRANSFORMER VAULT FO – FIBER OPTIC b = PROJECT ZONE LOCATION c = NUMBER
	HANDHOLE – STREET LIGHTING, TREE LIGHTING AND BRANCH CIRCUIT SITE WIRING
	POWER PEDESTAL
	POWER PANEL

SITE ELECTRICAL

SYMBOL	DESCRIPTION
X	4'x4'x3'D VAULT WITH STEEL LID C = COMMUNICATIONS E = ELECTRICAL/LIGHTING P = POWER: PUD POWER
X	WSDOT TYPE 2 J–BOX; NONSLIP LID C = COMMUNICATIONS E = ELECTRICAL/LIGHTING
	WSDOT TYPE 1 J–BOX NON–SLIP LID PEDESTRIAN RATED
T	FRONTIER–35 WITH DBL–STEEL LID T = TELEPHONE
CT SW	PUD PRIMARY SWITCH CABINET
PV	PUD PRIMARY PULL VAULT
TX	PUD PAD MOUNTED UTILITY TRANSFORMER (LESS THAN 750KVA, SHOWN ON DRAWINGS)
	CLEAR ZONE/GUARD POST CENTERLINE
	SITE ELECTRICAL EQUIPMENT W/CLEAR ZONE SHOWN
	ELECTRICAL EQUIPMENT AS NOTED
M	PUD ELECTRICAL METER
	GFCI DOUBLE DUPLEX RECEPTACLE WITH WEATHERPROOF WHILE–IN–USE COVER,
	GFCI DUPLEX RECEPTACLE WITH WEATHERPROOF WHILE–IN–USE COVER,
	ELECTRICAL EQUIPMENT
	CONDUIT RACEWAY
	UNDERGROUND CONDUIT
	CONDUIT LINE WEIGHT
	CONDUIT EXISTING LINE WEIGHT
E	CONDUIT STUB OUT
	CONDUIT STUB UP/DOWN

NOTE: PROVIDE VAULT TYPE AS SHOWN ON DWGS.

* NOT ALL SYMBOLS LISTED ARE USED.

30% DESIGN - NOT FOR CONSTRUCTION

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PORT OF ASTORIA

HARBOR POWER ENGINEERS, INC.
ELECTRICAL ENGINEERING FOR COASTAL & WATERFRONT FACILITIES
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REVISIONS

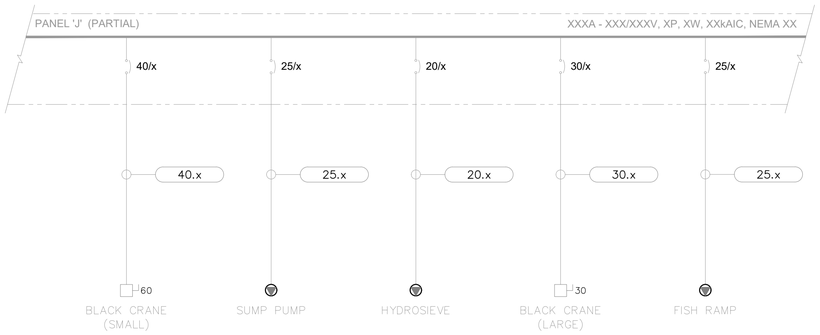
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

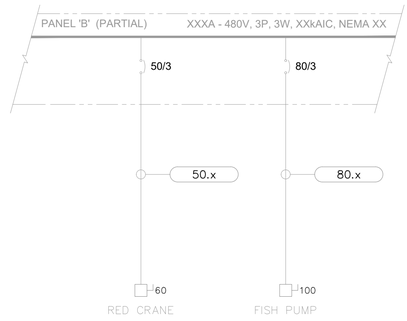
TITLE:
SYMBOLS AND ABBREVIATIONS

DESIGNED BY:	EJD	PROJECT NO:	234038
DRAWN BY:	KDD	DATE:	APRIL 2024
CHECKED BY:	EJD	SCALE:	NOTED

SHEET NO: **E0**



SINGLE LINE WIRING DIAGRAM PANEL 'J' (PARTIAL)



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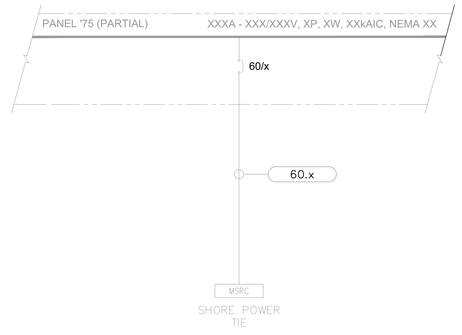

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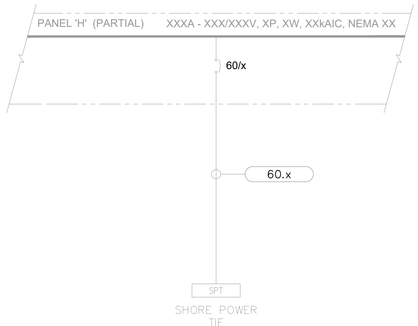

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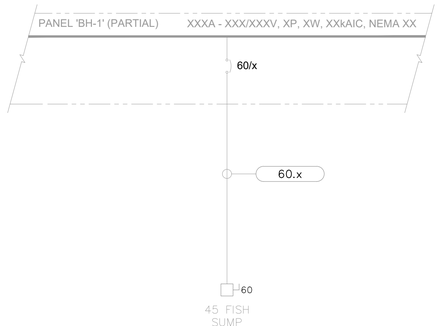

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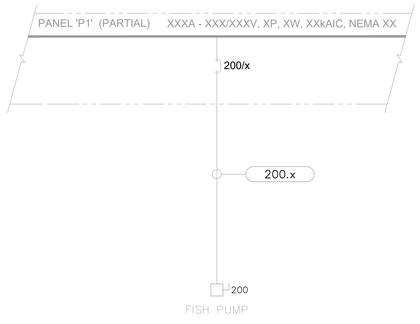

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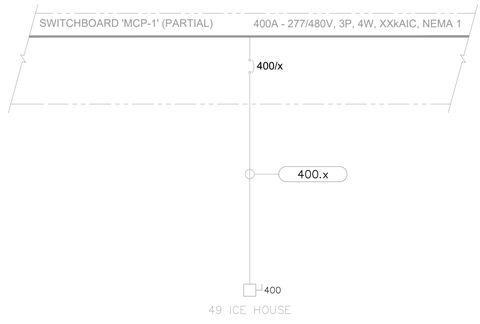
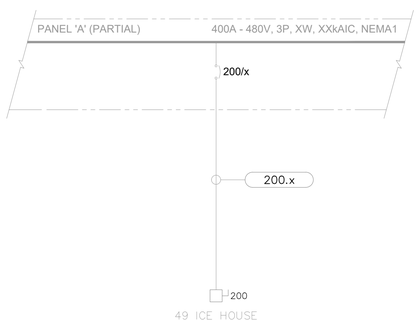
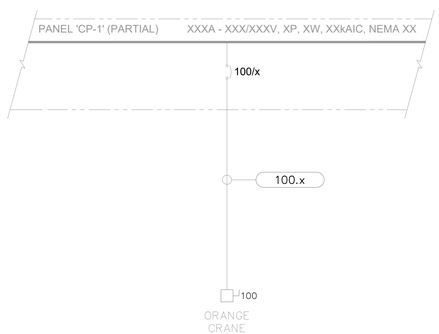


SINGLE LINE WIRING DIAGRAM PANEL 'MCP-1' (PARTIAL)



SINGLE LINE WIRING DIAGRAM PANEL 'A' (PARTIAL)



SINGLE LINE WIRING DIAGRAM PANEL 'CP-1' (PARTIAL)

COPPER FEEDER SCHEDULE

FEEDER TAG	CONDUITS ①②			CONDUCTORS PER SET		REMARKS
	MET	SETS	RNC	PHASE/NEUTRAL	GROUND ③	
800.4	3.00"	3	4.00"	4 #350 KCMIL	#1/0	–
600.4	3.00"	2	4.00"	4 #350 KCMIL	#1	–
400.4K	2.50"	2	3.00"	5 #3/0	#2	–
400.4	2.00"	2	2.50"	4 #3/0	#2	–
400.3	3.00"	1	4.00"	3 #500 KCMIL	#2	–
350.4	3.50"	1	4.00"	4 #500 KCMIL	#2	–
350.3	2.50"	1	4.00"	3 #400 KCMIL	#2	–
300.4	3.00"	1	4.00"	4 #350 KCMIL	#4	–
300.3	2.50"	1	3.00"	3 #350 KCMIL	#4	–
275.4	3.00"	1	4.00"	4 #300 KCMIL	#4	–
275.3	2.50"	1	3.00"	3 #300 KCMIL	#4	–
200.4	2.00"	1	2.50"	4 #3/0	#6	–
125.3	1.25"	1	2.00"	3 #1	#6	–
110.4K	1.50"	1	2.00"	3 #2, 1 #2/0 –N–	#6	–
110.4	1.25"	1	2.00"	4 #2	#6	–
110.3	1.25"	1	2.00"	3 #2	#6	–
100.4	1.25"	1	2.00"	4 #2	#8	–
100.3	1.25"	1	2.00"	3 #2	#8	–
90.4	1.25"	1	2.00"	4 #4	#8	–
90.3	1.00"	1	1.50"	3 #4	#8	–
80.4	1.25"	1	1.50"	4 #4	#8	–
80.3	1.00"	1	1.50"	3 #4	#8	–
70.4	1.25"	1	2.00"	4 #4	#8	–
70.3	1.00"	1	1.50"	3 #4	#8	–
60.4	1.00"	1	1.50"	4 #6	#10	–
60.3	0.75"	1	1.50"	3 #6,	#10	–
50.4K	1.00"	1	1.50"	3 #8, 1 #4 –N–	#10	–
50.4	1.00"	1	1.50"	4 #8	#10	–
50.3	0.75"	1	1.50"	3 #8	#10	–
40.4	0.75"	1	1.00"	4 #8	#10	–
40.3	0.75"	1	1.00"	3 #8	#10	–
30.4	0.75"	1	1.00"	4 #10	#10	–
30.2	0.75"	1	1.00"	2 #10	#10	–
20.4	0.75"	1	1.00"	4 #12	#12	–
20.3	0.75"	1	1.00"	3 #12	#12	–
15.4	0.75"	1	1.00"	4 #12	#12	–
15.3	0.75"	1	1.00"	3 #12	#12	–

FEEDER SCHEDULE NOTES:

A. CONDUCTORS AND CONDUITS SHOWN IN THIS SCHEDULE ARE BASED ON COPPER CONDUCTORS WITH THHN/THWN INSULATION. THIS NOTE INDICATES THAT CONDUIT (LISTED IN SCHEDULE) IS SIZED BASED ON TYPE THHN/THWN WIRE. USE WIRE TYPES AS SPECIFIED IN SECTION 16120 OR AS NOTED ELSEWHERE IN THE CONTRACT DOCUMENTS.

B. PROVIDE NOTED SIZE GROUND CONDUCTOR IN EACH CONDUIT OF FEEDERS CONSISTING OF MULTIPLE SETS OF CONDUCTORS.

C. NOT ALL FEEDERS ARE NECESSARILY USED ON THIS PROJECT.

D. NOMINAL AMPACITIES GREATER THAN 100 AMPS ARE FOR 75^C TERMINATIONS.

E. ON FEEDERS SHOWN WITH A ".6" SUFFIX, PROVIDE SIX PHASE CONDUCTORS AND ONE GROUND WIRE IN CODE SIZED CONDUIT. INCLUDE 80% DERATING FACTOR ON PHASE CONDUCTOR SIZE.

F. CONDUIT SIZES AND QUANTITIES ON PLANS TAKE PRECEDENCE OVER THOSE SHOWN IN SCHEDULE. PROVIDE CONDUITS INDICATED IN SCHEDULE FOR FEEDERS NOT SHOWN ON PLANS.

G. PROVIDE CIRCUIT CONDUCTORS AND RACEWAYS FROM PANELBOARD TO EQUIPMENT WHERE FEEDER TAGS ARE SHOWN ADJACENT TO PANEL SCHEDULES. SEE PLANS FOR EQUIPMENT LOCATIONS.

H. PROVIDE POINT BY POINT CIRCUIT CONDUCTORS AND RACEWAYS AS SHOWN IN BLOCK DIAGRAM(S).

SCHEDULE REMARKS:

1. CABLES NOTED MAY BE USED ONLY WHEN ALLOWED BY CODE AND PROJECT SPECIFICATIONS.
2. PVC (RNC) CONDUIT IS PERMITTED BELOW EXISTING IVAR'S (WHARF) DECK. GALVANIZED RIGID STEEL (MET) CONDUIT SHALL BE USED IN ALL OTHER AREAS.
3. PROVIDE GROUND WIRE NOTED BELOW IN ALL FEEDERS AND BRANCH CIRCUITS. MINIMUM GROUNDING SHALL BE PER CODE.

30% DESIGN - NOT FOR CONSTRUCTION

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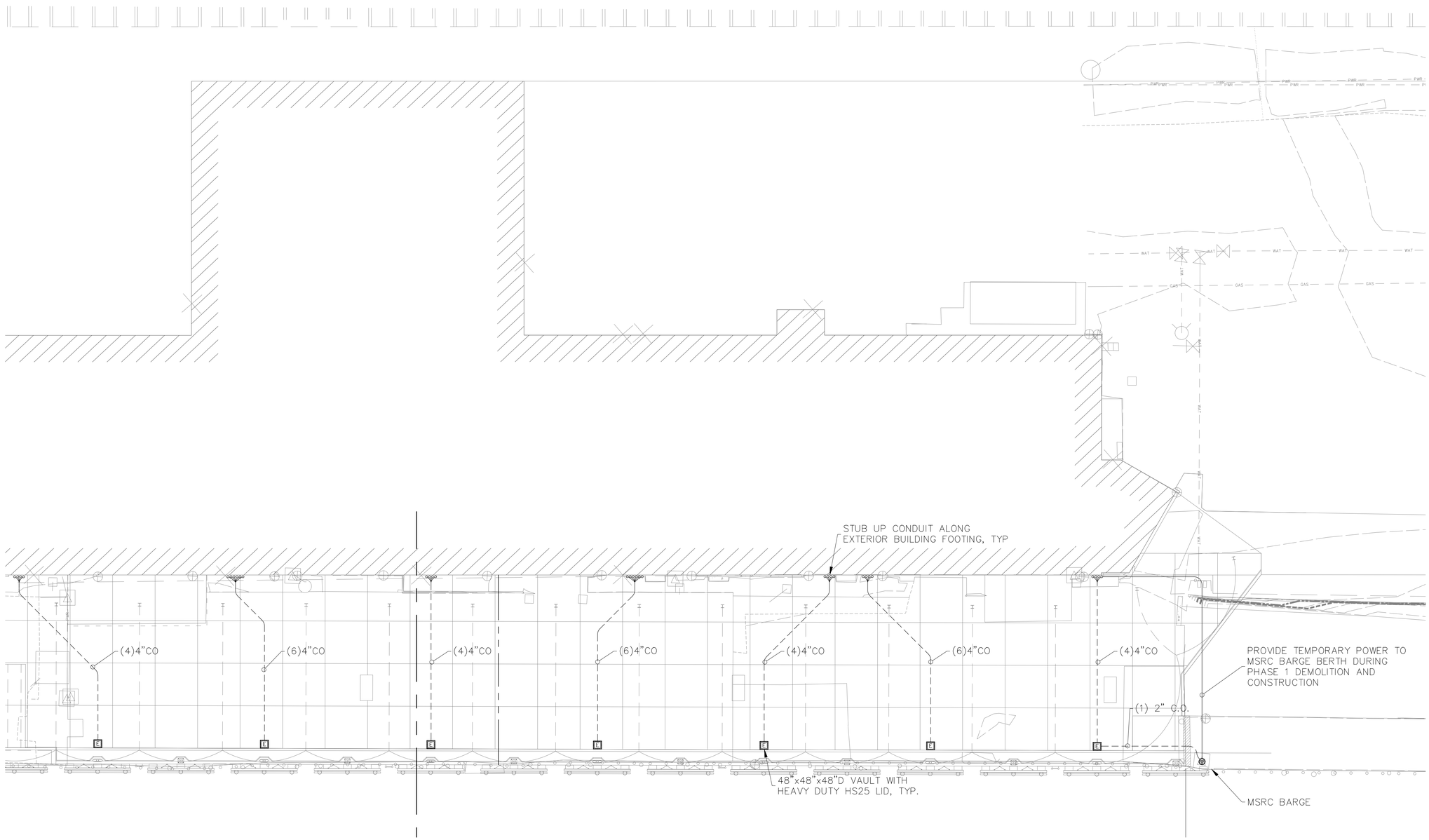
REVISIONS		
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
SINGLE LINE WIRING DIAGRAM

DESIGNED BY:	EJD	PROJECT NO:	234038
DRAWN BY:	KDD	DATE:	APRIL 2024
CHECKED BY:	EJD	SCALE:	NOTED

SHEET NO: **E1.1**



ELECTRICAL SITE PLAN SOUTH

0 5 10 20 40 60 FT.

30% DESIGN - NOT FOR CONSTRUCTION

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www.pndengineers.com

PORT OF ASTORIA

HARBOR POWER ENGINEERS, INC.
ELECTRICAL ENGINEERING FOR COASTAL & WATERFRONT FACILITIES
PM: ED DAVID, PE TEL: 206.855.4600

REVISIONS		
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **ELECTRICAL SITE PLAN SOUTH**

DESIGNED BY:	EJD	PROJECT NO:	234038	SHEET NO: **E2.0**
DRAWN BY:	KDD	DATE:	APRIL 2024	
CHECKED BY:	EJD	SCALE:	NOTED	

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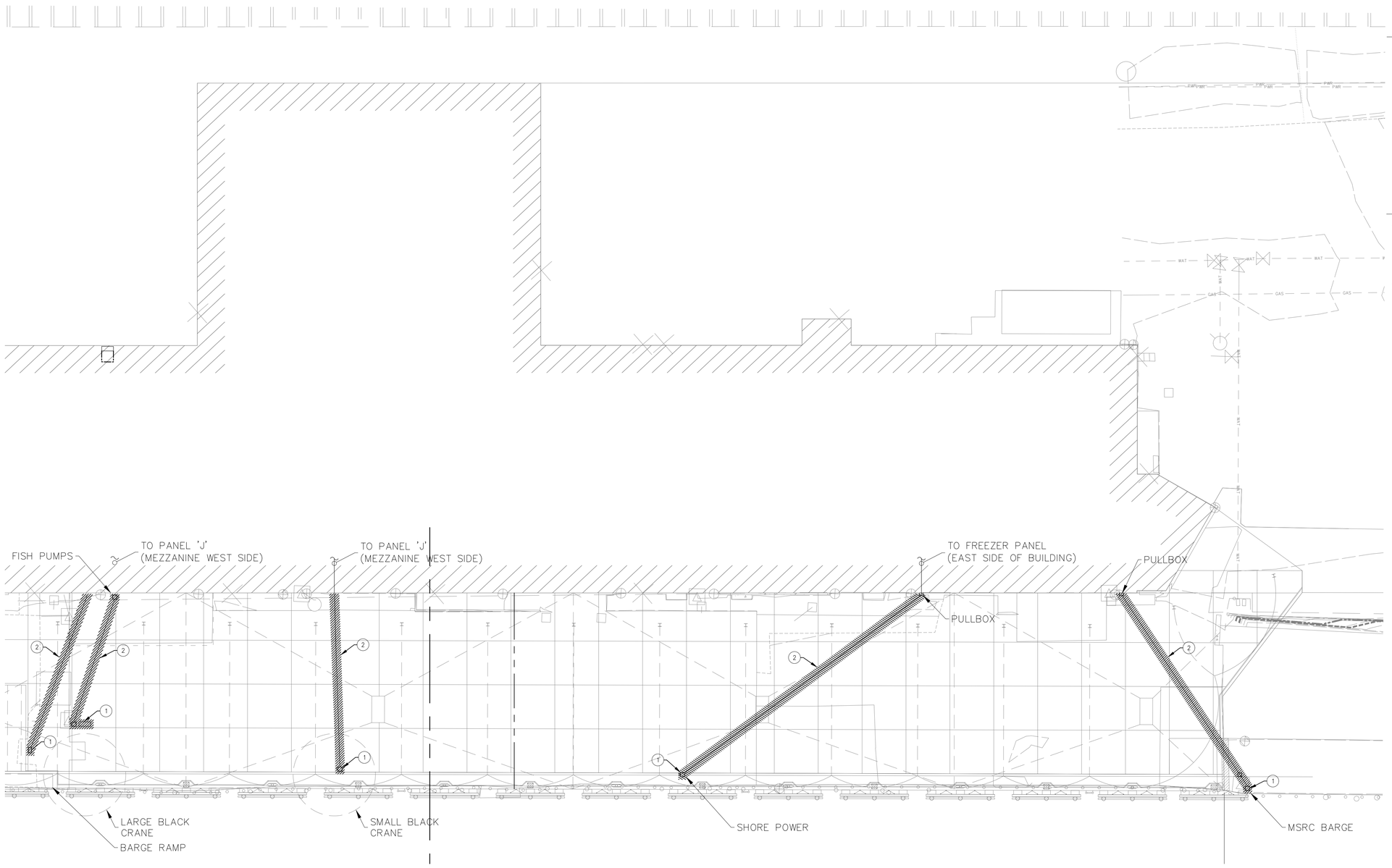
GENERAL NOTES

1. XXX

SHEET NOTES

1. DEMOLISH EXISTING ELECTRICAL EQUIPMENT INCLUDING METERING, PANELS, TRANSFORMER(S), RACK, AND CONTROLS. REMOVE EXISTING ANTENNAS AND LOW VOLTAGE EQUIPMENT; RETURN TO PORT.
2. REMOVE CABLES FROM EXISTING CONDUIT BACK TO NEAREST UPSTREAM DISCONNECT OR OCPD; ABANDON EMPTY UNDERGROUND CONDUIT IN PLACE.



ELECTRICAL SITE PLAN SOUTH - DEMO

0 5 10 20 40 60 FT.

30% DESIGN - NOT FOR CONSTRUCTION

PND ENGINEERS, INC.
3240 Eastlake Avenue E
Seattle, Washington 98102
P: 206.624.1387
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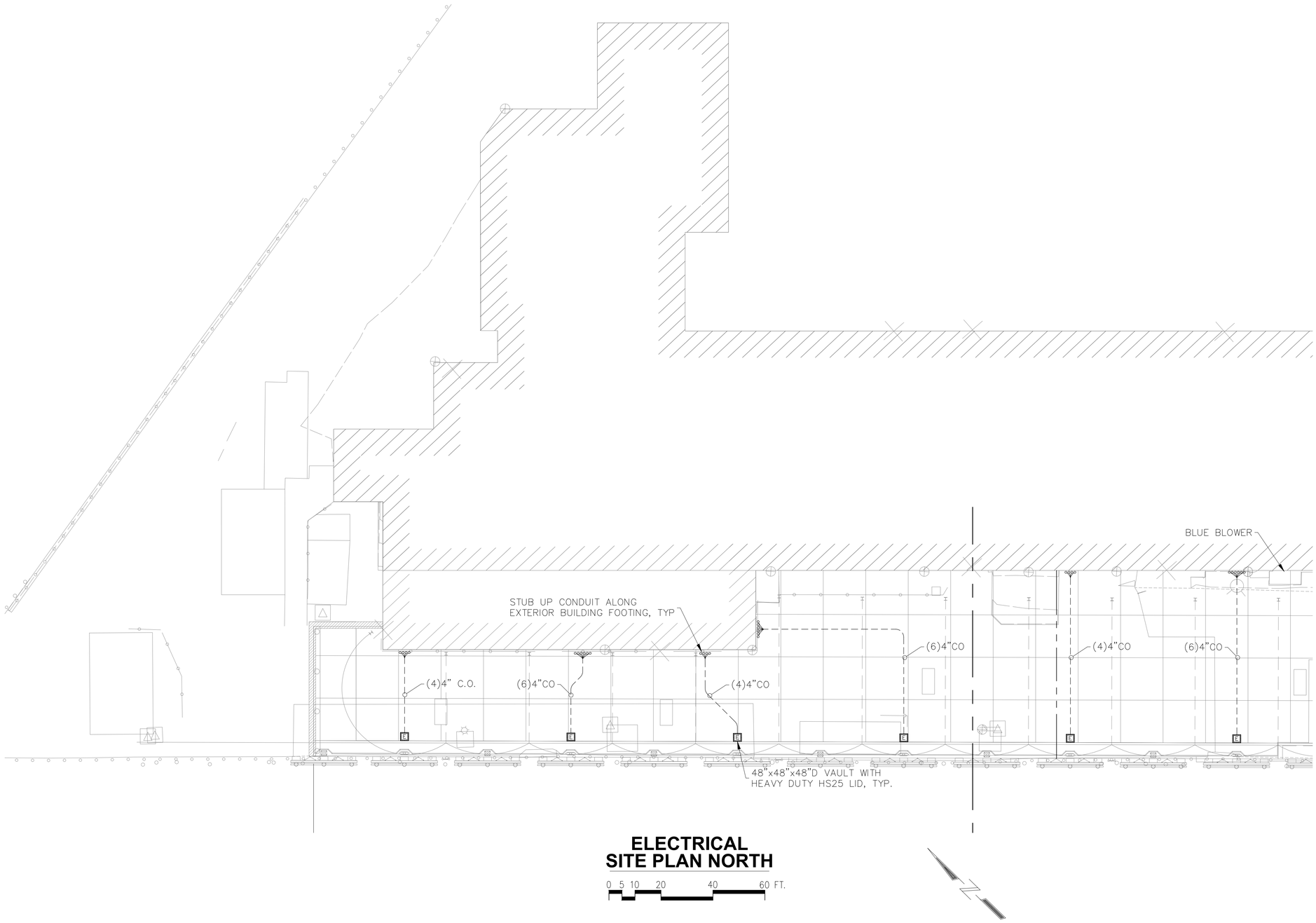
PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
ELECTRICAL SITE PLAN SOUTH - DEMO

DESIGNED BY:	EJD	PROJECT NO:	234038
DRAWN BY:	KDD	DATE:	APRIL 2024
CHECKED BY:	EJD	SCALE:	NOTED

SHEET NO:
E2.0D



ELECTRICAL SITE PLAN NORTH

0 5 10 20 40 60 FT.

30% DESIGN - NOT FOR CONSTRUCTION

P N D ENGINEERS, INC.
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REVISIONS		
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT: **PORT OF ASTORIA**
PIER 2 WEST REHABILITATION

TITLE: **ELECTRICAL SITE PLAN NORTH**

DESIGNED BY:	EJD	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	KDD	DATE:	APRIL 2024	**E2.1**
CHECKED BY:	EJD	SCALE:	NOTED	

GENERAL NOTES

1. XXX

SHEET NOTES

1. DEMOLISH EXISTING ELECTRICAL EQUIPMENT INCLUDING METERING, PANELS, TRANSFORMER(S), RACK, AND CONTROLS. REMOVE EXISTING ANTENNAS AND LOW VOLTAGE EQUIPMENT; RETURN TO PORT.
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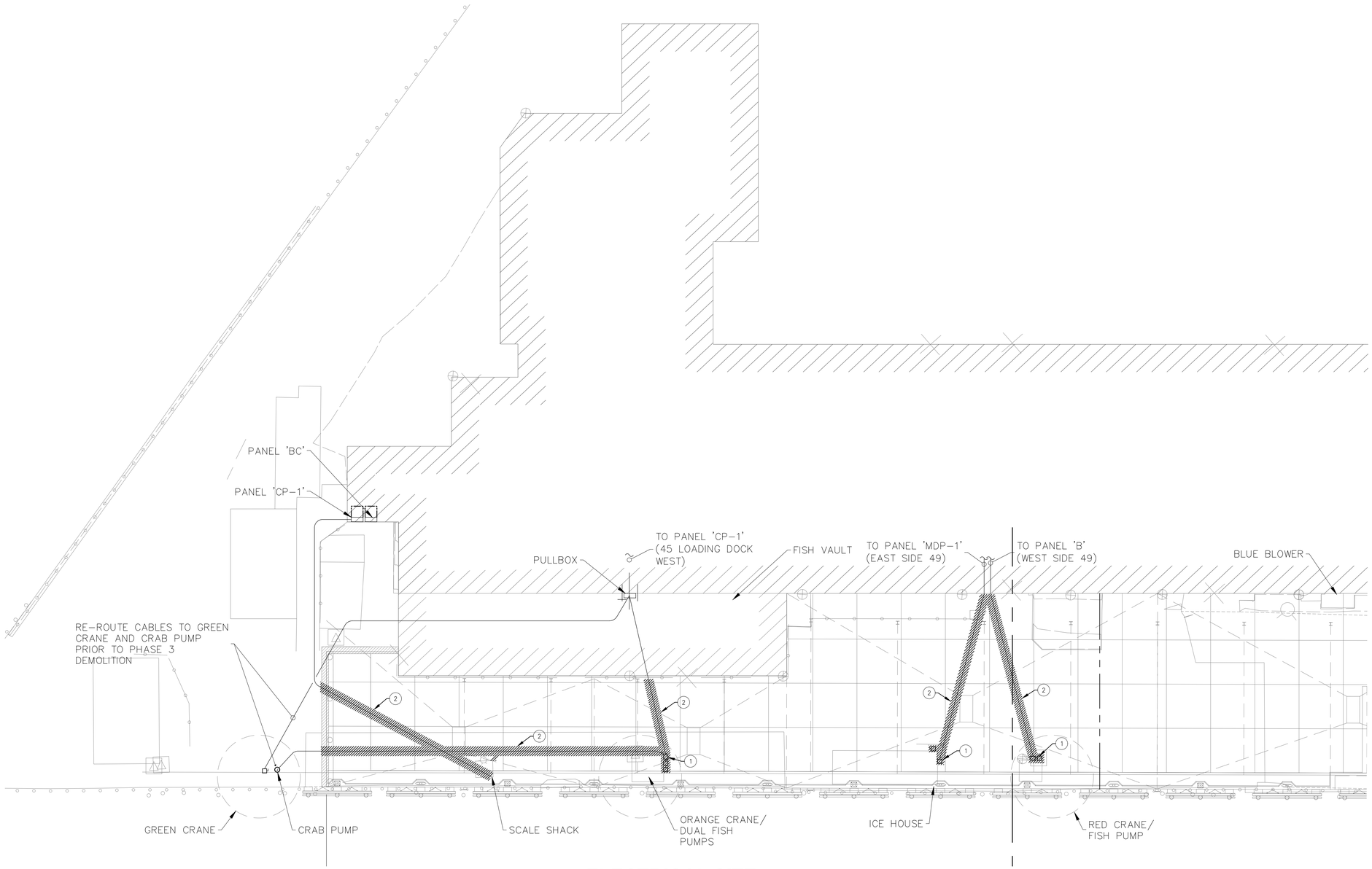

ELECTRICAL SITE PLAN NORTH - DEMO

0 5 10 20 40 60 FT.

30% DESIGN - NOT FOR CONSTRUCTION

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Seattle, Washington 98102
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ELECTRICAL ENGINEERING FOR COASTAL & WATERFRONT FACILITIES
PM: ED DAVID, PE TEL: 206.855.4600

REVISIONS		
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT: **PORT OF ASTORIA PIER 2 WEST REHABILITATION**

TITLE: **ELECTRICAL SITE PLAN NORTH - DEMO**

DESIGNED BY:	EJD	PROJECT NO:	234038
DRAWN BY:	KDD	DATE:	APRIL 2024
CHECKED BY:	EJD	SCALE:	NOTED

SHEET NO: **E2.1D**

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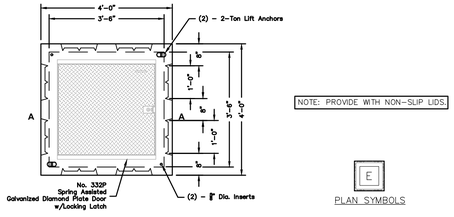
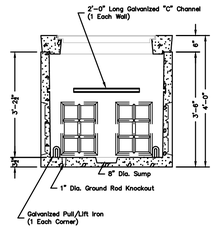


PLAN VIEW

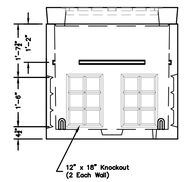
NOTE: PROVIDE WITH NON-SLIP LIDS.

E

PLAN SYMBOLS



SECTION AA



SIDE VIEW

1 E2.0 ELECTRICAL PULL BOX - 444-LA

ELEVATION – NOT TO SCALE

30% DESIGN - NOT FOR CONSTRUCTION

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REVISIONS		
REV	DATE	DESCRIPTION
0	10/24/2023	ISSUED FOR CONSTRUCTION

PROJECT:
PORT OF ASTORIA
PIER 2 WEST REHABILITATION

TITLE:
ELECTRICAL DETAILS

DESIGNED BY:	EJD	PROJECT NO:	234038	SHEET NO:
DRAWN BY:	KDD	DATE:	APRIL 2024	**E3.0**
CHECKED BY:	EJD	SCALE:	NOTED	

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PROJECT TITLE: Pier 2 West Rehabilitation (60% Design Phase)
CLIENT: Port of Astoria

Addendum A, Part 3: Detailed Fee/Hours Breakdown by Task

Revised: 4/30/2024

4A Project Management

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $247.50	RJ, CM, MH Senior Eng VI $230.00	C.Fornace CC Senior Eng IV $192.50	OT Senior Eng III $182.50	Senior Eng II $170.00	WT, MT Senior Eng I $160.00	DM/LS Staff Eng IV $142.50	G.Dean CAD Tech VI $142.50	Tech IV $165.00	Tech V $142.50	Tech VI $165.00	Total Hours	Labor Cost
	1	Project Coordination		20					10			4		34	$6,595.00
	2	Invoicing, Project Reporting		8								6		14	$2,695.00
	3	Project Meetings(12 video conference)(6 in person meetings)		42										42	$9,660.00
	4	Pre-App Meeting with City of Astoria		10										10	$2,300.00
		Subtotal	**0**	**80**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**10**	**0**	**100**	**$21,250.00**

EXPENSES:

		Item	Quantity	Per trip	Unit Price	Cost
1	1	Travel (360 miles/trip each way)(6 meetings)	5	360	0.655	$1,179.00
		TOTAL EXPENSES				**$1,179.00**

SUBCONSULTANTS:

	Quantity	Subtotal	Markup (10%)	Cost
	0		$0.00	$0.00
TOTAL SUBCONSULTANTS				**$0.00**

SUB-TASK TOTAL - $22,429.00

4B Site Evaluation

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	Sub coordination		4								1		5	$1,062.50
		Subtotal	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**5**	**$1,062.50**

EXPENSES:

		Item	Quantity	Unit Price	Cost
2	1	Travel (360 miles/trip each way)(2 trip)	0	360	0.655	$0.00
		TOTAL EXPENSES				**$0.00**

SUBCONSULTANTS:

Global Geophysics

			Quantity	Subtotal	Markup (10%)	Cost
2	1	Pile Length Investigation	1	$10,650.00	$1,065.00	$11,715.00
				$10,650.00		$11,715.00
		TOTAL SUBCONSULTANTS				**$11,715.00**

SUB-TASK TOTAL - $12,777.50

PROJECT TITLE: Pier 2 West Rehabilitation (60% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

4C Construction Phasing and Planning Coordination

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	Develop Initate Phase Plans and Details for Permitting		40	30				30			1		101	$19,392.50
	2	Confirm construction access for design/permitting including site meeting.		40						50				90	$16,325.00
		Subtotal	**0**	**80**	**30**	**0**	**0**	**0**	**30**	**50**	**0**	**1**	**0**	**191**	**$35,717.50**

EXPENSES:

		Item	Quantity	Per trip	Unit Price	Cost
4	1	Travel (360 miles/trip each way)(1 trips)	0	360	0.655	$0.00
		TOTAL EXPENSES				**$0.00**

SUBCONSULTANTS:

Quantity	Subtotal	Markup (10%)	Cost
0		$0.00	$0.00
	$0.00		$0.00
TOTAL SUBCONSULTANTS			**$0.00**

SUB-TASK TOTAL - $35,717.50

PROJECT TITLE: Pier 2 West Rehabilitation (60% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

4D 60% Design

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	60% OPEN CELL Bulkhead Design	16	80	8	40			140			1		285	$51,292.50
	2	60% Geotechnical Design	8	16						4		1		29	$6,372.50
	3	Fender and Mooring System Design		4	8			24		16		1		53	$8,722.50
	4	Pile Cap and Pier Facing Design		6	10				30	8				54	$8,720.00
	5	Site civil, utility, and stormwater design		20	32			100		60		1		213	$35,452.50
	6	Building Shoring Design		20	40				20	16		1		97	$17,572.50
	7	Electrical Design		8										8	$1,840.00
	8	Corrosion Projection Design		6	4			10	20	4				44	$7,170.00
	9	Coordinate, Review, and Address Review Comments		40	20				30					90	$17,325.00
	10	60% Cost Estimate		60										60	$13,800.00
		Subtotal	**24**	**260**	**122**	**40**	**0**	**134**	**240**	**108**	**0**	**5**	**0**	**933**	**$168,267.50**

EXPENSES:

		Item	Quantity	Unit Price	Cost
5	1	Travel (360 miles/trip each way)(0 trips)	0	360	0.655	$0.00
		TOTAL EXPENSES				**$0.00**

SUBCONSULTANTS:

			Quantity	Subtotal	Markup (10%)	Cost
Harbor Power						
4	7	Electrical Systems Design	1	$22,375.00	$2,237.50	$24,612.50
				$22,375.00		$24,612.50
GeoEngineers						
4	2	Encased SPT boring and lab testing	1	$35,000.00	$3,500.00	$38,500.00
4	2	60% Geotech Seismic Analysis	1	$20,000.00	$2,000.00	$22,000.00
4	2	Seismic FLAC Analysis	1	$85,000.00	$8,500.00	$93,500.00
4	2	Final Geotech Report	1	$14,000.00	$1,400.00	$15,400.00
				$154,000.00		$169,400.00
Appledore Marine Engineers						
4	9	Independent Technical Review	1	$23,617.00	$2,361.70	$25,978.70
				$23,617.00		$25,978.70
		TOTAL SUBCONSULTANTS				**$219,991.20**
		SUB-TASK TOTAL -				**$388,258.70**

60% Design Task Summary				
4A	**Project Management**	**$22,429.00**	**$22,000.00**	4.8%
4B	**Site Evaluation**	**$12,777.50**	**$13,000.00**	2.8%
4C	**Construction Phasing and Planning Coordination**	**$35,717.50**	**$36,000.00**	7.8%
4D	**60% Design**	**$388,258.70**	**$388,000.00**	84.5%
	Task 4 Total	**$459,182.70**	**$459,000.00**	

PROJECT TITLE: Pier 2 West Rehabilitation (90% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

5A Project Management

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $247.50	RJ, CM, MH Senior Eng VI $230.00	C.Fornace CC Senior Eng IV $192.50	OT Senior Eng III $182.50	Senior Eng II $170.00	WT, MT Senior Eng I $160.00	DM/LS Staff Eng IV $142.50	G.Dean CAD Tech VI $142.50	Tech IV $165.00	Tech V $142.50	Tech VI $165.00	Total Hours	Labor Cost
	1	Project Coordination		90					10			6		106	$22,980.00
	2	Invoicing, Project Reporting		8								6		14	$2,695.00
	3	Project Meetings		48				20	40					108	$19,940.00
	4	Other meetings (TBD)		20										20	$4,600.00
		Subtotal	**0**	**166**	**0**	**0**	**0**	**20**	**50**	**0**	**0**	**12**	**0**	**248**	**$50,215.00**

EXPENSES:

		Item	Quantity	Per trip	Unit Price	Cost
1	3	Travel (360 miles/trip each way)	5	360	0.655	$1,179.00

TOTAL EXPENSES **$1,179.00**

SUBCONSULTANTS:

Quantity	Subtotal	Markup (10%)	Cost
0		$0.00	$0.00

TOTAL SUBCONSULTANTS **$0.00**

SUB-TASK TOTAL **$51,394.00**

PROJECT TITLE: Pier 2 West Rehabilitation (90% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

5B 90% Design

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	90% OPEN CELL Bulkhead Design	60	64	40	80			120			1		365	$69,112.50
	2	90% Geotechnical Design	8	100					120	4		1		233	$42,792.50
	3	Fender and Mooring System Design		24			24			40		1		89	$15,442.50
	4	Pile Cap and Pier Facing Design		60	56				40	16				172	$32,560.00
	5	Site civil, utility, and stormwater design		80	80			80	80	80		1		401	$69,542.50
	6	Building Shoring Design		30	30				20	16		1		97	$17,947.50
	7	Electrical Design		8						8				16	$2,980.00
	8	Corrosion Projection Design		20			40	10	30	4				104	$17,845.00
	9	Coordinate, Review, and Address Review Comments		60	40			40	40					180	$33,600.00
	10	90% Cost Estimate		64										64	$14,720.00
		Subtotal	**68**	**510**	**246**	**80**	**64**	**130**	**450**	**168**	**0**	**5**	**0**	**1721**	**$316,542.50**

EXPENSES:

		Item	Quantity	Unit Price	Cost
6	1	Travel (360 miles/trip each way)(0 trips)	0	360	0.655	$0.00
		TOTAL EXPENSES			**$0.00**

SUBCONSULTANTS:

Harbor Power

			Quantity	Subtotal	Markup (10%)	Cost
6	7	Electrical Systems Design	1	$7,030.00	$703.00	$7,733.00
				$7,030.00		$7,733.00
		TOTAL SUBCONSULTANTS				**$7,733.00**

SUB-TASK TOTAL	**$324,275.50**

90% Design Task Summary				
5A	**Project Management**	**$51,394.00**	**$51,000.00**	13.6%
5B	**90% Design**	**$324,275.50**	**$324,000.00**	86.4%
	Task 5 Total	**$375,669.50**	**$375,000.00**	

PROJECT TITLE: Pier 2 West Rehabilitation (100% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

6A Project Management

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $247.50	RJ, CM, MH Senior Eng VI $230.00	C.Fornace CC Senior Eng IV $192.50	OT Senior Eng III $182.50	Senior Eng II $170.00	WT, MT Senior Eng I $160.00	DM/LS Staff Eng IV $142.50	G.Dean CAD Tech VI $142.50	Tech IV $165.00	Tech V $142.50	Tech VI $165.00	Total Hours	Labor Cost
	1	Project Coordination		24					10			4		38	$7,515.00
	2	Invoicing, Project Reporting		6								4		10	$1,950.00
	3	Project Meetings		36				20	40					96	$17,180.00
	4	Bidding Coordination		60					60					120	$22,350.00
		Subtotal	**0**	**126**	**0**	**0**	**0**	**20**	**110**	**0**	**0**	**8**	**0**	**264**	**$48,995.00**

EXPENSES:

	Item	Quantity	Per trip	Unit Price	Cost
1 3	Travel (360 miles/trip each way)	5	360	0.655	$1,179.00
	TOTAL EXPENSES				**$1,179.00**

SUBCONSULTANTS:

	Quantity	Subtotal	Markup (10%)	Cost
	0		$0.00	$0.00
TOTAL SUBCONSULTANTS				**$0.00**
SUB-TASK TOTAL				**$50,174.00**

PROJECT TITLE: Pier 2 West Rehabilitation (100% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

6B 100% Design

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	100% OPEN CELL Bulkhead Design		50		20			80			1		151	$26,692.50
	2	100% Geotechnical Design		40					40					80	$14,900.00
	3	Fender and Mooring System Design		24			24			20		1		69	$12,592.50
	4	Pile Cap and Pier Facing Design		56	60				40	16				172	$32,410.00
	5	Site civil, utility, and stormwater design		30	40			40	40	40		1		191	$32,542.50
	6	Building Shoring Design		10	10				10	10		1		41	$7,217.50
	7	Electrical Design		6						8				14	$2,520.00
	8	Corrosion Projection Design		10					10					20	$3,725.00
	9	Coordinate, Review, and Address Review Comments		40				20	40					100	$18,100.00
	10	100% Cost Estimate		60										60	$13,800.00
		Subtotal	**0**	**326**	**110**	**20**	**24**	**60**	**260**	**94**	**0**	**4**	**0**	**898**	**$164,500.00**

EXPENSES:

		Item	Quantity	Unit Price	Cost
5	1	Travel (360 miles/trip each way)(0 trips)	0	360	0.655	$0.00
		TOTAL EXPENSES				**$0.00**

SUBCONSULTANTS:

Harbor Power

			Quantity	Subtotal	Markup (10%)	Cost
7	7	100% Electrical Systems Design	1	$7,030.00	$703.00	$7,733.00
				$7,030.00		$7,733.00
		TOTAL SUBCONSULTANTS				**$7,733.00**

SUB-TASK TOTAL **$172,233.00**

PROJECT TITLE: Pier 2 West Rehabilitation (100% Design Phase) Revised: 4/30/2024

CLIENT: Port of Astoria

6C Bid Support

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $248	RJ, CM, MH Senior Eng VI $230	C.Fornace CC Senior Eng IV $193	OT Senior Eng III $183	Senior Eng II $170	WT, MT Senior Eng I $160	DM/LS Staff Eng IV $143	G.Dean CAD Tech VI $143	Tech IV $165	Tech V $143	Tech VI $165	Total Hours	Labor Cost
	1	Develop Bid Documents		60					60			1		121	$22,492.50
	2	Advertising Support		8					8			1		17	$3,122.50
	3	Pre-Bid Meetings		36					30			1		67	$12,697.50
	4	Bid Review and Recommendation		24										24	$5,520.00
		Subtotal	**0**	**128**	**0**	**0**	**0**	**0**	**98**	**0**	**0**	**3**	**0**	**229**	**$43,832.50**

EXPENSES:

		Item	Quantity	Unit Price	Cost
5	1	Travel (360 miles/trip each way)(0 trips)	3	360	0.655	$707.40

SUB-TASK TOTAL EXPENSES$707.40

SUBCONSULTANTS:

Harbor Power

			Quantity	Subtotal	Markup (10%)	Cost
7	7	100% Electrical Systems Design	1	$960.00	$96.00	$1,056.00
				$960.00		$1,056.00

TOTAL SUBCONSULTANTS **$1,056.00**

SUB-TASK TOTAL **$45,595.90**

100% Design Task Summary

6A	**Project Management**	**$50,174.00**	**$50,000.00**	18.7%
6B	**100% Design**	**$172,233.00**	**$172,000.00**	64.2%
6C	**Bid Support**	**$45,595.90**	**$46,000.00**	17.2%
	Task 6 Total	**$268,002.90**	**$268,000.00**	

PROJECT TITLE: Pier 2 West Rehabilitation (Construction Administration) Revised: 4/30/2024

CLIENT: Port of Astoria

7 Construction Administration

LABOR:

Task No.	Item	Task (Scope of Services)	JC Senior Eng VII $247.50	RJ, CM, MH Senior Eng VI $230.00	C.Fornace CC Senior Eng IV $192.50	OT Senior Eng III $182.50	Senior Eng II $170.00	WT, MT Senior Eng I $160.00	DM/LS Staff Eng IV $142.50	G.Dean CAD Tech VI $142.50	Tech IV $165.00	Tech V $142.50	Tech VI $165.00	Total Hours	Labor Cost
	1	RFI review		60					80					140	$25,200.00
	2	Submital Review		40					140					180	$29,150.00
	3	On-Site Inspection		400				40	2340				10	2790	$433,500.00
	4	Review Change Orders		60					20					80	$16,650.00
	5	Record Drawings		20					60	80			1	161	$24,715.00
		Subtotal	**0**	**580**	**0**	**0**	**0**	**40**	**2640**	**80**	**0**	**0**	**11**	**3351**	**$529,215.00**

EXPENSES:

	Item	Item	Quantity	Per trip	Unit Price	Cost
7	3	Travel (360 miles/trip each way)(meetings)	66	360	0.655	$15,562.80
7	3	M&IE	192	1	69	$13,248.00
7	3	Lodging	154	1	136	$20,944.00
		TOTAL EXPENSES				**$49,754.80**

SUBCONSULTANTS:

Harbor Power Engineers		Quantity	Subtotal	Markup (10%)	Cost
7	1-5	1	$14,060.00	$1,406.00	$15,466.00
GeoEngineers					
	TOTAL SUBCONSULTANTS				**$15,466.00**

SUB-TASK TOTAL	**$594,435.80**

Construction Services

7	**Construction Administration**	**$594,435.80**	**$594,000.00**
	Task 7 Total	**$594,435.80**	**$594,000.00**

Addendum C

PND Engineers, Inc. (PND) Standard Form of Agreement For Professional Engineering Services_Pier 2 West Rehabilitation Post 30% Design_Port of Astoria

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION

GENERAL TERMS AND CONDITIONS UNDER THE
FISCAL YEAR 2023 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM
GRANTS

January 29, 2024

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Index of Definitions

GENERAL TERMS AND CONDITIONS

The Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (Nov. 15, 2021), and the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022) appropriated funds to the United States Department of Transportation (the "**USDOT**") Maritime Administration ("**MARAD**") for fiscal year (FY) 2023 under the heading "Port Infrastructure Development Program." The funds are available to make grants to improve port facilities at coastal seaports, inland river ports, or Great Lakes ports. The MARAD program administering those funds is the Port Infrastructure Development Program (PIDP).

On February 10, 2023, MARAD posted a funding opportunity at Grants.gov with funding opportunity title "2023 Port Infrastructure Development Program Grants" and funding opportunity number MA-PID-23-001. The notice of funding opportunity posted at Grants.gov (the "**NOFO**") solicited applications for Federal financial assistance under the FY 2023 PIDP. On November 7, 2023, MARAD announced application selections under the NOFO.

These general terms and conditions are incorporated by reference in a project-specific agreement under the FY 2023 PIDP. The term "Recipient" is defined in the project-specific portion of the agreement. The project-specific portion of the agreement includes schedules A through K. The project-specific portion of the agreement may include special terms and conditions in project-specific articles.

ARTICLE 1
PURPOSE

1.1 Purpose. The purpose of this award is to make grants to improve port facilities at coastal seaports, inland river ports, or Great Lakes ports. The parties will accomplish that purpose by achieving the following objectives:

(1) timely completing the Project; and

(2) ensuring that this award does not substitute for non-Federal investment in the Project, except as proposed in the Technical Application, as modified by schedule D.

ARTICLE 2
MARAD ROLE

2.1 Administration. MARAD will administer this agreement.

2.2 MARAD Program Contacts.

David Bohnet
Supervisory Grant Management Specialist

DOT – Maritime Administration
1200 New Jersey Ave, SE
Washington, DC 20590
MAR-510
W21-226
Mailstop 3
(202) 366-0586
david.bohnet@dot.gov

ARTICLE 3
RECIPIENT ROLE

3.1 Statements on the Project. The Recipient states that:

(1) all material statements of fact in the Technical Application were accurate when that application was submitted; and

(2) schedule E documents all material changes in the information contained in that application.

3.2 Statements on Authority and Capacity. The Recipient states that:

(1) it has the authority to receive Federal financial assistance under this agreement;

(2) it has the legal authority to complete the Project;

(3) it has the capacity, including institutional, managerial, and financial capacity, to comply with its obligations under this agreement;

(4) not less than the difference between the total eligible project costs listed in section 3 of schedule D and the PIDP Grant Amount listed in section 1 of schedule D is committed to fund the Project;

(5) it has sufficient funds available to ensure that infrastructure completed or improved under this agreement will be operated and maintained in compliance with this agreement and applicable Federal law; and

(6) the individual executing this agreement on behalf of the Recipient has authority to enter this agreement and make the statements in this article 3 and in section 21.7 on behalf of the Recipient.

3.3 MARAD Reliance. The Recipient acknowledges that:

(1) MARAD relied on statements of fact in the Technical Application to select the Project to receive this award;

(2) MARAD relied on statements of fact in both the Technical Application and this agreement to determine that the Recipient and the Project are eligible under the terms of the NOFO;

(3) MARAD relied on statements of fact in both the Technical Application and this agreement to establish the terms of this agreement; and

(4) MARAD's selection of the Project to receive this award prevented awards under the NOFO to other eligible applicants.

3.4 Project Delivery.

(a) The Recipient shall complete the Project under the terms of this agreement.

(b) The Recipient shall ensure that the Project is financed, constructed, operated, and maintained in accordance with all Federal laws, regulations, and policies that are applicable to projects of MARAD.

3.5 Rights and Powers Affecting the Project.

(a) The Recipient shall not take or permit any action that deprive it of any rights or powers necessary to the Recipient's performance under this agreement without written approval of MARAD.

(b) The Recipient shall act promptly, in a manner acceptable to MARAD, to acquire, extinguish, or modify any outstanding rights or claims of right of others that would interfere with the Recipient's performance under this agreement.

3.6 Notification of Changes to Key Personnel. The Recipient shall notify MARAD within 30 calendar days of any change in key personnel who are identified in section 4 of schedule A.

ARTICLE 4
AWARD AMOUNT, OBLIGATION, AND TIME PERIODS

4.1 Federal Award Amount. MARAD hereby awards a PIDP Grant to the Recipient in the amount listed in section 1 of schedule D as the PIDP Grant Amount.

4.2 Federal Funding Source.

(a) If section 4 of schedule F identifies the Funding Act as "IIJA," then the PIDP Grant is from PIDP grant funding that was appropriated in division J of the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (Nov. 15, 2021).

(b) If section 4 of schedule F identifies the Funding Act as "FY2023," then the PIDP Grant is from PIDP grant funding that was appropriated in the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022).

(c) If section 4 of schedule F contains a table that lists separate amounts for "IIJA" and "FY2023," then the amount listed for "IIJA" is from PIDP grant funding that was appropriated in division J of the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (Nov. 15, 2021) and the amount listed for "FY2023" is from PIDP grant funding that was appropriated in the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022).

(d) If section 4 of schedule F identifies the Funding Act as something other than "FY2023" or "IIJA", then the PIDP Grant includes PIDP grant funding that was appropriated under a different funding act than "FY2023" or "IIJA".

4.3 Federal Obligations.

(a) This agreement obligates for the budget period the amount listed in section 1 of schedule D as the PIDP Grant Amount.

(b) If section 1 of schedule D contains an "Other Federal Funds Grant Amount", then MARAD was transferred other Federal funds from another Federal agency, and, therefore, in addition to the PIDP Grant Amount, this agreement also obligates the Other Federal Funds Grant Amount for the budget period. The total amount of Federal funds obligated is the total of the PIDP Grant Amount and the Other Federal Funds Grant Amount listed in section 1 of schedule D. Unless otherwise stated in the project-specific agreement, the Federal Award Date, period of performance start and end date, and the budget period start and end date will be the same for the PIDP Grant Amount and Other Federal Funds Grant Amount obligated by this agreement.

ARTICLE 5
STATEMENT OF WORK, SCHEDULE, AND BUDGET CHANGES

5.1 Change Notification Requirement. The Recipient shall notify MARAD within 30 calendar days of any change in circumstances or commitments that adversely affect the Recipient's capacity or intent to complete the Project in compliance with this agreement. In that notice, the Recipient shall describe the change and what actions the Recipient has taken or plans to take to ensure completion of the Project. The notification requirement under this section 5.1 is separate from any requirements under this article 5 that the Recipient request modification of this agreement.

5.2 Scope and Statement of Work Changes. If the Project's activities differ from the activities described in schedule B, then the Recipient shall request a modification of this agreement to update schedule B.

5.3 Schedule Changes. If one or more of the following conditions are satisfied, then the Recipient shall request a modification of this agreement to update schedule C:

(1) a completion date for the Project or a component of the Project is listed in section 2 of schedule C and the Recipient's estimate for that milestone changes to a date that is more than six months after the date listed in section 2 of schedule C;

(2) a schedule change would require the budget period to continue after the budget period end date listed in section 1 of schedule C; or

(3) a schedule change would require the period of performance to continue after the period of performance end date listed in section 1 of schedule C.

For other schedule changes, the Recipient shall follow the applicable procedures of MARAD and document the changes in writing.

5.4 Budget Changes.

(a) The Recipient acknowledges that if the cost of completing the Project increases:

(1) that increase does not affect the Recipient's obligation under this agreement to complete the Project; and

(2) MARAD will not increase the amount of this award to address any funding shortfall.

(b) The Recipient shall request a modification of this agreement to update schedule D if, in comparing the Project's budget to the amounts listed in section 3 of schedule D:

(1) the total "Non-Federal Funds" amount decreases; or

(2) the total eligible project costs amount decreases.

(c) For budget changes that are not identified in section 5.4(b), the Recipient shall follow the applicable procedures of MARAD and document the changes in writing.

(d) If there are Project Cost Savings, then the Recipient may propose to MARAD, in writing consistent with MARAD's requirements, to include in the Project specific additional activities that are within the scope of this award, as defined in section 1.1 and schedule B, and that the Recipient could complete with the Project Cost Savings.

In this agreement, "**Project Cost Savings**" means the difference between the actual eligible project costs and the total eligible project costs listed in section 3 of schedule D, but only if the actual eligible project costs are less than the total eligible project costs that are listed in section 3 of schedule D. There are no Project Cost Savings if the actual eligible project costs are equal to or greater than the total eligible project costs that are listed in section 3 of schedule D.

(e) If there are Project Cost Savings and either the Recipient does not make a proposal under section 5.4(d) or MARAD does not accept the Recipient's proposal under section 5.4(d), then:

(1) in a request under section 5.4(b), the Recipient shall reduce the PIDP award amount of the Federal Share by the Project Cost Savings; however, if the total eligible project costs that are listed in section 3 of schedule D are more than the total estimated project costs in the Technical Application, the Recipient may request to MARAD to only reduce the PIDP award amount of the Federal Share by the difference between the actual eligible project costs and the total estimated project costs in the Technical Application so long as the Recipient is providing under this agreement the non-Federal share amount committed to in the Technical Application; and

(2) if that modification reduces this award and MARAD had reimbursed costs exceeding the revised award, the Recipient shall refund to MARAD the difference between the reimbursed costs and the revised award.

In this agreement, "**Federal Share**" means the sum of the total "PIDP Funds" and "Other Federal Funds" amounts that are listed in section 3 of schedule D.

(f) The Recipient acknowledges that amounts that are required to be refunded under section 5.4(e)(2) constitute a debt to the Federal Government that MARAD may collect under 2 C.F.R. 200.346 and the Federal Claims Collection Standards (31 C.F.R. parts 900–999).

5.5 MARAD Acceptance of Changes. MARAD may accept or reject modifications requested under this article 5, and in doing so may elect to consider only the interests of the PIDP grant program and MARAD. The Recipient acknowledges that requesting a modification under this article 5 does not amend, modify, or supplement this agreement unless MARAD accepts that modification request and the parties modify this agreement under section 20.1.

ARTICLE 6
GENERAL REPORTING TERMS

6.1 Report Submission. The Recipient shall send all reports required by this agreement to all MARAD contacts who are listed in section 5 of schedule A and all MARAD contacts who are listed in section 2.2.

6.2 Alternative Reporting Methods. MARAD may establish processes for the Recipient to submit reports required by this agreement, including electronic submission processes. If the Recipient is notified of those processes in writing, the Recipient shall use the processes required by MARAD.

6.3 Paperwork Reduction Act Notice. Under 5 C.F.R. 1320.6, the Recipient is not required to respond to a collection of information that does not display a currently valid control

number issued by the Office of Management and Budget (the "**OMB**"). Collections of information conducted under this agreement are approved under OMB Control No. 2133-0552.

ARTICLE 7
PROGRESS AND FINANCIAL REPORTING

7.1 Quarterly Project Progress Reports and Recertifications. On or before the 20th day of the first month of each calendar year quarter and until the end of the budget period, the Recipient shall submit to MARAD a Quarterly Project Progress Report and Recertification, including a Federal Financial Report (SF-425) as an attachment, in the format and with the content described in exhibit C. If the date of this agreement is in the final month of a calendar year quarter, then the Recipient shall submit the first Quarterly Project Progress Report, Recertification, and SF-425 in the second calendar year quarter that begins after the date of this agreement.

7.2 Final Progress Reports and Financial Information. No later than 120 days after the end of the budget period, the Recipient shall submit:

(1) a Final Project Progress Report and Recertification in the format and with the content described in exhibit C for each Quarterly Project Progress Report and Recertification, including a final Federal Financial Report (SF-425); and

(2) any other information required under MARAD's award closeout procedures.

ARTICLE 8
PERFORMANCE REPORTING

8.1 Baseline Performance Measurement. If the Capital-Planning Designation in section 2 of schedule F is "Capital," then:

(1) the Recipient shall collect data for each performance measure that is identified in the Performance Measure Table in schedule G, accurate as of the Baseline Measurement Date that is identified in schedule G; and

(2) on or before the Baseline Report Date that is stated in schedule G, the Recipient shall submit a Baseline Performance Measurement Report that contains the data collected under this section 8.1 and a detailed description of the data sources, assumptions, variability, and estimated levels of precision for each performance measure that is identified in the Performance Measure Table in schedule G.

8.2 Post-construction Performance Measurement. If the Capital-Planning Designation in section 2 of schedule F is "Capital," then:

(1) for each performance measure that is identified in the Performance Measure Table in schedule G with quarterly measurement frequency, for each of 12 consecutive calendar quarters, beginning with the first calendar quarter that begins after the Project substantial completion date, at least once during the quarter, the Recipient shall collect data for that performance measure;

(2) for each performance measure that is identified in the Performance Measure Table in schedule G with annual measurement frequency, the Recipient shall collect data for that performance measure on at least three separate occasions: (i) once during the four consecutive calendar quarters that begin after the Project substantial completion date; (ii) once during the fourth calendar quarter after the first collection; and (iii) once during the eighth calendar quarter after the first collection; and

(3) not later than January 31 of each year that follows a calendar year during which data was collected under this section 8.2, the Recipient shall submit to MARAD a Post-construction Performance Measurement Report containing the data collected under this section 8.2 in the previous calendar year and stating the dates when the data was collected.

If an external factor significantly affects the value of a performance measure collected under this section 8.2, then the Recipient shall identify that external factor in the Post-construction Performance Measurement Report and discuss its influence on the performance measure.

8.3 Project Outcomes Report. If the Capital-Planning Designation in section 2 of schedule F is "Capital," then the Recipient shall submit to MARAD, not later than January 31 of the year that follows the final calendar year during which data was collected under section 8.2, a Project Outcomes Report that contains:

(1) a narrative discussion detailing project successes and the influence of external factors on project expectations;

(2) all baseline and post-construction performance measurement data that the Recipient reported in the Baseline Performance Measurement Report and the Post-construction Performance Measurement Reports; and

(3) an *ex post* examination of project effectiveness relative to the baseline data that the Recipient reported in the Baseline Performance Measurement Report.

ARTICLE 9
CLIMATE CHANGE AND ENVIRONMENTAL JUSTICE

9.1 Climate Change and Environmental Justice. Consistent with Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad" (Jan. 27, 2021), schedule H

documents the consideration of climate change and environmental justice impacts of the Project.

ARTICLE 10
RACIAL EQUITY AND BARRIERS TO OPPORTUNITY

10.1 Racial Equity and Barriers to Opportunity. Consistent with Executive Order 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Jan. 20, 2021), schedule I documents activities related to the Project to improve racial equity and reduce barriers to opportunity.

ARTICLE 11
LABOR AND WORK

11.1 Labor and Work. Consistent with Executive Order 14025, "Worker Organizing and Empowerment" (Apr. 26, 2021), and Executive Order 14052, "Implementation of the Infrastructure Investment and Jobs Act" (Nov. 15, 2021), schedule J documents the consideration of job quality and labor rights, standards, and protections related to the Project.

ARTICLE 12
CIVIL RIGHTS AND TITLE VI

12.1 Civil Rights and Title VI.

(a) Consistent with Executive Order 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Jan. 20, 2021), Executive Order 14091, "Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Feb. 16, 2023), and DOT Order 1000.12C, "The U.S. Department of Transportation Title VI Program" (June 11, 2021), the purpose of sections 12.1(b)–12.1(c) is to ensure that the Recipient has a plan to comply with civil rights obligations and nondiscrimination laws, including Title VI and 49 C.F.R. part 21.

(b) If the Recipient Type Designation in section 1 of schedule K is "Existing," then the Recipient shall submit to MARAD either:

(1) not later than one month after the date of this agreement, documentation showing that the Recipient has complied with all reporting requirements under MARAD's implementation of Title VI; or

(2) not later than six months after the date of this agreement, both a Title VI Plan and a Community Participation Plan, as those plans are described in chapter II, sections 3–4 of DOT Order 1000.12C.

(c) If the Recipient Type Designation in section 1 of schedule K is "New," then MARAD completed a Title VI Assessment of the Recipient, as described in chapter II, section 2 of DOT Order 1000.12C, before entering this agreement, as documented in section 2 of schedule K.

(d) In this section 12.1, "**Title VI**" means Title VI of the Civil Rights Act of 1964, Pub. L. No. 88-352 (codified at 42 U.S.C. 2000d to 2000d-4a).

12.2 Legacy Infrastructure and Facilities. In furtherance of the Americans with Disabilities Act of 1990 (ADA), Pub. L. No. 101-336 (codified at 42 U.S.C. 12101–12213), and Section 504 of the Rehabilitation Act of 1973, Pub. L. No. 93-112 (codified at 29 U.S.C. 794), not later than one year after the date of this agreement, the Recipient shall develop a plan to address any legacy infrastructure or facilities that are not compliant with ADA standards and are involved in, or closely associated with, the Project. Consistent with 49 C.F.R. part 27, even in the absence of prior discriminatory practice or usage, a Recipient administering a program or activity receiving Federal financial assistance is expected to take action to ensure that no person is excluded from participation in or denied the benefits of the program or activity on the basis of disability.

ARTICLE 13
CRITICAL INFRASTRUCTURE SECURITY AND RESILIENCE

13.1 Critical Infrastructure Security and Resilience.

(a) Consistent with Presidential Policy Directive 21, "Critical Infrastructure Security and Resilience" (Feb. 12, 2013), and the National Security Presidential Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems (July 28, 2021), the Recipient shall consider physical and cybersecurity and resilience in planning, design, and oversight of the Project.

(b) If the Security Risk Designation in section 5 of schedule F is "Elevated," then the Recipient shall:

(1) in the first Quarterly Project Progress Report and Recertification that the Recipient submits under section 7.1, identify a cybersecurity Point of Contact for the transportation infrastructure being improved in the Project; and

(2) in the second Quarterly Project Progress Report and Recertification that the Recipient submits under section 7.1, provide a plan for completing the requirements in section 13.1(c).

(c) If the Security Risk Designation in section 5 of schedule F is "Elevated," then not later than the eighth Quarterly Project Progress Report and Recertification that the Recipient submits under section 7.1, the Recipient shall include each of the following in a Quarterly Project Progress Report and Recertification that the Recipient submits under section 7.1:

(1) a cybersecurity incident reporting plan for the transportation infrastructure being improved in the Project or a summary of that plan;

(2) a cybersecurity incident response plan for the transportation infrastructure being improved in the Project or a summary of that plan;

(3) the results of a self-assessment of the Recipient's cybersecurity posture and capabilities or a summary of those results; and

(4) a description of any additional actions that the Recipient has taken to consider or address cybersecurity risk of the transportation infrastructure being improved in the Project.

ARTICLE 14
PIDP DESIGNATIONS

14.1 Effect of Urban or Rural Designation. Based on information that the Recipient provided to MARAD, including the Technical Application, section 1 of schedule F designates this award as an urban award or a rural award, as defined in the NOFO. The Recipient shall comply with the requirements that accompany that designation on geographic location and cost sharing.

14.2 Effect of Historically Disadvantaged Community. If section 3 of schedule F lists "Yes" for the "HDC Designation," then based on information that the Recipient provided to MARAD, including the Technical Application, MARAD determined that the Project will be carried out in a historically disadvantaged community, as defined in the NOFO. The Recipient shall incur a majority of the costs under this award in historically disadvantaged communities.

ARTICLE 15
CONTRACTING AND SUBAWARDS

15.1 Minimum Wage Rates. The Recipient shall include, in all contracts in excess of $2,000 for work on the Project that involves labor, provisions establishing minimum rates of wages, to be predetermined by the United States Secretary of Labor, in accordance with the Davis-Bacon Act, 40 U.S.C. 3141–3148, that contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15.2 Buy America.

(a) For the purpose of the award term at exhibit B, term B.5, the Project is "an infrastructure project." The Recipient acknowledges that iron, steel, manufactured products, and construction materials used in the Project are subject to the Buy America preference in that award term and this agreement is not a waiver of that preference. All noninfrastucture spending is subject to the Buy American Act, 41 U.S.C. chapter 83.

(b) If the Recipient uses iron, steel, manufactured products, or construction materials that are not produced in the United States in violation of the award term at exhibit B, term B.5, MARAD may disallow and deny reimbursement of costs incurred by the Recipient and take other remedial actions under article 16 and 2 C.F.R. 200.339–200.340.

(c) Under 2 C.F.R. 200.322, as appropriate and to the extent consistent with law, the Recipient should, to the greatest extent practicable under this award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The Recipient shall include the requirements of 2 C.F.R. 200.322 in all subawards including all contracts and purchase orders for work or products under this award.

(d) For all iron, steel, manufactured products, or construction materials incorporated into the Project and to which a Buy America preference applies, the manufacturer or supplier of the item(s) should provide to the Recipient a signed certification statement attesting that each item procured under this award meets the applicable Buy America preference requirements. The Recipient must maintain on file any certifications received under this section 15.2(d) and provide to MARAD copies of any such certifications or other documentation supporting compliance upon request of MARAD pursuant to article 24 and 2 C.F.R. 200.334-200.338.

15.3 Small and Disadvantaged Business Requirements.

(a) If any funds under this award are administered by a State Department of Transportation, the Recipient shall expend those funds in compliance with the requirements at 49 C.F.R. part 26 ("Participation by disadvantaged business enterprises in Department of Transportation financial assistance programs").

(b) If any funds under this award are not administered by a State Department of Transportation, the Recipient shall expend those funds in compliance with the requirements at 2 C.F.R. 200.321 ("Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms").

15.4 Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. The Recipient acknowledges that Section 889 of Pub. L. No. 115-232 and 2 C.F.R. 200.216 prohibit the Recipient and all subrecipients from procuring or obtaining certain telecommunications and video surveillance services or equipment under this award.

15.5 Pass-through Entity Responsibilities.

(a) If the Recipient makes a subaward under this award, the Recipient shall comply with the requirements on pass-through entities under 2 C.F.R. parts 200 and 1201, including 2 C.F.R. 200.331–200.333.

(b) By accepting this award, the Recipient certifies that it either has systems in place to comply with the requirements set forth at 2 C.F.R. 200.331-333 and described in this section 15.5(b)(1)-(9) or will refrain from making subawards until the systems are designed and implemented:

(1) The Recipient is responsible for selecting subrecipients using a system for properly differentiating between subrecipients and procurement contractors under the standards at 2 C.F.R. 200.331.

(2) The Recipient must establish and follow a system that ensures all subaward agreements are in writing and contain all the elements required by 2 C.F.R. 200.332(a).

(3) Prior to making subawards under this award, the Recipient must ensure that each subrecipient has a Unique Identity Identifier.

(4) The Recipient must ensure that subrecipients are aware that they are subject to the same requirements as those that apply to the pass-through entity's PIDP award, as required by 2 C.F.R. 200.332(a)(2), including but not limited to, applicable Buy America requirements, procurement standards, reporting subawards and executive compensation under the Federal Funding Accountability and Transparency Act, certifications regarding lobbying, and Title VI of the Civil Rights Act of 1964 requirements.

(5) The Recipient must establish and follow a system for evaluating subrecipient risks of noncompliance with Federal statutes, regulations, and the terms and conditions of the subaward as required by 2 C.F.R. 200.332(b) and document that evaluation.

(6) The Recipient must establish and follow a system for deciding whether to impose additional requirements on subrecipients based on risk factors as required by 2 C.F.R. 200.332(c).

(7) The Recipient must establish and follow a system for monitoring subrecipient performance that includes the elements required by 2 C.F.R. 200.332(d) and report the results of the monitoring in the quarterly progress reports referenced in article 7 of this agreement.

(8) The Recipient must verify that every subrecipient is audited as required by subpart F of 2 C.F.R. 200 when it is expected that the subrecipient's Federal awards expended during the respective fiscal year equaled or exceeded the threshold set forth in 2 C.F.R. 200.501.

(9) The Recipient may not make a fixed amount subaward without prior approval from MARAD.

ARTICLE 16
NONCOMPLIANCE AND REMEDIES

16.1 Noncompliance Determinations.

(a) If MARAD determines that the Recipient may have failed to comply with the United States Constitution, Federal law, or the terms and conditions of this agreement, MARAD may notify the Recipient of a proposed determination of noncompliance. For the notice to be effective, it must be written and MARAD must include an explanation of the nature of the noncompliance, describe a remedy, state whether that remedy is proposed or effective at an already determined date, and describe the process through and form in which the Recipient may respond to the notice.

(b) If MARAD notifies the Recipient of a proposed determination of noncompliance under section 16.1(a), the Recipient may, not later than 7 calendar days after the notice, respond to that notice in the form and through the process described in that notice. In its response, the Recipient may:

(1) accept the remedy;

(2) acknowledge the noncompliance, but propose an alternative remedy; or

(3) dispute the noncompliance.

To dispute the noncompliance, the Recipient must include in its response documentation or other information supporting the Recipient's compliance.

(c) MARAD may make a final determination of noncompliance only:

(1) after considering the Recipient's response under section 16.1(b); or

(2) if the Recipient fails to respond under section 16.1(b), after the time for that response has passed.

(d) To make a final determination of noncompliance, MARAD must provide a notice to the Recipient that states the bases for that determination.

16.2 Remedies.

(a) If MARAD makes a final determination of noncompliance under section 16.1, MARAD may impose a remedy, including:

(1) additional conditions on the award;

(2) any remedy permitted under 2 C.F.R. 200.339–200.340, including withholding of payments; disallowance of previously reimbursed costs, requiring refunds from the Recipient to MARAD; suspension or termination of the award; or suspension and disbarment under 2 C.F.R. part 180; or

(3) any other remedy legally available.

(b) To impose a remedy, MARAD must provide a written notice to the Recipient that describes the remedy, but MARAD may make the remedy effective before the Recipient receives that notice.

(c) If MARAD determines that it is in the public interest, MARAD may impose a remedy, including all remedies described in section 16.2(a), before making a final determination of noncompliance under section 16.1. If it does so, then the notice provided under section 16.1(d) must also state whether the remedy imposed will continue, be rescinded, or modified.

(d) In imposing a remedy under this section 16.2 or making a public interest determination under section 16.2(c), MARAD may elect to consider the interests of only MARAD.

(e) The Recipient acknowledges that amounts that MARAD requires the Recipient to refund to MARAD due to a remedy under this section 16.2 constitute a debt to the Federal Government that MARAD may collect under 2 C.F.R. 200.346 and the Federal Claims Collection Standards (31 C.F.R. parts 900–999).

16.3 Other Oversight Entities. Nothing in this article 16 limits any party's authority to report activity under this agreement to the United States Department of Transportation Inspector General or other appropriate oversight entities.

ARTICLE 17
AGREEMENT TERMINATION

17.1 MARAD Termination.

(a) MARAD may terminate this agreement and all of its obligations under this agreement if any of the following occurs:

(1) the Recipient fails to obtain or provide any non-PIDP Grant contribution or alternatives approved by MARAD as provided in this agreement and consistent with schedule D;

(2) a completion date for the Project or a component of the Project is listed in section 2 of schedule C and the Recipient fails to meet that milestone by six months after the date listed in section 2 of schedule C;

(3) the Recipient fails to meet a milestone listed in section 3 of schedule C by the deadline date listed in that section for that milestone;

(4) the Recipient fails to comply with the terms and conditions of this agreement, including a material failure to comply with the project schedule in schedule C even if it is beyond the reasonable control of the Recipient;

(5) circumstances cause changes to the Project that MARAD determines are inconsistent with MARAD's basis for selecting the Project to receive a PIDP Grant; or

(6) MARAD determines that termination of this agreement is in the public interest.

(b) In terminating this agreement under this section, MARAD may elect to consider only the interests of MARAD.

(c) This section 17.1 does not limit MARAD's ability to terminate this agreement as a remedy under section 16.2.

(d) The Recipient may request that MARAD terminate the agreement under this section 17.1.

17.2 Closeout Termination.

(a) This agreement terminates on Project Closeout.

(b) In this agreement, "**Project Closeout**" means the date that MARAD notifies the Recipient that the award is closed out. Under 2 C.F.R. 200.344, Project Closeout should occur no later than one year after the end of the period of performance.

17.3 Post-Termination Adjustments. The Recipient acknowledges that under 2 C.F.R. 200.345–200.346, termination of the agreement does not extinguish MARAD's authority to disallow costs, including costs that MARAD reimbursed before termination, and recover funds from the Recipient.

17.4 Non-Terminating Events.

(a) The end of the budget period described under section 28.4 does not terminate this agreement or the Recipient's obligations under this agreement.

(b) The end of the period of performance described under section 28.5 does not terminate this agreement or the Recipient's obligations under this agreement.

(c) The cancellation of funds under section 19.2 does not terminate this agreement or the Recipient's obligations under this agreement.

17.5 Other Remedies. The termination authority under this article 17 supplements and does not limit MARAD's remedial authority under article 16 or 2 C.F.R. part 200, including 2 C.F.R. 200.339–200.340.

ARTICLE 18
COSTS, PAYMENTS, AND UNEXPENDED FUNDS

18.1 Limitation of Federal Award Amount. Under this award, MARAD shall not provide funding greater than the amount obligated under section 4.3. The Recipient acknowledges that MARAD is not liable for payments exceeding that amount, and the Recipient shall not request reimbursement of costs exceeding that amount.

18.2 Projects Costs. This award is subject to the cost principles at 2 C.F.R. 200 subpart E, including provisions on determining allocable costs and determining allowable costs.

18.3 Timing of Project Costs.

(a) The Recipient shall not charge to this award costs that are incurred after the budget period.

(b) Except as permitted under section 18.3(d)–(e), the Recipient shall not charge to this award costs that were incurred before the date of this agreement.

(c) This agreement hereby terminates and supersedes any previous MARAD approval for the Recipient to incur costs under this award for the Project. Section 5 of schedule D is the exclusive MARAD approval of costs incurred before the date of this agreement.

(d) If section 5 of schedule D identifies a pre-award approval under 2 C.F.R. 200.458 that will be reimbursed with Federal funds, then the Recipient may charge to this award, for payment from the PIDP Grant or other Federal amounts, costs that were incurred before the date of this agreement, were consistent with that approval, and would have been allowable if incurred during the budget period.

(e) If MARAD approves a request from the Recipient under 46 U.S.C. 54301(a)(10)(B) and section 5 of schedule D describes that approval, then the Recipient may charge to this award, for payment from non-Federal amounts, costs that were incurred before the date of this agreement, were consistent with that approval, and would have been allowable if incurred during the budget period.

18.4 Recipient Recovery of Federal Funds. The Recipient shall make all reasonable efforts, including initiating litigation, if necessary, to recover Federal funds if MARAD determines, after consultation with the Recipient, that those funds have been spent fraudulently, wastefully, or in violation of Federal laws, or misused in any manner under this award. The Recipient shall not enter a settlement or other final position, in court or otherwise, involving the recovery of funds under the award unless approved in advance in writing by MARAD.

18.5 Unexpended Federal Funds. Any Federal funds that are awarded at section 4.1 but not expended on allocable, allowable costs remain the property of the United States.

18.6 Timing of Payments to the Recipient.

(a) Reimbursement is the payment method for the PIDP grant program.

(b) The Recipient shall not request reimbursement of a cost before the Recipient has entered into an obligation for that cost.

18.7 Payment Method.

(a) If the MARAD Payment System identified in section 6 of schedule A is "Delphi eInvoicing System," then the Recipient shall complete all applicable forms and attach supporting documents, including the SF 270, in Delphi eInvoicing System, which is on-line and paperless, to request reimbursement. To obtain the latest version of these standard forms, visit https://www.grants.gov/forms/. The Recipient shall review the training on using Delphi eInvoicing System before submitting a request for reimbursement. To guide the Recipient when reviewing this training, MARAD provides the following additional information, which may change after execution of this agreement:

(1) The Recipient may access the training from the MARAD "Delphi eInvoicing System" webpage at https://einvoice.esc.gov. The training is linked under the heading "Grantee Training." The Recipient should click on "Grantee Training" to access the training.

(2) A username and password are not required to access the on-line training. It is currently available, will be accessible 24/7, and will take approximately 10 minutes to review.

(3) Once the above referenced training has been reviewed, Recipients must request and complete the External User Access Request form. Recipients can request the External User Access Request form by sending an email to a Grants/Contracting Officer who is identified in in section 5 of schedule A or section 2.2. A request to establish access will be sent once the External User Access Request form is received.

(b) MARAD may deny a payment request that is not submitted using the method identified in this section 18.7.

18.8 Information Supporting Expenditures.

(a) If the MARAD Payment System identified in section 6 of schedule A is "Delphi eInvoicing System," then when requesting reimbursement of costs incurred or credit for cost share incurred, the Recipient shall electronically submit and attach the SF 270 (Request for Advance or Reimbursement), shall identify the Federal share and the Recipient's share of costs, and shall submit supporting cost detail to clearly document all costs incurred. As supporting cost detail, the Recipient shall include a detailed breakout of all costs incurred, including direct labor, indirect costs, other direct costs, and travel.

(b) If the Recipient submits a request for reimbursement that MARAD determines does not include or is not supported by sufficient detail, MARAD may deny the request or withhold processing the request until the Recipient provides sufficient detail.

18.9 Reimbursement Request Timing Frequency.

(a) If the MARAD Payment System identified in section 6 of schedule A is "Delphi eInvoicing System," the Recipient shall request reimbursement of a cost incurred as soon as practicable after incurring that cost. If the Recipient requests reimbursement for a cost more than 180 days after that cost was incurred, MARAD may deny the request for being untimely.

(b) If the MARAD Payment System identified in section 6 of schedule A is "Delphi eInvoicing System," then the Recipient should not request reimbursement more frequently than once every 30 days.

ARTICLE 19
LIQUIDATION, ADJUSTMENTS, AND FUNDS AVAILABILITY

19.1 Liquidation of Recipient Obligations.

(a) The Recipient shall liquidate all obligations of award funds under this agreement not later than the earlier of (1) 120 days after the end of the period of performance or (2) the statutory funds cancellation date identified in section 19.2.

(b) Liquidation of obligations and adjustment of costs under this agreement follow the requirements of 2 C.F.R. 200.344–200.346.

19.2 Funds Cancellation.

(a) PIDP grant funding that was appropriated in division J of the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (Nov. 15, 2021) for fiscal year 2023, is canceled by statute after September 30, 2038, and then unavailable for any purpose, including adjustments.

(b) PIDP grant funding that was appropriated in the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022), or a previous annual appropriations act, remains available until expended.

(c) Section 4.2 identifies the specific source or sources of funding for this award.

ARTICLE 20
AGREEMENT MODIFICATIONS

20.1 Bilateral Modifications. The parties may amend, modify, or supplement this agreement by mutual agreement in writing signed by MARAD and the Recipient. Either party may request to amend, modify, or supplement this agreement by written notice to the other party.

20.2 Unilateral Contact Modifications.

(a) The Recipient may update the contacts who are listed in section 3 of schedule A by written notice to all of the MARAD contacts who are listed in section 5 of schedule A and section 2.2.

(b) MARAD may update the contacts who are listed in section 5 of schedule A and section 2.2 by written notice to all of the Recipient contacts who are listed in section 3 of schedule A.

20.3 MARAD Unilateral Modifications.

(a) MARAD may unilaterally modify this agreement to comply with Federal law, including the Program Statute.

(b) To unilaterally modify this agreement under this section 20.3, MARAD must provide a notice to the Recipient that includes a description of the modification and state the date that the modification is effective.

20.4 Other Modifications. The parties shall not amend, modify, or supplement this agreement except as permitted under sections 20.1, 20.2, or 20.3. If an amendment, modification, or supplement is not permitted under section 20.1, not permitted under section 20.2, or not permitted under section 20.3, it is void.

ARTICLE 21
FEDERAL FINANCIAL ASSISTANCE, ADMINISTRATIVE, AND NATIONAL POLICY REQUIREMENTS

21.1 Uniform Administrative Requirements for Federal Awards. The Recipient shall comply with the obligations on non-Federal entities under 2 C.F.R. parts 200 and 1201.

21.2 Federal Law and Public Policy Requirements.

(a) The Recipient shall ensure that Federal funding is expended in full accordance with the United States Constitution, Federal law, and statutory and public policy requirements:

including but not limited to, those protecting free speech, religious liberty, public welfare, the environment, and prohibiting discrimination.

(b) The failure of this agreement to expressly identify Federal law applicable to the Recipient or activities under this agreement does not make that law inapplicable.

21.3 Federal Freedom of Information Act.

(a) MARAD is subject to the Freedom of Information Act, 5 U.S.C. 552.

(b) The Recipient acknowledges that the Technical Application and materials submitted to MARAD by the Recipient related to this agreement may become MARAD records subject to public release under 5 U.S.C. 552.

21.4 History of Performance. Under 2 C.F.R. 200.206, any Federal awarding agency may consider the Recipient's performance under this agreement, when evaluating the risks of making a future Federal financial assistance award to the Recipient.

21.5 Whistleblower Protection.

(a) The Recipient acknowledges that it is a "grantee" within the scope of 41 U.S.C. 4712, which prohibits the Recipient from taking certain actions against an employee for certain disclosures of information that the employee reasonably believes are evidence of gross mismanagement of this award, gross waste of Federal funds, or a violation of Federal law related this this award.

(b) The Recipient shall inform its employees in writing of the rights and remedies provided under 41 U.S.C. 4712, in the predominant native language of the workforce.

21.6 External Award Terms and Obligations.

(a) In addition to this document and the contents described in article 29, this agreement includes the following additional terms as integral parts:

(1) Appendix A to 2 C.F.R. part 25: System for Award Management and Universal Identifier Requirements;

(2) Appendix A to 2 C.F.R. part 170: Reporting Subawards and Executive Compensation;

(3) 2 C.F.R. 175.15(b): Trafficking in Persons; and

(4) Appendix XII to 2 C.F.R. part 200: Award Term and Condition for Recipient Integrity and Performance Matters.

(b) The Recipient shall comply with:

(1) 49 C.F.R. part 20: New Restrictions on Lobbying;

(2) 49 C.F.R. part 21: Nondiscrimination in Federally-Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964;

(3) 49 C.F.R. part 27: Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance; and

(4) Subpart B of 49 C.F.R. part 32: Governmentwide Requirements for Drug-free Workplace (Financial Assistance).

21.7 Incorporated Certifications. The Recipient makes the statements in the following certifications, which are incorporated by reference:

(1) Appendix A to 49 C.F.R. part 20 (Certification Regarding Lobbying).

ARTICLE 22
MONITORING, FINANCIAL MANAGEMENT, CONTROLS, AND RECORDS

22.1 Recipient Monitoring and Record Retention.

(a) The Recipient shall monitor activities under this award, including activities under subawards and contracts, to ensure:

(1) that those activities comply with this agreement; and

(2) that funds provided under this award are not expended on costs that are not allowable under this award or not allocable to this award.

(b) If the Recipient makes a subaward under this award, the Recipient shall monitor the activities of the subrecipient in compliance with 2 C.F.R. 200.332(d) and section 15.5 of this agreement.

(c) The Recipient shall retain records relevant to the award as required under 2 C.F.R. 200.334.

22.2 Financial Records and Audits.

(a) The Recipient shall keep all project accounts and records that fully disclose the amount and disposition by the Recipient of the award funds, the total cost of the Project, and the amount or nature of that portion of the cost of the Project supplied by other sources, and any other financial records related to the Project.

(b) The Recipient shall keep accounts and records described under section 22.2(a) in accordance with a financial management system that meets the requirements of 2 C.F.R. 200.301–200.303 and 2 C.F.R. 200 subpart F and will facilitate an effective audit in accordance with 31 U.S.C. 7501–7506.

(c) The Recipient shall separately identify expenditures under the FY 2023 PIDP Grants in financial records required for audits under 31 U.S.C. 7501–7506. Specifically, the Recipient shall:

(1) list expenditures under that program separately on the schedule of expenditures of Federal awards required under 2 C.F.R. 200 subpart F, including "FY 2023" in the program name; and

(2) list expenditures under that program on a separate row under Part II, Item 1 ("Federal Awards Expended During Fiscal Period") of Form SF-SAC, including "FY 2023" in column c ("Additional Award Identification").

22.3 Internal Controls. The Recipient shall establish and maintain internal controls as required under 2 C.F.R. 200.303.

22.4 MARAD Record Access. MARAD may access Recipient records related to this award under 2 C.F.R. 200.337 in order to make audits, examinations, excerpts, and transcripts. This right also includes timely and reasonable access to the Recipient's personnel for the purpose of interview and discussion related to such documents.

ARTICLE 23
NOTICES

23.1 Form of Notice.

(a) For a notice under this agreement to be valid, it must be in writing.

(b) For a notice to MARAD under this agreement to be valid, it must be signed and dated by an individual with authority to act on behalf of the Recipient.

23.2 Method of Notice to MARAD.

(a) For a notice to MARAD under this agreement to be valid, it must be sent by one or more of the following: (1) email; (2) a national transportation company with all fees prepaid and receipt of delivery; or (3) by registered or certified mail with return receipt requested and postage prepaid.

(b) For a notice to MARAD under this agreement to be valid, it must be addressed to all of the MARAD contacts who are listed in section 5 of schedule A and section 2.2.

(c) Except as specified in section 23.2(d), a valid notice to MARAD under this agreement will be deemed to have been received on the earliest of (1) when the email is received by MARAD, as recorded by MARAD's email systems, and (2) when indicated on the receipt of delivery by national transportation company or mail.

(d) If a valid notice or other communication to MARAD under this agreement is received after 5:00 p.m. on a business day, or on a day that is not a business day, then the notice will be deemed received at 9:00 a.m. on the next business day.

23.3 Method of Notice to Recipient.

(a) Except as specified in section 23.3(d), for a notice to the Recipient under this agreement to be valid, it must be sent by one or more of the following: (1) email; (2) a national transportation company with all fees prepaid and receipt of delivery; or (3) registered or certified mail with return receipt requested and postage prepaid.

(b) For a notice to the Recipient under this agreement to be valid, it must be addressed to all of the Recipient contacts who are listed in section 3 of schedule A.

(c) A valid notice to the Recipient under this agreement is effective when received by the Recipient. It will be deemed to have been received:

(1) for email, on receipt; and, for other delivery, when indicated on the receipt of delivery by national transportation company or mail; or

(2) if the Recipient rejects or otherwise refuses to accept it, or if it cannot be delivered because of a change in address or representatives for which no notice was given, then on that rejection, refusal, or inability to deliver.

(d) For a notice to the Recipient under article 16 to be valid, it must be sent by one or more of the following: (1) a national transportation company with all fees prepaid and receipt of delivery or (2) registered or certified mail with return receipt requested and postage prepaid.

23.4 Recipient Contacts for Notice. If a Recipient contact who is listed in section 3 of schedule A is unable to receive notices under this agreement on behalf of the Recipient, then the Recipient shall promptly identify one or more replacement contacts under section 20.2(a).

23.5 Additional Mandatory Notices to MARAD. The Recipient shall notify MARAD if any one of the following conditions is satisfied, not later than 5 business days after that condition is satisfied:

(1) the Recipient receives a communication related to this award or this agreement from the United States Comptroller General, a Federal Inspector General, or any other oversight entity; or

(2) the Recipient becomes aware of waste, fraud, abuse, or potentially criminal activity related to this agreement.

23.6 Scope of Notice Requirements. The form and method requirements of this article 23, including sections 23.1, 23.2, and 23.3, apply only to communications for which this agreement expressly uses one or more of the following words: “notice”; “notification”;

"notify"; or "notifying." This article 23 does not control or limit other communication between the parties about the Project or this agreement.

ARTICLE 24
INFORMATION REQUESTS

24.1 MARAD Information Requests.

(a) By notice, MARAD may request from the Recipient any information that MARAD determines is necessary to fulfill its oversight responsibilities under the Program Statute or other Federal law.

(b) If MARAD requests information from the Recipient under section 24.1(a), the Recipient shall respond in the form and at the time detailed in the notice requesting information.

(c) This section 24.1 does not limit the Recipient's obligations under section 22.4 or 2 C.F.R. 200.337 to provide access to Recipient records.

ARTICLE 25
ASSIGNMENT

25.1 Assignment Prohibited. The Recipient shall not transfer to any other entity any discretion granted under this agreement, any right to satisfy a condition under this agreement, any remedy under this agreement, or any obligation imposed under this agreement.

ARTICLE 26
WAIVER

26.1 Waivers.

(a) A waiver of a term of this agreement granted by MARAD will not be effective unless it is in writing and signed by an authorized representative of MARAD.

(b) A waiver of a term of this agreement granted by MARAD on one occasion will not operate as a waiver on other occasions.

(c) If MARAD fails to require strict performance of a term of this agreement, fails to exercise a remedy for a breach of this agreement, or fails to reject a payment during a breach of this agreement, that failure does not constitute a waiver of that term or breach.

ARTICLE 27
ADDITIONAL TERMS AND CONDITIONS

27.1 Disclaimer of Federal Liability. MARAD shall not be responsible or liable for any damage to property or any injury to persons that may arise from, or be incident to, performance or compliance with this agreement.

27.2 Relocation and Real Property Acquisition.

(a) To the greatest extent practicable under State law, the Recipient shall comply with the land acquisition policies in 49 C.F.R. 24 subpart B and shall pay or reimburse property owners for necessary expenses as specified in that subpart.

(b) The Recipient shall provide a relocation assistance program offering the services described in 49 C.F.R. 24 subpart C and shall provide reasonable relocation payments and assistance to displaced persons as required in 49 C.F.R. 24 subparts D–E.

(c) The Recipient shall make available to displaced persons, within a reasonable period of time prior to displacement, comparable replacement dwellings in accordance with 49 C.F.R. 24 subpart E.

27.3 Real Property and Equipment Disposition.

(a) In accordance with 2 C.F.R. 200.311, when real property is no longer needed for the originally authorized purpose, the Recipient or subrecipient must obtain disposition instructions from the Federal awarding agency or pass-through entity.

(b) In accordance with 2 C.F.R. 200.313 and 1201.313, equipment acquired under this award must be used by the Recipient or subrecipient in the Project as long as needed, whether or not the Project continues to be supported by the Federal award. When no longer needed for the originally awarded Project or another Federal award:

(1) if the entity that acquired the equipment is a State or a subrecipient of a State, that entity shall dispose of that equipment in accordance with State laws and procedures; and

(2) if the entity that acquired the equipment is neither a State nor a subrecipient of a State, that entity shall request disposition instructions from MARAD within 120 days after that entity determines that the equipment is no longer needed.

(c) In accordance with 2 C.F.R. 200.443(d), the distribution of the proceeds from the disposition of equipment must be made in accordance with 2 C.F.R. 200.313–200.316 and 2 C.F.R. 1201.313.

(d) The Recipient shall ensure compliance with this section 27.3 for all tiers of subawards under this award.

27.4 Environmental Review.

(a) The Recipient shall not begin final design, begin construction, or take other actions that represent an irretrievable commitment of resources for the Project unless and until:

(1) MARAD complies with the National Environmental Policy Act, 42 U.S.C. 4321 to 4370m-12, Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, Section 7 of the Endangered Species Act, 16 U.S.C. 1531, and any other applicable environmental laws and regulations; and

(2) MARAD provides the Recipient with written communication stating that the environmental review process is complete.

(b) The Recipient acknowledges that:

(1) MARAD's actions under section 27.4(a) depend on the Recipient conducting necessary environmental analyses and submitting necessary environmental documents to MARAD; and

(2) applicable environmental statutes and regulations may require the Recipient to prepare and submit documents to other Federal, State, and local agencies.

(c) To the extent practicable and consistent with Federal law, the Recipient shall coordinate all environmental investigations, reviews, and consultations as a single process.

(d) The activities described in schedule B and other information described in this agreement may inform environmental decision-making processes, but the parties do not intend this agreement to document the alternatives under consideration under those processes. If a build alternative is selected that does not align with schedule B or other information in this agreement, then:

(1) the parties may amend this agreement under section 20.1 for consistency with the selected build alternative; or

(2) if MARAD determines that the condition at section 17.1(a)(5) is satisfied, MARAD may terminate this agreement under section 17.1(a)(5).

(e) The Recipient shall complete any mitigation activities described in the environmental documents and correspondence for the Project, including the terms and conditions contained in the required permits and authorizations for the Project. Section 3 of schedule B identifies environmental documents and correspondence describing mitigation activities, but the absence of a document or correspondence from that section does not relieve the Recipient of any compliance obligations. MARAD may determine that any failure to complete the mitigation activities within the Project environmental documents is non-compliance of the grant agreement subject to the remedies identified in article 16.

(f) The Recipient acknowledges that, unless MARAD indicates otherwise in writing, upon termination of an agreement for the Project entered into under 36 C.F.R. 800.6(c) or 36

C.F.R. 800.14(b), the Recipient shall immediately cease all Project activities related to the "undertaking" as defined in that agreement, pending MARAD's determinations under 36 C.F.R. 800 and applicable law.

ARTICLE 28
MANDATORY AWARD INFORMATION

28.1 Information Contained in a Federal Award. For 2 C.F.R. 200.211:

(1) the "Federal Award Date" is the date of this agreement, as defined under section 30.2;

(2) the "Assistance Listings Number" is 20.823 and the "Assistance Listings Title" is "Port Infrastructure Development Program"; and

(3) this award is not for research and development.

28.2 Federal Award Identification Number. The Federal Award Identification Number is listed in section 7 of schedule A.

28.3 Recipient's Unique Entity Identifier. The Recipient's Unique Entity Identifier, as defined at 2 C.F.R. 25.415, is listed in section 2 of schedule A.

28.4 Budget Period. The budget period for this award begins on the date of this agreement and ends on the budget period end date that is listed in section 1 of schedule C. In this agreement, "budget period" is used as defined at 2 C.F.R. 200.1.

28.5 Period of Performance. The period of performance for this award begins on the date of this agreement and ends on the period of performance end date that is listed in section 1 of schedule C. In this agreement, "period of performance" is used as defined at 2 C.F.R. 200.1.

ARTICLE 29
CONSTRUCTION AND DEFINITIONS

29.1 Schedules. This agreement includes the following schedules as integral parts:

Schedule A	Administrative Information
Schedule B	Project Activities
Schedule C	Award Dates and Project Schedule
Schedule D	Award and Project Financial Information
Schedule E	Changes from Application
Schedule F	PIDP Designations
Schedule G	PIDP Performance Measurement Information

Schedule H	Climate Change and Environmental Justice Impacts
Schedule I	Racial Equity and Barriers to Opportunity
Schedule J	Labor and Work
Schedule K	Civil Rights and Title VI

29.2 Exhibits. The following exhibits, which are located in the document titled "Exhibits to MARAD Grant Agreements Under the Fiscal Year 2023 Port Infrastructure Development Program Grants," dated January 2, 2024, and available at https://www.maritime.dot.gov/grants-finances/federal-grant-assistance/marad-fy-2023-pidp-exhibits-january-2-2024, are part of this agreement.

Exhibit A	Applicable Federal Laws and Regulations
Exhibit B	Additional Standard Terms
Exhibit C	Quarterly Project Progress Reports and Recertifications: Format and Content

29.3 Construction.

(a) In these General Terms and Conditions:

(1) unless expressly specified, a reference to a section or article refers to that section or article in these General Terms and Conditions;

(2) a reference to a section or other subdivision of a schedule listed in section 29.1 will expressly identify the relevant schedule; and

(3) there are no references to articles or sections in project-specific portions of the agreement that are not contained in schedules listed in section 29.1.

(b) If a provision in these General Terms and Conditions or the exhibits conflicts with a provision in the project-specific portion of the agreement, then the project-specific portion of the agreement prevails. If a provision in the exhibits conflicts with a provision in these General Terms and Conditions, then the provision in these General Terms and Conditions prevails.

29.4 Integration. This agreement constitutes the entire agreement of the parties relating to the PIDP grant program and awards under that program and supersedes any previous agreements, oral or written, relating to the PIDP grant program and awards under that program.

29.5 Definitions. In this agreement, the following definitions apply:

"**General Terms and Conditions**" means this document, including articles 1–30.

"**Program Statute**" means the collective statutory text:

(1) at 46 U.S.C. 54301;

(2) under the heading "Port Infrastructure Development Program" in title VIII of division J of the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (Nov. 15, 2021), and all other provisions of that act that apply to amounts appropriated under that heading; and

(3) under the heading "Port Infrastructure Development Program" in title I of division L of the Consolidated Appropriations Act, 2023 Pub. L. No. 117-328 (Dec. 29, 2022), and all other provisions of that act that apply to amounts appropriated under that heading.

(4) If a Funding Act not described in (1)-(3) above is identified in section 4 of schedule F, then all provisions of that act that apply to amounts appropriated under that heading for the PIDP shall also apply.

"**Project**" means the project proposed in the Technical Application, as modified by the negotiated provisions of this agreement, including schedules A–K.

"**PIDP Grant**" means an award of funds that were made available under the NOFO.

"**Technical Application**" means the application identified in section 1 of schedule A, including Standard Form 424 and all information and attachments submitted with that form through Grants.gov.

29.6 References to Times of Day. All references to times of day in this agreement are deemed references to that time at the prevailing local time in Washington, DC.

ARTICLE 30
AGREEMENT EXECUTION AND EFFECTIVE DATE

30.1 Counterparts. This agreement may be executed in counterparts, which constitute one document. The parties intend each countersigned original to have identical legal effect.

30.2 Effective Date. The agreement will become effective when all parties have signed it. The date of this agreement will be the date this agreement is signed by the last party to sign it. This instrument constitutes a PIDP Grant when MARAD's authorized representative signs it.

Addendum D

PND Engineers, Inc. (PND) Standard Form of Agreement For Professional Engineering Services_Pier 2 West Rehabilitation Post 30% Design_Port of Astoria

U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION

EXHIBITS TO MARAD GRANT AGREEMENTS UNDER THE FISCAL YEAR 2023 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM GRANTS

January 2, 2024

EXHIBIT A
APPLICABLE FEDERAL LAWS AND REGULATIONS

By entering into this agreement for a FY 2023 PIDP Grant, the Recipient assures and certifies, with respect to this Grant, that it will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance, and use of Federal funds for this Project. Performance under this agreement shall be governed by and in compliance with the following requirements, as applicable, to the type of organization of the Recipient and any applicable sub-recipients. The applicable provisions to this agreement include, but are not limited to, the following:

General Federal Legislation

a. Davis-Bacon Act - 40 U.S.C. §§ 3141, et seq.
b. Federal Fair Labor Standards Act - 29 U.S.C. §§ 201, et seq.
c. Hatch Act - 5 U.S.C. §§ 1501, et seq.
d. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 - 42 U.S.C. §§ 4601, et seq.
e. National Historic Preservation Act of 1966 - 54 U.S.C. § 306108
f. Archeological and Historic Preservation Act of 1974 - 54 U.S.C. §§ 312501, et seq.
g. Native American Graves Protection and Repatriation Act - 25 U.S.C. §§ 3001, et seq.
h. Clean Air Act – 42 U.S.C. §§ 7401, et. seq.
i. Clean Water Act - 33 U.S.C. §§ 1251, et seq.
j. Endangered Species Act – 16 U.S.C. §§ 1531 et seq.
k. Coastal Zone Management Act – 16 U.S.C. §§ 1451 et seq.
l. Flood Disaster Protection Act of 1973 – 42 U.S.C. §§ 4001 et seq.
m. Age Discrimination Act of 1975, as amended - 42 U.S.C. §§ 6101, et seq.
n. American Indian Religious Freedom Act, 42 U.S.C. 1996
o. Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. §§ 1101, et seq.
p. The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, P.L. 91-616, as amended - 42 U.S.C. §§ 4541, et seq.
q. Sections 523 and 527 of the Public Health Service Act of 1912, as amended, 42 U.S.C. §§ 290dd through 290dd-2
r. Architectural Barriers Act of 1968 - 42 U.S.C. §§ 4151, et seq.
s. Contract Work Hours and Safety Standards Act - 40 U.S.C. §§ 3701, et seq.
t. Copeland Anti-kickback Act, as amended - 18 U.S.C. § 874 and 40 U.S.C. § 3145
u. National Environmental Policy Act of 1969 - 42 U.S.C. §§ 4321, et seq.
v. Wild and Scenic Rivers Act – 16 U.S.C. §§ 1271, et seq.
w. Single Audit Act of 1984 - 31 U.S.C. §§ 7501, et seq.
x. Americans with Disabilities Act of 1990 - 42 U.S.C. §§ 12101, et seq.
y. Title IX of the Education Amendments of 1972, as amended - 20 U.S.C. §§ 1681–1683 and §§ 1685–1687
z. Section 504 of the Rehabilitation Act of 1973, as amended - 29 U.S.C. § 794
aa. Title VI of the Civil Rights Act of 1964 - 42 U.S.C. §§ 2000d, et seq.
bb. Limitation on Use of Appropriated Funds to Influence Certain Federal Contracting and Financial Transactions – 31 U.S.C. § 1352
cc. Freedom of Information Act - 5 U.S.C. § 552, as amended

dd. Magnuson-Stevens Fishery Conservation and Management Act – 16 U.S.C. §§ 1801, et seq.
ee. Farmland Protection Policy Act of 1981 – 7 U.S.C. §§ 4201, et seq.
ff. Fish and Wildlife Coordination Act of 1956 – 16 U.S.C. §§ 661, et seq.
gg. Section 9 of the Rivers and Harbors Act and the General Bridge Act of 1946 - 33 U.S.C. §§ 401 and 525
hh. Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. § 303 and 23 U.S.C. § 138
ii. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) – 42 U.S.C. §§ 9601, et seq.
jj. Safe Drinking Water Act – 42 U.S.C. §§ 300f, et seq.
kk. The Wilderness Act – 16 U.S.C. §§ 1131, et seq.
ll. Migratory Bird Treaty Act 16 U.S.C. §§ 703, et seq.
mm. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. No. 109–282, as amended by section 6202 of Pub. L. No. 110–252)
nn. Cargo Preference Act of 1954 – 46 U.S.C. § 55305
oo. Section 889 of the John D. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232
pp. Build America, Buy America Act – Pub. L. No. 117-58, div. G §§ 70901–70927
qq. The Buy American Act, 41 U.S.C. chapter 83

Executive Orders

a. Executive Order 11246 – Equal Employment Opportunity
b. Executive Order 11990 – Protection of Wetlands
c. Executive Order 11988 – Floodplain Management
d. Executive Order 12372 – Intergovernmental Review of Federal Programs
e. Executive Order 12549 – Debarment and Suspension
f. Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
g. Executive Order 13166 – Improving Access to Services for Persons With Limited English Proficiency
h. Executive Order 13985 – Advancing Racial Equity and Support for Underserved Communities Through the Federal Government
i. Executive Order 14005 – Ensuring the Future is Made in All of America by All of America's Workers
j. Executive Order 14008 – Tackling the Climate Crisis at Home and Abroad
k. Executive Order 14025 – Worker Organizing and Empowerment
l. Executive Order 14052 – Implementation of the Infrastructure Investment and Jobs Act

General Federal Regulations

a. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards – 2 C.F.R. Parts 200, 1201
b. Non-procurement Suspension and Debarment – 2 C.F.R. Parts 180, 1200
c. Procedures for predetermination of wage rates – 29 C.F.R. Part 1
d. Contractors and subcontractors on public building or public work financed in whole or

part by loans or grants from the United States – 29 C.F.R. Part 3

e. Labor standards provisions applicable to contracts governing federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act) – 29 C.F.R. Part 5
f. Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements) – 41 C.F.R. Parts 60, et seq.
g. New Restrictions on Lobbying – 49 C.F.R. Part 20
h. Nondiscrimination in Federally Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 – 49 C.F.R. Part 21
i. Uniform relocation assistance and real property acquisition for Federal and Federally assisted programs – 49 C.F.R. Part 24
j. Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance – 49 C.F.R. Part 25
k. Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance – 49 C.F.R. Part 27
l. DOT's implementation of DOJ's ADA Title II regulations compliance procedures for all programs, services, and regulatory activities relating to transportation under 28 C.F.R. Part 35
m. Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Department of Transportation – 49 C.F.R. Part 28
n. Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors – 49 C.F.R. Part 30
o. Governmentwide Requirements for Drug-Free Workplace (Financial Assistance) – 49 C.F.R. Part 32
p. DOT's implementing ADA regulations for transit services and transit vehicles, including the DOT's standards for accessible transportation facilities in Part 37, Appendix A – 49 C.F.R. Parts 37 and 38
q. Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs – 49 C.F.R. Part 26 (as applicable under section 12.3 of this agreement)
r. Preference for Privately Owned Commercial U.S. Flag Vessels – 46 C.F.R. Part 381
s. Buy America Preferences for Infrastructure Projects – 2 C.F.R. 184

Specific assurances required to be included in the FY 2023 PIDP Grant agreement by any of the above laws, regulations, or circulars are hereby incorporated by reference into this agreement.

EXHIBIT B
ADDITIONAL STANDARD TERMS

[The remainder of this page intentionally left blank.]

TERM B.1
TITLE VI ASSURANCE
(Implementing Title VI of the Civil Rights Act of 1964, as amended)

ASSURANCE CONCERNING NONDISCRIMINATION IN FEDERALLY-ASSISTED PROGRAMS AND ACTIVITIES RECEIVING OR BENEFITING FROM FEDERAL FINANCIAL ASSISTANCE

(Implementing the Rehabilitation Act of 1973, as amended, and the Americans With Disabilities Act, as amended)

49 C.F.R. Parts 21, 25, 27, 37 and 38

The United States Department of Transportation (USDOT)

Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

By signing and submitting the Technical Application and by entering into this agreement under the FY 2023 PIDP, the Recipient **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through the Maritime Administration (MARAD), it is subject to and will comply with the following:

Statutory/Regulatory Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled *Non-discrimination In Federally-Assisted Programs Of The Department Of Transportation—Effectuation Of Title VI Of The Civil Rights Act Of 1964*);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

General Assurances

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

> *"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise*

subjected to discrimination under any program or activity," for which the Recipient receives Federal financial assistance from DOT, including MARAD.

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Non-discrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these non-discrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted FY 2023 PIDP Grant:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23 (b) and 21.23 (e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.

2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with the FY 2023 PIDP Grant and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

   "*The Recipient, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.*"

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.

4. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.

5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.

6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.

7. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:

    a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
    b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:

    a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
    b. the period during which the Recipient retains ownership or possession of the property.

9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.

10. Maintain records of Title VI, Title IX, and ADA investigations, complaints, and lawsuits alleging discrimination on the basis of race, color, national origin, sex, age, or disability that are attributed to the Recipient. To the extent permitted by law, the records shall include the date that the investigation, lawsuit, or complaint was filed; a summary of the allegation(s); the status of the investigation, lawsuit, or complaint; and actions taken by the Recipient in response, or final findings related to, the investigation, lawsuit, or complaint. The Recipient must submit a summary of these records that includes de-identified aggregate data, upon request by MARAD, sufficient to determine whether the Recipient is in compliance with Federal non-discrimination requirements. If MARAD determines that the provided information is insufficient to determine whether the Recipient is in compliance with Federal non-discrimination requirements, then the parties will come to a mutually-agreed-to resolution about the information the Recipient should submit.

11. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

By signing this ASSURANCE, the Recipient also agrees to comply (and require any sub-recipients, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing MARAD's access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by MARAD. You must keep records, reports, and submit the material for review upon request to MARAD, or its designee in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

The Recipient gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation under the FY 2023 PIDP. This ASSURANCE is binding on the Recipient, other recipients, sub-recipients, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in the FY 2023 PIDP.

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Maritime Administration (MARAD), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 C.F.R. Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or MARAD to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or MARAD, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or MARAD may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant

thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or MARAD may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Specific Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the Recipient will accept title to the lands and maintain the project constructed thereon in accordance with the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022), the regulations for the administration of the FY 2023 PIDP**,** and the policies and procedures prescribed by the Maritime Administration (MARAD) of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the Recipient all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto Recipient and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the Recipient, its successors and assigns.

The Recipient, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the Recipient will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the Recipient pursuant to the provisions of Specific Assurance 7(a):

A. The (Recipient, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:

    1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (Recipient, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, Recipient will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*

C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the Recipient will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the Recipient and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by Recipient pursuant to the provisions of Specific Assurance 7(b):

A. The (Recipient, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (Recipient, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.

B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, Recipient will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*

C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, Recipient will there upon revert to and vest in and become the absolute property of Recipient and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 C.F.R. Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq*.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq*.), as amended, (prohibits discrimination on the basis of disability); and 49 C.F.R. Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq*.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 C.F.R. Parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681 et seq).

TERM B.2
CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS -- PRIMARY COVERED TRANSACTIONS

2 C.F.R. Parts 180 and 1200

These assurances and certifications are applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring MARAD approval or that is estimated to cost $25,000 or more – as defined in 2 C.F.R. Parts 180 and 1200.

By signing and submitting the Technical Application and by entering into this agreement under the FY 2023 PIDP, the Recipient is providing the assurances and certifications for First Tier Participants and Lower Tier Participants in the FY 2023 PIDP Grant, as set out below.

1. Instructions for Certification – First Tier Participants:

a. The prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "civil judgment," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 C.F.R. Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a Recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a Recipient or subrecipient of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers to any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment, including a civil settlement, rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are 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 (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior MARAD approval or estimated to cost $25,000 or more - 2 C.F.R. Parts 180 and 1200)

a. The prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms “covered transaction,” “civil settlement,” “debarred,” “suspended,” “ineligible,” “participant,” “person,” “principal,” and “voluntarily excluded,” as used in this clause, are defined in 2 C.F.R. Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a Recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a Recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered

transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

TERM B.3
REQUIREMENTS REGARDING DELINQUENT TAX LIABILITY OR A FELONY CONVICTION UNDER ANY FEDERAL LAW

As required by sections 744 and 745 of Title VII, Division E of the Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (Dec. 29, 2022), and implemented through USDOT Order 4200.6, the funds provided under this award shall not be used to enter into a contract, memorandum of understanding, or cooperative agreement with, make a grant to, or provide a loan or loan guarantee to, any corporation that:

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless a Federal agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or

(2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless a Federal agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government.

The Recipient therefore agrees:

1. **Definitions.** For the purposes of this exhibit, the following definitions apply:

"**Covered Transaction**" means a transaction that uses any funds under this award and that is a contract, memorandum of understanding, cooperative agreement, grant, loan, or loan guarantee.

"**Felony Conviction**" means a conviction within the preceding 24 months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the United States Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. 3559.

"**Participant**" means the Recipient, an entity who submits a proposal for a Covered Transaction, or an entity who enters into a Covered Transaction.

"**Tax Delinquency**" means an unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2. **Mandatory Check in the System for Award Management.** Before entering a Covered Transaction with another entity, a Participant shall check the System for Award Management (the "**SAM**") at http://www.sam.gov/ for an entry describing that entity.

3. **Mandatory Certifications.** Before entering a Covered Transaction with another entity, a Participant shall require that entity to:

    (1) Certify whether the entity has a Tax Delinquency; and

    (2) Certify whether the entity has a Felony Conviction.

4 **Prohibition.** If

    (1) the SAM entry for an entity indicates that the entity has a Tax Delinquency or a Federal Conviction;

    (2) an entity provides an affirmative response to either certification in section 3; or

    (3) an entity's certification under section 3 was inaccurate when made or became inaccurate after being made

    then a Participant shall not enter or continue a Covered Transaction with that entity unless MARAD has determined in writing that suspension or debarment of that entity are not necessary to protect the interests of the Government.

5. **Mandatory Notice to MARAD.**

    (a) If the SAM entry for a Participant indicates that the Participant has a Tax Delinquency or a Felony Conviction, the Recipient shall notify MARAD in writing of that entry.

    (b) If a Participant provides an affirmative response to either certification in section 1, the Recipient shall notify MARAD in writing of that affirmative response.

    (c) If the Recipient knows that a Participant's certification under section 1 was inaccurate when made or became inaccurate after being made, the Recipient shall notify MARAD in writing of that inaccuracy.

6. **Flow Down.** For all Covered Transactions, including all tiers of subcontracts and subawards, the Recipient shall:

    (1) require the SAM check in section 2;

    (2) require the certifications in section 3;

    (3) include the prohibition in section 4; and

(4) require all Participants to notify the Recipient in writing of any information that would require the Recipient to notify MARAD under section 5.

TERM B.4
RECIPIENT POLICY TO BAN TEXT MESSAGING WHILE DRIVING

(a) *Definitions.* The following definitions are intended to be consistent with the definitions in DOT Order 3902.10, Text Messaging While Driving (Dec. 30, 2009) and Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving (Oct. 1, 2009). For clarification purposes, they may expand upon the definitions in the executive order.

For the purpose of this Term B.4, "**Motor Vehicles**" means any vehicle, self-propelled or drawn by mechanical power, designed and operated principally for use on a local, State or Federal roadway, but does not include a military design motor vehicle or any other vehicle excluded under Federal Management Regulation 102-34-15.

For the purpose of this Term B.4, "**Driving**" means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic congestion, a traffic signal, a stop sign, another traffic control device, or otherwise. It does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

For the purpose of this Term B.4, "**Text messaging**" means reading from or entering data into any handheld or other electronic device (including, but not limited to, cell phones, navigational tools, laptop computers, or other electronic devices), including for the purpose of Short Message Service (SMS) texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include the use of a cell phone or other electronic device for the limited purpose of entering a telephone number to make an outgoing call or answer an incoming call, unless this practice is prohibited by State or local law. The term also does not include glancing at or listening to a navigational device that is secured in a commercially designed holder affixed to the vehicle, provided that the destination and route are programmed into the device either before driving or while stopped in a location off the roadway where it is safe and legal to remain stationary.

For the purpose of this Term B.4, the "**Government**" includes the United States Government and State, local, and tribal governments at all levels.

(b) *Workplace Safety.* In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving (Oct. 1, 2009) and DOT Order 3902.10, Text Messaging While
Driving (Dec. 30, 2009), the Recipient, subrecipients, contractors, and subcontractors are encouraged to:

(1) adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving—

(i) Company-owned or -rented vehicles or Government-owned, leased or rented vehicles; or

(ii) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.

(2) Conduct workplace safety initiatives in a manner commensurate with the size of the business, such as—

(i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and

(ii) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

(c) *Subawards and Contracts.* To the extent permitted by law, the Recipient shall insert the substance of this exhibit, including this paragraph (c), in all subawards, contracts, and subcontracts under this award that exceed the micro-purchase threshold, other than contracts and subcontracts for the acquisition of commercially available off-the-shelf items.

TERM B.5
REQUIRED USE OF AMERICAN IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS

This award term implements § 70914(a) of the Build America, Buy America Act, Pub. L. No. 117-58, div. G, tit. IX, subtit. A, 135 Stat. 429, 1298 (2021), Office of Management and Budget (OMB) Memorandum M-24-02, "Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure", and 2 C.F.R. part 184.

Requirement to Use Iron, Steel, Manufactured Products, and Construction Materials Produced in the United States.

The Recipient shall not use funds provided under this award for an infrastructure project unless:

(1) all iron and steel used in the project are produced in the United States—this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;

(2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product; and

(3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

Incorporation into an infrastructure project.

The Buy America preference in this award term only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

Categorization of articles, materials, and supplies.

An article, material, or supply should only be classified into one of the following categories: (i) Iron or steel products; (ii) Manufactured products; (iii) Construction materials; or (iv) Section 70917(c) materials. An article, material, or supply should not be considered to fall into multiple categories. In some cases, an article, material, or supply may not fall under any of the categories listed in this paragraph. The classification of an article, material, or supply as falling into one of the categories listed in this paragraph must be made based on its status at the time it is brought to the work site for incorporation into an infrastructure project. In general, the work site is the

location of the infrastructure project at which the iron, steel, manufactured products, and construction materials will be incorporated.

Application of the Buy America Preference by category.

An article, material, or supply incorporated into an infrastructure project must meet the Buy America Preference for only the single category in which it is classified.

Determining the cost of components for manufactured products.

In determining whether the cost of components for manufactured products is greater than 55 percent of the total cost of all components, use the following instructions:

(a) For components purchased by the manufacturer, the acquisition cost, including transportation costs to the place of incorporation into the manufactured product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(b) For components manufactured by the manufacturer, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (a), plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the manufactured product.

Waivers.

When necessary, the Recipient may apply for, and the USDOT may grant, a waiver from the Buy America preference in this award term.

A request to waive the application of the Buy America preference must be in writing. The USDOT will provide instructions on the waiver process and on the format, contents, and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Office of Management and Budget (OMB) Made in America Office.

When the USDOT has made a determination that one of the following exceptions applies, the awarding official may waive the application of the Buy America preference in any case in which the USDOT determines that:

(1) applying the Buy America preference would be inconsistent with the public interest;

(2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or

(3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

There may be instances where an award qualifies, in whole or in part, for an existing waiver described at https://www.transportation.gov/office-policy/transportation-policy/made-in-america.

Definitions

"Buy America preference" means the "domestic content procurement preference" set forth in section 70914 of the Build America, Buy America Act, which requires the head of each Federal agency to ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States.

"Component" means an article, material, or supply, whether manufactured or unmanufactured, incorporated directly into: a manufactured product; or, where applicable, an iron or steel product.

"Construction materials" means articles, materials, or supplies that consist of only one of the items listed in paragraph (1) of this definition, except as provided in paragraph (2) of this definition. To the extent one of the items listed in paragraph (1) contains as inputs other items listed in paragraph (1), it is nonetheless a construction material.

(1) The listed items are:

(i) Non-ferrous metals;
(ii) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
(iii) Glass (including optic glass);
(iv) Fiber optic cable (including drop cable);
(v) Optical fiber;
(vi) Lumber;
(vii) Engineered wood; and
(viii) Drywall.

(2) Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

"**Infrastructure**" means public infrastructure projects in the United States, which includes, at a minimum, the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging.

"Infrastructure project" means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project. See also paragraphs (c) and (d) of 2 C.F.R. 184.4.

"Iron or steel products" means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both.

"Manufactured products" means:

(1) Articles, materials, or supplies that have been:
(i) Processed into a specific form and shape; or

(ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

(2) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under 2 C.F.R. 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under 2 C.F.R. 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

"Manufacturer" means the entity that performs the final manufacturing process that produces a manufactured product.

"Predominantly of iron or steel or a combination of both" means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

"Produced in the United States" means:
(1) In the case of iron or steel products, all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) In the case of manufactured products:

(i) The product was manufactured in the United States; and

(ii) The cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product. The costs of components of a manufactured product are determined according to 2 C.F.R. 184.5, as outlined above in this award term.

(3) In the case of construction materials, all manufacturing processes for the construction material occurred in the United States. *See* section 2 C.F.R. 184.6 for more information on the meaning of "all manufacturing processes" for specific construction materials.

"Section 70917(c) materials" means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. See section 70917(c) of the Build America, Buy America Act.

EXHIBIT C
QUARTERLY PROJECT PROGRESS REPORTS AND RECERTIFICATIONS: FORMAT AND CONTENT

1. Purpose. The purpose of the Quarterly Project Progress Reports and Recertifications under this agreement for the FY 2023 PIDP are to ensure that the project scope, schedule, and budget will be maintained to the maximum extent possible.

2. Format and Content. The Recipient shall produce a quarterly cost, schedule, and status report that contains the sections enumerated in the following list. At the discretion of MARAD, modifications or additions can be made to produce a quarterly reporting format that will most effectively serve both the Recipient and MARAD. Some projects will have a more extensive quarterly status than others. For smaller projects, MARAD may determine that the content of the quarterly reports will be streamlined and project status meetings will be held on a less-frequent basis. The first quarterly progress report should include a detailed description and, where appropriate, drawings of the items funded.

(a) Project Overall Status. This section provides an overall status of the project's scope, schedule and budget. The Recipient shall note and explain any deviations from the scope of work, the schedule, or the budget that are described in this agreement.

(b) Project Significant Activities and Issues. This section provides highlights of key activities, accomplishments, and issues occurring on the project during the previous quarter. Activities and deliverables to be reported on should include meetings, audits and other reviews, design packages submitted, advertisements, awards, construction submittals, construction completion milestones, submittals related to any applicable Recovery Act requirements, media or Congressional inquiries, value engineering/constructability reviews, environmental permit approvals, compliance with environmental mitigation measures, and other items of significance.

(c) Action Items/Outstanding Issues. This section should draw attention to, and track the progress of, highly significant or sensitive issues requiring action and direction in order to resolve. The Recipient should include administrative items and outstanding issues that could have a significant or adverse effect on the project's scope, schedule, or budget. Status, responsible person(s), and due dates should be included for each action item/outstanding issue. Action items requiring action or direction should be included in the quarterly status meeting agenda. The action items/outstanding issues may be dropped from this section upon full implementation of the remedial action, and upon no further monitoring anticipated.

(d) Project Scope Overview. The purpose of this section is to provide a further update regarding the project scope. If the original scope contained in the grant agreement is still accurate, this section can simply state that the scope is unchanged.

(e) Project Schedule. An updated master program schedule reflecting the current status of the program activities should be included in this section. A Gantt (bar) type chart is

probably the most appropriate for quarterly reporting purposes, with the ultimate format to be agreed upon between the Recipient and MARAD. It is imperative that the master program schedule be integrated, i.e., the individual contract milestones tied to each other, such that any delays occurring in one activity will be reflected throughout the entire program schedule, with a realistic completion date being reported. Narratives, tables, and/or graphs should accompany the updated master program schedule, basically detailing the current schedule status, delays and potential exposures, and recovery efforts. The following information should also be included:

- Current overall project completion percentage vs. latest plan percentage.
- Completion percentages vs. latest plan percentages for major activities such as right-of-way, major or critical design contracts, major or critical construction contracts, and significant force accounts or task orders. A schedule status description should also be included for each of these major or critical elements.
- Any delays or potential exposures to milestone and final completion dates. The delays and exposures should be quantified, and overall schedule impacts assessed. The reasons for the delays and exposures should be explained, and initiatives being analyzed or implemented in order to recover the schedule should be detailed.

(f) Project Cost. An updated cost spreadsheet reflecting the current forecasted cost vs. the latest approved budget vs. the baseline budget should be included in this section. One way to track project cost is to show: (1) Baseline Budget, (2) Latest Approved Budget, (3) Current Forecasted Cost Estimate, (4) Expenditures or Commitments to Date, and (5) Variance between Current Forecasted Cost and Latest Approved Budget. Line items should include all significant cost centers, such as prior costs, right-of-way, preliminary engineering, environmental mitigation, general engineering consultant, section design contracts, construction administration, utilities, construction packages, force accounts/task orders, wrap-up insurance, construction contingencies, management contingencies, and other contingencies. The line items can be broken-up in enough detail such that specific areas of cost change can be sufficiently tracked and future improvements made to the overall cost estimating methodology. A Program Total line should be included at the bottom of the spreadsheet. Narratives, tables, and/or graphs should accompany the updated cost spreadsheet, basically detailing the current cost status, reasons for cost deviations, impacts of cost overruns, and efforts to mitigate cost overruns. The following information should be provided:

- Reasons for each line item deviation from the approved budget, impacts resulting from the deviations, and initiatives being analyzed or implemented in order to recover any cost overruns.

- Transfer of costs to and from contingency line items, and reasons supporting the transfers.

- Speculative cost changes that potentially may develop in the future, a quantified dollar range for each potential cost change, and the current status of the speculative change. Also, a comparison analysis to the available contingency amounts should be included, showing that reasonable and sufficient amounts of contingency remain to keep the project within the latest approved budget.

- Detailed cost breakdown of the general engineering consultant (GEC) services (if applicable), including such line items as contract amounts, task orders issued (amounts), balance remaining for tasks, and accrued (billable) costs.

- Federal obligations and/or disbursements for the project, compared to planned obligations and disbursements.

(g) Federal Financial Report (SF-425). The Federal Financial Report (SF-425) is a financial reporting form used throughout the Federal Government Grant system. Recipients shall complete this form and attach it to each quarterly Project Progress and Monitoring Report. The form is available at https://www.grants.gov/forms/forms-repository/post-award-reporting-forms.

(h) Certifications.

i. A certification that the Recipient is in compliance with 2 C.F.R. 200.303 (Internal Controls) and 2 C.F.R. part 200, subpart F (Audit Requirements), as applicable.

ii. The certification required under 2 C.F.R. 200.415(a).

Addendum E

PND Engineers, Inc. (PND) Standard Form of Agreement For Professional Engineering Services_Pier 2 West Rehabilitation Post 30% Design_Port of Astoria- Federal Supplement

1 Termination for Convenience

Client may terminate this Agreement for convenience and without cause by giving thirty (30) days' prior written notice of such termination to the Engineer. Upon receipt of the notice of termination, except as explicitly directed by Client, Engineer shall immediately discontinue performing all Services. Upon termination under this clause, Engineer shall be entitled to payment as provided in section 4.01(B) of the Agreement.

2 Termination for Cause

Notwithstanding anything contained in this Agreement to the contrary, Client may terminate this Agreement immediately upon notice to Engineer upon the happening of any of the following events: (a) Engineer engages in any form of dishonesty or conduct involving moral turpitude related to Engineer's independent contractor relationship with Port or that otherwise reflects adversely on the reputation or operations of Port; (b) Engineer fails to comply with any applicable law related to Engineer's independent contractor relationship with Port; (c) problems occur in connection with the performance of the Services that cannot be resolved with reasonable effort by the Parties; and/or (d) Engineer breaches and/or otherwise fails to perform any Engineer representation, warranty, covenant, and/or obligation contained in this Agreement. The determination as to whether any of the aforementioned events have occurred will be made by Port in its sole discretion.

3 Consequences of Termination

Upon termination of this Agreement, Port will be responsible only for compensating Engineer for Services actually performed as of the date of termination. Except as specifically provided herein, Port shall not be liable for any damages including loss of use, interruption of business, or any indirect, special, incidental, or consequential damages of any kind, including without limitation loss of profits and those arising under any agreement between Engineer and any third party, arising out of the performance of this Agreement or in connection with the terms of this Agreement, regardless of the form of action, whether in contract, tort, strict product liability, or otherwise, and regardless whether Port has been advised of the possibility of such damages. Termination of this Agreement by Port will not constitute a waiver or termination of any rights, claims, and/or causes of action Port may have against Engineer. Within a reasonable period of time after termination of this Agreement [but in no event later than five (5) days after

termination], Engineer will deliver to Port all materials and documentation related to or concerning the Services.

4 Remedies

If a party breaches and/or otherwise fails to perform any of its obligations under this Agreement, the non-defaulting party may, in addition to any other remedy provided to the non-defaulting party under this Agreement, pursue all remedies available to the non-defaulting party at law or in equity. All available remedies are cumulative and may be exercised singularly or concurrently.

5 Equal Employment Opportunity

Engineer agrees to abide by 41 CFR 60-1.4(b) and to include the Equal Opportunity Clause contained in 41 CFR 60-1.4(b)(1) in all documents, as required by 41 CFR 60-1.4(b).

6 Recovered Materials

To the extent applicable, Engineer must comply with 2 CFR § 200.323, which requires compliance with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

7 Prohibition on certain telecommunications and video surveillance services or equipment.

Engineer agrees to comply with 2 CFR § 200.216.

P | N | D
ENGINEERS, INC.

Supplement 2

PND Engineers, Inc. (PND) Standard Form of Agreement For Professional Engineering Services_Pier 2 West Rehabilitation Post 30% Design_Port of Astoria

PND ENGINEERS, INC.
SEATTLE STANDARD RATE SCHEDULE
EFFECTIVE FEBRUARY 2023

Professional:	Staff Engineer I	$110.00
	Staff Engineer II	$127.50
	Staff Engineer III	$137.50
	Staff Engineer IV	$142.50
	Staff Engineer V	$147.50
	Staff Engineer VI	$165.00
	Senior Engineer I	$160.00
	Senior Engineer II	$170.00
	Senior Engineer III	$182.50
	Senior Engineer IV	$192.50
	Senior Engineer V	$210.00
	Senior Engineer VI	$230.00
	Senior Engineer VII	$247.50
	Environmental Scientist I	$115.00
	Environmental Scientist II	$137.50
	Environmental Scientist III	$155.00
	Environmental Scientist IV	$170.00
	Environmental Scientist V	$187.50
	Environmental Scientist VI	$197.50
Surveyors:	Senior Land Surveyor I	$127.50
	Senior Land Surveyor II	$137.50
	Senior Land Surveyor III	$147.50
Technicians:	Technician I	$65.00
	Technician II	$95.00
	Technician III	$105.00
	Technician IV	$115.00
	Technician V	$142.50
	Technician VI	$165.00
	CAD Designer III	$95.00
	CAD Designer IV	$110.00
	CAD Designer V	$132.50
	CAD Designer VI	$142.50