August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

PROJECT DESCRIPTION

1. PROJECT DESCRIPTION

The Humboldt Bay Offshore Wind **M**inimum **V**iable **P**ort Project ("MVP" or "Project" hereafter) will establish the first operating wind terminal on the West Coast. The Project is a new purpose-built facility for the transport, import, staging, preassembly, final assembly, launch, in-water construction, and long-term maintenance of floating offshore Wind Turbine Devices (WTDs). See Figure 1. At full buildout, the terminal will also serve as a facility for manufacturing of various WTD components. Marine infrastructure and upland improvements are required to prepare the terminal for use by offshore wind developers to conduct these activities. While the offshore wind energy industry is the proposed anchor tenant(s) of the modernized marine terminal project, the multipurpose facilities could accommodate a variety of vessels and traditional port-based industries, including breakbulk cargo and forest products. Importantly, the proposed project will provide the minimum facilities that are required for the near-term development of floating offshore wind energy to meet Federal and State renewable energy, climate change, and clean transportation goals and the growing demand for a diversified renewable electricity mix.

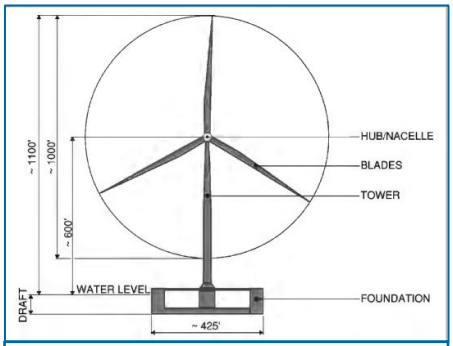

Figure 1 Illustration of a Floating WTD

1.1 Scope of Work

The Project will support the design and engineering (D&E) for all phases of the future terminal while expediting initial phases of construction to develop the MVP infrastructure needed to begin in-water construction of floating offshore WTDs. The Project entails site preparation, removal of old obsolete structures, environmental mitigation actions, and construction of new heavy-lift facilities that collectively provide the terminal operating capacity to support the construction of all offshore wind production areas on the West Coast.[1] The Project presented in this application is the first phase of a larger build out; it contains all the requirements for a functioning wind port. Future phases will add capacity and storage. Key components include[2]:

- **Grant Management and Project Oversight** for the duration of the Project will be led by the Harbor District. Grant Management will include all required reporting, project management, and data collection and analysis activities. Notably, the Project schedule, as negotiated with the Department during grant agreement execution, will include **Critical Project Reviews** in advance of commencing each major budget period and project task to evaluate progress and confirm the sources and availability of match commitments for subsequent phases.
- **100% design and engineering** (D&E) for future construction activities programmed in the MVP, 60% D&E of the remaining terminal site redevelopment (totaling 180 acres);
- Advancement of all necessary permits, approvals, and authorizations;
- **Site preparation** including demolition of existing wharf structure and removal of old creosote-soaked wood piles, preparation of dredge material dewatering areas, and other activities;
- **Dredging** of Berth 1 and North Wet Storage Area, approximately 720,000 cubic yards of sand and bay mud, upgrades to the Samoa Lagoons dewatering area for maintenance dredging;
- **Ground-mounted solar** system (PV)—power used for resiliency and facility energy needs—

[1] *See,* Bureau of Ocean Energy Management (BOEM), State Activities. https://www.boem.gov/renewable-energy/state-activities.
[2] The Scope of Work is further detailed in the Harbor District's Staff Report dated August 10, 2023. See, Letter of Commitment.

and deployment of electric equipment and workplace **charging infrastructure** (EVSE);

- Construction of one **wharf**, approximately 1,200 linear feet. Of that, one part will be 800 linear feet long and 150 feet wide, and the balance will be 400 feet long by 200 feet wide, built to handle heavy loads at 6,000 pounds per square foot (psf);
- Construction of a new 40-acre **storage yard** (3,000 psf) for staging and integration and facilities for receiving, staging and storing offshore wind and components. Work will require demolition of existing structures, site preparation, raising the site to prepare for sea level rise, reconfiguring **utilities**, ground improvements, and installation of a new **stormwater system**;
- Major **utility improvements** along the west access road supporting the larger buildout and future electrification activities (e.g., **shore power**, **vehicle and equipment electrification**)
- Creation of in-water **wet storage areas** for wind turbine assemblies in which foundations and fully assembled structures will be staged for final assembly and tow out to the Call Areas;
- Upgrade the North Access Road, connecting to Vance Avenue, and the Southwest Access Road, connecting to New Navy Base Road, to bring the roads into a **state of good repair** and **mitigate traffic impacts** during construction and operations;
- **Tenant and facility relocation** for existing aquaculture operation and new recreational access or fishing pier and gear storage to accommodate for displacement by the new terminal;
- **Mitigation**—compensatory mitigation for impacts to marine, freshwater, and terrestrial habitats and species protected by law. Mitigation will be achieved through habitat protection and restoration within Humboldt Bay, including deployment of an eco-shoreline. Several offsite projects are in advanced design stages. The District will contribute to final design, permitting, and construction of these restoration projects to satisfy the Project's required mitigation, including eelgrass restoration in the Bay;
- Creation of a **Bay-Wide Master Plan** focused on delivering diverse community and workforce development benefits through holistic uses of the Bay and its industrial tidelands. The Plan includes actionable studies and strategies for **workforce development**, fostering **local innovation**, **electrifying terminal operations**, a Community Benefits Program, **local grant programs**, a **Diversity, Equity, Inclusion, and Accessibility Plan**, a West Coast Floating Offshore Wind Needs Evaluation and Gaps Analysis, a rails-to-trails Class 1 bike path, and other activities advancing stakeholder engagement, knowledge, and benefits.

1.2 Technical & Engineering Aspects of the Project

The Project will serve California and Oregon's floating offshore wind industries and their electricity markets while supporting the growth of zero-emission transportation and society-wide decarbonization. Project feasibility and planning studies will draw from floating offshore wind projects and experience in Europe[3] as well the extensive California Energy Commission (CEC) and BOEM studies referenced herein. Project constructability will start with domestic preference requirements of the MPDG and general USDOT programs—how to manufacture offshore wind components, vessels, and specialized equipment in the U.S., and how to build and equip offshore wind terminals in compliance with domestic preference requirements and guidelines.

1.3 Current Design Status of the Project

Thanks to the grant from the CEC, significant progress is already underway on planning and designing the terminal. Progress to date includes the development of a conceptual Master Plan

[3] *See generally,* https://www.equinor.com/energy/hywind-scotland and https://norwegianoffshorewind.no/.

(Attachments), preliminary engineering designs (Attachments), a Basis of Design (Attachments), field studies, preliminary environmental studies, and initial stakeholder engagement. This Project will leverage funds provided by the CEC to advance design, permitting, and environmental compliance of the proposed site, establish and fortify lines of communication among diverse stakeholder groups to enhance project design and benefits, and design upgrades so the site will be resilient to natural disasters, all of which is designed to attract wind industry private investment and support Federal and State offshore wind and greenhouse gas reduction goals.

1.4 Transportation Challenges

On February 22, 2023, the Biden Administration announced a goal of deploying "15 GW of floating offshore wind by 2035." On August 22, 2023, the CEC established goals of deploying up to 5 MW of floating offshore wind by 2030 and 25 GW by 2045. These goals face substantial marine and systemwide transportation challenges. Unlike offshore wind development on the Atlantic and Gulf coasts, the Pacific Ocean is too deep for offshore wind platforms fixed directly to the ocean floor. Instead, Pacific Coast offshore wind will be deployed on **floating platforms**. Floating offshore wind (FOSW) platforms and the accompanying equipment (blades, towers, etc.) are all so massive that none of the primary equipment or components can be transported across land. Instead, nearly all FOSW components can only be transported via large marine vessels. Accordingly, all manufacturing and final assembly of FOSW must occur within ports at custom heavy-lift marine terminals that have large laydown areas and manufacturing areas and that are immediately adjacent to deep draft navigation channels. **Floating Offshore Wind will be a new and innovative industry in the U.S. and will require new specialized marine terminals.** Many of these terminals will need to be of a size and scale that does not currently exist on the west coast of North America. Adding to these challenges, manufactured equipment will need to be shipped between ports and thousands of fully-assembled floating wind turbines will need to be towed from ports, all without interrupting current cargo transport patterns or port cargo handling operations. This Project will be critical to addressing these challenges.

According to the "California Floating Offshore Wind Regional Ports Assessment" published by BOEM in January of 2023,[4] Humboldt Bay is the only California port capable of hosting each of the three critical facility types necessary to support offshore wind development and operation (see Figure 2). In addition, the BOEM study specifies that only the Ports of Humboldt Bay, Los Angeles, and Long Beach are capable of conducting the final "vertical integration" stage of deploying offshore wind turbines. Among these three ports, only Humboldt Bay has immediately available developable

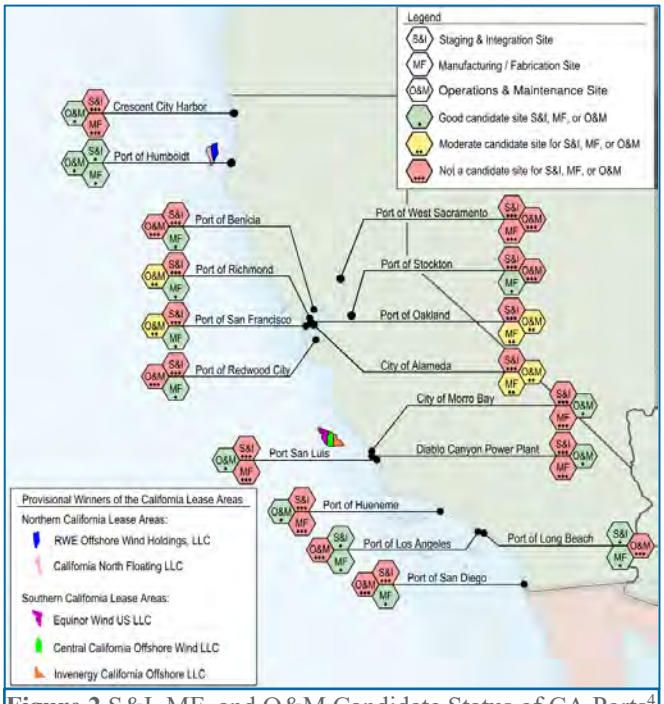

Figure 2 S&I, MF, and O&M Candidate Status of CA Ports[4]

[4] https://www.boem.gov/sites/default/files/documents/renewable-energy/studies/BOEM-2023-010.pdf. The facility types are 1) Staging and Integration (S&I) Sites, 2) Manufacturing/Fabrication (MF) Sites, and 3) Operations and Maintenance (O&M) Sites.

space, meaning that **Humboldt Bay must serve as California's initial vertical integration port.** According to a report[5] published last month by the California State Lands Commission, the Port of Humboldt plans to develop two S&I sites, with "Ready Dates" of 2028 and 2031; the Port of Long Beach plans to develop two S&I sites, with "Ready Dates" of 2031 and 2035; the Port of Los Angeles does not have any plans to develop an S&I site; and, no other ports have announced plans to develop S&I sites.

Thus, without an S&I site coming online in Humboldt Bay in 2028, the State of California cannot reach its goal of 5 GW of offshore wind by 2030. As a result, the West Coast floating offshore wind industry would be delayed, along with the many benefits that offshore wind will address (reversal of climate change and subsequent environmental improvements, transportation and shipping enhancements, energy resiliency, economic and employment advancements, a shift towards greater social and environmental equity, etc.). In other words, without the development of a vertical integration terminal within Humboldt Bay, the State and Federal Government cannot achieve their offshore wind goals within the targeted timelines. Humboldt Bay is optimal for serving the FOSW industry because the bay: is centrally-located to the current and future west coast offshore wind areas of California and Oregon, has the required navigation channel widths/depths without any needed modifications to the Federal navigation channel, has no conventional containerized cargo operations, has no vertical obstructions (bridges, powerlines, or other), and contains substantial available and developable industrial space immediately adjacent to navigation channels. These features make the Port of Humboldt Bay uniquely and ideally suited for manufacturing and marshalling FOSW components, assembling foundations, and vertically integrating all components into deployment-ready units.

Several west coast ports have vertical obstructions that will limit their ability to serve the FOSW industry. For instance, all of the ports within San Francisco Bay are limited by the relatively low height of Golden Gate Bridge. Other west coast ports will likely be limited in their ability to serve the industry due to competing cargo needs and limited developable land area. Accordingly, the State has designated the Port of Humboldt Bay as a principal offshore wind marshalling port. In line with this finding, the CEC granted $10.45MM to the Port in 2022 to utilize as matching funds for Federal grants and to fund development of a heavy-lift offshore wind terminal project at the 180-acre Port-Authority-owned site known as the Redwood Marine Terminal (RMT). The California State Lands Commission also granted $576,191 to the Port to support the project. Notably, these investments by the State of California preceded BOEM's recent identification of Humboldt Bay as being the only "good candidate" port for supporting all aspects of developing and maintaining California's OSW industry (Figure 2). The proposed heavy-lift offshore wind terminal at the RMT site is envisioned to specialize in vertical integration, with room for manufacturing and other related uses (Figure 3).

1.5 Broader Context

The former wood product manufacturing/shipping site known as RMT was once one of the largest employment centers in the multi-county region, with hundreds of skilled workers employed at the site for several consecutive generations. Today, the site is almost entirely vacant. The timber industry was the primary employment sector throughout California's north coast but began significantly declining in the 1980s. The RMT site stayed active and employed hundreds of

[5] Cal. State Lands Comm'n, AB 525 Port Readiness Plan (2023). https://www.slc.ca.gov/content-types/port-readiness-plan/.

workers until 2013, at which time the site completely shuttered and caused massive layoffs that the community still has not recovered from. This also led to a precipitous decline in the number of cargo ships (shipping wood products) leaving Humboldt Bay.

The project area and surrounding communities contain a much higher percentage of people unemployed and living below the poverty level than State and Federal averages. The median income for the area is almost half that of the statewide average. The region also has higher-than-national and higher-than-statewide percentage of American Indian population, providing opportunities for Tribal hiring preferences and Tribal-oriented job training. The District has been working with several Tribal governments and several stakeholders to act on these opportunities.

The future improvements made possible by the proposed MPDG funding will transition a nearly vacant industrial site to a modern multipurpose terminal that is needed to serve as a primary west coast facility for the manufacturing, import, staging, preassembly, final assembly, and loadout of large offshore wind components, including both wind turbine generation components and floating foundation components. Port development will revitalize the local economy and rejuvenate Humboldt Bay's overall ship traffic and cargo tonnage by introducing an entirely new industry. Additionally, this project is the earliest opportunity for the State and the Nation to begin construction of the floating offshore wind necessary to meet our climate change, renewable energy, and clean transportation objectives.

1.6 Location

The proposed project is located on the Samoa Peninsula of Humboldt Bay in Humboldt County California (Figure 3). The site was formerly used by the forest product industry for wood processing and shipping. Existing uses include storage of commercial fishing equipment, commercial fish landing and holding, limited forest product storage, and mariculture. Much of the site is currently vacant. There are remnants from past forest product industry uses at the site including utilities, buildings, docks, and other structures. This infrastructure is generally failing and in need of repair, replacement, or demolition.

The Project location is in Humboldt County, California (40° 49' 1.5564" N, 124° 11' 1.518" W), on the ancestral lands of the Wiyot Peoples. The area is designated as **rural,** and the MVP is located in an **Historically Disadvantaged Community**. Though not located in an Area of Persistent Poverty, the Project site is surrounded by such areas and would represent a major new employer for the region.

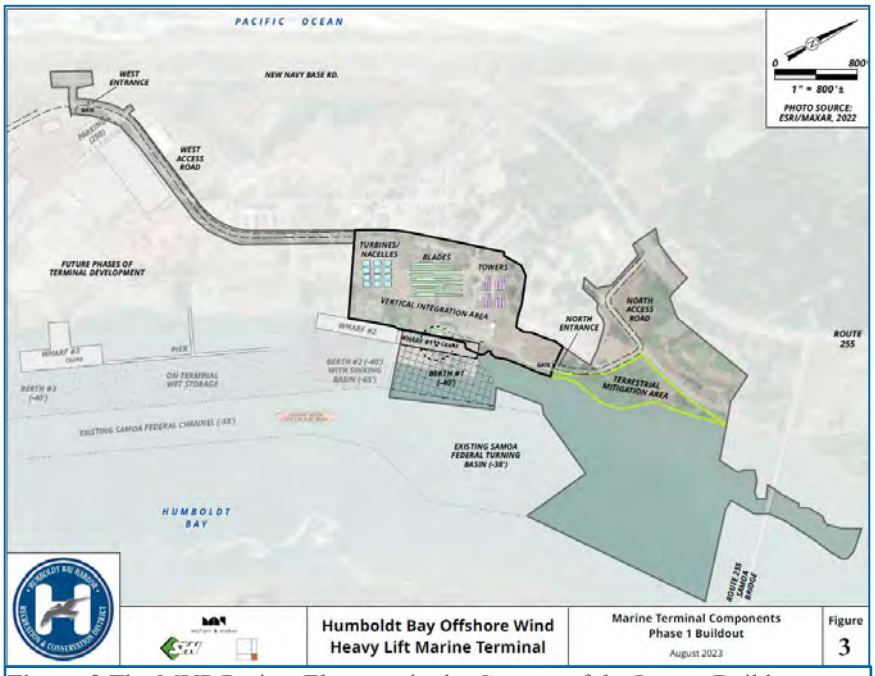

Figure 3 The MVP Project Elements in the Context of the Larger Buildout

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PROJECT BUDGET, SOURCES, AND USES OF FUNDING

PROJECT BUDGET

This section outlines the costs and proposed budget for the Humboldt Bay Offshore Wind MVP Project. The Project's cost is $853,439,620 ($2023) based on the preliminary engineering design with commonly accepted contingencies and cost escalations. As described in more detail below, the Harbor District and its project partners are requesting $426,719,810 million—50 percent of eligible project costs—in MPDG Opportunity (Mega, INFRA, Rural) grant program funds. The District and its partners will combine this with existing and committed funds as well as future eligible incentives, grants, loans, (green) bonds, and other public and private capital in the value of $426,719,810 to build the Project. Notably, some 99% of the non-Federal match share is currently originating from commitments by the District's private-sector contract operator. The balance of this narrative outlines the details of the Project's budget and funding plan.

1.1 Previously Incurred Costs

The Project has been in the planning phase since 2022 when BOEM began its California Floating Offshore Wind Assessment and concluded that Humboldt Bay was a prime location for the wind port. In order to meet aggressive California and Federal goals and timelines for offshore wind development, design work is underway and the NEPA process began earlier this year. All of these activities have been funded with Port revenues, private funds, and State funds. These activities will progress while the Project's Federal applications for funding are under review in order to maintain an aggressive schedule that seeks to enable in-water construction of floating offshore wind turbines to commence no later than 2029. The Project will need to complete Final Engineering, Site Investigations, Stakeholder & Community Outreach, NEPA/CEQA documentation, Baywide Master Planning, and Permitting, all by Q4 2025, with far earlier deadlines for NEPA documentation to maintain the project schedule in alignment with any Federal funds awarded. Should the MVP be selected for award, the Port will be seeking authorization to use the following post-award and pre-obligation activities for the non-Federal cost share of the Project. These are estimated expenditures that would be incurred before a signed grant agreement, upon authorization by the Department of Transportation.

- Final Engineering & Site Investigations – approximately $4,600,000
- NEPA/CEQA Documentation and Outreach – approximately $350,000
- Baywide Master Planning – approximately $500,000

1.2 Future Project Eligible Costs

All Project costs are future eligible costs. The Project will be constructed and operated through a public-private partnership between the Humboldt Harbor District and a private-sector contract operator. These future eligible costs total $853,439,620 ($2023). The Project partners have committed to fund 50 percent of the MVP Project's cost. Table 1 demonstrates the breakdown of Federal and Non-Federal funds across major project categories.

Depending on the outcome of the District's FY2023 PIDP "Small Project at a Small Port" Planning Grant application for the Humboldt: POWERED Project, the match will be divided between a private-sector contract operator and the port in one of two ways depending on the District's available eligible non-Federalized funding. Should funding be awarded under the FY 2023 PIDP, a portion of the Harbor District's available Non-Federal match share would become federalized, limiting its available match share for initial project activities. For ease of Project planning and the development of this proposal, proposed Project activities—as described in this document and the

Scope of Work section of the Project Description Narrative—assume no award will be made under the FY 2023 PIDP. If the District's FY 2023 PIDP proposal is selected for funding along with this MPDG Proposal, the District will coordinate with the Department to refine the Project scope, schedule, and budget to eliminate the risk of double counting federalized funds for those activities programmed in the Humboldt: POWERED Project. Similarly, the District would coordinate with the Department to determine whether awarded MPDG funds should be rescoped to other eligible activities or descoped to allow for these MPDG funds to be allocated to other qualified MPDG projects. For purposes of the match funding commitment, the District's private-sector contract operator is committing capital to the MVP Project without reliance on the successful award of FY 2023 PIDP funding.

The District has determined that the overall project will be operated and maintained by a private-sector contract operator through a lease from the District. Following a competitive proposal process conducted in 2022, the District has entered into an "Exclusive Right to Negotiate" with Crowley Wind Services. If the current negotiations are not successful to the satisfaction of the District and the overall community, then the District will go through a new competitive process to select a new contract operator. If the current negotiations are successful to the satisfaction of the District and the overall community, then the District will enter into a lease with Crowley. The following information is provided in the event that Crowley is selected. If a different private-sector contract operator is ultimately selected, then that firm would assume Crowley's match:

Table 1 Sources and Uses of Funds for the Humboldt Bay Offshore Wind MVP Project

Item	Federal MPDG	%	Other Federal	%	Non-Federal	%	Total
Soft Costs	$0	0%	$0	0%	$44,000,000	100%	$44,000,000
Construction	$426,719,810	65%	$0	0%	$228,935,190	35%	$655,655,000
Mitigation	$0	0%	$0	0%	$63,030,000	100%	$63,030,000
Administrative	$0	0%	$0	0%	$7,000,000	100%	$7,000,000
Escalation	$0	0%	$0	0%	$83,754,620	100%	$83,754,620
TOTAL	**$426,719,810**	**50%**	**$0**	**0%**	**$422,219,994**	**49%**	**$853,439,620**

Table 2 Non-Federal Match Commitment Scenarios

Scenario	Harbor District Match		Crowley Match	
	$	% of MVP[1]	$	% of MVP[1]
With PIDP Award	$6,672,266	0.78%	$420,047,544	49.22%
Without PIDP Award	$4,499,816	0.53%	$422,219,994	49.47%

In addition to this flexibility in budgetary allocations, the Offshore Wind MVP Project also maintains some flexibility within its funding schedule that would support the Department being able to maximize utilization of MPDG funds within each fiscal year. As described throughout this proposal, the Project Team proposes to implement the project in discrete phases based upon the results of Critical Project Reviews with the Department at the outset of each subsequent major series of activities. The Critical Project Review meetings will enable the Project Team to demonstrate substantial progress of ongoing tasks as well as provide updated documentation showing the sources of all eligible match funding for the subsequent phases, recognizing additional match share capital is expected to become available over the next five years to supplement the activities proposed herein. Table 3 provides a breakdown of the estimated costs to be incurred

[1] Due to the size of the proposed budget, rounding errors are eliminated after eleven significant figures.

within each Calendar Year in order to provide the Department with greater capacity to award these multi-year funds to more eligible projects under this MPDG Opportunity.

Table 3 Estimated Project Capital Outlays by Calendar Year

Metric	2024	2025	2026	2027	2028
Estimated Outlay	$8,534,396.20	$85,343,962	$170,687,924	$298,703,867	$298,703,867
Percent of MVP Costs	<1%	10%	20%	35%	<35%

1.3 Sufficient Contingency

The cost estimates provided in **Tables 1 and 6** are based on preliminary engineering and include a 10 percent contingency on all items except equipment, workforce development, and grant administration.

1.4 Funds Subject to Limit (INFRA)

No funds are subject to the INFRA program limit.

1.5 Project Costs by Urban and Rural Area

All costs will be expended in a designated RURAL area.

Table 4 Project Spending by Urban and Rural Area

Budget Item	Rural*	Urban	Total
Project (dollars)	$853,439,620	$0	$853,439,620
Project (percentage)	100	0	100

Project Costs by APP or HD

All Project funds (non-Federal match + Federal grant funds) will be invested in an Historically Disadvantaged Community.

Table 5 Project Spending by Census Tract

Census Tract	APP or Hist. Disadvantaged	Project Spending	Share of Total Cost
06023001300	Yes – Hist. Disadvantaged	$853,439,620	100%

Figure 1 Snapshot of USDOT's Tool to Identify Historically Disadvantaged Communities

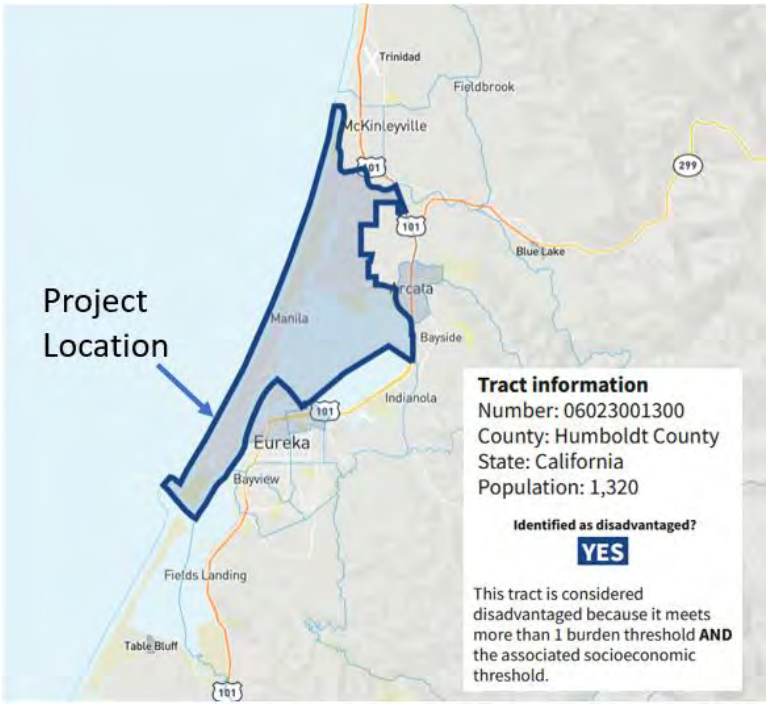

Table 6: Estimated Costs for the Project

Item	Description	Quantity	Unit	Unit Price	Subtotal	Subtotal	Contingency	TOTAL
1	**Soft Costs (Design, Studies, Permitting)**					**$40,000,000**	10%	**$ 44,000,000**
	Soft Costs (Design, Studies, Permitting, CM)	1	LS	$40,000,000	$40,000,000		$4,000,000	
2	**Construction at Primary Site**					**$596,050,000**	10%	**$ 655,655,000**
a	40-Acre Uplands Area	40	AC	$5,332,000	$213,280,000		$21,328,000	
b c	Wharf #1	200,000	SF	$1,460	$292,000,000		$29,200,000	
d	Eco-Shoreline	1,800	LF	$1,300	$2,340,000		$234,000	
	Dredging of Berth #1and North Wet Storage Area	970,000	CY	$64	$62,080,000		$6,208,000	
e f g h	Ground-Mounted Solar	1	LS	$10,000,000	$10,000,000		$1,000,000	
	Access Road Improvements (North Access Road)	1	LS	$3,020,000	$3,020,000		$302,000	
	Access Road Improvements (Southwest Access Road)	1	LS	$10,330,000	$10,330,000		$1,033,000	
	Samoa Lagoons Dewatering Area	1	LS	$3,000,000	$3,000,000		$300,000	
3	**Construction at Offsite Mitigation Sites**					**$57,300,000**	10%	**$ 63,030,000**
a b c d	Eelgrass Mitigation	1	LS	$21,000,000.00	$21,000,000		$2,100,000	
e f	Offsite Marine and ESHA Mitigation	1	LS	$30,000,000.00	$30,000,000		$3,000,000	
	Public Recreation Access (Fishing Pier, Kayak Launch, or Other)	1	LS	$1,200,000.00	$1,200,000		$120,000	
	Class 1Bike Path and Associated Fencing	1	LS	$1,100,000.00	$1,100,000		$110,000	
	Fisherman Storage Relocation to Woodley Island	1	LS	$3,000,000.00	$3,000,000		$300,000	
	Existing Aquaculture Relocation to Off-Site District-Owned Location	1	LS	$1,000,000.00	$1,000,000		$100,000	
4	**Administrative Activities**					**$7,000,000**	0%	**$ 7,000,000**
a b	District Grant Administration	1	LS	$1,000,000	$1,000,000		$100,000	
	Community Benefit Program	1	LS	$6,000,000	$6,000,000		$600,000	
	Total Construction Costs					**$700,350,000**		**$ 769,685,000**
	Escalation (3.5% over 5 yrs)				$76,140,564		$7,614,056	**$ 83,754,620**
	Total Construction Cost (with Escalation, No					**$776,490,564**		
	Total Construction Cost (with Escalation,							**$ 853,439,620**

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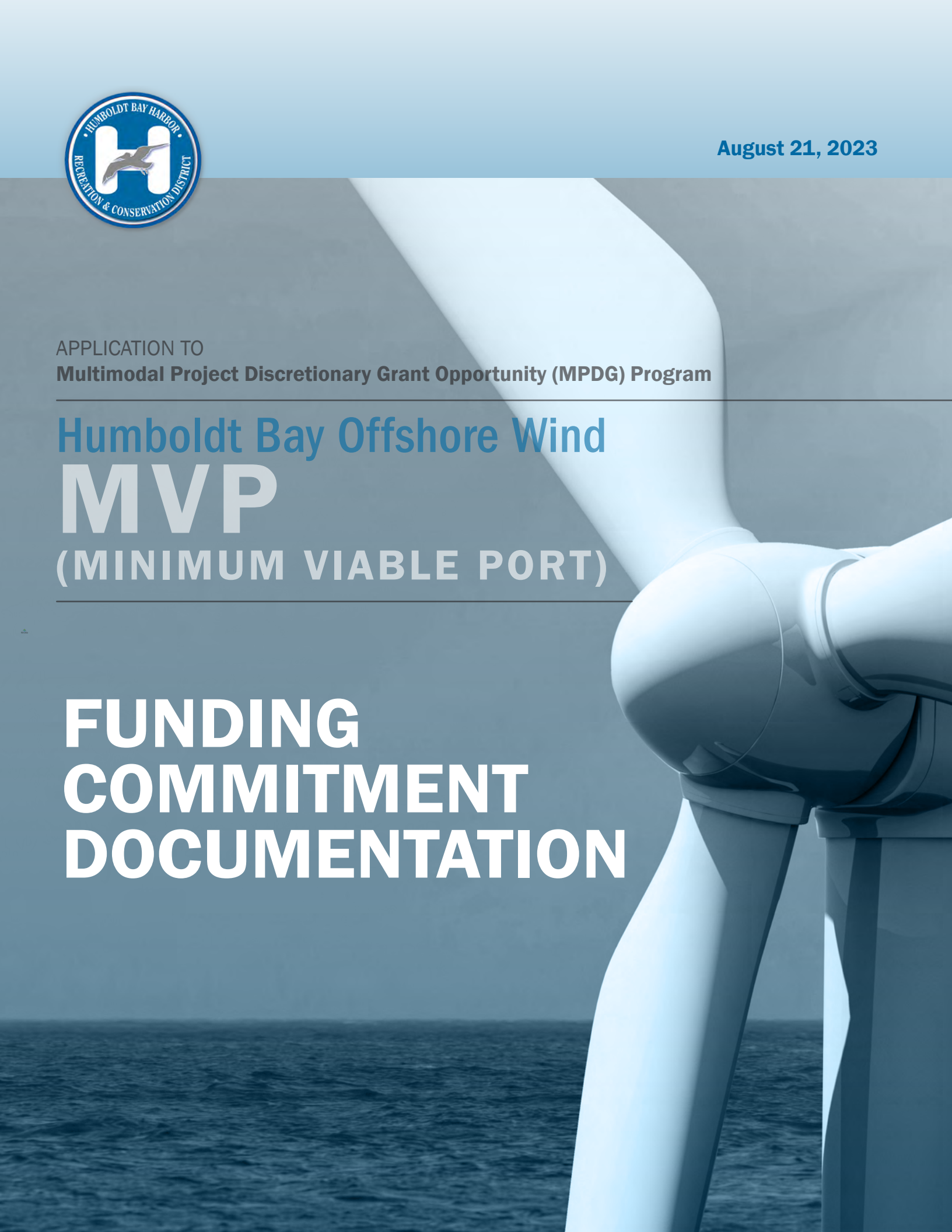
FUNDING COMMITMENT DOCUMENTATION



CROWLEY

August 21, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Commitment to the Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project

Dear Secretary Buttigieg:

Crowley Wind Services Holdings, LLC and Crowley Wind Services, Inc. (collectively, "Crowley") are pleased to partner with the Humboldt Bay Harbor, Recreation, and Conservation District (District) to propose a powerful project to establish the West Coast floating offshore wind industry with this application to the FY 2023-2024 Multimodal Project Discretionary Grant Opportunity (MPDG). The Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project will serve as the initial phase of design, engineering, permitting, and construction for a larger complex serving the floating offshore wind energy industry's manufacturing, marshalling and installation, and operational needs in northern California. At full buildout, the Project will support the manufacturing, installation, and operation of floating offshore wind platforms; the use of heavy-cargo vessels; and the provision of crewing and marshalling services for local wind energy operators. This will be the first hub on the West Coast to offer such ongoing services to this emerging industry.

The State of California has appropriated more than $10 million to initiate development of an offshore wind marshalling port in Humboldt Bay's Redwood Marine Terminal (RMT) as the hub of California's floating offshore wind industry to meet the State's objectives of deploying floating offshore wind capacity of 5 GW by 2030 and 25 GW by 2045 and the nation's objectives of 15 GW by 2035. Yet, the State has recently published a report finding that more than $11 billion will need to be invested across California's ports to fully meet State and Federal targets for floating offshore wind. Accordingly, the Port of Humboldt Bay—and the floating offshore wind industry at large—requires federal assistance as part of the necessary whole-of-government approach in order to catalyze progress on this critical multi-year, multi-phase climate, energy, and employment initiative.

The planning, stakeholder engagement, design and engineering, construction, community benefit, and workforce development investments proposed for the Humboldt Bay Offshore Wind MVP Project will support each of the MPDG program objectives and outcome criteria. First, the Project will directly improve safety by incorporating Crowley's industry-leading advanced safety practices as well as advancing numerous special studies and design activities leading to the construction of resilient and sustainable port terminal infrastructure enabling the domestic manufacture, assembly, transport, and installation of floating offshore wind turbines. Second, the Project exemplifies the state of good repair criterion by redeveloping a former wood products export terminal, removing thousands of chemically-treated wood pilings from the Bay, and creating new recreational infrastructure—a biking and hiking trail as well as new recreational vessel launch—for the benefit of community members. Third, the Project will generate substantial beneficial economic impacts; enable freight movement for offshore wind turbines and their components—many of which are too large to be transported by road or rail; and, directly and indirectly generate thousands of new jobs in construction, terminal operations, manufacturing, utilities, advanced energy, logistics, and the maritime industries. Fourth, this project likely presents the one of the greatest opportunities for the Department of Transportation and the MPDG Program to address climate change, resiliency, and the environment through the vast energy, environmental, and clean transportation benefits that can only be realized during this decade by the creation of this sustainably-designed terminal—built for resilience against tsunamis, earthquakes, wildfires, and sea level rise. Fifth, the Project supports equity, multimodal options,

9487 Regency Square Blvd. +1 904 727 2200
Jacksonville, FL 32225 crowley.com

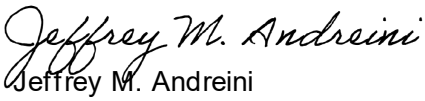
and quality of life by directly incorporating public feedback into project elements and establishing meaningful workforce development and community benefits programs. Lastly, the Project—proposed by a public-private partnership—is at the forefront of innovation: building for a future zero-emission terminal while utilizing low- and zero-emission construction equipment; leveraging diverse public and private capital sources to de-risk and spur development in the emerging floating offshore wind industry; and, delivering the broader Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project in a minimum viable phased approach to expedite the capacity for in-water construction and catalyze the development of floating offshore wind energy systems.

The proposed $853,439,620Project will accelerate development and significantly increase the competitiveness of the U.S. offshore wind industry. To support this, Crowley will commit $422,219,623to the Project from its private capital reserves; co-investments by private partners—present and future; and, through the development of a comprehensive funding stack leveraging other future eligible Federal, State, and local grants, incentives, bonds, and tax credits secured by Crowley or the Harbor District, and based on this proposal and in conjunction with other governmental approval and commitments, such as but not limited to Federal, State and local permits, District lease agreement for the RWT, , and final investment approval of satisfactory design and build requirements. These funds—representing 49.4727% of total eligible project costs—will be made available at each phase of the project and proof of having sufficient match funding will be demonstrated at each Critical Project Review with the Department. If the Humboldt Bay Offshore Wind MVP Project is awarded sufficient funding under the MPDG and in partnership with the District, Crowley guarantees the availability of the staff and resources necessary to complete the activities described in the application, including ensuring timely reporting and compliance with all MPDG requirements and all Local, State, and Federal laws and regulations.

As the first mover in floating offshore wind and the premier port in California for supporting all aspects of the floating offshore wind industry, the Project provides a unique opportunity for the Department of Transportation and the Federal government to catalyze the decarbonization of the electricity and transportation sectors and achieve state and federal floating offshore wind objectives. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed for several years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

In partnering with the Humboldt Bay Harbor District, Crowley is committing to catalyze the development of the nation's floating offshore wind industry. Together, we form a powerful team capable not only of planning such an ambitious and important project, but also of executing it in a timely, cost-effective, equitable, and inclusive manner. For these reasons and more, I urge you to fund the Humboldt Bay Offshore Wind MVP Project. If you have any questions at all, please do not hesitate to contact me.

Sincerely,



Jeffrey M. Andreini
Vice President, Crowley Wind Services
Jeffrey.andreini@crowley.com

**Humboldt Bay Harbor,
Recreation and Conservation District**
(707) 443-0801
P.O. Box 1030
Eureka, California 95502-1030

Date: **August 21, 2023**

To: **The Honorable Pete Buttigieg**
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

From: **Larry Oetker, Executive Director, HBHRCD**

Re: **Letter of Commitment to the Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project**

Dear Secretary Buttigieg:

Humboldt Bay Harbor, Recreation, and Conservation District (District) is pleased to propose a powerful project to establish the West Coast floating offshore wind industry with this application to the FY 2023-2024 Multimodal Project Discretionary Grant Opportunity (MPDG). The Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project will serve as the initial phase of design, engineering, permitting, and construction for a larger complex serving the floating offshore wind energy industry's manufacturing, marshalling and installation, and operational needs in northern California. At full buildout, the Project will support the manufacturing, installation, and operation of floating offshore wind platforms; the use of heavy-cargo vessels; and the provision of crewing and marshalling services for local wind energy operators. This will be the first hub on the West Coast to offer such ongoing services to this emerging industry.

The State of California has appropriated more than $10 million to initiate development of an offshore wind marshalling port in Humboldt Bay's Redwood Marine Terminal (RMT) as the hub of California's floating offshore wind industry to meet the State's objectives of deploying floating offshore wind capacity of 5 GW by 2030 and 25 GW by 2045 and the nation's objectives of 15 GW by 2035. Yet, the State has recently published a report finding that more than $11 billion will need to be invested across California's ports to fully meet State and Federal targets for floating offshore wind. Accordingly, the Port of Humboldt Bay—and the floating offshore wind industry at large—requires federal assistance as part of the necessary whole-of-government approach in order to catalyze progress on this critical multi-year, multi-phase climate, energy, and employment initiative.

The planning, stakeholder engagement, design and engineering, construction, community benefit, and workforce development investments proposed for the Humboldt Bay Offshore Wind MVP Project will support each of the MPDG program objectives and outcome criteria. First, the Project will directly improve safety by advancing numerous special studies and design activities leading to the construction of resilient and sustainable port terminal infrastructure enabling the domestic manufacture, assembly, transport, and installation of floating offshore wind turbines. Second, the Project exemplifies the state of good repair criterion by redeveloping a former wood products export terminal, removing thousands of chemically-treated wood pilings from the Bay, and creating new recreational infrastructure—a biking and hiking trail as well as new recreational vessel launch—for the benefit of community members. Third, the Project will generate substantial beneficial economic impacts; enable freight movement for offshore wind turbines and their components—many of which are too large to be transported by road or rail; and, directly and indirectly generate thousands of new jobs in construction, terminal operations, manufacturing, utilities, advanced energy, logistics, and the maritime industries. Fourth, this project likely poses the greatest opportunity for the Department of Transportation and the MPDG Program to address climate change, resiliency, and the environment through the vast energy,

environmental, and clean transportation benefits that can only be realized during this decade by the creation of this sustainably-designed terminal—built for resilience against tsunamis, earthquakes, wildfires, and sea level rise. Fifth, the Project supports equity, multimodal options, and quality of life by directly incorporating public feedback into project design elements and establishing meaningful workforce development and community benefits programs. Lastly, the Project—proposed by a public-private partnership—is at the forefront of innovation: building for a future zero-emission terminal while utilizing low- and zero-emission construction equipment; leveraging diverse public and private capital sources to de-risk and spur development in the emerging floating offshore wind industry; and, delivering the broader Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project in a minimum viable phased approach to expedite the capacity for in-water construction and catalyze the development of floating offshore wind energy systems.

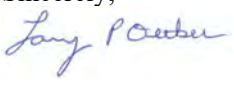
The proposed $853,439,620 Project will accelerate development and significantly increase the competitiveness of the U.S. offshore wind industry. To support this, the Harbor District will commit up to $6,672,266 from the non-federalized portions of its existing grant funding from the California Energy Commission. This funding is subject to a partial restriction should the District be awarded funding under the FY 2023 Port Infrastructure Development Program, in which event the District would be limited to committing $4,499,816 from its existing grant. These State funds are available immediately. Moreover, the District will collaborate with private partners and other Local, State, and Federal partners to develop a comprehensive funding stack—comprising eligible bonds, grants, tax credits, and other public and private sources—supporting all aspects of the cumulative Redwood Marine Terminal redevelopment efforts. This future funding will be made available at each phase of the project and proof of having sufficient match funding will be demonstrated at each Critical Project Review with the Department. If the Humboldt Bay Offshore Wind MVP Project is awarded funding under the MPDG, the District guarantees the availability of the staff and resources necessary to complete the activities described in the application, including ensuring timely reporting and compliance with all MPDG requirements and all Local, State, and Federal laws and regulations.

On August 10, 2023 the elected Board of Commissioners of the Humboldt Bay Harbor District unanimously adopted Harbor District Resolution 2023-15, which authorizes the District to submit this 2023-24 MPDG application and authorizes the expenditure of the matching funds. A copy of that Resolution can be found in Attachment 1 to this letter. On March 6, 2023, the elected Board also passed District Resolution 2023-05, which acknowledges the District's commitment to supporting offshore wind related port/terminal development. A copy of that Resolution can be found in Attachment 2 to this letter.

As the first mover in floating offshore wind and the premier port in California for supporting all aspects of the floating offshore wind industry, the Project provides a unique opportunity for the Department of Transportation and the Federal government to catalyze the decarbonization of the electricity and transportation sectors and achieve state and federal floating offshore wind objectives. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed for several years with further cascading impacts due to a lack of immediately available public funding sources capable of supporting projects of this magnitude and critical national significance.

The Humboldt Bay Harbor District is committing to catalyze the development of the nation's floating offshore wind industry. We are capable not only of planning such an ambitious and important project, but also of executing it in a timely, cost-effective, equitable, and inclusive manner. For these reasons and more, I urge you to fund the Humboldt Bay Offshore Wind MVP Project. If you have any questions at all, please do not hesitate to contact me.

Sincerely,



Larry Oetker, Executive Director
loetker@humboldtbay.org
707-443-0801

ATTACHMENTS:

1. Harbor District Resolution 2023-15, which authorizes the District to submit this 2023-24 MPDG application and authorizes the expenditure of the matching funds.
2. Harbor District Resolution 2023-05, which acknowledges the District's commitment to supporting offshore wind related port/terminal development.
3. Project Labor Agreement

HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

RESOLUTION NO. 2023-15

A RESOLUTION AUTHORIZING THE SUBMISSION OF A US DEPARTMENT OF TRANSPORTATION FY 2023-2024 MULTIMODAL PROJECT DISCRETIONARY GRANT OPPORTUNITY FOR THE HUMBOLDT OFFSHORE WIND TERMINAL PROJECT FOR THE CONSTRUCTION OF A PHASE OF A NEW HEAVY LIFT MULTIPURPOSE TERMINAL TO SUPPORT THE OFFSHORE WIND INDUSTRY

WHEREAS, on March 29th, 2021, the President Biden Administration announced a whole of government approach to catalyze offshore wind energy, strengthen the domestic supply chain, and create good-paying jobs, and

WHEREAS, the Federal US Department Of Transportation FY 2023-2024 Multimodal Project Discretionary Grant Opportunity (MPDG) Program is seeking to fund projects with significant national or regional impact that will improve and expand the surface transportation infrastructure in rural areas, and

WHEREAS, the grant program's objective is to "1) Invest in surface transportation infrastructure projects of national or regional significance and improve/expand infrastructure in rural areas; 2) Support projects that are consistent with the Department's strategic goals: improve safety, economic strength and global competitiveness, equity, and climate and sustainability", and

WHEREAS, the projects that strengthen and modernize port infrastructure and can support shore -side wind energy projects are eligible activities, and

WHEREAS, the Federal Government has established a goal of 30 gigawatts of offshore wind by the year 2030 and the State of California has established a goal of 25 gigawatts of offshore wind by the year 2045, and

WHEREAS, in December of 2022 the federal Bureau of Energy Management (BOEM) received bids totaling $757,100,000 from five international energy companies for two offshore wind areas (five sub-areas) off the coast of Humboldt and off the coast of Morro Bay, and

WHEREAS, BOEM has identified future offshore wind lease areas of the coast of Oregon with up to 16 gigawatts that are to be leased in the coming months;

WHEREAS, studies by NREL and others have also identified future offshore wind lease areas off the Cape Mendocino and Del Norte Coast which are approximately 122 miles from

Humboldt Bay and capable of producing a combined total of approximately 12.8 gigawatts of electricity;

WHEREAS, a report published by BOEM in early 2023 determined that only three ports in California are capable of hosting "Staging and Integration" (S&I) sites and a more recent State Lands Commission report indicated that the proposed Humboldt Bay project is the only S&I project that could be built in time in order for the State to reach its offshore wind goals, and

WHEREAS, the California Energy Commission formally awarded $10.45 million in funding to support the Port of Humboldt Bay's project, and

WHEREAS, the Port has identified and prepared a master plan on approximately 180+ acres of existing coastal dependent industrial lands to develop a new heavy lift terminal, upland tarmac, and manufacturing facilities which when fully developed will make Humboldt Bay the west coast hub for offshore wind, and

WHEREAS, the Port has prepared a US Department of Transportation FY 2023-2024 Multimodal Project Discretionary Grant to cover remaining soft costs of the project and Phase 0 and Phase 1 construction activities,

NOW, THEREFORE, THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. Authorizes the submission of a grant application under the US Department of Transportation FY 2023-2024 Multimodal Project Discretionary Grant Program.

SECTION 2. Authorizes the Executive Director to sign all documents associated with the grant application.

SECTION 3. Authorizes the Executive Director to commit matching funds drawn from a grant issued to the District from the California Energy Commission in early 2022.

PASSED AND ADOPTED by the Humboldt Bay Harbor, Recreation and Conservation District Board of Commissioners at a duly called meeting held on the **10th day of August 2023** by the following polled vote:

AYES: Benson, Dale, Higgins, Kullmann, Newman

NOES: 0

ABSENT: 0

ABSTAIN: 0

ATTEST:

Greg Dale, President
Board of Commissioners

Aaron Newman, Secretary
Board of Commissioners

CERTIFICATE OF SECRETARY

The undersigned, duly qualified and acting Secretary of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, does hereby certify that the attached Resolution is a true and correct copy of RESOLUTION NO. **2023-015** entitled,

A RESOLUTION AUTHORIZING THE SUBMISSION OF A US DEPARTMENT OF TRANSPORTATION FY 2023-2024 MULTIMODAL PROJECT DISCRETIONARY GRANT FOR A NEW HEAVY LIFT MULTIPURPOSE TERMINAL TO SUPPORT THE OFFSHORE WIND INDUSTRY

as regularly adopted at a legally convened meeting of the Board of Commissioners of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, duly held on the **10th day of August 2023**; and further, that such Resolution has been fully recorded in the Journal of Proceedings in my office, and is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this **10th day of August 2023**.

Aaron Newman, Secretary
Board of Commissioners

Humboldt Bay
Harbor, Recreation and Conservation District
(707) 443-0801
P.O. Box 1030
Eureka, California 95502-1030

STAFF REPORT
HARBOR DISTRICT MEETING
March 9, 2023

TO: Honorable Board President and Harbor District Board Members

FROM: Rob Holmlund, Development Director

DATE: March 6, 2023

TITLE: Consider Adopting Resolution 2023-05, A Resolution Concerning Offshore Wind Development Off the West Coast of the United States and Around Humboldt Bay

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STAFF RECOMMENDATION: Staff recommends that the Board receive a staff report, receive public comment, and adopt Harbor District Resolution No. 2023-05 that supports the State's goals regarding offshore wind, commits to working with Tribal nations regarding their concerns with offshore wind, recognizes a suite of interested stakeholders, acknowledges that offshore wind development will have direct impacts on select stakeholders, recognizes that offshore wind development will provide many local benefits, seeks District partnerships in developing a regional vision and roadmap for offshore wind development, and directs staff to continue a range of activities in support of offshore wind development.

SUMMARY: On 11/29/22, the Humboldt County Board of Supervisors (BOS) adopted County Resolution 22-1584 associated with offshore wind. District staff used that County Resolution as a template to develop a slightly modified Resolution that is being presented to the District Board of Directors.

BACKGROUND: The State of California has committed to a carbon neutral vision for 2045, which is to be achieved through a number of types of renewable energy projects, including solar, land-based wind farms, and offshore wind. In August 2022, the California Energy Commission set planning goals of five gigawatts (GW) of OSW by the year 2030 and 25 GW by 2045. The Federal government has also established goals for offshore wind, including 30 GW of offshore wind by 2030 and 15 GW of floating offshore wind energy by 2035. In December of 2022, the Federal Department of the Interior's Bureau of Ocean Energy Management (BOEM) leased five sub-areas off the California Coast (two off the coast of Humboldt and three off the coast of Morro Bay). The state and federal governments are also investing in port and supply chain development as critical to the success of the OSW industry.

In March 2022, the Harbor District Board accepted a $10.45M grant from the California Energy Commission to permit, design, and develop the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal. In October of 2022, the District Board approved an Exclusive Right to Negotiate with

Crowley Wind Services to develop the terminal, which will serve as a west coast hub for the offshore wind industry.

On 11/29/22, the Humboldt County Board of Supervisors (BOS) adopted County Resolution 22-1584, which commits the County to

- Work collaboratively with stakeholders to prepare for the unique opportunities presented by offshore wind;
- To ensure local communities experience the full scale of potential benefits of hosting this industry;
- To lower risk for vulnerable communities, to shift old patterns of harmful boom-and-bust natural resource extraction;
- to prepare local communities, governments, and economies for the transition.

Throughout the past year, the District has worked closely with the County in all of the commitments outlined in the County Resolution. The attached District Resolution is based on the County Resolution and allows the District to make similar commitments.

ATTACHMENTS:

A. Resolution No. 2023-05

HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

RESOLUTION NO. 2023-05

A RESOLUTION OF THE BOARD OF DIRECTORS CONCERNING OFFSHORE WIND DEVELOPMENT OFF THE WEST COAST OF THE UNITED STATES AND AROUND HUMBOLDT BAY

WHEREAS, offshore wind energy development is a crucial strategy to address global climate change and to meet the state and federal administrations' ambitious climate and renewable energy targets; and

WHEREAS, it is essential that the offshore wind industry develops and operates equitably and sustainably, and in partnership with the region's communities, to address the area's unique assets, needs, and connections with natural resources; and

WHEREAS, the Humboldt Bay Harbor, Recreation and Conservation District (District) is deeply committed to ensuring that the development of the offshore wind industry in this region yields a strong slate of community benefits, minimizes and mitigates impacts wherever possible, compensates communities for unavoidable impacts, and generates robust and sustainable economic opportunities for the region's communities; and

WHEREAS, the Bureau of Ocean Energy Management's (BOEM) offshore wind Final Sale Notice for wind lease areas off the coast of Humboldt County offers tremendous opportunities to pursue and achieve community benefits, including through a 20% workforce and/or supply chain development credit, a 5% General Community Benefit Agreement (CBA) credit, and a 5% Lease Area Use CBA credit; and

WHEREAS, concentrated and coordinated effort will be required to ensure that the offshore wind industry in the Humboldt region is developed sustainably in a way that benefits Tribal Nations and underrepresented communities, advances racial equity, protects the environment and builds a thriving, equitable, and sustainable local economy, including through the development and negotiation of CBAs and other agreements; and

WHEREAS, in collaboration with the County of Humboldt, the District has engaged with and plans to continue to engage with multiple stakeholders including Tribal governments, the City of Eureka, CalPoly Humboldt, the Workforce Development Coalition of Humboldt County, Redwood Coast Energy Authority; the State Building and Construction Trades Council, the Humboldt and Del Norte Construction Trades Council, the Redwood Region Climate and Community Resilience Hub (CORE Hub), the broader North Coast Offshore Wind Community

Benefits Network (Network), commercial fisheries, the Peninsula Community Collaborative, private property owners, various non-governmental organizations and environmental groups, and other regional communities and stakeholders to work toward a broad vision and roadmap for offshore wind development in our region; and

WHEREAS, the CORE and the Network represent a diverse group of Tribal Nations, local government agencies and educational institutions, labor leaders, local community-based organizations, and community residents, and has participated in BOEM's offshore wind lease sale process to seek robust community benefits stipulations and bid credits; and

WHEREAS, Tribal Nations; Black, Indigenous, and Communities of Color; commercial fisheries, and frontline communities bear the brunt of devastating impacts of climate catastrophe, energy vulnerability, and long-term impacts of extractive over-harvesting of natural resources, and are therefore critical partners and leaders in developing an equitable and sustainable path to offshore wind development; and

WHEREAS, the District recognizes Tribal sovereignty, self-determination, and other rights of Native American Tribes, as well as the specific and intentional historic trauma to Tribal Nations and Peoples by the federal, state, and county/local governments and previous destructive natural resource industries in the North Coast region; and

WHEREAS, the County of Humboldt and the surrounding region have rich fisheries, which are foundational to Tribal Nations, the commercial fishing economy, and marine species, and which will be affected by this new industry; and

WHEREAS, Humboldt Bay was historically one of California's largest fishing port, with North Coast fisheries currently contributing forty million ex-vessel dollars to the local community; and

WHEREAS, the cumulative loss of community fishing grounds and port fishing infrastructure by offshore wind development will impact fishermen, the fishing industry, Tribal fisheries and underserved North Coast fishing communities; and

WHEREAS, the District recognizes that BOEM's recently completed Humboldt and Morro Bay wind lease area auctions were a key step in the path to offshore wind development and is merely the beginning of what will hopefully be a long, productive, and collaborative partnership with wind developers and the region's diverse communities and constituencies; and

WHEREAS, necessary infrastructure investments throughout the greater Humboldt Bay region needs to be planned, prioritized, and sequenced in order to prepare for and maximize economic opportunities for projects related to offshore wind energy in particular, and the blue/green economy more generally; and

WHEREAS, investments in port, peninsula, and bay infrastructure are a critical early step in the District's overall economic development strategy for offshore wind, and are needed to minimize adverse community and environmental impacts; and

WHEREAS, to stimulate job creation, equitable economic development and prosperity for a diverse population, the District and various stakeholders must collaborate to prioritize early investments in such infrastructure, without which the site development for an array of economic development projects will not be possible; and

WHEREAS, offshore wind development, if pursued thoughtfully and in genuine partnership with the District, the County of Humboldt, Tribal Nations, and the region's other local governments, communities, commercial fisheries, and stakeholders, can help promote a diverse and thriving economic landscape

NOW, THEREFORE, THE BOARD OF COMMISSIONERS OF THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. The District believes that offshore wind energy development is a key strategy to fight global climate change. Accordingly, the District supports the State's goals of reaching 5 gigawatts of offshore wind energy by the year 2030 and 25 gigawatts by 2045, as well as the national goal of 30 gigawatts of offshore wind energy by 2030. The District also supports the State's efforts to plan for the necessary supplemental steps required to achieve the offshore wind energy goals, including enhancing power transmission infrastructure, preparing a capable workforce, and upgrading port infrastructure. The District is prepared to do its part to ensure the equitable and sustainable economic development of this new industry in the County and region, while helping ensure that any unavoidable impacts are mitigated and minimized. Offshore wind energy development provides a unique opportunity for diversification of the County's economic engines, and should be developed in full collaboration with local stakeholders, including Tribal Nations, local organizations and industries, fisheries and local government entities.

SECTION 2. The District recognizes that offshore wind development will affect Tribal Nations and their citizens. The District commits to working collaboratively with and supporting the leadership of Tribal Nations in addressing the effects of and advancing Tribal interests in offshore wind development.

SECTION 3. The District recognizes that the County of Humboldt is taking the lead in working with multiple stakeholders, including several Tribal governments, the City of Eureka, CalPoly Humboldt, the Workforce Development Coalition of Humboldt County, Redwood Coast Energy Authority, the State Building and Construction Trades Council, Humboldt and Del Norte Construction Trades Council, the Redwood Region Climate and Community Resilience Hub (CORE Hub), the broader North Coast Offshore Wind Community Benefits Network (Network), commercial fisheries, the Peninsula Community Collaborative, private property owners, various non-governmental organizations and environmental groups, and other regional communities

and stakeholders in advocating for offshore wind workforce development and community benefits, and have raised important issues before BOEM, other federal agencies and the State of California. The District supports these efforts, and will continue to participate as partners with the County in advocacy and negotiation of community benefits related to offshore wind development.

SECTION 4. The District acknowledges that offshore wind development will have unavoidable impacts on regional fisheries, including Tribal fisheries. The District intends to work collaboratively with representatives of affected local fishermen, businesses, industries and Tribal Nations to ensure that any impacts are mitigated, and to ensure compensation and support regarding unavoidable impacts, and to inform the region's transition process.

SECTION 5. The District recognizes that many other local stakeholders and residents will be directly and indirectly affected by offshore wind development in our region. The District intends to engage in sustained and proactive outreach to receive input from these communities regarding offshore wind development, and to help ensure that this new industry is a net benefit for the District and the region, with broadly-beneficial community benefits, and avoidance of concentrated negative impacts.

SECTION 6. Offshore wind development offers tremendous opportunities for employment, training, career development, and other workforce systems. The District will work collaboratively with resource partners and future employers, Tribal Nations, and labor and industry representatives, to help establish and support sustainable workforce development pathways for onshore and offshore construction, operations, and associated activities.

SECTION 7. For these reasons, the District Board of Directors strongly supports continued and enhanced engagement in all processes described above, including partnering to create: a regional vision and roadmap for offshore wind development, advancing funding opportunities to support regional agency and regional capacity, a community benefit plan, local outreach and engagement, and taking other steps appropriate to facilitating the offshore wind industry's long-term and sustainable development, for the benefit of our community.

SECTION 8. The District staff are therefore directed to
continue or undertake the following activities related to offshore wind development:

a) work collaboratively with local stakeholders in creating a regional vision and roadmap for offshore wind development to prepare our community for sustainable and equitable development of the offshore wind industry;
b) collaborate and engage with Tribal Nations regarding offshore wind development and its effect on and opportunities for Tribal Nations and their citizens;
c) collaborate with the commercial fishing communities, Tribes, recreational users of the Bay, and other directly impacted stakeholder groups, as well as the County, the CORE Hub, the Offshore Wind Community Benefit Network, and others in pursuing community benefits agreements with offshore wind development leaseholders and other developers;

d) support and/or participate in negotiations of community benefits agreements or similar agreements related to community benefits, workforce development, procurement, and mitigation of impacts, with offshore wind development leaseholders and other project developers, participants and affected stakeholders which advances the District's goals for Humboldt Bay and the regional vision and roadmap for offshore wind development which will be developed;
e) engage in outreach and stakeholder input efforts to ensure that all affected and interested members of the Humboldt County community and region are aware of offshore wind development activities and can participate in public processes regarding such activities;
f) work with the County of Humboldt to draft a Memorandum of Understanding regarding community benefits opportunities, including bay-wide master planning, project labor agreements, workforce development, and other County activities related to offshore wind;
g) coordinate with other state, federal, Tribal and local government entities to shape offshore wind development to maximize environmental and economic benefits, and minimize adverse impacts;
h) assist in planning and advancing onshore infrastructure upgrades that are essential for development of the industry, and are needed to minimize adverse impacts;
i) on behalf of the District Board, submit letters of support and requests for funding and regulatory or legislative frameworks related to regional agency and growing regional capacity to facilitate sustainable development of the offshore wind industry in the region;
j) take all reasonable additional steps to support offshore wind development in a manner that maximizes the benefits to the region, while minimizing and mitigating any unavoidable impacts, as described herein; and
k) report to the District Board of Directors as needed regarding negotiations, initiatives, and efforts as described herein.

PASSED AND ADOPTED by the Humboldt Bay Harbor, Recreation and Conservation District Board of Commissioners at a duly called meeting held on the **9th day of March 2023** by the following polled vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____

Greg Dale, President
Board of Commissioners

_____

Aaron Newman, Secretary
Board of Commissioners

CERTIFICATE OF SECRETARY

The undersigned, duly qualified and acting Secretary of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, does hereby certify that the attached Resolution is a true and correct copy of RESOLUTION NO. **2023-05** entitled,

A RESOLUTION OF THE BOARD OF DIRECTORS CONCERNING OFFSHORE WIND DEVELOPMENT OFF THE WEST COAST OF THE UNITED STATES AND AROUND HUMBOLDT BAY

as regularly adopted at a legally convened meeting of the Board of Commissioners of the HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT, duly held on the **9th day of March 2023**; and further, that such Resolution has been fully recorded in the Journal of Proceedings in my office, and is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this **9th day of March 2023**.

_____

Aaron Newman, Secretary
Board of Commissioners

Humboldt Bay
Harbor, Recreation and Conservation District
(707) 443-0801
P.O. Box 1030
Eureka, California 95502-1030

STAFF REPORT
HARBOR DISTRICT MEETING
August 10, 2023

TO: Honorable Board President and Harbor District Board Members

FROM: Larry Oetker, Executive Director

DATE: August 4, 2023

TITLE: Consider Approval of a Project Labor Agreement with the State Building and Construction Trade Council of the State of California, Building and Construction Trades Council of Humboldt and Del Norte Counties, and the Signatory Craft Councils and Unions

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STAFF RECOMMENDATION: Staff Recommends that the Board: Approve the Project Labor Agreement.

SUMMARY: The District's Offshore Wind Subcommittee and the State Building and Construction Trades Council have come to agreement on a Project Labor Agreement for the New Terminal Project (Attachment 1). The project is projected to require a significant amount of assistance from both the Federal and State Governments. On February 4, 2022, President Biden issued an Executive Order on Use of Project Labor Agreements For Federal Construction Projects which requires project labor agreements for federally funded projects of more than $35 Million.

DISCUSSION: Attachment 2 includes the Executive Order. As a separate agenda item, the District is applying for a multi-million-dollar Federal Multimodal Project Discretionary Grant (MPDG). Staff will provide an overview of the project phasing, progress to date and schedule for developing the new heavy lift marine terminal.

Under this agenda item, Staff will also provide an overview of potential Community Benefits that may be achieved through a project labor agreement such as tribal, Samoa Peninsula geographical, and other equity-based hiring/apprenticeship preferences; living wage requirements; local workforce training programs; and other opportunities for community benefits associated with the construction of a new heavy lift marine terminal.

Staff will be releasing a supplemental staff report by 5:00 pm on Tuesday, August 8, 2023. Any comments received prior to Tuesday, August 8th at 3:00 pm will be included in the supplemental Staff Report.

Staff would life to specifically thank the County of Humboldt, Humboldt Builders Exchange, and Chris Hannan, President of the State Building and Construction Trades Council for their assistance with negotiating this agreement.

Although there are many extremely important sections of the agreement, Staff would draw your attention to the following sections:

2.9 Disadvantage Worker
2.11 Local Business Area
2.12 Local Small Business
2.13 Local Hiring Requirement
2.14 Local Resident
2.15 Targeted Worker
3.49 Local Business Utilization
4.7 Skilled and Trained Workforce
8.61 Core Employees
8.8 Craft Request Form (See Attachment C for the form)
15.21 Apprentices

ATTACHMENTS:

1. Project Labor Agreement by and Between the Humboldt Bay Harbor, Recreation and Conservation District and State Building and Construction Trades Council of Humboldt and Del Norte Counties and the Signatory Craft Councils and Unions
2. Executive Order on Use of Project Labor Agreements For Federal Construction Projects

PROJECT LABOR AGREEMENT

BY AND BETWEEN

THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

AND

STATE BUILDING AND CONSTRUCTION TRADES COUNCIL OF CALIFORNIA,

BUILDING AND CONSTRUCTION TRADES COUNCIL

OF HUMBOLDT AND DEL NORTE COUNTIES

AND THE SIGNATORY CRAFT COUNCILS AND UNIONS

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PROJECT LABOR AGREEMENT

THE HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT

INTRODUCTION AND FINDINGS

WHEREAS, the successful timely completion of the Humboldt Bay Offshore Wind and Heavy Lift Terminal, herein referred to as the "Project," is of the utmost importance to the District; and

WHEREAS, large numbers of workers of various skills will be required in the performance of the construction work, including those to be represented by the Unions affiliated with the Building and Construction Trades Council of Humboldt and Del Norte Counties and any other craft labor organization which is signatory to this Agreement, employed by contractors and subcontractors who are signatory to agreements with said labor organizations; and

WHEREAS, this agreement also covers all contractors and subcontractors of all tiers who shall become signatory to this Agreement by signing the Letter of Assent (attached as Attachment A); and

WHEREAS, it is recognized that on projects of this magnitude with multiple contractors and bargaining units on the job site at the same time over an extended period of time, the potential for work disruption is substantial without an overriding commitment to maintain continuity of work; and

WHEREAS, the interests of the general public, the District, the Unions and Contractors would be best served if the construction work proceeded in an orderly manner without disruption because of strikes, sympathy strikes, work stoppages, picketing, lockouts, slowdowns or other interferences with work; and

WHEREAS, the Parties to this Agreement acknowledge that the construction of the Project is important to the development of the County of Humboldt, its residents, and the region as a whole; and

WHEREAS, the Parties place a high priority on the recruitment, training, and employment of residents and to create business opportunities for small and disadvantaged companies of historically disadvantaged communities of the Port's Local Impact Area as defined by this Agreement. The District places the highest priority on opportunities for the Humboldt Bay and Del Norte County area Tribes (including but not limited to the Wiyot Tribe, members of the Bear River Band of the Rohnerville Rancheria, members of the Blue Lake Rancheria); residents within communities along the Samoa Peninsula from Mad River Slough to the North Jetty; Veterans; commercial fisherman; and

WHEREAS, the District is committed to serving and creating economic opportunity in the communities that will be impacted by the construction activities by supporting the development and employment of increased numbers of construction workers from among the residents of these

communities; and

WHEREAS, the District and Humboldt County support efforts to develop offshore wind collaboratively with local stakeholders, to mitigate impacts of development, and to provide compensation and support regarding unavoidable impacts. The District and the County of Humboldt are working collaboratively to increase regional capacity, engagement and planning around offshore wind development; provide community benefits; increase local workforce and supply chain development; invest in necessary infrastructure, including housing, port infrastructure, transmission, roads, health care, child care; and ensure that offshore wind development benefits Tribal and underrepresented local communities.

WHEREAS, the Contractors and the Unions desire to mutually establish and stabilize wages, hours and working conditions for the workers employed on the Project by the Contractors, and further, to encourage close cooperation among the Contractors, and the Unions to the end that a satisfactory, continuous and harmonious relationship will exist among the Parties to this Agreement; and

WHEREAS, the contracts for the construction of the Project will be awarded by the District or future developers in accordance with the applicable provisions of public works construction law; and

WHEREAS, the District or future developers has the absolute right to select the lowest responsible bidder for the award of construction contracts on the Project; and

WHEREAS, the Parties signatory to this Agreement pledge their full good faith and trust to work towards a mutually satisfactory completion of the Project;

NOW, THEREFORE, IT IS AGREED BETWEEN AND AMONG THE PARTIES HERETO, AS FOLLOWS:

ARTICLE I: PURPOSE

The purpose of this Agreement is to provide a framework to facilitate the project delivery schedule and to address the special needs of the Humboldt Bay Harbor Recreation, and Conservation District, the Developers (if any), the Prime Contractor(s), the subcontractors, Targeted Workers, and the building and construction tradespeople performing work associated within the scope of the Project herein described.

This Agreement is intended to support the scheduling and financial commitments of the District by providing for a readily available pool of skilled craft construction workers, with the use of multiple shifts, the full utilization of apprentices and to minimize potential overtime concerns, as major construction activity occurs in this tightly confined work environment.

In recognition of the special needs of the Project, and to maintain a spirit of harmony, labor-management peace, and stability during the term of this Agreement, this Agreement will permit the District to maximize economies of operations through the use of uniform workplace rules and procedures applicable to all employers and employees while also avoiding costly delays on Project

work due to contractor lockouts, industry-wide job stoppages, strikes, sympathy strikes, work stoppages, picketing, slowdowns, labor disputes or other interference with work.

The parties recognize that it is uncertain, at the time of the execution of this Agreement, whether the District or future users of the subject property will directly procure contracts for construction of the Project. Procurement of construction will depend, in large part, on the funding sources, procurement requirements, and any other terms of the lease agreement(s) with future developers.

This Agreement has been developed to facilitate the utmost timely, efficient and cost-effective completion of the Project, to ensure that the Project is within the designated schedule and budget, which is of vital importance to the District and the public.

ARTICLE II: DEFINITIONS

2.1 "Agreement" means this Project Labor Agreement.

2.2 "Apprentice" means those employees registered and participating in Joint Labor/Management Apprenticeship Programs approved by the Division of Apprenticeship Standards, Department of Industrial Relations of the State of California.

2.3 "Board" means the Board of Commissioners of the Humboldt Bay Harbor, Recreation, and Conservation District, a California special district.

2.4 "Developer" means, as applicable, either (i) the District or (ii) a third-party entity to which the District conveys real property rights (whether by license, lease or other method) to all or a portion of the Project area for, among other things, the construction and operation of port infrastructure and which such entity procures construction contracts with one or more Contractors. For those construction contracts between the District and a Contractor, the District, for those construction contracts, shall be consider the Developer for purposes of this Agreement. For those separate construction contracts between an entity described in subdivision (ii) of this Section 2.4 and any Contractor, the District shall not be considered a Developer and, instead, that entity shall be considered the Developer for purposes of this Agreement.

2.5 "District" means The Humboldt Bay Harbor, Recreation, and Conservation District.

2.6 "Committee" means Joint Administrative Committee as described in Article XI of this Agreement.

2.7 "Construction contract" means any of the contracts for construction of the Project.

2.8 "Contractor" or "Employer" means the Prime Contractor, the Project Labor Coordinator (in the event it performs work covered by this Agreement), and all subcontractors and owner operators of any tier, with respect to the construction of any part of the Project.

2.9 "Disadvantaged Worker" shall mean a Local Resident, who, prior to the

commencing Project Work, meets at least one of the following barriers to employment: (1) is enrolled as a tribal member or a spouse of an enrolled tribal member of a federally recognized Tribe within the Local Impact Area or within Del Norte County; (2) resides on the Samoa Peninsula from the Mad River Slough to the North Jetty; (3) is a Veteran Worker; (4) is a commercial fisherman; or (5) has successfully completed the Building Trades Multi-Craft Core Curriculum Pre-Apprenticeship Program (this includes graduates who reside in Del Norte County).

2.10 "Letter of Assent" means the document that each Contractor (of any tier) must sign and submit to the Project Labor Coordinator and the Council, before beginning any Project Work, which formally binds them to adherence to all the forms, requirements and conditions of this Agreement.

2.11 "Local Business Area" or "Local Impact Area" means all of Humboldt County.

2.12 "Local Small Business" means a Contractor that (i) has operated an office in the Local Impact Area for two consecutive years prior to executing the Letter of Assent for the Project and (ii) has had, on average, fifteen (15) or fewer full-time employees during each of the prior twelve (12) payroll periods prior to executing the Letter of Assent for the Project. For purposes of this section, a full time employee means an individual who is regularly schedule to work 40 hours per week.

2.13 "Local Hiring Requirement" means the Local Resident hiring targets as referenced in Article VIII of this Agreement.

2.14 "Local Resident" means individuals domiciled within the Local Impact Area.

2.15 "Targeted Worker" means (i) any Disadvantaged Worker; (ii) any worker domiciled in the Local Business Area; (iii) graduates of Humboldt County local High Schools, College of the Redwoods, and Cal Poly Humboldt; or (iv) any workers needed to meet targeted employment requirements pursuant to the Project's funding sources.

2.16 "Master Labor Agreement" or "MLA" means the local collective bargaining agreements of the signatory Unions having jurisdiction over the Project Work and which have signed this Agreement.

2.17 "Plan" means the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry as described in Article XIII of this Agreement.

2.18 "Prime Contractor" means the individual firm, partnership, owner operator, or corporation, or combination thereof, including joint ventures, which is an independent business enterprise that has entered into a contract with the Developer to construct the Project.

2.19 "Project" means the District's Offshore Wind and Heavy Lift Terminal, at the Port of Humboldt Bay in Eureka, California, as is more particularly described in Section 3.2 of this Agreement.

2.20 "Project Labor Coordinator" means an independent third-party individual or entity, with whom the Developer enters into a contract, or a Developer staff member, which helps in facilitating implementation of this Agreement.

2.21 "Council" means the Building and Construction Trades Council of Humboldt and Del Norte Counties ("Council").

2.22 "Union(s)" or "Signatory Unions" means the State Building and Construction Trades Council of California ("State Council"), the Building and Construction Trades Council of Humboldt and Del Norte Counties ("Council"), the signatory Craft Councils and Local Unions signing this Agreement, acting in their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.

2.23 "Veteran Worker" means any person who has served in the armed forces of the United States as demonstrated by a valid Form DD214.

ARTICLE III: SCOPE OF AGREEMENT

3.1 Parties: This Agreement shall apply and is limited to all Contractors performing construction on the Project, the District and the Unions. Notwithstanding anything in this Agreement to the contrary, where, in this Agreement, rights, duties, or obligations are given to or imposed upon the "Developer", such rights, duties, or obligations shall pass solely to the Developer, as applicable, pursuant to Section 2.4, above. For those construction contracts in which the District is not deemed the Developer pursuant to Section 2.4, above, the District shall not be liable to the Unions, whether jointly, severally, vicariously, or otherwise, under this Agreement to perform any duties or obligations that are imposed upon the Developer under this Agreement.

3.2 Project Defined: This Agreement shall apply and is limited to the demolition, abatement, grading, construction, reconstruction, redevelopment, alteration, installation, and expansion work for the Humboldt Bay Offshore Wind and Heavy Lift Terminal project, consisting of the construction of a new multipurpose terminal, including cut and fill to a phased base elevation of approximately15.5 feet; shoreline structure development associated with the proposed sea level rise fill; infrastructure to support upland tarmac such as lighting, paving, drainage improvements, alternative maritime power vaults, and associated utility lines, poles, conduit, and wires throughout the wharf and tarmac area; reconstruction of inbound and outbound truck access roads, including internal traffic circulation realignment, pavement improvements, street widening, striping, drainage, security fencing, gates, and other truck access and perimeter security improvements; retention of the existing marine railway within the project area; the addition of the new cranes would require infrastructure improvements, such as cable and electrical upgrades for new crane rails (collectively, the "Project Work").

3.2.1 The Developer has the absolute right to combine, consolidate or cancel contracts or portions of contracts identified as part of the Project. It is further understood by the parties that the Developer may at any time, and at its sole discretion, terminate, delay, suspend, remove, modify, or add to any and all portions or segments of the Project, at any time. Should any

portion of the Project be terminated, delayed, suspended or removed, and subsequently built, such portions of the Project shall remain covered under the terms and conditions of this Agreement.

3.3 Master Labor Agreements:

3.3.1 The provisions of this Agreement, including the MLAs (which are the local collective bargaining agreements of the signatory Unions having jurisdiction over the work on the Project, as such may be changed from time-to-time and which are incorporated herein by reference and are available for review at the District's office), shall apply to the work covered by this Agreement. It is understood that this is a self-contained, stand alone, Agreement and that by virtue of having become bound to this Project Labor Agreement, neither the Prime Contractor nor the Contractor will be obligated to sign any other local, area, or national agreement. (provided, however, that the Contractor may be required to sign an uniformly applied, non-discriminatory Participation Agreement at the request of the trustees or administrator of a trust fund established pursuant to Section 302 of the Labor Management Relations Act, and to which such Contractor is bound to make contributions under this Agreement, provided that such Participation Agreement does not purport to bind the Contractor beyond the terms and conditions of this Agreement and/or expand its obligation to make contributions pursuant thereto). It shall be the responsibility of the Prime Contractor to have each of its Contractors sign the Participation Agreement with the appropriate Craft Union prior to the Contractor beginning Project Work.

The Project Labor Coordinator and the Council shall, prior to the commencement of work on the Project, agree upon the MLAs to be applicable for work covered by this Agreement.

3.3.2 Where a subject covered by the provisions of this Agreement is also covered by a MLA, the provisions of this Agreement shall prevail except for all work performed under the National Transient Lodge (NTL) Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and control systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article V (Work Stoppages, Strikes, Sympathy Strikes and Lockouts), Article XII (Grievance and Arbitration Procedure) and Article XIII (Jurisdictional Disputes) of this Agreement, which shall apply to such work. All disputes relating to the interpretation or application of this Agreement shall be subject to resolution by the grievance arbitration procedure set forth in Article XII of this Agreement. Where a subject is covered by the provisions of a MLA and is not covered by this Agreement, the provisions of the MLA shall prevail. Any dispute as to the applicable source between this Agreement and any MLA for determining the wages, hours of working conditions of employees on this Project shall be resolved under the grievance procedures established in this Agreement.

3.4 Exclusions:

3.4.1 The Agreement shall be limited to construction work on the Project, and is not intended to, and shall not apply to any construction work performed at any time prior to the effective date, or after the expiration or termination of the Agreement, or on other District or Developer projects. All work from the award of construction contract(s) to the notice of completion

of the contract(s) shall be covered by this Agreement. Work before the award of contract and after notice of completion shall not be subject to this Agreement.

3.4.2 The Agreement is not intended to, and shall not, affect or govern the award of contracts by the District or Developer, which are outside the approved scope of the Project.

3.4.3 The Agreement is not intended to, and shall not, affect the operation or maintenance of any facilities whether related to the Project or not.

3.4.4 Items specifically excluded from the scope of this Agreement include the following:

(a) Work performed by non-manual employees of Contractors, including but not limited to: superintendents; supervisors (meanings those individuals that are employed above the level of general foreman); assistant supervisors; staff engineers; time keepers, mail carriers, clerks, office workers, messengers; guards, safety personnel, emergency medical and first aid technicians; and other professional, engineering, administrative, information technology, community relations, public affairs, environmental compliance, supervisory, and management employees.

(b) Work on equipment and machinery owned or controlled and operated by the Developer for work that is not covered by the scope of this Agreement.

(c) All off-site manufacture and handling of materials, equipment or machinery; provided, however, that lay down or storage areas for equipment or material and manufacturing (prefabrication) sites, dedicated solely to the Project or Project Work, and the movement of materials or goods between locations on a Project site are within the scope of this Agreement. Additionally, off-site work, including fabrication, that is traditionally performed by any of the Unions that is directly or indirectly part of the Project, shall be considered within the scope of this Agreement provided such work is covered by a provision of a local Master Labor Agreement or local addendum to a National agreement of the applicable Union(s);

(d) Any work performed on or near or leading to or onto the Project and undertaken by state, county, city or other governmental bodies, or their contractors; or by public or private utilities or their contractors; and/or by the Developer or its contractors (for work which is not part of the Project).

(e) It is recognized that certain equipment and systems of a highly technical and specialized nature will have to be installed at the Project. The nature of the equipment and systems, together with requirements of manufacturer's warranty, may dictate that it be prefabricated, pre-piped, and/or pre-wired and that it be installed under the supervision and direction of the Owner's and/or manufacturer's personnel. The Unions agree to install such material, equipment and systems without incident, or allow such installation to be performed by the manufacturer's employees or a contractor certified by the manufacturer where the Unions are unable to perform such work or the warranty requires the work to be performed by the employees of the manufacturer or a contractor certified by the manufacturer. If a warranty on the manufacturer's specialty or

technical equipment or systems purchased by the Developer or Prime Contractor requires that the installation of such specialty or technical equipment or system be performed by the manufacturer's own personnel, then such installation may be performed by the manufacturer's own personnel. If a warranty on the manufacturer's specialty or technical equipment or systems purchased by the Developer or Prime Contractor requires that the installation of such specialty or technical equipment or system be performed by a contractor certified by the manufacturer, and there are no Union signatory contractors certified by the manufacturer to install and/or perform such work, then such installation may be performed by such certified contractor. The Prime Contractor shall notify the Unions at the pre-job conference of the use of this provision and shall provide copies of the written warranty that require that the work be performed by the manufacturer's own personnel, or a contractor certified by the manufacturer, to the affected Union. When the warranty does not require installation by the manufacturer's own personnel or a contractor certified by the manufacturer, the Unions agree to perform and install such work under the supervision and direction of the manufacturer's representative.

(f) Off-site laboratory work for testing.

(g) Non-construction support services contracted by the Developer or Contractor in connection with this Project.

(h) For purposes of this Agreement the Project includes the dredging and site contouring work associated with the eel grass; coastal wetland, and other required environmentally sensitive habitat restoration/mitigation associated with the project but does not include the underwater planting work performed by or under the supervision of biologists.

(i) The project does not include the loading and unloading of any commercial cargo from barges or other commercial vessels over the newly constructed terminal between the vessel and the landward terminus of the dock that are customarily completed by members of the International Longshore and Warehouse Union, except for the delivery of construction materials and equipment for the Project.

(j) Notwithstanding anything in this Agreement to the contrary, the Contractor shall have the unqualified right to select and hire directly all supervisors above the level of general foreman it considers necessary and desirable without such person being referred by the Union(s). The selection of the foreman and/or general foremen, and the number of foremen required shall be entirely the responsibility of the Contractor.

3.4.5 This Agreement shall not apply to Developer employees or professional consultants working directly for the Developer or to such consultants retained or contracted whose employees do not perform the work of craft employees covered by this Agreement. Notwithstanding the foregoing, it is understood and agreed that Surveyors and Building/Construction Inspectors and Field Soils and Material Testers (Inspectors) are a covered craft under this Agreement. This inclusion applies to the scope of work defined in the State of California Wage Determination for that Craft. This shall also specifically include such work where it is referred to by utilization of such terms as "quality control" or "quality assurance." Every Surveyor and Inspector performing under these classifications pursuant to a professional services agreement or a construction contract shall be bound to all applicable requirements of this

Agreement. Covered work as defined by this Agreement shall be performed pursuant to the terms and conditions of this Agreement regardless of the manner in which the work was awarded.

3.4.6 The Agreement shall not apply to employees of the Developer, Project Labor Coordinator, design teams (including, but not limited to architects, engineers and master planners), or any other consultants for the Developer (including, but not limited to, project managers and construction managers and their employees not engaged in Project Work) and their sub-consultants, and other employees of professional service organizations, not performing manual labor within the scope of this Agreement.

3.4.7 This Agreement shall not apply to off-site maintenance of equipment or to on-site supervision of such work.

3.4.8 This Agreement shall not apply to work that is immediately necessary to repair a unit or piece of equipment as the result of an emergency, Act of God, or other sudden unexpected events outside of the Developer's or Contractor's control.

3.4.9 Local Business Utilization: Terms of this Agreement shall not apply to contracts for Project Work that have an de minimis estimated value before bidding below two hundred and fifty thousand dollars ($250,000), and that are awarded to Contractors based in the Local Business Area. The aggregate dollar value of all contracts falling under this provision shall not exceed one percent (1%) of the total dollar value of Project Work. The Parties agree any contracts cannot be subdivided for the purpose or effect of coming under the threshold.

ARTICLE IV: EFFECT OF AGREEMENT

4.1 By executing the Agreement, the Unions, Contractors and the Developer agree to be bound by each and all of the provisions of the Agreement.

4.2 The Developer, the Prime Contractor, and Contractors shall have the absolute right to award contracts or subcontracts for Project Work to any contractor notwithstanding the existence or non-existence of any agreements between such contractor and any Union parties hereto, provided only that such contractor is willing, ready and able to execute and comply with this Project Labor Agreement should such contractor be awarded work covered by this Agreement.

4.3 All Contractors of whatever tier, who have been awarded contracts for work covered by this Agreement, shall be required to accept and be bound to the terms and conditions of this Project Labor Agreement, and shall evidence their acceptance by the execution of the Letter of Assent as set forth in Attachment "A" hereto, prior to the commencement of work. At the time that any Contractor enters into a subcontract with any subcontractor of any tier providing for the performance on the construction contract, the Contractor shall provide a copy of this Agreement to the subcontractor and shall require the subcontractor, as a part of accepting the award of a construction subcontract, to agree in writing in the form of a Letter of Assent to be bound by each and every provision of this Agreement prior to the commencement of work on the Project. No Contractor or subcontractor shall commence Project Work without having first provided a copy of the Letter of Assent as executed by it to the Project Labor Coordinator and to the Council forty-eight (48) hours before the commencement of Project Work, or within forty-eight (48) hours after

the award of Project Work to that Contractor (or subcontractor), whichever occurs later.

4.4 This Agreement shall only be binding on the signatory Contractors hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any signatory to this Agreement or the Letter of Assent, unless signed by such parent, affiliate, subsidiary, division or venture of such company.

4.5 Nothing contained herein shall be construed to prohibit, restrict, or interfere with the performance of any other operation, work or function awarded to any Contractor before the effective date of this Agreement or which may be performed by the Developer for its own account on the property or in and around the construction site.

4.6 It is understood that the liability of the Developer, the Contractor, the Project Labor Coordinator, and the liability of the separate Unions under this Agreement shall be several and not joint. The Unions agree that this Agreement does not have the effect of creating any joint employment status between or among the Developer, Prime Contractor, Project Labor Coordinator, and any Contractor.

4.7 If terms of state law or funding requirements apply a "skilled and trained workforce" requirements (Public Contract Code sections 2600 et seq.) to the Project, then all Contractors shall comply with such requirements in the performance of all covered work on the Project. The Unions and all Contractors shall utilize the grievance procedures set forth in Article XII of this Agreement to resolve any disputes regarding skilled and trained workforce requirements. To the maximum extent permissible under state law and terms of funding agreements, Contractors' requirement to utilize a skilled and trained workforce shall be monitored and enforced by Unions and Contractors through provisions of this Agreement, rather than through provisions of Public Contract Code sections 2602 and 2603.

ARTICLE V: WORK STOPPAGES, STRIKES, SYMPATHY STRIKES AND LOCKOUTS

5.1 No Work Stoppages or Disruptive Activity The Council and the Unions signatory hereto agree that neither the Council nor the Unions, nor their respective officers or agents or representatives, shall incite or encourage, condone or participate in any strike, walk-out, slow-down, picketing, observing picket lines or other activity of any nature or kind whatsoever, for any cause or dispute whatsoever with respect to or any way related to Project Work, or which interferes with or otherwise disrupts, Project Work, or with respect to or related to the Developer or Contractors or subcontractors, including, but not limited to, economic strikes, unfair labor practice strikes, safety strikes, sympathy strikes and jurisdictional strikes whether or not the underlying dispute is arbitrable. Any such actions by the Council, or Unions, or their members, agents, representatives or the employees they represent shall constitute a violation of this Agreement. If the Council or Unions are notified of offsite work stoppage, strike, picketing or other disruptive activity by the Union that will economically and/or materially affect the completion of the Project, the Union will promptly make good to cease such Project work disruption.

5.2 No Union shall sanction, aid or abet, encourage or continue any activity in violation of Section 5.1 of this Article and shall undertake all reasonable means to prevent or to terminate any such activity. No employee shall engage in activities which violate this Article. Any employee who participates in or encourages any activities which violate this Article will be subject to discharge and will not be eligible for rehire under this Agreement for a period of 180 calendar days. The Union shall use its best efforts to obtain immediate compliance with this Article by employees it represents but shall not be held liable for conduct by employees for which it is not responsible.

5.3 Notwithstanding any provision of this Agreement to the contrary, it shall not be a violation of this Agreement for any Union to withhold the services of its members (but not the right to picket) from a particular Contractor who:

(a) fails to timely pay its weekly payroll; or

(b) fails to make timely payments to the Union's Labor/Management Trust Funds in accordance with the provisions of the applicable MLAs.

Prior to withholding its members' services for the Contractor's failure to meet its weekly payroll, the Union shall give at least five (5) days (unless a lesser period of time is provided in the Union's MLA, but in no event less than forty-eight (48) hours) written notice of such failure to pay by registered or certified mail, return receipt requested, and by facsimile or email transmission to the involved Contractor, Prime Contractor and Project Labor Coordinator. The Union will meet within a five-day period, after the written notice of such failure to pay was sent, to attempt to resolve the dispute with the applicable Contractor, Prime Contractor and/or the Project Labor Coordinator. Upon the payment of the delinquent Contractor of all monies due and then owing for wages, the Union shall direct its members to return to work and the Contractor shall return all such members back to work.

Prior to withholding its members' services for the Contractor's failure to make timely payments to the Union's Labor/Management Trust Funds, the Union shall give at least thirty (30) days written notice of such failure to pay by registered or certified mail, return receipt requested, and by facsimile or email transmission to the involved Contractor, the Prime Contractor and Project Labor Coordinator. The Union, Contractor, Prime Contractor and Project Labor Coordinator will meet within ten (10) days following receipt of the written notice to attempt to resolve the dispute. Upon payment by the delinquent Contractor of all monies due and then owing for wages and/or fringe benefit contributions, the Union shall direct its members to return to work and the Contractor shall return all such members back to work. Nothing in this section should be construed to prevent the union having jurisdiction over the involved work from submitting a grievance under the procedures of Article XIII for any alleged or actual violations of Article IX or referring the alleged or actual prevailing wage violation to the Project Labor Coordinator and/or State Labor Commissioner for review and enforcement, in accordance with Section 9.3.4 of this Agreement.

5.4 Expiration of MLAs: If the MLA, or any local, regional, and other applicable collective bargaining agreements expire during the term of the Project, the Union(s) agree that there shall be no work disruption of any kind as described in Section 5.1 above as a result of the

expiration of any such agreement(s) having application on the Project and/or failure of the involved Parties to that agreement to reach a new contract. Terms and conditions of employment established and set for purposes of prevailing wage requirements under this Agreement at the time of bid shall remain established and set. Otherwise to the extent that such agreement does expire and the Parties to that agreement have failed to reach concurrence on a new contract, work will continue on the Project on one of the following two (2) options, both of which will be offered by the Unions involved to the Contractors affected:

5.4.1 Each of the Unions with a contract expiring must offer to continue working on the Project under interim agreements that retain all the terms of the expiring contract, except that the Unions involved in such expiring contract may each propose wage rates and employer contribution rates to employee benefit funds under the prior contract different from what those wage rates and employer contributions rates were under the expiring contracts. The terms of the Union's interim agreement offered to Contractors will be no less favorable than the terms offered by the Union to any other employer or group of employers covering the same type of construction work in the Local Impact Area.

5.4.2. Each of the Unions with a contract expiring must offer to continue working on the Project under all the terms of the expiring contract, including the wage rates and employer contribution rates to the employee benefit funds, if the Contractor affected by that expiring contract agrees to the following retroactivity provisions: if a new MLA, local, regional or other applicable labor agreement for the industry having application at the Project is ratified and signed within six months of the MLA expiration date and if such new labor agreement provides for retroactive wage increases, then each affected Contractor shall pay to its employees who performed work covered by this Agreement at the Project during the hiatus between the effective dates of such expired and new labor agreements, an amount equal to any such retroactive wage increase established by such new labor agreement, retroactive to whatever date is provided by the new labor agreement for such increase to go into effect, for each employee's hours worked on the Project during the retroactive period. All Parties agree that such affected Contractors shall be solely responsible for any retroactive payment to its employees and that neither the Project, nor the Developer, nor the Board's designee, nor any other Contractor has any obligation, responsibility or liability whatsoever for any such retroactive payments or collection of any such retroactive payments, from any such Contractor.

5.4.3 Some Contractors may elect to continue to work on the Project under the terms of the interim agreement option offered under paragraph 5.4.1 and other Contractors may elect to continue to work on the Project under the retroactivity option offered under paragraph 5.4.2. To decide between the two options, Contractors will be given one week after the applicable MLA has expired or one week after the Union has personally delivered to the Contractors in writing its specific offer of terms of the interim agreement pursuant to paragraph 5.4.1 whichever is the later date. If the Contractor fails to timely select one of the two options, the Contractor shall be deemed to have selected the retroactivity option offered under paragraph 5.4.2.

5.5 Expedited Arbitration will be utilized for all work stoppages and lockouts. Any party, including the Developer, Prime Contractor and Project Labor Coordinator, whom the parties agree are parties in interest for purposes of this Article, may institute the following procedure, in

lieu of or in addition to any other contractual procedure or any action at law or equity, when a breach or violation of this Article V is alleged to have occurred:

5.5.1 If the Contractor contends that any Union has violated this Article, it will serve written notification upon the Business Manager of the Union(s) involved, advising him of the fact, with copies of such notice to the Prime Contractor, the Project Labor Coordinator and the Council. The Business Manager will immediately instruct, order and use the best efforts of his office to cause any violation of this Article to cease.

5.5.2 If the Union contends that any Contractor has violated this Article, it will notify the Contractor, Prime Contractor, and Project Labor Coordinator, setting forth the facts which the Union contends violates this Article, at least twenty-four (24) hours prior to invoking the procedures set forth in Section 5.5. It is agreed by the parties that the term "lockout" for purposes of this Agreement does not include discharge, termination or layoff of employees by the Contractor in the normal course of its business, nor does it include the Contractor's decision to terminate or suspend work on the Project or any portion thereof for operational or special circumstances.

5.5.3 The party invoking this procedure shall notify the permanent arbitrator next in sequence from the following list:

1. John Kagel
2. Catherine Harris
3. Andrea Dooley
4. Thomas Pagan
5. Carol Vendrillo

The Parties agree these shall be the five permanent Arbitrators under this procedure. In the event that none of the five permanent Arbitrators are available for a hearing within 24 hours, the party invoking the procedure shall have the option of delaying until one of the five permanent Arbitrators is available or of asking the permanent Arbitrator that would normally hear the matter to designate an arbitrator to sit as a substitute Arbitrator for this dispute. If any of the permanent Arbitrators ask to be relieved from their status as a permanent Arbitrator, the Parties shall mutually select a new permanent Arbitrator from the following list of arbitrators:

1. Sara Adler
2. Chris David Ruiz Cameron
3. Najeeb Khoury

Selection shall be made by each party alternately striking from the foregoing list until one name remains who shall be the replacement permanent Arbitrator. Expenses incurred in arbitration shall be borne equally by the Union and the Contractor involved and the decision of the Arbitrator shall be final and binding on both Parties, provided, however, that the Arbitrator shall not have the authority to alter or amend or add to or delete from the provisions of this Agreement in any way. Notice to the Arbitrator shall be by the most expeditious means available, including by hand delivery, overnight mail, facsimile, or email to the party alleged to be in violation and to the

Council and involved Union if a Union is alleged to be in violation and will be deemed effective upon receipt.

5.5.4 Upon receipt of notice, the Arbitrator shall convene a hearing within twenty-four (24) hours if it is contended that the violation still exists.

5.5.5 The Arbitrator, with the assistance of the Project Labor Coordinator, if necessary, shall notify the Parties by telephone and by facsimile or email of the place and time for the hearing. Notice shall be given to the individual Contractors and Unions alleged to be involved; however, notice to the Council shall be sufficient to constitute notice to the Unions for purposes of the arbitration being heard by the Arbitrator. The hearing shall be completed in one session, which, with appropriate recesses at the Arbitrator's discretion, shall not exceed twenty-four (24) hours unless otherwise agreed upon by all Parties. A failure of any party to attend a hearing shall not delay the hearing of evidence or the issuance of any decision by the Arbitrator.

5.5.6 The sole issue at the hearing shall be whether or not a violation of Section 5.1 or 5.2 has in fact occurred. The Arbitrator shall have no authority to consider any matter of justification, explanation or mitigation of such violation. The decision shall be issued within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with or enforcement of the award. The Arbitrator may order cessation of the violation of this Article and other appropriate relief and such decision shall be served on all Parties by hand or registered mail upon issuance. If the arbitrator determines that a work stoppage has occurred, the respondent Unions(s) shall, within eight (8) hours of receipt of the award, direct all the employees they represent on the project to immediately return to work. If the craft(s) involved does not return to work by the beginning of the next regularly scheduled shift following such eight (8) hour period after receipt of the arbitrator’s award, and the respondent Union(s) have not complied with their obligation to immediately instruct, order, and use their best efforts to cause a cessation of the violation and return of the employees they represent to work, then the respondent Union(s) shall each pay a sum as liquidated damages to the Developer, and each shall pay an additional sum per shift for each shift thereafter on which the craft(s) has not returned to work. Similarly, if the arbitrator determines that a lock-out has occurred, the respondent Contractor(s) shall, within eight (8) hours of receipt of the award, return all the affected employees to work on the Project, or otherwise correct the violation as found by the arbitrator. If the respondent Contractor(s) do not take such action by the beginning of the next regularly scheduled shift following the eight (8) hour period, each respondent Contractor shall pay a sum as liquidated damages to the affected Union(s) (to be apportioned among the affected employees and the benefit funds to which contributions are made on their behalf, as appropriate and designated by the Arbitrator) and each shall pay an additional sum per shift for each shift thereafter in which compliance by the respondent Contractor(s) has not been completed. The Arbitrator shall retain jurisdiction to determine compliance with this Section and to establish the appropriate sum of liquidated damages, which shall not be less than five thousand dollars ($5,000) per shift, nor more than twenty thousand dollars ($20,000) per shift.

5.5.7 Such decision shall be final and binding on the parties to the dispute and may be enforced by any Court of competent jurisdiction upon the filing of this Agreement and all

other relevant documents referred to above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's decision as issued under Section 5.5.6, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Arbitrator's award shall be served on all parties by hand or delivered by registered mail.

5.5.8 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by the Parties to whom they accrue.

5.5.9 The fees and expenses incurred in arbitration shall be divided equally by the arbitration's initiating and responding parties.

5.5.10 The procedures contained in Section 5.5 shall be applicable to alleged violations of Article V to the extent any conduct described in Section 5.1 or 5.2 occurs on the Project. Procedures contained in Article XII shall not be applicable to any alleged violation of this Article, with the single exception that any employee discharged for violation of Section 5.1 or 5.2 may resort to the grievance procedures of Article XII to determine only whether or not the employee was, in fact, engaged in that violation. Disputes alleging violation of any other provision of this Agreement, including any underlying disputes alleged to be in justification, explanation, or mitigation of any violation of Article V, shall be resolved under the applicable grievance adjudication procedures.

ARTICLE VI: NO DISCRIMINATION

6.1 The Contractors and Unions agree not to engage in any form of unlawful discrimination on the ground of, or because of, race, religion, national origin, sex, sexual orientation, age, physical handicap, marital status, medical condition, political affiliation, or membership in a labor organization in hiring and dispatching workers for the Project.

6.2 Any employee covered by this Agreement who believes they have been unlawfully discriminated against, in violation of section 6.1 above, shall be referred to the appropriate state and/or federal agency for the resolution of such dispute.

ARTICLE VII: UNION SECURITY

7.1 The Contractors recognize the Unions as the sole and exclusive collective bargaining representative for all employees covered by this Agreement that are engaged in Project Work. The Parties acknowledge that the collective bargaining relationship established between any Contractor and Union is a “pre-hire” relationship permitted by Section 8(f) of the National Labor Relations Act, except that this provision does not change any pre-existing Section 9(a) collective bargaining relationship that exists between any Contractor and Union parties to this Agreement.

7.2 Employees are not required to become or remain union members or pay dues or fees as a condition of performing Project Work under this Agreement. Employers shall make and transmit all deductions for union dues, fees, and assessments that have been authorized by employees in writing in accordance with the applicable MLA. Nothing in this Section 7.2 is intended to supersede independent requirements of applicable MLA as to those Employers otherwise signatory to such MLA and as to the employees of those Employers who are performing Project Work.

ARTICLE VIII: REFERRAL

8.1 The Union(s) shall be the primary source of all craft labor working within their respective jurisdictions on the Project.

8.2 The Contractor shall have the right to determine the competency of all employees, the number of employees required and shall have the sole responsibility for selecting employees to be laid off, which shall not be in conflict with this Agreement or the applicable Master Labor Agreements.

8.3 For Unions now having a job referral system in their Master Labor Agreement, the Contractor agrees to comply with such system and it shall be used exclusively by such Contractor, except as it may be modified by this Article. Such job referral systems will be operated in a non-discriminatory manner and in full compliance with federal, state, and local laws and regulations, which require equal employment opportunities and non-discrimination, and referrals shall not be affected by obligations of union membership or the lack thereof.

8.3.1 The Contractor may reject any referral for any lawful nondiscriminatory reason, provided the Contractor complies with any reporting pay requirements under the California prevailing wage law; provided, however, that such right is exercised in good faith and not for the purpose of avoiding the Contractor's commitment to employ qualified workers through the procedures endorsed in this Agreement.

8.4 In the event that Unions are unable to fill any request for employees within forty-eight (48) hours after such written request is made by the Contractor (Saturdays, Sundays, and holidays excepted), the Contractor may employ applicants from any other available source. The Contractor shall refer the applicant to the Union for registration and dispatch to the Project prior to the commencement of work on the Project by such applicant.

8.5 Except as required by law, the Unions shall not knowingly refer an employee currently employed by any Contractor working under this Agreement to any other Contractor.

8.6 The parties recognize the Developer's interest in promoting competition by allowing Contractors that may not have previously had a relationship with the Unions signatory to this Agreement to participate in this Project. To ensure that such Contractors will have an opportunity to employ their "core" employees on this Project, the parties agree that the core work force is comprised of those employees: whose names appeared on the Contractor's active payroll for sixty (60) of the one hundred (100) working days immediately before award of Project Work

to the Contractor; who possess any license required by state or federal law for the Project Work to be performed; have worked at least two thousand (2,000) hours in the specific construction craft classification during the immediate two (2) years prior to the award of Project Work to the Contractor; and, who have the ability to safely perform the basic functions of the applicable trade.

8.6.1 The Union will refer to such Contractor first a core employee, as described above, then an employee through a referral from the appropriate Union hiring hall out-of-work list for the affected trade or craft, then a second core employee, then a second employee through the referral system, and so on until such Contractor's crew requirements are met or until such Contractor has hired a maximum of five (5) core employees in its workforce or, for Contractors, which qualify as a Local Small Business, has hired a maximum of seven (7) core employees in its workforce. Thereafter, all additional employees in the affected trade or craft shall be hired exclusively from the hiring hall out-of-work list(s). For the duration of the Contractor's work the ratio shall be maintained and when the Contractor's workforce is reduced, employees shall be reduced in the same ratio of core employees to hiring hall as was applied in the initial hiring. Any supervisors authorized under Section 3.4.4(k) shall not count towards the number of core employees. This provision does not apply to contractors which are directly signatory to one or more of the Master Labor Agreements and is not intended to limit the transfer provisions of the Master Labor Agreement of any trade. As part of this process, and in order to facilitate the contract administration procedures, as well as appropriate fringe benefit fund coverage, all Contractors shall require their core employees and any other persons employed other than through the referral process, to register with the appropriate Union hiring hall, if any, prior to their first day of employment at a project site.

8.6.2 Prior to each Contractor performing any work on the Project, each Contractor shall provide a list of its core employees to the Project Labor Coordinator and the Council. Failure to do so will prohibit the Contractor from using any core employees. Upon request by any Party to this Agreement, the Contractor hiring any core employee shall provide satisfactory proof (i.e., payroll records, quarterly tax records, and such other documentation) evidencing the core employee's qualification as a core employee to the Project Labor Coordinator and the Council.

8.7 In recognition of the fact that the communities surrounding the Project will be impacted by the construction of the Project Work, and to ensure the project creates a positive economic impact in the surrounding area and to disadvantaged communities, the parties agree that, to the extent allowed by law, and as long as they possess the requisite skills and qualifications, the Unions will exert their best efforts to refer and/or recruit sufficient numbers of skilled craft Targeted Workers, to fulfill the requirements of the Employers. Each Contractor will exert their best efforts to ensure that, in each construction craft for which it employs workers, at least 20% of Project Work hours shall be performed by Targeted Workers. To that end, the Unions agree to conduct, in good faith, ongoing outreach to Targeted Workers and the communities within which Targeted Workers reside to maximize the number of Targeted Works on the Unions referral lists.

8.8 To facilitate the dispatch of Targeted Workers, all Contractors will be required to utilize the Craft Request Form whenever they are requesting the referral of any employee from a Union referral list for the Project, a sample of which is attached as Attachment "C." When Targeted

Workers are requested by the Contractors, the Unions will refer such workers regardless of their place in the Unions' hiring halls' list and normal referral procedures. The Project Labor Coordinator shall be copied on all Craft Request Forms at the time of the request for dispatch and will monitor compliance with the referral process.

8.9 The Contractors and the Unions wish to facilitate the entry into the building and construction trades of Veterans who are interested in careers in the building and construction industry. The Parties will use best efforts to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as resources for preliminary orientation, assessment of construction aptitude, referral to joint labor-management apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the Parties.

8.10 The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of Veterans interested in working on the Project and of joint labor-management apprenticeship and employment opportunities for the Project and to conduct reasonable outreach, in good faith, to ensure Veterans know about Project employment opportunities. To the extent permitted by law, the Unions will give credit to such Veterans for bona fide, provable past experience. Contractors shall track the hiring and retention of Veteran Workers hired for the Project. Contractors shall collect the tracking information from all sources and shall submit bi-annual reports to the Developer and the Council.

ARTICLE IX: WAGES AND BENEFITS

9.1 Wages. All employees covered by this Agreement (including foremen and general foremen if they are covered by the Master Labor Agreements) shall be classified in accordance with work performed and paid by the Contractors the hourly wage rates for those classifications in compliance with the applicable prevailing wage rate determination established pursuant to applicable law. If a prevailing rate increases under law, the Contractor shall pay that rate as of its effective date under the law. Notwithstanding any other provision in this Agreement, Contractors directly signatory to one or more of the MLAs are required to pay all of the wages set forth in those MLAs without reference to the forgoing.

9.3 Benefits.

9.3.1 Contractors shall pay contributions to the established employee benefit funds in the amounts designated in the appropriate MLA and make all employee–authorized deductions in the amounts designated in the appropriate MLA; however, such contributions shall not exceed the contribution amounts set forth in the applicable prevailing wage determination. Notwithstanding any other provision in this Agreement, Contractors directly signatory to one or more of the MLA are required to make all contributions set forth in those MLA without reference to the foregoing. Bona fide jointly trusteed benefit plans or authorized employee deduction programs established or negotiated under the applicable MLA or by the Parties to this Agreement during the life of this Agreement may be added.

9.3.2 The Contractor adopts and agrees to be bound by the written terms of the

applicable, legally established, trust agreement(s) specifying the detailed basis on which payments are to be made into, and benefits paid out of, such trust funds for its employees. The Contractor authorizes the Parties to such trust funds to appoint trustees and successors' trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor.

9.3.3 Contractors of whatever tier shall make regular and timely contributions required by Section 9.3.1 of this Article in amounts and on the time schedule set forth in the appropriate MLA. Delinquency in the payment of contributions is a breach of this Agreement. If a Contractor is delinquent with paying contributions in violation of the MLA, the Union or the Trust Fund shall provide notification to Project Labor Coordinator after efforts by the Union or the Fund to resolve the delinquency have been exhausted with the delinquent Contractor, and provide documentary evidence of the delinquency endorsed by the Fund. Upon such notification, the Project Labor Coordinator will attempt to resolve the delinquency among the Contractor, the Union and the Fund. If the delinquency is not resolved within ten (10) days thereafter, the Prime Contractor, in the case of a delinquent subcontractor, shall withhold an amount to cover the delinquency from any retained funds otherwise due and owing to the subcontractor and shall not release such withholding until the subcontractor is in compliance, provided, however, that if the delinquent amount is undisputed in whole or in part between the Fund and the delinquent subcontractor, the Prime Contractor shall issue a joint check payable to the Fund and the subcontractor in the amount of the undisputed delinquency. In the case of a delinquent Prime Contractor or any Contractor, the Project Labor Coordinator shall notify the Developer of the delinquency and request the Developer to withhold, in an appropriate amount, any funds due and owing to the Prime Contractor. Pursuant to the announced commitment of the Developer, the Prime Contractor shall be subject to withholding of retained amounts which may only be released upon the Contractor's resolution of the delinquency as evidenced by a written statement endorsed by the Fund. Where there is no dispute as to the amount of the delinquency, retained amounts may be released by a joint check payable to the Prime Contractor and the Fund in the amount of any undisputed delinquency. All Contractors must certify to the Project Labor Coordinator that all benefit contributions due as required by this Agreement have been paid prior to the release of payment from the Developer.

9.3.4 The Project Labor Coordinator shall monitor the compliance of all Contractors with all Federal and state prevailing wage laws and regulations. All complaints regarding potential prevailing wage violations may be referred to the Project Labor Coordinator for processing, investigation and resolution, and if not resolved within 30 days of taking cognizance of the potential violation or complaint, the matter may be referred to the State Labor Commissioner by any party.

ARTICLE X: COMPLIANCE

10.1 All Contractors, Unions, and employees shall comply with all applicable federal and state laws, ordinances, and regulations, including, but not limited to, those relating to safety and health, employment, and applications for employment. All employees shall comply with the safety regulations established by the Developer or the Contractor. Employees must promptly report any injuries or accidents to a supervisor.

ARTICLE XI: LABOR MANAGEMENT COOPERATION

11.1 The parties to this Agreement may establish a Joint Administrative Committee ("JAC") to monitor compliance with the terms and conditions of the Project and the Agreement. This Committee shall be comprised of the Project Labor Coordinator, and one (1) representatives selected by the District, one (1) representative selected by Developer, and three (3) representatives of the signatory Unions, to be selected by the Council. Each representative shall designate an alternate who shall serve in his or her absence for any purpose contemplated by this Agreement.

11.2 The JAC shall meet as required to review the implementation of the Agreement and the progress of the Project and to attempt to reach solutions to problems and differences. Decisions of the JAC must be unanimously adopted in writing to become effective.

11.3 The JAC shall not review or discuss substantive grievances or disputes arising under Article V (Work Stoppages, Strikes, Sympathy Strikes and Lockouts), Article XIII (Jurisdictional Disputes) or Article XII (Grievance Arbitration Procedure). Such grievances shall be processed pursuant to the provisions of those respective Articles.

ARTICLE XII: GRIEVANCE ARBITRATION PROCEDURE

12.1 The Parties hereby agree that all grievances and disputes that may arise concerning the application or the interpretation of the terms of this Agreement, other than disputes arising from conduct described in Article V (Work Stoppages, Strikes, Sympathy Strikes and Lockouts), and Article XIII (Jurisdictional Disputes), shall be handled in accordance with the following procedures.

12.2 Grievances and disputes shall be settled according to the following procedures:

Step 1: The business representative of the Union involved shall first attempt to settle the matter by oral discussion with the particular Contractor's project superintendent no later than five (5) working days after the Union submitting the grievance first became aware of, or by the use of reasonable diligence should have been aware of, the occurrence first giving rise to the dispute or grievance. If the matter is not resolved with the superintendent within five (5) working days after the oral discussion with the superintendent, the dispute or grievance shall be reduced to writing by the grieving Union.

Step 2: If the matter is not resolved in Step 1, above, within five (5) working days after the oral discussion with the superintendent and the business representative of the Union involved, the written grievance shall be given to the Contractor involved and submitted to the Project Labor Coordinator for processing. The business manager of the involved Union or his designee shall meet with the involved Contractor and the Project Labor Coordinator within ten (10) working days after the written grievance was submitted to the Project Labor Coordinator. If the grievance remains unresolved, then the Union may, within ten (10) calendar days after meeting with the Contractor, by written notice to the Contractor and Project Labor Coordinator, submit the grievance to arbitration in accordance with the provisions as set forth below.

Step 3: After notice by any party of intent to submit a grievance to arbitration, the Project

Labor Coordinator, in order, will select an Arbitrator listed under the Expedited Arbitration provisions of Article V, Section 5.5.3 of this Agreement. The decision of the Arbitrator shall be binding on the parties, provided, however, that the Arbitrator shall not have the authority to alter, amend, add to or delete from the provisions of this Agreement in any way. A failure of any party to attend said hearing shall not delay the hearing of evidence or the issuance of any decision by the Arbitrator. Should any party seek judicial enforcement of the Award made by the Arbitrator, the prevailing party shall be entitled to receive its attorney's fees and costs.

12.3 Failure by either party to adhere to the time limits herein for meeting, discussing, or responding shall constitute a negative response and advance the grievance to the next step in the grievance procedure. Failure of the grieving party to raise, file, or appeal a grievance within the time provided shall render the grievance null and void.

12.4 Grievances, which are settled directly by the Parties to such grievance, shall not be precedent setting. The costs of the arbitrator shall be borne equally between the grieving Union and the affected Contractor.

12.5 Project Labor Coordinator shall be notified by the grieving party of all actions at Steps 2 and 3 and shall, upon its request, be permitted to participate fully in all proceedings at these steps. The Project Labor Coordinator shall be responsible for assisting the parties to the grievance with scheduling, meeting locations and facilitating resolution to the grievance. However, the Project Labor Coordinator is not responsible for ensuring the grievance time limits set forth above are adhered to.

ARTICLE XIII: JURISDICTIONAL DISPUTES / PRE-JOB CONFERENCE

13.1 The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor plan.

13.2 All Jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Unions.

13.3 If a dispute arising under this Article involves the Northern California Carpenters Regional Council or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5 of the Plan from a list composed of John Kagel, Robert Hirsch and Thomas Pagan, and the Arbitrator's hearing on the dispute shall be held at the offices of the California State Building and Construction Trades Council in Sacramento, California, within fourteen (14) days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

13.4 No Work Disruption Over Jurisdiction. All Jurisdictional disputes shall be resolved

without the occurrence of any strike, work stoppage, disruption, or slowdown of any nature and the Contractor's assignments shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

13.5 Pre-Job Conference. Each Contractor will conduct a pre-job conference with the Unions not later than fourteen (14) calendar days prior to commencing work. The purpose of the conference will be to, among other things, determine craft manpower needs, schedule of work for the contract and project work rules/owner rules. The Council, the Project Labor Coordinator, and the Developer shall be advised in advance of all such conferences and may participate if they wish. All work assignments shall be disclosed by the Prime Contractor and all Contractors at a pre-job conference. Should there be Project Work that was not previously discussed at the pre-job conference, or additional project work be added, the contractors performing such work will conduct a separate pre-job conference for such newly included work. Any Union in disagreement with the proposed assignment shall notify the Contractor of its position in writing, with a copy to Project Labor Coordinator, within seven (7) calendar days thereafter. Within seven (7) calendar days after the period allowed for Union notices of disagreement with the Contractor's proposed assignments, but prior to the commencement of any work, the Contractor shall make final assignments in writing with copies to the Council and to the Project Labor Coordinator.

ARTICLE XIV: MANAGEMENT RIGHTS

14.1 The Contractor retains the full and exclusive authority for the management of its operations, as set forth in this Article, which shall not be in conflict with this Agreement or the MLAs. The Contractor shall direct the workforce at its sole prerogative, including but not limited to the hiring, promotion, transfer, layoff, discipline or discharge for just cause of its employees; the selection of foremen and general foremen; the assignment and schedule of work; the promulgation of reasonable work rules; and, the requirement of overtime work, the determination of when it will be worked and the number and identity of employees engaged in such work. No rules, customs, or practices which limit or restrict productivity, efficiency or the individual and/or joint working efforts of employees shall be permitted or observed. The Contractor may utilize any methods or techniques of construction.

14.1.1 The foregoing enumeration of management rights shall not be deemed to exclude other functions not specifically set forth. The Contractor, therefore, retains all legal rights not specifically covered by this Agreement or the MLAs.

14.2 There shall be no limitation or restriction by a signatory Union upon a Contractor's choice of materials or design, nor, upon the full use and utilization of equipment, machinery, packaging, pre-cast, pre-fabricated, pre-finished, or pre-assembled materials, tools, or other labor saving devices. The on-site installation or application of all items shall be performed by the craft having jurisdiction over such work.

14.3 The use of new technology, equipment, machinery, tools and/or labor-saving devices and methods of performing work may be initiated by the Contractor from time-to-time during the Project. The Union agrees that it will not in any way restrict the implementation of such new devices or work methods. If there is any disagreement between the Contractor and the Union concerning the manner or implementation of such device or method of work, the

implementation shall proceed as directed by the Contractor, and the Union shall have the right to grieve and/or arbitrate the dispute as set forth in Article XII of this Agreement.

14.4 The Contractor shall determine the number of employees required to perform the specific work activity, including the manning requirements and operation of equipment and vehicles in accordance with the prevailing wage laws. The Contractor may also require operators and drivers to be moved from one piece of equipment or vehicle to another, as job conditions require. The Contractor will in turn recognize the appropriate rate of pay for employees who are required to operate multiple equipment pieces or vehicles during the same workday.

14.5 The Contractor shall assign work in accordance with Article XIII. It is understood that the Contractor may use composite crews for certain work activities to achieve efficient production. The make-up of these composite crews shall reflect the percent of work traditionally done by each craft. When such circumstances exist, the Contractor shall, at a pre-job conference prior to implementation, discuss the work involved and the make-up of the crews. In the performance of the work, all employees will perform the work they are assigned.

14.6 In addition to the Developer's following rights, and other rights set forth in this Agreement, the Developer expressly reserves its management rights and all the rights conferred on it by law. The Developer's rights include, but are not limited to:

14.6.1 Inspect the Project to ensure that the Contractor follows applicable safety and other work requirements.

14.6.2 Require contractors to establish a different work week or shift schedule for particular employees as needed, to meet the operational needs of the Project.

ARTICLE XV: APPRENTICES

15.1 Importance of Training. The Parties recognize the need to maintain continuing support of the programs designed to develop adequate numbers of competent workers in the construction industry, the obligation to capitalize on the availability of the local work force in the area served by the District, and the opportunities to provide continuing work under the construction program. To these ends, the Parties will facilitate, encourage, and assist Local Residents within the Local Impact Area with priority outreach to Targeted Workers to commence and progress in Labor/Management Apprenticeship and/or training Programs in the construction industry leading to participation in such apprenticeship programs. The District, Developer, Contractors, the Project Labor Coordinator, other District consultants, and the Council, will work cooperatively to identify, or establish and maintain, effective programs and procedures for persons interested in entering the construction industry and which will help prepare them for the formal joint labor/management apprenticeship programs maintained by the Unions. The Project Labor Agreement Coordinator will work with the Unions and Contractors to partner and cooperate with apprenticeship readiness programs utilizing the Council's Multi-Craft Core Curriculum (MC3). The unions agree to give preferential entry to their affiliated State-approved joint labor-management apprenticeship programs for successful graduates of MC3 apprenticeship readiness programs approved by the Council.

15.2 Use of Apprentices

15.2.1 Apprentices used on Projects under this Agreement shall, to the extent permitted by law, be registered in Joint Labor Management Apprenticeship Programs approved by the State of California. The Apprentice ratio for each craft shall be in compliance, at a minimum, with the applicable provisions of the Labor Code relating to utilization of apprentices, unless an exemption has been approved by the Division of Apprenticeship Standards. The Parties agree to a goal that apprentices will perform a minimum of twenty (20%) of total craft work hours consistent with Labor Code section 1777.5, as amended.

The Parties agree that available, capable, qualified, and willing Targeted Workers are prioritized for placement as New Hire Apprentices. The Parties Agree that twenty-five percent (25%) of all apprentice hours shall be performed by Targeted Workers, if available.

15.2.2 The Unions agree to cooperate with the Contractor in furnishing apprentices as requested up to the maximum percentage. The apprentice ratio for each craft shall be in compliance, at a minimum, with the applicable provisions of the Labor Code relating to utilization of apprentices, unless an exemption has been approved by the Division of Apprenticeship Standards. The Developer shall encourage such utilization, and, both as to apprentices and the overall supply of experienced workers, the Project Labor Coordinator will work with the Council to assure appropriate and maximum utilization of apprentices and the continuing availability of both apprentices and journey persons.

15.2.3 The Parties agree that apprentices will not be dispatched to Contractors working under this Agreement unless there is a journeyman working on the project where the apprentice is to be employed who is qualified to assist and oversee the apprentice's progress through the program in which he is participating.

15.2.4 All apprentices shall work under the direct supervision of a journeyman from the trade in which the apprentice is indentured. A journeyman shall be defined as set forth in the California Code of Regulations, Title 8 [apprenticeship] section 205, which defines a journeyman as a person who has either completed an accredited apprenticeship in his or her craft, or has completed the equivalent of an apprenticeship in length and content of work experience and all other requirements in the craft which has workers classified as journeyman in the apprenticeable occupation. Should a question arise as to a journeyman's qualification under this subsection, the Contractor shall provide adequate proof evidencing the worker's qualification as a journeyman to the Project Labor Coordinator and the Council.

ARTICLE XVI: SAFETY, PROTECTION OF PERSON AND PROPERTY

16.1 It shall be the responsibility of each Contractor to ensure safe working conditions and employee compliance with any safety rules contained herein or established by the Developer, the state and the Contractor. It is understood that the employees have an individual obligation to use diligent care to perform their work in safe manner and to protect themselves and the property of the Contractor and the Developer.

16.2 Employees shall be bound by the safety, security and visitor rules established by

the Contractor and the Developer. These rules will be published and posted in conspicuous places throughout the work site. An employee's failure to satisfy his obligations under this Section will subject him to discipline, including discharge.

16.3 The use, sale, transfer, purchase and/or possession of a controlled substance, alcohol and/or firearms while performing work on the Project site are prohibited. Accordingly, the parties agree that all Employers will utilize the Humboldt Bay Harbor and Conservation District Approved Drug and Alcohol Testing Policy, a copy of which is attached hereto as Attachment "B" for all employees on the Project for all Employers. All Unions agree to comply with the requirements of the program subject to the grievance procedure contained in this Agreement.

ARTICLE XVII: SAVINGS CLAUSE

17.1 The Parties agree that in the event any article, provision, clause, sentence or work of the Agreement is determined to be illegal or void as being in contravention of any applicable law by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect. The Parties further agree that if any article, provision, clause, sentence or word of the Agreement is determined to be illegal or void by a court of competent jurisdiction, the Parties shall substitute, by mutual agreement, in its place and stead, an article, provision, sentence or work which will meet the objections to its validity and which will be in accordance with the intent and purpose of the article, provision, clause, sentence or word in question.

17.2 The Parties also agree that in the event that a decision of a court of competent jurisdiction materially alters the terms of the Agreement such that the intent of the Parties is defeated, then the entire Agreement shall be null and void.

17.3 If a court of competent jurisdiction determines that all or part of the Agreement is invalid and/or enjoins the Developer from complying with all or part of its provisions and the Developer accordingly determines that the Agreement will not be required as part of an award to a Contractor, the Unions will no longer be bound by the provisions of Article V to the extent that such Contractor is no longer bound. The Unions and their members shall remain bound to Article V with respect to all other Contractors who remain bound to this Agreement, and no action taken by the Unions or their members shall disrupt the work of such Contractors.

ARTICLE XVIII: UNION ACCESS AND STEWARDS

18.1 Access to Project Sites. Authorized representatives of the Unions shall have access to Project Work, provided that they do not interfere with the work of employees and further provided that such representatives fully comply with visitor, security, environmental, and safety rules. It is understood that because of heightened safety and security aspects of the Project, visitors may be limited to certain times, or areas, or to being accompanied at all times while on the Project site.

18.2 Stewards.

18.2.1. Each Union shall have the right to dispatch a working journeyperson as a steward for each shift, and shall notify the Contractor in the writing of the identity of the designated steward or stewards prior to the assumption of such person's duties as steward. Such designated steward or stewards shall not exercise any supervisory functions. There will be no non-working stewards. Stewards will receive the regular rate of pay for their respective crafts.

18.2.2 In addition to his/her work as an employee, the steward should have the right to receive, but not to solicit, complaints or grievances and to discuss and assist in the adjustment of the same with the employee's appropriate supervisor. Each steward should be concerned only with the employees of the steward's Contractor and not with the employees of any other Contractor. A Contractor will not discriminate against the steward in the proper performance of his/her Union duties.

18.2.3 When a Contractor has multiple, non-contiguous work locations at one site, the Contractor may request, and the Union shall appoint such additional working stewards as the Contractor requests to provide independent coverage of one or more such locations. In such cases, a steward may not service more than one work location without the approval of the Contractor.

18.2.4 The stewards shall not have the right to determine when overtime shall be worked or who shall work overtime.

18.3 Contractor agrees to notify the appropriate Union twenty-four (24) hours before the layoff of a steward, except in the case of disciplinary discharge for just cause. If the steward is protected against such layoff by the provisions of the applicable MLA, such provisions shall be recognized when the steward possesses the necessary qualifications to perform the remaining work. In any case in which the steward is discharged or disciplined for just cause, the appropriate Union will be notified immediately by the Contractor.

ARTICLE XIX: TERM

This Agreement shall be effective on _____and shall terminate upon the Developer's acceptance of all Project work performed under this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day and year written below.

THE UNION OFFICIALS signing this Agreement warrant and represent that they are authorized to collectively bargain on behalf of the organizations whom they represent and the members of such organizations.

Dated: _____, 20___

Humboldt Bay Harbor and Conservation District

Dated: _____, 20___

State Building and Construction Trades Council of California

By: _____

Print Name: _____

Print Title: _____

By: _____

Print Name: Chris Hannan

Print Title: President

Dated: , 20___

Building and Construction Trades Council of Humboldt and Del Norte Counties

By: _____

Print Name: _____

Print Title: _____

BUILDING AND CONSTRUCTION TRADES COUNCIL
OF HUMBOLDT AND DEL NORTE COUNTIES
CRAFT UNIONS AND DISTRICT COUNCILS

ATTACHMENT A

COMPANY LETTERHEAD

_____

_____

SUBJECT: LETTER OF ASSENT
Humboldt Bay Harbor, Recreation, and Conservation District

Dear Mr./Ms. _____:

This is to certify that the undersigned Contractor/Employer has examined a copy of the Project Labor Agreement for the Humboldt Bay Harbor, Recreation, and Conservation District entered into by and between the District and the signatory Unions dated _____. The undersigned Contractor/Employer hereby agrees to be a party to and to comply with all of the terms and conditions of the aforementioned Project Labor Agreement as such Agreement may, from time to time, be amended by the negotiating parties or interpreted pursuant to its terms.

Such obligation to be a party to and bound by this Agreement shall extend to all work covered by the Agreement undertaken by this Company on the Project, and this Contractor/Employer shall require all its subcontractors, of whatever tier, to become similarly bound for all work within the scope of this Agreement by signing an identical Letter of Assent.

This Letter of Assent shall become effective and binding upon the undersigned Contractor/Employer the _____ day of _____ and shall remain in full force and effect until this company has completed all of its work to be performed on the Project.

Sincerely,

(Name of Construction Company)

By:_____
(Name and Title of Authorized Executive)

_____

(Contractor's State License No.: _____

Project Name: _____

cc: Building and Construction Trades Council
of Humboldt and Del Norte Counties

ATTACHMENT B
HUMBOLDT BAY HARBOR AND CONSERVATION DISTRICT
APPROVED
DRUG AND ALCOHOL TESTING POLICY

(rev. December 2019)

The Parties recognize the problems which drug and alcohol abuse have created in the construction industry and the need to develop drug and alcohol abuse prevention programs. Accordingly, the Parties agree that in order to enhance the safety of the workplace and to maintain a drug and alcohol-free work environment, individual Employers may require applicants or employees to undergo drug and alcohol testing.

1. It is understood that the use, possession, transfer or sale of illegal drugs, narcotics, or other unlawful substances, as well as being under the influence of alcohol and the possession or consuming alcohol is absolutely prohibited while employees are on the Employer's job premises or while working on any jobsite in connection with work performed under the Project Labor Agreement ("PLA").

2. No Employer may implement a drug testing program which does not conform in all respects to the provisions of this Policy.

3. No Employer may implement drug testing at any jobsite unless written notice is given to the Union setting forth the location of the jobsite, a description of the project under construction, and the name and telephone number of the Project Supervisor. Said notice shall be addressed to the office of each Union signing the PLA. Said notice shall be sent by email or by registered mail before the implementation of drug testing. Failure to give such notice shall make any drug testing engaged in by the Employer a violation of the PLA, and the Employer may not implement any form of drug testing at such jobsite for the following six months.

4. An Employer who elects to implement drug testing pursuant to this Agreement shall require all employees on the Project to be tested. With respect to individuals who become employed on the Project subsequent to the proper implementation of a valid drug testing program, such test shall be administered upon the commencement of employment on the project, whether by referral from a Union Dispatch Office, transfer from another project, or another method. Individuals who were employed on the project prior to the proper implementation of a valid drug testing program may only be subjected to testing for the reasons set forth in paragraphs 5(g)(l) through 5(g)(3) and paragraphs 6(a) through 6(e) of this Policy. Refusal to undergo such testing shall be considered sufficient grounds to deny employment on the project.

5. The following procedure shall apply to all drug testing:

a. The Employer may request urine samples only. The applicant or employee shall not be observed when the urine specimen is given. An applicant or employee, at his or her sole option, shall, upon request, receive a blood test in lieu of a urine test. No employee of the

Employer shall draw blood from a bargaining unit employee, touch or handle urine specimens, or in any way become involved in the chain of custody of urine or blood specimens. A Union Business Representative, subject to the approval of the individual applicant or employee, shall be permitted to accompany the applicant or employee to the collection facility to observe the collection, bottling, and sealing of the specimen.

b. An employer may request an applicant to perform an alcohol breathalyzer test, at a certified laboratory only and cutoff levels shall be those mandated by applicable state or federal law.

c. The testing shall be done by a laboratory approved by the Substance Abuse & Mental Health Services Administration (SAMHSA), which is chosen by the Employer and the Union.

d. An initial test shall be performed using the Enzyme Multiplied Immunoassay Technique (EMIT). In the event a question or positive result arises from the initial test, a confirmation test must be utilized before action can be taken against the applicant or employee. The confirmation test will be by Gas Chromatography/Mass Spectrometry (GC/MS). Cutoff levels for both the initial test and confirmation test will be those established by SAMHSA. Should these SAMHSA levels be changed during the course of this Agreement or new testing procedures are approved, then these new regulations will be deemed as part of this existing Agreement. Confirmed positive samples will be retained by the testing laboratory in secured long-term frozen storage for a minimum of one year. Handling and transportation of each sample must be documented through strict chain of custody procedures.

e. In the event of a confirmed positive test result the applicant or employee may request, within forty-eight (48) hours, a sample of his/her specimen from the testing laboratory for purposes of a second test to be performed at a second laboratory, designated by the Union and approved by SAMHSA. The retest must be performed within ten (10) days of the request. Chain of custody for this sample shall be maintained by the Employer between the original testing laboratory and the Union's designated laboratory. Retesting shall be performed at the applicant's or employee's expense. In the event of conflicting test results the Employer may require a third test.

f. If, as a result of the above testing procedure, it is determined that an applicant or employee has tested positive, this shall be considered sufficient grounds to deny the applicant or employee his/her employment on the project.

g. No individual who tests negative for drugs pursuant to the above procedure and becomes employed on the project shall again be subjected to drug testing with the following exceptions:

1. Employees who are involved in industrial accidents resulting in damage to plant, property or equipment or injury to him/her or others may be tested for drug or alcohol pursuant to the procedures stated hereinabove.

2. The Employer may test employees following thirty (30) days advance written notice to the employee(s) to be tested and to the applicable Union. Notice to the applicable Union shall be as set forth in paragraph 3 above and such testing shall be pursuant to the procedures stated hereinabove.

3. The Employer may test an employee where the Employer has reasonable cause to believe that the employee is impaired from performing his/her job. Reasonable cause shall be defined as being aberrant or unusual behavior, the type of which is a recognized and accepted symptom of impairment (i.e., slurred speech, unusual lack of muscular coordination, etc.). Such behavior must be actually observed by at least two persons, one of whom shall be a supervisor who has been trained to recognize the symptoms of drug abuse or impairment and the other of whom shall be the Job Steward. If the Job Steward is unavailable or there is no Job Steward on the project the other person shall be a member of the applicable Union's bargaining unit. Testing shall be pursuant to the procedures stated hereinabove. Employees who are tested pursuant to the exceptions set forth in this paragraph and who test positive will be removed from the Employer's payroll.

h. Applicants or employees who do not test positive shall be paid for all time lost while undergoing drug testing. Payment shall be at the applicable wage and benefit rates set forth in the applicable Union's Master Labor Agreement. Applicants who have been dispatched from the Union and who are not put to work pending the results of a test will be paid waiting time until such time as they are put to work. It is understood that an applicant must pass the test as a condition of employment. Applicants who are put to work pending the results of a test will be considered probationary employees.

6. The Employers will be allowed to conduct periodic jobsite drug testing on the Project under the following conditions:

a. The entire jobsite must be tested, including any employee or subcontractor's employee who worked on that project three (3) working days before or after the date of the test;

b. Jobsite testing cannot commence sooner than fifteen (15) days after start of the work on the project;

c. Prior to start of periodic testing, a Business Representative will be allowed to conduct an educational period on company time to explain periodic jobsite testing program to affected employees;

d. Testing shall be conducted by a SAMHSA certified laboratory, pursuant to the provisions set forth in paragraph 5 hereinabove.

e. Only two (2) periodic tests may be performed in a twelve (12) month period.

1.

7. It is understood that the unsafe use of prescribed medication, or where the use of prescribed medication impairs the employee's ability to perform work, is a basis for the Employer to remove the employee from the jobsite.

8. Any grievance or dispute which may arise out of the application of this Agreement shall be subject to the grievance and arbitration procedures set forth in the PLA.

9. The establishment or operation of this Policy shall not curtail any right of any employee found in any law, rule or regulation. Should any part of this Agreement be found unlawful by a court of competent jurisdiction or a public agency having jurisdiction over the parties, the remaining portions of the Agreement shall be unaffected, and the parties shall enter negotiations to replace the affected provision.

10. Present employees, if tested positive, shall have the prerogative for rehabilitation program at the employee's expense. When such program has been successfully completed the Employer shall not discriminate in any way against the employee. If work for which the employee is qualified exists, he/she shall be reinstated.

11. The Employer agrees that results of urine and blood tests performed hereunder will be considered medical records held confidential to the extent permitted or required by law. Such records shall not be released to any persons or entities other than designated Employer representatives and the applicable Union. Such release to the applicable Union shall only be allowed upon the signing of a written release and the information contained therein shall not be used to discourage the employment of the individual applicant or employee on any subsequent occasion.

12. The Employer shall indemnify and hold the Union harmless against any and all claims, demands, suits, or liabilities that may arise out of the application of this Agreement and/or any program permitted hereunder.

13. Employees who seek voluntary assistance for substance abuse may not be disciplined for seeking such assistance. Requests from employees for such assistance shall remain confidential and shall not be revealed to other employees or management personnel without the employee's consent. Employees enrolled in substance abuse programs will be subject to all Employer rules, regulations and job performance standards with the understanding that an employee enrolled in such a program is receiving treatment for an illness.

14. The parties agree to develop and implement a drug abuse prevention and testing program for all apprentices entering the industry.

15. This Memorandum of Understanding shall constitute the only Agreement in effect between the parties concerning drug and alcohol abuse, prevention and testing. Any modifications thereto must be accomplished pursuant to collective bargaining negotiations between the parties.

APPENDIX A: SPECIMEN REPORTING CRITERIA

Initial Test Analyte	Initial Test Cutoff [1]	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Marijuana metabolites (THCA)[2]	50 ng/ml [3]	THCA	15 ng/ml
Cocaine metabolite (Benzoylecgonine)	150ng/ml[3]	Benzoylecgonine	100 ng/ml
Codeine/ Morphine	2000 ng/ml	Codeine Morphine	2000 ng/ml 2000 ng/ml
Hydrocodone/ Hydromorphone	300 ng/ml	Hydrocodone Hydromorphone	100 ng/ml 100 ng/ml
Alcohol	0.02%	Ethanol	0.02%
Oxycodone/ Oxymorphone	100 ng/ml	Oxycodone Oxymorphone	100 ng/ml 100 ng/ml
6-Acetylmorphine	10 ng/ml	6-Acetylmorphine	10 ng/ml
Phencyclidine	25 ng/ml	Phencyclidine	25 ng/ml
Amphetamine/ Methamphetamine	500 ng/ml	Amphetamine Methamphetamine	250ng/ml 250 ng/ml

[1] For grouped analytes (i.e., two or more analytes that are in the same drug class and have the same initial test cutoff):

Immunoassay: The test must be calibrated with one analyte from the group identified as the target analyte. The cross-reactivity of the immunoassay to the other analyte(s) within the group must be 80 percent or greater; if not, separate immunoassays must be used for the analytes within the group.

Alternate technology: Either one analyte or all analytes from the group must be used for calibration, depending on the technology. At least one analyte within the group must have a concentration equal to or greater than the initial test cutoff or, alternatively, the sum of the analytes present (i.e., equal to or greater than the laboratory's validated limit of quantification) must be equal to or greater than the initial test cutoff.

[2] An immunoassay must be calibrated with the target analyte, 9-tetrahydrocannabinoJ-9- carboxylic acid (THCA).

[3] **Alternate technology (THCA and benzoylecgonine):** The confirmatory test cutoff must be used for an alternate technology initial test that is specific for the target analyte (i.e., 15 ng/ml for THCA, 100 ng/ ml for benzoylecgonine).

MDMA[4]/MDA[5]	500 ng/ml	MDMA MDA	250ng/ml 250 ng/ml
Initial Test Analyte	Initial Test Cutoff	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Barbiturates	300 ng/ml	Barbiturates	200 ng/ml
Benzodiazepines	300 ng/ml	Benzodiazepines	300 ng/ml
Methadone	300 ng/ml	Methadone	100 ng/ml
Methaqualone	300 ng/ml	Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml	Propoxyphene	100 ng/ml

SIDE LETTER OF AGREEMENT
TESTING POLICY FOR DRUG ABUSE

It is hereby agreed between the parties hereto that an Employer who has otherwise properly implemented drug testing, as set forth in the Testing Policy for Drug Abuse, shall have the right to offer an applicant or employee a "quick" drug screening test. This “quick” screen test shall consist either of the “ICUP” urine screen or similar test or an oral screen test. The applicant or employee shall have the absolute right to select either of the two “quick” screen tests, or to reject both and request a full drug test.

An applicant or employee who selects one of the "quick" screen tests, and who passes the test, shall be put to work immediately. An applicant or employee who fails the "quick" screen test, or who rejects the "quick" screen tests, shall be tested pursuant to the procedures set forth in the Testing Policy for Drug Abuse. The sample used for the "quick" screen test shall be discarded immediately upon conclusion of the test. An applicant or employee shall not be deprived of any rights granted to them by the Testing Policy for Drug Abuse as a result of any occurrence related to the “quick” screen test.

[4] Methylenedioxymethamphetamine (MDMA)
[5] Methylenedioxyamphetamine (MDA)

ATTACHMENT C

HUMBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT
CRAFT REQUEST FORM

TO THE CONTRACTOR: Please complete and submit this form to the applicable union to request craft workers that fulfill the hiring requirements for this project. After submitting your request, please call the Local to verify receipt and substantiate their capacity to furnish workers as specified below. Please keep copies for your records.

Humboldt Bay Harbor, Recreation, and Conservation District Project Labor Agreement (PLA) establishes a 20% goal of all of the hours worked on the Project shall be from Targeted Workers, defined as (1) a Disadvantaged Worker, as defined below; (2) residents of Humboldt County, which is comprised of the zip codes set forth on Attachment D; (3) graduates of Humboldt County local High Schools, College of the Redwoods, or Cal Poly Humboldt; or (4) any workers needed to meet targeted employment requirements pursuant to the Project's funding sources (collectively defined as Targeted Worker). For purposes of this paragraph, "Disadvantaged Worker" mean an individual that resides in the Humboldt County **and** meets one of the following additional criteria: (1) is enrolled as a tribal member or a spouse of an enrolled tribal members of a federally recognized Tribe within Humboldt or Del Norte Counties; (2) resides on the Samoa Peninsula from the Mad River Slough to the North Jetty; (3) is a Veteran Worker (any person who has served in the armed forces of the United States as demonstrated by a valid Form DD214); (4) is a commercial Fisherman; or (5) has successfully completed the Building Trades Multi-Craft Core Curriculum Pre-Apprenticeship Program and resides in Humboldt or Del Norte Counties.

TO THE UNION: Please complete the "Union Use Only" section on the next page and send this form back to the requesting Contractor. Be sure to retain a copy of this form for your records.

CONTRACTOR USE ONLY

To: Union Local # _____ **Fax#** (___)_____ **Date:** _____

Cc: Project Labor Coordinator

From: Company: _____ Issued By: _____

Contact Phone: (___)_____ Contact Fax: (___)_____

PLEASE PROVIDE ME WITH THE FOLLOWING UNION CRAFT WORKERS.

Craft Classification (i.e., plumber, painter, etc.)	Journeyman or Apprentice	Targeted Worker or General Dispatch	Number of workers needed	Report Date	Report Time
TOTAL WORKERS REQUESTED = _____					

\

Please have worker(s) report to the following work address indicated below:

Project Name: _____ Site: _____ Address: _____

Report to: _____ On-site Tel: _____ On-site Fax: _____

Comment or Special Instructions: _____

UNION USE ONLY

Date dispatch request received:
Dispatch received by:
Classification of worker requested:
Classification of worker dispatched:

WORKER REFERRED

Name:		
Date worker was dispatched:		
Is the worker referred a:	(check all that apply)	
JOURNEYMAN	Yes _____	No _____
APPRENTICE	Yes _____	No _____
TARGETED WORKER	Yes _____	No _____
GENERAL DISPATCH FROM OUT OF WORK LIST	Yes _____	No _____

[This form is not intended to replace a Union's Dispatch or Referral Form normally given to the employee when being dispatched to the jobsite.]

ATTACHMENT D
U.S. POSTAL SERVICE ZIP CODES

Humboldt County Zip Codes:

95501 95502 95503

95511 95514 95518

95519 95521 95524

95525 95526 95528

95534 95536 95537

95540 95542 95545

95549 95547 95549

95550 95551 95553

95554 95555 95556

95558 95559 95560

95562 95564 95565

95569 95570 95571

95573 95589

BRIEFING ROOM

Executive Order on Use of Project Labor Agreements For Federal Construction Projects

FEBRUARY 04, 2022 • PRESIDENTIAL ACTIONS

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Federal Property and Administrative Services Act, 40 U.S.C. 101 *et seq.*, and in order to promote economy and efficiency in the administration and completion of Federal construction projects, it is hereby ordered that:

Section 1. Policy. (a) Large-scale construction projects pose special challenges to efficient and timely procurement by the Federal Government. Construction employers typically do not have a permanent workforce, which makes it difficult to predict labor costs when bidding on contracts and to ensure a steady supply of labor on contracts being performed. Challenges also arise because construction projects typically involve multiple employers at a single location, and a labor dispute involving one employer can delay the entire project. A lack of coordination among various employers, or uncertainty about the terms and conditions of employment of various groups of workers, can create friction and disputes in the absence of an agreed-upon resolution mechanism. These problems threaten the efficient and timely completion of construction projects undertaken by Federal contractors. On large-scale projects, which are generally more complex and of longer

duration, these problems tend to be more pronounced.

(b) Project labor agreements are often effective in preventing these problems from developing because they provide structure and stability to large-scale construction projects. Such agreements avoid labor-related disruptions on projects by using dispute-resolution processes to resolve worksite disputes and by prohibiting work stoppages, including strikes and lockouts. They secure the commitment of all stakeholders on a construction site that the project will proceed efficiently without unnecessary interruptions. They also advance the interests of project owners, contractors, and subcontractors, including small businesses. For these reasons, owners and contractors in both the public and private sector routinely use project labor agreements, thereby reducing uncertainties in large-scale construction projects. The use of project labor agreements is fully consistent with the promotion of small business interests.

(c) Accordingly, it is the policy of the Federal Government for agencies to use project labor agreements in connection with large-scale construction projects to promote economy and efficiency in Federal procurement.

Sec. 2. Definitions. For purposes of this order:

(a) "Labor organization" means a labor organization as defined in 29 U.S.C. 152(5) of which building and construction employees are members, as described in 29 U.S.C. 158(f).

(b) "Construction" means construction, reconstruction, rehabilitation, modernization, alteration, conversion, extension, repair, or improvement of buildings, structures, highways, or other real property.

(c) "Large-scale construction project" means a Federal construction project within the United States for which the total estimated cost of the construction contract to the Federal Government is $35 million or more. The Federal Acquisition Regulatory Council (FAR Council), in consultation with

the Council of Economic Advisers, may adjust this threshold based on inflation using the process at 41 U.S.C. 1908.

(d) "Agency" means an executive department or agency, including an independent establishment subject to the Federal Property and Administrative Services Act, 40 U.S.C. 102(4)(A).

(e) "Project labor agreement" means a pre-hire collective bargaining agreement with one or more labor organizations that establishes the terms and conditions of employment for a specific construction project and is an agreement described in 29 U.S.C. 158(f).

Sec. 3. Project Labor Agreement Presumption. Subject to sections 5 and 6 of this order, in awarding any contract in connection with a large-scale construction project, or obligating funds pursuant to such a contract, agencies shall require every contractor or subcontractor engaged in construction on the project to agree, for that project, to negotiate or become a party to a project labor agreement with one or more appropriate labor organizations.

Sec. 4. Requirements of Project Labor Agreements. Any project labor agreement reached pursuant to this order shall:

(a) bind all contractors and subcontractors on the construction project through the inclusion of appropriate specifications in all relevant solicitation provisions and contract documents;

(b) allow all contractors and subcontractors on the construction project to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements;

(c) contain guarantees against strikes, lockouts, and similar job disruptions;

(d) set forth effective, prompt, and mutually binding procedures for

resolving labor disputes arising during the term of the project labor agreement;

(e) provide other mechanisms for labor-management cooperation on matters of mutual interest and concern, including productivity, quality of work, safety, and health; and

(f) fully conform to all statutes, regulations, Executive Orders, and Presidential Memoranda.

Sec. 5. Exceptions Authorized by Agencies. A senior official within an agency may grant an exception from the requirements of section 3 of this order for a particular contract by, no later than the solicitation date, providing a specific written explanation of why at least one of the following circumstances exists with respect to that contract:

(a) Requiring a project labor agreement on the project would not advance the Federal Government's interests in achieving economy and efficiency in Federal procurement. Such a finding shall be based on the following factors:

(i) The project is of short duration and lacks operational complexity;

(ii) The project will involve only one craft or trade;

(iii) The project will involve specialized construction work that is available from only a limited number of contractors or subcontractors;

(iv) The agency's need for the project is of such an unusual and compelling urgency that a project labor agreement would be impracticable; or

(v) The project implicates other similar factors deemed appropriate in regulations or guidance issued pursuant to section 8 of this order.

(b) Based on an inclusive market analysis, requiring a project labor agreement on the project would substantially reduce the number of potential bidders so as to frustrate full and open competition.

(c) Requiring a project labor agreement on the project would otherwise be

inconsistent with statutes, regulations, Executive Orders, or Presidential Memoranda.

Sec. 6. Reporting. (a) To the extent permitted by law and consistent with national security and executive branch confidentiality interests, agencies shall publish, on a centralized public website, data showing the use of project labor agreements on large-scale construction projects, as well as descriptions of the exceptions granted under section 5 of this order.

(b) On a quarterly basis, agencies shall report to the Office of Management and Budget (OMB) on their use of project labor agreements on large-scale construction projects and on the exceptions granted under section 5 of this order.

Sec. 7. Nothing in this order precludes an agency from requiring the use of a project labor agreement in circumstances not covered by this order, including projects where the total cost to the Federal Government is less than that for a large-scale construction project, or projects receiving any form of Federal financial assistance (including loans, loan guarantees, revolving funds, tax credits, tax credit bonds, and cooperative agreements). This order also does not require contractors or subcontractors to enter into a project labor agreement with any particular labor organization.

Sec. 8. Regulations and Implementation. (a) Within 120 days of the date of this order, the FAR Council, to the extent permitted by law, shall propose regulations implementing the provisions of this order. The FAR Council shall consider and evaluate public comments on the proposed regulations and shall promptly issue a final rule, to the extent permitted by law.

(b) The Director of OMB shall, to the extent permitted by law, issue guidance to implement the requirements of sections 5 and 6 of this order.

Sec. 9. Contracting Officer Training. Within 90 days of the date of this order, the Secretary of Defense, the Secretary of Labor, and the Director of OMB shall coordinate in designing a training strategy for agency contracting officers to enable those officers to effectively implement this order. Within 180 days of the date of the publication of proposed regulations, the Secretary of Defense, the Secretary of Labor, and the Director of OMB shall provide a report to the Assistant to the President for Economic Policy and Director of the National Economic Council on the contents of the training strategy.

Sec. 10. Revocation of Prior Orders, Rules, and Regulations. Executive Order 13502 of February 6, 2009 (Use of Project Labor Agreements for Federal Construction Projects), is revoked as of the effective date of the final regulations issued by the FAR Council under section 8(a) of this order. Upon Executive Order 13502's revocation, the heads of agencies shall consider, to the extent permitted by law, revoking any orders, rules, or regulations implementing Executive Order 13502.

Sec. 11. Severability. If any provision of this order, or the application of such provision to any person or circumstance, is held to be invalid, the remainder of this order and its application to any other person or circumstance shall not be affected thereby.

Sec. 12. Effective Date. This order shall be effective immediately and shall apply to all solicitations for contracts issued on or after the effective date of the final regulations issued by the FAR Council under section 8(a) of this order. For solicitations issued between the date of this order and the effective date of the final regulations issued by the FAR Council under section 8(a) of this order, or solicitations that have already been issued and

are outstanding as of the date of this order, agencies are strongly encouraged, to the extent permitted by law, to comply with this order.

Sec. 13. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

JOSEPH R. BIDEN JR.

The White House,

February 4, 2022.

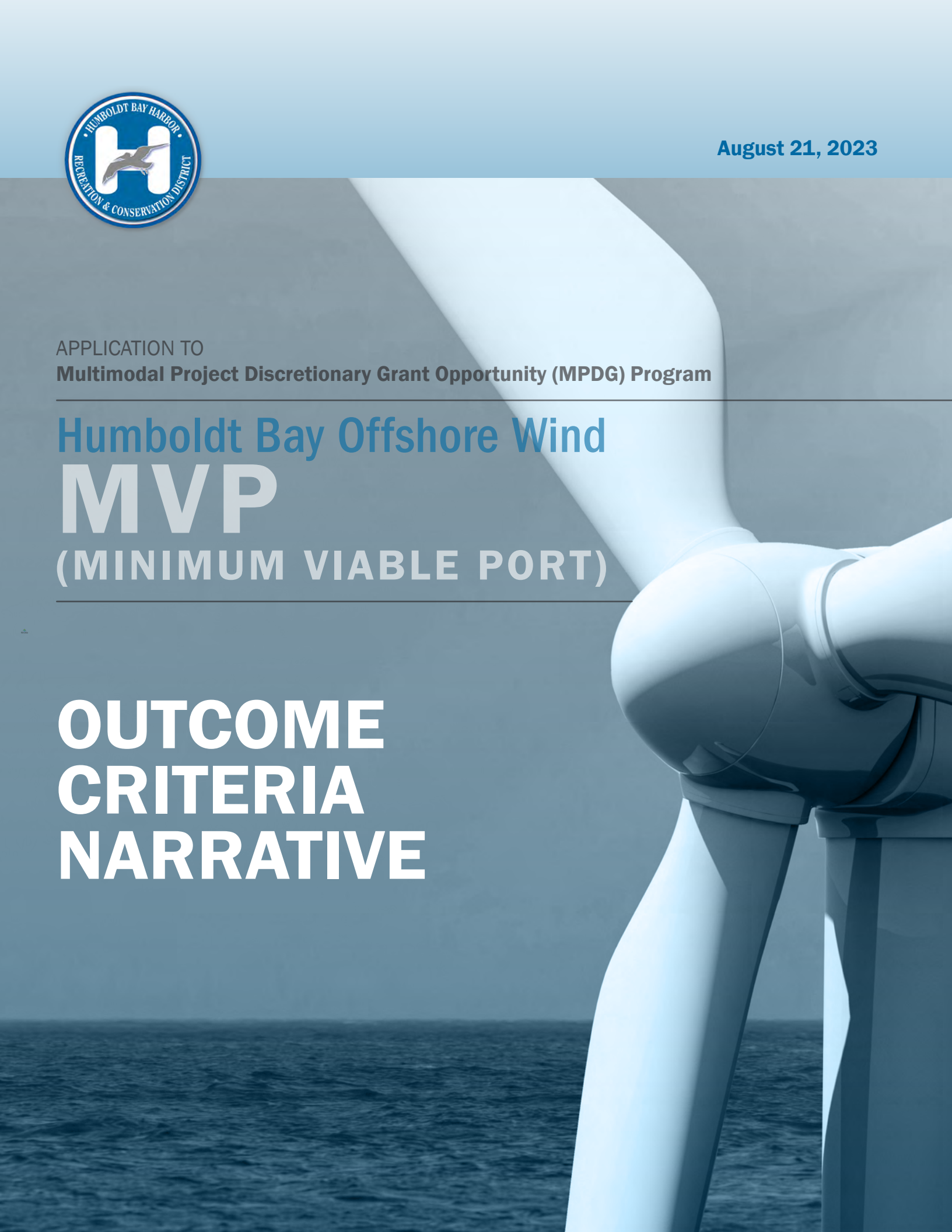
August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

OUTCOME CRITERIA NARRATIVE



PROJECT OUTCOMES

This section discusses the outcomes that are anticipated from construction and operation of the Humboldt Bay Offshore Wind **M**inimum **V**iable **P**ort[1] Project ("MVP" or "Project" hereafter) that will establish the first operating wind terminal on the U.S. Pacific Coast. The offshore wind industry is a new, emerging industry in the U.S., but is well-established in northern Europe. The first offshore wind terminals were installed in the North Sea (part of the Atlantic Ocean) off the shore of Denmark in 1991. A contributing factor to the earlier emergence of this industry in Europe compared with the U.S. is that the North Sea has strong winds but is much shallower than even the Atlantic Ocean along the East Coast. This made it a more hospitable location for the early industry to develop. As the industry matured and wind turbines became larger and more powerful, the industry started making investments in the U.S. on the East Coast. Fast forward with a few years of U.S. experience, the offshore wind industry is now developing on the West Coast. Yet, the Pacific Ocean drops in depth much more quickly than the Atlantic, necessitating the development of floating wind turbines and further increasing the complexity and challenges of establishing these nascent, large-scale renewable energy systems.

As a "first-mover" in floating offshore wind (FOSW) on North America's Pacific Coast, nearly every aspect of the Project is helping to advance innovation alongside National and State renewable energy goals. For instance, the MVP Project has been phased to construct the **m**inimum **v**iable **p**ort infrastructure needed to support offshore wind development while designing the terminal such that future construction phases will not interrupt ongoing assembly and in-water construction of floating offshore wind turbines. While the industry is new for the region, the Project Team is coordinating closely with community stakeholders and global leaders in the offshore wind industry to gather insights and lessons learned from European and the U.S. Atlantic offshore wind experiences. This broad coordination is enabling the team to leverage best practices that are being adapted for the different conditions of the Pacific Ocean, across all aspects of the project. This is cross-cutting throughout the other outcomes considered—everything from safety processes to maintenance procedures will be adapted for Pacific conditions and designed to advance the Biden Administration's and California's leadership on climate change, clean transportation, and workforce development.

The outcomes of this project go far beyond constructing a port terminal in rural Northern California. This Project will be the first and only terminal on the West Coast capable of coming online in time to enable construction of floating offshore wind turbines before 2030. At just partial buildout—the Minimum Viable Port—the terminal will support the in-water installation of one turbine per week, each of which could be rated up to 25 MW. Each individual turbine could generate enough instantaneous power to simultaneously support more than 70 350 kW electric vehicle charging stations (EVSE) in support of the National Electric Vehicle Infrastructure (NEVI) Program. In addition to enabling projects that will allow the true decarbonization of the transportation system, the project will support the grid and rapid growth of renewable energy in the Western U.S. This is particularly critical in California where a recent decision by the California Public Utilities Commission has paused the expansion of Community Choice Aggregators (CCAs) due to resource adequacy concerns—concerns that could rapidly be addressed by the timely

[1] A "minimum viable product", upon which the proposed project is formulated, is a version of a product with just enough features to be usable by early-adopter customers who can then provide feedback for future product development.

deployment of floating offshore wind and its ability to generate and deliver large amounts of renewable energy nearly 24/7.

These outcomes are at risk. While the Harbor District, in its limited capacity, has assembled many of the nation's leading experts in the offshore wind industry, many challenges remain. The Department of Energy's lack of guidance to public agencies and public-private partnerships on the 48C Tax Credit's Direct Pay capabilities has removed that option from our funding stack until the program is reopened at a future date, potentially under an unknown future Administration with unknown discretionary authority and objectives. Barring the FY 2023-24 MPDG funding, there is no other Federal or State Program currently available in calendar year 2024 that is programmed to support unique projects of this size and critical national significance. Due to the long lead-time of the grant cycle, grant agreement execution, and the FAR bidding process, relying on future Federal grant awards in 2025 would very likely postpone construction activities such that none of the benefits and outcomes discussed herein would begin accruing until after 2030, causing the State and Federal government to miss their offshore wind energy development targets, and likely incurring cost increases that further challenge Project implementation.

The balance of this section describes the anticipated Project Outcomes in the order referenced in the Notice of Funding Opportunity.

1.1 Safety

Given the needed size and complexity of the envisioned heavy-lift terminal at the Project site, detailed seismic, structural, civil, and marine engineering will be needed to ensure that the site is constructed and operated safely. A key center point of the Project's planning activities will include looking to other floating offshore wind terminals and industry operations to identify safety hazards that are unique to this nascent industry to incorporate or establish best practices for minimizing safety risks. Establishing the best practices for minimizing safety risks will require planning level review of terminal, harbor-wide, bay-wide, and statewide operations and investments in the new offshore wind industry. The Project will result in preliminary designs and a Baywide Master Plan to ensure safety in loading and unloading operations; to identify and mitigate current risk issues; and to reduce the possibility of worker injuries.

Considering safety across engineering, navigation, operations and the terminal, harbor, bay and open ocean scales during the project development phase is an innovation and best practice. It is also an application of U.S. DOT's Safe System Approach to safety in the design of the new terminal and its operational procedures, building in and reinforcing multiple layers of protection that prevent accidents from happening in the first place and minimize the harm caused to those involved when accidents do occur. Research on offshore wind farm safety in the *Journal of Marine Science and Engineering* found that "[t]he operation of offshore wind farms is characterized by a complicated operational environment, long project cycle, and complex vessel traffic, which lead to safety hazards" and that "operation of the offshore wind farm is systematic. All the components and factors are closely connected. Focusing on a certain object may lead to underestimation of the risk of the whole system."[2] As just one example, improper bolt installation in a marine environment can lead to more frequent maintenance trips and the need to tow platforms into harbor more frequently than expected. This increases maintenance crews to ocean inspections and towing more

[2] Mou, J.; Jia, X.; Chen, P.; Chen, L. Research on Operation Safety of Offshore Wind Farms. J. Mar. Sci. Eng. 2021, 9, 881. https://doi.org/10.3390/jmse9080881

than expected, with a possible increase in safety incidents. This highlights how assembly practices on land affect rate of depreciation at sea, and the demands on the terminal to maintain the wind farm once operational. The Project's commitment to develop a master plan that addresses the terminal design, navigational and operations practices in holistic approach from the start is thus forward looking and critical for obtaining the best safety outcomes from the Project.

The Baywide Master Plan will investigate and consider navigational and operational impacts to local vessel operators, recreational users of Humboldt Bay and its tidelands, and local ecosystems to ensure that improving the safety, efficiency, or reliability of one stakeholder group does not adversely impair another stakeholder group. The Project also includes improvements to the access roads and connecting County/State roadway facilities, which will improve the safety of those transportation networks as well as reduce truck turn times. The Project's proposed road improvement components will also make truck movements more efficient and increase heavy vehicle capacity. This should in turn reduce vehicle crashes on the local roads around the site.

The Project will advance the safety of manufacturing, transport, assembly, installation, and maintenance of floating offshore wind components in Humboldt Bay and beyond to the waters of California, Oregon, and, perhaps, Washington. This is essentially an entirely new industry, including the development of safety solutions and standards for highly specialized port facilities, vessels, and equipment. In addition to these operational safety practices, the Project will also remove thousands of creosote wood piles from the Bay, enhancing safety of navigation and recreational uses.

The loading, unloading, and transport of offshore wind components will occur at the Redwood Marine Terminal (RMT), in the wet storage and maintenance areas of Humboldt Bay, and at the offshore installation sites. The Project's 30% plans and Baywide Master Plan will incorporate and/or establish safety standards for each phase of the development process. For example, the Project will determine:

- Transportation improvements for safe access of worker vehicles and trucks transporting supplies and small components from existing County roads to the marine terminal.
- What is the necessary separation between and among laydown uses, vertical assembly activities and equipment, and any manufacturing facilities or sites?
- What are the industry-leading equipment, operator, and laborer safety guidelines for the nascent floating offshore wind industry while recognizing the operation is a blend of oversize cargo movement, manufacturing, and intermodal transloading?
- How will vessel movements to and from the wet storage area affect loading operations at the heavy lift terminal at Humboldt?
- What separation distance between wet storage mooring areas and the edge of designated federal navigation channel and fairways would be required?
- Where and how will safe and secure vessel fueling/bunkering/charging operations occur?

The work to date has identified several safety risks, and the Project will address and be designed to maximize the mitigation of those risks. For example, certain maintenance functions, such as blade replacement, are too unsafe to perform in the ocean environment. The Project will identify a Humboldt Harbor location where an entire offshore wind unit can be towed in and those critical maintenance activities can be safely performed.

1.2 State of Good Repair

This Project is the foundational step toward rehabilitating a defunct marine terminal and revolutionizing the port and maritime industry in Humboldt Bay and across the West Coast. Many offshore wind turbine components are too large to be reliably and safely transported via land-based modes, necessitating local manufacturing and assembly of key components and use of Jones Act short sea shipping along the United States Marine Highway System to deliver additional domestically-produced components. Accordingly, the Project seeks to determine the most efficient and effective ways to transport, assemble, and install floating offshore wind components. These determinations require a planning level review of terminal, harbor wide, bay wide, statewide, and nationwide operations and investments in the new offshore wind energy production industry and supply chain. The California Energy Commission and Department of Energy have both identified long term needs for the statewide and nationwide operations and investments in the emerging OSW energy production industry.[3,4]

The Project will also support workforce development initiatives that lead to future curricula and High Road Training Partnerships that will provide the interest, skills, knowledge, and experience needed to support all aspects of the OSW industry supply chain from manufacturing to logistics, construction, and operation.[5] The Baywide Master Plan portion of the Project will foster optimization of the entire California offshore wind supply chain, from manufacturing to installation and to long term operations and maintenance, while incorporating community feedback into project design and maximizing equitable benefits. The Project will provide the special studies and 30% design for the efficient manufacture, installation, and operation of floating offshore wind foundations, towers, nacelles, and blades.

The former wood product manufacturing/shipping site known as the Redwood Marine Terminal was once one of the largest employment centers in a multi-county region, with hundreds of skilled workers employed at the site for several generations. Today, the site is almost entirely vacant. The timber industry was the primary employment sector throughout California's north coast but began significantly declining in the 1980s. The RMT site stayed active and employed hundreds of workers until 2013, at which time the site completely shuttered and caused massive layoffs from which the community still has not recovered. This also led to a precipitous decline in the number of cargo ships (shipping wood products) leaving Humboldt Bay.

Managing the Asset Once Built. The Harbor District operates and maintains many of the maritime assets through Humboldt Bay and has the experience and capacity to ensure that the asset is fully and properly managed. While the District may play a direct role in operations and maintenance of some components of the asset, the District has determined that the overall project will be operated and maintained by a contract operator through a lease from the District. Following a competitive proposal process conducted in 2022, the District has entered into an "Exclusive Right to Negotiate" with Crowley Wind Services, Inc. If the current negotiations are **not** successful to the satisfaction of the District and the overall community, then the District will go through a new competitive process to select a new contract operator. If the current negotiations are successful to the satisfaction of the District and the overall community, then the District will enter into a lease

[3] https://slc.ca.gov/content-types/news/commission-releases-alternative-port-assessment-to-support-offshore-wind/.
[4] *See generally*, https://windexchange.energy.gov/news/7151.
[5] *See,* Dept. of Labor, High Road to the Middle Class. https://www.dol.gov/general/good-jobs/high-road-to-the-middle-class.

with Crowley. In either case, the contract operator will have the experience and capacity to manage the asset once it is built. The District has the expertise to select a qualified contract operator.

The following information is provided in the event that Crowley is selected: As the nation's leading diversified maritime services provider, Crowley has extensive experience managing, operating, and maintaining a diverse portfolio of port terminals, which informs their ability to maintain the proposed terminal. The capital for maintenance will come from an operating fund that is generated from fees collected through use of the terminal. These fees will be paid as the terminal is chartered by the developers of the floating offshore wind farms. Crowley has an advanced, digital asset management system and the as-built designs will be added to the system and programmed for regular and proactive maintenance of the site. As noted in the Safety section, there are synergies between safety and state of good repair processes that reinforce beneficial safety outcomes even as the state of good repair investment keeps the terminal in peak operating condition. In the event that a different contract operator is ultimately selected, the District will ensure that the party possesses equivalent or better experience and qualifications.

1.3 Economic Impacts, Freight Movement, and Job Creation

The Port has an unprecedented opportunity to revolutionize the region's economy due to its unique economic advantage as the only "good candidate" for hosting a fully vertically integrated floating OSW industry supply chain. Importantly, California has the healthiest incentive markets of any state which will be available to co-fund this and future phases alongside Federal opportunities such as those originating in the *Infrastructure Investment and Jobs Act* and the *Inflation Reduction Act*. Still, the California Energy Commission has recently released a report noting that some $12,000,000,000 will be needed to develop sufficient port infrastructure to meet California's 2045 FOSW deployment goals. While the region is remote, with limited access to Class I rail and the Interstate Highway System, the floating OSW industry is not expected to rely heavily on that infrastructure because of the oversize and overweight nature of the components. Instead, this new industry will demand greater support from—and help revitalize—the nation's Jones Act fleet, merchant marine, and longshoring industry.

The Project and the ensuing offshore wind industry development will transform Humboldt Bay, nearby communities, the region, and the nation, inducing a variety of direct and indirect social, environmental, and economic benefits. Future offshore wind industry investments in Humboldt Bay, alone, are expected to exceed $1 billion, generating substantial direct and induced benefits for the region. A 2020 study by the American Wind Energy Association found that, "In a high scenario with 3,000 MW installed per year and 60% domestic content, these benefits could reach $25 billion per year and support over 83,000 jobs by 2030."[6] While specific investment needs for each aspect of the offshore wind ecosystem in Humboldt Bay have not been fully quantified, the cumulative benefit to economic vitality at the regional and national level will be substantial as demonstrated in Table 1 which shows the employment multiplier achieved by investing $1,000,000 in various industrial activities. Interpreting these metrics:

- Every job in the utilities industry creates another 10 jobs in other industries to which it is linked.

[6] https://supportoffshorewind.org/wp-content/uploads/sites/6/2020/03/AWEA_Offshore-Wind-Economic-ImpactsV3.pdf.

- Every 4.7 jobs in the transportation and storage industry creates another 11.3 jobs through industry linkages. This highlights the "foundational" value of these industries to the greater economy.

Table 1. Employment Multipliers per $1 Million in Final Demand[7]

Major industry group	Direct jobs	Supplier jobs[8]	Induced jobs[9]	Total indirect jobs
Utilities	1	4.5	5.9	10.4
Construction	5.5	4.8	6.1	10.9
Durable manufacturing	1.8	4.9	11.6	16.5
Transportation and warehousing	4.7	5.4	6	11.3
Finance and insurance	3.1	4.7	6.2	10.8
Professional, scientific, and technical services	4.3	4.8	10.4	15.3
Educational services	9.1	5.4	9.2	14.6
Other services (except public administration)	8.7	5.3	8.7	14

The communities nearest to the Port have greater representation of minority populations than the national average and higher percentages of residents living below the poverty level—nearly two and three times the national average. See Table 2 below. With commodity markets upon which the region has long relied largely collapsing over the past two decades, the area will likely remain economically stagnant until a new industrial driver is established in the region.

The project will contribute greatly to West Coast supply chains and goods movement. The FOSW industry will require an entirely new supply chain and will require substantial movement of cargo between ports. For instance, in order for California to reach its goal of deploying 25 GW of offshore wind by 2045, then 1,667 fully-integrated floating turbines will be needed (assuming that each is 15 MW). This means that the following will need to be manufactured and shipped between ports: 1,677 floating platforms (each larger than a city block); 1,677 nacelles/turbines (each as large as a house); 5,000 blades (each nearly 500 feet long); over 1,000,000 linear feet of steel towers; over 15,000,000 linear feet of mooring lines; over 5,000 anchor systems; and likely several million linear feet of transmission cables.

Figure 1 Loading Steel Towers

If production of all of this equipment starts in 2027, then 93 turbines would need to be produced per year (or 1.8 full turbine systems per week) for 18 straight years. This is all just to meet California's offshore wind goals and does not account for additional Federal goals. The California Energy Commission estimates that this will require ten terminals dedicated exclusively to offshore wind. Humboldt Bay can provide at least two of these needed terminals at the RMT site. If the facilities planned for the RMT site were to be located in other ports, existing cargo operations may be interrupted or compromised. Thus, the proposed project could prevent impacts to the speed or throughput of cargo movements at other ports by concentrating the first FOSW terminals in a port that has the available space. Co-locating manufacturing and assembly facilities in Humboldt Bay will also greatly increase efficiency and reliability as the oversize and overweight components are already waterside.

[7] https://www.epi.org/publication/updated-employment-multipliers-for-the-u-s-economy/.
[8] *Id.* Includes materials and capital services supplier jobs.
[9] *Id.* Includes jobs supported by respending of income from direct jobs and supplier jobs, as well as public-sector jobs supported by tax revenue.

1.4 Climate Change, Resiliency, and the Environment

Resilience is a key focus of this Project—advancing resilience at the port, throughout the offshore wind supply chain, and for the communities that will rely on this variable baseload capacity for their electricity needs. In redeveloping the defunct marine terminal, the Port will establish new resilience metrics, such as 1) capacity utilization rate; 2) downtime duration; 3) emergency response plan effectiveness; 4) information sharing; 5) redundancy measures (operational and emergency); 6) training exercises; and, 7) financial resilience assessments. By monitoring these measures, the Port can assess the port's resilience and identify areas for improvement to ensure that the port can better anticipate, prepare for, withstand, respond to, and recover from inclement weather, natural disaster, cyberattacks, and other human-made disruptions while maintaining its critical functions. Notably, offshore wind will help the nation and the State of California reduce the long-term impacts of climate change.

The future improvements—leveraging best practices from other leading port and OSW terminals—will be designed to maximize resilience to 100-year sea level rise, flood, king tides, earthquakes, wildfire, and other weather events and natural disasters while also avoiding other potential points of failure across the OSW supply chain. Humboldt Bay and the surrounding shoreline are vulnerable to the effects of climate change-driven sea level rise, which has been recognized to potentially increase inundation, flooding, coastal erosion, increased wave force, changes in sediment supply and movement, damage to infrastructure, and, in low-lying areas, permanent inundation by high tides. Wharf seismic design will comply with CBC-ASCE 7-16 for wharf structures accessible by the general public, which includes life safety and no collapse requirements under rare ground motion.

The region is also at risk of operational impacts from climate change-induced wildfire and resulting smoke. Project designs are incorporating best practices to mitigate these and other risk exposures, such as by raising the terminal to 14'-17' above MLLW. Moreover, designs will include "green" infrastructure, such as terminal electrification for zero-emission cargo handling equipment and wharf electrification to minimize ships idling at berth. The Project will also identify opportunities to incorporate green construction materials in all phases and evaluate future manufacturing facilities and processes that could minimize lifecycle carbon emissions and airborne pollutants and use the maximum amount of renewable energy. Notably, the Port updates its emissions inventory which is used to monitor progress in achieving the goals and objectives of the Humboldt County Climate Action Plan (CAP).[10]

1.4.1 Renewable and Resilient Power

The Project also includes a photovoltaic (PV) array that would be roof-mounted and connected to micro-grids on site. While the projected power generation from the PV array is not sufficient to meet the full demands of the Project, engineers have determined that the balance of the power could be purchased from Pacific Gas & Electric (PG&E), the local Redwood Coast Energy Authority, or through a power purchasing agreement with an offshore wind developer. This would allow the facility to operate as a green port reliant on 100 percent renewable energy. In the event of a utility grid outage, backup power is needed to serve critical loads. This emergency power is necessary to ensure operations at the fabrication and assembly facility, and that equipment handling activities are carried out in a safe manner wharf side during a power disruption. It also

[10] https://humboldtgov.org/2464/Climate-Action-Plan.

means that the terminal can remain operational during storms, when its services may be needed to support emergency operations at sea. PV-battery only microgrids have backup power capability and can serve the critical loads for short-term grid outages, if they are designed for the correct requirements.

The terminal designers are working with the local electric utility provider, PG&E, to identify ways to strengthen the grid for the region as well. In October of 2019, there were two PG&E Public Safety Power Shutoff (PSPS) events due to potential red flag wildfire conditions in other regions of the state that resulted in significant and unnecessary power outages within Humboldt County. In June 2020, PG&E announced that the Humboldt Bay Generating Station is capable of serving as a local power source during emergencies by reconfiguring the plant to "island" connections from the rest of the California grid. The Samoa Peninsula is included within the islanding portion of Humboldt County and should no longer experience power outages due to distant PSPS events.[11]

The growth of transportation electrification, particularly of fleets, is going to drive immense new load onto the nation's grid, much of which will come during the night when solar is not available. Failure to invest in offshore wind will increase demand for critical and rare earth minerals for batteries to store solar energy, creating distant yet significant environmental impacts that could be mitigated by the Offshore Wind MVP Project.

> *California's sweeping climate plan would increase electricity consumption by as much as 68% by 2045 — which would put an immense strain on the power grid unless hefty private and public investments are made in clean energy[.]*[12]

Finally, offshore wind adds much-needed stability to California's renewable power portfolio, improving reliability. This is because wind power generation holds steady in the evening as the average amount of renewable electricity generation available from solar generation begins to decline. This is particularly critical as transportation electrification expands rapidly among fleets who will perform the majority of charging at night, creating resource adequacy challenges as utilities seek to maintain their renewable portfolio levels in line with mandated carbon intensities.

1.4.2 Supports Energy Efficient Transportation

California has aggressive clean energy and clean transportation targets. With the recent adoption of the Advanced Clean Fleets (ACF) Rule[13] and Advanced Clean Trucks (ACT) Regulation[14], the Port and the region must plan for mass adoption of electric vehicles and equipment, including that used in construction and cargo handling. As such, this project will include gap analyses, strategies, and plans to support early compliance with these policies while delivering the renewable energy needed to power this fuel transition. Additionally, the Project will support the establishment of the nation's floating west coast offshore wind manufacturing supply chain, including locally within Humboldt Bay, the State of California, and the entire U.S. west coast—enabling communities near and far the opportunity to prosper.

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[11] PV power and microgrid discussion summarized from
Schatz Energy Research Center at Humboldt State University, (Electrical Infrastructure and Green Port Conceptual Engineering Assessment Memorandum," August 13, 2022.
[12] *See generally,* https://calmatters.org/environment/2022/06/california-climate-plan-electricity/.
[13] *See generally*, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets.
[14] *See generally*, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks.

The Port is a longtime supporter and active user of the M-5 Marine Highway corridor as approximately 80% of fuel is shipped between the SF Bay Area to Humboldt. Forest products are also regularly shipped north to Coos Bay, Greys Harbor, and other international ports. Given the sheer mass and weight of the floating offshore wind components, the full buildout of the marshalling, manufacturing, and maintenance facilities will require extensive use of the M-5 Marine Highway, with potential connections to other Marine Highway spurs. The offshore wind project will expand the uses on the M-5 Marine Highway, which is a stated goal of MARAD. Short sea shipping is a removes traffic from the state's highways and produces the least emissions per ton mile shipped of all the typical freight modes.

1.4.3 Habitat Restoration

The Project includes construction of new habitat to compensate for disruption associated with the terminal restoration activity. The new habitat will be located in the same area but away from terminal operations. The Habitat Restoration Subarea includes areas that are ruderal and dominated by non-native invasive plant species. This will mitigate impacts to wetlands and environmentally sensitive habitat areas (ESHAs). Habitat restoration will develop a mosaic of habitat types that is significantly higher quality than what will be impacted by the Project and include eco-shoreline components which leverage biomimicry to support habitat health and productive ecosystem services. The following activities will occur in the Habitat Restoration Subarea:

- Create and enhance wetland and ESHA habitats at a sufficient replacement ratio to Project impacts to ensure no net loss of wetlands, eelgrass, and ESHA.
- Areas may be lowered in elevation to introduce tidal influence and develop salt marsh habitat.
- Freshwater wetlands may be created at the margins of salt marsh to mimic natural salt marsh to freshwater marsh ecotones in Humboldt Bay.
- Freshwater wetland will be developed by excavating geomorphic low points to intercept groundwater; placing clay soils in the bottom of geomorphic low points to intercept groundwater; and/or placing clay soils in the bottom of geomorphic low points to capture and retain rainwater.
- Salt marsh, eel grass, freshwater wetlands, and ESHA will be planted with suitable native plant species.
- Biological mitigation; including but not limited to relocation of osprey nests.

1.5 Equity, Multimodal Options, and Quality of Life

The Project will be completed in accordance with Executive Order 12898, as required under NEPA and endorsed by the EPA.[15] Communities potentially impacted by the proposed project will be identified through review of existing studies (e.g. Humboldt Bay Management Plan, Samoa Town Master Plan, City of Eureka Community Background Report) and completion of an assessment of the project construction and operations relative to the communities in the area, particularly as it relates to potential impacts to low income and underrepresented communities. Environmental justice has been incorporated into the 2017 Humboldt County General Plan,[16] and because the Project will require a development permit from the county, the project will comply with county policy, specifically noting:

[15] https://ejscreen.epa.gov/mapper/.
[16] https://humboldtgov.org/205/General-Plan.

[Environmental Justice] is a civil rights matter, grounded in the Equal Protection Clause of the U. S. Constitution. The Fourteenth Amendment expressly provides that the states may not "deny to any person within [their] jurisdiction the equal protection of the laws." Both U. S. and California law includes directives to consider this issue in local decision making.

1.5.1 Equity Assessment

The Project is located in the industrial area of Humboldt Bay. Multiple communities will be affected to various degrees by the development and operations of the future offshore wind terminal; however, the development will be within existing boundaries of the terminal property and will be designed to minimize, avoid, and mitigate potential impacts to the surrounding communities. The Project will include extensive outreach, engagement, and planning to ensure underrepresented populations are included in the design and implementation of Humboldt's future OSW industries. The Harbor District has strong ties to the local community and is committed to advancing an inclusive, accessible, and equitable engagement process, which will include developing a formal Equity Assessment and Equity Impact Analysis as part of the proposed *DEIA Plan*. The Port has no history of adverse compliance reviews, external lawsuits, investigations, or complaints alleging discrimination, of any kind, occurring in the last five years. The Baywide Master Plan will be a vehicle for ensuring equity during broader development throughout Humboldt Bay.

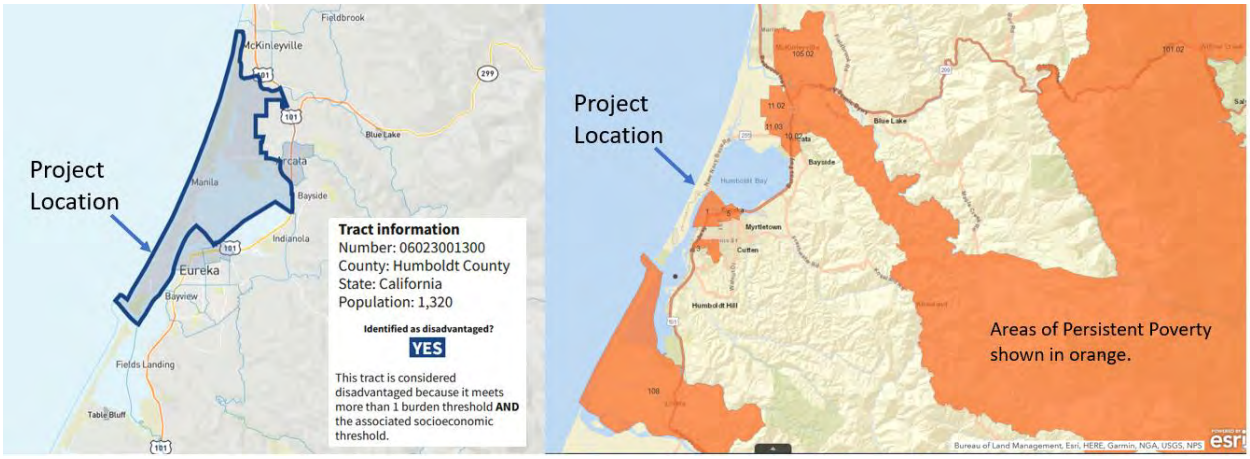

Figure 2 Snapshots from USDOT's APP and HDC Tools Showing Project Site in Context of Communities

The population of Humboldt County, as of the 2010 Census,[17] was 135,940 residents, with about 19.6 percent living below the poverty level. The Project and the County are in a Census-Designated Urban Cluster and a Qualified Opportunity Zone, pursuant to 26 U.S.C. 1400Z-1, which is intended to spur economic development and job creation in distressed communities.

The project area and surrounding communities have a higher percentage of people unemployed and living below the poverty level, compared to State and Federal averages (Table 2). The median income for the area is almost half that of the statewide level. These statistics are indicative of a population of the working poor. The Project and directly related offshore wind energy development will revitalize waterfront industry at the terminal and across Humboldt Bay while providing living wage jobs and the opportunity to join unions to nearby communities including Native Tribes.

[17] https://data.census.gov/cedsci/table?q=Humboldt&g=1600000US0664392

Humboldt County is home to eight Federally-recognized Tribal governments and many tribal members reside in the project area. Humboldt Bay falls entirely within the ancestral territory of the Wiyot peoples, who today belong to three different Federally-recognized Tribal governments clustered around the Bay. The Harbor District has positive ongoing relationships with each of these Tribal governments. The Wiyot Tribe is currently in a contractual and scientific partnership with the District in a multi-year endangered species sampling project. The District is also currently in a formal partnership with the Tribe managing a $7 million grant to conduct comprehensive habitat restoration and invasive species removal on the 300-acre Tuluwat Island, which is the cultural and religious heartland of the Wiyot Peoples.

Table 2. Demographic Information for the Project Area

Demographic	2019 American Community Survey, Census Data[18] [19]					
	Samoa	Eureka	Arcata	Humboldt Cnty.	California	National
Population	212	26,512	18,178	135,940	39,512,223	328,239,523
Unemployment Rate	19.6%	4.0%	3.5%	6.6%	5.1%	4.5%
% Below Poverty Level	33.1%	21.8%	24.7%	19.6%	11.8%	12.3%
% Minority	41.0%	44.8%	41.9%	26.2%	63.7%	40.1%
Black or African American (alone)	0%	2.5%	2.6%	1.3%	5.5%	12.4%
Hispanic or Latino (of any race)	4.2%	16.4%	16.8%	12.1%	39.4%	18.4%
American Indian/Alaska Native (alone)	2.4%	1.8%	2.2%	4.6%	0.4%	0.7%
Asian (alone)	0%	5.7%	4.1%	2.6%	14.6%	5.6%
Native Hawaiian/Pacific Islander (alone)	1.4%	0.2%	1.2%	0.4%	0.4%	0.2%
Other Race (alone)	0%	7.2%	7.3%	0%	0.03%	0.03%
Two or more races	33%	11.0%	7.7%	5.2%	3.1%	2.5%
Median Household Income	$42,292	$46,926	$39,069	$51,662	$80,440	$65,712

Demographic data support a higher-than-national and higher-than-statewide percentage of American Indian population. The percentage of American Indians in Humboldt County is five times the national average. Tribal members suffer disproportionately from high regional unemployment and poverty rates. The District will work with Tribes and the county workforce investment board to seek employment opportunities for tribes and members of other disadvantaged communities in Humboldt County.

While the Town of Samoa registered only 212 residents in the 2019 Survey, there has been recent residential expansion with the construction of dozens of low-and moderate-income housing units near the RMT, and more residential development is planned. This new residential construction is forecasted to triple the Town of Samoa's current population within 10 to 15 years.

1.5.2 Workforce Opportunities

The Project will benefit from the designation of Humboldt State University in 2022 as a polytechnic institution, which is supported by a $458 million appropriation in the recent California State budget. The new funding will enable Humboldt State to launch as many as 10 new academic programs by fall 2023, with an emphasis on engineering, technology and applied sciences including additional resources to support renewable energy education. As a state university, Cal Poly Humboldt is highly diverse and among the campus's STEM majors, 56% are women and

[18] https://data.census.gov/table?g=160XX00US0664392&tid=ACSDP5Y2019.DP05&hidePreview=true
[19] https://www.census.gov/quickfacts/fact/table/

40% are from underrepresented ethnic groups.[20] The Project offers the potential for these students to seek employment within the offshore wind industry after graduation from Humboldt State University and the College of the Redwoods.

In response to historic, disproportionate impacts on the county's American Indian population, Humboldt State University has actively reached out through its Indian Natural Resource, Science and Engineering Program (INRSEP), which serves Native American students majoring in the sciences and related disciplines. The program has been successful in placing nearly all of its students in graduate programs or career-related positions in private industry as well as Federal, State, tribal, and non-profit agencies.[21] **This program directly relates to the economic and employment benefits the Project will bring to the community and, specifically, to the indigenous peoples of Humboldt County.**

The Project will include meaningful community, workforce, and stakeholder engagement to ensure that these efforts drive local benefits, alleviate emissions burdens on neighboring communities, support economic vitality, and advance workforce development providing the local labor pool greater access to good-paying jobs and offering the free and fair choice to join a union.

1.5.3 Inclusive Hiring Practices, Use of DBE, MBE, and WBE firms

The Port and its project partners are committed to implementing hiring policies and workplace cultures that promote the entry and retention of a diverse workforce, including through hiring and contracting with members of underrepresented populations as well as Disadvantaged Business Enterprises, Minority-owned Businesses, Women-owned Businesses, and 8(a) firms receiving support from the SBA—all in alignment and furtherance of DOT's Equity Action Plan, California's DEIA efforts, and the project partners' own internal DEI, DE&I, and DEIA Plans. The Project Team recognizes that the distribution of workplace rights notices is an important and legally-required part of ensuring that employees are aware of their rights and that employers are in compliance with applicable laws and regulations. At minimum, distribution of workplace rights notices will be made by posting in the workplace, direct distribution to all employees, posting resources online such as on a company intranet, and by hosting regular training sessions.

1.5.4 Multimodal Quality of Life Options

The Project includes new walking and bicycling infrastructure—a Class 1 bike path built to ADA requirements—in furtherance of the Great Redwood Trail Master Plan, a 320-mile rails-to-trails program. This trail will provide an amenity for the surrounding "working poor" community as well as tourists, and support trail linkages from Humboldt County to the Marin Headlands and the Golden Gate Bridge. Facilities such as the wind farm support a niche tourism trend focused on understanding industrial processes—the "see it made" trend.

In addition, the Project partners have chosen training facilities that are located on Humboldt County's transit system, increasing the accessibility of their training programs and the workforce development activities being implemented as part of this and the larger project. In addition, the District will work with local transit operators to add a stop at the terminal to reduce employee VMT and indirect source emissions of the terminal. Both Eureka Transit and Redwood Transit have stops near the Samoa Peninsula. It would be an easy route change to add a stop at the terminal

[20] https://www.northcoastjournal.com/NewsBlog/archives/2021/07/13/hsus-polytech-push-receives-458-million-from-state.
[21] https://www.humboldt.edu/nativeprograms/.

to support workforce development once the terminal is in operation. This will increase the potential for lower income and disadvantaged members of the community to access these high-quality work options. As shown in the maps below, this will bring new transit and active transportation opportunities to Samoa Peninsula's historically disadvantaged community and nearby Areas of Persistent Poverty.

1.6 Innovation Areas: Technology, Project Delivery, and Financing

Innovation, according to the Notice of Funding Opportunity, has three primary dimensions: technology, project delivery, and financing. This section describes the many innovations associated with this Project that will support a "first mover" in this new U.S. industry and establish the minimum viable port infrastructure to commence in-water construction of wind turbines within this decade. Among the "firsts" associated with this Project:

- The floating offshore wind industry is yet to emerge in the U.S., and this will be the first terminal on the West Coast;
- This will be the first terminal supporting floating offshore wind farm construction and operations in the Western Hemisphere;
- The Project preserves space for an integrated manufacturing facility at the terminal, to be constructed as terminal development efforts advance. This would be the first integrated manufacturing and marshalling facility in the U.S. and the first to serve the floating offshore wind industry. This is a major step forward for establishing the domestic offshore wind supply chain, focusing on ensuring domestically manufactured components receiving the 48C tax credit are actually supporting development of the nation's domestic floating offshore wind industry—a challenge DOE has yet to address and instead prioritized providing guidance to foreign corporations to the disadvantage of public agencies and domestic public-private partnerships;[22]
- As noted throughout the Outcome Narrative, the Floating Offshore Wind industry is new and will require adapting existing industry practices for the conditions found in the Pacific Ocean.
- This terminal will be the first offshore wind heavy-lift marine terminal on the West Coast to adopt the Institute for Sustainable Infrastructure (ISI) Envision® Sustainability Certification process. This sustainability certification looks to implement more sustainable, resilient and equitable projects with focuses on quality of life, leadership, resource allocation, natural world and climate & resilience.

1.6.1 Technology

While technology is often considered a new product or software, it can also be a new way of producing something—a process technology. This Project includes both hardware and process innovations. Unlike offshore wind development on the Atlantic and Gulf coasts, the Pacific Ocean is too deep for offshore wind platforms fixed directly to the ocean floor. Instead, West Coast offshore wind will be deployed on floating platforms. Floating offshore wind platforms and the accompanying equipment (blades, towers, etc.) are all so massive that none of the primary equipment/components can be transported across land. Instead, nearly all FOSW components can only be transported via large marine vessels. Accordingly, all manufacturing and final assembly of FOSW must occur within ports at custom heavy-lift marine terminals that have large laydown

[22] *See generally,* https://www.energy.gov/infrastructure/qualifying-advanced-energy-project-credit-48c-program. Note the number of references and times guidance supports foreign participation as compared to the abject lack of references to "public".

areas and manufacturing areas and that are immediately adjacent to deep draft navigation channels. Floating Offshore Wind will be a new and innovative industry in the U.S. and will require new specialized marine terminals. Many of these terminals will need to be of a size and scale that does not currently exist on the west coast of North America. Adding to these challenges, manufactured equipment will need to be shipped between ports and thousands of fully-assembled floating wind turbines will need to be towed from ports, all without interrupting current cargo transport patterns or port cargo handling operations. As described in the Safety section, this will require a holistic look at the Project's operation and adaptation of existing navigation, terminal operation, and assembly processes.

In addition to the innovation that is inherent in establishing an entirely new industry, the project will include and advance innovation that improves the economic impact and reduces adverse impacts of terminal development and operations. As noted in the Project Description, the Project will include studies and strategies for advancing workforce development to coincide with the terminal's future zero-emission operations—as identified in the *Green Construction Gaps Analysis*, *Workforce Gaps Analysis*, and *Terminal Electrification Study*. These efforts will include High Road Training Partnerships that establish curricula to build up the local workforce for operating and maintaining zero-emission cargo handling equipment, vehicles, advanced energy systems, and manufacturing technologies that will be at the future terminal. Proactive planning is already underway for this zero-emission terminal, with the intent to pre-lay and construct sufficient conduit and electrical infrastructure—including a large solar array—within this Project's construction phases to support full zero-emission operations in the future. Additionally, the local grantmaking program to be established under the Offshore Wind MVP Project will foster local innovation, particularly among underrepresented populations and Tribal Members.

1.6.2 Project Delivery

The Project has been designed to deliver the Minimum Viable Port (MVP) infrastructure needed to support near-term construction of offshore wind generation without being impaired by future phased construction, including the future manufacturing facilities. The Project team attempted to identify a narrower and less costly scope but determined that doing so would likely require terminal operations to cease during those future terminal construction activities with the added consequence of disrupting continuous in-water construction for 9 months to a year at time. Thus, this project is innovative in delivering the minimum viable port infrastructure to enable continuous, unimpeded assembly and in-water construction of nearly 1 GW of floating offshore wind per year once the Offshore Wind MVP Project's facilities becomes operational. In addition to the immediate Project's delivery, the Offshore Wind MVP Project will support innovative project delivery across other industries. For example, fleets transitioning to battery-electric technologies will expect to perform the vast majority of charging at night, necessitating immense growth of offshore wind energy to mitigate the adverse environmental and economic impacts of deploying battery energy storage systems to capture solar energy for night-time utilization or reverting to fossil energy to meet this massive impending load growth. Moreover, utilities and Community Choice Aggregators will benefit from this project as the new night-time load of EVs will disrupt their RPS commitments and risk severe resource adequacy issues absent the growth of offshore wind energy. It should be noted that just one year of operation at the proposed terminal will support the development of enough offshore wind generation capacity to simultaneously power some 3,500 350 kW EVSE deployed under the NEVI Program. No other project proposed under the MPDG enables such innovation in project delivery that spans so many critical national interests.

The District has developed an innovative and comprehensive funding stack and strategy to support the delivery of the Project and development of the nation's floating offshore wind industry. The District acknowledges this request is quite large and it is being submitted earlier than the Project Team anticipated. Yet, rapidly evolving decisions by multiple Federal agencies have required the District to reconfigure its funding stack strategy in preparation for an apparent lack of major Federal funding sources being competed in FY 2024. The District was undertaking a viable, staged approach to attract public and private investment—commencing with the CEC and FY 2023 PIDP proposals—which has since been impaired by the Federal government's reasonably unforeseeable choices, actions, and decisions.

This application and the ability of the District and its partners to pull it together within the 45 calendar days allotted to the MPDG Opportunity demonstrates their strong commitments to this innovative, industry-leading funding stack and the Project. The Project Team now looks to the Federal government to demonstrate they are likewise fully committed to advancing innovation across industries with the MPDG Opportunity and ensure the Federal government is indeed implementing the required whole-of-government approach needed to avoid the worst impacts of climate change, decarbonize our transportation sector, and bring vast amounts of renewable energy, advanced energy jobs, energy independence, and energy resilience to the American people. This has not been demonstrated of late, requiring greater innovation by one of the smallest, most remote jurisdictions in California and its public and private partners.

1.6.3 Financing

P3 Delivery. The public Port will deliver the project in partnership with a qualified and experienced port terminal operator. This public-private partnership (P3) will deliver the Project and will also operate the terminal once construction is complete. The private partners will be responsible for buying and maintaining equipment for the terminal, hiring employees, and contracting with other companies to perform terminal-related work. To serve the private role in the P3, the District has entered into an "Exclusive Right to Negotiate" with Crowley Wind Services. If the current negotiations are not successful to the satisfaction of the District and the overall community, then the District will go through a new competitive process to select a new P3 partner (contract operator). If the current negotiations are successful to the satisfaction of the District and the overall community, then the District will enter into a lease with Crowley. In either case, the P3 partner will have the financing capabilities to provide major capital to the Project.

As discussed above, innovative project delivery is closely related to the Project's innovative funding stack. Yet, an innovative funding stack is only as viable as the government partners' interests in advancing projects of critical local, state, and national significance. Recent decisions and inactions by Federal agencies have interrupted this innovative approach and process designed to attract public and private investment for the development of the floating offshore wind industry. Still, the Project Team is endeavoring forward at breakneck speed to meet the demands of our prospective Federal partners as this Project proposes the only opportunity for the Federal government to meet its stated offshore wind objectives and all objectives related to transportation electrification and avoiding the worst impacts of climate change.

Cooperative Operating Model. In addition, as demonstrated in the Letters of Support for this application, there is strong support for this Project across multiple industries. Collaboration and knowledge sharing is key to the success of this nascent industry. The Project Partners are leading regular consultations with fellow West Coast ports who may also enter the industry, as well as active offshore wind ports around the world.

August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

PROJECT READINESS

PROJECT READINESS

This section describes the work that has been accomplished and that is planned to deliver the Project in the order referenced in the Notice of Funding Opportunity.

1.1 Environmental Risk

The detailed schedule is presented below. The Project Team intends to host Critical Project Reviews with the Department in advance of commencing each major subsequent task. At these Critical Project Reviews, the District and its partners will demonstrate sufficient completion of prior tasks enabling the subsequent phases while also demonstrating to the Department that match share has been obtained and will be immediately available for the subsequent phases to be initiated. This will ensure that the Department is maximizing its ability to allocate MPDG funds among multiple awardees within each Federal Fiscal Year and also support forecasting future availability of MPDG funds for subsequent awards. The Offshore Wind MVP Project's schedule will be rectified and amended in consultation with the Department as part of the grant agreement process and regularly throughout the Project as part of the Critical Project Reviews.

Figure 1 Detailed Project Schedule

Project Site	Task	Subtask or Milestone	Non-Construction Project Tasks	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024[3] Q1	2024[3] Q2	2024[3] Q3	2024[3] Q4	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1	2026 Q2	2026 Q3	2026 Q4
Both	1		TASK 1: OVERALL PROJECT MANAGEMENT & GRANT ADMINISTRATION																
		1.1	DOT Notification of Awardees			Mega Grant Award													
		1.2	NEPA Documentation for Grant Award																
		1.3	Executed Grant Agreement Returned to DOT																
		1.4	Executed Subcontracts																
		1.5	Attend Kickoff Meeting																
		1.6	Internal Project Schedule																
		1.7	Quarterly Progress Reports																
		1.8	Draft Final Report																
		1.9	Final Report																
Heavy-Lift Offshore Wind Terminal Project at RMT Site	2a		TASK 2a: RMT PRELIMINARY ENGINEERING, SPECIAL STUDIES, & SITE INVESTIGATIONS																
		2a.1	Coastal/Navigation/Hydrology/SLR/Tsunami Analysis																
		2a.2	Geotechnical Borings and Analysis																
		2a.3	Sediment Testing, Analysis, and Sampling																
		2a.4	ROW, Title Reports, Boundary Surveying, Site Surveying (Land & Bathymetry)																
		2a.5	Dredged Material Management Planning, Coordination, Analysis																
		2a.6	Air Quality Analysis, Terminal Electrification Plan, and Green Construction Plan																
		2a.7	Terrestrial/Wetland/Habitat Assessments/Mitigation Plan & Reporting																
		2a.8	Living Shoreline/Bank/Dredge Slope Stabilization Assessment/Analysis																
		2a.9	Off-Terminal Habitat Assessments/Surveys																
		2a.10	USACE Sect 408 Analysis - Hydrodynamics, Sed Transport, Local Wet Storage																
		2a.11	Land Transportation Analysis																
		2a.12	USCG Analysis - ATON, Vessel Maneuvering																
		2a.13	Agency Coordination																
	2b		TASK 2b: 60% ENGINEERING, SPECIAL STUDIES, & SITE INVESTIGATIONS																
		2b.1	Civil Engineering and Site Design																
		2b.2	Marine Engineering Design																
		2b.3	Design-based Documents, Graphics, and Site Plans																
		2b.4	Cost Estimates/Constructability/Quantities																
	2c		TASK 2c: RMT PERMITTING[1]																
		2c.1	Environmental Constraints/Environmental Setting																
		2c.2	CEQA Environmental Impact Report																
		2c.3	NEPA Environmental Impact Statement																
		2c.4	Obtain Permits																
		2c.5	Stakeholder Outreach																
	2d		TASK 2d: RMT ADVANCED DESIGN FOR ACCESS ROADS & HABITAT MITIGATION																
		2d.1	Prepare 90% Plans and Specifications			Mega Grant Award													
		2d.2	Prepare Final Plans and Specifications																
		2d.3	Prepare Bidding Issue Plans and Specifications																
Baywide	3		TASK 3: HUMBOLDT HARBOR BAY WIDE WIND PORT FACILITIES MASTER PLANNING																
		3.1	Chapter 1: Diversity, Equity, Inclusion, and Accessibility (DEIA) Plan																
		3.2	Chapter 2: West Coast Floating Offshore Wind Needs Evaluation																
		3.3	Chapter 3: Opportunity and Options Analysis for Sites Throughout Port of Humboldt																
		3.4	Chapter 4: Impact Assessment and Evaluation of Mitigation Alternatives																

Final Design and Construction Tasks

Heavy-Lift Offshore Wind Terminal Project at RMT Site	Project Task	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024[3] Q1	2024[3] Q2	2024[3] Q3	2024[3] Q4	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1	2026 Q2	2026 Q3	2026 Q4	2027 Q1	2027 Q2	2027 Q3	2027 Q4	2028 Q1	2028 Q2	2028 Q3	2028 Q4
	PROCUREMENT, BIDDING, AND CONTRACTOR SELECTION - ACCESS ROADS & HABITAT MITIGATION																								
	CONSTRUCTION - ACCESS ROADS & HABITAT MITIGATION																								
	Contractor Mobilization																								
	Access Road & Yard Preparation																								
	Wetland, Marine, ESHA and Eelgrass Mitigation[2]																								
	FINAL DESIGN - TERMINAL (Wharf, Berth, and Uplands)																								
	Prepare 90% Plans and Specifications																								
	Prepare Final Plans and Specifications																								
	Prepare Bidding Issue Plans and Specifications																								
	PROCUREMENT, BIDDING, AND CONTRACTOR SELECTION - TERMINAL (Wharf, Berth, and Uplands)																								
	CONSTRUCTION - TERMINAL (Wharf, Berth, and Uplands)																								
	Contractor Mobilization																								
	Wharf Demolition																								
	Dredge																								
	Rip Rap																								
	Wharf Construction																								
	Upland Works																								
	Contractor Demobilization																								

[1] CEQA, NEPA, and environmental documentation is to be funded exclusively through matching funds and not with Mega funds.
[2] The duration for environmental mitigation is an estimate for mitigation construction/planting only. Mitigation monitoring will also be required.
[3] Costs incurred in 2024 subject to pre-approval from DOT.
* Community Benefit Program will be implemented concurrently with all phases of the project.

1.1.1 Required Approvals

This section outlines the NEPA Status, permits and other approvals needed to advance the Project.

NEPA Status

The District recognizes USDOT regularly assigns management to the Departmental divisions most closely related to the awarded industry or transportation sector and is thus assuming that an award under MPDG would likely be overseen by MARAD. The Project Team has reviewed guidance documents regarding the NEPA process for the grant agreement and met with the Maritime Administration (MARAD) NEPA Coordinator to discuss the Project as part of its application to the FY 2023 Port Infrastructure Development Program (PIDP). Based on the MARAD guidance memo titled Process on pre-NEPA Field Surveys Prior to Grant/Loan Award Execution, all remaining Project development tasks can be completed with U.S. DOT approval prior to NEPA documentation except for the geotechnical site investigation. The geotechnical site investigation will require a NEPA categorical exclusion for "Research Studies and Activities" as described in Maritime Administrative Order 600-1. The Port will be responsible for completing MARAD's NEPA documentation, in collaboration with MARAD's NEPA Coordinator in the Office of Environmental Compliance, prior to executing the grant agreement. A NEPA Environmental Impact Statement will be prepared for the Project construction. The Project Team has begun strategizing with the Army Corps of Engineers and MARAD regarding the NEPA process. Figure 1 shows the schedule for NEPA documentation relative to Project construction.

Environmental Permits and Reviews

Based on past precedent, a waiver from the California Coastal Commission may be required for the Project's Marine Geotechnical Site Investigation. The construction portion of the Project will require numerous approvals (Table 1). The process will include consultation with local Tribal entities under Section 10/404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, and as required by California Assembly Bill (AB) 52 Tribal Cultural Resources.

Public Engagement

Public engagement—spanning, at minimum, industry, government agencies, residents, Tribal Members, community-based organizations, utilities, and workforce stakeholders—is a core part of the Project and began in advance of NEPA. The District and many industry stakeholders have hosted numerous public engagement events to gather public feedback that is being incorporated into the early project designs and, indeed, the Offshore Wind MVP Project. The Project Team has and will continue to engage diverse community stakeholder groups, including members of the Wiyot Tribe and the ten other federally-recognized Tribal governments in the vicinity. The Project team will use best practices across all aspects of stakeholder engagement, such as providing for meals and childcare during public meetings, ensuring materials are translated to non-English languages commonly used in the community (including Spanish and Hmong), and other activities that maximize diverse, equitable, accessible, and inclusive coordination efforts. To achieve this, the Project Team will coordinate with leading agencies, such as the California Air Resources Board, Department of Transportation, and Department of Energy, to understand best practices for enacting meaningful and actionable engagement in furtherance of the Justice40 Initiative and California's AB 617 Community Air Protection Program.

Stakeholder and public outreach will continue through the NEPA process. To further reduce adverse impacts to disadvantaged communities, the Project will include a Baywide Master Plan; a Diversity, Equity, Inclusion, and Accessibility (DEIA) Plan; Terminal Electrification strategies;

an inclusive Workforce Development Gap Analysis; and, development of a Green Construction Gap Analysis. In addition, the project will adopt the Institute for Sustainable Infrastructure (ISI) Envision® sustainability certification process. All of these, in concert, will serve to reduce environmental and public health impacts of the future development and provide an established path to economic opportunity therein.

Table 1 Permits, Approvals, and Consultations

Permit/Review	Agency/Consultation	Trigger
Federal Approvals		
Section 10/404 of CWA	U.S. Army Corps of Engineers	Impacts to Waters of the U.S., wetlands, dredging
Section 408	U.S. Army Corps of Engineers	Potential impacts to navigation channel (USACE facility)
Section 7 ESA consultation; Biological Opinion	National Marine Fisheries Service U.S. Fish and Wildlife Service	Potential impacts to ESA species/habitat (bay is green sturgeon critical habitat)
Section 106 of National Historic Preservation Act	California Office of Historic Preservation/Tribes	Potential impacts to cultural or tribal cultural resources
Tribal Consultation AB 52	Interested Tribes/Native American Heritage Commission	Potential impacts to tribal cultural and/or treaty resources
CZMA concurrence	California Coastal Commission	Project in Coastal Zone
FAA Obstruction Evaluation	Federal Aviation Administration	Project is near an airport
PATON	U.S. Coast Guard	Construction of new in water structures and associated navigational aids.
MMPA	National Marine Fisheries Service	Potential impacts to marine mammals
Migratory Bird Treaty Act	California Department of Fish and Wildlife; U.S. Fish and Wildlife Service; Humboldt Bay Harbor, Recreation and Conservation District	Potential impacts to migratory birds
Bald/Golden Eagle Protection Act	California Department of Fish and Wildlife /U.S. Fish and Wildlife Service	Potential impacts to eagles
State and Local Approvals		
Section 401 WQC	Eureka Plain, North Coast Regional Water Control Board	Construction, wetland impacts, impacts to Waters of the US or State, turbidity impacts
1602 Streambed Alteration Agreement; Incidental Take Permit	California Department of Fish and Wildlife	Impacts to drainage features (Waters of the State); impacts to special status species
Lease Agreement	California State Lands Commission	Encroachment into State Lands
Coastal Development Permit	California Coastal Commission or authorized local permitting authority/	Coastal development. May be Humboldt County if they update their coastal program
Development Permit	Humboldt Bay Harbor, Recreation and Conservation District	Terminal development.
SWPPP and WQMP	Eureka Plain RWQCB	Construction and facility design.
California Air Resources Board Operating Permit	North Coast Air Quality Management District	Changes to operating facility emissions.

1.1.2 State and Local Approvals

The key to minimizing regulatory risk and surprises is a robust scoping and outreach process at the outset of the NEPA/CEQA process. Indeed, the Port has already conducted extensive outreach and scoping with local agencies, Tribes, and community and industry stakeholders. A key issue for the County of Humboldt is the need for amendments to the Humboldt Bay Area Plan to allow

for required building heights. The Port and County are actively developing a strategy to address this in 2024. Additionally, there are errors in the County zoning maps that require correction. It is expected that these corrections will also be completed in 2024. The Project team has worked closely with the community to provide education regarding Project benefits, including greenhouse gas reduction and economic benefits from wind energy development. The Project has broad public support as demonstrated by the support letters provided with this application.

1.1.3 Environmental Reviews, Approval and Permits by Other Agencies

A waiver from the California Coastal Commission will be required for a geotechnical site investigation, necessitating a NEPA Categorical Exclusion for Research Studies and Activities.

US Army Corps Permits under Section 10 and 404 of the Clean Water Act will be required for impacts to wetlands (freshwater and marine) and work in coastal waters of the U.S. The Port has identified and is currently designing compensatory mitigation (habitat restoration) projects for the wetland impacts which are included within the scope of the Offshore Wind MVP Project. Additionally, Section 408 approval may be required for impacts to the Federal navigation channel, because dredging will occur adjacent to Federal navigation channel.

The Project will require the approvals listed in Table 1 as well as a CEQA Environmental Impact Report and NEPA Environmental Impact Statement. The CEQA Notice of Preparation was posted June 23, 2023. The Port has engaged with the pertinent regulatory agencies to identify the special studies and compensatory mitigation that will be required to obtain approvals.

Domestic Content

The Project will include development of a *Terminal Electrification Plan*, *Green Construction Gap Analysis*, and *Domestic Procurement Gap Analysis*, each of which will include strategies to cost-effectively maximize domestic content while achieving climate and public health benefits across the supply chain, construction activities, and ongoing operations. The Project Team will engage leading original equipment manufacturers (OEMs), emerging technology developers, and material and product suppliers to understand pathways to maximizing sustainable domestic content, utilization of green construction materials and low-emission equipment, and reliance on domestic labor, innovation, and manufacturing capacity.

1.1.4 Technical Capacity

Experience and Understanding of Federal Requirements

The Project Team has the requisite experience and understanding of Federal requirements, from contracting to project closeout, to ensure the Project can be delivered on time and within budget. The Project Team has extensive experience procuring services and goods in compliance with the Federal Acquisition Regulation and is committed to maintaining open, competitive bidding and procurement processes for components proposed in this application. As needed, the Project Team will issue FAR-compliant bidding packages to enable this Project to progress quickly, ensuring timely delivery of the FOSW terminal and waterside infrastructure. The Project Team is committed to complying with the Build America, Buy America Act to the maximum extent possible.

1.1.5 Experience with Federal Agencies and Federally-Funded Projects

The Port Authority has direct experience and understanding of Federal requirements, including NEPA, USACE Permitting, and USACE dredging projects. The Port has managed several U.S. Economic Development Administration (EDA) and U.S. Environmental Protection Agency (EPA) grant projects and studies. As a working port, the Port of Humboldt Bay has longstanding working

relationships with USACE, the U.S. Coast Guard, and MARAD. The State and Federal offshore wind initiatives have required the Port to also work closely with the U.S. Department of Defense, the Bureau of Offshore Energy Management, and the Fish and Wildlife Service. The Project Team has likewise issued multiple requests to engage the Department of Energy for their technical and financial support.

The Port has experience as a recipient of past grants from the EPA, Federal Emergency Management Agency (FEMA), U.S. Department of Homeland Security, USACE, EDA, California Energy Commission, California State Lands Commission, California Department of Fish and Wildlife, California Coastal Conservancy, Ducks Unlimited, California Department of Transportation, and the California Division of Boating and Waterways. The Port Authority does not have any record of ever failing to complete a grant-funded project or to deliver the final product(s) as described in the Port's grant applications. For the current grant application and associated Project, the Port has built a highly experienced and qualified project team with expanded internal and external resources to help manage the Project, including direct experience with Federal aid projects, grant oversight, grant reporting, and overall State and Federal compliance. The team includes several licensed civil, structural, geotechnical, and mechanical engineers, as well as environmental and permitting specialists.

Similarly, the District's pending private-sector contract operator (Crowley) carries deep expertise in working with Federal agencies and federally-funded projects through its position as a leading Jones Act vessel operator, logistics provider, and terminal developer and operator. Crowley's experience in collaborating with the U.S. Coast Guard and MARAD across all aspects of vessel lifecycles will bring substantial lessons to designing the terminal and Bay to maximize navigability and operational effectiveness. Likewise, Crowley's experience in designing, developing, and operating port terminals—including the forthcoming Salem OSW Terminal in Massachusetts—will lend direct expertise in complying with all aspects of developing a federalized project. Notably, Crowley has substantial experience working collaboratively with lead agencies and applicants to deliver projects funded under PIDP, BUILD, and TIGER as well as programs led by the EPA, DOE, FEMA, and the Department of Defense.

1.1.6 Financial Completeness

The Project Team has included budget contingencies of 10% and identified conservative budget estimates that will greatly reduce the likelihood of the Project encountering cost overruns. Letters of funding commitment from Crowley and the District are provided with this application. The level of non-federal funding is not contingent on any other events; it is available upon notice of funding award. The Project Team intends to continue building out its funding stack and may use eligible Non-Federal incentives, grants, loans, bond revenues, and other public and private investments to supplement the Project Team's match share commitments. This funding strategy will be a key component of demonstrating project readiness during the proposed Critical Project Review meetings at which the Project Team will demonstrate sufficient progress of prior Project activities and the immediate availability of match share funding to implement subsequent Project phases. In the unlikely event of cost overruns, Crowley has entered into a soon-to-be-announced JV partnership with a financial services company, which will expand their access to new forms of green infrastructure funding instruments. As a public agency, the District could issue bonds to support the terminal or borrow through the TIFIA program and, as a terminal supporting manufacturing and final assembly of offshore wind components and turbines, the Project Team could likely borrow through the DOE Title 17 Clean Energy Financing Program.

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APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

PROJECT REQUIREMENTS

PROJECT REQUIREMENTS

The table below describes the Project Requirements across all three MPDG programs.

Statutory Requirements	How the Project Aligns with the Requirement
1. The Project will generate national, or regional economic, mobility, or safety benefits.	A statewide analysis of California's ports concluded that the Port of Humboldt in the north, and the Port of Long Beach in the south, had the most favorable conditions for establishing an integrated marshalling port for OSW activities. California and the U.S. have ambitious goals for generating electricity through offshore wind and the port facilities are an essential part of this supply chain. Moreover, California needs more electricity generation capacity than it has in place today to meet future demand given population growth and the expected transition from carbon-based fuels to electricity for industrial and transportation uses. The offshore wind energy capacity unlocked by this Project will enable widespread electrification and support resource adequacy for utilities and Community Choice Aggregators which currently face immense challenges in procuring sufficient renewable energy to meet night-time load growth while maintaining compliance with Renewable Portfolio Standard (RPS) targets and mandates. Finally, the loss of the timber industry and related activities crippled the local Humboldt economy. The introduction of offshore wind in this community introduces a new industry with strong growth potential and good wages to a disadvantaged community in rural Northern California. The Project is a win at the local, state, and national levels. As reported in the Outcomes Narrative, future offshore wind industry investments in Humboldt Bay, alone, are expected to exceed $1 billion, generating substantial direct and induced benefits for the region. A 2020 study by the American Wind Energy Association found that, "In a high scenario with 3,000 MW installed per year and 60% domestic content, these benefits could reach $25 billion per year and support over 83,000 jobs by 2030.
2. The project is cost effective.	The Project is cost effective; the benefit cost ratio is over the 1.0 breakeven threshold. While the Project's benefit cost ratio demonstrates the Project is highly cost-effective, it is limited in its scope due to the difficulties in directly quantifying the immense benefits to be directly achieved through the development of the Humboldt Bay Offshore Wind MVP Project and the annual in-water construction of hundreds of Megawatts of renewable energy. For instance, the Project's BCA has not quantified the immense avoided economic and societal costs that would not be realized absent this project being funded, such as continued reliance on fossil transportation fuels; costs, fees, fines, and penalties associated with delay in meeting lease obligations by the Wind Developers; the continued expansion of fossil energy being used to meet growing night-time electricity demands; and, helping overcome recent challenges to the advancement of consumer choice for renewable energy as a result of the CPUC's decision on resource adequacy.[1]
3. The Project will contribute to 1 or more of the national goals described under Section 150.	The Project contributes to multiple national goals outlined in Section 150. Chief among these are: 1) Freight Movement and Economic Vitality; 2) Environmental Sustainability; and 3) Reduced Project Delivery. As noted in Requirement 1 above, the Project provides strong support for the local, regional, and national economy. The Project incorporates multiple features that support Environmental Sustainability including solar power, improved wetlands habitat, and essential support for floating offshore wind on the Pacific Coast. Finally, the Port of Humboldt is poised to be the first operating port serving the offshore wind industry on the Pacific Coast. If the Port is delayed, the construction and operation of the first wind generation area will be delayed by at least two years—reducing the likelihood that California and U.S. will meet their goals for offshore wind generation.

[1] Cal. Pub. Util. Comm'n, Decision Adopting Local Capacity Obligations for 2024-2026, Flexible Capacity Obligations for 2024, and Program Refinements, Decision 23-06-029 (June 29, 2023). Available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M513/K132/513132432.PDF.

4. The Project is based on the results of Preliminary Engineering.	The Port and its partners have nearly completed 30 percent design. Significant public outreach has been undertaken to inform the early design specifications. Utility engineering has begun to inform the solar and grid requirements. Additional studies will be required as the Design progresses. The Partners have also consulted with other offshore wind ports and terminal operators across the U.S. and around the world to inform the design of this new terminal.
5. With respect to the non-federal financial commitments, 1 or more stable and dependable sources of funding and financing are available to construct, maintain, and operate the Project, and contingency amounts are available to cover unanticipated cost increases.	The Port Authority and its pending private-sector contract operator, Crowley, have sufficient funding available to meet the matching requirements, relying primarily on an existing planning grant from the CEC and corporate revenues from Crowley and its investment partner(s). Any cost overruns will be easily managed from the Project Team's existing capital reserves and obligations. See the Letters of Funding Commitment, attached. Cost estimates are based on Preliminary Design and include a 10 percent contingency, depending on the item. It should be noted that the District's available match share funding will be impacted by the FY 2023 PIDP results. Should the District be awarded the requested Small Project at a Small Port Planning Grant funding under the PIDP, a portion of the District's eligible match share from its existing grant from the California Energy Commission would be federalized by that program. If awarded, cost savings could be realized to the Offshore Wind MVP scope and Crowley would cover any funding shortfalls associated with a PIDP award.
6. The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.	The Project is the critical initial phase for future public and private investments across Humboldt Bay that will exceed $1 billion to establish the vertically integrated offshore wind industry supply chain as needed to achieve State and national objectives. A lack of Federal funding, including in the immediate proposal and future phases, will impede certain activities necessary to equitably establish the West Coast floating offshore wind industry supply chain and achieve the many benefits that ensue (environmental, transportation, energy, economic, equity, workforce development, etc.). The small and disadvantaged community in Humboldt County is the prime location for a purpose-built terminal to serve the emerging floating offshore wind industry off the U.S. Pacific Coast. This Project will be a major step forward in establishing a domestic supply chain to support this growing industry in the U.S. and provide much-needed renewable electricity generation capacity to California. National and regional goals are riding on the success of this Project, but the Port of Humboldt County needs help in realizing the potential. As discussed in the Project Outcomes section, delivering the MVP Project by 2030 is at risk due to challenges in accessing public incentives, such as the Department of Energy's 48C Tax Credit's Direct Pay capabilities and, potentially, the FY 2024 MPDG Opportunity. The Project has a well-defined funding stack strategy that aligns with ongoing project design efforts. This funding stack strategy contemplates significant State and private funding, but Federal funds are needed to meet imminent State and Federal goals in terms of scale and timing of investment. Left to the private market, the rollout of FOSW would be much slower in the current interest rate environment. Still, this strategy faces challenges due to delays in issuing DOE program guidance and DOT's unforeseen decision to expedite the 2024 MPDG Opportunity which necessitates this proposal being submitted in advance of our envisioned funding stack timeline. As discussed, the lack of federal funding opportunities of this magnitude available in 2024 risks this Project having to apply for funding in 2025 when the amount of remaining MPDG funding is unknown, the future Administration and their discretionary objectives are unknown, and the successor legislation to IIJA (FY22 to FY26) is an unknown. That is an extreme risk to the Project's ability to secure public funding under the whole-of-government approach that the Biden Administration has called for the OSW industry. This MPDG proposal leverages public funding to attract $0.98 cents of private funding for every dollar of MPDG funding, a very high level of private match for such a large project. The Project cannot be easily and efficiently completed without this MPDG funding as there are no other large-scale incentive programs available in the near-term to support a

	project of this scale and critical national significance. While the MVP could be built with different phasing, such an approach would require the entire terminal to shut down operations during future phase construction activities—9 to 12 months at a time. Thus, this funding is key to the success of developing the Minimum Viable Port infrastructure; the success of the OSW industry; the success of meeting State and Federal OSW, climate, and clean transportation objectives; and, indeed, the success of the IIJA and IRA programs. **The need is immense and this MPDG Opportunity is perhaps the last chance for the Project Team to receive the public funding needed to advance terminal development sufficiently to enable in-water construction of any floating offshore wind turbines on the West Coast before 2030.**
7. The Project is reasonably expected to begin construction no later than 18 months after the date of obligation of funds.	Time is of the essence; the Project must advance quickly without unreasonable delay to meet State and national OSW deployment targets and the many climate objectives dependent upon the rapid growth of renewable energy capacity. Preliminary design activities are nearly complete and the Notice of Preparation for the CEQA work has been posted, fortifying the Port's ability to complete the project on time and within the proposed budget. Crowley has designed and overseen the construction of other wind terminals and this experience informs the Project delivery at Humboldt. The Project Team is committed to the timely success of this Project and recognizes that the first dollars in from the Federal government will unlock a cascade of funding opportunities from other public and private sources.
8. The applicant has sufficient legal, financial and technical capacity to carry out the Project.	**Legal**. The Humboldt Bay Harbor Recreation and Conservation District oversees planned development of the harbors and ports within the District, as well as protection of the natural resources. It is a countywide agency with permit jurisdiction over all tidal, submerged and other lands granted to the District, including all of Humboldt Bay. **Financial**. The Partners have secured the non-federal match and proposed a series of Critical Project Review checkpoints to demonstrate substantial advancement of ongoing project activities and the availability of eligible match funding to advance to subsequent Project phases and tasks. Letters of Commitment are provided. **Technical**. The Port has hired a diverse team of engineers—marine, civil, structural, environmental, electrical, etc.—to design the Project. Additionally, the Project Team will engage biologists, archeologists, geologists, Tribal representatives, and other experts necessary to support site preparation and construction activities in this sensitive area that is the ancestral home of the Wiyot Tribe. The Port's pending private-sector contract operator is Crowley Wind Services, an experienced port terminal operator currently overseeing the design and delivery of a new offshore wind terminal in Salem, MA.
9. The application includes a plan for the collection and analysis of data to identify the impacts of the Project and accuracy of forecasts included in the application.	Please see the data collection plan provided with this application. The Project Team recognizes that quantifying these benefits is key to demonstrating the efficacy and viability of these public investments and ensuring public interest and support remains throughout all future phases of development throughout the nation's offshore wind industry. Thus, the Project Team will take great care to establish baselines and comprehensive strategies and metrics for quantifying the benefits of the Humboldt Bay Offshore Wind MVP Project. Even if selected for award under INFRA or Rural, the Project Team is committed to executing a comprehensive data collection plan and knowledge transfer strategy in alignment with the Mega Data Collection Plan requirements.

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APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

BENEFIT-COST ANALYSIS NARRATIVE

Benefit-Cost Analysis Memorandum

Humboldt Bay Offshore Wind MVP (Minimum Viable Port)

Prepared for the Humboldt Bay Harbor, Recreation, & Conservation District

August 21, 2023

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Exhibits

Executive Summary

This memorandum presents a Benefit-Cost Analysis (BCA) in support of Humboldt Bay Harbor, Recreation, & Conservation District's (District's) application for funding under the United States Department of Transportation's (USDOT) Multimodal Project Discretionary Grant (MPDG) Opportunity program (National Infrastructure Project Assistance) program. The District is seeking funding under this grant program to support the Humboldt Bay Offshore Wind **M**inimum **V**iable **P**ort Project ("MVP" or "Project" hereafter) on the Samoa Peninsula of Humboldt Bay in Humboldt County, California.

The Project would establish the first operating offshore wind turbine staging and integration (S&I) terminal on the U.S. Pacific Coast. The Project will cover the first phase of the redevelopment of the terminal and will construct a purpose-built facility for the import, staging, preassembly, final assembly, launching, and long-term maintenance of wind turbine devices (WTDs). At full buildout the terminal will also serve as a facility for manufacturing of various WTD components. Marine infrastructure and upland improvements are required to prepare the terminal for use by offshore wind developers to conduct these activities. While the offshore wind energy industry is the proposed anchor tenant(s) of the modernized marine terminal project, the multipurpose facilities could accommodate a variety of vessels and traditional port-based industries, including breakbulk cargo and forest products. Importantly, the proposed project would provide facilities that are required for the development of offshore wind energy equipment to meet federal and state renewable energy goals and growing demand for electrical power.

The BCA was conducted in accordance with USDOT's January 2023 *Benefit-Cost Analysis Guidance for Discretionary Grant Programs*. The BCA compares expected benefits and costs of the Build conditions to the No Build (baseline) conditions to estimate the proposed Project's net benefits. Exhibit 1- Impact Matrix presents the Impact Matrix, which describes the baseline, the Project, and the estimated benefits.

Exhibit 1– Impact Matrix

Current Status/Baseline	Change to Baseline	Types of Impacts	Affected Population	Economic Benefit (NPV, $2021M)	Page Reference in BCA Memo
Under the without-project conditions, no ports with the capability to stage and integrate (S&I) floating wind turbine devices (WTDs) would exist on the West Coast of the United States until operations begin in 2032 at the proposed Long Beach Wind Port. The Long Beach Wind Port is anticipated to S&I WTDs for delivery to the Morro Bay Wind Energy Area (WEA) and the Humboldt Bay WEA before sourcing to the rest of the West Coast. The Humboldt Bay WEA would not be able to begin sourcing WTDs from the facility until 2032. Three ocean-going tugs would transport one assembled WTD 576 miles from the Long Beach Wind port to the Humboldt Bay WEAs each week for installation, and then on North to Oregon and Washington once the Humboldt Bay WEAs are complete.	Under the with-project conditions, the Humboldt Wind Port would be ready for operations in January 2029 and would be able to S&I and deliver one WTD per week (following completion of Phase 1). Initially, the WTDs would be towed 23 miles by three ocean-going tugs to the Humboldt Bay WEAs for installation. After the Humboldt Bay WEAs are fully installed, further WTDs would be installed near Humboldt Bay or further north in Oregon and Washington. The energy produced from the WTDs would be used to expand the overall grid and replace the non-renewable onshore sources of energy. The Project would also include community amenities such as bike paths and a fishing pier.	**Safety**			
		Household Power Loss Prevention	California residents	$33.36	13
		Climate Change, Resiliency, and the Environment			
		Tug Emissions Savings	California residents	$104.18	14
		Power Generation Emissions Savings	California residents	$7.92	14
		Equity, Multimodal Options, and Quality of Life			
		Community Recreation Benefits	Local residents	$0.22	15
		Economic Impacts, Freight Movement, and Job Creation			
		Tug Operating Cost Savings	Wind farm operators; electricity users	$712.67	12
		Operating & Maintenance Costs Increase (disbenefit)	Humboldt Bay Harbor District and terminal operator(s)	-$20.71	17
		State of Good Repair			
		Residual Value	Humboldt Bay Harbor District	$68.78	15

All values are in 2021 dollars and discounted to 2021. The analysis covers a 20-year operating period following commencement of operations of the Project in 2029. The BCA estimates the Project's Net Present Value (NPV) to be $445.2 million and the benefit-cost ratio (BCR) to be 2.0:1.

As shown in Exhibit 2, the Project provides $712.7 million in economic impact benefits over the analysis period and $906.4 million total in net benefits, using a 7% discount rate. The benefits include prevention of power loss, emissions savings, community recreation facilities, tug operating cost and emissions savings from travel time reduction, net operating and maintenance costs, and the Project's residual value.

Exhibit 2 – Costs and Benefits Delivered (2029 – 2048)

	Discounted to 2021 at 7% 20-Year Analysis
Costs (2021 $M)	
Capital Cost	$461.2
Total Costs	$461.2
Benefits (2021 $M)	
Safety	
Household Power Loss Prevention	$33.4
Climate Change, Resiliency, and the Environment	
Tug Emissions Savings	$104.2
Power Generation Emissions Savings	$7.9
Equity, Multimodal Options, and Quality of Life	
Community Recreation Benefits	$0.2
Economic Impacts, Freight Movement, and Job Creation	
Tug Operating Cost Savings	$712.7
Operating & Maintenance Costs Increase (disbenefit)	-$20.7
State of Good Repair	
Residual Value	$68.8
Total Benefits	**$906.4**
Outcome	
Net Benefits (2021 $M)	**$445.2**
Benefit-Cost Ratio	***2.0***

1. Introduction

The Humboldt Bay Offshore Wind Minimum Viable Port Project ("MVP" or "Project" hereafter) will establish the first operating offshore wind turbine staging and integration (S&I) facility on the U.S. Pacific Coast. The Project includes a 200,000 square foot wharf with associated dredging, access road improvements, wetlands and eelgrass mitigation, an eco-shoreline, and community amenities of a Class 1 bike path and public recreation access.

Under the Build conditions, the Project will redevelop the terminal and the facility will be ready for operations in January 2029. The facility will be able to stage and integrate (S&I) and deliver one wind turbine device (WTD) per week. Initially, the WTDs would be towed 23 miles by three ocean-going tugs to the Humboldt Bay Wind Energy Areas (WEAs) for installation. After the Humboldt Bay WEAs are fully installed, further WTDs would be installed near Humboldt Bay or further north in Oregon and Washington. The energy produced from the WTDs would be used to expand the overall grid and replace the non-renewable onshore sources of energy.

Under the No Build conditions, no ports with the capability to assemble floating WTDs would exist on the West Coast of the United States until operations begin in 2032 at the proposed Long Beach Wind Port. The Long Beach Wind Port is anticipated to S&I WTDs for delivery to the Morro Bay WEAs and the Humboldt Bay WEAs before sourcing to the rest of the West Coast. The Humboldt Bay WEAs would not be able to begin sourcing WTDs from the facility until 2032. Three ocean-going tugs would transport one assembled WTD 576 miles from the Long Beach Wind Port to the Humboldt Bay WEAs each week for installation, and then on North to Oregon and Washington once the Humboldt Bay WEAs are filled.

Compared to the No Build conditions, the Project would decrease the distance tugs must travel for the installation and repair of WTDs. The benefits are assessed over 20 years, spanning from 2029 to 2048. The Project results in benefits to climate change, resiliency, and the environment; safety; equity, multimodal options, and quality of life; economic impacts, freight movement, and job creation; and state of good repair. The analysis assumptions can be found under section *2. Analysis Assumptions.*

The benefits analysis was conducted using the USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs document[1] as a guide for preferred methods and monetized values. The parameters of the benefits analysis follow the protocols set by the Office of Management and Budget (OMB) Circular A-94 as well as the recommended benefit quantification methods by the USDOT. Generally, for the benefits calculations, standard factors and values accepted by Federal agencies were used, except in cases where project-specific values or prices were available. In such cases, modifications are noted, and references are provided for data sources.

The analysis follows a conservative estimation of the quantifiable benefits of the Project in the BCA; the actual total benefits of the Project may be greater than depicted in the results. The No Build (baseline) conditions assume that the Project would not be built and the purpose of, and need for, the Project would not be met. The Project was compared to the No Build conditions to identify the net benefits in the following categories: Climate

[1] USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023

Change, Resiliency, and the Environment; Safety; Equity, Multimodal Options, and Quality of Life; Economic Impacts, Freight Movement, and Job Creation; and State of Good Repair.

Benefits were estimated over a 20-year period, from 2029 to 2048. All dollar values were discounted to 2021 at 7% and are in 2021 dollars. CO_2 emissions were calculated at a 3% discount rate, as consistent with 2023 USDOT guidance.

2. Analysis Inputs

The BCA is based on several inputs/assumptions on the differences between the Build and No Build. A list of inputs and sources used in the analysis is provided in Exhibit 3.

Exhibit 3 – Benefit-Cost Analysis Inputs

Inputs	Value	Source
General		
Dollar Year	2021	Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023
Discount Rate	7.0%	
Discount Rate (CO2)	3.0%	
Discount Year	2021	
Period of Analysis	20	
Construction Begins	2025	Crowley
Construction Ends	12/31/2028	
Project Open/Analysis Period Begins	2029	
WTD Installation Begins, With Project Conditions	2030	
Year Analysis Period End	2048	
Capital Costs ($2023)	$769,685,000	
Projected Begin of Operations for Port of Long Beach Facility	2032	Port of Long Beach. 2023. https://polb.com/port-info/news-and-press/port-of-long-beach-releases-pier-wind-project-concept-05-09-2023/
Turbines assembled per week (Port of HB)	1	Crowley
Turbines assembled annually (Port of HB)	52	
Without Project - Turbines assembled for shipment to Humboldt Bay WEA or further north per week (Port of LB)	1	Assumption
Installed capacity in the 2 Humboldt Lease Areas (GW)	2.6	California State Lands Commission, Moffat & Nicol. AB 525 Port Readiness Plan. July 7, 2023
Wind turbine device capacity (MW)	15	
Energy generation as a % of max capacity	40%	BOEM. See 'Average Generation' tab.
Hours in a year	8,760	Calculation
Average energy generation per turbine annually (MWh)	52,561	Calculation
Megawatts (MW) per gigawatt (GW)	1,000	
# of WTDs expected in 2 Humboldt Lease Areas	173	Calculation
Years to reach capacity at both Humboldt Lease Areas	3.33	Calculation
conversion for kilowatts (kW) per megawatt (MW)	1,000	
State of Good Repair		
Government nonresidential structures: Nonbuilding: Other	60	BEA Rates of Depreciation, Service Lives, Declining-Balance Rates, and Hulten-Wykoff Categories,

Inputs	Value	Source
		https://apps.bea.gov/national/pdf/BEA_depreciation_rates.pdf
Economic Impacts, Freight Movement, and Job Creation		
Annual Operating Costs as a % of Capital Costs	0.50%	Crowley
Annual Operating Costs Before Offshore Permit to Install WTDs	$100,000	
Safety		
% of new energy generated which flows to grid expansion	20%	Assumption
Percentage of total electricity sales in 2022 used by households (residential)	38.9%	EIA. Electricity explained. https://www.eia.gov/energyexplained/electricity/use-of-electricity.php
Total Economic Impact from Loss of Electric Power Per Capita Per Day ($2021)	$182	FEMA. Benefit-Cost Analysis Sustainment and Enhancements, Standard Economic Value Methodology Report, Version 11.0, September 2022.
Average Annual Electric Power Interruptions per U.S. Electricity Customer (excluding major events) (hours)	2	EIA. 2021. https://www.eia.gov/todayinenergy/detail.php?id=50316
Average monthly electricity consumption for a U.S. home (kWh)	886	EPA. Green Power Equivalency Calculator. https://www.epa.gov/green-power-markets/green-power-equivalency-calculator-calculations-and-references#
Average hours in a month	730	Calculation
Average U.S. home electricity consumption per hour (kW)	1.2	Calculation
California Persons per Household, 2017-2021	2.92	US Census Bureau. QuickFacts California. https://www.census.gov/quickfacts/fact/table/CA/PST045222
Innovation Areas: Technology, Project Delivery, and Financing		
# of anchor handling tug vessels (AHTV) to tow a single turbine	1	Crowley
# of ocean-going tugs to assist tow	2	
Distance between Humboldt Bay and Humboldt Lease Areas (nautical miles)	23	California State Lands Commission, Moffat & Nicol. AB 525 Port Readiness Plan, Table B.1. July 7, 2023
Distance between Port of Long Beach and Humboldt Lease Areas (nautical miles)	576	
Tug speed to lease area (knots)	3	California State Lands Commission, Moffat & Nicol. AB 525 Port Readiness Plan, Table B.4. July 7, 2023
Tug speed return trip (knots)	7.5	
Tug services assist rate per hour ($2023)	$2,999	Crowley. Escort Rates per Tug LA/Long Beach/El Segundo. 2023. https://www.crowley.com/wp-content/uploads/sites/7/2023/05/23-SAE-Rate-Sheet-LALB-V4.pdf
Tug services assist rate per hour ($2021)	$2,675	Calculation

Inputs	Value	Source
Anchor handling tug rate per hour ($2021)	$5,350	Calculation
Equity, Multimodal Options, and Quality of Life		
Population of Samoa, CA (2021)	237	U.S. Census Bureau. 2021 American Community Survey 5-Year Estimates.
Population of Samoa, CA (2021) between ages 20-60	130	
Class 1 bike path addition length (feet)	5900	Humboldt Bay Harbor, Recreation, & Conservation District
Feet per mile	5280	
Cycling path with no At-Grade Crossings (per cycling mile, per user) ($2021)	$1.87	Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023
Mortality Reduction Benefit Cycling Ages 20-64 ($2021) per trip	$6.42	
Participation rate for Americans who rode a bicycle outdoors in 2022	34%	peopleforbikes. 2022 U.S. Bicycling Participation Study. https://prismic-io.s3.amazonaws.com/peopleforbikes/22d4a9f5-f114-4c5e-a40d-a32c7fa1567f_2022+PeopleForBikes+US+Bicycling+Participation+Study.pdf
2022 Average frequency of biking (days)	55	
Climate Change, Resiliency, and the Environment		
% of added energy generated which replaces nonrenewables	80%	Estimate based on general mix of sources for electricity in the Western U.S.
% Replacing Coal Years 2030-2039	20%	
% Replacing Coal Years 2040 on	0%	
% Replacing Natural Gas 2030-2039	80%	
% Replacing Natural Gas 2040 on	100%	
Average diesel use per hour - anchor handling tug	400	Sea-Web Maritime Reference
Average diesel use per hour - tug assists	315	
Lbs of CO2 per gallon of diesel	22.45	EIA. Carbon Dioxide Emissions Coefficients. https://www.eia.gov/environment/emissions/co2_vol_mass.php
Conversion rate for pounds per metric ton	2,205	https://www.metric-conversions.org/weight/grams-to-metric-tons.htm
CO2		
2022	$56	Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023
2023	$57	
2024	$58	
2025	$59	
2026	$60	
2027	$61	
2028	$62	
2029	$63	
2030	$65	

Inputs	Value	Source
2031	$66	
2032	$67	
2033	$68	
2034	$69	
2035	$70	
2036	$72	
2037	$73	
2038	$74	
2039	$75	
2040	$76	
2041	$78	
2042	$79	
2043	$80	
2044	$81	
2045	$82	
2046	$84	
2047	$85	
2048	$86	
2049	$87	
2050	$88	

3. Benefits Analysis

The following sections summarize the methodology for estimating all the quantifiable benefits of the Project, along with the associated results. The Project will produce impacts in: Economic Impacts, Freight Movement, and Job Creation; Climate Change, Resiliency, and the Environment; Safety; Equity, Multimodal Options, and Quality of Life; and State of Good Repair.

Economic Impacts, Freight Movement, and Job Creation

The Project will significantly reduce tug operating costs, as WTDs installed in the Humboldt Bay area and all WEAs further north avoid a near 600-mile tow from the Port of Long Beach facility. The Project would also result in increased operations and maintenance (O&M), as further discussed in the Costs section. Although this is considered a disbenefit to the BCA, these expenditures have potential for positive impacts on economic outcomes and job creation.

Tug Operating Cost Savings

One anchor handling tug and two assist tugs are required to tow a single WTD. The Port of Long Beach S&I facility could potentially begin sending assembled WTDs north starting in 2032[2], and it was assumed one would be delivered to the Humboldt WEAs per week, and then one per week would be delivered further north or south after filling the Humboldt WEAs. The distance from Humboldt Bay to the Humboldt WEAs is 23 nautical miles, compared to 576 nautical miles from Port of Long Beach. According to the California State Lands Commission Assembly Bill (AB) *525 Port Readiness Plan*[3], the tug speed towing the WTD to the lease area would be about 3 knots, and the return journey speed would be about 7.5 knots, as the tugs deadhead back at faster speeds. Altogether, the tow from Port of Long Beach to the Humboldt WEAs would take about 184 hours longer than from Humboldt Bay, and the return journey would take about 74 hours longer.

The facility developer, Crowley, estimated the hourly cost of the assist tugs to be $2,675 and the anchor handling tug to be $5,350, in 2021 dollars, based on their harbor tug rates. This is conservative, as transport of WTDs will require ocean-going tugs. The estimated total added cost for a round trip tow of a single turbine from Port of Long Beach was over $2.71 million in 2021 dollars. Under the No Build conditions, approximately 880 WTDs would undergo this extended journey.

The total value of tug operating cost savings as a result of the Project is $712.7 million, discounted at 7% in 2021 dollars.

Safety

Safety benefits of the Project are derived from the prevention of power loss to electricity customers. Power outages can disrupt communications, water, and transportation; close

[2] Port of Long Beach. 2023. https://polb.com/port-info/news-and-press/port-of-long-beach-releases-pier-wind-project-concept-05-09-2023/
[3] https://www.energy.ca.gov/data-reports/reports/ab-525-reports-offshore-renewable-energy

retail businesses, grocery stores, gas station, ATMs, banks, and other services; cause food spoilage and water contamination; and prevent use of medical devices.[4] CalMatters reports that the "state's power grid — marred by outages in previous years and increasingly extreme weather — needs massive investments to attain the clean-energy future outlined in California's five-year climate roadmap."[5]

Household Power Loss Prevention

The Project is expected to assemble and install one WTD weekly. While these WTDs have 15 MW capacity, BOEM estimates the WTDs will average about 40% of this capacity hourly — see the 'Average Generation' tab. While 40% of capacity was used in the BCA, the WTDs are likely to produce much more energy given the high wind speeds characteristic to the Humboldt Bay WEAs. This conservative 40% of capacity was applied to the 15 MW capacity and the number of hours in a week (168) to calculate an average 1008 MWh energy generation per WTD per week. The annual energy generation was captured by summing the weekly values of installing an additional WTD every week, starting in 2030 when the Humboldt Bay WEAs offshore wind permits are expected to begin. Of the more than 492 million megawatts of energy that are expected to be generated as a result of the Project across the 20-year analysis period, 20% of that was assumed to flow to expand the overall capacity of the grid. The remaining 80% was assumed to replace nonrenewable energy sources.

In recent years, many California households have suffered power loss in the form of blackouts and brownouts, widespread enough to make national headlines. FEMA estimates the total economic impact from loss of electric power as $182 per person per day, in 2021 dollars.[6] The U.S. Energy Information Administration (EIA) estimates that the average annual electric power interruption per household lasts two hours, excluding major events such as hurricanes, wildfires, etc. The average California household has 2.92 members.[7] By reducing the FEMA economic impact estimate from a 24-hour day to a 2-hour window, and multiplying it by the average CA household size, the average annual cost of a power interruption is estimated to be $44.29 in 2021 dollars.

EIA estimates that 38.9% of total electricity sales in 2022 were used by residential households; the remainder is used for commercial, industrial and transportation purposes, which is not quantified in this BCA. To estimate the cost of household power loss, this percentage was applied to the 20% grid expansion assumption of added power generation resulting from the Project.

The U.S. Environmental Protection Agency (EPA) estimates average monthly electricity consumption for a U.S. home to be 886 kWh, or 1.2 kW hourly. During the average two-hour power loss event, if energy is not meeting demand, the power generated by the Project's installed WTDs can power over 8,000 households in the first year of installation (2030) and over 300,000 in the final year of the analysis period (2048). This was then

[4] Power Outages. https://www.ready.gov/power-outages.
[5] CalMatters. Electricity use would surge under California's new climate plan. June 2022. https://calmatters.org/environment/2022/06/california-climate-plan-electricity/
[6] https://www.fema.gov/sites/default/files/documents/fema_standard-economic-values-methodology-report_092022.pdf
[7] U.S. Census Bureau

multiplied by the annual cost of power interruption, $44.29, to sum the benefits across the analysis period.

The total value of household power loss prevention as a result of the Project is $33.4 million, discounted at 7% in 2021 dollars.

Climate Change, Resiliency, and the Environment

Climate Change, Resiliency, and the Environment benefits of the Project are based on the emissions reductions from the reduced tug travel time and the offshore WTD power generation replacing other nonrenewable energy sources.

Tug Emissions Savings

The total emissions savings from reduced tug distances enabled by the Project was estimated using the travel hours avoided by towing from Humboldt Bay instead of the Port of Long Beach, as discussed in the Tug Operating Cost Savings section. The Project would avoid a total of 258 hours round-trip per WTD towed. Using vessel specifications from the Sea-Web Maritime Reference, average diesel use for the anchor handling tug and tug assists were estimated at 400 and 315 gallons per hour, respectively. EIA estimates 22.45 pounds of CO_2 are emitted per gallon of diesel used. This was aggregated across the analysis period and converted to metric tons. The value of CO_2 reduction was monetized using the USDOT recommended values to calculate the cost of emissions avoided (metric tons) each year.

The total value of reduced tug emissions as a result of the Project is $104.2 million, discounted at 3%[8] in 2021 dollars.

Offshore Emissions Savings

Of the power generated as a result of the Project, 80% was assumed to replace nonrenewable energy. For the first ten years following installation (2030-2039) 20% of this energy was assumed to replace coal and 80% to replace natural gas. For the remainder of the analysis period, 100% was assumed to replace natural gas, as it is unlikely that California or the nearby states would still be utilizing coal. CO_2 emissions were estimated using EIA emissions by type of electricity generation, as shown in Exhibit 4 – CO_2 Emissions from Nonrenewable Energy Generation.

[8] Carbon emission reduction benefits were discounted as 3%, based on USDOT guidance.

Exhibit 4 – CO_2 Emissions from Nonrenewable Energy Generation

U.S. electricity net generation and resulting CO_2 emissions by fuel in 2021

	Electricity generation	CO_2 emissions		
	million kWh	million metric tons	million short tons	pounds per kWh
Coal	897,885	919	1,013	2.26
Natural gas	1,579,361	696	767	0.97
Petroleum	19,176	21	23	2.44

Data source: U.S. Energy Information Administration, State Electricity Profiles, U.S. Profile, Table 5 (net generation) and 7 (emissions).
Note: Data are for utility-scale electric power plants, including combined heat and power plants.

Source: U.S. Energy Information Administration (EIA). https://www.eia.gov/tools/faqs/faq.php?id=74&t=11

CO_2 was monetized using the USDOT recommended values to calculate the cost of emissions avoided (metric tons) each year, see Exhibit 3 – Benefit-Cost Analysis Inputs. Other emissions from coal and natural gas electricity generation were not quantified.

The total value of reduced nonrenewable energy emissions as a result of the Project is $7.9 million, discounted at 3[9] in 2021 dollars.

Equity, Multimodal Options, and Quality of Life

Community Recreation Benefits

The Project is expected to install approximately 1.1 miles of Class 1 bike path. The average annual cyclist traffic was estimated by applying the participation rate for Americans who rode a bicycle outdoors in 2022 (34%) and the average frequency of biking (55 days[10]) to the local population of Samoa, CA (237 people, 130 between the ages of 20 and 60[11]). No population growth was applied.

Bike amenity benefits were monetized using the USDOT recommended values per cycling mile, per user, of a dedicated cycling path with no at-grade crossings ($1.87) and the mortality reduction benefit per trip for cycling, ages 20-64 ($6.42). There may be added safety benefits from relocating cyclists from the local roads to the protected path.

The total value of the added bike path over the analysis period is $0.2 million, discounted at 7%.

State of Good Repair

The Project would also result in State of Good Repair benefits due to the residual value of the Project's infrastructure at the end of the analysis period.

[9] Carbon emission reduction benefits were discounted as 3%, based on USDOT guidance.
[10] peopleforbikes. 2022 U.S. Bicycling Participation Study. https://prismic-io.s3.amazonaws.com/peopleforbikes/22d4a9f5-f114-4c5e-a40d-a32c7fa1567f_2022+PeopleForBikes+US+Bicycling+Participation+Study.pdf
[11] U.S. Census Bureau

Residual Value

The Project includes elements that have an estimated useful life extending beyond the 20-year period of analysis. The useful life of the Project (60 years for government nonresidential structures: nonbuilding: other) is used to depreciate the asset to the end of the analysis period using straight-line depreciation. Soft costs were $51.0 million in 2023 dollars of the total project costs and thus were excluded; residual value was applied only to remaining capital costs. The remaining value of this cost is discounted from the final year of the 20-year analysis period (2048). **The value of the remaining useful life for the Project amounts to $68.8 million in 2021 dollars, discounted at 7%.**

Benefits Not Quantified

In addition to the initial tow of the WTD to the WEA, WTDs will also occasionally need to be towed back to port for repairs that cannot be completed at sea. It is estimated that at least some of the WTDs would have to be towed back to port for repair after approximately 10 years. Without the MVP Project, WTDs would have to be towed all the way back to Long Beach, and then back to the WEA after repairs. Due to the uncertainty of how repairs would impact the capacity of the Port to continue installation of new turbines, these benefits were not quantified.

As stated in the Household Power Loss Prevention section, households comprise approximately 40% of total power consumption. The remaining 60% of power generation is used for industrial and commercial purposes. The significant benefits of avoiding power interruption for these users were not quantified.

While reduction in CO_2 emissions from the tug emissions savings and power generation emissions savings from the WTDs replacing coal and natural gas were captured, no other air pollutants, such as PM_x, NO_x, or SO_x, were estimated, understating the benefits for emissions reduction. Air pollution has been linked to cancer, asthma attacks, heart attacks, strokes, and other health related impacts.[12] The reduced emissions enabled by the Project would result in health benefits, generating positive impacts to safety, equity, and quality of life.

[12] American Lung Association. Why You Need to Know (and Care) About Port Pollution. https://www.lung.org/blog/all-about-port-pollution

4. Cost Analysis

The Project has two cost components: the initial capital costs and net O&M costs.

Capital Cost

The capital cost for the Project includes design, permitting, construction, and equipment for all components. Capital costs are expected to be expended from the start of 2024 to year-end 2028, as depicted in Exhibit 6 – Estimated Cost Schedule. Only a small portion of soft costs (approximately 1%) will be expended in 2024. The capital cost for the Project was provided in 2023 dollars and adjusted to 2021 dollars using the GDP deflator. **The total capital costs for the Project amount to $461.2 million in 2021 dollars, discounted at 7%.**

Exhibit 5 – Summary of Project Capital Costs

Year	Cost (2023$)	Cost (2021$)	Discounted Cost 7%
2024	$6,927,165	$6,178,991	$5,043,900
2025	$76,968,500	$68,655,459	$52,376,900
2026	$153,937,000	$137,310,918	$97,900,800
2027	$269,389,750	$240,294,106	$160,118,100
2028	$262,462,585	$234,115,115	$145,795,100
Total	**$769,685,000**	**$686,554,589**	**$461,234,800**

Exhibit 6 – Estimated Cost Schedule

Year	2024				2025				2026				2027				2028			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Year %	<1%				10%				20%				35%				<35%			

Net Operating & Maintenance Costs

The Project would lead to an increase in O&M costs. The assumption for annual O&M of the Project was 0.5% of total capital costs, or approximately $3.4 million in 2021 dollars. **The net O&M increase for the Project amounts to $20.7 million in 2021 dollars, discounted at 7%. As per USDOT guidance, the O&M costs were included as a negative benefit under economic impacts.**

5. BCA Results

The analysis results in a total Project BCR of 2.0:1 when discounted at a rate of 7%. Exhibit 7 displays a summary of the BCA results for the Project.

Exhibit 7 – Benefit-Cost Analysis Results

	Discounted to 2021 at 7% 20-Year Analysis
Costs (2021 $M)	
Capital Cost	$461.2
Total Costs	$461.2
Benefits (2021 $M)	
Safety	
Household Power Loss Prevention	$33.4
Climate Change, Resiliency, and the Environment	
Tug Emissions Savings	$104.2
Power Generation Emissions Savings	$7.9
Equity, Multimodal Options, and Quality of Life	
Community Recreation Benefits	$0.2
Economic Impacts, Freight Movement, and Job Creation	
Tug Operating Cost Savings	$712.7
Operating & Maintenance Costs Increase (disbenefit)	-$20.7
State of Good Repair	
Residual Value	$68.8
Total Benefits	**$906.4**
Outcome	
Net Benefits (2021 $M)	**$445.2**
Benefit-Cost Ratio	***2.0***

Appendix A List of Supporting Documents

BEA Rates of Depreciation, Service Lives, Declining-Balance Rates, and Hulten-Wykoff Categories, https://apps.bea.gov/national/pdf/BEA_depreciation_rates.pdf

FEMA. Benefit-Cost Analysis Sustainment and Enhancements, Standard Economic Value Methodology Report, Version 11.0, September 2022.

Lim, Jennifer, and Matt Trowbridge. AB 525 Port Readiness Plan. Moffatt & Nichol. Prepared for the California State Lands Commission and the California Energy Commission. 7 July 2023.

Peopleforbikes. 2022 U.S. Bicycling Participation Study. https://prismic-io.s3.amazonaws.com/peopleforbikes/22d4a9f5-f114-4c5e-a40d-a32c7fa1567f_2022+PeopleForBikes+US+Bicycling+Participation+Study.pdf

The White House, Table 10.1 - Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2028 https://www.whitehouse.gov/wp-content/uploads/2023/03/hist10z1_fy2024.xlsx

USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023, https://www.transportation.gov/sites/dot.gov/files/2023-01/Benefit%20Cost%20Analysis%20Guidance%202023%20Update.pdf

August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

MEGA DATA PLAN

MVP DATA COLLECTION PLAN

The Board of Commissioners of Humboldt Bay Harbor, Recreation, and Conservation District (the "District" or the "Port" hereafter) has developed an approach for the collection and analysis of data to identify and track the Project's outcomes to understand whether the Project performs as expected. This data will inform the design and operation of future heavy-lift wind terminals in the U.S. and beyond.

The Plan is divided into three sections. The first outlines the data concepts that will be collected and how they map to the Project's anticipated outcomes and the grant program's evaluation criteria. The second section describes when the data will be collected. The third section describes how the data will be analyzed—the trend that will be described.

1.1 What Data Will the Port Collect?

Where not protected as confidential business information, the Port will collect data that will allow the Project's progress along three Mega Program criteria: Economic Impacts, Freight Movement and Job Creation; Climate Change, Resiliency and Environment; and, Equity, Mobility Options and Quality of Life to be tracked.

For **Economic Impacts, Freight Movement and Job Creation**, the Port will collect data on total 1) tonnage and quantity of deliveries of components accepted at the terminal by type (blade, nacelle, floating foundation, etc.); 2) total platforms/turbines assembled; 3) total floating offshore wind devices installed at sea.

For **Equity, Mobility Options and Quality of Life**, the Port will collect data on the number of people who enroll and finish their workforce training, apprenticeship, and High Road Training Partnerships programs. The Port will also track the number that go on to take a job with the terminal, the Port, or a related facility. In alignment with the District's Project Labor Agreement (see, District's Letter of Commitment), the project will also track the number of Tribal members gaining employment directly related to the MVP Project and the future terminal. Community benefits investments made for the community will be reported, such as the quantity of applications to the District's proposed grantmaking program, types of entities applying, and the size and impacts of the grant awards. The Port will also collect data on the number of users of the proposed recreational facility (to be designed as a kayak launch or fishing pier, based upon Community input). The Port already collects data on its public and community stakeholder engagement efforts, and this will continue throughout the Project to ensure and demonstrate continued equity in project design and implementation. The Port will also install an infrared sensor along the proposed rails-to-trails bike path to count users.

For **Climate Change, Resiliency and Environment**, using the shipments and assembly data collected under Economic Impacts, Freight Movement and Job Creation, the Port will estimate and track the emissions reductions associated with transporting the components by sea rather than truck. Similarly, the Port will use commonly accepted models for assessing operational emissions at the Terminal, a trend which will see constant reductions as the unique zero-emission heavy-lift equipment technologies come to market. The Port will also report on the amount of solar energy produced by the solar array as well as the amount of electricity utilized for shore power and vehicle and cargo handling equipment charging needs.

The data concepts selected for tracking leverage data that the terminal operator would collect routinely to monitor the performance of its operations and program initiatives. This includes data on shipments, assemblies, installations, solar energy produced, and electricity consumed for transportation purposes.

The Project Team has an established method for comparing the typical carbon and criteria emissions associated with TEUs transported by barge, rail, and truck on a ton-mile basis. This method will utilize data on the shipments' origin/destination, information on the type of vessel used for deliveries and towing out to sea, and emissions factors for the equipment.

The bike sensor will be a simple count device that is permanently mounted. Community benefit information will be reported qualitatively—describing what was provided, the cost, and beneficiaries.

Finally, the workforce, apprenticeship, High Roads Training Partnerships, and transition to port facility employment metrics will be collected by the Port's training partners on program enrollment, certifications, graduations, and placements.

1.2 When to Collect the Data

The data collection for all concepts except those related to workforce training will start with the first quarter of operation. The data will be collected monthly and reported quarterly and annually for ease of analysis and as required by the MPDG Opportunity.

The workforce, apprenticeship, High Roads Training Partnerships, and transition to port facility employment data collection will begin one year or two training sessions prior to the new terminal's opening—whichever is earlier. It is anticipated that prospective new offshore wind terminal workers will enroll in training and apprenticeships to prepare for the hiring wave that will start as the new terminal opens.

The data will be collected for five calendar years after opening of the new terminal as required by the MPDG Opportunity's Mega funding, regardless of the ultimate source of funding ultimately awarded to the Humboldt Bay Offshore Wind MVP Project.

1.3 How Will It Be Analyzed?

The annual data for each series will be reported to USDOT within 60 days of the new calendar year. Similarly, the quarterly data for each series will be reported to USDOT within 30 days of the close of each quarter (e.g., by April 30th of each year for Q1 Reports).

The overall trend for all metrics except those related to workforce, apprenticeship, High Roads Training Partnerships, and hiring will be discussed in the context of external factors of influence. For example, there could be a drop in assemblies and installations if a large storm disrupts operations and causes the loss of a couple workdays in a month. Unseasonable weather could also cause a drop in bike path use.

Finally, the workforce, apprenticeship, High Roads Training Partnerships, and port facility hiring will be reported. The results will be reported by race, sex, ethnicity, and residential location to understand the Project's success in hiring from the local community as well as drawing from under-represented groups for terminal jobs and related marine infrastructure employment.

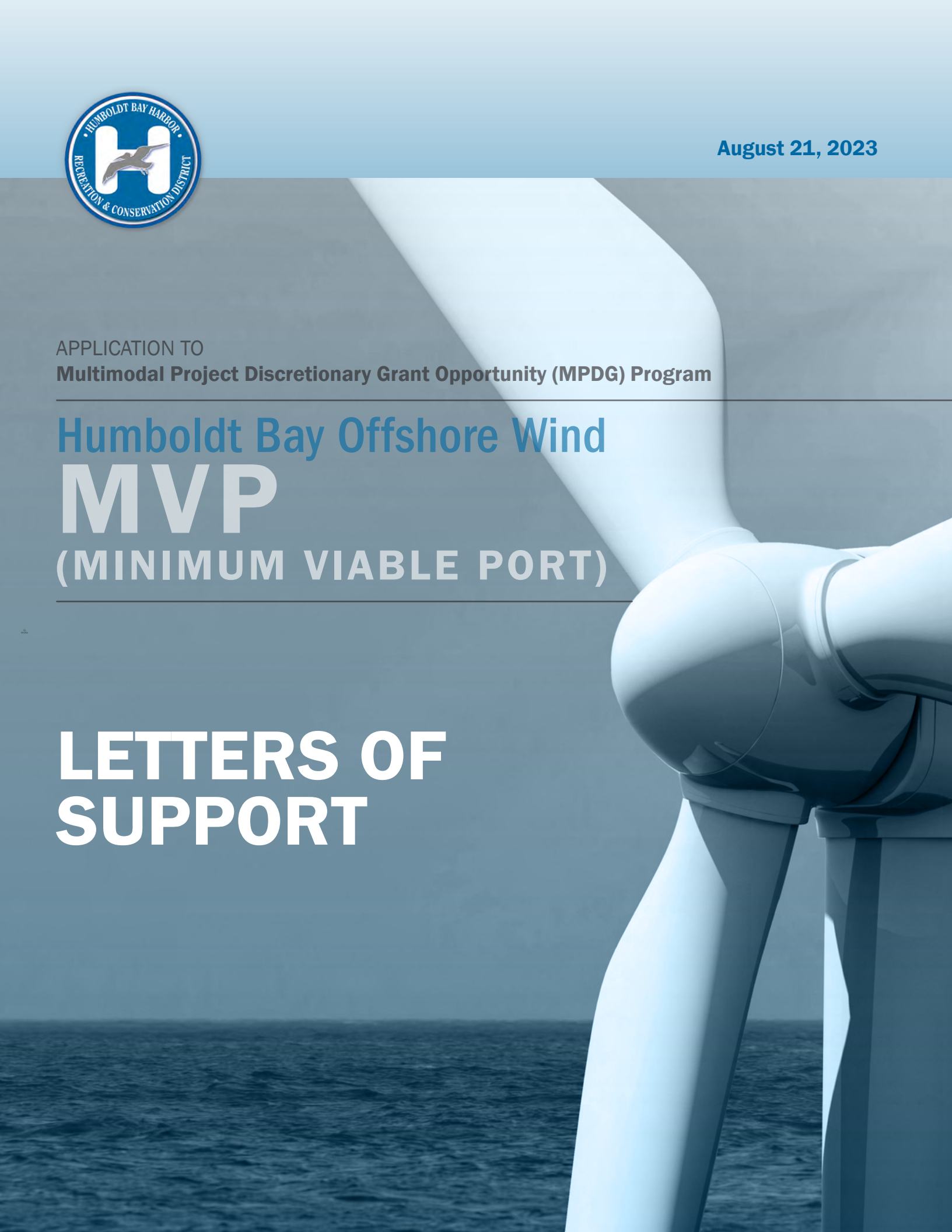
The Port will provide a final report not later than six (6) years after the date of substantial completion of the Project. The report will compare the baseline data to quarterly project data for the duration of the fifth year of the project after substantial completion.

August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind
MVP
(MINIMUM VIABLE PORT)

LETTERS OF SUPPORT



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August 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

RE: Support of Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

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The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

JIM WOOD
Assemblymember, 2nd Assembly District

California State Senate

SENATOR MIKE MCGUIRE

MAJORITY LEADER

NORTHERN CALIFORNIA'S SECOND SENATE DISTRICT

August 21, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am writing to express my enthusiastic support for the Humboldt Bay Harbor, Recreation, and Conservation District's Offshore Wind Heavy Lift Multipurpose Marine Terminal Project. This project is critical to the infrastructure of California's growing offshore wind industry, which will bring desperately-needed economic development opportunities to the North Coast, and support state and federal goals to decarbonize the nation's energy grid by 2035.

Phase 1 of the project has estimated costs of $776,500,000. The District will provide 50 percent, compiled of state, private, and other funding, and is seeking the remaining $388,250,000 in federal 2023-2024 MPDG Mega and INFRA grant funding. This essential funding will kick start the redevelopment of the Redwood Multipurpose Marine Terminal, a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The site is ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of advanced energy technologies.

California has invested $10.45 million in the District to initiate the development of the West Coast's first offshore wind marshalling port in the Humboldt Bay. The District will now require federal assistance to accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

I wholeheartedly support this critical project to advance state and federal goals for offshore wind development and the transition to clean transportation technologies. If our office can be of any assistance, please do not hesitate to call us at (707) 445-6508.

Warmest regards,

MIKE McGUIRE
Senator

CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom
Governor

Toks Omishakin
Secretary

400 Capitol Mall, Suite 2340
Sacramento, CA 95814
916-323-5400
www.calsta.ca.gov

August 18, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's Offshore Wind Heavy Lift Multipurpose Marine Terminal Project Proposal

Dear Secretary Buttigieg:

It was great to see you at the USDOT HQ Office a few weeks ago to discuss California's recent supply chain investments and policy outlook. I am writing today to express support for the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project). The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Project, which is estimated to cost approximately $776,500,000. The District will supply a 50% match to that total, compiled of state funding, private investment, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 Multimodal Project Discretionary Grant Program (MPDG) Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port and hub of the California and West Coast floating offshore wind industry in Humboldt Bay. The District requires federal assistance from the MPDG to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal (Terminal), which is a 180-plus acre vacant

industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Terminal site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the U.S. Department of Transportation and the federal government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance. If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Road Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

The state's offshore wind goal of 25 gigawatts by 2045 is the boldest commitment any state has made. This amount could supply electricity for 25

million homes in California. This Project is an important catalyst in advancing state and federal strategic goals for offshore wind development and the transition to clean transportation technologies CalSTA strongly supports the Port's pursuit of Mega funding.

If you have any questions regarding our commitment to this Project, please don't hesitate to contact me at (916) 654-6130 or Toks.Omishakin@calsta.ca.gov.

Sincerely,

Toks Omishakin

_____

Toks Omishakin, Secretary
California State Transportation Agency

City of ARCATA

736 F Street
Arcata CA 95521

City Manager	Environmental Services	Police	Recreation
707-822-5953	707-822-8184	707-822-2428	707-822-7091
Community Development	*Finance*	*Engineering*	*Transportation*
707-822-5955	707-822-5951	707-825-2128	707-822-3775

August 18, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of

the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

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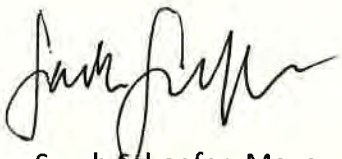
We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,



Sarah Schaefer, Mayor
City of Arcata

August 14, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project**.**

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channel depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal

Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Angela Shull

RRDEC board member

Mayor Pro Temp, City of Blue Lake

August 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

The City of Eureka is pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of persistent poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas, other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of

THE CITY OF
EUREKA
OFFICE OF THE CITY MANAGER

531 K Street, Eureka, CA 95501 (707) 441.4144 www.ci.eureka.ca.gov

available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

The City of Eureka strongly endorses this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Miles Slattery
City Manager

CC: Mayor Kim Bergel
Councilmember Leslie Castellano
Councilmember Kati Moulton
Councilmember G. Mario Fernandez
Councilmember Scott Bauer
Councilmember Reneé Contreras-DeLoach

531 K Street, Eureka, CA 95501 (707) 441.4144 www.ci.eureka.ca.gov

COUNTY OF HUMBOLDT

COUNTY ADMINISTRATIVE OFFICE

825 5th Street, Suite 112, Eureka, CA 95501-1153
Telephone (707) 445-7266 Fax (707) 445-7299
cao@co.humboldt.ca.us

August 17, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

RE: Letter of Support for the Humboldt Bay Harbor District's FY2023-24 MPDG Proposal for Offshore Wind Heavy Lift Multipurpose Marine Terminal Project

Dear Secretary Buttigieg,

On behalf of the Humboldt County Board of Supervisors, I am pleased to express the County of Humboldt's support for the Port of Humboldt Bay Harbor, Recreation and Conservation District's (Harbor District) application to the FY 2023-24 Multimodal Project Discretionary Grant Program (MPDG) grants for its Redwood Multipurpose Marine Terminal Project.

This transformational infrastructure project would support the floating offshore wind industry by funding the redevelopment of the Redwood Multipurpose Marine Terminal (Terminal), which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the terminal site are ideally suited to serve this nascent industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints. The project is located at the Port of Humboldt Bay, a census-designated rural area that includes both historically disadvantaged communities and areas of persistent poverty.

The project presents a new market and job creation opportunity for the Harbor District and the greater Humboldt Bay region. Just as significant, it also represents an opportunity to minimize community and environmental impacts of development of this new industry. Tribal Nations, Black, Indigenous and communities of color, and frontline communities bear the brunt of devastating impacts of the climate catastrophe, energy vulnerability, and the long-term impacts of extractive over-harvesting of natural resources. Federal investments will help provide the resources needed not only to develop this critical port resource, but also to ensure the project mitigates the impacts on historically underrepresented communities and the environment.

The Harbor District is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project, which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, comprised of State funding, private funding, and other potential sources. With the 50% match, the Harbor District is seeking $388,250,000 in federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the MPDG to continue and accelerate progress on this critical climate, clean transportation, renewable energy, employment initiative.

As the West Coast's first offshore wind port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the federal government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than 2 years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, social and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal members, and those looking to enter the renewable energy and logistics industries. Similarly, project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the Harbor District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Elishia Hayes
Humboldt County Administrative Officer

August 17, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers Local 549 is pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal

Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers Local 549 strongly endorses this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Respectfully,

Randy Thomas
Business Manager/ Secretary Treasurer
Boilermakers Local 549

August 16, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary, Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and

federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Chris Knerr, Business Agent

OPCMIA Local 300

1710 Corby Avenue

Santa Rosa, CA 95407

Cknerr@OPCMIALocal300.org

INTERNATIONAL ASSOCIATION OF
Heat & Frost Insulators & Allied Workers
International Headquarters
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August 18, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation

Affiliated with the AFL-CIO, Building and Construction Trades Department, Metal Trades Department and Canadian Labour Congress

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channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

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We strongly endorses this multi-phased planning and terminal construction project as an important step in advancing **State and Federal** strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Rick Johnson

Heat and Frost Insulators and Allied Workers Local Union No. 16
AFFILIATED WITH THE AFL-CIO AND BUILDING AND CONSTRUCTION TRADES DEPARTMENT

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BENICIA, CA 94510

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FAX (707) 748-1620
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August 17, 2023

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1200 New Jersey Ave, SE
Washington, DC 20590

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Sincerely,

Chris Manager
Business Manager

IBEW LOCAL 551
INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

2525 Cleveland Ave., Suite B
Santa Rosa, California 95403

MARIN, SONOMA, MENDOCINO, LAKE.
HUMBOLDT AND DEL NORTE COUNTIES

Telephone: (707) 542-3505
Fax Number: (707) 542-9134
ibew551@ibewlocal551.org

August 16, 2023

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1200 New Jersey Ave, SE
Washington, DC 20590

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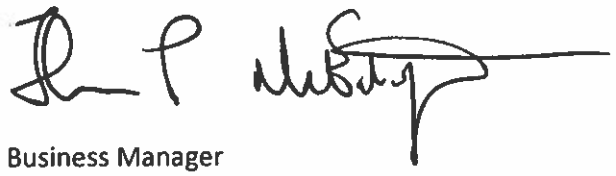
Sincerely,

John McEntagart



Business Manager

IBEW Local 551

JPM/ch
OPE-29-afl&cio

International Union of Elevator Constructors

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AFL-CIO
PHONE (415) 285-2900
FAX (415) 285-2020

LOCAL UNION NO.8
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SAN FRANCISCO, CA 94110-2117

August 17, 2023

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1200 New Jersey Ave, SE
Washington, DC 20590

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Sincerely,

Matt Russo
Business Manager
IUEC Local 8

MAR/djl

IRON WORKERS LOCAL UNION 377

UNION OFFICE OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING

Charlie Hernandez
Executive Officer
Trustee

Eddie Reyes
President
Business Representative

Chris Donnelly
Business Representative

David A. Ortiz
Organizer

August 16, 2023

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1200 New Jersey Ave, SE

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IRON WORKERS LOCAL UNION 377

UNION OFFICE OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING

Charlie Hernandez
Executive Officer
Trustee

Eddie Reyes
President
Business Representative

Chris Donnelly
Business Representative

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Organizer

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570 Barneveld Avenue, San Francisco, CA 94124 (415) 285-3880 info@local377.com

IRON WORKERS LOCAL UNION 377

UNION OFFICE OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Eddie Reyes

Ironworkers Local 377

President/Business Agent

570 Barneveld Avenue, San Francisco, CA 94124 (415) 285-3880 info@local377.com

OPERATING ENGINEERS
LOCAL 3
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PHONE 510.748.7400
FAX 510.748.7412
DAN REDING BUSINESS MANAGER

August 16, 2023

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1200 New Jersey Ave, SE
Washington, DC 20590

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Operating Engineers Local Union No. 3 strongly endorses this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Dan Reding
Business Manager and
International Vice President

INTERNATIONAL ASSOCIATION
OF SHEET METAL,
AIR, RAIL AND
TRANSPORTATION
WORKERS

SHEET METAL WORKERS'
LOCAL UNION NO. 104

3232 CONSTITUTION DRIVE
LIVERMORE, CALIFORNIA 94551-7567
TEL: (925) 314-8600 ▪ FAX: (925) 831-0231

Rick Werner
PRESIDENT/BUSINESS MANAGER

August 16, 2023

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U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

RE: Humboldt Bay Harbor District FY2023-2024 MPDG Proposal Support

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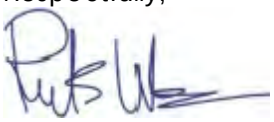
We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing state and federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Respectfully,



Rick Werner
President/Business Manager

:jm opeiu #29

State Building and Construction Trades Council
of California
Established 1901
Chartered By
BUILDING AND CONSTRUCTION TRADES
DEPARTMENT
AFL - CIO

CHRIS HANNAN
PRESIDENT

J. TOM BACA
SECRETARY-TREASURER

August 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

RE: Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal - SUPPORT

Dear Secretary Buttigieg:

On behalf of the State Building and Construction Trades Council of California, AFL-CIO, representing nearly 500,000 working men and women in the construction industry, including more than 65,000 enrolled in our state-of-the-art apprenticeship programs, I write in support of the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The State Building Trades, in partnership with our local affiliated council, the Humboldt and Del Norte Counties Building and Construction Trades Council, recently negotiated a Project Labor Agreement (PLA) with the District for the construction of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project). The District is seeking to fund Phase 1 of the Project, which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of state funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate the development of the West Coast's first offshore wind marshaling port in Humboldt Bay, California, as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

The District is applying for funds to begin redeveloping the Redwood Multipurpose Marine Terminal, a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channel depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshaling ports for the domestic wind industry. As the West Coast's first offshore wind port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind

industry will be delayed by more than two years, with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hubs, marshaling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

The Port of Humboldt Bay is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty. The Project will bring hundreds, if not thousands, of badly needed construction jobs to the area, providing family-sustaining wages, medical and retirement benefits, and a pathway to the middle class to area residents.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem to enable the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensure the benefits of this new industry, and this project accrue equitably and permanently.

We strongly support this multi-phased planning and terminal construction project as an essential step in advancing state and federal strategic goals for offshore wind development and the transition to clean transportation technologies. We respectfully urge you to fully consider the District's application to the MPDG Mega and INFRA grant programs.

Thank you for your consideration.

Sincerely,

CHRIS HANNAN
President

CH:bp
opeiu#29/afl-cio

AEDC Small Business Lending Center

AEDC provides loans and support to entrepreneurial, innovative business and community endeavors.
707 K Street, Eureka, CA 95501 707.798.6132 707.798.6130 fax www.aedc1.org

August 15, 2023
The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

As a Community Development Financial Institution whose primary interest is supporting a healthy and equitable economy, w e are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

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AEDC provides loans and support to entrepreneurial, innovative business and community endeavors.
707 K Street, Eureka, CA 95501 707.798.6132 707.798.6130 fax www.aedc1.org

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorses this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Ross Welch

Ross Welch, Executive Director
ross@aedc1.org; (707) 834-4730

CALIFORNIA ASSOCIATION OF PORT AUTHORITIES
CaliforniaPorts.org

August 14, 2023

The Honorable Pete Buttigieg
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

On behalf of the California Association of Port Authorities (CAPA), I write to express our support for Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District's) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The District is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants, which will be matched by a combination of State funding, private funding, and other funds.

These funds will be used to initiate redevelopment of the Redwood Multipurpose Marine Terminal, a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies.

The Project provides a unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast.

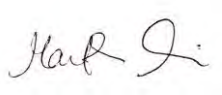
In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels. The Project presents a new market and job creation opportunity for the District, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently toward the successful development of the terminal. One highlight includes collaborating on securing funding to establish Centers of Excellence and a new High Roads Training Partnership Program that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies.

Thank you for your consideration of the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,



Martha Miller
Executive Director
California Association of Port Authorities

August 21, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

On behalf of the Environmental Protection Information Center, we are happy to support the Humboldt Bay Harbor, Recreation, and Conservation District (District) in seeking funding for Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The District has expressed its commitment to develop a port with net zero greenhouse gas emissions, pushing the boundaries of what is currently possible while building our renewable energy future. Humboldt Bay offers an opportunity to rethink port development and offer a model for other US ports that are also attempting to decarbonize. Significant investment is necessary to achieve a vision of a zero emission port and support from the Department of the Interior is critical to that vision.

Environmental Protection Information Center
145 G Street, Suite A, Arcata, CA 95521
(707) 822-7711
www.wildcalifornia.org

epic environmental protection information center

Keeping Northern California Wild Since 1977

The Project is also critical to the success of offshore wind on the West Coast. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Thomas Wheeler

Thomas Wheeler
Executive Director

Environmental Protection Information Center
145 G Street, Suite A, Arcata, CA 95521
(707) 822-7711
www.wildcalifornia.org

Eureka
The Greater Eureka Chamber of Commerce
Business HQ

August 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

RE: LETTER OF SUPPORT FOR THE HUMBOLDT BAY HARBOR DISTRICT'S FY2023-2024 MPDG PROPOSAL

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorses this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Nancy Olson
President/CEO

Offshore Wind California

August 21, 2023

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-24 MPDG Proposal

Dear Secretary Buttigieg:

Offshore Wind California is writing to express our enthusiastic support for the Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project (the "Project"), which will serve as the initial phase of design, engineering, permitting, and construction for a larger complex serving the floating offshore wind energy industry's manufacturing, marshalling and installation, and operational needs in northern California. At full buildout the Project will support the manufacturing, installation, and operation of floating offshore wind platforms; the use of heavy-cargo vessels; and the provision of crewing and marshalling services for local wind energy operators. This will be the first hub on the West Coast to offer such ongoing services to this emerging industry.

The Humboldt Bay Harbor, Recreation & Conservation District ("District") is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 168-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast of the United States and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these limitations.

Developed and eventually delivered through a public-private partnership and informed by outreach to key stakeholders and the public, the Project will address federal, state and local clean energy and economic goals. These include the Biden Administration's goal of deploying 30 gigawatts (GW) of offshore wind energy in the United States by 2030, and the State of California's goal of creating at least 5 GW of offshore wind energy by that same year. Indeed, Humboldt Bay's offshore wind areas are among the most productive on the Pacific coast and are projected to provide 1.6 GW of energy—about a third of California's goal—on their own. At the local level, the jobs associated with these terminal operations will provide much-needed economic development and industrial diversity to the Humboldt Bay area economy. Many of these jobs will require apprenticeship training programs, creating new career paths locally and reducing the need to leave the area for economic opportunities.

Offshore Wind California is a coalition of industry members with a shared interest in promoting policies and public support for responsible development of offshore wind power in California.

As the first mover in floating offshore wind and the premier port in California for supporting all aspects of the floating offshore wind industry, the Project provides a unique opportunity for the Department of Transportation and the Federal government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind objectives. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed for several with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

Thank you for your consideration of this Project and its commitment to supporting the Federal government's larger vision of a clean energy economy. Please contact me if you have any questions about Offshore Wind California's support for the Humboldt Bay Offshore Wind MVP Project.

Sincerely,

Adam C. Stern
Executive Director
Offshore Wind California (OWC)
(510) 681-4483
adam.stern@offshorewindca.org
www.offshorewindca.org

PACIFIC OCEAN ENERGY TRUST

9450 SW Gemini Drive, Beaverton, Oregon 97008-7105

August 21, 2023

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-24 MPDG Proposal

Dear Secretary Buttigieg:

The Pacific Ocean Energy Trust is writing to express our enthusiastic support for the Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project (the "Project"), which will serve as the initial phase of design, engineering, permitting, and construction for a larger complex serving the floating offshore wind energy industry's manufacturing, marshalling and installation, and operational needs in northern California. At full buildout the Project will support the manufacturing, installation, and operation of floating offshore wind platforms; the use of heavy-cargo vessels; and the provision of crewing and marshalling services for local wind energy operators. This will be the first hub on the West Coast to offer such ongoing services to this emerging industry.

The Humboldt Bay Harbor, Recreation & Conservation District ("District") is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 168-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast of the United States and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these limitations.

Developed and eventually delivered through a public-private partnership and informed by outreach to key stakeholders and the public, the Project will address federal, state and local clean energy and economic goals. These include the Biden Administration's goal of deploying 30 gigawatts (GW) of offshore wind energy in the United States by 2030, and the State of California's goal of creating at least 5 GW of offshore wind energy by that same year. Indeed, Humboldt Bay's offshore wind areas are among the most productive on the Pacific coast and are projected to provide 1.6 GW of energy—about a third of California's goal—on their own. At the local level, the jobs associated with these terminal operations will provide much-needed economic development and industrial diversity to the Humboldt Bay area economy. Many of these jobs will require apprenticeship training programs, creating new career paths locally and reducing the need to leave the area for economic opportunities.

The Pacific Ocean Energy Trust is an Oregon-based 501(c)3 non-profit with a mission to promote ocean-based climate solutions. For the past fifteen years, we have promoted technology commercialization, best practices, and good policies

that will help ensure that the United States effectively addresses climate change. This Humboldt project is an essential component necessary for the effective development of floating offshore wind in the northern California and southern Oregon region, an area with a world class wind resource. The importance of the timely development of this Project to the west coast's ability to take advantage its world class wind cannot be overstated.

As the first mover in floating offshore wind and the premier port in California for supporting all aspects of the floating offshore wind industry, the Project provides a unique opportunity for the Department of Transportation and the Federal government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind objectives. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed for several years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

Thank you for your consideration of this Project and its commitment to supporting the Federal government's larger vision of a clean energy economy. Please contact me if you have any questions about POET's support for the Humboldt Bay Offshore Wind MVP Project.

Sincerely,

Jason R. Busch

Jason Busch
Executive Director
Pacific Ocean Energy Trust

Email: jbusch@PacificOceanEnergy.org
Mobile: +1-503-729-2253

RREDC

Redwood Region Economic Development Commission
325 2nd Street, Suite 203, Eureka, California 95501
Phone 707.445.9651 Fax 707.445.9652 www.rredc.com

August 16, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is moving to develop their Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project). This project is a necessary piece of infrastructure that will support the development of the West Coast's Offshore Wind industry that is critical to achieving our nation's renewable energy goals. This project is estimated to cost approximately $776,500,000. The Harbor District is seeking funding from the State of California, private, and other potential sources to provide support for 50% of the project cost. To match these investments, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million toward the development of this critical infrastructure. The District requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

I am pleased to express my support for the District's application to the FY2023-2024 MPDG grants for this project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty. The District will redevelop the Redwood Multipurpose Marine Terminal (Terminal), a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Terminal site is ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. As the West Coast's first offshore wind Port and the premier port in

California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

I strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Gregg Foster
Executive Director

August 21, 2023

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-24 MPDG Proposal

Dear Secretary Buttigieg:

CADEMO Corp. is writing to express our enthusiastic support for the Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project (the "Project"), which will serve as the initial phase of design, engineering, permitting, and construction for a larger complex that serves the floating offshore wind energy industry's manufacturing, marshalling and installation, and operational needs in northern California. At full buildout, the Project will support the manufacturing, installation, and operation of floating offshore wind platforms; the use of heavy-cargo vessels; and the provision of crewing and marshalling services for local wind energy operators. This will be the first hub on the West Coast to offer such ongoing services to this emerging industry.

The Humboldt Bay Harbor, Recreation & Conservation District ("District") is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 168-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are well suited to serve California's nascent floating offshore wind industry and enable localized manufacturing of critical advanced energy technologies.

Developed and eventually delivered through a public-private partnership and informed by outreach to key stakeholders and the public, the Project will address federal, state and local clean energy and economic goals. These include the Biden Administration's goal of deploying 30 gigawatts (GW) of offshore wind energy in the United States by 2030, and the State of California's goal of creating at least 5 GW of offshore wind energy by that same year. Indeed, Humboldt Bay's offshore wind areas are among the most productive on the Pacific coast and are projected to provide 1.6 GW of energy—about a third of California's goal—on their own. At the local level, the jobs associated with these terminal operations will provide much-needed economic development and industrial diversity to the Humboldt Bay area economy. Many of these jobs will require apprenticeship training programs, creating new career paths locally and reducing the need to leave the area for economic opportunities.

CADEMO is a four-turbine, 60 MW demonstration project in state waters off Vandenberg Space Force Base on the Central Coast. Expected to be operational in late 2027, it will be the West Coast's first floating offshore wind project. While we have not made a final selection of our port operations locations, the availability of the Humboldt project will be a useful option.

As one of California's initial options to support floating offshore wind construction and integration, the Project provides a unique opportunity for the Department of Transportation and the Federal government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind objectives. Absent this investment, it is highly likely that development of the West Coast's floating offshore wind industry in federal waters will be delayed for several with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

Thank you for your consideration of this Project and its commitment to supporting the Federal government's larger vision of a clean energy economy. Please contact me if you have any questions about CADEMO Corp.'s support for the Humboldt Bay Offshore Wind MVP Project.

Sincerely,

Mikael Jakobsson
Director
CADEMO Corporation
mikael.jakobsson@ciercoenergy.com

REDWOOD COAST
EnergyAuthority

August 17, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, comprised of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other

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(707) 269-1700

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www.RedwoodEnergy.org

ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

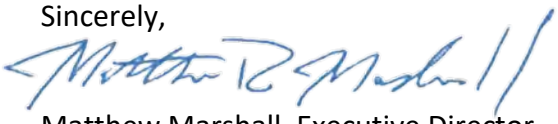
The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring that benefits of this new industry and project accrue equitably and permanently.

We strongly endorse this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,



Matthew Marshall, Executive Director
Redwood Coast Energy Authority

Cal Poly Humboldt.

Division of Initiatives, University Advancement

August 20, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

On behalf of California State Polytechnic University, Humboldt (Cal Poly Humboldt), I am pleased to write this letter in support of the Humboldt Bay Harbor, Recreation, and Conservation District (District) request for $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

Successful funding of the District's application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project is critical to the success of California's climate action goals. That is why the State of California has already appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshaling port in Humboldt Bay, California, as the hub of the California and West Coast floating offshore wind industry.

Cal Poly Humboldt has recently added degree programs designed to help ensure that there is an educated workforce locally that will accelerate innovation and entrepreneurship in fields related to broadband connectivity, renewable energy, port development, and the offshore wind industry.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshaling ports for the domestic wind industry.

Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by at least two years, with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

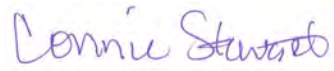
While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry.

Cal Poly Humboldt is collaborating to secure funding to establish an Offshore Wind Center of Excellence and we have already received more than $1 million from the state's High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and others looking to enter the renewable energy and logistics industries.

Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring the benefits of this new industry and this project accrue equitably and permanently.

Cal Poly Humboldt strongly endorses this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,



Connie Stewart
Executive Director of Initiatives
California State Polytechnic University, Humboldt

August 16, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the Humboldt Bay Harbor District's FY2023-2024 MPDG Proposal

Dear Secretary Buttigieg:

The Humboldt Bay Harbor, Recreation, and Conservation District (District) is seeking to fund Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative. We are pleased to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (District) application to the FY2023-2024 MPDG grants for its Redwood Multipurpose Marine Terminal Redevelopment Project.

The Project is located at the Port of Humboldt Bay, which is in a Census-Designated Rural Area that includes both Historically Disadvantaged Communities and Areas of Persistent Poverty.

The District is applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-plus acre vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. The Humboldt Bay Port and the Redwood Marine Terminal (Terminal) site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast and enable localized manufacturing of critical advanced energy technologies. Whereas other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

The Project presents a new market and job creation opportunity for the District and the greater Humboldt Bay region. Offshore wind is an emerging energy and transportation market in the U.S., with the California coast poised as the next critical location for offshore wind marshalling ports for the domestic wind industry. As the West Coast's first offshore wind Port and the premier port in California for supporting all aspects of the floating offshore wind industry, this project provides the unique

opportunity for the Department of Transportation and the Federal Government to catalyze the decarbonization of the transportation sector and achieve state and federal floating offshore wind targets. Absent this investment, it is highly likely that the West Coast's floating offshore wind industry will be delayed by more than two years with further cascading impacts due to a lack of available public funding sources capable of supporting projects of this magnitude and critical national significance.

If funded, the Project will significantly accelerate the time to market and increase the competitiveness of the U.S. offshore wind industry by reducing travel costs between manufacturing hub, marshalling port, and offshore wind farm installations on the U.S. West Coast. In addition to reduced travel and operational costs, the Project will have significant employment, safety, workforce development, community, and environmental benefits at the local and regional levels.

While the Terminal is in the earlier stages of design, Project stakeholders are working diligently to establish a balanced ecosystem for enabling the successful development of the terminal, the workforce, and the floating offshore wind industry. This includes collaborating on securing funding to establish Centers of Excellence and new High Roads Training Partnership Programs that provide diversified career paths to local and regional residents, students, members of underserved communities, Tribal governments, and those looking to enter the renewable energy and logistics industries. Similarly, Project stakeholders are heavily engaged with community-based organizations, utilities, regulators, and local businesses to identify pathways to ensuring benefits of this new industry and this project accrue equitably and permanently.

We strongly endorses this multi-phased planning and terminal construction project as an important step in advancing State and Federal strategic goals for offshore wind development and the transition to clean transportation technologies. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Dr. Keith Flamer
President/Superintendent
College of the Redwoods

August 18, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am writing to express support for the Port of Humboldt Bay Harbor, Recreation, and Conservation District's (henceforth, Harbor District) application for funding to support Phase 1 of the Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project (Project), which is estimated to cost approximately $776,500,000. The Harbor District is seeking to supply a 50% match to that total, compiled of State funding, private funding, and other potential sources. With the 50% match, the District is seeking $388,250,000 in Federal grant funds from the FY2023-2024 MPDG Mega and INFRA grants.

To date, the State of California has appropriated $10.45 million to initiate development of the West Coast's first offshore wind marshalling port in Humboldt Bay, California as the hub of the California and West Coast floating offshore wind industry. The Port of Humboldt Bay requires federal assistance from the Multimodal Project Discretionary Grant Opportunity (MPDG) to continue and accelerate progress on this critical climate, clean transportation, renewable energy, and employment initiative.

Over the past five years, our team at the Schatz Energy Research Center at California State Polytechnic University, Humboldt (Cal Poly Humboldt) has led efforts to carry out analysis related to the feasibility of developing the offshore wind resource on California's north coast. This work, which has been supported by the federal Bureau of Ocean Energy Management (BOEM), the California Energy Commission (CEC), the California Ocean Protection Council, and the Office of Planning and Research of the California Governor's Office, has resulted in publication of thirty reports specific to wind energy development offshore Humboldt Bay. One of these reports, published in 2020, focused on the Port of Humboldt Bay's federal navigation channel and the associated upland port infrastructure that would be required to deploy offshore wind on the west coast. The reports can be found at: http://schatzcenter.org/publications/#wind.

Schatz Energy Research Center

Based on the preliminary analysis led by our team, the Port of Humboldt Bay developed a master plan of the facilities that will be required to serve the offshore wind industry. Based on this plan, the District is now applying for funds to begin redevelopment of the Redwood Multipurpose Marine Terminal, which is a 180-acre largely vacant industrial site adjacent to the federal navigation channel in Humboldt Bay. Our team's prior analysis confirms that the Humboldt Bay Port and the Redwood Marine Terminal site are ideally suited to serve the nascent floating offshore wind industry for the entire West Coast. Whereas most other ports are constrained by bridges and channels depths, Humboldt Bay has none of these constraints.

California has set appropriately ambitious clean energy targets, with a goal of achieving 100% clean energy by 2045. The offshore wind resource has great promise to contribute substantially to this goal. On May 25th 2021, President Biden and Governor Newsom jointly announced an agreement to cooperate on offshore wind. As part of that effort, the federal Bureau of Energy Management (BOEM) held a successful lease auction for the Humboldt and Morro Bay Wind Energy Areas in December 2022. These two Wind Energy Areas have potential to bring at least 4.6 gigawatts of carbon free renewable energy into California's electrical system and would represent a key first step toward further expansion of the industry. The proposed project represents critical infrastructure to help unlock this potential while also supporting regional economic development and job creation.

The Schatz Energy Research Center and Cal Poly Humboldt are committed to research and projects aimed at decarbonizing our nation's energy system while also making it more equitable and resilient. Building the necessary port infrastructure is a critical path element for developing the West Coast offshore wind industry. This development must occur in a responsible manner that provides community benefits, creates good paying jobs, minimizes environmental impact, and ensures the safety and well-being of workers and vulnerable members of our community. Achieving all of this requires public investment, and it is with this in mind that we endorse the Harbor District's proposed project. I urge you to give full and fair consideration to the District's application to the MPDG Mega and INFRA grant programs.

Sincerely,

Arne Jacobson
Director, Schatz Energy Research Center

Schatz Energy Research Center
(707) 826-4345

Cal Poly Humboldt
serc@humboldt.edu

1 Harpst St. Arcata, CA 95521
www.schatzcenter.org

August 21, 2023

APPLICATION TO
Multimodal Project Discretionary Grant Opportunity (MPDG) Program

Humboldt Bay Offshore Wind

MVP
(MINIMUM VIABLE PORT)

TITLE VI PLAN

TITLE VI PLAN

The Board of Commissioners of the Humboldt Bay Harbor, Recreation, and Conservation District (hereafter "the District") is committed to adherence to Title VI and the equitable and inclusive workplace and community it supports. The District is a Special Purpose District of the State of California.

As a Project being led by a Special District established by the State of California, the Project will ensure that no person is excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under any of its projects, activities, or services and business opportunities on the basis of race, color, national origin, age, sex or disability as afforded by Title VI of the Civil Rights Act of 1964 (Title VI) and related statutes, as amended. All persons, regardless of their citizenship status, are covered under this regulation.

The purpose of this policy is to affirm the Project sponsor's commitment to non-discrimination under Title VI. The sponsors strive to ensure non-discrimination in all of its projects, activities, or services and business opportunities whether or not they are federally funded.

It is the intent of the Project sponsors, to take a proactive leadership role in good faith efforts to achieve non-discriminatory practices in serving all citizens, inclusive of minority populations and low-income populations, as provided herein. In addition, it is the intent of the sponsors to ensure the Project provides equal employment and business opportunities to individuals with Limited English Proficiency (LEP).

Similarly, as a recipient of federal funds, the District consults with state Title VI Coordinators in an effort to comply with and carry out the requirements of the Title VI Regulations, as amended.

The District will develop a Title VI Plan as a subchapter within the Diversity, Equity, Inclusion, and Accessibility (DEIA) Plan proposed within the Project.

REPORT

Humboldt Bay Harbor, Recreation, and Conservation District

October 2022

moffatt & nichol

REDWOOD MULTIPURPOSE MARINE TERMINAL PROJECT

Preliminary Basis of Design

Document Verification

Client	Humboldt Bay Harbor, Recreation, and Conservation District
Project name	Redwood Multipurpose Marine Terminal Project
Document title	Preliminary Basis of Design
Status	Draft Report
Date	October 2022
Project number	212991-01
File reference	MN-Preliminary Basis of Design-20220919

Revision	Description	Issued by	Date	Checked
00	Preliminary Basis of Design	ME, SF, YN	20221007	SH, MT, SP

Produced by:

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www.moffattnichol.com

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Attachments

Disclaimer

Moffatt & Nichol devoted effort consistent with (i) the level of diligence ordinarily exercised by competent professionals practicing in the area under the same or similar circumstances, and (ii) the time and budget available for its work, to ensure that the data contained in this report is accurate as of the date of its preparation. This study is based on estimates, assumptions and other information developed by Moffatt & Nichol from its independent research effort, general knowledge of the industry, and information provided by and consultations with the client and the client's representatives. No responsibility is assumed for inaccuracies in reporting by the Client, the Client's agents and representatives, or any third-party data source used in preparing or presenting this study. Moffatt & Nichol assumes no duty to update the information contained herein unless it is separately retained to do so pursuant to a written agreement signed by Moffatt & Nichol and the Client.

Moffatt & Nichol's findings represent its professional judgment. Neither Moffatt & Nichol nor its respective affiliates, makes any warranty, expressed or implied, with respect to any information or methods disclosed in this document. Any recipient of this document other than the Client, by their acceptance or use of this document, releases Moffatt & Nichol and its affiliates from any liability for direct, indirect, consequential or special loss or damage whether arising in contract, warranty (express or implied), tort or otherwise, and irrespective of fault, negligence and strict liability.

This report may not to be used in conjunction with any public or private offering of securities, debt, equity, or other similar purpose where it may be relied upon to any degree by any person other than the Client. This study may not be used for purposes other than those for which it was prepared or for which prior written consent has been obtained from Moffatt & Nichol.

Possession of this study does not carry with it the right of publication or the right to use the name of "Moffatt & Nichol" in any manner without the prior written consent of Moffatt & Nichol. No party may abstract, excerpt or summarize this report without the prior written consent of Moffatt & Nichol. Moffatt & Nichol has served solely in the capacity of consultant and has not rendered any expert opinions in connection with the subject matter hereof. Any changes made to the study, or any use of the study not specifically identified in the agreement between the Client and Moffatt & Nichol or otherwise expressly approved in writing by Moffatt & Nichol, shall be at the sole risk of the party making such changes or adopting such use.

This document was prepared solely for the use by the Client. No party may rely on this report except the Client or a party so authorized by Moffatt & Nichol in writing (including, without limitation, in the form of a reliance letter). Any party who is entitled to rely on this document may do so only on the document in its entirety and not on any excerpt or summary. Entitlement to rely upon this document is conditioned upon the entitled party accepting full responsibility and not holding Moffatt & Nichol liable in any way for any impacts on the forecasts or the earnings from the project resulting from changes in "external" factors such as changes in government policy, in the pricing of commodities and materials, price levels generally, competitive alternatives to the project, the behavior of consumers or competitors and changes in the owners' policies affecting the operation of their projects.

This document may include "forward-looking statements". These statements relate to Moffatt & Nichol's expectations, beliefs, intentions or strategies regarding the future. These statements may be identified by the use of words like "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "should," "seek," and similar expressions. The forward-looking statements reflect Moffatt & Nichol's views and assumptions with respect to future events as of the date of this study and are subject to future economic conditions, and other risks and uncertainties. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, including, without limitation, those discussed in this study. These factors are beyond Moffatt & Nichol's ability to control or predict. Accordingly, Moffatt & Nichol makes no warranty or representation that any of the projected values or results contained in this study will actually be achieved.

This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions and considerations.

Glossary

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute for Steel Construction
ASCE	American Society of Civil Engineers
ASD	allowable stress design
AWS	American Welding Society
BFE	base flood elevation
BOEM	Bureau of Ocean Energy Management
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CGP	Construction General Permit
CMC	California Mechanical Code
CPT	cone penetration test
FAA	Federal Aviation Administration
FIRM	FEMA Flood Insurance Rate Map
GHG	greenhouse gas
GW	gigawatts
Harbor District	Humboldt Bay Harbor, Recreation, and Conservation District
HAT	Highest Astronomical Tide
IES	Illumination Engineering Society
IGP	Industrial General Permit
LAT	Lowest Astronomical Tide
LID	Low Impact Development
LRFD	Load Resistance Factor Design
MBL	minimum breaking load
MEG4	Mooring Equipment Guidelines, 4th Edition
MHHW	Mean Higher High Water
MHW	Mean High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
OCIMF	Oil Companies International Marine Forum
OCS	Outer Continental Shelf
OSHA	Occupational Safety and Health Administration
PIANC	Permanent International Association of Navigation Congresses
PV	photo-voltaic
RCP	Representative Concentration Pathway
RMT	Redwood Marine Terminal
ROW	right of way
SIC	Standard industrial Classification
SLR	sea level rise
SPMT	self-propelled modular transporter
SWL	safe working load
SWPPp	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UFC	Unified Facilities Criteria
UHMW	ultra-high molecular weight

US	United States
USACE	United States Army Corps of Engineers
USCS	United States Customary System
WTG	wind turbine generation
WWTP	Wastewater Treatment Plant

1. Introduction

1.1. Background

The offshore wind industry in the Pacific Outer Continental Shelf (OCS) region in the United States (US) is a relatively new industry that is poised for significant growth and development. Multiple states, including California, have passed legislation creating a market for the offshore wind industry. The federal government announced in May 2021 a goal to deploy 30 gigawatts (GW) of offshore wind in the US by 2030. California Assembly Bill 525, amended June 17, 2021, directs state agencies to develop a strategic plan and to set statewide goals for offshore wind production by 2030 and 2045. These production goals will drive industry development, including development of port infrastructure, that is purpose built to support the deployment of offshore wind projects in the Pacific Ocean. Due to water depths, traditional fixed foundations of offshore wind turbines are not feasible and floating foundations are to be used.

The project objective is to develop Humboldt Bay marine infrastructure and upland space into a Marshalling and Integration port to support the Offshore Floating Wind Industry in the Pacific OCS region. This project seeks to redevelop the existing Redwood Marine Terminal Berth 1 (RMT1), and its associated uplands so that it can serve as the primary facility for the manufacturing, import, staging, preassembly, and loadout of large offshore wind components, including both wind turbine generation (WTG) components and floating foundation components. RMT1 is located within the Port of Humboldt Bay and is uniquely located with no air draft restrictions and direct access to a federally maintained deep water channel. It is comprised of approximately 160 acres of useable upland space. Upgrades to the existing uplands, utilities, and marine infrastructure are required for RMT1 to serve as the regional WTG staging port and component and foundation manufacturing port.

A new berth, RMT2, is required to accommodate an additional offshore wind energy developer. The facility's existing size, location, and direct unimpeded access to open water, as well as vicinity to the Bureau of Ocean Energy Management (BOEM) offshore wind Humboldt Call Area make it an ideal candidate to serve as an offshore wind hub (co-location of marshalling and manufacturing terminals) in this region. Additionally, the terminal can support future BOEM lease areas in Oregon and Central California, including the Morro Bay and Diablo Canyon call areas.

The RMT1 site was developed as a lumber mill on the Samoa Peninsula in the 1890s. The Samoa Pulp mill was built on the site of the lumber mill in 1965. In 1993 the pulp mill was closed, then reopened in 2000. By that time most of the buildings on the mill site had been demolished. The pulp mill was closed for good in 2008. The Humboldt Bay Harbor, Recreation, and Conservation District (Harbor District) purchased the site in 2013, and much of the facility has since been demolished. (Humboldt Bay Maritime Industrial Use Market Study, 2018).

Once Offshore Floating Wind Industry demand decreases, the terminal would serve as a multi-use or multi-industry facility as other business opportunities arise.

1.2. Existing Site Description and Location

The existing RMT1 is located on the Samoa Peninsula in the Port of Humboldt Bay, California; see Figure 1-1, Figure 1-2, and Figure 1-3. The site has two main areas: the wharf and the uplands. The uplands generally consist of both paved and unpaved surfaces. The existing wharf is constructed of timber and provides an approximately 1,136-foot-long berth. The site was previously used to support the timber industry and currently services commercial fishermen, an aquaponics research facility, and a hagfish processing / shipping operation.

FIGURE 1-1: REDWOOD MARINE TERMINAL LOCATION

FIGURE 1-2: REDWOOD MARINE TERMINAL (RMT) – PROJECT SITE (GOOGLE EARTH 2019)

1.3. Project Description

The proposed RMT Project will serve as an import, storage, pre-assembly, and loadout facility for wind towers, nacelles, and blades to service the offshore wind market. This marshalling port will have the

potential to import, stage, pre-assemble, manufacture, and integrate components for offshore wind turbine systems on the order of 15 – 25 MW .

The design effort will include consideration of later development phases of the larger hub with a focus on vertical integration and onsite fabrication of device base. Other uses are developed at a programmatic level and design of those uses (such as manufacturing buildings) would be outlined under a supplemental Basis of Design at a future date..

The proposed site plan for the terminal is shown on Figure 1-2.

This project includes the following site upgrades:

Uplands

- Execution of wetlands mitigation project
- Demolition of various buildings
- Demolition of existing site utilities
- Grading and compaction of soil
- Ground improvement
- Installation of site storm water collection and treatment system
- Installation of potable and fire suppression water systems
- Installation of perimeter fencing and associated lighting and security
- Installation of new high mast lighting grid
- Installation of electrical service to meet site requirements
- Installation of elevated outlet racks for nacelles
- Installation of dense graded aggregate top surface to support operational loading

Marine Infrastructure

- Execution of wetlands mitigation project
- Demolition of 200,000 SF existing timber pile-supported wharf structure
- Installation of two pile-supported wharves (steel piles & concrete superstructure)
- Dredge to accommodate delivery vessels and floating foundations at wharf berth
- Placement of dredge material on southern section of RMT1
- Placement of slope protection (rock revetment)
- Installation of mooring dolphins for vessel berthing
- Installation of mooring dolphins for wet storage of floating foundation and fully integrated devices
- Dredge a sinking basin to accommodate semi-submersible barge
- Dredging the designated wet storage areas around the navigation channels[1]

[1] *The owner and operator or the terminal can choose to eliminate this area from the design and use an off-site location to store the semi-sub barge*

1.4. Scope of Basis of Design

This BOD states the basis for the specific design criteria adopted for the RMT development for incorporation into the basic design. It consists of design data assembled and developed during the preliminary design phase and identifies required codes and references for the design of individual project elements. The BOD is a living document and will be updated as the design matures. RMT project / future development requirements for design life, materials, and operational performance will be added in future revisions of this document. Reference to a value of 'TBD' indicates a design parameter or decision that is still under development.

1.5. Functional Requirements

The following requirements represent the functional aspects that shall be incorporated into the basic design:

1. Site designed for minimum top of subgrade elevation of +17.0 ft NAVD88. Cutting and filling the site will be required to achieve the finished grade elevation. This subgrade elevation is above the FEMA 100 year flood elevation and meets the medium high risk aversion for 2080 as dictated by the State of California Sea-Level Rise Guidance 2018 Update and the California Coastal Commission Recent Update to Best available Science Rising Seas Science Report and OPC State of California Sea-Level Rise Guidance, 2018 Update.
2. Site drainage will be in compliance with the State of California storm water collection and treatment regulations.
3. Site lighting will be in compliance with OSHA and US Coast Guard regulations. It is assumed that high mast lighting will be used. Supplemental lighting will be used where occasional work tasks require additional light greater than what is provided in the area. The lighting must be located or shielded so it is not mistaken for, or interferes with, marine navigational lights.
4. The access road will be designed to meet the county road standards at the connection to existing county roads and in areas outside the Harbor District property. Within the Harbor District property, an alternative road design section may be selected. Three access points to the site will be provided: north access from Vance Avenue, a west entrance from Navy Base Road and a south access point.
5. All areas accessible for crawler cranes shall be designed with a flexible pavement of well graded crushed rock of a minimum thickness of 3 ft (to be confirmed) on the uplands and 3 ft on the wharf.
6. The wharf and uplands shall be designed to accommodate the design vessels and the heavy lifting, transport, and storage loading associated with both WTG components and floating foundations (i.e., cranes and SPMTs). Based on anticipated site use, the design uniform live loading criteria shall be 3,000 psf for the uplands and 6,000 psf (to be confirmed) on the wharf.
7. The berth shall be designed to accommodate the delivery vessel and/or the semi-submersible barge. The berth shall also be designed to accommodate a fully assembled floating foundation. The berth shall be dredged to an elevation of -40 ft MLLW with a 2-ft over dredge allowance to accommodate a 35-ft draft vessel with a minimum under keel clearance of 3 ft at MLLW. Dredging footprint shall extend to the navigation channel.
8. The berth shall accommodate roll-on / roll-off (RORO) vessels for offload of wind components directly from a delivery vessel. The berth shall be designed to accommodate only one RORO vessel at berth at a time and shall have adequate fendering and mooring points to accommodate this operation.
9. The semi-submersible barge lay-by area shall be designed to accommodate only the semi-submersible barge. This area shall be dredged to an elevation of -21 ft MLLW with a 2-ft over dredge allowance to accommodate a 19-ft draft semi-submersible barge with a minimum under keel clearance of 2 ft. This dredge depth is intended to accommodate the semi-submersible barge

only. The turbine foundation will be placed on the semi-submersible barge at the berth. Dredging footprint shall extend to the navigation channel.

10. The marine structures are not designed for vessel or barge impact, vehicular impact, blast loading, or other impact loads.
11. The marine structures shall be designed to minimize environmental impact by minimizing berth deepening and maximizing overlap with existing wharf footprint to minimize impacts on bay bottom habitat.
12. Fenders shall be generally spaced at 50 ft maximum and bollards shall be generally spaced at 75 ft maximum. This spacing requirement shall be used as guidance when laying out the fenders and bollards. It is recognized that in some instances the spacing will be exceeded as needed to match structural or operational requirements.
13. The site will be designed to prevent local settlement that would inhibit SPMT movement. It is understood that the site will settle over time, and that additional gravel may be required to be placed on site in the future to compensate for settlement over time. The upland bearing capacity, settlement criteria, and differential settlement criteria will be determined in the next design phases, after discussion with the device components manufacturer(s).

2. Datums and Units

The horizontal coordinate system shall be North American Datum of 1983 (NAD83), California State Plane Zone 1.

The vertical coordinate system shall be North American Vertical Datum of 1988 (NAVD88), Geoid 12B.

United States Customary System (USCS - feet, inches, pounds, etc.) units shall be used.

3. Codes, Standards, and References

3.1. Codes & Standards

The following codes, standards, and references shall govern the design of the facility.

American Association of State Highway and Transportation Officials (AASHTO):

- AASHTO LRFD (Load Resistance Factor Design) Bridge Design Specifications, Ninth Edition, 2020
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, Sixth Edition, 2013

American Concrete Institute (ACI):

- ACI 224R-01, Control of Cracking in Concrete Structures
- ACI 318-19, Building Code Requirements for Structural Concrete

American Institute for Steel Construction (AISC):

- AISC 303-16, Code of Standard Practice for Steel Buildings and Bridges
- AISC 341-16, Seismic Provisions for Structural Steel Buildings
- AISC 360-16, Specification for Structural Steel Buildings

American Society of Civil Engineers (ASCE):

- ASCE 7-16, Minimum Design Loads for Buildings and Other Structures
- ASCE 61-14, Seismic Design of Piers and Wharves

American Welding Society (AWS):

- AWS D1.1, Structural Welding Code, 2020

California Code of Regulations (CCR):

- 2019 California Building Code (CBC)
- 2019 California Electrical Code (CEC)
- 2019 California Mechanical Code (CMC)

Illumination Engineering Society (IES):

- The Lighting Handbook, 10th edition

National Fire Protection Association (NFPA):

- NFPA 307, Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves

Oil Companies International Marine Forum (OCIMF):

- Mooring Equipment Guidelines (MEG4), 4th Edition, 2018

Permanent International Association of Navigation Congresses (PIANC):

- PIANC WG 33, Guidelines for the Design of Fenders Systems, 2002
- PIANC WG 34, Seismic Design Guidelines for Port Structures, 2001
- PIANC WG 153, Recommendations for the Design and Assessment of Marine Oil and Petrochemical Terminals, 2016

United States Army Corps of Engineers (USACE):

- USACE EM 1110-2-1100, Coastal Engineering Manual, 2002
- USACE EM 1110-2-2502, Retaining and Flood Walls, 1989

Unified Facilities Criteria (UFC):

- UFC 4-152-01 Design: Piers and Wharves, 2017
- UFC 4-159-03 Design: Moorings, 2020

Occupational Safety and Health Administration (OSHA)

- Occupational Safety and Health Standards for Shipyard Employment 1915.82

3.2. References

Available reports previously prepared for the project site are as follows:

- BST Associates, 2018. *Humboldt Bay Maritime Industrial Use Market Study DRAFT REPORT*.
- LACO, 2013. *Samoa Industrial Waterfront Preliminary Transportation Access Plan*
- LACO, 2021. *Humboldt Bay California's Wind Energy Port – HBHRCD Conceptual Master Plan*
- PB Ports & Marine, Inc., 2003. *Port of Humboldt Bay Harbor Revitalization Plan*
- Shatz Energy Research Center, 2020. *Port Infrastructure Assessment Report*
- SHN Preliminary Geotechnical Data Report, Redwood Multipurpose Marine Terminal, Samoa, California, 09/08/2022
- EMI, Summary of Geotechnical Study, 09/01/2022
- EMI, Preliminary Site-Specific Acceleration Response Spectra Recommended for Seismic Design of Redwood Multipurpose Marine Terminal, Humboldt Bay, Samoa, California, 09/22/2022.

Other references include:

- BOEM, 2016. *Determining the Infrastructure Needs to Support Offshore Floating Wind and Marine Hydrokinetic Facilities on the Pacific West Coast and Hawaii (BOEM 2016-011)*
- California Ocean Protection Council & California Natural Resources Agency, 2018. *State of California Sea-Level Rise Guidance: 2018 Update*
- California Coastal Commission, 2018. *Recent Updates to Best Available Science: Memo to Staff, May 7, 2018*
- NOAA, Nautical Chart No. 18622
- USACE, 2021. *Humboldt Bay Samoa Channel Condition Survey, 22 April 2021*

4. Operational Criteria

After construction the site will be turned over to an operator who will be responsible for all activities at the site for the specified term of their contract. The operator may change over the life of the facility. The high-level concept of operations for the site is as follows.

WTG and floating foundation components, including blades, nacelles, tower sections, and foundation elements, are imported at the berth via a delivery vessel. Two methods for transfer from the delivery vessel onto the wharf will be accommodated. The first method consists of using a vessel or wharf-based crane to lift the components from the vessel to the wharf. The second method consists of a RORO operation. This method uses SPMTs to drive onto the vessel, onboard the components, and then transport the components off the vessel and onto the wharf. In both methodologies, SPMTs are used to transport the component from the wharf to the upland storage area.

This methodology is used extensively in the offshore wind industry due to its ability to handle and efficiently spread significant loads to achieve manageable applied loads on the structures and/or subgrade below.

The terminal design will accommodate the fabrication of floating offshore wind turbine foundations on the uplands. This activity can also occur at an alternative site. If the foundation is fabricated at this facility, a serial production line will likely be used. This type of production will start at the western extent of the terminal and move east as structural elements are added to the unit. When the foundation unit is complete, it is stationed at the southern end of the wharf for roll-out onto a semi-submersible barge. The foundation can be loaded out using a ramp system or a semi-submersible barge. In this study, the semi-submersible barge option is used as it provides maximum flexibility. The semi-submersible barge will be moored at the berth. The completed foundation unit is moved onto the semi-submersible barge via SPMTs, an example of this procedure is shown in Figure 4-1. The semi-submersible barge then transports the foundation to a predetermined deep water area and performs a “float-off” operation in which the semi-submersible barge ballasts down until the foundation becomes buoyant. The foundation is towed back to the berth area, where it is outfitted with the WTG components (tower, nacelle, and blades), an example of this procedure is shown in Figure 4-2. These components are typically placed onto the foundation using a large land-based crawler crane. The fully assembled wind turbine (foundation and WTG components) is towed out to the wind farm installation site and anchored in place.

FIGURE 4-1: SEMI-SUBMERSIBLE FOUNDATION BEING LOADED ONTO A SEMI-SUBMERSIBLE BARGE USING SPMTS
(Source: Wilson Offshore & Marine)

FIGURE 4-2: WTG COMPONENTS ASSEMBLED ON SEMI-SUBMERSIBLE FOUNDATION AT QUAYSIDE
(Source: Principle Power)

5. Environmental Criteria

5.1. Metocean Conditions

Figure 5-1 presents the location of metocean gauges discussed in this section.

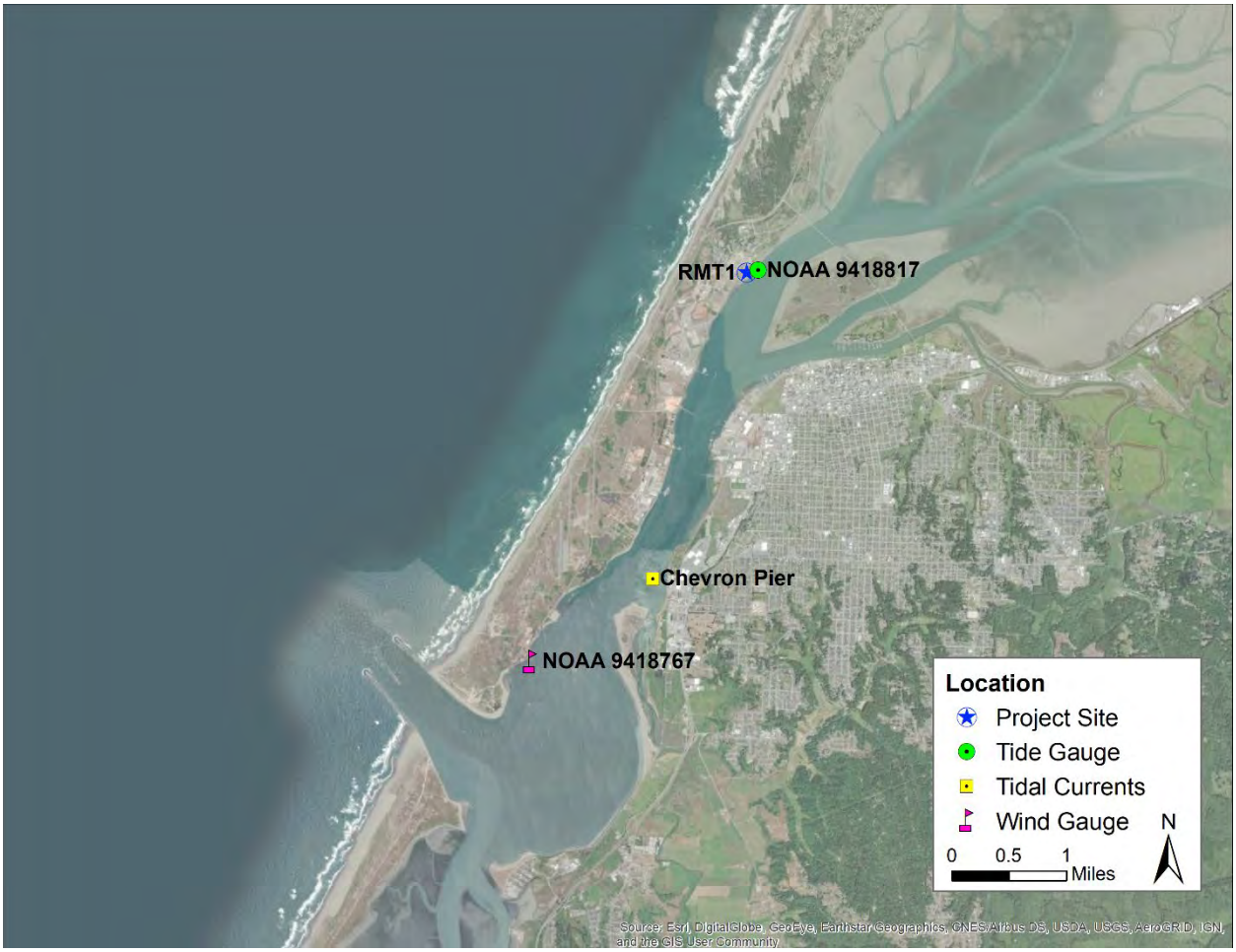


FIGURE 5-1: LOCATION OF METOCEAN GAUGES

5.1.1. Tides

The National Oceanic and Atmospheric Administration (NOAA) Station 9418817 at Samoa, Humboldt Bay, CA is the closest tidal station to the project site. The location of this gauge is shown in Figure 5-2. Tidal datums are provided in Table 5-1 and are based on the National Tidal Datum Epoch 1983-2001.

FIGURE 5-2: LOCATION OF NOAA TIDE STATION 9418817

TABLE 5-1: TIDAL DATUMS

Tidal Parameter	Elevation (ft MLLW)	Elevation (ft NAVD88)
Highest Astronomical Tide (HAT)	+9.36	+8.64
Mean Higher High Water (MHHW)	+7.37	+6.65
Mean High Water (MHW)	+6.65	+5.93
Mean Low Water (MLW)	+1.30	+0.58
North American Vertical Datum of 1988 (NAVD88)	+0.72	0.00
Mean Lower Low Water (MLLW)	0.00	-0.72
Lowest Astronomical Tide (LAT)	-2.43	-3.15

5.1.2. FEMA Flood Levels

Per FEMA Flood Insurance Rate Map (FIRM) Number 06023C0835G, effective June 21, 2017, a portion of the existing site is in an AE zone. The upland section of this facility has a base flood elevation (BFE) of +10 ft NAVD88. The existing wharf has a BFE of +12 ft NAVD88.

5.1.3. Sea-Level Rise Projections

Table 5-2 summarizes sea level rise (SLR) projections at the North Spit. The columns reflect varying risk levels, including the 50% probability, the likely range, the 5% probability (equivalent to 1-in-20 chance), the

0.5% probability (1-in-200 chance), and the extreme H++ scenario. The rows reflect two emissions scenarios, called Representative Concentration Pathways (RCPs). Low emission scenarios represent RCP 2.6, a scenario that leads to very low greenhouse gas (GHG) concentration levels. High emissions represent RCP 8.5, a business-as-usual scenario that leads to high GHG concentration levels.

Under the high emission scenarios, the 0.5% probability of SLR projection for year 2080 is 5.1 feet. Year 2080 is selected because the marine structures shall be designed for a 50-year service life.

TABLE 5-2: SEA-LEVEL RISE PROJECTIONS AT NORTH SPIT

		Probabilistic Projections (in feet) (based on Kopp et al. 2014)					H++ scenario (Sweet et al. 2017) *Single scenario
		MEDIAN	LIKELY RANGE		1-IN-20 CHANCE	1-IN-200 CHANCE	
		50% probability sea-level rise meets or exceeds...	66% probability sea-level rise is between...		5% probability sea-level rise meets or exceeds...	0.5% probability sea-level rise meets or exceeds...	
				Low Risk Aversion		Medium - High Risk Aversion	Extreme Risk Aversion
High emissions	2030	0.6	0.5 -	0.7	0.8	1	1.2
	2040	0.9	0.7 -	1.1	1.2	1.6	2.0
	2050	1.2	0.9 -	1.5	1.7	2.3	3.1
Low emissions	2060	1.3	1.0 -	1.7	2	2.8	
High emissions	2060	1.5	1.2 -	1.9	2.2	3.1	4.3
Low emissions	2070	1.6	1.2 -	2	2.4	3.5	
High emissions	2070	1.9	1.4 -	2.4	2.9	4	5.6
Low emissions	2080	1.8	1.4 -	2.4	2.9	4.4	
High emissions	2080	2.3	1.7 -	2.9	3.5	5.1	7.2
Low emissions	2090	2.1	1.5 -	2.7	3.4	5.3	
High emissions	2090	2.7	2.0 -	3.5	4.3	6.2	8.9
Low emissions	2100	2.3	1.7 -	3.1	3.9	6.3	
High emissions	2100	3.1	2.3 -	4.1	5.1	7.6	10.9
Low emissions	2110*	2.5	1.9 -	3.3	4.2	7.1	
High emissions	2110*	3.3	2.6 -	4.3	5.2	8	12.7
Low emissions	2120	2.7	2.0 -	3.7	4.8	8.2	
High emissions	2120	3.7	2.9 -	4.9	6.1	9.4	15.0
Low emissions	2130	3	2.1 -	4	5.3	9.4	
High emissions	2130	4.2	3.1 -	5.5	6.9	10.9	17.4
Low emissions	2140	3.2	2.3 -	4.4	5.9	10.7	
High emissions	2140	4.6	3.4 -	6.2	7.8	12.5	20.1
Low emissions	2150	3.4	2.3 -	4.8	6.6	12.1	
High emissions	2150	5	3.7 -	6.8	8.7	14.1	23.0

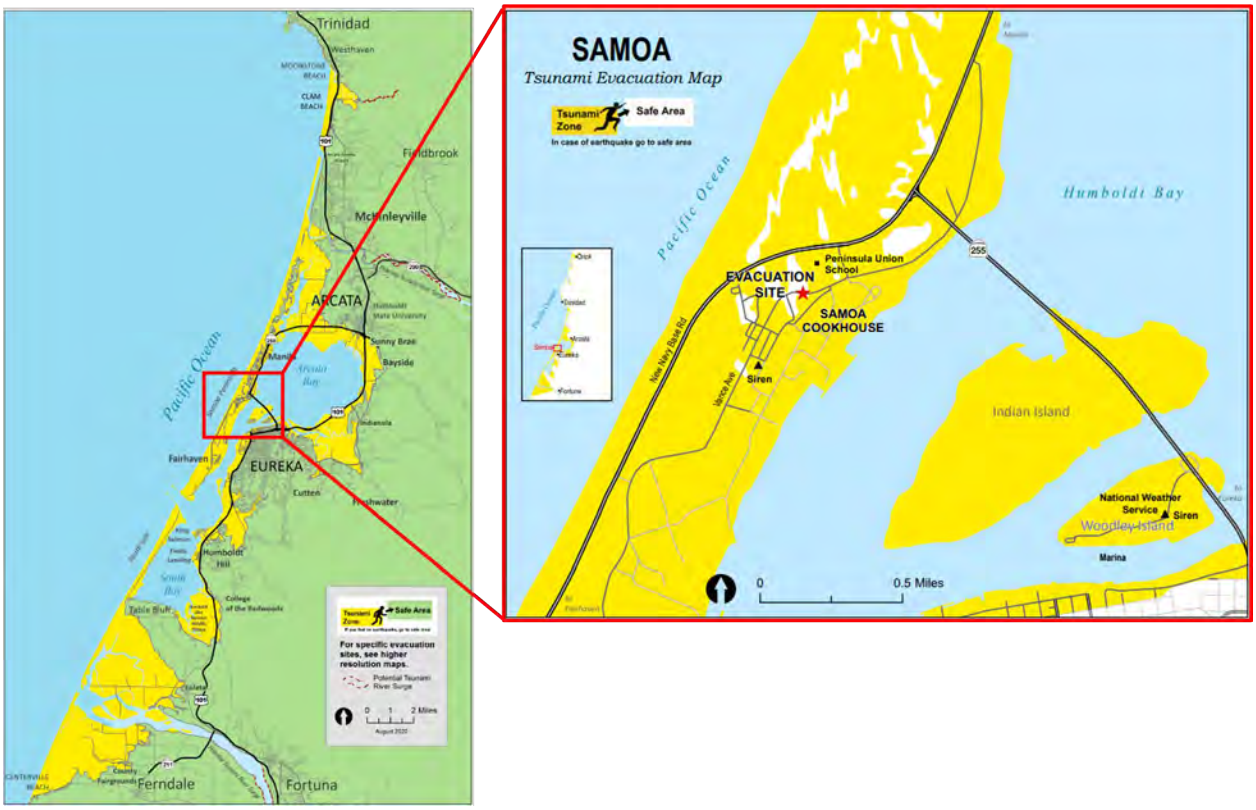
5.1.4. Tsunamis

Publicly available tsunami hazard assessments for the Humboldt Bay area were compiled. Figure 5-3 illustrates the tsunami hazard and evacuation map in the project area. Based on these assessments, several conclusions were made, including:

- Tsunami inundation depths could vary between 0 and 3 ft at the RMT1 project area.
- Tsunami waves come from the Pacific Ocean, over-wash the Samoa Peninsula, then flow into Humboldt Bay.

- Tsunami travel time depends on the location of earthquake sources and can vary from 10 to 20 minutes.
- The official Samoa evacuation site is located on high ground, near the Peninsula Union School.

FIGURE 5-3: TSUNAMI HAZARD AND EVACUATION MAP



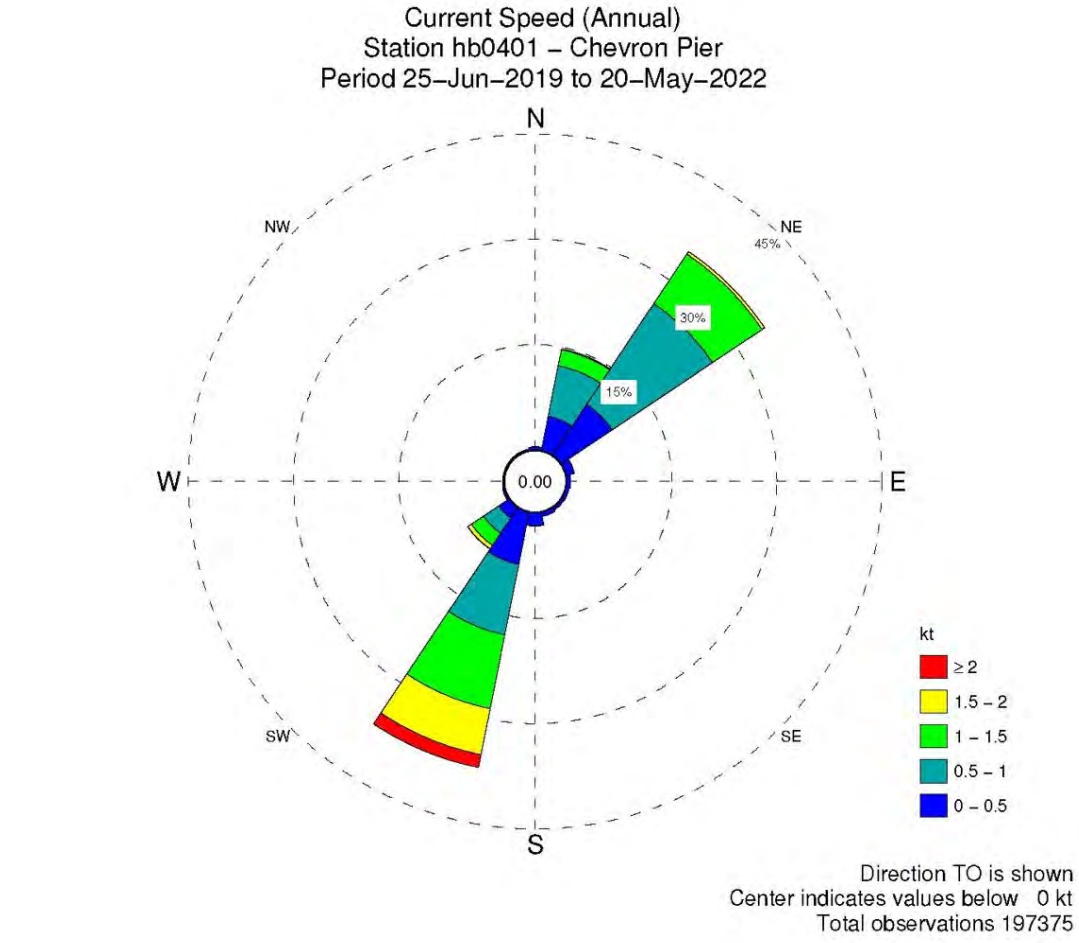
5.1.5. Currents

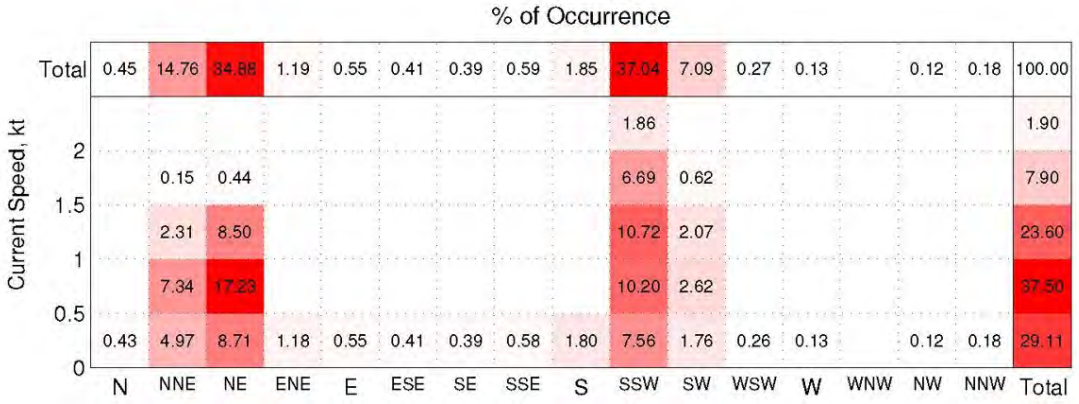
Tidal current measurements inside Humboldt Bay were analyzed at the Chevron Pier in North Bay (see Figure 5-1), which is located between the bay entrance and RMT1 and represents the general flow field to/from the project site. Figure 5-4 illustrates the annual current rose at Chevron Pier. The prevailing flood currents flow in the northeast direction and ebb currents in the southwest direction. Ebb currents are stronger, with a maximum of up to 3.4 knots. Maximum flood currents can reach 1.9 knots.

TABLE 5-3: TIDAL CURRENTS AT CHEVRON PIER

Parameter	Current Velocity (knots)
Max. Ebb	3.4
Mean Ebb	0.9
Max. Flood	1.9
Mean Flood	0.7

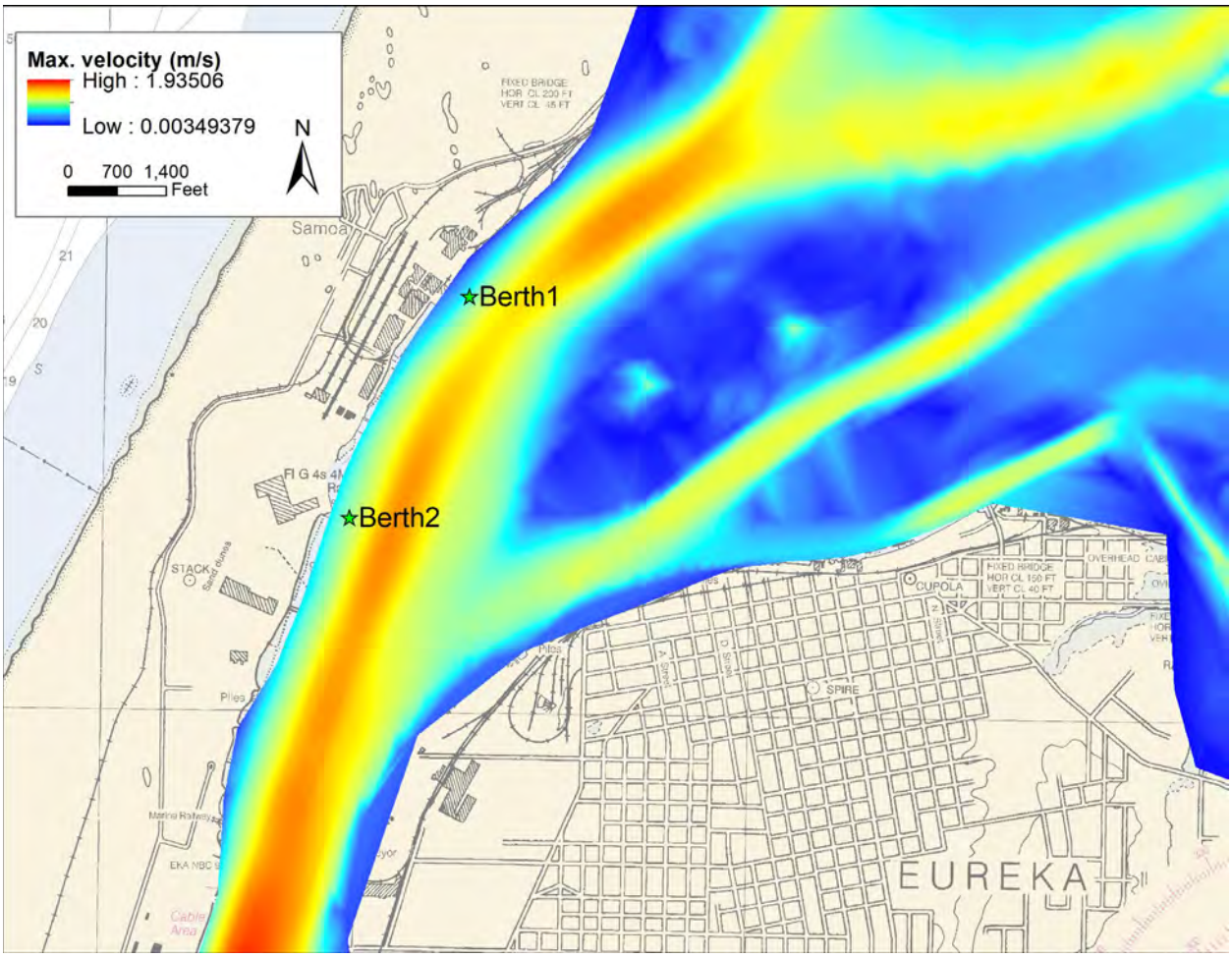
FIGURE 5-4: ANNUAL SURFACE CURRENT ROSE AT CHEVRON PIER





A hydrodynamic model simulates tidal circulation inside Humboldt Bay during the strong El Niño year of 1982/83. Figure 5-5 illustrates a raster interpolation of the maximum current velocity that shows stronger currents generally follow the deeper channel. The maximum current velocity at RMT 1 and RMT 2 are 1.0 and 1.3 knots, respectively.

FIGURE 5-5: HYDRODYNAMIC RESULTS AT RMT1 DURING 1982/83 EL NINO



5.1.6. Wind Statistics

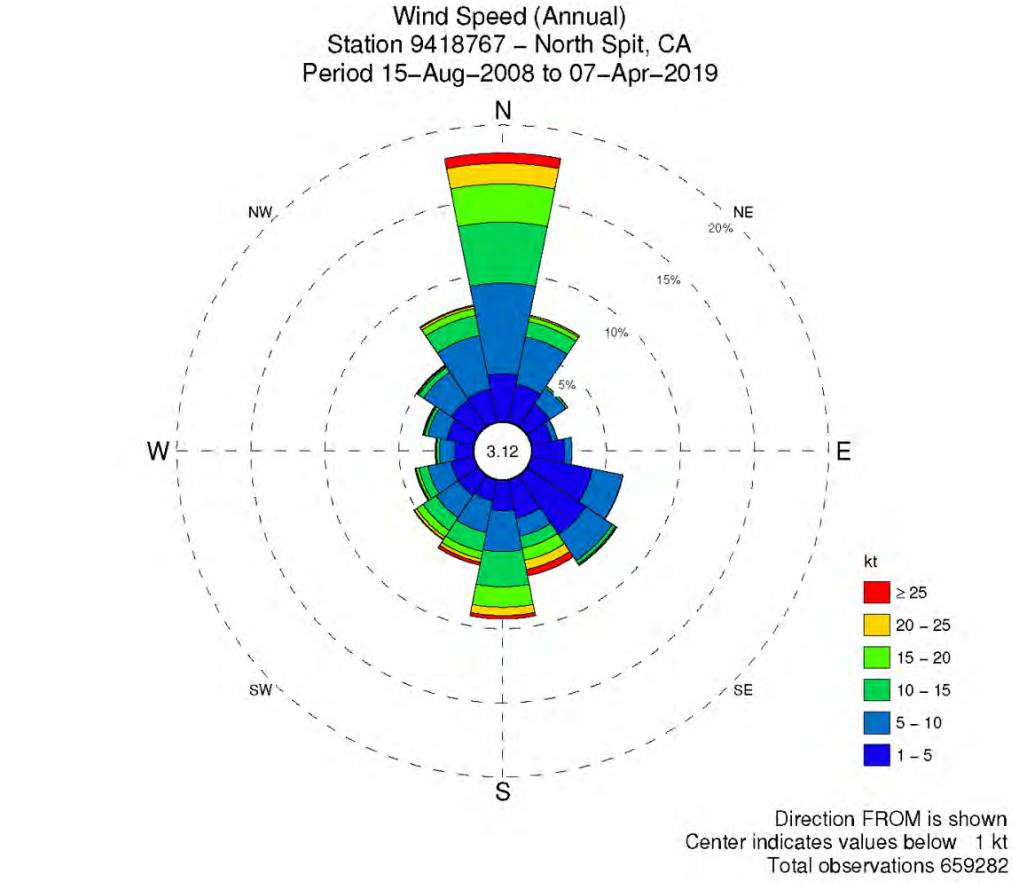
NOAA's 9418767 North Spit gauge is the most representative wind station for the RMT1 due to their close proximity and similar bay water exposure. The annual wind rose is presented in Figure 5-6. The results show that the prevailing and strongest winds are aligned well with the Bay orientation.

Table 5-4 summarizes the extreme wind speeds for varying return periods. The 100-year return period wind is 52.1 knots.

TABLE 5-4: EXTREME WIND SPEEDS AT NORTH SPIT

Return Period (years)	Wind Speed (knots)
1	39.8
5	43.5
10	45.3
25	47.9
50	50.0
100	52.1

FIGURE 5-6: ANNUAL WIND ROSE AT NORTH SPIT



% of Occurrence

Wind Speed, kt	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
Total	18.12	7.34	3.28	1.76	2.69	6.29	7.28	6.59	9.33	5.85	5.21	4.04	2.56	3.50	4.99	8.05	96.88
25	0.69							0.43	0.22	0.21							1.79
20	1.40	0.11						0.63	0.56	0.23	0.19					0.16	3.50
15	2.58	0.32						0.83	1.38	0.51	0.52	0.18				0.48	7.12
10	4.11	1.05	0.15				0.25	0.83	2.37	1.30	1.05	0.61	0.20	0.23	0.39	1.39	14.00
5	6.12	3.26	1.29	0.37	0.49	2.09	2.15	1.25	2.77	2.16	1.81	1.59	1.00	1.30	2.26	3.68	33.59
1	3.21	2.59	1.83	1.38	2.19	4.17	4.76	2.60	2.02	1.44	1.60	1.56	1.26	1.84	2.16	2.27	36.89
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total

5.1.7. Waves

The project site is sheltered from ocean swells and exposed to local wind waves. Preliminary analysis indicates a peak wave height (H_{mo}) of 2.2 Ft and period (T_p) of 2.7 seconds.

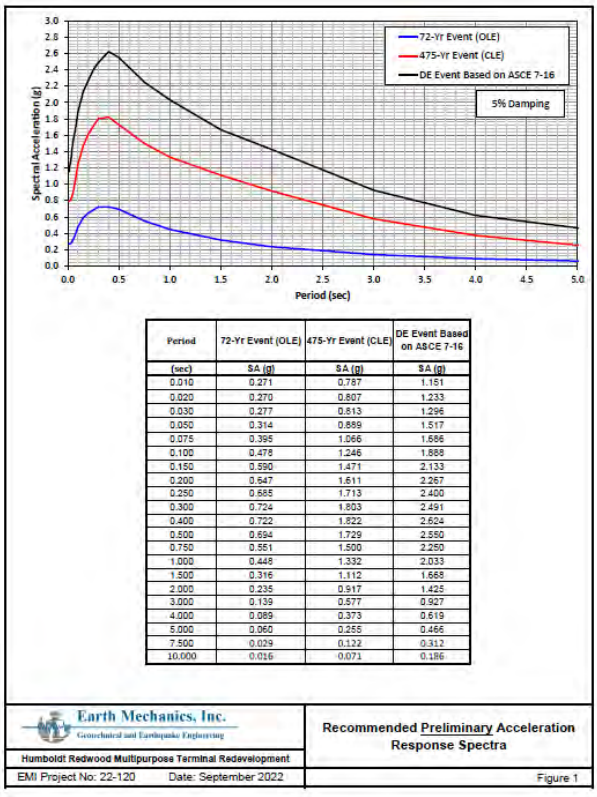
5.2. Earthquake Design

Wharf seismic design shall comply with CBC-ASCE 7-16 for wharf structure accessible by general public which include life safety and no collapse requirements under rare ground motion. For wharves structures not accessible to general public, the wharf seismic design shall comply with ASCE-61. ASCE-61 specifies two levels of ground motions: Operating Level Earthquake (OLE) with 72-year return period and Contingency Level Earthquake with 475 return period. The structure performance criteria under each ground motion level depends on the structure's classification.

Structure classifications and acceptable performance criteria under each level of ground motion will be confirmed by the District during the next phase of the project.

EMI has developed a preliminary site-specific response spectrum for the specified ground motion levels. Figure shows the preliminary acceleration response spectra (SRA). Detailed seismic hazard analyses will be performed and the findings will be documented in a complete seismic hazard study report during the next phase of the project.

FIGURE 5-7: RECOMMENDED PRELIMINARY ACCELERATION RESPONSE SPECTRA



Period	72-Yr Event (OLE)	475-Yr Event (CLE)	DE Event Based on ASCE 7-16
(sec)	SA (g)	SA (g)	SA (g)
0.010	0.271	0.787	1.151
0.020	0.270	0.807	1.233
0.030	0.277	0.813	1.296
0.050	0.314	0.889	1.517
0.075	0.395	1.066	1.666
0.100	0.478	1.246	1.888
0.150	0.590	1.471	2.133
0.200	0.647	1.611	2.267
0.250	0.685	1.713	2.400
0.300	0.724	1.803	2.491
0.400	0.722	1.822	2.624
0.500	0.694	1.729	2.550
0.750	0.551	1.500	2.250
1.000	0.448	1.332	2.033
1.500	0.316	1.112	1.668
2.000	0.235	0.917	1.425
3.000	0.139	0.577	0.927
4.000	0.089	0.373	0.619
5.000	0.060	0.255	0.466
7.500	0.029	0.122	0.312
10.000	0.016	0.071	0.186

Earth Mechanics, Inc.
Geotechnical and Earthquake Engineering

Recommended Preliminary Acceleration Response Spectra

Humboldt Redwood Multipurpose Terminal Redevelopment

EMI Project No: 22-120 Date: September 2022 Figure 1

6. Geotechnical and Survey Criteria

6.1. Geotechnical

The initial information used to establish existing subsurface conditions and soil properties for design was obtained from SHN's preliminary subsurface investigations draft report, issued on 23 August 2022. The investigation was completed to inform conceptual planning for the proposed terminal and is intended as the first of multiple phases of geotechnical investigation. Additional geotechnical investigation will follow conceptual planning and preliminary design and will become increasingly focused as specific design elements become more refined.

The preliminary geotechnical investigation was focused along the Humboldt Bay shoreline, where little existing geotechnical data is available. Previous geotechnical investigations for neighboring sites provide useful data relative to upland portions of the site, but data along the waterfront has not been developed to date.

6.1.1. Subsurface Investigations

The preliminary geotechnical field investigation consisted of 10 cone penetration tests (CPTs) and three machine borings. CPT and drilled boring locations are shown on Figure 1-1. The geotechnical boring locations are also shown on Figure 6-2 to show their location relative to the historic shoreline (note that all but CPT 22-C10 occurred within filled areas bay-ward of the historic shoreline). The CPTs were completed first, between April 19 and 22, 2022, followed by the machine borings, which occurred between May 31 and June 3, 2022. Based on conceptual development plans, the preliminary geotechnical field exploration was focused in the central and northern parts of the site; a single exploration site occurs at the southern end of the site.

Exploration locations were developed collaboratively with the RMT geotechnical team and staffed in the field by SHN geologists.

FIGURE 6-1: CPT AND DRILLED BORING LOCATIONS

FIGURE 6-2: GEOTECHNICAL BORING LOCATION

6.1.2. Geologic Setting

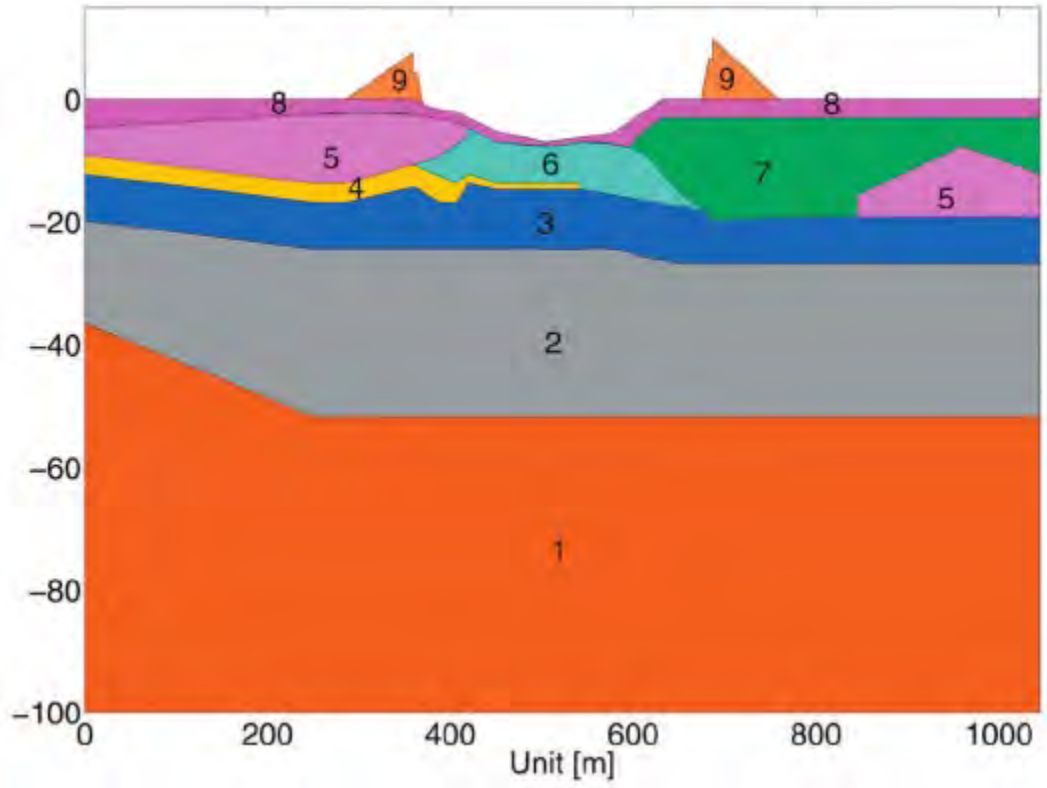
This summary of site geologic conditions is based on review of the recent CPT investigations in the context of other previous geotechnical investigations in the area. The 1994 Geomatrix report for the Samoa bridges is particularly useful, as it compiles all the Caltrans drill data across the bay into a series of profiles. For reference, see below a colorful soil profile across the “middle” channel of the three bay channels crossed by the Samoa bridges (note the metric scale).

A fundamentally important horizon within the bay is the contact between Pleistocene and Holocene sediments, which is typical in a coastal setting such as this. During the late Pleistocene, during the most recent glaciation, sea level was much lower and the shoreline was far to the west. Not much would have been happening in the area during this interval (geologically speaking!), with the exception of the drainage of the paleo-Mad River, which likely flowed through the Samoa channel (the westernmost of the three bay channels; closest to the site). The Pleistocene/Holocene boundary occurs on Figure 6-3 between Units 2 and 3; it occurs around the bay at an elevation of about -60 feet (+-20m, Figure 6-1). Below this horizon, across most of the bay is a stiff silt/clay unit (Unit 2 on Figure 6-1) and the Hookton Fm. (Unit 1), a thick dense sand unit. The Pleistocene clay unit (Unit 2) appears to have been present in the recent CPT’s as the “lower” clay unit, below about 65 feet Below Ground Surface (BGS). The Hookton Fm. occurs below about 80 feet BGS; it is several hundred feet thick and all the recent CPT’s bottomed out in this material. We can expect a continuation of the dense sandy conditions to the intended boring depth (150 feet).

During the latest Pleistocene and early Holocene marine transgression, the bay filled in with a variety of sediments, illustrated on the figure by Unit 3 and the laterally discontinuous lenses of sediment above (Units 4 through 8). At the RMT site, the CPT’s identified sandy intervals consistent with other areas of the bay, but also indicated a relatively thick clay deposit that appears localized to the subject site and the adjacent Town of Samoa. This “upper” clay unit is very soft, organic-rich, and occurs between about 22 feet BGS and 50 to 60 feet BGS; it is 20 to 42 feet thick across the site, except at CPT-08, where it thins extensively. The “upper” clay unit was thickest in CPT-04 and -05.

The entire Samoa Peninsula is covered with a veneer of windblown dune sand, much of which has been reworked during previous industrial developments. See the historic photo below to see what the RMT and Samoa Peninsula looked like in the 1930s.

FIGURE 6-3: TWO-DIMENSIONAL SOIL PROFILE OF HBMC BRIDGE SITE



Two-dimensional soil profile of HBMC Bridge site (layer 1: Tertiary and Quaternary Alluvial deposits; layer 2: medium dense organic silt, sandy silt and stiff silty clay; layer 3: dense sand; layer 4: silt; layer 5: medium dense to dense silty sand and sand with some organic matter; layer 6: dense silty sand and sand; layer 7: soft or loose sandy silt or silty sand with organic matter; layer 8: soft to very soft organic silt with clay; and layer 9: abutment fill. Layers 5 and 7 are susceptible to soil liquefaction (Geomatrix, 1994).

SHN note: the Pleistocene/Holocene unconformity occurs between Units 2 and 3.

6.1.3. Subsurface Conditions

A subsurface investigation program to support the conceptual design effort was performed. Figure 6-1 shows the locations of CPT and drilled borings. Figure 6-4 and Figure 6-5 show a preliminary soil profile at RMT1, as projected form the shoreline geotechnical data.

FIGURE 6-4: PRELIMINARY SOIL PROFILE AT NORTH WHARF SITE

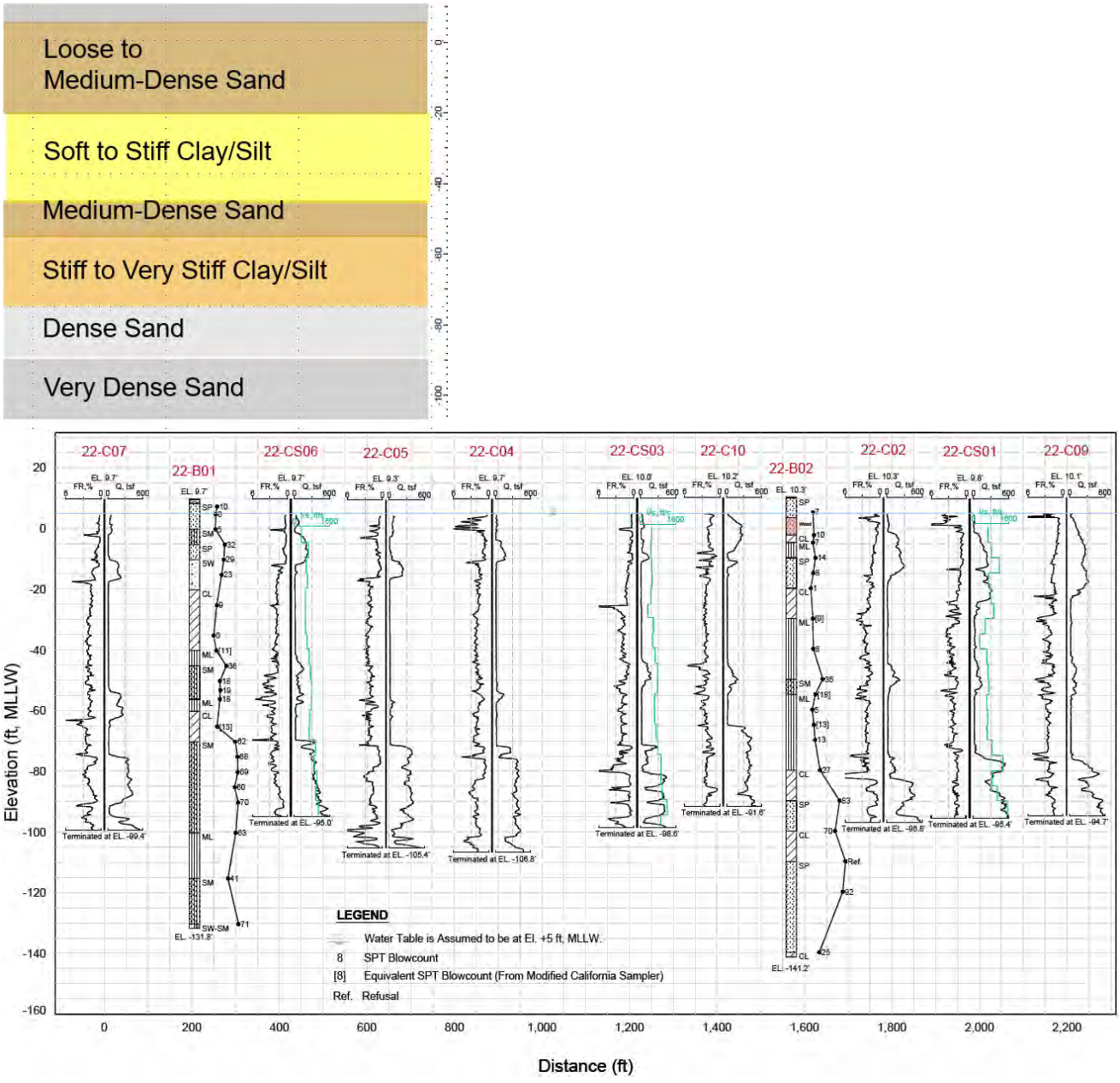
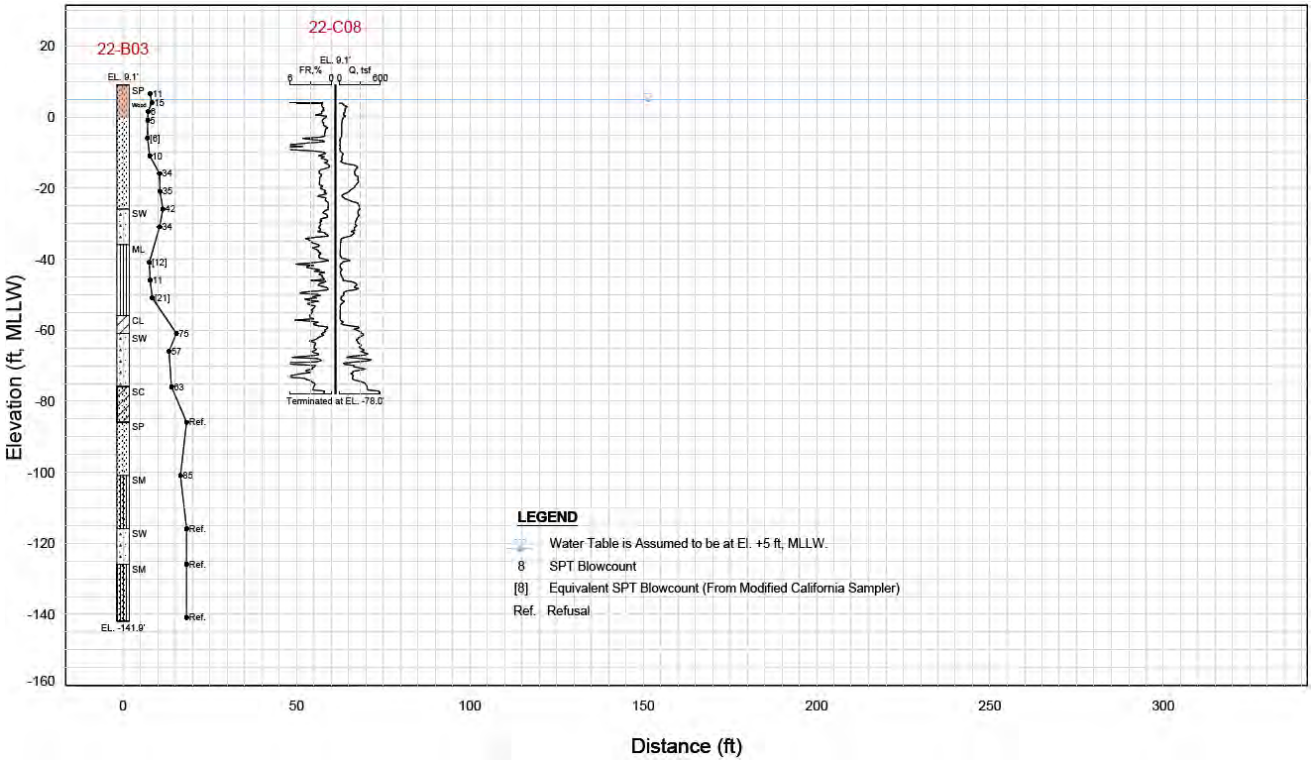


FIGURE 6-5: PRELIMINARY SOIL PROFILE AT SOUTH WHARF SITE



6.1.4. Geotechnical Design Considerations

6.1.4.1. Dredging

The material within the proposed dredge prism is expected to be soft silts and loose to medium dense sands/silty sands. Dredge materials characteristics and viable dredging method will be included in new versions of this document based on the future marine geotechnical investigation program.

6.1.4.2. Yard Area

The calculated maximum uniform pressure imposed by a 60-t SPMT axle is 3,000 psf. The settlement criteria will be evaluated in the subsequent phases of the project. The short term and long term settlement criteria will be discussed with OEMs to define the maximum applied bearing pressure, storage method, heavy components storage durations and acceptable settlement/differential settlement.

6.1.4.3. Site Stabilization (Ground Improvement)

Given the applied high live loads on the upland area, site stabilization will be required. Preloading is the preferred option to reduce the long term settlement for most of the upland area. The use of wick drains will be examined after discussing its impact on the construction schedule and the rate of settlement at the early stages of port operation. Ground improvement for the area directly behind the wharf structure and along the shoreline will be assessed in future phases of this project.

6.2. Hydrographic Surveys

Hydrographic survey was performed by eTrac. The bathymetric data will be included in the next revision of this document.

6.3. Topographic and Boundary Surveys

Topographic survey based on Lidar was performed by SHN, Sea Attachment 1.

6.4. Humboldt Bay Navigation Channel

Humboldt Bay navigation channel provides marine access up to the vicinity of the project site with the following minimum dimensions:

- Width = 400 feet (Samoa Channel)
  = 400 to 600 feet (North Bay Channel)
- Depth = -38 feet MLLW (Samoa Channel) or -48 feet MLLW (Outer/Entrance Channel)

The channel is currently maintained by USACE.

7. Navigation, Dredging, Mooring and Berthing Criteria

7.1. Design Vessels

The vessels expected to call on the proposed port facility will consist of delivery vessels and semi-submersible barges. Delivery vessels will consist of bulk carriers and/or barges bringing both the foundation raw materials and WTG components to the site. The semi-submersible barges are assumed to be purpose built smart ballasting barges.

7.1.1. Delivery Vessel

The design delivery vessel is the S2L-type heavy cargo vessel with the characteristics shown in Table 7-1.

TABLE 7-1: DELIVERY BERTH DESIGN VESSEL

Vessel Characteristic	S2L-TYPE
Length Overall	608.3 ft
Summer Draft	34.8 ft
Beam	83.0 ft

7.1.2. RORO Vessels

The design RORO vessel is the ST-Class RORO vessel and the design delivery barge is the 455 Series Barge with the characteristics shown in Table 7-2.

TABLE 7-2: RORO DESIGN VESSELS AT DELIVERY BERTH

Vessel Characteristic	ST-CLASS RO-RO	455 SERIES BARGE
Length Overall	496.9 ft	400.0 ft
Summer Draft	18.6 ft	19.0 ft
Beam	83.3 ft	105.0 ft

7.1.3. Semi-Submersible Barge

The semi-submersible barge will be a purpose-built semi-submersible barge with the characteristics shown in Table 7-3.

TABLE 7-3: PURPOSE-BUILT SEMI-SUB VESSEL

Name	Purpose Built Semi-Sub
Length Overall	350.0 ft
Summer Draft	19.1 ft
Beam	350.0 ft

7.1.4. Wind Turbine Device – Base Only

The wind turbine device base is expected to be a semi-submersible, floating steel structure. Delivery of wind turbine base could be relative to the following scenarios:

- Fully Assembled on a semi-submersible vessel. A fully assembled device base manufactured outside of and transported to Humboldt Harbor. This scenario requires either an in-harbor sinking basin or out of harbor (in-ocean) sinking and dead ship tow to the marine terminal or wet storage

location. A sinking basin will be provided at the RMT 1 location for in-harbor use. If size is not sufficient for ocean transport vessels, alternative sinking basin locations will need to be proposed by the terminal operator or will require use of sinking out of harbor in the ocean.

- Partially Assembled on RORO Vessel. Subcomponents are manufactured at locations outside of Humboldt Harbor and delivered to the marine terminal for transfer to the marine terminal yard. Subcomponents are assembled into an entire device base that is transferred across the wharf using SPMTs to a semi-submersible barge (Figure 4-1) that would utilize the in harbor sinking basin located in the berth pocket of marine terminal 1.
- Device Base Fully Manufactured in Humboldt. Steel materials would be delivered by combination of vessel and truck to fully fabricate the device base onsite. Completed base would be transferred to the wharf using SPMTs to a semi-submersible barge (Figure 4-1) that would utilize the in harbor sinking basin located in the berth pocket of marine terminal 1.

Based on discussion with wind industry developers, the following geometric parameters were developed for the design of the new wind terminal facility.

- Near Term Size (Estimated 12 MW Turbine Size)
  - Beam: 325 ft x 325 ft
  - Draft: 19 ft Min, 23 ft Max
- Future Size (Estimated 20 MW Turbine Size)
  - Beam: 400 ft x 400 ft
  - Draft: 20 ft Min, 25 ft Max

7.1.5. Wind Turbine Device – Fully Integrated

Outreach with Wind Industry Developers, the following geometric parameters were developed for the design of the new wind terminal facility for fully integrated devices.

- Near Term Size (Estimated 12 MW Turbine Size)
  - Beam: 325 ft x 325 ft
  - Draft: 32 ft Min, 38 ft Max
- Future Size (Estimated 20 MW Turbine Size)
  - Beam: 400 ft x 400 ft
  - Draft: 32 ft Min, 45 ft Max

It should be noted the draft stated is assumed for safe navigation through the navigation channels to open ocean conditions. The draft required for mooring stability will likely be greater once installed at the wind farm. There could be device base technologies that are stable during transport under lower ballasted condition or that utilize supplemental flotation to navigate through the confined navigation channels to the open ocean and then adjusted in deeper water. The actual navigation channel parameters needed to support a specific technology type is specific to each type of technology and dependent on the results of detailed maneuvering analysis and bridge simulation work for the tow out environmental conditions and operational plan. A navigation risk assessment will be required for each type of technology that will be subject to review and approval by the US Coast Guard. The US Coast Guard may require a moving channel closure when transporting fully integrated wind turbine devices.

7.2. Channel and Berth Pocket Requirements

7.2.1. Berth Pocket & Sinking Basin

A berth pocket and sinking basin are required at the RMT1 location with the following criteria.

- Moored Device Location Relative to Navigation Channel: 50 ft offset for maximum turbine dimension.
- Mooring & Maneuvering Area Depth. El -40 ft MLLW with 2 ft over dredge allowance to account for extreme low tides.
- Sinking Basin Area Depth is 450 ft by 450 ft, dredged to elevation El -60 ft MLLW.
- Side Slopes: Estimated to be 2H:1V with rock armoring and 2.5H:1V without armoring. To be verified after completion of marine geotechnical investigation.

7.3. Navigation and Dredging

Navigation. Vessel maneuvering and simulations for fully integrated devices will be needed to better refine the navigation procedures, tug assist, ballasting plans and other elements for a deployment of the device to the wind farm. Additional information on the characteristics of the fully integrated device will be needed to conduct a first step desktop analysis to evaluate the navigation and maneuvering to determine the need for any localized out of USACE navigation channel dredging needs.

Dredging. Dredging will be required for the berth and approach areas for the proposed RMT1 and RMT2 wharf structures. Dredging may be needed for the wet storage areas depending on location and device technology type and whether it is a fully integrated or a device foundation base. A dredged material management plan will need to be developed based on the results of sediment characterization, types and location of material by volume and relative to a range of disposal and beneficial reuse options (offshore at HOODS, onsite for fill to raise grades to mitigate SLR, and other disposal and reuse options).

7.4. Device Wet Storage

The following criteria were developed to assist in planning for the harbor-wide improvements that are needed to meet the needs of offshore wind developers and to meet the long terms needs for California to implement the goals for offshore wind power (2-5 GW by 2030 and 25 GW by 2045). The following criteria were developed based on outreach with a range of offshore wind developers, terminal operators, and device technology developers.

- Wet Storage.
  - Industry Needs Assumptions. The number of units required in wet storage is dependent on the developer, their supply chain strategy, size of the offshore wind project (GW and # of units), and required timeline to install the units offshore. However, for the purpose of developing a basis for size and quantity of wet storage required in Humboldt for the RMT project, the following assumptions were made to identify a conservative wet storage case.
    - Assumptions: Each unit is 15 MW, project size is 1.3 GW
      - Number of units = 1300 MW / 15 MW = ~90 units
    - Construction Time Period: Wind farm must be constructed in 1 year
    - Production Rate: Developer needs to deliver approximately 2 units / week to deliver 1.3 GW in 1 year

- Number of Devices for Wet Storage. Due to the distance from the port, transit times, and weather risk, developers will need more units in wet storage to serve the Morro Bay call area. Based on the assumptions above, the following quantity of units is conceivable:
  - Humboldt Call Area only (1.3 GW project, 90 units, 1 year installation window)
    - 4 floating foundations in wet storage (waiting for integration)
    - Minimum of 4 additional floating foundations in dry storage (e.g., on uplands) or in wet storage (waiting for integration)
    - Up to 8 fully integrated (waiting for good weather window to tow)
  - Morro Bay Call Area (1.3 GW project, 90 units, 1 year installation window)
    - 8 floating foundations in wet storage (waiting for integration)
    - Minimum of 7 additional floating foundations in dry storage (e.g., on uplands) or in wet storage (waiting for integration).
    - Up to 15 fully integrated (waiting for good weather window to tow)
  - Marine Vessel Operations. For these scenarios, the following tug fleet is envisioned:
    - Port tugs = 5 total
      - 2 tugs for semi-sub moves
      - 3 tugs for foundation moves and delivery vessel moves
    - Transit tugs
      - Humboldt Call Area = 3 tugs (2 for the move and 1 on stand-by at the call area)
      - Morro Bay Call Area = 7 or 9 tugs (need 2 + 2 for moves and 1 on stand-by at the call area, but will likely need an additional set of tugs to hit weather windows)
  - Device Water Depth Requirements (for wet storage).
    - Device Foundation for Wet Storage. Draft requirements.
    - El -28 ft MLLW with additional 2-ft over dredge allowance.
    - Device Fully Integrated for Wet Storage. Deeper draft requirements than the device foundation by itself.
    - El -38 ft MLLW with additional 2 ft over dredge allowance.

8. Marine Structures Design Criteria

8.1. Risk Category

The marine facilities shall be designed to Risk Category II per ASCE 7-10 Table 1.5-1.

8.2. Design Life

The design life of the marine facilities shall be 50 years. Consumable components such as fenders and cathodic protection anodes shall be replaced per the manufacturer's recommendations. Design life represents the physical condition of the marine facility and its ability to perform its function as originally designed assuming regular inspection and maintenance activities are carried out.

8.3. Deck Elevation

Top deck elevation for the marine structures is assumed to be +17.1 ft NAVD88. The deck top elevation will be refined in the next design phases based on further refinement of SLR prediction and sea wave analyses.

8.4. Design Loads

Dead Load (D)

Dead load shall include the self-weight of the structure including any permanent attachments.

- Steel: 490 pcf
- Concrete: 150 pcf
- Dense Graded Aggregate: 145 pcf

Buoyancy Load (B)

Buoyancy load shall be considered using a seawater unit weight of 64.1 pcf. All new structures shall be designed to be submerged in an extreme event.

Live Load (L)

The following live loads shall be considered:

- Uplands Storage and Staging Area: 3,000 psf
- Marine Structure (Heavy Lift Wharf): 6,000 psf
- Dolphins and Walkways: 100 psf

Vehicular loads include an AASHTO HS-20 truck with a 15% impact factor applied to design and a lateral load equal to 10% of the vertical load.

Wind Load (W)

Wind loads, on structural components when berth is vacant, shall comply with ASCE 7-16 requirements. Design wind speed shall be 92 mph (3 second gust at 33 feet above ground).

Current Load (C)

Current forces on structural pipe members shall be determined in accordance with API RP 2A. Lift, drag and mass coefficients shall be determined for each member taking into account its cross-section and

inclination as well as marine growth. Current forces on vessels shall be determined in accordance with the OCIMF Mooring Equipment Guidelines (MEG4) for static mooring analyses. Design current speed and direction to be confirmed.

Berthing Load (Be)

PIANC Guidelines for the Design of Fenders Systems (2002) shall be used to determine the required berthing energy for the design vessels, size of the fender system, and the berthing load. The structure shall be designed for the maximum fender load, including a +/- 10% tolerance in fender performance. The fender panel shall include ultra-high molecular weight (UHMW) facing to provide a maximum coefficient of friction of 0.2. Horizontal and vertical forces on fender system shall be considered based on friction between the vessel and fender panel.

Mooring Load (M)

The vessel with the strongest mooring line minimum breaking load (MBL) should be used to determine the bollard capacity safe working load (SWL). The mooring load shall be applied 180 degrees horizontally and at an angle of +25, 0, and -25 degrees to the horizontal plane. The bollards shall be designed for one mooring line per bollard. Structures shall be designed to accommodate 100% SWL on a single bollard and 60% SWL on an adjacent bollard(s), simultaneously. Application of the 60% SWL on adjacent bollards shall be based on designer judgement with consideration of mooring line arrangements. In addition, actual mooring forces from the mooring analysis shall be checked.

Earthquake Load (E)

Earthquake loads will be determined per CBC 2019 based on the site classification. The seismic performance criteria for the project, under Level 2 ground motion, is collapse prevention. Under Level 1 ground motion, post-event inspection and repair may be required (to be confirmed in future phases).

Load Combinations

All structures shall be designed using load combinations per UFC 4-152-01. Wind and current loads shall be operating loads when combined with operating loads (live, mooring and/or berthing). Wind and current loads shall be extreme loads during vacant / non-operating conditions (no mooring and/or berthing). Seismic loads shall coincide only with operating environmental conditions.

TABLE 8-1: LOAD COMBINATIONS – LOAD AND RESISTANCE FACTOR DESIGN (LRFD)

Load Case	U0	U1	U2	U3	U4	U5	U6	U7	U8	U9
D[a]	1.4	1.2	1.2	1.2	1.2	1.2	1.0+k	1.0-k	1.2	1.2
L	-	1.6[b]	-	1.6[b]	-	1.6[b]	0.1	-	1.6[b]	1.0
B	1.4	1.2	1.2	1.2	1.2	1.2	1.2	0.9	1.2	1.2
Be	-	-	1.6[c]	-	-	-	-	-	-	-
C	-	-	1.2	1.2	1.2	1.2	-	-	-	1.2
H[d]	-	1.6	1.6	1.6	1.6	1.6	1.0	1.0	1.6	1.6
Eq	-	-	-	-	-	-	1.0	1.0	-	-
W	-	-	-	-	1.0	-	-	-	-	1.0
M	-	-	-	-	-	1.6[e]	-	-	-	-
R+S+T	-	-	-	1.2	-	-	-	-	-	-
Ice	-	-	-	0.5	-	-	-	-	1.0	1.0

TABLE 8-2: LOAD COMBINATIONS – ALLOWABLE STRESS DESIGN (ASD)

Load Case	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
D[a]	1.0	1.0	1.0	1.0	1.0	1.0	1.0+k	1.0-k	1.0	1.0
L	-	1.0	-	1.0	-	1.0	0.1	-	1.0	0.75
B	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	1.0	1.0
Be	-	-	1.0	-	-	-	-	-	-	-
C	-	-	1.0	1.0	1.0	1.0	-	-	1.0	1.0
H[d]	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Eq	-	-	-	-	-	-	0.7	0.7	-	-
W	-	-	-	-	0.6	-	-	-	-	0.6
M	-	-	-	-	-	1.0	-	-	-	-
R+S+T	-	-	-	1.0	-	-	-	-	-	-
Ice	-	-	-	0.2	-	-	-	-	0.7	0.7

Notes:

a. 0.9 (0.6 ASD) for checking members for minimum axial load and maximum moment.
b. 1.3 for the maximum outrigger float load from a truck crane.
c. Accidental Berthing: 1.2 support structure, 1.0 fender system components.
d. Where the effect of H resists the primary variable effect, a load factor of 0.9 (0.6 ASD) shall be included with H where H is permanent and H shall be set to zero for all other conditions.
e. 1.6 for the mooring loads from the mooring analysis and 1.0 for the SWL of bollards.
f. k = 0.5 (PGA)

8.4.1. Durability

Calculation of concrete crack width shall comply with ACI 224R. Maximum design crack width under service loads shall comply with the following:

- Concrete exposed to seawater or seawater spray = 0.01 inch
- Buried structures = 0.012 inch

8.4.2. Corrosion

Steel piles exposed to salt water shall be protected using a minimum of two of the following strategies. Regardless of approach selected, steel piles shall be regularly inspected, maintained, and repaired as required to prevent section loss.

- Marine grade coating applied with strict conformance to specifications including inspection and repair of all coating defects and damages
- Cathodic protection anodes
- Pile wrap or jacket
- Additional “sacrificial” wall thickness

Corrosion rates for steel elements were obtained from the Waterfront Facilities Inspection and Assessment, ASCE Manuals and Reports on Engineering Practice No. 130, 2015; Section 4.6.2:

- Soil embedded zone (mudline down): 0.001 in./year;
- Immersed zone (between LAT and mudline): 0.004 in./year; and
- Splash and tidal zone (LAT up): 0.005 in./year.
- Steel elements located away from the water shall be designed for an atmospheric zone rate of 0.0004 in./year.

8.4.3. Serviceability

High Mast Light Pole: Maximum lateral deflection of foundation during service loading is 1/2 inch.

8.4.4. Material Properties

All materials shall comply with latest applicable ASTM specifications.

Concrete shall be normal-weight concrete with a minimum 28-day compressive strength of 5,000 psi, maximum water-to-cementitious ratio of 0.4 and a minimum clear cover to the reinforcing steel of 3-inches.

9. Civil Design Criteria

9.1. Heavy Lift Area and Uplands

9.1.1. Site Preparation

Demolition of existing at grade and below grade concrete structures, cultural protection considerations (minimize cut in areas of original upland areas) and consideration of other site preparation requirements will need to be considered in the site grading design and prior to conducting any grading work.

9.1.2. Stormwater Design

Stormwater systems will be designed to:

- Use the Rational Method for calculating runoff (Q)
- Convey the 10-yr, 24-hr storm event (Q10)
- Use NOAA14 or other local source of rain data
- A 10-minute time of concentration (Tc) minimum
- Provide 1 ft of freeboard to building pads for the (Q100)

9.1.2.1. Stormwater Compliance

The project site lies within the County of Humboldt's jurisdiction, but it is outside the regulated Municipal Separate Storm Sewer System (MS4) permit boundaries. Therefore, MS4 stormwater mitigation requirements do not apply to this project. However, this project will disturb over an acre of ground and will be required to meet the post-construction stormwater requirements for the State Water Resources Control Board's (SWRCB) Construction General Permit (CGP). The CGP specifies post-construction runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit. The CGP post-construction standards require that the project replicate the pre-project water balance (runoff) for the smallest storms up to the 85th percentile storm event.

Those activities that are considered industrial and have a Standard industrial Classification (SIC) code will be required to obtain coverage under the Statewide General Permit for Stormwater Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit) implements the federally required stormwater regulations in California for stormwater associated with industrial activities discharging to waters of the US.

9.1.3. Parking

Project will provide on-site parking for all employees, contractors, visitors, etc. No off-site parking will be allowed.

9.1.4. Access Roads

Access roads include both access points to the site from the county New Navy Base Road and Cookhouse Road. The railroad right of way (ROW) will need to be retained and the west access road will be located adjacent to and not within the rail ROW corridor. Additional right of way or easements may be needed within the west access road corridor to provide access and utilities through the Phase 3 area and into the Phase 2 area.

Access roads connecting to the site will have a minimum surface elevation of 16.00 ft. The maximum longitudinal slope of the access roads will be 5%. Access roads will have 12-ft paved lanes, 8-ft paved shoulders, 2-ft gravel shoulders, and 4:1 max side slopes for fill prisms.

Roadway access to the project site outside of Harbor District property shall meet AASHTO and Humboldt County Public Works standards.

North Site Access - The north access road will need to be routed within the available property parcel boundaries and easements, raised to mitigate flooding from SLR, and an alignment that considers wetland impacts and stormwater management. Peak stormwater flood routing will need to consider utilizing the existing low level outlet culvert, tide gate and discharge to the bay.

Intersection Site Access - Based on preliminary transportation analysis, signaling of intersections for the connection to Navy Base Road (both north and west access road) and to Vance Avenue will not be needed. A 3- or 4-way stop at the north road intersection with Vance Avenue will be the needed improvement.

Access roads within the site will follow the criteria in Site Grading Design.

9.1.5. Site Grading Design

Redevelopment of the site will require consideration for future SLR and flood protection. SLR criteria is outlined in Section 5.1.3. Site Conditions that will be the basis for minimum finished elevations on the marine terminal site are:

- The minimum elevation within the yard will be 17.00 ft, and the minimum finish floor elevations (FFE) for the buildings will be 18.00 ft. The minimum elevations for storm drain inverts and the bottom of bioretention basins (bottom of gravel layer) will be 13.00 ft.
- The minimum slope for the finish grade surface will be between 0.5% - 1%. Due to the large scale of the site, a flatter grade will help to minimize the amount of fill needed to construct the site, but drainage of the site needs to be considered.
- All paved driving surfaces shall have a 0.5% minimum cross slope.

9.1.6. Design of Erosion, Sedimentation, and Pollution Control

The project shall develop a Stormwater Pollution Prevention Plan (SWPPP) to satisfy the CGP.

The project shall develop a post-construction stormwater plan to satisfy the local Low Impact Development (LID) standards and/or Industrial General Permit (IGP).

Also see Stormwater Design.

9.1.7. Fire Protection Water

Fire water will be needed to provide fire suppression for the various buildings to be constructed on the site. Fire water will also need to serve all fire hydrants throughout the site. The northern end of the site (early phase construction) will likely receive fire water from the Town of Samoa's water main. The southern end of the site (late phase construction) will receive fire water from Humboldt Bay Municipal Water District's industrial water main. A new fire water storage tank will be needed on site to replace the existing red tank.

9.1.8. Potable Water

Potable water will be needed for the various buildings to be constructed on the site. Potable water will be needed for general office use (restrooms, kitchens, etc.). Depending on the activities within each building, there may be additional potable water demands. The northern end of the site (early phase construction) will

likely receive potable water from the Town of Samoa's water main. The southern end of the site (late phase construction) will receive potable water from Humboldt Bay Municipal Water District's potable water main.

9.1.9. Seawater Withdrawals

Seawater withdrawals for the offshore wind port are not needed for the intended operations. Other future terminal uses (aquaculture) for the site may require a salt water withdrawal. Additionally, the proposed Nordic Aquafarm development (immediately south of the project site) has a sea water withdrawal at red tank dock and a supply line running through the nearshore marine terminal shoreline. The Nordic seawater supply line will need to be re-routed into a utility corridor as part of the marine terminal redevelopment project. Consideration for sizing the pipeline and points of connection for potential future Phase 4 area aquaculture operations should be considered in the design of the new seawater withdrawal and pipeline. Red tank dock may be replaced as part of the marine terminal redevelopment. If a new pier or dock is proposed, the seawater withdrawal will need to be accommodated on that new pier.

9.1.10. Sanitary Sewer

Sanitary sewer service will be needed for the various buildings to be constructed on the site. Sanitary sewer service will be limited to demands from general office use (restrooms, kitchens, etc.). If there are industrial processes on the site that generate wastewater, they will need to be evaluated individually to determine if the wastewater generated by these processes can be sent directly to the sanitary sewer system, or if on-site pre-treatment is needed. On-site treatment and disposal of domestic wastewater is not expected for this site. It is expected that wastewater will be treated at the Samoa Wastewater Treatment Plant (WWTP), which discharges treated wastewater to the existing ocean outfall pipe. Wastewater from the site will need to be pumped to tie-in to the Town of Samoa's sewer main or directly to the Samoa WWTP.

9.1.11. Finished Surface Materials

The site surfacing material will be crushed aggregate with a total thickness of approximately 3 ft. Due to concerns with the potential for mobilizing fines in stormwater runoff, a two layer, 3-ft finished surface will likely be required. The upper finished surface should be a cleaner crushed aggregate product that has been screened to minimize the amount of fines. Pavements are not planned nor desired for the finished surface of the site. The heavy loads anticipated on the site make paving the entire site impracticable. Additionally, the crushed aggregate surface allows ease of maintenance for re-grading the finished surface when settlement from the heavy loads occurs. If localized areas of pavement are needed to meet industrial area runoff collection and treatment, that area should be minimized, and additional subsurface soil improvements will likely be needed in order to provide adequate support for pavements

9.1.12. Signage

The project shall be designed to meet the Federal Highway Administration Manual on Uniform Transportation Control Device standards.

10. Electrical Design Criteria

10.1. Port Operations Electrical Demands

Operations at the RMT port facility will be continuous and varied for all phases of the build-out, and will require significant power. Conceptualized as an all-electric facility (without diesel/gas engine driven equipment), reliable power will be essential to the success of the terminal. The expected operations and equipment requiring power include manufacturing buildings, warehouse buildings, assembly buildings, office space, on-site material heavy transport, on-site light material transport, manufacturing/construction equipment and tools, cranes, site lighting, vessel shore power and battery charging, along with a number of miscellaneous electrical loads.

Power will be distributed to the site at medium voltage (12,000 volts) and transformed down to utilization voltages of 480V, 208V and 120V, all at 60 Hz.

10.2. Estimated Electrical Loads

The terminal build-out will be completed in phases, with four phases currently being considered. The estimated loads are detailed in the Electrical Load Estimate, which indicates a total power requirement of 9.7 MVA at full build-out. The estimate relies on information that may change, including, for example, the size and number of buildings, the number of cranes, the number of battery chargers, etc. Because of this uncertainty, a conservative contingency of 50% has been included in the Electrical Load Estimate for power supply planning purposes.

10.3. Power Supply Sources and Distribution

The Samoa peninsula is currently fed by two PG&E 60kV circuits, the Humboldt #1 circuit and the Essex Junction-Fairhaven circuit, both of which terminate 1/2-mile south of the site at PG&E's Fairhaven Substation.

The proposed supply to the facility will be from two sources, the Harbor District's substation and directly from the Fairhaven substation. The Harbor District substation will supply Phases 1 and 2 of the project, and the Fairhaven substation will supply power for Phases 3 and 4. Further details on these two supply sources are located in the *Electrical Infrastructure and Green Port Conceptual Engineering Assessment Memorandum.*

Power will be distributed to the site at 12KV, on overhead lines, with some locations brought below grade in ductbanks. The lines would be routed along the western side of the facility within an established utility corridor. Further details of the incoming distribution lines are in the *Electrical Infrastructure and Green Port Conceptual Engineering Assessment Memorandum.*

10.4. Green Port Development

The goal for the terminal redevelopment is to provide a focus on electrification and zero-emissions equipment through the use of renewable energy supplies. The intent is for the facility to operate with reduced net carbon emissions for ongoing normal terminal operations.

A potential strategy for providing power from renewable sources is the development of a photo-voltaic (PV) system to generate and store power, to be used by the facility. This solar panel concept and options of a PV system are discussed in depth in the *Electrical Infrastructure and Green Port Conceptual Engineering Assessment Memorandum.*

10.5. Backup Power

The RMT facility will require some level of backup emergency power, which will likely include the installation of at least one standby generator. Although diesel generation is an option, natural gas fired backup generator(s) are preferred and will provide backup power for critical systems. At a minimum, the backup generator system will provide power to life safety systems, emergency lighting, and other equipment and systems considered critical. The extent of equipment, lightings, systems, and building components that would be included as critical will be determined once details of the facility installation are finalized.

Backup generators, or other emergency power supply systems such as battery storage may also be required for continuity of operations during a loss of utility power. This might include orderly shutdown of systems, or perhaps some level of ongoing production or other operations during loss of power. The extent of backup power for operational continuity will be determined once details of facility equipment is finalized.

11. Security

11.1. Background

The RMT facility will require certain security measures in order to comply with federal law. The following table illustrates the applicable federal codes to be used for terminal security for US ports.

TABLE 11-1: RELATIVE SECURITY CODES

Codes and Standards	Description/Use
33 CFR 101	Maritime Security - General
33 CFR 105	Maritime Security - Facilities
33 CFR 101.514 33 CFR 105.255	TWIC Requirements

12. Aids to Navigation & Lighting

12.1. Background

Aids to navigation and lighting requirements will apply to aspects of the project as follows in accordance with requirements outlined by the US Coast Guard and Federal Aviation Administration (FAA).

- Lighting. Navigation lighting for cranes and fully integrated wind turbine devices will be required. Lighting requirements will be outlined in consultation with the appropriate federal and state agencies.
- Aids to Navigation. Federal navigation aid structures and buoys may require relocation in localized areas such as the proposed marine terminal berth and wet storage locations. Relocation of aids to navigation will require coordination with the US Coast Guard. Additional private aids to navigation may be needed to mark wind turbine device wet storage area. The need for and type, size of private aids to navigation will be determined in coordination with the US Coast Guard.

13. Green Port Development

13.1. Background

The redevelopment of the RMT presents an opportunity to develop the new facility and operation following a goal to create a Green Port Development. The focus of the Green Port Development emphasizes minimizing impacts on the environment as part of the construction and long-term operations of the facility. The Green Port Development has goals and criteria relative to resource consumption and environmental quality as outlined in the subsequent sections.

13.2. Resource Consumption

- Construction Materials Selection – Building type, use of beneficially reused materials (dredged material), durable construction materials for longevity, and reduced GHG reduction measures as part of the materials sourcing and construction.
- Waste Management – Onsite recycling of materials for re-use on project site (such as concrete foundations crushed for fill needs), WWT treatment utilizing existing waste treatment systems and minimizing load demands, and minimizing waste generated as part of the development and site operations.
- Energy Use, Efficiency, Resiliency – Consider and develop the use of alternative fuels, renewable power, on-site solar, on-site microgrid, and backup power systems to reduce carbon footprint and improve resiliency of the facility operations.
- Transportation – Consider a range of modes of transportation for workers (walk, bus access, electric car, worker parking), and marine transportation alternative fuels or electrification, and shore power for vessels.

13.3. Environmental Quality

- SLR/Climate Change – Accommodate future water levels in accordance with California State Lands Commission guidance and to plan and build a facility that is resilient and adaptable to a changing environment.
- Air Quality – Site operation emissions reductions, near zero carbon goals, shore power for vessels, electrification or alternative fuel equipment operations will be pursed.
- Water Quality – Stormwater management for compliance with water quality discharge for the range and type of proposed uses.
- Ecosystem Restoration & Mitigation – Minimize impacts (to wetlands, eelgrass, habitat, and species of concern) through strategic, informed planning and design of the proposed improvements.
- Light & Noise – Development of site layouts and operations will be considerate of outdoor light and need for noise abatement needs for the project area.

Attachment 1 -Topographic and Boundary Surveys

EXPLANATION

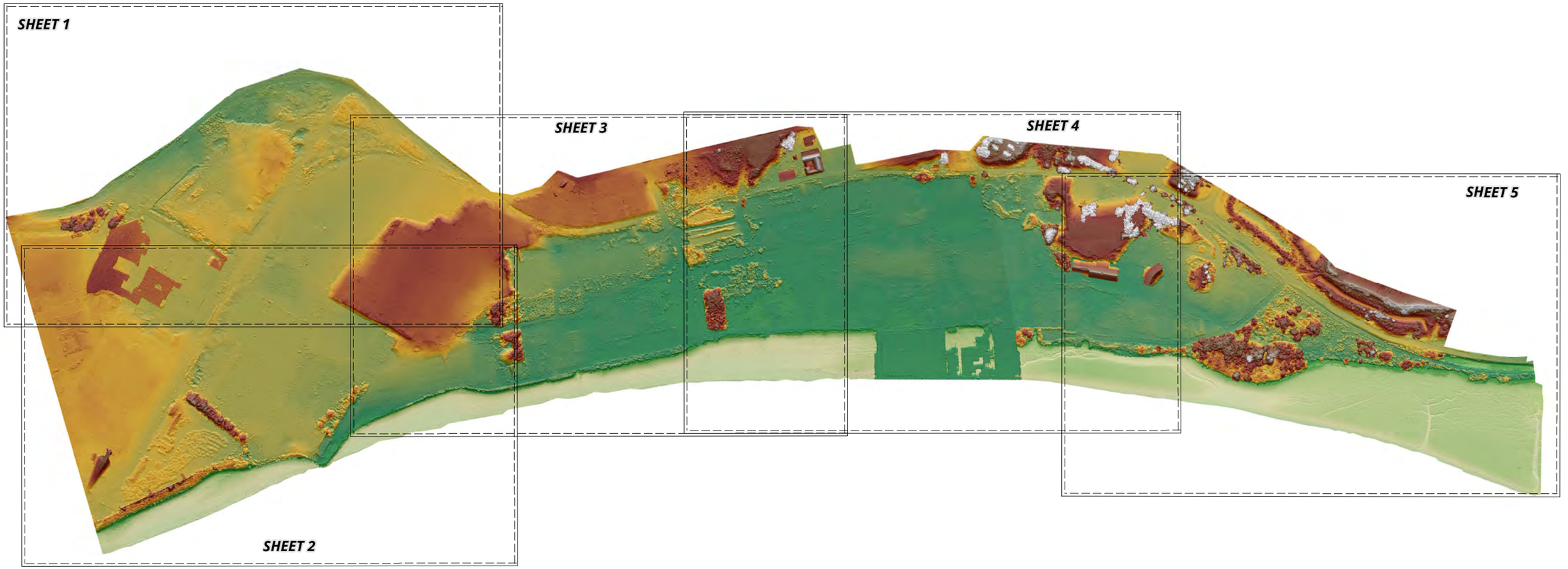
SHEET INDEX

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

60'

-10'



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1" = 600'±

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Humboldt Bay Harbor, Res. & Cons. District
Redwood Marine Multipurpose Terminal
Samoa, California

Preliminary Digital Elevation Model
Key Sheet Index
May 2022 - 022054.400

Figure
1

EXPLANATION

1-FT CONTOUR

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

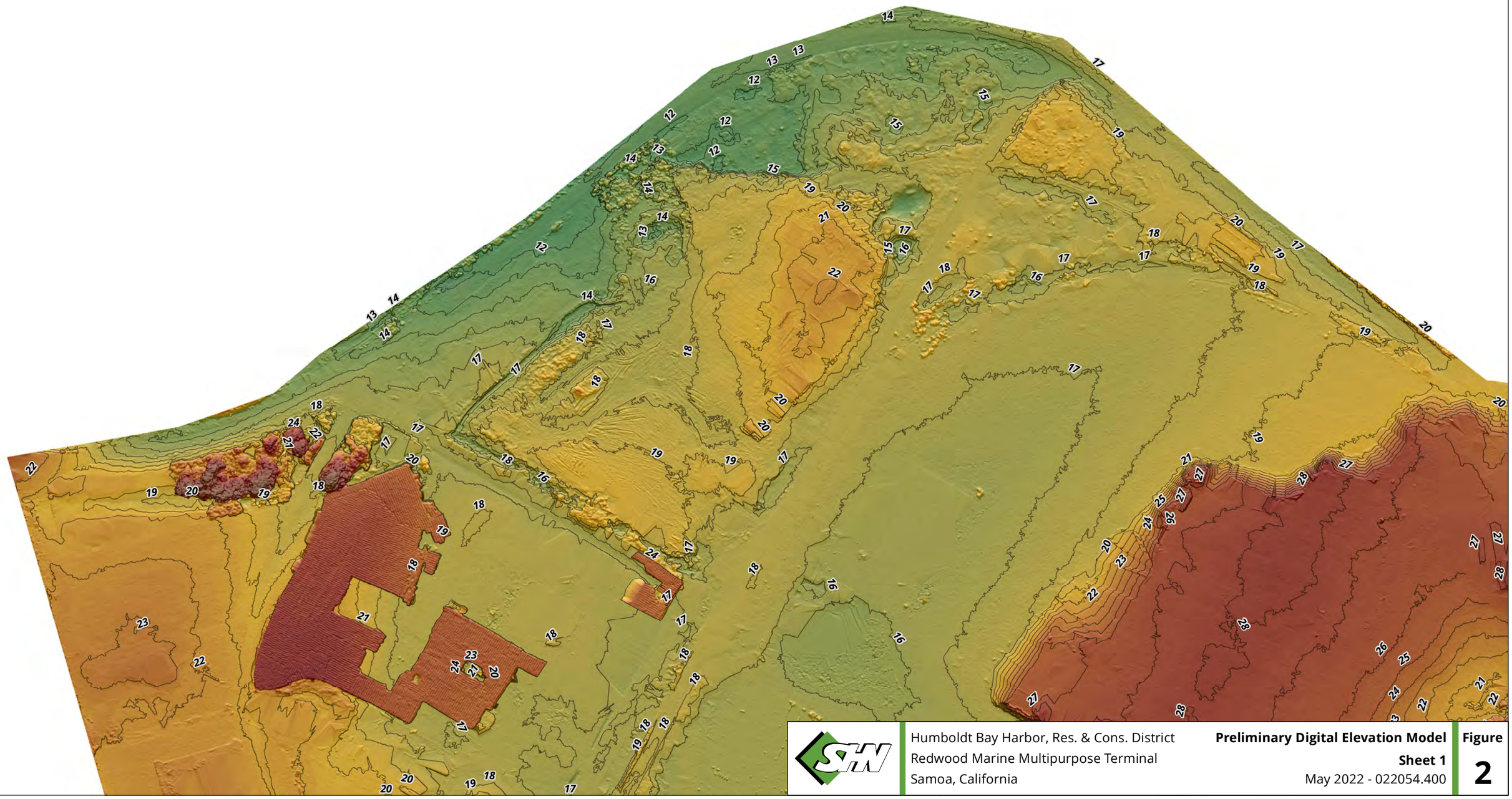
60'

-10'

N

0 *180*

1" = 180'±



	Humboldt Bay Harbor, Res. & Cons. District Redwood Marine Multipurpose Terminal Samoa, California	**Preliminary Digital Elevation Model** **Sheet 1** May 2022 - 022054.400	**Figure** **2**

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0 180

1 " = 180 '±

EXPLANATION

1-FT CONTOUR

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

60'

-10'

Humboldt Bay Harbor, Res. & Cons. District
Redwood Marine Multipurpose Terminal
Samoa, California

Preliminary Digital Elevation Model
Sheet 2
May 2022 - 022054.400

Figure
3

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0 180

1" = 180'±

EXPLANATION

1-FT CONTOUR

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

60'

-10'

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Humboldt Bay Harbor, Res. & Cons. District
Redwood Marine Multipurpose Terminal
Samoa, California

Preliminary Digital Elevation Model
Sheet 3
May 2022 - 022054.400

Figure 4

0 180

1" = 180'±

EXPLANATION

1-FT CONTOUR

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

60'

-10'

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Humboldt Bay Harbor, Res. & Cons. District
Redwood Marine Multipurpose Terminal
Samoa, California

Preliminary Digital Elevation Model
Sheet 4
May 2022 - 022054.400

Figure
5

0 180

1" = 180'±

EXPLANATION

1-FT CONTOUR

DIGITAL ELEVATION MODEL

ELEVATION (FEET, NAVD88)

60'

-10'

Humboldt Bay Harbor, Res. & Cons. District
Redwood Marine Multipurpose Terminal
Samoa, California

Preliminary Digital Elevation Model
Sheet 5
May 2022 - 022054.400

Figure 6

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DREDGING VOLUMES		
AREA	DREDGE (Cu Yd)	O.D. (Cu Yd)
WHARF 1	455,000	MAX 31,500
WHARF 2 (INCLUSIVE OF SINKING BASIN)	652,000	MAX 22,000
SINKING BASIN	142,000	MAX 12,000
WHARF 3	970,000	MAX 97,000
DEVICE STORAGE 1	1,590,000	MAX 175,000
DEVICE STORAGE 2	260,000	MAX 121,000
TOTAL	3,927,000	MAX 466,500

CRITERIA

1. BERTH AREA: -40' MLLW (WILL BE LOWER THAN THE CHANNEL)
2. DEVICE BASE STORAGE (BASE ONLY): -28' MLLW
3. INTEGRATED DEVICE STORAGE (FULL TURBINE): -38' MLLW
4. SINKING BASE: -60' MLLW

NOTES

1. THE EELGRASS DATA WAS OBTAINED FROM THE HUMDBOLDT BAY HARBOR, RECREATION, AND CONSERVATION DISTRICT EELGRASS DISTRIBUTION MAP. DATA WAS LAST UPDATED WITH SURVEYS CONDUCTED IN FALL 2016.
2. LOCATION OF NAVIGATION AIDS BASED ON NAUTICAL CHART 18622 56TH ED. LAST CORRECTED ON NOVEMBER 2021.

LEGEND

- CABLE AREA
- DREDGING AREA
- EXISTING BUOY
- EXISTING LIGHT
- 15.00 EXISTING MAJOR CONTOUR (NAVD88, SHN 2022)
- EXISTING MINOR CONTOUR (NAVD88, SHN 2022)

WOOD PRODUCTS MANUFACTURING BUILDING (40,000 SF)
OFFICE BUILDING (20,000 SF)
BREAKBULK HANDLING BUILDING (60,000 SF)
SOUTH ENTRANCE
PARKING (150)
BREAKBULK LAYDOWN YARD & COMMON LAYDOWN YARD
HAGFISH-TENANT RELOCATION BUILDING AND / OR OTHER USE(S) (30,000 SF)
2498'
A C-301
B C-301
C C-301
D C-301
ACCESS WALKWAY AT EXISTING PIER LOCATION W/ MOORING/ BREASTING DOLPHINS FOR DEVICE TEMP STORAGE
200' WIDE
MIN. 16'
PROPOSED WHARF #3
DREDGING SLOPE 2H:1V
408'
PIER
358' TYP
446'
800'
PROPOSED WHARF #2
PROPOSED WHARF #1
350'
450'
443'
OFFSHORE WIND PORT MARINE TERMINAL AREA
FABRICATION & ASSEMBLY BUILDING (50,000 SF)
EXISTING RMT II DOCK
DEVICE BASE STORAGE, TYP
DREDGE TO EL -40' + 2' O.D.
400'
DREDGING SLOPE 2H:1V
SINKING BASIN, DREDGE TO EL -60' + 2' O.D.
DREDGING SLOPE 2H:1V
NORTH ENTRANCE
HUMBOLDT BAY
681'
400'
DEVICE BASE STORAGE 1, DREDGE TO EL -38' + 2' O.D.
EXISTING SAMOA FEDERAL TURNING BASIN (EL -38')
100'
MIN. 50'
2084'
SR 255 - SAMOA BRIDGE
3489'
EXISTING EUREKA CHANNEL INNER REACH (EL -38')
CABLE AREA TO BE VERIFIED
INDIAN ISLAND
DEVICE BASE STORAGE 2, DREDGE TO EL -38' + 2' O.D.
1880'
939'

300' 0' 300' 600'
SCALE: 1"=300'

FOR CONCEPTUAL DESIGN
ISSUED: 2023-08-21
NOT TO BE USED FOR CONSTRUCTION

Mark	Description	Date	Appr
	PRELIMINARY DESIGN PLAN	08/21/23	

MPDG HUMBOLDT WIND PORT

PROPOSED CONDITIONS ALT 1

Date: 2023-08-21
Rev.: - -
M&N Project No. 212991-03
Designed by: YN
Drawn by: RG
Cad by: YN
Drawing code:
Reviewed by: SP
Submitted by: SUBMITTER'S NAME MOFFATT & NICHOL
Drawing Scale:
Plot scale: 1:1 (D SHEET)

moffatt & nichol
1300 CLAY STREET, SUITE 350
OAKLAND, CA 94612

SEAL

Sheet Reference No.
C-101
INDEX: 1 OF 2

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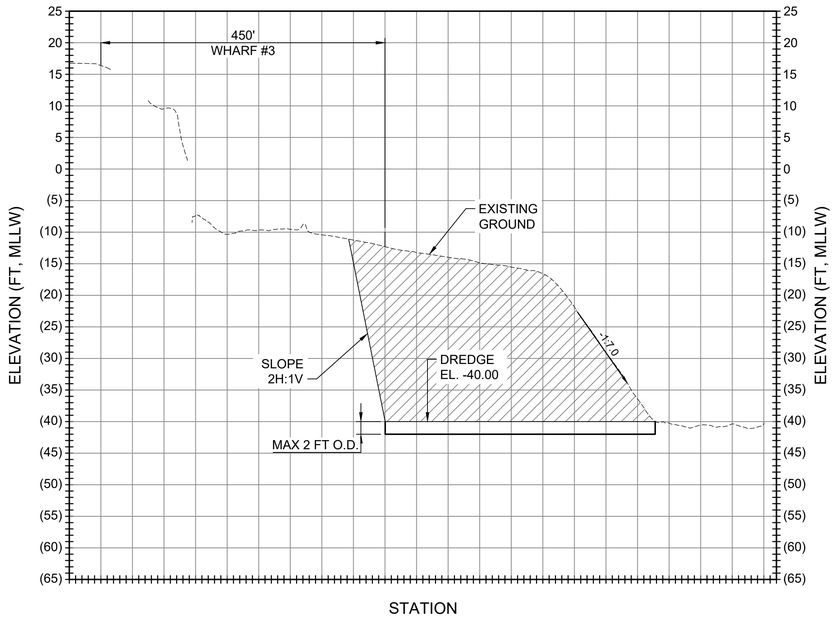

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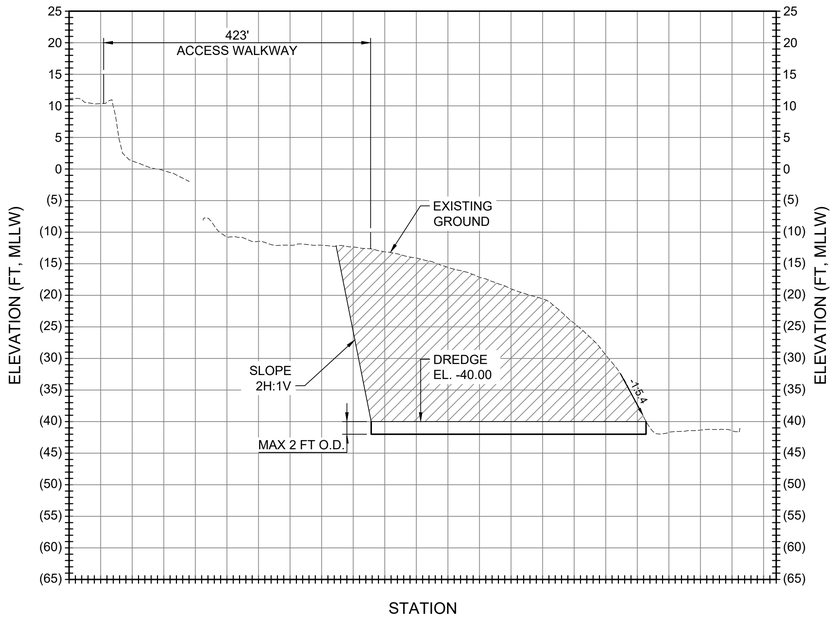
SCALE: V=1"=12'



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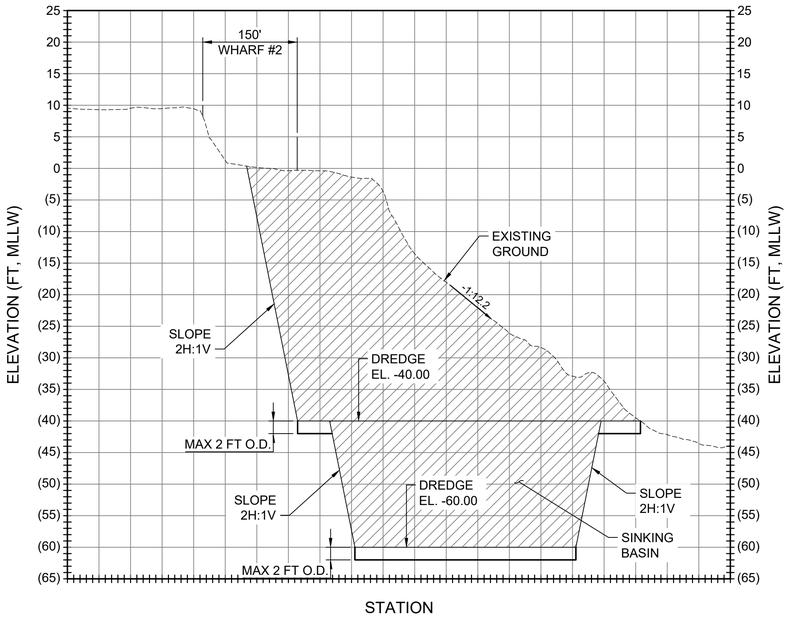

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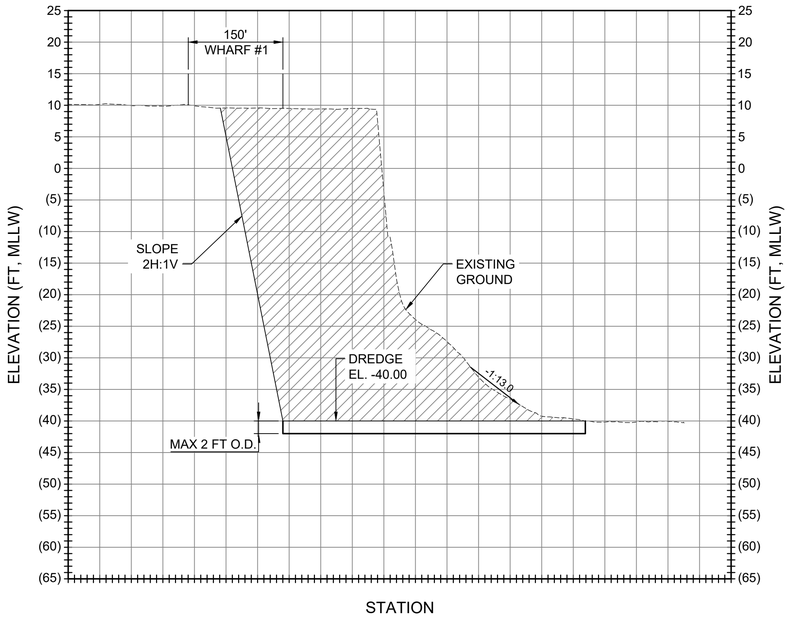

D C-101 **SECTION**
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SCALE: V=1"=12'

12' 0' 12' 24'
SCALE: 1"=12'

120' 0' 120' 240'
SCALE: 1"=120'

FOR CONCEPTUAL DESIGN
ISSUED: 2023-08-21
NOT TO BE USED FOR CONSTRUCTION

HUMBOLDT BAY HARBOR RECREATION & CONSERVATION DISTRICT

Mark	Description	Date	Appr
-	PRELIMINARY DESIGN PLAN	08/21/23	SP

MPDG HUMBOLDT WIND PORT

SECTIONS

1300 CLAY STREET, SUITE 350
OAKLAND, CA 94612
moffatt & nichol

Designed by:	YN
Drawn by:	RG
Cad by:	YN
Reviewed by:	SP
Submitted by:	SUBMITTERS NAME MOFFATT & NICHOL
Date:	2023-08-21
M&N Project No.	212991-03
Drawing code:	
Drawing Scale:	Plot scale: 1:1 (D SHEET)
Rev:	-

SEAL

Sheet
Reference No.
C-301
INDEX: 2 OF 2

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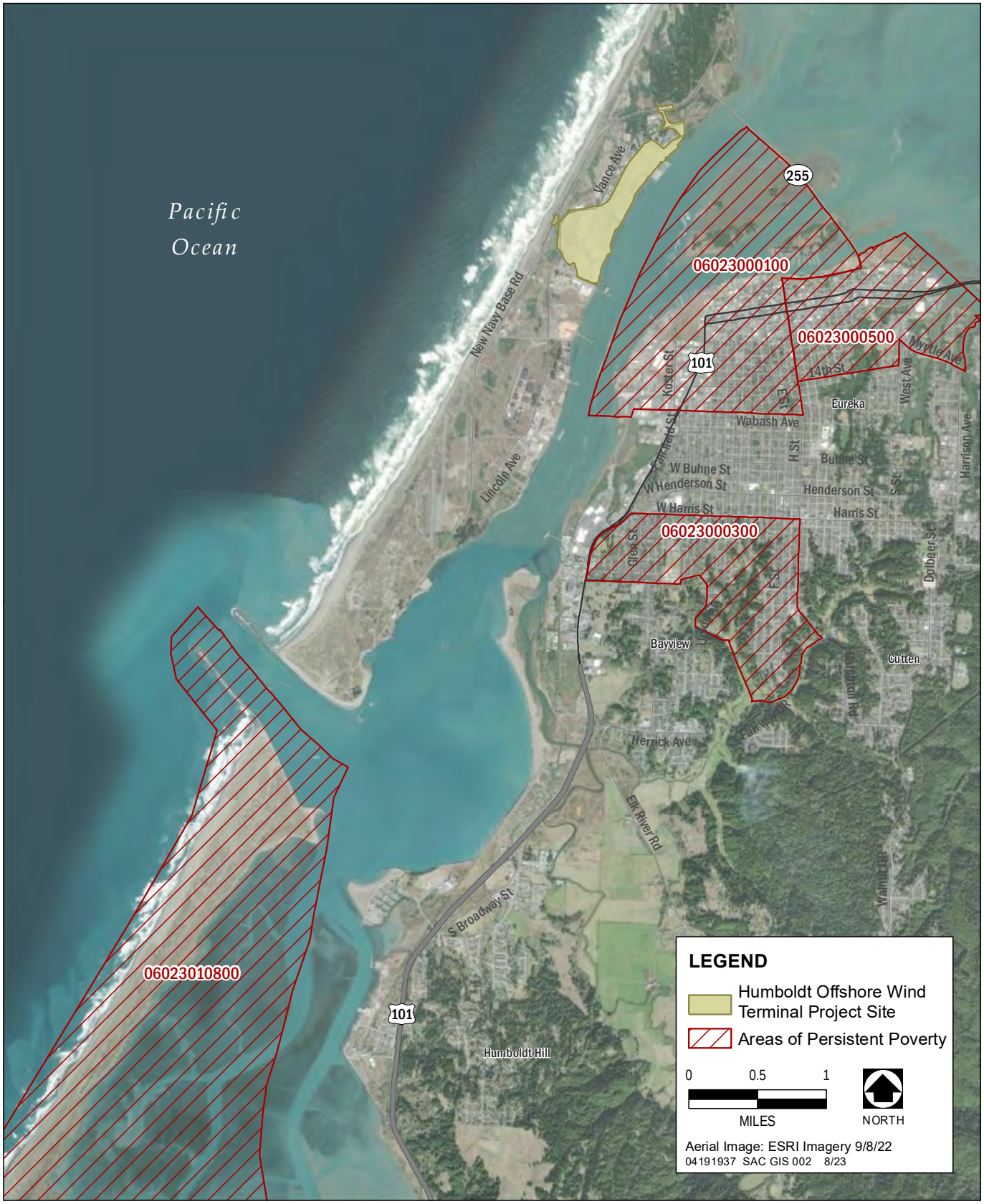
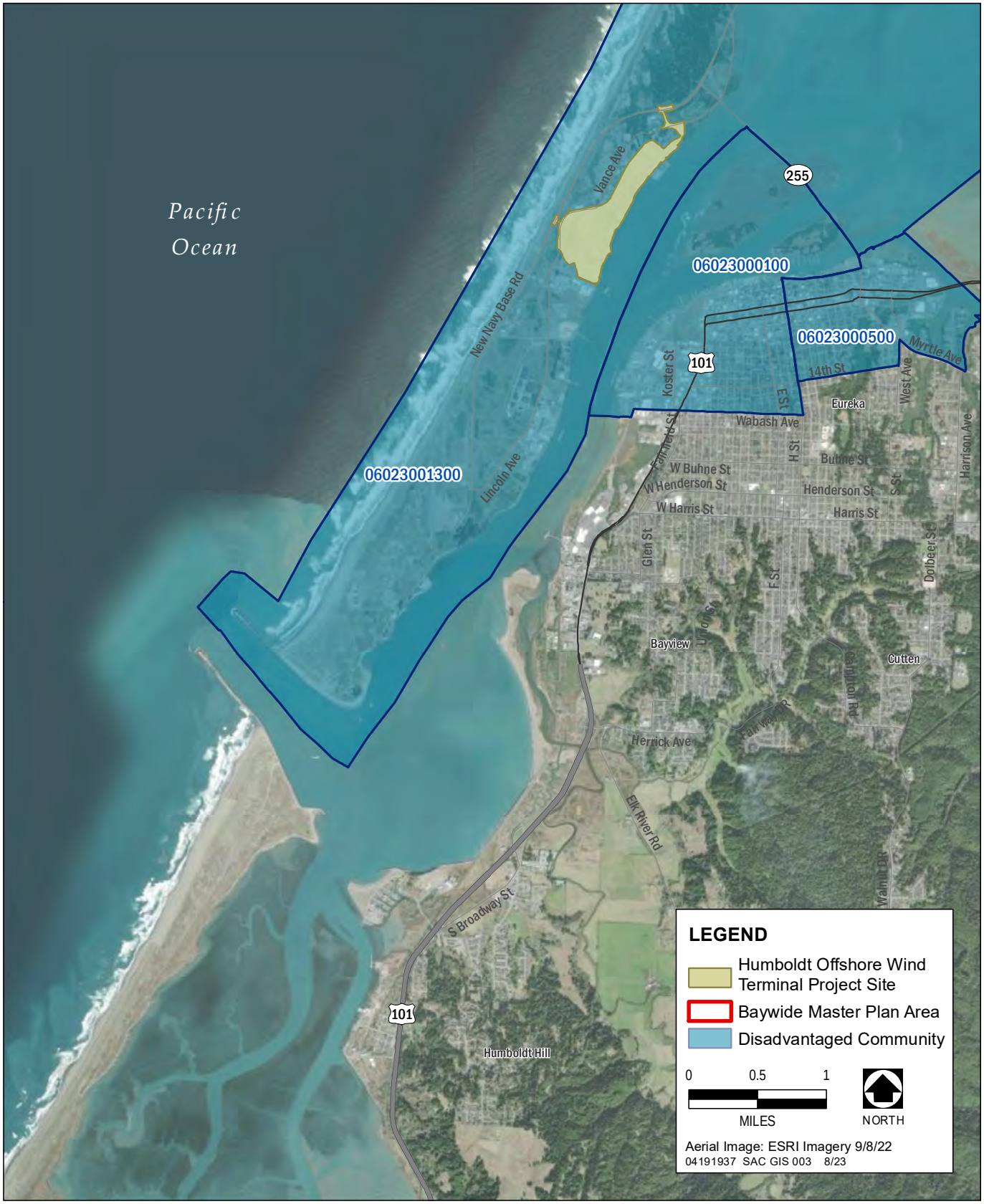


Sources: US Census Bureau, June 2023

Areas of Persistent Poverty

AECOM



Sources: US Census Bureau, June 2023

HDOT Historically Disadvantaged Communities

AECOM

Sources: US Census Bureau, June 2023

Humboldt Offshore Wind Terminal Project Site

AECOM