STREAMBED ALTERATION AGREEMENT NO. 1600-2015-0199-R3 AMENDMENT FOR THE PORT OF REDWOOD CITY WHARVES 1-4 DREDGING PROJECT

Permit Amendment Application Package:
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1.0 Introduction

The Port of Redwood City (Port) is proposing to adjust Wharves 1-4 width and length to accommodate a safer approach and docking for current panamax-size vessel calls. Wharves 1-4 are located 18 nautical miles south of San Francisco. The Port is the only deepwater port in south San Francisco Bay (Figure 1) and is strategically located between San Francisco and the rapidly growing Silicon Valley/San Jose region. The Port provides access to inland transportation via U.S. Highway 101 and Union Pacific Railroad and specializes in bulk, neo-bulk and liquid cargoes. Its location allows tenants to save transportation time and shipping costs.

The Port is a publicly-owned commercial port and has been shipping bulk and neo-bulk commodities since 1937 and currently handles inbound cargoes which include cement, sand/gravel aggregates, bauxite and gypsum, among other commodities. Outbound commodities consist primarily of recycled metals. Approximately 75 percent of the Port's revenue is related to maritime activity while the remainder is derived from commercial leasing and marina operations.

The Port conducted modernization of Wharfs 1 and 2 in 2012 and completed the effort in 2014. The modernized wharves replaced a 60-year World War II era wooden wharf with a new bulk handling concrete wharf. Wharves 3 and 4 were built in the 1980s and consist of pile-supported concrete structures designed to allow for cargo vessel access, mooring, and loading/unloading, predominantly of scrap metal and dry bulk cargo. The wharves connect to a reinforced shoreline (including seawall and rip-rap armoring) along Redwood Creek. Wharves 3 and 4 are currently used to offload gypsum, bauxite, and to load shredded scrap metal.

The Port is accessed by ocean going ships via a federally authorized channel maintained by the U.S. Army Corps of Engineers (USACE) at -30 feet mean lower low water (MLLW). The Redwood City Harbor Project includes the approximately 5-mile long by 500-feet wide San Bruno Shoal Channel adjacent to San Francisco Airport and south of the San Mateo Bridge the approximately 3-mile long by 300-feet wide Redwood Creek channel and its two turning basins and connecting channel.

The project site consists of the existing berth areas (currently permitted) and the proposed expansion of these berthing areas for Wharves 1-4 (Figures 2-4) which will be part of the amendment request. As stated previously, the purpose of this project is to provide increased efficiency for safer approaches and docking for current panamax-size vessel calls.

2.0 Location

The Port of Redwood City Wharves 1-4 are located on the western shoreline of South San Francisco Bay (the Bay), in Redwood City, CA (Figure 1). Adjacent property owners are Cemex, which operates a bulk cement terminal, and the State of California; the Port of Redwood City

Yacht Harbor is located upstream of the Port's facilities. Pacific Shores Office complex and Cargill Salt are located east of the Port.

3.0 Project Background and Purpose

The current configurations for Wharves 1-4 are provided below:

Wharves No. 1 & 2
Overall length 1530 feet.
Overall width 90 feet
Depth alongside 34 feet (MLLW)
Ship unloading conveyor of 3000 tons per hour.
Bulk cement pneumatic unloader and pipelines.
Open upland area for marshaling/storage.
Bulk cement, sand and aggregates, and general cargo

Wharves No. 3 & 4
Overall length 975 feet
Overall width 90 feet
Depth alongside 34 feet (MLLW).
Reinforced concrete pile and deck.
Ship loading conveyor of 300 tons/hour.
Open upland area for marshaling/storage.
Scrap metal and dry bulk cargo.

The Port's customers are driven by the demand of construction materials within the Silicon Valley and the volatile scrap metal market. Customers are currently coping with restricted channel or berth drafts due to shoaling and larger panamax vessels by lightering or light-loading. Lightering or light-loading occurs when the vessel needs to reduce its draft allowing the vessel to safely navigate through the channel to dock at the berths. The USACE maintaining the channel at -30 ft MLLW and the Port maintaining the widened berths at -34 ft MLLW would allow the vessels to be loaded deeper, reducing or eliminating the number of barges. Port customers would also increase efficiency by reducing the number of vessel calls due to the vessels being able to carry more tons per vessel call.

Panamax vessels currently calling at the Port are wider than the current berth widths; the berths are 90 ft in width whereas the vessels are 105 ft in width. In order to increase efficiency and safe navigational approaches and docking, the controlling depths and berth dimensions need to be adjusted. Currently the controlling depth is the adjacent federal channel designed depth of -30 ft MLLW. If the berths are expanded by 25 ft and the full expanded berth design depth is -34 ft MLLW, the Bar Pilots will use these working depths to calculate discharge rates to determine the allowable draft and thus allow for the full utilization of the -34 ft MLLW design depth within the berths as opposed to shallower depths which are currently defined.

The design change of expanding the dimensions of the berths would not increase through put nor exceed any existing CEQA, lease, or regulatory permit limits. The proposed project does not constitute an increase in capacity. Annual through put of current Port customers using Wharves 1-4 is limited to nearly 4,700,000 metric tons and 142 ships. Actual fiscal year 2017 through put for the same customers was approximately 1,500,000 metric tons and 52 ships. Excluding a 9-acre parcel adjacent to Wharf 5 (not part of this proposed project), the Port's properties are occupied and due to the high cost of local real estate, there is little potential for future expansion of Port properties. The proposed project is designed to keep the facilities functioning and does not change the existing use of the facilities.

4.0 Project Elements

The Port proposes to expand the widths of each berth by 25 ft. In addition, the berth area for Wharves 3-4 will be lengthened by 150 ft. Figures 2-4 provide plan views and cross sections for each wharf and the proposed expansion areas. The Port proposes to amend the existing SAA No. 1600-2015-0199-R3 by increasing the dredging episodes from 3 to a total of 4 episodes between 2015 and 2024. Maximum volumes associated with each anticipated episode would be increased from 50,000 cy to 70,000 cubic yards to accommodate the expanded areas and estimated accretion rates, for a total 10 year volume of 255,100 cubic yards. Table 1 provides the proposed amendment frequency and volumes.

TABLE 1. Proposed Amendments to 2015-2024 SAA for Maintenance Dredging Revised Frequency and Yearly Volumes

Episode	Year	Design Depth (ft MLLW)	Volume (cy)
Episode 1	Completed 2016	-34 + 1 ft OD	45,100
Episode 2	Proposed 2018	-34 + 1 ft OD	70,000
Episode 3	Proposed 2021	-34 +1 ft OD	70,000
Episode 4	Proposed 2023	-34 +1 ft OD	70,000
		10 year Total volume	**255,100**

The overall dredge boundary including the proposed expansion encompasses approximately 6.84 acres. Maintenance material will be placed at either SF-11, SFDODS, or beneficial reuse depending on the suitability determinations (See Section 7.2.3 Sediment Quality below) through the Dredge Material Management (DMMO) process. All dredging and material disposal/placement will be as required by regulatory permits, and the Dredged Material Management Office (DMMO). It is anticipated that a Sediment Characterization Sampling and Analysis Plan for Episode 2 will be submitted to the regulatory agencies for the January 24, 2018 DMMO meeting.

5.0 Construction Methods and Equipment

Dredging activities would be conducted by using a mechanical clamshell dredge with tugboats and scows. The mechanical clamshell dredge is made up of a large work barge with a large crane mounted on the deck of the barge. The crane has a boom that is long enough to extend out beyond the end of the work barge in any direction and is able to swivel 360 degrees on its mount. A large clamshell bucket is attached to a series of cables at the end of the boom, which allows the bucket to be raised and lowered into the water. The cables also open and close the bucket as it is filled with sediment and then emptied into scows.

The scows are open barges that can carry large quantities of sediment while they are towed with tugboats to and from the disposal site. The dredging episode is expected to be executed with one clamshell bucket, tugboats, and scows to transport the dredged material to SF-11, SF-DODS or a permitted beneficial reuse site such as Montezuma Wetlands Restoration Project (MWRP) site.

The dredge will anchor itself in place and the crane will begin digging in a series of arcs extending out and away from the work barge while the clamshell bucket digs down to the intended depth. The scows that are to be filled with sediment are tied to the side of the dredge plant. As soon as one scow is filled and hauled away, another scow is maneuvered into place alongside the dredge and the digging continues. The digging will begin near the dredge and will progress away from the dredge until the crane boom has been extended out to its maximum length.

After the furthest arc has been completed down to the desired depth, the spuds or anchors will be lifted out of the bay mud and the dredge plant will be repositioned to the next area to be dredged using small tender tugboats. The dredge will be stabilized with either spud and/or anchors and digging will begin again. This relocation operation requires approximately 1-hour to complete.

Best Management Practices (BMPs) will be implemented and detailed in a Dredge Operations Plan (DOP) submitted to the regulatory agencies for approval before dredging begins. All debris encountered during dredging operations will be removed and disposed of at an approved upland location.

Equipment

In-water equipment is likely to include:

- Derrick crane barge and associated clam shell bucket for removing sediment
- Support barges, including flat deck barges, utilizing anchors and/or spuds
- Support vessels for moving barges
- Small support vessels for crew transportation

6.0 Construction Schedule

All Dredging will be conducted within the established environmental windows for the project site (September 1 – November 30).

7.0 Environmental

This section provides information addressing potential impacts related to the proposed activities associated with dredging.

The construction components may pose potential impacts to the following species:

- Longfin smelt
- Chinook salmon
- Steelhead trout
- Green Sturgeon

7.1 Project Area

This section describes the action area which is defined as the geographic area potentially affected by the proposed project. For the purpose of establishing baseline conditions from which to evaluate potential effects of the project, the types of activities, as well as physical conditions such as substrate composition and timing, were examined and evaluated. The dredging area is over 500 feet from the nearest wetland/marsh, Bair Island, which is located across Redwood Creek. The Federally maintained ship channel is between the berths and the marsh. The Project component that poses potential impacts to the species and their habitat is resuspended sediments and disturbance of benthic areas from the removal of sediment. The action area for this project is described as the dimension of the expanded berth areas and a working area surrounding the areas proposed for dredging (Figures 2 and 3) (action area totaling approximately 7.5 acres).

7.2 Physical indicators

The San Francisco Bay-Delta is the second largest estuary in the United States and supports numerous aquatic habitats and biological communities. It encompasses 479 square miles, including shallow mudflats. San Francisco Bay is divided into four main basins: South Bay, Central Bay, San Pablo or North Bay, and Suisun Bay. This assessment focuses on the project area where dredging will occur within the South Bay, which is located south of the San Francisco-Oakland Bay Bridge (Bay Bridge).

7.2.1 Water Quality

The South Bay receives only minor amounts of freshwater inflow from the surrounding watersheds and limited influence from the Sacramento and San Joaquin rivers during wet years; it is often considered in effect a tidal lagoon (USACE and SFRWQCB 2014). The South Bay receives less than 10 percent of the freshwater budget of San Francisco Bay. It also receives the largest direct inflows of treated wastewater in the Bay. The South Bay tidal range can reach approximately 12 feet and is the greatest within San Francisco Bay. South Bay circulation is limited and water residence times are much longer in the South Bay than in the North Bay. South Bay salinity fluctuates due to exchange with the Central Bay, freshwater inflows from creeks and local municipal wastewater treatment plants, and evaporation.

Since 1993, the Regional Monitoring Program (RMP) for Water Quality in the San Francisco Estuary associated with SFEI, collects water quality data and provides reports annually. The annual monitoring consists of conventional water quality parameters (ammonia, conductivity, dissolved oxygen, dissolved organic carbon, silicates, hardness, nitrate, nitrite, pH, phosphate, salinity, temperature, suspended solids, phaeophytin, and chlorophyll); trace elements (aluminum, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, methylmercury, nickel, selenium, silver, and zinc); trace organics (including PAHs, PCBs, phthalates, polybrominated diphenyl ethers, and pesticides); and toxicity. Water quality pollutants contained in the Bay at detectable levels include trace metals, pesticides, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), algae blooms/low dissolved oxygen, and sediment contamination. The most recent annual RMP report with data collected in 2015 indicates that, water quality conditions remain within water quality objectives established by the SFRWQCB for the parameters monitored.

7.2.2 Sediment Quality

Sediments within the berths of Wharves 1-4 have been maintained to -34 ft MLLW+1 ft OD over the past forty years. The USACE has been responsible for dredging the adjacent and overlapping federal channel and frequently maintains the channel to a depth of -30 ft MLLW +2 ft OD. Sediment has been characterized within the berths and federal channel on a periodic basis. A brief summary of recent suitability determinations for maintenance dredging at the Port berths and within the federal channel is presented in Table 2. The results of these characterizations confirmed that the majority of the Port's Berths 1-4 sediments were SUAD at SF-11. However, there were on some occasions a portion of the volume of sediment that was not suitable for placement at SF-11 but was found suitable for placement at SF-DODS.

Sediment proposed to be dredged for this project will be characterized and tested for multiple disposal options through the Dredge Material Management Office (DMMO)

regulatory process. It is anticipated that a Sediment Characterization Sampling and Analysis Plan will be submitted to the regulatory agencies January 24, 2018.

Table 2. Summary of Past Maintenance Dredging Sediment Suitability Determinations

Year	Area	Testing Performed	Results Highlights	Suitability Determination
Port of Redwood City Maintenance Dredging Characterization				
2003	Berths 1-4	Full ITM (PN 01-01)	Small areas with total PCBs > BT and TMDL	SUAD at SF-11; small volume NUAD (Due to PCBs)
2008	Berths 1-4	Full ITM (PN 01-01)	Total PCBs and Total PAHs > BT and PCB TMDL for select areas	SUAD at SF-11; SUAD for SFDODs (due to PAHs)
2010	Berths 1-4	Full ITM/OTM (PN 01-01)	Total PCBs > SF BT for select areas.	SUAD at SF-11; small volume NUAD at SF-11 (due to PAHs); sediment SUAD at SF-DODS
2015	Berths 1-4	Full ITM/OTM (PN 01-01)	Total PCBs, dioxins, and Total PAHs > BT Total PCBs > TMDL	SUAD for SF-11 SUAD for SFDODs and MWRP foundation
USACE Federal Channel Maintenance Dredging Characterization				
2014	Reach 1-5a,b	Full ITM/OTM (PN01-01)	Total PCBs > BT	SUAD at SF-11
2015	Reach 1-5a	Tier 1	No testing	SUAD at SF-11
2015	Reach 5b	Full ITM/OTM (PN01-01)	Total PCBs > BT and TMDL is some samples Z layer analysis of PCBs	SUAD for MWRP foundation
2016	Reach 1-5a,b	Tier 1	No testing	SUAD at SF-11 for Reach 1-5a SUAD at SFDODs for Reach 5b

Notes: References: PER 2003a and b, 2008, 2010 and 2015 and USACE 2017ITM – Inland Testing Manual (PN01-01, USACE 2001) BT- Bioaccumulation Trigger
TMDL- SF Bay Total Maximum Daily Load Thresholds
SUAD – Suitable for unconfined aquatic disposal
NUAD – Not suitable for unconfined aquatic disposal
SF-11 – Alcatraz Disposal Site
SFDODs- San Francisco Deep Ocean Disposal Site

7.2.3 Resuspended Sediment/Turbidity

Suspended sediments are a key component of an estuarine system. The terms turbidity and suspended sediments are often used interchangeably. Turbidity refers to a number of different suspended particulates including plankton and sediments. Suspended sediments refer to the actual sediment component in the water column. Most near

shore environments, and estuaries in particular, tend to have higher levels of turbidity or suspended sediment loads due to discharges from rivers, drainages and the relative shallow nature of the environment.

Suspended sediment concentrations in San Francisco Bay tend to be extremely variable and strongly correlated to season and water depth (Buchanan and Ganju, 2006 and 2005, McKee, Ganju, Schoelhamer, 2006). Several groups, including the San Francisco Estuary Institute (SFEI) and the U.S. Geological Survey (USGS), have monitored suspended sediment loads throughout San Francisco Bay for many years. Suspended sediment concentrations have ranged from well over 1,000 milligrams per liter (mg/L) near the bottom, to as little as 10 mg/L in near surface measurements (Buchanan and Ganju, 2006). The Action Area footprint is influenced by nearshore discharges, currents, and wind- generated sediment disruption.

Resuspended sediments can influence the behavior, distribution and growth of listed species. Water quality in the action area may be slightly impacted during construction activities. Disturbance of sediments during the construction activities is likely to result in temporarily increased levels of suspended sediments/turbidity and potential release of contaminants from sediments.

High levels of turbidity may affect fish by disrupting normal feeding behavior, reducing growth rates, increasing stress levels, and reducing respiratory functions (Benfield and Minello 1996; Nightingale and Simenstad 2001). Review of the literature regarding the effects of turbidity associated with construction in the aquatic environment on anadromous salmonids indicates turbidity may interfere with visual foraging, increase susceptibility to predation, and interfere with migratory behavior. There is little direct information available to assess the effects of turbidity in San Francisco Bay estuary on juvenile or adult green sturgeon. The green sturgeon forages in bottom sediments and thus is well adapted to living in estuaries with fine sediment substrate and is tolerant of elevated levels of turbidity. Listed species in the estuary commonly encounter areas of increased turbidity due to storm flow runoff events, wind and wave action, and benthic foraging activities of other aquatic organisms. Fish generally react by avoiding areas of high turbidity and return when concentrations of suspended sediments are lower.

Although dredging may increase turbidity for a short period of time, operations will be restricted to the period between September 1 and November 30. This period avoids the migration seasons of both adult and juvenile anadromous salmonids; thus, no direct effects to CCC steelhead, CV steelhead, Sacramento River winter-run Chinook salmon, and CV spring-run Chinook are expected to occur. Green sturgeon may be in the area year-round and may be exposed to the temporary disturbance of suspended sediments by the Project.

To assess potential impacts of the Project on longfin smelt, the information contained in

the CDFG's "Longfin Smelt Fact Sheet", June 2009, the CDFG's "Status Review of the Longfin Smelt (*Spirinchus Thaleichthys*) In California", January 23, 2009 (Status Report) were reviewed. Based on these documents, entrainment and exposure to suspended sediments during dredging and disposal of dredged material are identified as the potential impacts most relevant during dredging operations. The DMMO background document references a Technical Note prepared by the US Army Engineer Research and Development Center (Reiner and Clarke 1998) which stated that "mechanical dredges are not generally treated in an entrainment context" and that "reasons for negligible entrainment by mechanical dredges are avoidance of increased turbidity and suspended sediment as a result of physical disturbance of the bottom substrate and avoidance of low-frequency vibrations caused by the lowering of the bucket into the water"(USACE 1998 and Stevens 1981). Furthermore, using a mechanical dredge (clamshell) has been utilized as an avoidance and minimization method for reducing impacts to fish during dredging.

As previously stated, the Port will be using a clam shell bucket to dredge, not a hydraulic dredge. Use of a clamshell dredge avoids the potential for entrainment and will minimize potential suspended sediments that could affect longfin smelt.

7.3 Avoidance and Minimization Measures

To avoid and minimize effects on federally listed species and their habitat within the Action Area, the following avoidance and minimization measures will be implemented:

- Standard best management practices (BMPs) would be applied by the contractor undertaking the applicable construction work to protect species and their habitat(s) from pollution due to fuels, oils, lubricants, and other harmful materials.
- Dredging activities will be restricted to the NMFS and CDFW approved environmental work window (September 1 to November 30) in accordance with Long Term Management Strategy guidance for sediments in San Francisco Bay to minimize potential adverse effects on fish and invertebrate species.
- Dredging will be conducted with a clamshell bucket to reduce potential suspension of sediment and entrainment.
- BMPs will be detailed within the Dredge Operations Plan submitted to the pertinent regulatory agencies for review and approval.

8.0 Project Permitting

State, local and Federal agencies have jurisdiction over the project area and/or resources that could potentially be impacted by the Project. As required, the following major permits, resource agency authorizations, and supporting documentation will be obtained for the Project unless the regulatory agencies determine an amendment to the existing maintenance permits is appropriate:

- San Francisco Regional Water Quality Control Board - Clean Water Act Section 401 water quality certification. RWQCB will be the lead agency for CEQA exemption under Catex 15301 Existing Facilities. Amendment to current Maintenance Dredging Permit CIWQS Place ID 757775 Water Quality Certification, 2015-2025 Maintenance Dredging at the Port of Redwood City Berths 1-4, Redwood City, San Mateo County expires December 31, 2025
- U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 and Rivers and Harbors Act. Amendment to Current Maintenance Dredging Permit 2015-00058S expires December 31, 2024
- San Francisco Bay Conservation and Development Commission (BCDC) Major Permit. Amendment to Current Maintenance Dredging Permit #M93-77 Amendment No. 3 Expires November 5, 2020
- Informal Biological Consultation with NMFS and Amendment to Streambed Alteration Agreement No. 1600-2015-0199-R3 with CDFW

9.0 References

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PER (2003a) Results of Sediment Sampling and Analysis for the Characterization of Berths 1 and 2 Sediments. Port of Redwood City. Port of Redwood City Maintenance Dredging Program. Pacific EcoRisk, Martinez, CA.

PER (2003b) PCB Analysis of Individual Sediment Core Samples from Berths 1 and 2. Port of Redwood City Maintenance Dredging Program. Pacific EcoRisk, Martinez, CA.

Reine, K., and Clarke, D. (1998). "Entrainment by hydraulic dredges–A review of potential impacts." Technical Note DOER-E1. U.S. Army Engineer Research and Development Center, Vicksburg, MS

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Figures

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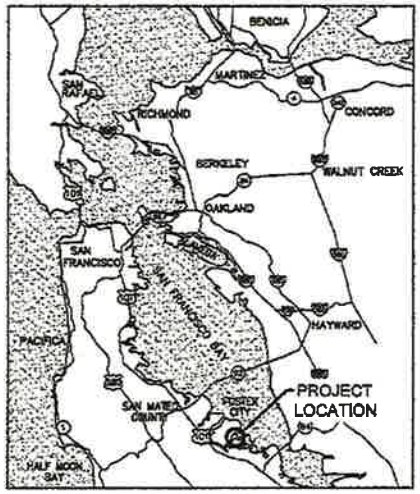
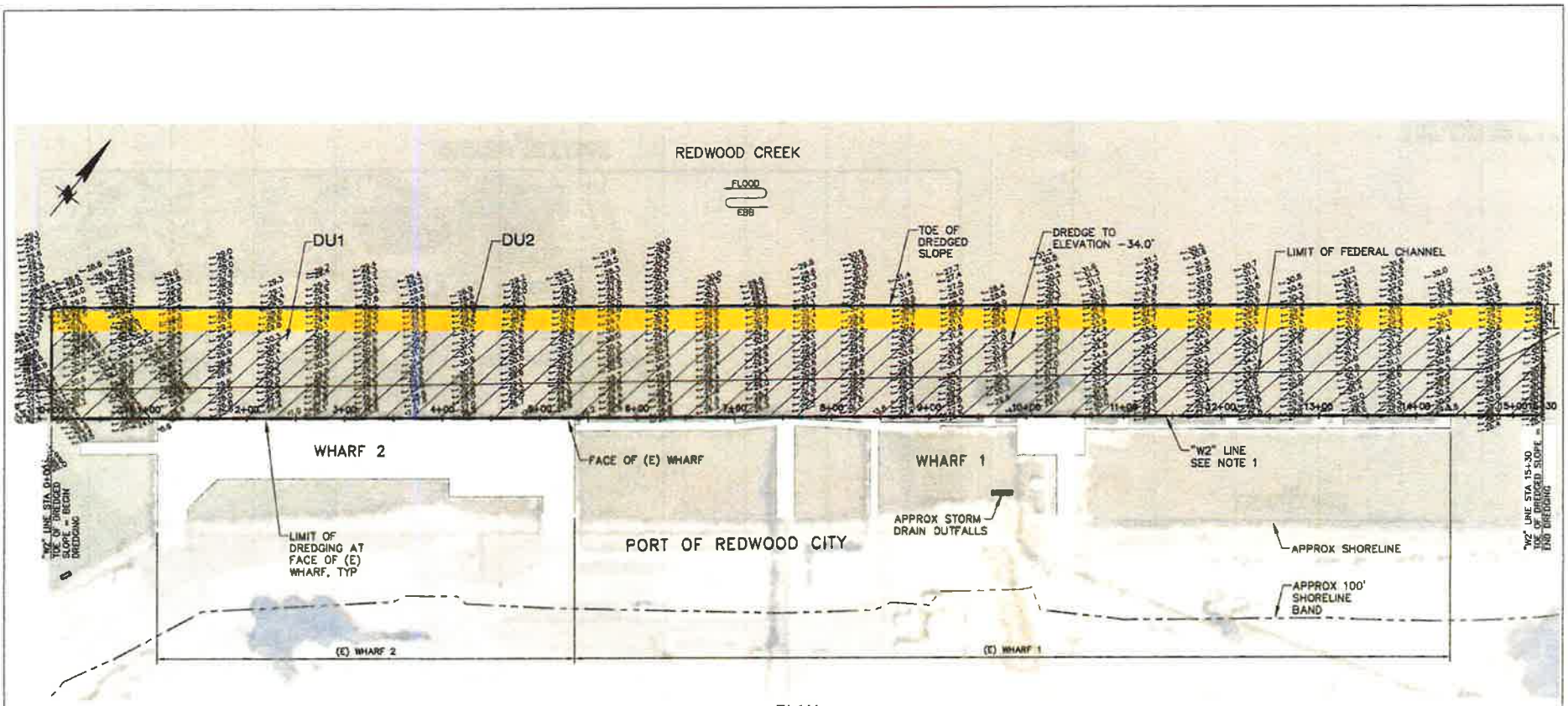
OVERALL SITE PLAN
NTS



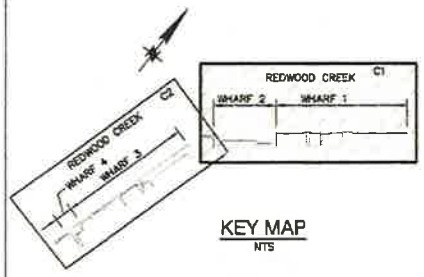
VICINITY MAP
NTS

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

DATE: DECEMBER 2017 PURPOSE: MAINTENANCE DREDGING DATUM: MLLW CORPS FILE NO.: 2015-00058S	PORT OF REDWOOD CITY 675 SEAPORT BLVD REDWOOD CITY, CA 94063	PORT OF REDWOOD CITY BERTH 1–4 MAINTENANCE DREDGING FIGURE 1 OF 4 VICINITY & LOCATION MAPS



PLAN
SCALE: 1" = 50'



KEY MAP
NTS

LEGEND

- APPROX DREDGING AREA
- EXISTING WHARF/CATWALK
- BERTH EXPANSION AREA
- PORT MAINTENANCE DREDGING AREA

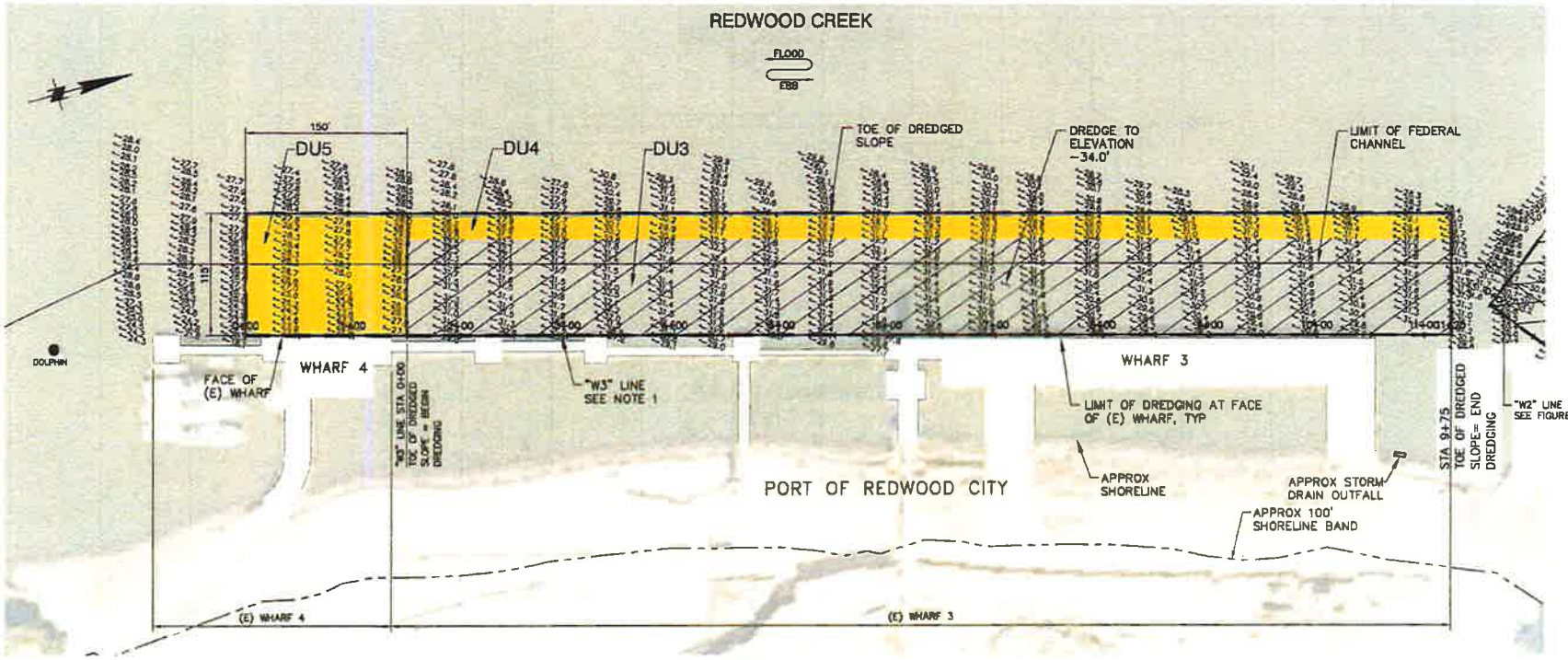
NOTES:

1. "W2" LINE IS APPROX ALONG THE FACE OF EXISTING WHARF.
2. STATION 0+00 ALONG "W2" LINE HAS THE FOLLOWING COORDINATES: N 2013603.51, E 6065474.18.

50' 0' 50' 100'
SCALE: 1"=50'

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

DATE: DECEMBER 2017 PURPOSE: MAINTENANCE DREDGING DATUM: MLLW CORPS FILE NO.: 2015-00585	PORT OF REDWOOD CITY 675 SEAPORT BLVD REDWOOD CITY, CA 94063	PORT OF REDWOOD CITY BERTH 1-4 MAINTENANCE DREDGING FIGURE 2 OF 4 DREDGING PLAN 1



PLAN
SCALE: 1" = 50'

LEGEND

- APPROX DREDGING AREA
- EXISTING WHARF/CATWALK
- BERTH EXPANSION AREA
- PORT MAINTENANCE DREDGING AREA

NOTES:

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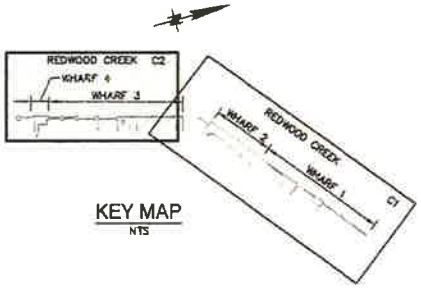
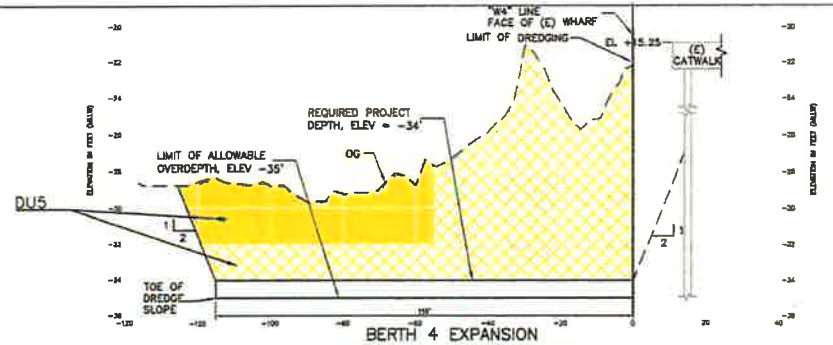


KEY MAP
NTS

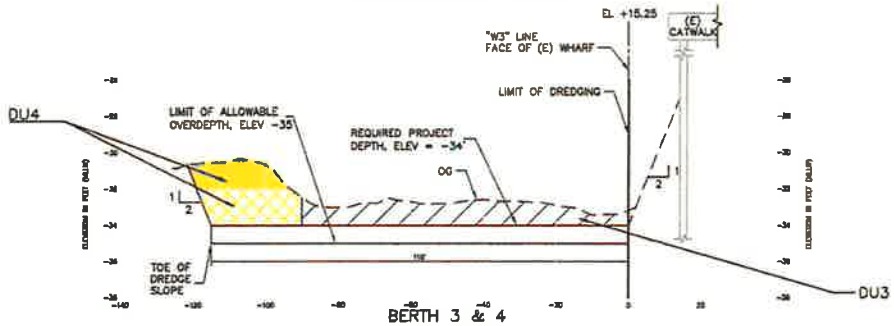
50' 0' 50' 100'
SCALE: 1"=50'

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

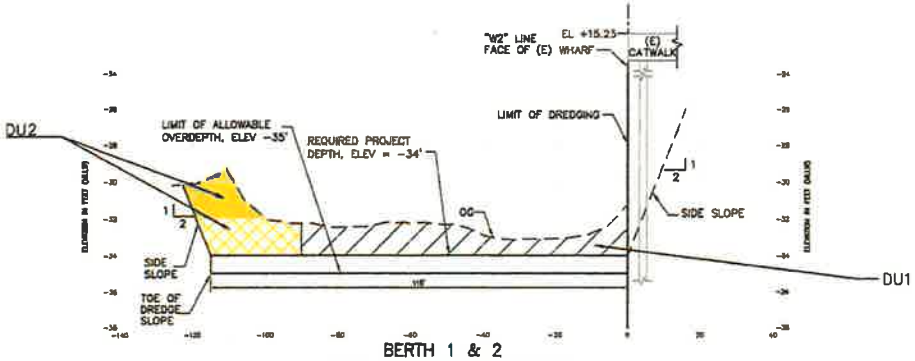
DATE: DECEMBER 2017 PURPOSE: MAINTENANCE DREDGING DATUM: MLLW CORPS FILE NO.: 2015-00058S	PORT OF REDWOOD CITY 675 SEAPORT BLVD REDWOOD CITY, CA 94063	PORT OF REDWOOD CITY BERTH 1-4 MAINTENANCE DREDGING FIGURE 3 OF 4 DREDGING PLAN 2



BERTH 4 EXPANSION
TYPICAL DREDGING SECTION



BERTH 3 & 4
TYPICAL DREDGING SECTION



BERTH 1 & 2
TYPICAL DREDGING SECTION

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

PERMITTED AND DREDGED BY USACE (MAINTENANCE DREDGING)
NEW WORK DREDGING
MAINTENANCE DREDGING

16' 0' 16' 32'
SCALE: 1"=16'

DATE: DECEMBER 2017
PURPOSE: MAINTENANCE DREDGING
DATUM: MLLW
CORPS FILE NO.: 2015-00058S

PORT OF REDWOOD CITY
675 SEAPORT BLVD
REDWOOD CITY, CA 94063

PORT OF REDWOOD CITY
BERTH 1-4 MAINTENANCE DREDGING

FIGURE 4 OF 4
TYPICAL SECTIONS