

**SAN FRANCISCO BAY AREA  
WATER EMERGENCY TRANSPORTATION AUTHORITY**

**TERMINAL DREDGING  
VALLEJO AND SOUTH SAN FRANCISCO  
IFB #18-015**

**Volume 3**

**Division 2  
Site Work**

**JUNE 21, 2018**

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**SECTION 02100**  
**DEMOLITION AND SALVAGE**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK**

A. Bid Item No. 2A – Remove, Transport and Replace Permanent Boarding Facility include, but not be limited to the following:

1. Excavation to expose piling at chain connections.
2. Proper marking of chains and exact connection points.
3. Removal of chains and storage for duration of contract. Contractor shall arrange for inspection of chains and zincs by the ODR prior to storage.
4. Disconnection and reconnection of all utility and data lines, including the sterilization of water lines.
5. Disconnect permanent gangway and relocate to shipyard or Contractor's work site for upgrades, repairs, and preventative maintenance.
6. Removal of permanent passenger loading float and transportation to and from repair facility.
7. Return of permanent passenger loading float and gangway after the completion of upgrade, maintenance, and repair work and reinstallation of the permanent passenger loading facilities at their original locations at completion of dredging.
8. Replacement of chains to exactly the same locations. Provide new sacrificial zinc anodes, shackles, and forks on the mooring chains. Demonstrate proper installation to the satisfaction of the ODR.

B. Bid Item No. 6A – Install & Remove Temporary Boarding Facility shall include, but not be limited to:

1. Joint inspection by the Contractor and WETA of the existing conditions of the temporary boarding facility and materials supplied by WETA.
2. Photos to be provided to WETA documenting the existing conditions.
3. Installation and removal of temporary electrical and data services.
4. Salvage of temporary electrical conductors to WETA.
5. Removal and replacement of portable promenade railings and gates. Contractor shall fabricate and provide a new passenger loading portal and gate at the temporary boarding location, equal in the construction details and operability to the existing interior portal and gate at the permanent boarding gangway.
6. Construction of temporary gangway pier, piling, and gangway hinge and plate.

7. Installation of WETA supplied gangway.
8. Retrieval from Mare Island of four (4) temporary steel pile piles including removal and re-storage at Mare Island facility and all transportation thereof.
9. Retrieval from Mare Island, installation, removal, and re-storage at Mare Island of temporary boarding facility and all transportation thereof.

### **C. REFERENCES**

#### **A. ANSI - American National Standards Institute**

1. A10.6 - Demolition Operations - Safety Requirements.

#### **B. BLP - Barclays Law Publishers**

1. CCOR- California Code of Regulations
  - a. Title 8 - Industrial Safety Orders, Construction Safety Orders.

### **1.2 SUBMITTALS**

#### **A. Contractor to provide a demolition plan for approval prior to start of operation. Plan to show the following, at a minimum:**

1. Schedule including daily hours.
2. Sequence of operations.
3. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity to ensure uninterrupted progress of WETA's on-site operations.
4. Interruption of utility services.
5. Coordination for shutoff, capping, and continuation of utility services.
6. Use of gangway.
7. Coordination of WETA's continuing occupancy of portions of existing facility and of WETA's partial occupancy of completed Work.
8. Locations of temporary barriers and means of egress, if required
9. Plan for removal of hazardous materials.
10. Circulation plan for pedestrians and vehicles.
11. Plan for access to commercial/retail businesses and ferry dock areas.
12. Listing of name and location of disposal sites for all materials.
13. Product data and shop drawings as required by other sections of these specifications.

### **PART 2 - MATERIALS**

- A. All materials shall be as indicated on the plans, and elsewhere in these specifications.

## **PART 3 - EXECUTION**

### **3.1 PROTECTION**

- A. Erect and maintain temporary bracing, shoring, lights, barricades, warning signs and guards necessary to protect the public from injury and the existing improvements from potential damage, all in accordance with applicable rules and regulations.
- B. Maintain safe access and operations for people and passengers at all times.
- C. Construction will be occurring in an operating passenger ferry terminal; Contractor shall keep waterways open to allow access to and continued use of existing facilities. Contractor shall protect all boats, structures and facilities from damage.
- D. Protect from demolition damage all work to remain.
- E. Do not interfere with commercial use space. Maintain free and safe passage to and from all active retail/commercial establishments.
- F. Provide, erect and maintain barricades as required to protect workers and the general public.
- G. Do not close or obstruct roadways and sidewalks without proper permits.
- H. Coordinate the performance of work in this Section with related or adjacent work. Complete the removal and protection of items before beginning new construction.
- I. Conduct operations with minimal interference to public or private thoroughfares. Maintain safe egress and access at all times.
- J. Contractor shall be responsible for the replacement of WETA and tenant items damaged during the construction process. Contractor shall provide replacement equal to, or better than, the original condition of the damaged items.

### **3.2 QUALITY ASSURANCE**

- A. Qualifications:
  - 1. Company specializing in performing the work of this section with minimum 3 years documented experience.
- B. Regulatory Requirements:
  - 1. Work shall be in accordance with rules and regulations of BLP, CCOR Title 8, Construction Safety Orders.
  - 2. State and local code requirements shall control the disposal of debris, which shall be at an acceptable off-site location. Contractor to provide written documentation for all disposal sites.
  - 3. Notify affected utility companies, if applicable, before starting work and comply with their requirements. The Contractor shall notify Underground Service Alert prior to starting any trenching work.
  - 4. Do not close or obstruct street, sidewalks, hydrants, and tenant operations without permits and the owner's approval.

### **3.3 TRANSFER OF RESPONSIBILITY AND DISPOSITION OF MATERIALS (SALVAGE)**

- A. Inform WETA within seven (7) days in advance of start of demolition.
- B. Title to all remaining materials and fixtures required to be removed, upon receipt of Notice to Proceed with the work, shall be vested in the Contractor whereupon the WETA will not be responsible for the condition, loss or damage to said property. All such items shall be removed from WETA property.
- C. Salvage value of materials and equipment removed shall be considered in the bid submittal.
- D. Except where noted otherwise, Contractor shall maintain possession of materials being demolished and store for reuse, transport, or immediately remove from site as required.

### **3.4 GENERAL REQUIREMENTS**

- A. Execute demolition work to ensure safety of persons and adjacent property against damage resulting from this work. Carry out demolition so as to minimize inconvenience to adjacent occupied building areas and docks.
- B. Utilize bracing and shoring where necessary to prevent collapse of structure or parts thereof. Any bracing or shoring plans shall be submitted to WETA for review prior to execution.
- C. Utilities: Make provisions and be responsible for disconnecting and reconnecting any utilities as may be required.
- D. Provide dust protection as required to prevent construction dust from entering the neighboring businesses and adjacent buildings. Prevent spread of flying particles and dust. Assume liability for all claims related to windblown dust, dirt and debris.

### **3.5 PREPARATION**

- A. Provide, erect, and maintain temporary barriers and security devices.
- B. Scaffolding: Provide as required for execution of any part of the work.
- C. Cranes, Hoists or Chutes: Provide as required for movement of personnel, materials, or equipment.
- D. Protect existing structures that are to be left un-demolished.
- E. Fire Protection: Provide and maintain fire extinguishers, fire hoses and other equipment per requirements of regulatory agencies for fire protection during demolition.

### **3.6 UTILITY SERVICES**

- A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by WETA. Provide temporary services during interruptions to existing utilities, as acceptable to WETA.
    - a. Provide not less than 72 hours' notice to WETA if shutdown of service is required during changeover.
- B. Utility Requirements: Locate, identify, disconnect, and cap off indicated utility services serving facility to be selectively demolished.
  - 1. WETA will arrange to shut off indicated utilities when requested by WETA.

2. Arrange to shut off indicated utilities with utility companies.
3. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of the facility before proceeding with selective demolition.
4. Cut off pipe or conduit to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

C. Utility Requirements: Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

### **3.7 DEMOLITION**

- A. Prior to start of demolition, submit schedule of hours of operations for approval by the ODR.
- B. Perform work in accordance with ANSI A10.6 unless otherwise indicated.
- C. Demolition work shown is diagrammatic and general. No attempt has been made to indicate all material to be removed. Perform all demolition shown and required for the construction of the project, including all items in the way of new work whether or not specifically shown. No extra costs will be allowed.
- D. Piles to be removed shall be completely removed to their entire depth.
- E. Demolish in an orderly and careful manner as required to accommodate new work. Follow the demolition phasing plan as shown and/or noted in the contract documents.
- F. Perform demolition in accordance with applicable requirements of authorities having jurisdiction.
- G. Cease operations immediately if remaining or adjacent structures appear to be in danger. Notify the ODR. Do not resume operations until directed to do so.
- H. Notify the ODR of any unforeseen conditions.
- I. Repair all demolition performed in excess of that required, at no cost to the owner.
- J. Remove salvage and debris from the site as it accumulates. Do not store, sell, burn or otherwise dispose of debris at the site. Remove all materials in such manners as to prevent spillage. Keep all pavements and areas adjacent to and leading from the site clean and free of mud, dirt, and debris at all times.
- K. Remove demolished materials, tools, and equipment from site upon completion of work.
- L. Noise control and abatement
  1. Provide state-of-the-art mufflers, silencers and noise control features for all equipment.
  2. Utilize least noisy procedures and use machines such as electric rather than diesel-powered whenever there is a choice.
  3. Provide impact tools and equipment that have intake and exhaust mufflers as applicable; pavement breakers and jackhammers shall be equipped with acoustically attenuating shields or shrouds.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 MEASUREMENT AND PAYMENT**

A. Removal and replacement of the permanent boarding facility shall be paid for by the contract lump sum price for Bid Item No. 2A – Remove, Transport & Replace Permanent Boarding Facility and Bid Item No. 3A – Handling and Coordination of Permanent Boarding Facility. This contract lump sum price shall include full compensation for moving equipment to and from the various locations within the project site, including to and from the Vallejo Ferry Terminal; setting up equipment; disconnection of existing utilities; reconnection of utilities; protection of facilities; clean-up; and for all labor, materials, tools, equipment, and incidentals required to perform the work involved as shown on the plans, as specified in these special provisions and the Standard Specifications, and as directed by the ODR.

B. Installation and removal of the temporary boarding facility shall be paid for by the contract lump sum price for Bid Item No. 6A – Install & Remove Temporary Boarding Facility. This contract lump sum price shall include full compensation for moving equipment to and from the various locations within the project site, including to and from the Vallejo Ferry Terminal; setting up equipment; transportation of WETA-supplied piling and gangway, provision of new steel piling, temporary electrical system; protection of facilities; clean-up; and for all labor, materials, tools, equipment, and incidentals required to perform the work involved as shown on the plans, as specified in these special provisions and the Standard Specifications, and as directed by the ODR.

**END SECTION**



**SECTION 02482****DREDGING AND DISPOSAL****PART 1 - GENERAL****1.1 WORK INCLUDED**

- A. The Work under this Section consists of providing all labor, plant, tools, equipment, supplies, and materials necessary to dredge, haul, and dispose of all dredged materials from the Vallejo Ferry Terminal and the South San Francisco Ferry, with placement as indicated in the bid sheets.
- B. Vertical Datum: elevations in the Construction Documents are referenced to Mean Lower Low Water (MLLW) Datum.
- C. The Ferry Terminal shall remain fully operational and the Contractor shall conduct his Work in such a manner to assure minimal interference and complete communication with Ferry Operations. Channels must not be blocked without prior authorization and per schedule, and ferry traffic must be allowed to continue with no interruptions.
- D. The Contractor shall be subject to the following constraints:
1. Contractor shall inform the ODR ten (10) calendar days in advance of performing dredging. This notification shall include which area is to be dredged and the day on which these areas are to be dredged.
  2. The Contractor will inform the ODR of the scheduled dredging.
  3. The allowable dredging permit window for the Vallejo Ferry Terminal Project is August 1st through November 1st.
  4. The allowable dredging permit window for the South San Francisco Ferry Terminal Project is June 1st through November 30th.
    - i. The South San Francisco Ferry Terminal is part of the Oyster Marina is owned by the San Mateo County Harbor District (District). In addition, the ferry site is managed by WETA. Accordingly, both the District and WETA have access rights to the site of the Work being performed under this Contract, and Contractor shall coordinate its Work to accommodate any site visits by WETA or the District. Contractor shall not interfere with ferry operations of the South San Francisco Ferry. The South San Francisco ferry service operates five days a week, Monday-Friday. Ferry operating hours in the Oyster Point Marina are approximately 7:10AM to 9:15AM and 4:00PM to 7:15PM weekdays. All Contractor equipment shall be clear of the ferry terminal facilities and approaches to allow uninterrupted ferry service. Temporary mooring of dredging equipment on the east side of the ferry landing may be allowed provided it does not interfere with ferry operation to the west ferry landing or

block marina berths. The WETA Central Bay Operations Manager will provide a more detailed schedule of ferry boat arrivals and departures.

5. Contractor's working hours for dredging are daylight hours only. The Contractor shall adhere to all noise restrictions as set by the City of Vallejo for the Vallejo Ferry Terminal and the City of South San Francisco Ferry and the San Mateo Harbor District for the South San Francisco Ferry Terminal. Contractor shall not interfere with ferry operations. All Contractor equipment shall be clear of the ferry terminal facilities and approaches to allow uninterrupted ferry service.
6. At the end of each Working Day, the Contractor shall position the equipment and barges such that interference with ferry traffic will be avoided. All equipment shall have sufficient lighting to allow for navigation.
7. Contractor shall inform the ODR of all proposed changes to the Dredging Operations Plan.
8. The Contractor shall provide transportation to and from the dredging operations and equipment for the ODR and other regulatory agencies' representatives as required.
9. Dredging operations shall cease immediately whenever violations of requirements are detected. Operation shall not resume until methods of compliance are approved.
10. Should the Contractor, during the progress of the work, lose, dump, throw overboard, sink, or misplace any material, plant, machinery, or appliance, which in the opinion of the ODR may be dangerous to or obstruct navigation, the Contractor shall recover and remove the same with the utmost dispatch. The Contractor shall give immediate notice, with description and location of such obstructions, to the ODR and, when required, shall mark or buoy such obstructions until the same are removed. Should he refuse, neglect, or delay compliance with the above requirements, such obstructions may be removed by WETA, and the cost of such removal may be deducted from any money due or to become due the Contractor, or may be recovered under his bond. The liability of the Contractor for the removal of a vessel wrecked or sunk without fault or negligence shall be limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899.

E. The Contractor shall adhere to the Floating Plant Inspection Form included as part of these Specifications as Attachment A.

## **1.2 SUBMITTALS**

A. The Contractor shall provide all records, operational plans and any other information required by the Special Provisions, dredging permits, regulatory agencies and the ODR. The Contractor shall provide all items in the time frame as stated. Failure to provide these items in a timely manner will

cause delays in the project or may cause the dredging operation to be shut down. No adjustment in time of Work will be made if after the notice to proceed has been issued, any such delays are caused by the negligence or non-performance of the Contractor

B. The Contractor shall submit the following to the Owner for review and comment with their Bid Proposal. The Owner will review and forward the documents to the DMMO for approval. No dredging Work shall begin pending Owner's review of all submittals and DMMO approval.

1. DREDGING OPERATIONS PLAN: This Plan shall incorporate all permit constraints and restrictions. Any changes to the Plan shall be updated and submitted to the Owner as the dredging Work proceeds. The dredging operations plan shall include, but not be limited to, the following items:
  - a. U.S. Army Corps of Engineers permit and other applicable permits numbers.
  - b. Contact Information: Contractor's business name, telephone number, dredging Site representative(s) and 24-hour emergency contact information (name, position, phone number). Include a project management responsibility matrix or organizational chart.
  - c. Dredging schedule for each subarea shall include:
    - i. Submittal dates
    - ii. Owner notification dates (14 days prior to start of dredging)
    - iii. Dredging start date
    - iv. Work hours per day and Work days per week
    - v. Dredging finish date
  - d. Proposed equipment and method of dredging including proposed dredge cuts. The equipment description should contain at a minimum the type, name or number, capacity, overall dimensions, radio call signs, and other relevant specifications as may be required by permit conditions. A schedule for other equipment inspection and equipment inspection forms shall be included.
  - e. The method and equipment to be utilized to transport the dredged material to Winter Island or approved upland facility. Provide barge measurement and loading curves, certified by a licensed naval architect.
  - f. Reference to the procedures, equipment, and disposal plan for solid debris as described in the Contractor's Solid Debris Management Plan specified elsewhere herein.
  - g. The method and equipment to be used for dredging position control, indicating how horizontal and vertical position control will be maintained.

- h. The method and equipment used for determining the positioning by electronic methods of the dredge and dump scow(s) during entire dredging and disposal operation.
  - i. Documentation of quality control procedures including samples of daily and weekly forms, reports and submittals, including but not limited to the Disposal Site Verification Log, Dredge Operations Daily Reports, and Vessel Traffic Control Log.
  - j. Security and safety methods to keep the public away from and clear of all dredging and disposal activities including compliance with appropriate U.S. Coast Guard rules.
  - k. Environmental Protection Plan including measures for spill control and management.
  - l. Safety and Emergency Response Plan.
  - m. Waste Management Plan
  - n. Notice to Mariners
  - o. Any and all other information required by the DMMO for approval of the Dredging Operations Plan.
  - p. The Contractor shall not receive a Notice to Proceed until the Dredging Operations Plan described above has been approved by the DMMO.
2. SOLID DEBRIS MANAGEMENT PLAN: This Plan shall incorporate all permit constraints and restrictions. The solid debris management plan shall include, but not be limited to, the following items:
- a. U.S. Army Corps of Engineers permit number.
  - b. Source and expected type of debris.
  - c. Debris retrieval and separation method.
  - d. Debris disposal method and location.
  - e. Schedule for disposal operations.
  - f. Debris containment method to be used, if floatable debris is involved.

C. DISPOSAL SITE VERIFICATION LOG: For disposal of suitable material at Winter Island, the Contractor shall maintain a daily Disposal Site Verification Log Record and submit them on a weekly basis each Friday to the U.S. Army Corps of Engineers and the Owner. Contractor shall follow all procedures outlined in the Department of the Army Permit, which will be provided to the selected Contractor with the Notice of Award.

D. **DREDGE OPERATIONS DAILY REPORTS:** During the performance of all dredging operations, equipment operators shall fill out a Daily Dredging Report and Leverman's Shift Log for each calendar day's activity on each dredge being operated. The Daily Dredging Report will include the number of scows loaded each day, an estimate of the amount of material being transported in each scow to the disposal site, and the method used to estimate that quantity will be provided in the daily report. Forms to be used shall be developed by the Contractor and shall conform to the samples provided in the approved Dredging Operations Plan. Forms shall be filled out completely and legibly; including signatures, using black or blue-black ink. The original forms shall be given to the Owner by 12:00 noon the day following the date shown on the reports. The Daily Report shall be filled out for each calendar day even when the equipment is not working. Progress payments for dredging will not be made until a complete set of reports covering the payment period are in the Owner's possession, and are deemed to be acceptable by the Owner.

E. **VESSEL TRAFFIC CONTROL LOG:** The Contractor shall submit the Vessel Traffic Control Log to the Owner on a weekly basis.

F. **SPECIAL NOTICES:** The Contractor shall provide immediate written notification with documentation of Work stoppages and slow-downs that may affect the dredging operation plan.

G. **EXISTING CONDITIONS RECORD:** Prior to commencement of Work, the Contractor and the Owner shall jointly survey the area adjacent to the dredging Work area making permanent note and record of such existing damage to the existing docks, piles, breakwater, or other existing features. This record shall serve as a basis for determination of subsequent damage to structures, conditions or other existing improvements due to the Contractor's operations. All parties making the survey shall sign the official record of existing damage. Damage of any nature to the existing features within the surveyed area, not noted in the original survey but subsequently noted, shall be reported immediately to the Owner. The record shall include a photographic record which contains, at a minimum, photographs of existing features, location of photograph(s) taken, and description of the condition. The record shall be submitted to the Owner prior to start of dredging.

### **1.3 SITE CONDITIONS**

A. The Contractor shall conduct a Site inspection and shall be responsible for reviewing all the contract documents, including reference documents and appendices, making an independent assessment of the conditions affecting the Work.

B. The Contractor shall satisfy himself as to the nature and location of the Work; the general and local conditions, particularly those bearing upon availability of transportation, disposal, availability of labor, water, electric power, roads and uncertainties of weather or physical conditions at the Site, the conformation and conditions of the ground, the character of facilities needed during the Work and all other matters which can in any way affect the Work or the cost thereof under this contract. The

Contractor shall further satisfy himself as to the character, quality, and quantity of subsurface materials to be encountered at the Site. Any failure by the Contractor to acquaint himself with all the available information will not relieve him from responsibility for properly estimating the difficulty or cost of successfully performing the Work.

C. The material to be dredged is believed to be soft sediment, however WETA does not guarantee the nature of the material. Debris, rubbish, and other articles typical of ship channel and berthing areas may be encountered and will become the property of the contractor and shall be removed and disposed of in accordance with Section 02881.3.5, "Disposal of Dredged Materials," of these special provisions.

D. The Contractor shall be responsible to know and understand the following:

1. The nature and location of the Work;
2. The general and local conditions, particularly those bearing upon disposal of materials, handling and storage of materials, availability of labor, water, electric power, and uncertainties of weather, tidal stages, or similar physical conditions at the Site;
3. The conformation and conditions of the ground;
4. The character of equipment and facilities needed prior to and during the execution of the Work;
5. All other matters which can affect the Work.

E. The Contractor shall further be responsible to know and understand the character, quality, and quantity of surface and subsurface materials to be encountered by inspecting the Site, reviewing exploratory investigative data available from the Owner, and information presented by the Contract Drawings and Specifications. Failure to become acquainted with all the available information will not relieve the Contractor from responsibility of properly estimating the difficulty or cost of performing the Work. The foregoing statement of potential conditions on Site is for information only and may not be relied upon to reflect actual conditions encountered on the Site.

F. The Contractor may anticipate underground obstructions such as utility lines, concrete foundations, and debris. No extra payment will be allowed for the removal, replacement, repair or possible increased cost caused by such underground obstructions. Any such lines or obstructions indicated on the Drawings show only the approximate location and shall be verified in the field by the Contractor. WETA will endeavor to familiarize the Contractor with all known underground obstructions, but this shall not relieve the Contractor from full responsibility to anticipate and locate all underground obstructions.

G. The Contractor is responsible for contacting all agencies and utility companies having jurisdiction or services in the project area for additional information.

H. The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by written notice of:

1. Subsurface or latent physical conditions at the Site differing materially from those indicated in the Contract Documents; or
2. Unknown physical conditions at the Site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

I. The Owner will promptly investigate conditions, and if they find that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for performance of the Work, an equitable adjustment will be made and the Contract Documents will be modified by a Change Order. Claims by the Contractor shall not be allowed unless a written notice is given to the Owner, and provided that the Owner determines the facts so justify, consider any such claims asserted before the date of final payment.

J. The Work to be conducted is adjacent to existing docks/floats. The Contractor shall inform the Owner fourteen (14) calendar days prior to any Work to allow coordination with existing uses.

#### **1.4 CONTRACTOR'S USE OF PREMISES**

A. Contractor shall not close or obstruct navigation ways, channels, roadways, or sidewalks without proper permits. Contractor shall not interfere with the use of or access to adjacent buildings, property or other Owner property or operations throughout the progress of the Work. Contractor shall accommodate scheduled ferry service with no delays. No additional compensation will be paid by the Owner for disruptions to dredging operations caused by ferry traffic.

B. Contractor shall confine all operations to the Work limits of the project. Contractor shall inspect and document the condition of existing piles, float, and other facilities adjacent to their Work areas prior to any dredging and disposal activities. Documentation shall be submitted in accordance with Section 01100 "Summary of Work." Contractor shall protect all existing facilities from damage, and notify Owner of any damage that occurs. Contractor shall repair or replace damaged items to the satisfaction of the Owner at no additional expense to the Owner.

C. Contractor shall be responsible for locating and preventing damage to utilities. If damage occurs, it is Contractor's obligation to repair or replace utility facilities at no additional expense to the Owner.

D. Contractor shall coordinate with the ODR, for completion and cleanup of Work Site, construction access and parking locations.

## 1.5 PERMIT REQUIREMENTS

A. All dredging shall conform to the requirements of applicable codes, ordinances and requirements of local, state, and federal agencies.

B. The Owner has applied for and anticipates receiving the permits as described in paragraph 1.6, Section 01100 Summary of Work, of these Specifications. The Contractor shall be responsible for obtaining permits, other than those specified in Paragraph 1.6, Section 01100, necessary to perform the Work under this Contract.

C. Contractor shall follow state and local code requirements for control and disposal of debris, which shall be at a licensed and approved off-Site location.

D. The Contractor shall be responsible for knowing and conforming to the requirements of the U. S. Army Corps of Engineers, the California Regional Water Quality Control Board, the San Francisco Bay Conservation and Development Commission, California Department of Fish and Wildlife, and any other federal, state, county or local agency code, ordinance, or regulation that may apply. The U.S. Army Corps of Engineers, BCDC, California Regional Water Quality Control Board Certification and CDFW permits are attached as appendices to these specifications for the Vallejo Ferry Terminal. Permits for the South San Francisco Ferry Dredging will be issued via addendum/modification.

E. Contractor shall comply with the following Army Corps of Engineers submittal requirements:

1. Dredge Operations Plan.
2. Solid Debris Management Plan.
3. Disposal verification log sheet.
4. Disposal summary sheet.
5. Notification to start work sheet.

F. The Contractor is responsible for securing and paying for all permits and licenses in connection with operating his equipment, floating or otherwise.

G. The Contractor is responsible for maintaining water quality standards and shall conform to the requirements of the California Regional Water Quality Control Board, San Francisco Bay Region.

1. Dredging shall be limited to the design depth as indicated on the contract plans.
2. No overflow or decant water shall be discharged from any barge, with the exception of spillage incidental to clam shell or excavator dredge operations.
3. The Contractor shall notify WETA if any spill or adverse condition occurs immediately.



H. Fines imposed by any Regulatory Agency caused by the Contractor, due to negligence or wrong doing on the part of the Contractor, in the execution of the Dredging Work shall be paid by the Contractor.

I. The Contractor shall be prepared for and allow for U.S. Army Corps of Engineers, BCDC, RWQCB, CDFW, NOAA Fisheries, and/or other regulatory agencies inspection at any time during performance of the Work.

J. Fines imposed by any regulatory agency caused by the Contractor, due to negligence or wrong doing on the part of the Contractor, in the execution of the Work shall be paid by the Contractor.

K. Contractor is advised that the Army Corps of Engineers has imposed dredging and aquatic disposal restrictions for this area. Due to permit constraints, dredging operations might not begin immediately upon award and execution of the contract. Under current limitations, dredging shall not commence before August 1, 2018, and must be completed by no later than November 1, 2018 for the Vallejo Ferry Terminal and June 1, 2018 through November 30, 2018 for the South San Francisco Ferry Terminal. Notice to proceed to the Contractor may be delayed due to the issuance of the regulatory permits.

L. Contractor shall comply with all Coast Guard regulations and display the proper signals during both day time and night time operations.

M. All vessels operated for disposal of dredged material are required to participate in and comply with the Coast Guard's Vessel Traffic Control Service (VTCS). Five minutes before each departure of dredged material from the Site, the Contractor shall notify the VTCS by radio of the time of departure from the Site, departure from the disposal Site, and return to dredge Site.

#### **1.6 PROTECTION OF FACILITIES**

A. At all times, the Contractor shall be solely and completely responsible for the condition of the job Site, including safety of persons, boats, docks, and all property, and for all necessary independent engineering reviews of these conditions.

B. The Contractor shall take care to insure the integrity and freedom from damage of all buildings, curbs, fences, gates, floats, marine fenders, wharves, boats, and other facilities adjoining or near the Site. Any damage caused by the Contractor's operations to any existing property shall be repaired or replaced in kind to the satisfaction of the ODR and the property owner, and at no cost to the ODR.

C. The Contractor shall erect and maintain temporary lights, navigation lights, barricades, warning signs, buoys and guards necessary to protect the public from property damage or injury in accordance with applicable rules and regulations.

D. During the dredging operations, the Contractor shall take all necessary measures to protect all boats and other facilities in the vicinity of the Work Site. The Contractor, at his own expense, shall have personnel available at all times to immediately wash off or clean as necessary any dredged material dropped, splashed or otherwise deposited on any boat.

E. Contractor shall wash down and hose off all materials dropped on the boats, floats, gangways, sidewalks, and street areas immediately and leave such facilities in the same condition as they were at the start of Work. Contractor shall inspect the above facilities at the end of each Work day and clean off any materials missed as Work progressed. Clean up shall be to the satisfaction of the ODR and the ODR staff.

F. The Contractor shall keep all pavements and areas adjacent to and leading from the Site clean and free of mud, dirt, and debris at all times.

G. The Contractor shall not close or obstruct sidewalks, roadways, channels or navigation ways without proper permits and authorization in writing from the ODR.

H. Contractor shall not tie, moor, connect or come into contact with the Owner's facilities, including all docks, breakwater walls, etc., with any of the Contractor's equipment unless specifically required for disconnection, transportation, and reconnection of existing facilities. All of the Contractor's equipment, boats, barges, scows, etc., shall be kept clear of the existing facilities, with the exception of any personnel carrying skiff or work boat, as approved by the ODR.

## **1.7 QUALITY CONTROL**

A. The Contractor shall staff the Project with a qualified Project Manager who is experienced in a project of this nature. All submittals described in Section 1.2 shall be reviewed and quality checked by the Project Manager prior to sending them to the Owner.

B. The Inspector will inspect the Work on a daily basis. The Contractor shall, without additional compensation, provide complete cooperation and unrestricted access for inspection including transport to the dredge and scow via Contractor's crew boat.

C. It is the Contractor's responsibility to comply with all contract requirements. The Inspector will review dredging operations to verify that the dredging, transport and disposal of dredged material comply with the Contract Documents and permit conditions. Inspector's review does not denote acceptance.

D. The Contractor shall make their daily reports, dredge logs, electronic positioning data, disposal Site logs, soundings and other records available to the Inspector when requested. A copy of all reports and records submitted by the Contractor will be retained on Site for inspection by the Inspector.

- E. Contractor shall follow a documented quality control plan for dredging and disposal.
- F. Contractor must have a minimum of five (5) years documented dredging experience and at least three (3) years of dredging experience in the Bay Area and be specialized in performing dredging.
- G. Contractor's dredging equipment, used for this dredging Work, shall have a minimum capacity for removal of 1,500 cubic yards of in-place material per day.
- H. Should the Contractor (during the progress of the Work) lose, dump, throw overboard, sink or misplace any material, plant, machinery or appliance which may be dangerous to intended uses of the waterway, or cause pollution of the waters, the Contractor shall give immediate notice, with a description and location of such obstructions, to the ODR, and, when required, shall mark, boom or buoy such obstructions until they are removed. The Contractor shall remove such obstructions within three (3) days after being directed to do so by the ODR. Should the Contractor refuse, neglect or delay compliance with the above requirements, such obstructions may be removed by the Owner, and the cost of such removal may be deducted from any money due to the Contractor.

## **1.8 PREPARATION**

- A. Contractor shall notify the Coast Guard of planned dredging operations in sufficient time to allow publication in the Local Notice to Mariners, Weekly Supplement.
- B. Prior to start of dredging, submit schedule of hours of operations for approval by the ODR.
- C. Contractor shall inform the Corps of Engineers, with a copy to WETA, when a dredge episode actually commences, suspends (suspension is when the dredge contractor leaves the site for more than 48 hours for reasons other than equipment maintenance), or restarts. Each notification should include the Corps permit number. The information can be sent in writing to the U.S. Army Corps of Engineers, Regulatory Branch, San Francisco District, 1455 Market Street, San Francisco, CA 94105, or by fax to (415) 977-8343, or via telephone at (415) 977-8447.

## **PART 2 - PRODUCTS**

### **2.1 EQUIPMENT**

- A. The Contractor's equipment shall be of suitable size and capacity to meet the productivity, tolerance and schedule requirements of the Work, and shall be kept in good working condition in order to efficiently perform the Work.
- B. All dredging under this contract shall be performed using a mechanical type dredge.
- C. All floating attendant plant shall be kept in good working condition.

- D. If an electric dredge is to be used, the Contractor shall make all arrangements and pay all costs associated with installing, removing and operating the electrical service for the dredge.
- E. If a diesel dredge is to be used, Contractor shall observe all applicable standards and regulations regarding air quality emissions and fueling of dredge and other attendant plant.
- F. Water and dredged material shall not be permitted to overflow or spill out of scows. Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. Dredge Limits: Dredging shall be carried to the limits, lines, depths, and tolerances indicated on the Contract Drawings, or as directed by the Owner. Dredging outside the limits shown will not be paid for and reinstatement of over-excavated material may be required as directed by the Owner at the Contractor's expense. The Contractor will be responsible for any fines or penalties imposed by regulatory bodies for any Work outside of the authorized dredge prism or for improper disposal of dredged materials.
- B. Side Slopes: The side slopes shall be dredged to the limits as shown on the Contract Drawings. The Contractor is directed to Paragraph 3.10 Overdredge and Side Slopes.
- C. Existing Structures: When dredging adjacent to existing structures, such as the rock slope, or docks, caution shall be exercised so as not to overdredge and endanger the stability of the structures or slopes. The Contractor shall be held responsible for any damage to existing slopes and adjacent structures. Where the slope material or other material outside of the prescribed limits of dredging is removed or disturbed as a result of the dredging operation, said materials shall be reinstated as directed by the Owner at the Contractor's expense.
- D. Sloughing: All material that sloughs into dredged areas from outside the dredging limits shall, prior to acceptance and at no additional cost to the Owner, be removed to the required dredge elevation.
- E. Dredging operations shall be conducted using equipment and procedures designed to minimize water turbidity.
- F. The Contractor shall comply with all permit conditions, as set forth in the permits.
- G. Trash, debris, and other miscellaneous man-made and natural objects encountered during dredging shall be removed and placed in a separate barge or other conveyance and disposed of outside the limits of Work at a land disposal site in accordance with local, state and federal laws and

regulations. No additional compensation will be made to the Contractor for excavation, removal and disposal of trash and debris.

H. The Contractor shall operate and maintain proper lighting and signals during both daytime and night time operations on all floating equipment, ranges, markers, and buoys in accordance with U.S. Coast Guard requirements. The Contractor shall be responsible for all damage resulting from negligence or failure in this respect.

I. The Contractor shall comply with all permit conditions, as set forth in the permits, regarding participation in the Coast Guard's Vessel Traffic Service (VTS).

### **3.2 SURVEYING**

A. The Contractor shall employ a competent, qualified, licensed hydrographic surveyor, scheduling and coordinating quality control-dredge surveys. The surveyor shall be subject to the approval of the ODR.

B. The Contractor is responsible for the layout of the Work. The ODR will furnish the dredge footprint. The ODR will furnish the coordinates and the descriptions of horizontal and vertical control within the project area. The Contractor shall be responsible, by utilizing this data, to dredge within the dredge prisms that are shown on the contract drawings. The Contract completion time will not be increased due to Work delays that result from the failure of the Contractor to maintain, repair or replace the established baselines, ranges or gages.

C. Hydrographic surveys shall be conducted using Class 1 hydrographic survey methods and accuracies outlined in the U.S. Army Corps of Engineers' HYDROGRAPHIC SURVEYING MANUAL (EM 1110-2-1003). The horizontal datum shall be based on the California State Plane Coordinate System, Zone 3 (NAD 1983).

D. Horizontal and Vertical Control: All dredge control and positioning for this project shall be accomplished by means of dredge mounted GPS controlled positioning systems. The Dredge Positioning shall consist of, as a minimum, a Differential GPS positioning system, an onboard computer with MS windows, an azimuth determination system (GPS or electronic compass), a depth-sensing device for the 'bucket', and positioning system software. The operator shall have a full "heads up" computer monitor display within easy view for control of his work. The software shall be industry standard such as "Dredge Pack" package as manufactured by Hypack, "WinOps" as manufactured by Lyman Burke Associates, Trimble or approved equal. Positioning systems shall be Differential GPS with sub-meter accuracy, and one second or less update capability. The Operator's display shall have an outline of the project area and the limits of dredging areas. The dredging areas shall be sectioned into individual cuts, which represent the real swing width of the dredge, and shall be stationed at a minimum of 25 foot increments along the direction of dredge travel. The true

horizontal and vertical position of the dredge bucket shall be visible in real time on the display, and the depth of the bucket shall also be displayed. The on-board computer shall have the ability to store real-time dredge positions – this data shall be made available to the ODR from time to time on CD ROM format as he/she may request from time to time. Horizontal control data will be provided to the Contractor on request, by the ODR for purposes of preparing the layout. The Contractor shall have an individual on Site at least four hours per day, who has at least five years experience in the setup, operation, calibration and maintenance of on-board marine electronic position systems. This individual shall have a working knowledge of electronic positioning systems, and accepted survey procedures and practices. Prior to the commencement of the Work, the Contractor shall submit details of the proposed dredge positioning system, and the resume of the individual who will be in responsible charge of its setup, operation and maintenance. No Work will be allowed to commence until the Contractor's dredge positioning system is approved by the ODR, and is operational, calibrated and properly functioning. Prior to the commencement of dredging, the Contractor shall demonstrate to the ODR that the positioning system has been properly calibrated, and shall proof all azimuth and offsets by checking against the stationary position of the dredge utilizing conventional land survey methods. Mean horizontal deviation shall be one meter or less, maximum vertical deviation shall be 0.2 feet. If during dredging operations, the system should malfunction, dredging operations shall cease until such a time that the system is repaired and back in proper operation.

E. Pre and post dredge surveys for acceptance and final payment will be performed by the ODR. Prior to initiation of dredge activities, the Contractor shall perform a condition survey to confirm the pre-dredge area and volumes (this shall be submitted and approved by the ODR prior to commencement of dredging).

F. The Contractor shall submit the following items to the ODR with each progress bill containing billing for dredging:

1. A map of the terminal showing pre-dredge and post-dredge soundings.
2. A minimum of four (4) representative cross sections showing the pre-dredge and post-dredge elevations.
3. The above shall be at a scale approved by the ODR.

G. FINAL POST DREDGING SURVEY: At completion of the project, the Contractor shall conduct a final hydrographic survey and provide the ODR with a map of the ferry terminal area showing the final soundings. Final post-dredge survey for acceptance and final payment shall be performed by the ODR.

H. The pre-dredge and post-dredge survey shall be performed using precision equipment accurate to 0.10 feet.

I. The Contractor shall provide and be responsible for all additional survey and layout Work required for the correctness of all final grades and lines.

J. The Contractor shall provide a positioning system for horizontal control capable of functioning during all waterborne activity hours. The Contractor shall establish and maintain all survey monuments, shore stations and control points necessary to operate the waterborne positioning system. The Owner shall be given free access to monitor positioning and measuring activities on the Contractor's positioning system. The Contractor shall provide copies of calibration, positioning and measuring data and results to the Owner upon request. The Contractor shall place and maintain the positioning system and all gauges, range lights, buoys and other markings required to assure the accuracy of the surveys. The Contractor shall submit a description of the positioning system equipment, including accuracies, to the Owner for review and acceptance. The Contractor shall take necessary measures to confirm that the selected system is operational at all times during dredging and can operate under the conditions present at the dredging Site.

K. The Contractor shall establish reference points (benchmarks) used as the basis for the horizontal and vertical control systems. The Contractor shall be responsible for maintaining and replacing reference points if damaged.

### **3.3 OPERATION**

A. The Contractor will be required to conduct his operation in conformance with the schedule as approved by the ODR (latest version). The ODR will require ten (10) calendar days of notification of the next area of operation so that required berthed boat movements can take place. The Contractor will only be allowed to work in one fairway between boat berths at any given time. Each area must be complete, including post dredge surveys, prior to moving boats back in place and the Contractor moving his operation to the next scheduled area.

B. The Contractor will be required to keep all docks and boats clean at all times. An on-dock crew of workers will be dedicated to removing mud splatter immediately. Any damage, cleaning or detailing of docks, WETA equipment, or boats will be at the Contractor's expense. The Contractor will be required to file and receive approval for operations and staffing plan for protecting and cleaning of in-place improvements and boats.

### **3.4 DREDGING**

A. The Contractor shall commence dredging operations after all necessary permits and other authorizations have been obtained and after receipt of written notification by the ODR to proceed with the Work.

- B. During the dredging, a steel grid "grizzly" with twelve inch square maximum openings shall be placed over the hopper of the dump scow for material processing. All dredged material shall be dropped onto the grid. Details of the "grizzly" are subject to Corps of Engineers approval.
- C. Solid debris, man-made objects and dredge material remaining on the grid shall be removed for subsequent off-loading to an upland disposal site by the Contractor, at no additional cost to the Owner.
- D. The Contractor shall cease operations immediately if adjacent piers, aprons, wharfs or structures appear to be in danger. The Contractor will notify the ODR and will not resume operations until directed to do so by the ODR.
- E. The Contractor will notify the ODR of any unforeseen conditions.
- F. The Contractor will, to the ODR's satisfaction, repair all damage caused by the dredging operations and restore the Site to its previous condition at no cost to the ODR. The ODR will inspect each dock facility prior to and after completion of dredging episodes to determine if any damage was caused by the Contractor's operations. The ODR will estimate the cost of repairs and either bill Contractor or deduct the amount of the cost of repairs from a payment to the Contractor. The ODR's inspection may cover, but need not be limited to, docks, piling, breakwaters and boats.
- G. Dredging shall be conducted in such a way that the Ferry Terminal bottom is uniform and formed to the required line and grade with stable side slopes. The Contractor shall take all reasonable precautions and measures necessary to minimize turbidity and disturbances to the environment.
- H. All materials dredged shall become property of the Contractor, and shall be removed from the job Site and disposed of in a legal manner by the Contractor as his property.
- I. Depth of dredge shall be based on MLLW datum.
1. No under dredge will be allowed.
  2. Contractor shall dredge to the elevations shown on the plans, and shall remove all sloughed materials that fall into the finished dredged areas. The Owner will pay for sloughing to a maximum slope of three feet horizontal to one foot vertical from the designated design depths, not from the elevation of any over-depth dredging done by the contractor. If the contractor elects to dredge below the design depths as shown on the plans, additional sloughing beyond the maximum limit stated above shall be removed from the dredged areas and disposed of in accordance with the provisions of this Division 2 at no cost to the Owner.
  3. Any over dredging in excess of the allowable as specified above, will be deducted from quantities and no payment will be allowed therefore.



4. The Contractor is responsible for re-dredging as required to remediate any under dredging in excess of the allowable, at no additional cost to the Owner.
- J. If the Contractor discovers significant underwater obstructions (excluding trash, debris, and other miscellaneous man-made and natural objects encountered during dredging), the Contractor shall immediately give the ODR written notification of the existence of such obstruction. Where the ODR determines that the removal of the obstruction is essential to accommodate the project, the Contractor shall remove the obstruction. Payment for removing underwater obstructions not shown on the plans shall be made by extra work as provided for in the Standard Specifications.
- K. Provide state-of-the-art mufflers, silencers and noise control features for all equipment.
- L. Contractor shall record and maintain Electronic Positioning Data Records. These records are to be submitted weekly to the ODR and the Corps of Engineers.
- M. Contractor shall maintain strict overflow control in accordance with the following requirements.
  1. No material shall be permitted to overflow or spill from the barge, bins or scow during transportation from the dredging Site to the disposal site.
  2. During dredging operations, overflow shall be limited to a maximum of 15 minutes for any type of dredging. Adjusting the dredging operation may be required to ensure that once overflow commences that it will not exceed the 15 minute allowable duration.

### **3.5 DISPOSAL OF DREDGED MATERIAL**

- A. All dredge materials shall be transported from the dredge site to Cullinan Ranch Restoration Site. The material shall be disposed of per Corps of Engineers, BCDC and RWQCB permits, project improvement plans and these special provisions. Any material deposited other than in the places designated or approved by the ODR will not be paid for and the contractor may be required to remove such misplaced material and deposit it where directed at his own expense. Unless specified otherwise, all dredge material within the lines and grades shown on the Contract Drawings, shall be transported from the dredge Site and placed in accordance with the issued permits.
- B. Contractor shall record and maintain electronic positioning records of the dredge and dump scow(s) during entire dredging operation at the Site, disposal site and enroute to and from disposal site. Contractor shall prepare daily Disposal Site Verification Logs and submit them on a weekly basis each Friday to the U.S. Army Corps of Engineers, with a copy to the Owner. Electronic Positioning Records shall conform to all requirements in effect at the time of dredging, as set forth in the U.S. Army Corps of Engineers' Permit.
- C. The Contractor shall comply with all permit conditions regarding overflow requirements.

D. Contractor shall maintain strict overflow control. During transportation from the dredge Site to the disposal site no material shall be permitted to overflow or spill from the barge, bins or scow.

E. Any dredged material that escapes, sloughs, or is lost at any time while dredging, loading, or transporting shall be re-dredged or retrieved, and disposed as directed by the Owner, at the Contractor's expense. Likewise, any material disposed of in an area other than that designated on the Contract Drawings or stated in the Permit, unless approved in writing by the Owner, shall be retrieved and disposed as directed by the Owner, at the Contractor's expense.

### **3.6 COMPLETION OF DREDGING**

A. If it is determined that the Site was not dredged in accordance to the Contract Documents, including but not limited to Plans and Special Provisions, the Contractor shall perform any work necessary to comply with the Contract Documents, including the Plans and Special Provisions at no additional cost to the Owner

### **3.7 INCREASED OR DECREASED QUANTITIES**

A. The Owner reserves the right to make such alterations, deviations, additions to or deletions from the Plans and Specifications, with no additional compensation or change in the lump sum or unit bid prices. The Owner also reserves the right to increase or decrease the quantity of any item or portion of the Work, as may be deemed by the ODR to be necessary or advisable and to require such extra work as may be determined by the ODR to be required for the proper completion or construction of the whole Work contemplated.

B. Owner's estimate of quantities is approximate only and will be used as a basis for comparison of bids.

C. Quantities shown are estimated from the soundings taken by the Owner on the dates shown on the plans, and shall be considered approximate. Exact quantities shall be determined by pre-dredge and post-dredge surveys as performed by the Owner. Prior to initiation of dredge activities, the Contractor shall perform a condition survey to confirm the pre-dredge area and volumes (this shall be submitted and approved by the ODR prior to commencement of dredging).

### **3.8 MISPLACED MATERIAL**

A. Should the Contractor during the progress of the Work, lose, dump, throw overboard, sink, or misplace any material, plant machinery, or appliance, which in the opinion of the ODR may be dangerous to or obstruct navigation, the Contractor shall recover and remove the same with the utmost dispatch. The Contractor shall give immediate notice, with description and location of such obstructions, to the ODR, and when required shall mark or buoy such obstructions until the same are removed. Should the Contractor refuse, neglect, or delay compliance with the above requirements,

such obstructions may be removed by the Owner, and the cost of such removal may be deducted from any money due or to become due to the Contractor, or may be recovered under his bond. The liability of the Contractor for the removal of a vessel wrecked or sunk without fault or negligence shall be limited to that provided in Section 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et seq.).

B. Any material that is deposited elsewhere than in places designated or approved by the ODR will not be paid for and the Contractor may be required to remove such misplaced material and deposit it where directed at the Contractor's expense. Misplaced excavated material may constitute a violation of applicable federal, state, and local statutes, ordinances or regulations, and the Contractor shall be liable for any civil and/or criminal penalties imposed by these statutes by reason of such violation. A copy of permits obtained by WETA included as part of these Specifications as Attachment B.

C. In the event any leaks occur in any scows used on the project, the Contractor shall immediately discontinue dredging operations until such leaks are corrected or remedied at the Contractor's expense. The Contractor shall also, at its expense, recover and remove any material misplaced or discharged by such leaks, or breaks.

### **3.9 SHOALING**

A. If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished basin, because of the natural lowering of the side slopes, re-dredging at Contract Price, within the limit of available funds, may be performed subject to agreement of both the Contractor and the ODR.

### **3.10 OVERDREDGE AND SIDE SLOPES**

A. Overdredge allowance shall be as shown on the Contract Drawings.

B. Side Slopes

1. Material removed within limits approved by the Owner, shall provide for final side slopes not steeper than those indicated on the Contract Drawings and will be measured and paid for at the Contract unit price.
2. Side slopes are given for measurement and payment purposes only and are not necessarily the angle of repose of the existing soil. Sloughing side slopes shall not be the basis for claims against the Owner.
3. Measurement for payment will be to the limit of dredging in basin subareas as shown on the Contract Drawings.

C. Excessive Dredging: Material taken from beyond the limits shown on the Contract Drawings will be considered as excessive dredging and may be subject to fines imposed by regulatory agencies.

The imposed fines will be the responsibility of the Contractor, and the Owner may withhold the amount of such fines from progress payments or the final payment.

### **3.11 SITE CLEANUP**

A. Upon acceptance of the Work, the Contractor shall remove all equipment and additional plant including temporary buoys/markers, ranges, anchors, and all other materials used in the Work.

B. The dredging area, staging areas, and any streets, parking lots, or property used in connection with the dredging operation shall be cleared of all obstructions and debris and left in as good a condition as existed prior to commencing the Work.

### **3.12 NONCOMPLIANCE**

A. The ODR will notify the Contractor in writing of any noncompliance with the foregoing provisions. Such notice, when delivered to the Contractor or his authorized representative at the Site of the Work, shall be deemed sufficient for the purpose. Within 24 hours after the receipt of such notice, the Contractor shall mail, or personally deliver to the ODR, a complete proposal of the prompt correction of the noncompliance. The ODR will review the proposal and return it to the Contractor approved, subject to such changes or conditions as the ODR finds necessary to assure correction of noncompliance. Immediately upon receipt of such approval, the Contractor shall begin the corrective Work and shall carry it to completion. If the Contractor fails or refuses to submit its proposal or to proceed with the corrective Work, the ODR or the ODR's authorized representative may suspend all or any part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such suspension shall be made the subject of a claim for extension of time, or for excess costs or damages by the Contractor. If the ODR so elects, the ODR may cause the corrective Work to be accomplished by others, in which event the cost thereof shall be chargeable against any monies otherwise due the Contractor from the Owner.

### **3.13 ENVIRONMENTAL LITIGATION: (1974 NOV OCE)**

A. If the performance of all or any part of the Work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the ODR, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the ODR in the administration of this contract. The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

B. The term "environmental litigation", as used herein, means a lawsuit alleging that the Work will have an adverse effect on the environment or that the Owners has not duly considered, either substantively or procedurally, the effect of the Work on the environment.

### **3.14 INSPECTION**

A. Inspection: The Work will be conducted under the general direction of the ODR and may be subject to inspection by the ODR's appointed inspector(s) to insure strict compliance with the Specifications. The ODR's inspector(s) will direct the maintenance of the navigation system, gages, ranges, location marks, and limit marks in proper order. Portable lighting shall be provided upon request of the ODR's inspector(s) for more detailed inspection of potential trouble areas.

B. The ODR's inspector(s) will direct suspension of operations at any unit of Work where the Contractor upon request does not correct:

1. A safety hazard, which is so grave as to endanger life, limb, or property or cause serious damage to the Work, which includes but is not limited to a failure on the part of the Contractor (1) to have a full-time quality control person present and fully alert and awake on the disposal area at all times dredging operations are in progress or (2) to provide and maintain the required marine band radio for use by ODR's inspector(s) at all times while pumping operations are in progress and/or (3) provide and maintain the approved lighting on the disposal area for safe night operations are all basis for ODR's inspector direct suspension of Work.

C. The ODR's inspector(s) will direct the maintenance of the gauges, ranges, location marks and limit marks in proper order and position; but the presence of the ODR's inspector(s) shall not relieve the Contractor of responsibility for the proper execution of the Work in accordance with the Specifications. The Contractor shall be required:

1. To furnish, on the request of the ODR, or any ODR's inspector, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the Work. However, the Contractor will not be required to furnish such facilities for the surveys prescribed herein.
2. To furnish, on the request of the ODR, or any ODR's inspector, suitable transportation from all points on shore designated by the ODR to and from the various pieces of plant, and to and from the disposal site.
3. Should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities, equipment or transportation may be furnished and maintained by the

Owner, and the cost thereof will be deducted from any amounts due or to become due the Contractor.

### **3.15 FINAL EXAMINATION AND ACCEPTANCE**

A. As soon as practicable after the completion of the entire Work or any section thereof (if the Work is divided into sections) as in the opinion of the ODR will not be subject to damage by further operations under the contract, such Work will be thoroughly examined at the cost and expense of the Owner by sounding or by sweeping, or both, as determined by the ODR or his authorized representative. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made, and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than one sounding or sweeping operations by the ODR over an area be necessary by reason of Work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent sounding or sweeping operations will be charged against the Contractor at the rate of \$8,500.00 per day for each day in which the ODR is engaged in sounding or sweeping and/ or is enroute to or from the Site or held at or near the said Site for such operations.

B. If the preliminary data indicates that the dredged area is not to the required lines and grades or has not been dredged in accordance with these Specifications, the Contractor will be directed by the Owner to resume dredging to complete the Work to project depth, and, following such additional dredging the Owner shall re-survey the area. The dredging and re-survey shall be repeated until the Contractor achieves project depths in conformance with the Contract Documents.

C. Final acceptance of the whole or a part of the Work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the Work.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 MEASUREMENT AND PAYMENT**

A. The quantity of dredged material shall be determined by the ODR. The calculation shall be based upon the measurements of in-place materials removed, obtained from the pre-dredge and post-dredge surveys as performed by the ODR.

B. Any material from areas dredged deeper than the allowable will be paid for or included in the total dredge quantity, as will those dredge quantities from outside the designated dredge area.

C. As soon as practicable after the completion of the entire work or any section thereof (if the work is divided into sections) as in the opinion of the WETA ODR or his authorized representative will not

be subject to damage by further operations under the contract, such work will be thoroughly examined at the cost and expense of the WETA by sounding or by sweeping, or both, as determined by the WETA Engineer or his authorized representative. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made, and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than two sounding or sweeping operations by the WETA ODR over an area be necessary by reason of work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent sounding or sweeping operations will be charged against the Contractor at the rate of \$8,500.00 per day for each day in which the WETA ODR's plant is engaged in sounding or sweeping and/ or is enroute to or from the site or held at or near the said site for such operations.

D. Final acceptance of the whole or a part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

#### **4.2 PAYMENT**

A. Payment for dredging, transportation and disposal of material from the Vallejo Ferry Terminal and the South San Francisco Ferry Terminal shall be paid for by the Contract unit price per cubic yard of in-place material actually dredged and properly disposed as contained in bid items. This Contract unit price shall include full compensation for moving equipment to and from the various locations within the project Site, including to and from the Ferry Terminal; setting up dredging equipment; dredging surveys, and volume calculations by an approved hydrographic surveyor; dredging; disposing of dredged materials; disposing of solid debris and chemical waste; protection of facilities; regulatory compliance, clean-up; and for all labor, materials, tools, equipment, and incidentals required to perform the Work involved as shown on the plans, as specified in these special provisions and the standard specifications, and as directed by the ODR.

B. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 7A – Dredging and Disposal at Cullinan Ranch Restoration Site (or approved beneficial site), Bid Item No. 3B – Dredging and Disposal at SF-11, and Bid Item No. 4B – Dredging and Disposal at SF-DODs, or approved beneficial reuse site (Cullinan Ranch Restoration Site or Montezuma Wetlands Restoration Site) and no separate payment will be made therefore.

C. Full compensation for all documents and submissions; for complying with the requirements of the U. S. Army Corps of Engineers' Permit (see appendices); and the requirements of any other

Permitting Agencies with jurisdiction over these matters shall be included in the contract unit price for dredging and no additional payment will be made therefore.

D. No payment will be made for any material from areas dredged deeper than the allowable, nor for materials dredged from outside the designated dredge area. Contractor shall dredge to the elevations shown on the plans, and shall remove all sloughed materials that fall into the finished dredged areas. The Owner will pay for sloughing to a maximum slope of three (3) feet horizontal to one foot vertical from the designated design depths, not from the elevation of any over-depth dredging done by the contractor. If the contractor elects to dredge below the design depths as shown on the plans, additional sloughing beyond the maximum pay limit stated above shall be removed from the dredged areas at no cost to the Owner.

E. Any over-dredging, in excess of allowable over-depth, or dredging in areas outside the design dredge template which result in any fines or penalties levied by any permitting agency shall be the sole financial responsibility of the Contractor.

F. Other items of Work, such as for mobilization, shall be according to the Bid Prices paid for such Work.

G. PROGRESS PAYMENTS:

1. Progress payments for dredging Work performed, where a post-dredge survey has not yet been performed, can be requested on a monthly basis by providing detailed invoices for Work completed the prior month. Invoices for progress payments shall be based on estimated dredging quantity, as calculated from the number, size, and fill quantity of each scow load to the disposal site. The Owner may inspect scow loads to verify quantities.
2. The total of progress payment for each subarea will not exceed 75% of the total volume available for the said subarea (excluding non-pay over depth) as estimated from a pre-dredge survey.

H. MEASUREMENT: Dredge subareas determined by the Owner to be in compliance with the Contract requirements will be measured for payment. Payment will be made for material removed within the limits of dredging, as measured over water areas only, and as measured by in-situ cubic yards of material removed. The dredged quantity will be based on the difference between pre- and post-dredge surveys performed by the Contractor.

I. OVERDREDGE MEASUREMENT: Contractor will be paid up to a maximum overdredge allowance at the unit price per cubic yard as indicated on the plans.

J. Unit prices for dredging shall include all cost for dredge surveys, dredging, transporting, and disposal of material (including any offloading and tipping fees) as required by the Contract Documents.



K. The Owner may issue change orders modifying the limits, lines, elevations, and depths shown on the Contract Drawings. If such modifications increase or decrease a quantity of dredging, the revised quantity will be used as basis for payment under unit price for the dredging subarea involved.

**END OF SECTION**

**SECTION 05500  
MISCELLANEOUS METALS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Modification of existing guardrail at temporary boarding gangway.
- B. Temporary boarding facility gate structure and guardrails.
- C. All miscellaneous steel and iron items, including anchorage and attachment not provided with work of other trades, as indicated or noted on drawings and required for completion of the contract.

**1.2 REQUIREMENTS OF REGULATORY AGENCIES**

- A. California Building Code, Latest Edition.
- B. OSHA.

**1.3 REFERENCE SPECIFICATIONS AND STANDARDS**

American Standards for Testing and Materials (ASTM).

- A. American Institute of Steel Construction (AISC).
- B. American Welding Society (AWS).

**1.4 SUBMITTALS**

- A. Shop drawings shall be furnished in accordance with provisions of Section 01300. Shop drawings shall show in detail all sizes, shapes, materials, finishes and methods of attaching miscellaneous metal items to one another, and work of other trades.

**1.5 SITE CONDITIONS**

- A. Verify conditions at site that affect work of this section, and take field measurements as required. Report any major discrepancies between drawings and field dimensions to the ODR prior to commencing work.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Structural steel, shapes, plates, and bars, ASTM A36.
- B. Bars, flats and rounds: Commercial grade 1018 or 1020.
- C. Galvanizing.

1. Iron and steel. ASTM A123, with average weight per square foot of 2.0 ounces and not less than 1.8 ounces per square foot.
2. Ferrous metal hardware items. A153 with average coating weight of 1.3 ounces per square foot.
3. Touch-up material for galvanized coatings. Galvalloy or Galvicon.
4. To the maximum extent possible, all holes and welds to be completed prior to galvanizing. Plan for field fabrication, cutting, drilling, etc., after galvanizing shall be submitted to the ODR for approval before fabrication.

D. Machine bolts. ASTM A-307, galvanized when assembling galvanized units.

E. Mechanical anchors for securing items of miscellaneous metal to concrete and masonry shall be cinch anchors, or approved equal, not less than 3/8", and of the threaded type for anchoring with the bolt head out. Anchor bolts where set in concrete shall be hook type, but not less than 1/2" and as indicated on the plans.

F. Arc welding electrodes. AWS Series E-60 or E-70 as required for conditions of intended use.

## **PART 3 - EXECUTION**

### **3.1 WELDING**

A. Steel shall be welded by the shielded electric arc method. Reference is made to the current edition of the "Welding Handbook" published by the American Welding Society as a guide for general procedure and qualifications of welders.

B. Surfaces to be welded shall be thoroughly cleaned and welds shall show a uniform section and reasonable smoothness, without any distortion. Exposed surfaces of welded joints shall be dressed and finished to produce invisible connections. Welding alloys shall be furnished in the same color and character as the surfaces of the metals joined.

### **3.2 WORKMANSHIP**

A. Except for any modifications indicated on drawings and/or specified herein, the AISC Code of Standard Practice for Steel Buildings, and the AWS Code for Fusion Welding and Gas Cutting in Building Construction, both as amended to date, shall govern all materials, fabrication, and erection of all work under this section.

B. Work to be built in with concrete or masonry shall be of the proper form required for anchorage, or be provided with concealed anchors.

C. All work shall be formed true to detail, with clean, straight, sharply defined profiles. Exposed joints shall be close fitting and made where least conspicuous.

D. All bolts, anchors, inserts, and other miscellaneous steel and iron fastenings to be installed in forms before concrete is poured, or built into masonry shall be provided as indicated on drawings, details or schedules, or necessary to complete the work. The Contractor shall examine and check the plans for number, type, and locations of all such items.

### **3.3 MISCELLANEOUS ITEMS**

A. Furnish, fabricate, and install all miscellaneous angles, plate, clips, anchors, and other miscellaneous metal work required for the complete job as indicated on the drawings. Such items shall be formed as detailed or, if not detailed, as required for the location and purposes served, and in accordance with the applicable provisions specified herein. Furnish and install all miscellaneous metal items not specifically mentioned herein, or in other sections, but which are customarily considered as part of the work, the same as if fully specified herein and detailed on the drawings.

### **3.4 FINISHES**

- A. All items shall be hot dipped galvanized or stainless steel (Type 316).
- B. After welding is completed, any damage to the galvanizing of the metal shall be repaired by the application of Dry Galv, Galvalloy or Galvicon primer paint. Touch up shall be applied as per manufacturer's instructions to provide a coating equal to the original finish.

### **3.5 CLEANUP**

- A. During the progress of the work, the premises shall be kept free from debris and waste material resulting from the work in this section. Upon completion, all surplus materials and debris shall be removed from the site.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 MEASUREMENT AND PAYMENT**

- A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 2A – Remove, Transport and Replace Permanent Boarding Facility, Bid Item No. 4A – Upgrades, Maintenance, and Repairs of Permanent Gangway, Bid Item No. 5A – Upgrades, Maintenance, and Repairs to the Permanent Passenger Float, Bid Item No. 8A – Drydock Repairs to Permanent Passenger Float, and Bid Item No. 2B – Furnish and Install Two (2) Timber Cluster Fender Piles and no separate payment will be made therefore.

**END OF SECTION**

**SECTION 05505**  
**STEEL PILING**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK**

- A. This section applies to steel piling as required for the temporary boarding facility float location.
- B. Related sections:
- C. Section 01300 – Submittals

**1.2 APPLICABLE PUBLICATIONS**

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. These apply to any work required to driving steel piling or working on them.

- B. ASTM - American Society for Testing and Materials
  - 1. A 36-77a – Structural Steel
  - 2. A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - 3. A307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
  - 4. A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  - 5. A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- C. AWS – American Welding Society Publication
  - 6. 1.D1.1 – Structural Welding Code

**1.3 SUBMITTALS**

- A. Steel “H” Piles. Submit detail drawings and manufacturer’s data for the piles and any required fabricated additions to the piles for approval prior to commencement of the work or ordering materials. Include details of any splices.
- B. Equipment Descriptions. Submit descriptions of pile driving equipment for approval prior to commencement of pile installations. Include details of the pile hammer, power plant, leads, cushion material and helmet.
- C. Certificates of Conformance or Compliance. Required for material other than pile steel.
- D. Records. Furnish a complete and accurate record of each driven pile. The record shall indicate the pile location, size, length, elevation of tip and top of pile, number of splices and location(s), blows required for each foot of penetration throughout the entire length of the pile and blows per inch for the final 6 inches of penetration, and the total driving time. The record also shall include the type and size of the hammer used, the rate of operation, and the type and dimensions of driving helmet and cushion block used. Record unusual occurrences during driving.

## **PART 2 - MATERIALS**

### **2.1 PILES AND HARDWARE**

- A. ASTM A572 Grade 50. Steel Plate and Piles, tips shall be square and blunt, as received from the mill.
- B. Cold-Formed Steel Tubing: ASTM A500.
- C. Hot-Formed Steel Tubing: ASTM A501.
- D. Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A, with hex nuts, ASTM A563, and, where indicated, flat washers.
- E. Plain Washers: Round, carbon steel, ANSI B18.22.1.
- F. Lock Washers: Helical, spring type, carbon steel, ANSI B18.21.1.
- G. WETA-Supplied Piles: WETA will provide four (4)-30" diameter steel pipe piles at Vallejo Mare Island Ferry Maintenance Facility. Piling for temporary boarding float installation is located at Vallejo Mare Island Ferry Maintenance Facility wharf site. Contractor shall remove piling from wharf, drive for anchoring of temporary ferry float, remove at completion of temporary ferry float use and return piles to storage site at Vallejo Mare Island Ferry Maintenance Facility wharf site.
- H. Steel "H" piles for the temporary boarding gangway pile bent shall be as shown on the plans.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Pile Hammers. Pile hammers shall have a delivered energy suitable for the total weight of the pile, the characteristics of subsurface material encountered, and the pile capacity. Driving energy of the hammer shall be not less than 15,000 foot pounds. Operate diesel powered hammers at the rate recommended by the manufacturer during the final driving period. Maintain sufficient pressure at the steam hammer so that:
  - 1. For double-acting hammer, the number of blows per minute during and at the completion of driving of a pile is equal approximately to that at which the hammer is rated.
  - 2. For single-acting hammer, there is a full upward stroke of the ram.
  - 3. For differential type hammer, there is a slight rise of the hammer base during each downward stroke.
- B. Driving Helmets and Hammer Cushions. Provide a driving helmet or cap, including a pile cushion, between top of the pile and ram. Provide driving helmet or cap and hammer cushion combination capable of minimizing energy absorption and dissipation, and transmitting hammer energy uniformly over top of pile. Provide hammer cushion of solid wood or of laminated wood boards or other cushioning material as is appropriate for the type of pile being driven. Replace cushion if it has been highly compressed, charred, or burned, or has become deteriorated during driving. Do not add fresh cushioning material just before the final driving of each pile.
- C. Leads. Construct pile driver leads in a manner which affords freedom of movement to the hammer and which has the strength and rigidity to hold the hammer and pile in the correct position and alignment during driving.

D. Followers. Except where piles are driven through water, do not use a follower. The type of follower, when used, and the method of connection to the pile must be approved by the ODR.

E. Template. Where electing to use a crane-type driver with swinging leads, provide an approved single-guide template to insure that the piles are held securely in place and are driven in correct positions. If a completely free hammer is used, provide an approved template, or template and hammer arrangement, which will hold the piles securely in place for driving. Provide a free hammer with approved extensions which will assure that the hammer's energy is applied axially at all times.

F. Pile Driving. Drive piles to the "calculated" tip elevation as indicated on the plans.

G. Jetting of Piles. Jetting of piles will not be permitted.

H. Long Piles. Handle and drive long piles of a high slenderness ratio carefully to ensure against overstress or leading from a true position. Provide pile driving rig with sufficiently rigid supports so that the leads remain accurately aligned. Where a high degree of accuracy is required, erect templates or guide frames at or close to the ground or water surface.

I. Splices. When authorized, use splices of the full penetration butt weld type. Unless otherwise authorized, use only one splice per length of pile. Design and construct splices to maintain the true alignment and position of the pile sections. Splices shall develop the full strength of the pile in both bearing and bending. Proprietary prefabricated splicer sleeves may be used after approval.

J. Welding. ASW D1.1. Weld joints at pile connections continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.

K. Tolerances in Driving. The Contractor shall establish and locate all line and levels and be responsible for the correct location of all piles. All piles shall be driven with a variation of not more than 0.25 inch per foot of pile length from the vertical for plumb piles or not more than 0.50 inch per foot of pile length from the required angle for batter piles. Top of pile shall be within 3 inches of the location indicated. Pile rotation shall not be more than 5 degrees. Manipulation of piles to force them into position will not be permitted. All piles will be checked for heave. Piles found to have heaved shall be re-driven to the required point of elevation.

L. Cutting of Piles. Cut piles at the elevations indicated by a method approved by the ODR.



**PART 4 - MEASUREMENT AND PAYMENT****4.1 MEASUREMENT AND PAYMENT**

A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 2A – Remove, Transport and Replace Permanent Boarding Facility, and Bid Item No. 6A – Transportation, Installation and Removal of Temporary Boarding Facility, and no separate payment will be made therefore.

**END OF SECTION**

**SECTION 02300  
TIMBER PILINGS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

**A.** Drawings and general provisions of Contract, including General and Special Conditions and Specification sections, apply to work of this section.

**1.2 SUMMARY**

**A.** The work includes labor, materials, equipment and services required for completion of the work under this Section; all as shown on the drawings and as specified herein.

**B.** The work to be done under this Section consists of furnishing all supervision, materials, labor, tools and equipment, and performing all operations necessary for driving, fitting, and connecting all timber piles as shown on the Drawings and as herein specified.

**1.3 QUALITY ASSURANCE**

**A.** The following standards and specifications form a part of these Specifications:

1. American Society for Testing and Materials Standards.
 

A 588	Structural Steel.
A 123	Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars and Strip.
A 153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
A 307	Low-Carbon Steel Externally and Internally Threaded Standard Fasteners.
ASTM D 25	Round Timber Pile
ASTM D 2555	Establishing Clean Wood Strength Values.
ASTM E 329	Inspection and Testing Agencies for Concrete, Steel and Bituminous Materials as used in Construction.
2. American Welding Society Publication.
 

ASTM D1.1	Structural Welding Code.
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3. Federal Specification.  
RR-S-331 Shoes, for Wood Piles.

## PART 2 - PRODUCTS

### 2.1 PLANT INSPECTIONS

A. Timber piles shall be inspected by an independent commercial laboratory prior to delivery to the site. The laboratory shall be employed by the Contractor and approved by the Owner. The basis of approval shall be conformance with Sections 3 and 4 of ASTM Standard E 329. The name, qualifications, and evidence of conformance with the above shall be submitted to the Engineer for approval. Inspection, testing and approval of materials shall conform to AWPA Standard M2.

### 2.2 MATERIALS

- A. All piles shall be Douglas Fir Timber piles with approved treatment in the State of California (ACQ typical).
- B. Piles shall be of lengths required to achieve the minimum tip and capacity indicated on the Drawings and shall include an allowance for cut-off.
- C. Piles shall conform to ASTM D 25. Butt and tip diameters shall be not less than those shown in the following table:

PILE LENGTH	MINIMUM	DIAMETER
	BUTT	TIP
Less than 40 ft.	12 inches	8 inches
40 ft. to 50 ft.	12 inches	7 inches
More than 50 ft.	13 inches	6 inches

- D. Timber pile appurtenances shall meet the following requirements:
1. Bolts, nuts and washers shall conform to ASTM Standard A307 and shall be hot-dip galvanized in accordance with ASTM Standard A153.
  2. All miscellaneous metals and plates are to be epoxy coated with Amercoat 240, in accordance with manufacturer's specifications.
  3. Pile shoes, where called for, shall conform to Federal Specification RR-S-331, Type I.
  4. Stainless steel bands shall be of suitable strength to resist the deformation of the pile. Bands shall be submitted to the Engineer for approval

## 2.3 FIELD INSPECTIONS

A. The Contractor shall notify the ODR within 24 hours of delivery of all piles to be driven on the project site. At the ODR's discretion, these piles are to be available for inspection. The Contractor shall assist the ODR in maintaining records of the behavior of each pile during driving, the total penetration, and the significant blow counts before acceptance of final penetration. No piles shall be driven except in the presence of the ODR, who shall be given notice at least 48 hours in advance of all pile driving. The Contractor shall mark the depth intervals on all piles

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. All piles shall be driven continuously to the depths shown on the Drawings.
- B. Bearing piles shall be driven without interruption to the required working load capacity of 25 tons per pile.
- C. Capacity of all piles shall be determined based on the WEAP analysis and driving shall be witnessed by the Owner's Engineer. Contractor shall provide driving logs for all piles including tip elevation, cut off elevation.
- D. The allowable pile load shall be computed by means of the following driving formula:

$$R = 2E / (S+C) \quad S = \frac{2E}{R} - C$$

Where:

R = allowable pile load in pound

E = energy per blow in foot-pounds

S = penetration of last blow or average penetration of last few blows experienced in inches

C = constant equal to 1.0 for drop hammer and 0.1 for steam or air hammer

1. The value of "S" must be determined with the hammer operating at one hundred (100) percent of the rated number of blows per minute for which the hammer is designed.
  2. Any driving resistance developed in strata overlying the bearing material shall be discounted.
  3. If the driving of the pile has been interrupted for more than one (1) hour, the value of "S" shall not be determined until the pile is driven at least an additional twelve (12) inches, except when it encounters refusal.
- E. Piles shall be supported by rigid leads during driving, or by approved falsework. Where leads are used, they shall hold piles firmly in position and concentric with the hammer.
- F. Acceptance of the piles will be based on the correct placement (within 3") and plumbness: 1/8" per foot of pile length is the maximum allowable variation from the vertical.

- G.** Vibratory Hammers: All piles may be driven to near refusal using an adequately sized vibratory hammer, appropriately sized for the weight and size of the piles. Hammers shall be equipped with clamping devices appropriately designed for the pile being driven. All hydraulic systems shall operate with biodegradable hydraulic oils. Both Hammers and power packs shall be insulated to provide maximum protection from excessive noise.
- H.** Spudding shall not be used, except that an approved steel spud may be used to penetrate rock, riprap or other obstructions if necessary to prevent damage to the piles.
- I.** The first pile driven for each group shall be near the center of the group and subsequent driving from the center outward. Any driven pile raised more than one-half inch by subsequent driving of adjacent piles shall be re-driven to original elevation, with no compensation for the additional driving.
- J.** Water jetting of piles will not be permitted.
- K.** Drilling at the pile locations will only be permitted in the event unclassified rock is encountered. In such cases the contractor shall submit a plan for relocating the pile to avoid the rock for approval by Engineer.
- L.** Special care shall be taken in setting and driving piles to prevent damage to adjacent existing structures.

### **3.2 DRIVING OPERATIONS**

- A.** Care shall be used in handling timber piles to prevent damage. The care and handling of treated piles shall conform to AWPA Standard M4 and to the additional requirements specified herein. Cant hooks, peaveys, pickaroons, and end hooks shall not be used on side surfaces, and the use of pointed tools shall be confined to end grains. When shown on the Drawings, pile tips shall be fitted with steel shoes and butt ends bound with bands, to protect them in the driving operation.
- B.** Driving and fitting shall meet the following requirements:
1. Piles fitted as shown on the Drawings, after driving.
  2. Excessive manipulation of piles to force them into proper location not permitted.
  3. No splicing of piles permitted.
  4. The top of each fender pile where cut off shall be double banded with 1 1/4" stainless steel bands at top of pile. All exposed pile tops shall be fitted with black fiberglass conical pile caps.
  5. Paint or markings shall be cleaned off piles before final acceptance.

### **3.3 OBSTRUCTIONS**

- A.** Obstructions encountered in pile locations, shall be deal with as follows:
1. Any obstructions located within 15 feet of the top of the ground surface/mudline during pile driving at pile locations shall be removed at the expense of the Contractor. Such obstructions may include man-made materials such as old foundations, retaining structures, pile stubs, and natural materials such as boulders.

2. In the case of an apparent obstruction greater than 15' below the ground surface but above anticipated full depth, which prevents appreciable penetration of a pile, the abnormal condition will receive further consideration by the ODR. Depending on the depth and resistance of the obstruction, the ODR, after consulting with WETA, will decide whether to consider the pile acceptable, order the obstruction removed, or relocate the pile. The decision may be deferred until the driving of adjacent piles indicates the obstruction to be isolated or extending over the area of several piles.
3. Care shall be taken in driving to avoid subjecting piles to excessive or undue stress. Any pile driven in the wrong position or damaged by reason of defects, or by driving, shall be withdrawn and replaced by a new pile, or supplemented by a second pile adjacent to the first. In either case, no payment shall be made for the unacceptable pile.

#### **3.4 PILE CUT -OFF AND SISTERING**

**A.** After driving, the heads of piles (except as hereinafter specified) shall be cut-off and chamfered at the correct elevation, with the cut made perpendicular to the axis of the piles. Pile cut-offs shall be the property of the Contractor, to be removed from the site.

**B.** At the conclusion of driving the new piles shall be pulled into final position using approved methods. Care shall be taken not to overstress the piles during this process. Piles that, in the opinion of the engineer, are too far off of proper alignment to allow them to be pulled into position without causing over stress shall be pulled or cut off at grade and re-driven. Overtightening of bolts to correct alignment problems will not be allowed.

#### **3.5 PILE ACCEPTANCE CRITERIA**

**A.** Piles may be rejected by the ODR if any one of the following conditions exists.

1. Piles are determined to be damaged, regardless of cause.
2. Required pile capacities have not been obtained as per developed WEAP criteria.
3. Piles are not installed within the specified tolerances for plan location, orientation, or cut-off elevation.

**B.** If piles are found to be damaged, the Contractor shall suspend pile-driving activity and make changes to the fabrication methods, handling or installation methods, and/or equipment as needed to install subsequent piles without damage.

**C.** If, as determined by the ODR, a particular pile is too far out of tolerance, then that pile is rejected and the Contractor shall, at no additional cost to WETA, remove the out of tolerance pile and re-drive within tolerance.

### **PART 4 - MEASUREMENT AND PAYMENT**

#### **4.1 MEASUREMENT AND PAYMENT**

**A.** All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 2B – Furnish and Install Two (2) Timber Cluster Fender Piles, and no separate payment will be made therefore.

**END OF SECTION**

**SECTION 09900**  
**PAINTING**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

A. Drawings and general and special provisions of the Contract, apply to this Section.

**1.2 SUMMARY**

A. This Section includes surface preparation and painting of the following:

1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

**1.3 SUBMITTALS**

A. Product Data: For each paint system specified. Include block fillers and primers.

1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
3. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

**1.4 QUALITY ASSURANCE**

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

**1.5 DELIVERY, STORAGE, AND HANDLING**

A. Deliver materials in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.

5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F (7°C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

## **1.6 PROJECT CONDITIONS**

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90°F (10 and 32°C).

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95°F (7.2 and 35°C).

C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5°F (3°C) above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

## **1.7 EXTRA MATERIALS**

A. Furnish extra paint materials from the same production run as the materials applied in the quantities described below. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to WETA.

1. Quantity: Furnish WETA with extra paint materials in the quantities indicated below:
  - a. Exterior Silicone - Alkyd Gloss Enamel: 1 gal. (3.785 L) of each color required.

## **PART 2 - PRODUCTS**

### **2.1 PAINT MATERIALS, GENERAL**

A. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.



1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

C. Colors: Match colors indicated by reference to manufacturer's color designations.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify the ODR about anticipated problems using the materials specified over substrates primed by others.

### **3.2 PREPARATION**

A. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and re-prime.
2. Ferrous Metals: Clean un-galvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.
  - a. Blast steel surfaces clean as recommended by paint system manufacturer and according to requirements of SSPC-SP 10.
  - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
  - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.

B. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

C. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

### 3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Paint colors, surface treatments, and finishes are indicated in the schedules.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
2. Omit primer on metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

E. Electrical Work: Painting of electrical work is limited to items exposed in occupied spaces.

F. Electrical items to be painted include, but are not limited to, the following:

1. Conduit and fittings.

G. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

H. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

I. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

### **3.4 FIELD QUALITY CONTROL**

A. WETA reserves the right to invoke the following test procedure at any time and as often as WETA deems necessary during the period when paint is being applied:

1. WETA will engage the services of an independent testing agency.
2. The testing agency will perform appropriate tests for the following characteristics as required by WETA:
  - a. Paint thickness.
  - b. Surface preparation.
  - c. Material testing.

### **3.5 CLEANING**

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

### 3.6 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by ODR.

B. Provide "Wet Paint" signs to protect newly painted finishes.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

### 3.7 EXTERIOR PAINT SCHEDULE

A. Ferrous Metal: Provide the following finish systems over exterior ferrous metal. Primer is not required.

1. Two-Component, Polyamide-Epoxy Coal Tar: Provide two coats with total dry film thickness not less than 15 mils for piles, pile cap bearings and entire float.
  - a. First and Second Coats: Coal tar epoxy (SSPC Paint 16).
    - i. Carboln: Carbomaster 14.
    - ii. Devoe: Devtar 247 High Buld Epoxy Mastic.
    - iii. Glidden: 5270/5271 Glid-Guard Coal Tar Epoxy Finish.
    - iv. Porter: 7023 Tarsset C-200a Polyamide Cured Coal Tar Epoxy.
    - v. PPG: 97-640/97-641 Coal Cat Coal Tar-Epoxy Coating.
    - vi. R-O:9578 High Build Coal Tar Epoxy.
    - vii. S-W: Coal Tar Epoxy C-200 (B69B50/B60V50)
2. Silicone-Alkyd Gloss Enamel: Provide two finish coats over metal primer with total dry film thickness not less than 4 mils for canopies.
  - a. Prime Coat: Manufacturer's recommended metal primer. (Not required on some shop-primed items.)
    - i. Carboln: Rustbond 8 HB Vinyl-Alkyd.
    - ii. Devoe: 13101 Mirrolac Cover Up Rust Penetrating Metal Primer.
    - iii. Glidden: 5205/5206/5207 Glid-Guard Tank and Structural Primer.
    - iv. Porter: 260 FD High Solids Shop Primer.
    - v. PPG: 97-682 Multiprime Red Inhibitive Primer.
    - vi. R-O:Primer as recommended by Rust-Oleum .
    - vii. S-W: Kem Kromik Metal Primer, B50N2 or B50W1.
    - viii. Tnemec: Series 37-77 Chem-Prime.
  - b. First and Second Coats: Silicone-alkyd gloss enamel.
    - i. Carboln: Sub-Sil B Silicone Alkyd Enamel.
    - ii. Devoe: 475-S-XXXX Bar-Ox 475 Silicone Alkyd Gloss Enamel.
    - iii. Glidden: 5539 Glid-Guard Silicone-Alkyd Enamel.
    - iv. Porter: 2210 S.A.-22 Gloss Silicone Alkyd.
    - v. PPG: 97-480 Series Silicone-Alkyd Gloss Enamel.

- vi. R-O:A29-000 S-A.
- vii. S-W: Silicone Alkyd Enamel, B56 Series.
- viii. Tnemec: Series 82 Silicone-Alkyd Enamel.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 MEASUREMENT AND PAYMENT**

A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 4A – Maintenance Repairs of Permanent Gangway, Bid Item No. 5A – Upgrades, Maintenance, and Repairs to the Permanent Passenger Float, and Bid Item No. 8A – Drydock Repairs to Permanent Passenger Floats and no separate payment will be made therefore.

**END OF SECTION**

**SECTION 15200**  
**POTABLE WATER SYSTEM**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

A. The work of this section shall include all labor, tools, equipment, materials and manufactured items necessary to disconnect, reconnect and sanitize the potable water system for the existing ferry boarding facility.

**1.2 SCOPE**

The work of this section shall include, but not be limited to, the completion of the following items:

A. Disconnect, reconnect, test, and sanitize the water line as shown on the plans, all in accordance with City of Vallejo requirements.

**1.3 SUBMITTALS**

Items to be submitted to the ODR for approval under this section shall be:

- A. Sanitizing procedures.
- B. Procedure for disconnection and reconnection of water line.

**1.4 CODES AND STANDARDS**

All material and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations.

A. In case of difference between building codes, specifications, state laws, local ordinances, industry standards, utility company regulations and the contract documents, the most stringent shall govern.

B. Applicable codes and standards shall include all state laws, ordinances, utility company regulations and the applicable requirements of the following nationally accepted codes and standards.

C. Building Codes:

- Uniform Building Code
- Uniform Plumbing Code
- City of Vallejo Standards

D. Industry Standards, Codes and Specifications:

IAPMO	International Association Plumbing and Mechanical Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing Materials
AWWA -	American Water Works Association
NBS	National Bureau of Standards
UL	Underwriters Laboratories

NSF National Sanitation Foundation

## **1.5 ACCURACY OF DATA**

A. The data for connections to existing system given herein and on the drawings is diagrammatic and may need to be adjusted for existing conditions. The drawings and specifications are for the assistance and guidance of the Contractor. The Contractor shall be prepared to conform to those conditions found in the field and as may be required without extra cost to WETA.

## **PART 2 - PRODUCTS**

### **2.1 LOCATION AND INSTALLATION OF PLUMBING**

A. Prior to the installation, the Contractor shall submit material lists and/or catalog cuts for approval covering the actual disconnect and reconnect details and/or any other details or shop drawings required to clearly show installation features.

B. All piping shall be reconnected as it was prior to present work. Piping in general shall be installed without undue stresses or strains, and provisions for expansion, contraction, and structural settlement shall be made as required. All piping shall be thoroughly cleaned before reconnection and shall be maintained in that condition during the entire construction period. Systems shall be thoroughly flushed clean after reconnection and tested prior to public use.

C. Water piping shall be the existing facilities.

## **PART 3 - EXECUTION**

### **3.1 TESTS**

A. Tests on the water system shall be made by the Contractor under the supervision of WETA's Representative.

B. The Contractor shall furnish all materials, tools and equipment necessary to conduct proper tests as hereinafter specified.

C. The pipe shall be filled with water from the City Water System, taking care to see that all air vents are open during the filling. After filling, the pipeline shall stand full at a hydrostatic pressure of 175 psi for not less than four hours to allow the escape or absorption of slight air pockets. During this period of time, all pipe valves, connecting fittings and temporary plugs shall be examined for leaks. If any leaks are found, they shall be stopped, and repaired to allow the test to be completed.

D. In making the test of any particular section, the gate valves at both ends of that section, if such exist, shall be tightly closed and all outlets therefrom shall be closed. Where such gate valves do not exist, temporary watertight plugs shall be installed at end of pipe. The completely closed pipeline section shall be subjected then to an internal hydrostatic pressure test as hereinafter tabulated for a period of not less than four hours and all repetitions of this test shall be for a similar period of time, and at the same pressure.

E. The test pressure of 175 psi shall be applied in every instance by means of a force pump which must have an attached air chamber of a capacity of not over 50 gallons.

F. The test pump shall have testing certificate insuring recent calibration before it is used on the pipeline. The pump shall be of a type which will measure accurately the quantity of water pumped into the pipeline while under test.

G. All cracked pipe, special castings, fittings, valves, loose joints and/or leaky joints shall be repaired or removed and replaced with sound work and the test repeated in sequence until satisfactory pipe tightness has been obtained.

**3.2 STERILIZATION**

A. All labor, materials and equipment necessary to perform the sterilization of the completed work shall be done by a certified testing company approved by the City of Vallejo and paid for by the Contractor. The testing company shall furnish and place H.T.H. sterilization tablets in each 10' length of pipe. The tablets must be secured to the upper inside surface of each length of pipe using Permatex No. 2 compound or equal.

B. The number of H.T.H. tablets required per length of pipe are:

<u>Inside Diameter of Pipe</u>	<u>Number of Tablets</u>
Up to 4"	1
6"	2
8"	4
12"	8

C. The testing company will take samples and blow off the water system prior to making final tie-in to existing system.

D. In the event that the samples taken by the testing company result in positive bacteria in the sampled water system, the water systems shall be sterilized by the Contractor using a chlorine injection method and supervised by the testing company. The water system shall again be blown off and resampled by the testing company. Any re-sterilization and resampling will be paid for by the Contractor.

**PART 4 - MEASUREMENT AND PAYMENT**

**4.1 MEASUREMENT AND PAYMENT**

A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 2A – Remove, Transport & Replace Permanent Boarding Facility, and no separate payment will be made therefore.

**END OF SECTION**



**SECTION 16000  
ELECTRICAL**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK**

A. The work under the electrical sections of the specifications includes: furnishing and/or installing all supervision, labor, materials, tools, transportation, equipment, services, facilities, tests and temporary work required for the complete electrical system, at the site as shown on the drawings and as specified herein. The work shall also include furnishing and installing all materials, mountings, devices and fittings not specifically mentioned herein or indicated on the drawings which are necessary to produce a complete ready-to-operate installation.

B. The Contractor shall coordinate the electrical work with the work of other trades, furnish record drawings upon the completion of the project and shall arrange for licenses and inspections necessary for the completion of the electrical work. Note: The work will not be accepted until record drawings are delivered in acceptable form to the ODR. The City of Vallejo will require an electrical permit for this work.

C. The scope of work shall include, but not be limited to, the following:

1. Conduits, conductors, cables, pull boxes and other components for the temporary lighting system at gangway and temporary float, disconnection and reconnection of permanent ferry dock facilities. Interception of existing conduit to reconnect to new pull box and facilities.
2. Continuous electrical power supply to temporary lighting system.

**1.2 DEFINITIONS**

A. "Pre-wired" shall mean controls shall be installed on the machinery at the factory and all that is necessary for operation is one connection.

- |          |   |
|----------|---|
| B. IPCEA | Insulated Power Cable Engineers Association.    |
| ANSI     | American National Standards Institute.          |
| IEEE     | Institute of Electrical & Electronic Engineers. |
| UL       | Underwriter Laboratories, Inc.                  |
| NEMA     | National Electrical Manufacturers Association.  |
| USASI    | United States of America Standards Institute.   |
| NEC      | National Electric Code.                         |

**1.3 CODES, REGULATIONS, PERMITS AND FEES**

A. The Contractor shall furnish and pay for licenses necessary for the completion of the electrical work.

B. The Contractor shall coordinate and obtain inspections required for the work herein. All work performed hereunder shall conform to building safety codes, ordinances, rules and regulations of any legal body having jurisdiction. When these specifications require or describe materials or

construction of better quality or larger size than required by the governing codes, rules and regulations, the provisions of the specifications shall prevail. The Contractor shall provide a working system without extra cost to WETA even though the work is not specified herein or indicated on the drawings.

C. Nothing shown in the drawings nor in these specifications shall be considered as authorizing any installation that violates the requirements of such codes. In addition, the installation shall conform to, as minimum standards, all rules and regulations that apply in the following publications.

1. National Electrical Code
2. Building Standards - State of California
3. Rules and regulations - serving electric utility
4. Rules and regulations - Fire Marshal's office
5. OSHA (Occupational, Safety and Health Act)

#### **1.4 DRAWINGS**

A. The electrical drawings are basically diagrammatic. The actual installation shall be in accordance with all applicable codes and good construction standards. Dimensions shown shall be verified with other drawings and field measurements.

B. Record Drawings. Contractor shall provide and keep up-to-date a complete set of record prints, which shall be corrected regularly, showing every change from the original Contract set of Drawings, including all Addenda, Change Orders, Job Decisions, etc.

C. Failure to maintain accurate records will be sufficient cause for the ODR to withhold any payment due to the Contractor. Upon completion of the work, a set of prints shall be delivered to the ODR and all changes as noted on the record set of prints shall be incorporated thereon. All changes shall be neatly and legibly drawn to scale on the set of prints using standard architectural or engineering drafting practices. Payment for Record Drawing shall be considered in contract prices paid for the various items of work, and no additional compensation will be allowed therefor.

#### **1.5 CONFLICTS**

A. In case of conflicts between the Drawings and Specifications, or conflicts between Drawings, or conflicts within the Specifications, the most restrictive, most severe and most costly requirement shall prevail and be provided unless a written clarification is issued by the ODR.

#### **1.6 SUBMITTALS**

A. Material lists, catalog cuts, shop drawings, samples and factory tests of materials proposed for the installation shall be delivered to the ODR for his review. Partial submittals will not be accepted by the ODR. The Contractor shall submit six (6) copies of each submittal which shall include manufacturer's names, brand names, catalog numbers and catalog cuts, together with drawings and such other descriptive data and ratings as may be required. Review of materials and equipment will be based on manufacturers published ratings and compliance with these specifications. No materials or equipment shall be purchased or installed until this review by the ODR is completed.

B. The Contractor shall submit catalog cuts, shop drawings, samples and/or factory tests with certificate of compliances on the materials as called for by the ODR. Shop drawing and submittal list as follows:

1. Conduit and fittings.
2. Conductors.

3. Pull boxes.
4. Circuit breakers.
5. Cable grips.
6. Lighting fixtures
7. Other materials as may be required by the ODR.

C. After completion of the review, the ODR will return to the Contractor copies of the material submitted with appropriate instructions. Responsibility shall rest on the Contractor to furnish all the material requiring review by the ODR in sufficient time to meet the requirements of this specification, including possible resubmittal without delaying construction.

## **PART 2 - MATERIALS**

### **2.1 GENERAL**

A. The equipment to be furnished under this specification shall be essentially a standard product of the manufacturer. Where two or more units of the same equipment are required, these units shall be the product of a single manufacturer. All materials shall be delivered to the jobsite new and unused and shall bear the UL label.

B. Electrical materials are selected on the basis of function, size of units, performance, quality of fabrication, aesthetic appearance, availability of spare parts, arrangements of controls and factory service facilities. The manufacturers and catalog numbers selected establish a standard for electrical materials and equipment, and material substitutions have to be equivalent in all requirements.

C. Any equipment delivered or installed that is damaged or shows signs of abuse shall be removed and replaced by a new equal piece of equipment. No on-site repair of damaged or abused equipment shall be allowed.

D. Materials, products and/or equipment furnished by the Contractor shall pass the factory and/or field tests called for in the plans and specifications. The materials, products and/or equipment will not be accepted if they fail to pass the field and factory tests.

E. The Contractor shall be familiar with local electrical codes, including the special requirements of local codes as part of the work to be completed.

### **2.2 APPROVED MANUFACTURERS**

A. The following manufacturers are approved for the products listed.

<u>Products</u>	<u>Manufacturers</u>
Rigid plastic (Schedule 40)	Carlson, Johnson, Darwin
Cast outlet boxes	Republic, J&L, Youngstown
Cable and wires	Okonite, Anaconda, General
Wiring devices	Hubbell, Bryant, G.E.
Lamps	Sylvania, G.E., Westinghouse
Ballasts	Advance, Jefferson, G.E.

Switches and circuit breakers	Square D, to match existing
Ground fault relays	Westinghouse
Fuses	Buss, Chase-Shawmut, F.P.E.
Conduit hanger hardware	Unistrut, Kindorf, CLIC (Litchfield International)
Splice connectors	Burdy, IlSCO, Thomas & Betts

### 2.3 MATERIALS, EQUIPMENT AND COMPONENTS

A. General. The materials, equipment and components to be provided shall include, but not be limited to, the following:

1. Electrical power source connection for temporary lighting system.
2. Conduit, cables, and all conductors.
3. All necessary junction and pull boxes.
4. Tests and demonstration of proper operation of the complete system.

B. Circuit Breakers.

1. Feeder breakers shall be molded case with frame and trip ratings as shown, to match existing.
2. Molded case circuit breakers in main switchboards and distribution boards shall be provided with minimum symmetrical interrupting capacities noted on wiring diagram.
3. Circuit breakers shall be fungus proofed and provided with thermal trip and instantaneous magnetic trips or solid state over-current trips. Multi-pole breakers shall be single toggle, common trip.

C. Interrupting Capacity Ratings. If the A.I.C. ratings of equipment are not noted on the plans, the switchboard and equipment manufacturers shall provide electrical equipment with an interrupting capacity of 65,000 A.I.C., or as required by the electrical distribution system.

D. Wire and Cable

1. Conductor sizes are specified by the American Wire Gage (AWG) and conductors shall be copper.
2. Cables shall be types of THWN/THHN, stranded, 90 degree rated.
3. The insulation on power cables for use of 600 volts or less shall be 600 volts minimum and shall conform to UL Standard 83 or UL Standard 44.
4. Electrical tapes used for electrical insulation and other purposes in wire and cable splices, termination, repairs and miscellaneous purposes shall conform to the requirements of UL Standard 510.

5. Grounding conductors shall be soft drawn insulated copper wire as indicated, with green colored insulation or green plastic identification bands. Grounding and bonding equipment shall conform to UL Standard 467.
  6. Connectors and terminals conforming to UL Standard 486 shall be designed for use with the specific associated conductor materials, and shall provide a uniform compression over the entire contact surface. Terminal lugs shall be used on all stranded conductors.
- E. Conduit and Raceways and Fittings
1. Rigid plastic conduit shall conform to UL Standard 651. Carlon Company Schedule 40/P&C duct type DB, or equal.
  2. Flexible liquid tight conduit shall be Carlon Flexible Conduit, or equivalent, and listed by UL.
  3. Rigid Steel Conduit (RSC): Hot dipped galvanized or metalized finish with PVC coating conforming to ANSI C80.1 and UL 6. Fittings, couplings, and connectors, threaded type conforming to UL 514.
- F. Pull Boxes
1. Non-metallic pull boxes shall be a standard product of Carlon Company or equal. The pull boxes shall be UL listed and comply with UL Standard 508.
  2. All pull boxes and vaults shall conform to the appropriate serving utility's requirements.
  3. All pull boxes and vaults shall be sized per code, as directed on the drawings and per the serving utility's requirements.

## **PART 3 - EXECUTION**

### **3.1 COORDINATION OF WORK**

- A. Materials shall be installed in a neat and orderly manner, in accordance with applicable codes and to the complete satisfaction of the ODR.
- B. The Contractor shall coordinate the electrical work with the work of other trades. The Contractor shall not be reimbursed for any work installed but not usable due to improper coordination of work.
- C. Utility Services: Prior to installing any work, the Contractor shall coordinate the installation of the electrical power, with the Ferry staff and local serving utilities, as needed.
- D. Local Codes: Prior to installing any work, the Contractor shall review the job and bring any special requirements to the attention of the ODR. Special requirements of local codes shall be included as part of this work.
- E. Materials: Prior to placing orders for materials, the Contractor shall check equipment ratings, equipment catalog numbers and equipment dimensions as to applicability and correctness for installation.

### **3.2 DEVICES**

- A. Conduit Raceways.

1. Conduit raceways shall be installed in a neat and orderly manner. Raceways shall run true and be aligned plumb vertically and horizontally. Fasteners shall be factory designed, and supports installed at spacings prescribed by electrical codes.
2. Branch circuits and feeders are shown schematically on the drawings. Conduits shall be provided with junction boxes, condulets, expansion fittings, ells and supports as required by codes. Routing of conduit shall be field engineered unless otherwise noted on drawings.
3. Conduit shall be installed in compliance with local codes.
4. Provide grounding conductor for all non-metallic conduit.

#### B. Wire and Cables

1. Prior to installing cables in 1-1/2" conduit or larger, a steel mandrel shall be pulled through the conduit. Mandrel shall be a size smaller in diameter than the conduit.
2. Wire and cable bushings shall be installed on all conduits entering junction boxes, pull boxes or equipment.
3. When mechanized equipment is used for pulling cables, the cables shall be lubricated with a lubricating compound recommended by the cable manufacturer. Pulling sheaves shall have a minimum radius of fifteen times the diameter of the cable.
4. Where multiple circuits run through the same junction box or outlet box, each wire shall be marked with a wrap-around cable marker indicating the circuit number and panel.
5. At wiring devices, 6" tails shall be connected to the devices.
6. All conductors shall be copper.
7. Color code all wires and cables. A different color shall be used for each phase of each voltage system. No. 12 wires shall be provided with insulation coding, and No. 8 wires and larger may be coded by color markers. Coordinate coding scheme with ODR.
8. Gauge of wire flagged on homeruns shall be extended to all outlet boxes unless otherwise designated.
9. A pull wire shall be installed in all empty conduits. Pull wire shall be 160 lb. nylon cord.
10. Parallel conductors shall only be installed on circuits rated above 400 amps.
11. Grounding cables in conduits and panel boards shall be insulated. Exposed copper cables in panel boards shall not be allowed.

#### C. Splices

1. Splices shall be approved by the ODR.
2. Splices for power cables shall be moisture-proof and installed with the following Scotch Cast Kits, 3M Company:

- a. Branch circuits #12 to #6 gauge, Scotchlok Connector Seal Packs #3576, #3577 or #3578.
- b. Four layers of protective taping shall be applied, Scotch #33 @ 1/2 lap. One layer of Scotchkote water seal shall be applied.
- c. All splices in areas subject to moisture shall be made using Scotchcast split mold, transparent, resin filled splicing kits.
- d. Splices for communication cables, etc., shall be installed in accordance with manufacturer's recommendations and be moisture-proof.
- e. Splices shall be allowed only in junction or pull boxes.
- f. All splices shall be made in a dry environment with dry conductors.

#### D. Grounding

1. All grounding conductors that are substituted for metallic raceways shall be copper cables per code.
2. Service neutral, equipment enclosures, stepdown transformers, etc., shall be grounded by a grounding method that is acceptable to local authorities.
3. Low voltage systems (0-480V) shall be grounded.
4. All metallic fixtures shall be grounded.

### 3.3 PAINTING AND FINISH

- A. Upon completion of work, all equipment and finishes shall be in place and as new.

### 3.4 FASTENING, MOUNTING AND HANGING

- A. Electrical equipment shall be securely fastened in place and capable of withstanding forces created by wind, earthquake, or sonic booms. Fastening, mounting and hanging details shown on the plans shall be considered minimum requirements and supplemented by additional work if necessary to insure a secure attachment.

### 3.5 SALVAGE AND DEBRIS

- A. Upon completion of work, remove all debris from the jobsite.
- B. Materials removed from existing facilities shall be stored and/or removed from the jobsite by the Contractor unless claimed by WETA. Excess cables and wire shall become the property of the Contractor.
- C. Materials claimed by WETA shall be delivered to the Vallejo Mare Island Ferry Maintenance Facility by the Contractor.

### 3.6 SAFETY

- A. Exposed energized panels shall be shielded and protected at all times. The main disconnect, if energized, shall be locked in the open position after working hours during construction.

B. Working on energized panels during construction shall not be authorized or permitted by the Contractor.

#### **PART 4 - MEASUREMENT AND PAYMENT**

##### **4.1 MEASUREMENT AND PAYMENT**

A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for Bid Item No. 2A – Remove, Transport and Replace Permanent Boarding Facility and Bid Item No. 6A – Install & Remove Temporary Boarding Facility, and no separate payment will be made therefore.

**END OF SECTION**



**SECTION 42131****VALLEJO PASSENGER FLOAT AND GANGWAY – WORK PACKAGE 2018**

**NOTE:** .. It is recommended that for the purpose of ascertaining information pertaining to this Work List, that you ship check the Float and Gangway in question. Float and Gangway drawings are also available for review at the North Bay Operations and Maintenance Facility. Technical Points of Contacts are Bryan Hoffman (415) 559-0324, Peter Belden (415) 850-0413, or Marty Robbins (415) 726-0356.

**1. DRYDOCK FLOAT (BID ITEM 8A) & STAGE GANGWAY FOR WORK**

- |                     |  |
|---------------------|--|
| Official Number:    | none   |
| Length:             | 88'-0"   |
| Beam:               | 50'-0" nominal, 55'-6" overall   |
| Maximum Draft:      | 8'-2" projection   |
| Float Displacement: | approximately 862,000 pounds (dry)   |
| Gangway Weight:     | approximately 96,000 pounds  |
| References          | <ul style="list-style-type: none"> <li>(a) Section 05500, Miscellaneous Metals</li> <li>(b) Section 09900, Painting</li> <li>(c) Drydock Plan, Drawing #CVCVL009 Dated: July 11, 2003, see Attachment C to Volume 3 of the IFB</li> <li>(d) Vallejo Ferry Terminal Dock Drawing Package</li> <li>(e) TOPPER INDUSTRIES Adjustable Transfer Platform Extension Ramp Concept Design [[to be provided via an Addendum to the IFB]]</li> </ul> |
- A. Upon transfer of ferry operations to the temporary passenger loading Float and Gangway, prepare and transport the Vallejo Passenger Float and Gangway to drydock (or other suitable facility) and perform all the work indicated in this section. WETA shall have two (2) weekdays of work to perform on the Float prior to turning the Float over to the Contractor for transportation to the shipyard. Contractor shall provide all necessary labor, material and equipment to drydock Float and site the Gangway for modifications, cleaning, painting, inspection, and completion of the work specified herein, and any necessary repairs. Undock the Float and return the Gangway upon completion of the work and provide transportation back to the work site to support reinstallation following dredging operations.
- B. (Bid item 8A) Drydock the Float and support the Gangway using Reference (c) and (d). Use blocks of sufficient size to safely support the Float and Gangway. Provide documentation to the ODR indicating the block sizes, dimensions, and positions used. Use alternate block locations from 2015 drydocking. Blocking should allow free access to the chain pipes.
- C. Once the Float and Gangway are returned to its permanent location, the Contractor shall provide WETA access to the Float and Gangway in order to re-ballast to the required freeboards prior to resumption of passenger service at the permanent Float and Gangway.

## 2. TEMPORARY SERVICES & GENERAL TERMS

- A. The designated shipyard Project Manager shall meet with ODR personnel at the North Bay Operations and Maintenance Facility on Mare Island in Vallejo and jointly shipcheck the Float and Gangway at least five (5) days prior to the docking. The Project Manager shall also meet with ODR personnel twice per day while in dock. One meeting to occur at or near the start of the work day, the second meeting shall occur at or near the end of the workday. Additional meetings shall be held if necessary by mutual agreement.
- B. At least seven (7) days prior to docking, the shipyard shall provide to the ODR a written report that details the status of all material ordered for the work. The shipyard will then update the status of all material as requested by the ODR.
- C. Provide safety and security for the entire Float and Gangway throughout the repair period until such time as the ODR has accepted redelivery of the Float and Gangway. Every reasonable precaution shall be taken to protect the Float and Gangway from the hazards of fire, flooding, pilferage, malicious damage, and other events including cataclysmic phenomena of nature.
- D. Provide and maintain comprehensive and effective fire prevention and fire detection, and firefighting programs and systems sufficient to ensure the safety and integrity of the Float and Gangway. Provide personnel trained in shipboard firefighting techniques and also trained to cooperate with and assist local firefighting organizations. Provide sufficient shore fire hoses to ensure an adequate supply of firefighting water, at sufficient pressure, and maintain an adequate number of tested fire-hoses aboard the Float and Gangway to effectively fight fires at any location in the Float and Gangway.
- E. Provide and maintain portable fire extinguishers in sufficient quantity, and of the appropriate type, to combat local fires of any class. Provide sufficient fire watches, including roving watches as may be required, to ensure that fires that may be inadvertently started by welding sparks or heat, electrical malfunction, or spontaneous combustion are detected, reported and promptly extinguished.
- F. Provide labor, material and equipment to clean and gas free any spaces that will require hot work associated with any of the Work List items contained herein, as necessary, **and** obtain a Marine Chemist certificate for **Safe for Men** and **Safe for Hot Work**. Maintain the certificate during the course of the work. Provide fire watches as required. All voids need to be opened and certified for entry prior to ODR inspections.
- G. All welding, welding materials, and welding methods shall be subject to the review and approval of the ODR.
- H. Provide labor, material, and equipment to restore and repair any surfaces, equipment, or furnishings that may have been damaged during all work described herein to the as-arrived condition.
- I. The Contractor shall exercise extreme care and caution in protecting Clipper readers and electrical boxes from shipyard dirt and debris. Any and all sensitive items shall be securely wrapped in protective covers to the satisfaction of the ODR prior to any work being undertaken on the Float and Gangway. All mooring lines shall be labelled as to location and removed during the course of the work. Mooring lines shall be reinstalled at the completion of all shipyard work.
- J. All painted surfaces disturbed during the course of the work shall be restored to the satisfaction of the ODR.
- K. Unless otherwise indicated, all stainless steel in this specification shall be SS316.

### 3. ANODE RENEWAL

- A. Provide labor, material and equipment to renew all zinc anodes on the Float.
- B. If zincs are welded to the Float With straps, grind off straps and install SS316 studs for mounting zincs to the Float and Gangway.
- C. Use SS316 fasteners for zinc installation. Ensure positive metal to metal contact following installation.
- D. Anode renewal shall be by divers for float is not exercised.

### 4. VOID & TANK INSPECTIONS

- A. Provide labor, material and equipment to open all watertight voids for inspection by the ODR.
- B. Pump dry any accumulated liquids in the voids.
- C. Provide, and maintain for the duration of the job, chemist certificate for **SAFE FOR MEN TO ENTER**, and **SAFE FOR HOT WORK**, and all required ventilation and temporary lighting for inspection, any additional work resulting from inspection, and any other work required by this Work List. Open and certify voids prior to ODR inspections.
- D. Upon completion of inspection, close up the voids in good order, using new gaskets. Clean seating flange prior to closure.
- E. All hatches shall be externally sealed with a marine grade silicone sealant after close out. DO NOT seal hatches to the ballast compartments (Voids A, B, C, and D).

### 5. FENDERS

- A. Procure and install up to 120 feet of fender rubber, to match existing, in lengths and locations as directed by the ODR; any new rubber not installed shall be turned over to the Owner. *Note that this material may be long lead time so it must be ordered in a timely manner to support installation at the repair facility.*
- B. Existing fasteners shall be cleaned and re-used. Galvanized coatings shall be touched up to the satisfaction of the ODR.
- C. Removed sections of rubber shall be salvaged, cut into lengths as directed by the ODR, and returned to the Owner. Salvaged fender rubber can be securely stowed on the Float for the return voyage to Vallejo. Any sections of removed fender rubber that are rejected by the ODR shall be properly disposed of by the Contractor.
- D. Provide and install two (2) new fenders on the west end of the Permanent Passenger Float to support docking of the WETA work skiff JULIA as follows.
  - 1. WETA will provide two (2) new fenders. Each fender will be constructed of 4"x2"x1/4" steel channel 34" long with 2" legs. Contractor shall weld the fenders to the side shell of the float on its off-shore end in locations directed by the ODR. Contractor shall also fabricate and weld two (2) triangular gussets to each fender to the float deck as directed by the ODR.

## 6. GATES & CARD READERS

- A. Remove and properly dispose of the roll up gate at the shore end of the Permanent Gangway in its entirety.
- B. Provide and install a new aluminum roll up gate at the shore end of the Permanent Gangway similar in design and operation to the gate located at the North Bay Operations and Maintenance Facility portal. Provide a custom fabricated COOKSON or equal roll up gate approximately 139" wide x 109" in height. Point of Contact is Jim Lawrence with The Door Company, Yuba City, CA phone (800) 537-5555.
- C. Remove and replace all existing card readers, push button controllers, and the enclosure for opening and closing the new roll up gate, in-kind. Interface the new card readers and push button controllers with the existing security access system, coordinate testing with the ODR. The new enclosure shall be stainless steel NEMA 4X.
- D. At the float end of the gangway repair the inner gate hinges per direction of the ODR.
- E. Following all work, test operation of all gates and components to the satisfaction of the ODR including the ability to manually raise and lower the aluminum roll up gate in the event of a loss of power, or failure of the card reader system.

## 7. FLOAT & GANGWAY PRESERVATION – SURFACE PREPARATION & PAINTING

- A. Topside Preservation – All steel structures (topside on the Float, and topside and underside of Gangway, including top side of both roofs, knees, void covers, railings, structures, et cetera) shall be mechanically or hand prepared, primed and painted. Apply one primer coat and one color coat, to match existing, to all metallic surfaces topside. In the way of all structural work and repairs, mechanically or hand prepare finished surfaces, prime and paint to match.
- B. (Bid Item 8A) Fresh Water Wash Float Hull – Immediately after drydocking the Float and Gangway, accomplish a rotary, high pressure fresh water wash (minimum 3500 PSI) to the entire hull from the main deck edge down. Include the chain pipes and cavities in their entirety, inside and out. The wash shall be accomplished in close proximity to the hull (twelve (12) inches) to insure salt contamination is removed from the hull. The wash shall leave no visible growth or residue after the hull dries from washing.
- C. (Bid Item 8A) Grit Blast Float Hull – Provide labor, material and equipment to grit blast areas of loose paint, marine growth, abrasion, and corrosion from the hull, main deck edge down. Feather all edges to achieve a smooth transition appearance. *NOTE: For cost estimate purposes, assume that 1,250 square feet (SF) of hull will require grit blasting to SSPC-SP-6, Commercial Blast Cleaning. The Shipyard shall use a blast media appropriate for steel. Upon completion of hull grit blasting, the Contract will be adjusted upward or downward to account for the actual scope of grit blasting authorized by the ODR.* On-site inspection of damaged paint areas by the shipyard, the INTERNATIONAL representative, and ODR shall establish which areas of the hull require will require further surface preparation. Shipyard shall be responsible for ensuring that all surfaces to be painted are properly prepared by whatever appropriate means as agreed upon by all parties.
- D. (Bid Item 8A) Painting of Float Hull, Anti-Corrosion Coating – Furnish and apply anti-corrosion coatings in accordance with Reference (c). *NOTE: For cost estimate purposes, assume that 1,250 square feet (SF) of hull will require anti-corrosion coating. The Contract will be adjusted upward or downward to account for the actual scope authorized by the ODR per the bid sheet.*

- E. (Bid Item 8A) Painting of Float Hull, Anti-Fouling – From the main deck edge down and including all areas of the chain pipes, furnish and apply anti-fouling coatings in accordance with Reference (b).
- F. Thoroughly blast to bare metal (SSPC-SP10) and paint all metal surfaces of the gangway once the passenger loading Float and Gangway have been removed. Final color to match existing.
- G. Preparation and painting shall include all steel components that compromise the mounting of the gangway to the pile cap foundation at the land side end of the gangway; and all steel components that compromise the mounting of the gangway to the Float and Gangway at the water side end of the gangway.
- H. Carefully and completely mask off and protect all existing equipment and appurtenances such as light fixtures, security grilles, electrical boxes, signage, et cetera from contamination.
- I. Paint roof panels of Permanent Passenger Float to match the existing color on the Permanent Gangway roof panels.
- J. Quality of surface preparation and painting shall be to the satisfaction of the ODR.

#### **8. HYDRAULIC COMPONENT REPLACEMENT**

- A. Perform a complete rebuild of two (2) hydraulic lift cylinders for the existing adjustable boarding platform. Drain existing fluid completely, flush, and the refill system with vegetable-based, environmentally friendly hydraulic oil. Ensure new seals, O-rings, and all other systems are compatible with the new hydraulic oil.
- B. Replace all four (4) sheaves, mechanical linkages related to platform lift mechanisms, and locking pawls with new. Sheaves and brackets shall be stainless steel. Install new sheaves and brackets above concrete deck level and adjust linkages as necessary. Mechanically prepare the steel containment deck pan below the existing adjustable platform and apply two coats of INTERNATIONAL Innershield 300V in contrasting colors. After paint is fully cured pour concrete in the deck pan up to the level on the surrounding concrete deck and finish with broom texture.
- C. The system shall be completely commissioned and tested to prove safe and proper operation prior to transportation back to Vallejo.

#### **9. NON-SKID**

- A. Prepare and renew the non-skid paint systems on the top surface of all horizontal bracing installed between fender knees, and on all passenger walking areas, to match existing.

#### **10. RENEW GANGWAY ELASTOMERIC BEARINGS**

- A. Remove and dispose of all elastomeric vertical and longitudinal bearing assemblies and prepare associated metal surfaces by blasting to near-white steel (SSPC-SP10).
- B. Following removal and cleaning of all blast media, paint all prepared surfaces with two (2) coats of INTERNATIONAL Innershield 300V in contrasting colors for each coat. Third top coat shall be INTERNATIONAL Innershield 900HS epoxy (in gray to match existing gangway color). All per paint manufacturer's specifications including DFT and cure times.
- C. Procure and install all new elastomeric vertical and longitudinal bearing assemblies in accordance with the specifications and procedures per Sheet S5 of Reference (d). Provide all new fasteners.

- D. Prepare and paint steel components of the bearing assemblies and the fasteners following re-installation. DO NOT paint the rubber elements of the bearing assemblies.
- E. Renew the steel mounting plates for the elastomeric bearings on the concrete pile bent at the shore end of the gangway.
- F. WETA will provide as Owner Furnished Equipment two (2) new vertical elastomeric bearings for the Float end of the gangway. The newer horizontal bearing at the Float end of the gangway may be re-used. The Contractor shall provide all others, four (4) total comprised of two (2) verticals at the Shore end of the gangway, one (1) horizontal at the Shore end of the gangway, and one (1) horizontal at the Float end of the gangway.

#### **11. THREE NEW ADJUSTABLE TRANSFER PLATFORM EXTENSION RAMPS**

- A. Demolish three (3) existing fixed transfer platform extension ramps designated as Platform 1, Platform 2, and Platform 3 on Reference (e). Surface prepare, prime, and paint disturbed metal surfaces to match in accordance with Section 6.
- B. Perform final design and engineering, then procure and install three (3) new aluminum electrically adjustable transfer platform extensions [[TOPPER INDUSTRIES sketched to be provided via an Addendum to the IFB]] at these same locations capable of fifteen inches (15") of vertical adjustment, thirteen inches (13") in the up direction from level and two inches (2") down from level. See Reference (f).
- C. New platform extensions shall be compatible with existing transfer spans and operational rigging for personnel safety.
- D. Hinge new aluminum adjustable transfer platform extensions on remaining steel structure following demolition and surface preparation/painting; use isolation materials to prevent dissimilar metal contact.
- E. Install foundations and other required structures to support the installation and operation of the new adjustable transfer platform extension ramps.
- F. Install a 36" vertical 8" D-rubber fender and foundation to replace the 6" D-rubber fender that is attached to the old fixed Platform 1 (southeastern most). The new fender and support structure shall be installed next to the new adjustable platform (not attached to it) at the same elevation as the old 6"D-rubber fender, with its own supporting structure capable of withstanding occasional incidental contact by vessels.
- G. Provide all required electrical components to support installation and operation of adjustable transfer platform extension ramps. Install control buttons for each ramp in a weathertight enclosure in a location determined by the ODR.
- H. Test new adjustable transfer platform extension ramps to prove proper and safe operation to the ODR.

#### **12. MISCELLANEOUS FLOAT WORK**

- A. Provide and install new stainless steel NEMA 4X electrical distribution and breaker boxes on the float along the southern side of the gangway to replace existing boxes as directed by the ODR. Remove and properly dispose of old and obsolete boxes. Remove and replace all electrical components and test for proper operation to the satisfaction of the ODR.
- B. Provide and install new CHEYENNE MANUFACTURING fiberglass boxes to replace existing fire station and life ring holders. Fire station box shall be 32" x 26" x 9".

- C. Remove and replace in-kind, the two (2) existing 100A / 240VAC SQUARE D shore power safety switches, in their entirety, that serve Berths A and B on the Permanent Passenger Float. New enclosures shall be NEMA 4X stainless steel and UL approved.
- D. Remove and replace in-kind all flexible electrical and electronics conduit between the seawall and the head of the gangway, use new stainless steel fittings and fasteners.
- E. Replace the existing Clipper electronics enclosure HOFFMAN box with a same size stainless steel NEMA 4X enclosure. Remove and reinstall all internal components; test functionality to the satisfaction of the ODR.
- F. Remove and replace the swim ladder on the west end of the float, including new foundation pads securing the ladder to the concrete deck. New ladder shall match the same dimensions and arrangement, and shall be fabricated from mild steel and hot-dipped galvanized.

### **13. LED LIGHTING REPLACEMENT**

- A. Procure and install 16 new LED lighting fixtures to replace existing, AZZ Inc. Model Number AVP-26L-U-HF-G-W-30, or approved equal. Reuse existing mounting boxes, or replace as required. Replace all non-functioning lamps testing all prior to replacement.
- B. Test lights upon return of the Float and Gangway to Vallejo following reinstallation of shore power.

### **14. PIPING SYSTEM REPLACEMENTS**

- A. Replace all existing flexible piping (hoses), fittings, valves, components, hangers, and hardware between the seawall and the head of the gangway, in-kind using NPT swaged threaded fittings in lieu of the existing barb-style fittings. Provide a new swivel-type connection on the sewage line at the seawall.
- B. Test new piping systems upon return of the Float and Gangway to Vallejo following reinstallation of utilities.

### **15. NEW PUBLIC ADDRESS WIRING & SPEAKERS**

- A. Remove existing public address (PA) speakers, wiring, and other old related equipment at the direction of the ODR.
- B. Provide and install new conduit, wireways, wiring, cable, PA components, connection boxes, as required on the Permanent Passenger Float and Gangway, and running to the Vallejo Ferry Terminal Ticket Office IT Room to support installation of a new PA system as follows:
- C. Owner will be installing an IP-based public address system on the float, gangway, and in the ferry building. Contractor shall furnish and install the following supporting communications infrastructure for this system:
  - 1. Fiber optic cable from the IT closet (behind ticket office in Vallejo Ferry Building) to communications panel at top of gangway. 6 or 12-strand OM3 multimode fiber optic cable, OSP rated and gel-filled. Terminate at a patch panel at both ends, LC connectors, label, test, and certify all strands at both ends.
  - 2. Cat6 Ethernet cable from the IT closet (behind ticket office in Vallejo Ferry Building) to communications panel at top of gangway. OSP rated and gel-filled. Terminate at a patch panel at both ends, label, test, and certify all strands at both ends.

3. Cat6 Ethernet cables from the communications panel at the top of the gangway to 6 owner-specified locations on the gangway and float (for public address speakers and microphones). Cable shall be OSP rated. Terminate (male RJ45 connectors on the equipment end; patch panel in the communications panel), label, test, and certify cables at both ends.
4. All cables shall be installed in Schedule 40 PVC conduit. Where sufficient capacity exists, contractor may use existing conduit in lieu of installing new conduit. Verify conduit system is properly sized for cables (minimum one inch). Terminate equipment cables in backboxes, locations will be specified by the ODR.

## **16. FINAL CLEANING**

- A. Following completion of all work and immediately prior to redelivery of the Float and Gangway to Vallejo, the entire Float and Gangway, including the roof tops shall be pressure washed and thoroughly cleaned to the satisfaction of the ODR.

## **17. MEASUREMENT AND PAYMENT**

- A. All compensation for furnishing all labor, materials, tools and incidentals for doing all work for this Section shall be paid for by the contract lump sum price for:
  1. Bid Item No. 3A, Handling and Coordination of Permanent Boarding Facility
  2. Bid Item No. 4A, Upgrades, Maintenance, and Repairs of Permanent Gangway
  3. Bid Item No. 5A, Upgrades, Maintenance, and Repair of Permanent Float (non-drydock items), and
  4. Bid Item No. 8A, if elected – Drydock Repairs to Permanent Passenger Float as detailed in this technical specification section.

**END OF SECTION & VOLUME 3**



**Attachment A**

**FLOATING PLANT AND MARINE ACTIVITIES**

**Attachment B**

**PERMITS**

**Attachment C**

**VALLEJO PERMANENT PASSENGER FLOAT DRYDOCK PLAN**

**Attachment D**

**VALLEJO TEMPORARY PASSENGER FLOAT AS-BUILT DRAWINGS**

**Attachment E**

**IFB 18-015: TERMINAL DREDGE PLANS  
FOR VALLEJO & SOUTH SAN FRANCISCO**

**Attachment F**

**PREVAILING WAGE DETERMINATION CA6**

**Attachment G**

**PREVAILING WAGE DETERMINATION CA9**

**END OF IFB DOCUMENTS**