

Division of Boating and Ocean Recreation

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF BOATING & OCEAN RECREATION  
ENGINEERING BRANCH  
Honolulu, Hawaii

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BOARD OF LAND AND NATURAL RESOURCES

Ryan K.P. Kanakaole  
Acting Chairperson

**CONTRACT SPECIFICATIONS AND PLANS**

Job No. B78CO71A  
Heeia Kea Small Boat Harbor Bulkhead Fender Repairs  
Kaneohe, Oahu, Hawaii

May 2026


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Approved:   
MEGHAN STATTS  
Administrator  
Division of Boating and Ocean Recreation

Approved:   
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Engineering Branch Head  
Division of Boating and Ocean Recreation

May 2026

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**NOTICE TO BIDDERS**

(Chapter 103D, HRS)

COMPETITIVE SEALED BIDS for **Job No. B78CO71A, Heeia Kea Small Boat Harbor Bulkhead Fender Repairs, Kaneohe, Oahu, Hawaii**, shall be submitted to the Department of Land and Natural Resources, Division of Boating and Ocean Recreation, Engineering Branch, on the specified date and time through the State of Hawaii e-Procurement System (HiePRO).

The Department of Land and Natural Resources Interim General Condition, dated October 1994, as amended is available on request; and the General Conditions –AG008, latest revision shall be made a part of the specifications. Electronic copies of the General Conditions is available on the HiePRO site.

The project is located at Heeia Kea Small Boat Harbor, Kaneohe, Oahu, Hawaii.

The purpose of this Invitation for Bids (IFB) is to award to a Contractor work that shall generally consist of obtaining all required permits, removal of existing deteriorated bulkhead fenders, bull rails, and cleats; installation of a new plastic lumber fender system; installation of new bull rails, mooring cleats, and anchoring hardware; and appurtenant work as shown in the plans and in accordance with the project specifications.

Due to the nature of work contemplated, bidders must possess a valid State Contractor’s license, Classification “A”.

The estimated cost of construction is \$750,000

As a condition for award of the contract and final payment, the vendor shall provide proof of compliance with the requirements of 103D-310(c) HRS. Proof of compliance/documentation is obtained through Hawaii Compliance Express (HCE). Vendors shall register in Hawaii Compliance Express (HCE), a program separate from HiePRO. The annual subscription fee to utilize the HCE service is currently \$12.00. Allow 2 weeks to obtain complete compliance status after initial registration. It is highly recommended that vendors subscribe to HCE prior to responding to a solicitation. The vendor is responsible for maintaining compliance. If the vendor does not maintain timely compliance in HCE, an offer otherwise deemed responsive and responsible may not be awarded.

The award of the contract, if it be awarded, will be subject to the availability of funds.

The Engineering Branch Head is responsible for administering and overseeing the Contract, including monitoring and assessing contractor performance.

The project is subject to preference for Hawaii Products established by Section 103D, Hawaii Revised Statutes. The Hawaii Product List may be examined at the State Procurement Office.

Should there be any questions, please use the question and answer section of the HiePRO solicitation.

# INFORMATION AND INSTRUCTIONS TO BIDDERS

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## INFORMATION AND INSTRUCTIONS TO BIDDERS

- A. PROJECT LOCATION AND SCOPE OF WORK: The project location and scope of work shall be as generally described in the Notice to Bidders.
- B. PROPOSALS: **Bidders shall submit their bid, including the completed proposal form, bid bond, and any other documents required by the solicitation as part of their bid through the State of Hawaii e-Procurement System (HIePRO). See D. PROPOSAL FORM**
- C. GENERAL CONDITIONS: The Department of Land and Natural Resources Interim General Conditions dated October 1994, as amended, shall be made a part of these contract specifications and are referred to hereafter as the General Conditions.
- D. PROPOSAL FORM: **The Bidders shall fill out and upload the electronic copy of the proposal form to the HIePRO website when submitting the bid. Bid Proposals shall not be mailed, faxed or delivered to the State, unless requested to do so after the designated closing date. The successful Bidder shall fill out and print a hard copy of the proposal form, sign and submit the form with the contract award package.**
- E. OMISSIONS OR ERASURES: Any proposal which contains any omission or erasure or alteration not properly initialed, or conditional bid, or other irregularity may be rejected by the Board of Land and Natural Resources (Board).
- F. NOTICE OF INTENT TO BID AND QUESTIONNAIRE:  
A Notice of Intent to Bid is not required for this project. In compliance with HRS Section 103D-310, the lowest responsive and responsible bidder may be required to complete a questionnaire. When required, the completed questionnaire shall be submitted to the Chief Engineer for evaluation. Failure to furnish the requested information within the time allowed may be grounds for a determination of non-responsibility, in accordance with HRS Section 103D-310 and HAR Section 3-122-108.
- G. BID SECURITY: A bid security will be furnished by each bidder as provided in sub-section 2.7 of the General Conditions. The successful bidder's bid security will be retained until Contract execution and furnished a performance and payment bond in an amount equal to one hundred percent (100%) of the total Contract price, including an amount estimated to be required for extra work, is furnished. **No bid security is required for bids less than \$50,000.**
- The Board reserves the right to hold the bid securities of the four lowest bidders until the successful bidder has entered into a contract and has furnished the required performance bond. All bid securities will be returned in accordance with sub-section 3.5 of the General Conditions.
- Should the successful bidder fail to enter into a contract and furnish a satisfactory performance bond within the time stated in the proposal, the bid security shall be forfeited as required by law.
- H. CONTRACTOR'S LICENSE REQUIRED: The Board will reject all bids received from contractors who have not been licensed by the State Contractors License Board in accordance with Chapter 444,

HRS; Title 16, Chapter 77, Hawaii Administrative Rules; and statutes amendatory thereto. This project will require a Class “A” contractor’s license.

- I. IRREGULAR BIDS: No irregular bids or propositions for doing the work will be considered by the Board.
- J. WITHDRAWAL OF BIDS: No bidder may withdraw his bid between the time of the opening thereof and the award of contract.
- K. SUCCESSFUL BIDDER TO FILE PERFORMANCE AND PAYMENT BONDS: The successful bidder will be required to file performance and payment bonds each; in the amount equal to the total contract price, including amounts estimated to be required for extra work, as provided in sub-section 3.6 of the General Conditions. **Performance and payment bonds are not required for bids less than \$50,000.**
- L. NUMBER OF EXECUTED ORIGINAL COUNTERPARTS OF CONTRACT DOCUMENTS: If requested by the Board, six copies of the Contract, performance and payment bonds shall be executed. **For contracts less than \$50,000, the State reserves the right to contract the work under a purchase order.**
- M. CHANGE ORDERS: No work of any kind in connection with the work covered by the plans and specifications shall be considered as change order work, or entitle the Contractor to extra compensation, except when the work has been ordered in writing by the Chief Engineer (Engineer) and in accordance with sub-section 4.2 of the General Conditions.

The Contractor shall clearly identify and inform the Engineer in writing of any deviations from the contract documents at the time of submission and shall obtain the Engineer's written approval to the specified deviation prior to proceeding with any work.

- N. WAGES AND HOURS: In accordance with sub-sections 7.3 to 7.9 of the General Conditions relative to hours of labor, minimum wages and overtime pay, the current minimum wage rates promulgated by the Department of Labor and Industrial Relations (DLIR) shall be paid to the various classes of laborers and mechanics engaged in the performance of this contract on the job site. The minimum wages shall be increased during the performance of the contract in an amount equal to the increase in the prevailing wages for those kinds of work as periodically determined by the DLIR.

The Department of Land and Natural Resources will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the said minimum wage rates. The possibility of wage increase is one of the elements to be considered by the Contractor in determining his bid, and will not, under any circumstances, be considered as the basis of a claim against the Department under this Contract.

No work shall be done on Saturdays, Sundays, legal State holidays, and/or in excess of eight (8) hours each day without the written consent of the Engineer. Should permission be granted to work at such times, the Contractor shall pay for all inspection administrative costs thereof. No work shall be done at night unless authorized by the Engineer.

- O. PERMITS: The Contractor shall procure all required project permits and pay the required fees, including hiring consultants and payment there to for services related to obtaining required permits if required. In all cases, the Contractor shall give all notices necessary and incident to the due and lawful prosecution of the work.
- P. PROPERTY DAMAGE: It shall be the responsibility of the contractor to respect State property and to prevent damage to existing improvements. The Contractor will be responsible for damages resulting from construction operations. Immediately upon discovery, the Contractor shall repair such damage to the satisfaction of the Engineer.

All trees and shrubbery outside the excavation, embankment or construction limits shall be fully protected from injury.

- Q. TIME: The time of completion is specified in the Proposal. It is the Board's intention to insist the Contractor diligently prosecute the work to completion within the specified time.

Prospective bidders are reminded that the State has the option to proceed with or abandon a project depending on whether the project can be completed for occupancy in the specified time.

It is the bidder's responsibility to check the availability of all materials before bidding. The bidder shall select sub-contractors and suppliers who can warrant availability and delivery of all specified or qualified materials to assure project completion within the specified time.

The successful bidder must assume all risks for completing the project by the specified date. There shall be no extension of time for any reason except for delays caused by acts of God, labor disputes involving unions, or actions of the State. If for any reason the project falls behind schedule, the Contractor shall at its own cost, take necessary remedial measures to get the project back on schedule, i.e., working overtime, air freighting all materials, etc. In addition, if the Contractor fails to fully complete the project by the completion date, Contractor will be required to make the facility usable at its own cost.

- R. BIDDER'S RESPONSIBILITY TO PROVIDE PROPER SUPERINTENDENCE: The successful low bidder shall designate in writing to the Engineer the name of its authorized superintendent (Superintendent), who will be present at the job site whenever any work is in progress. The Superintendent shall be responsible for all work, receiving and implementing instructions from the Engineer in a timely manner. The cost for superintendence shall be considered incidental to the project.

If the Superintendent is not present at the site of work, the Engineer shall have the right to suspend the work as described under sub-section 5.5 c. and 7.20 - Suspension of Work of the General Conditions.

- S. LIQUIDATED DAMAGES: Liquidated damages in the amount specified in the Proposal will be assessed for each and every calendar day from and after the expiration of the time period stated in the Contract for the completion of the project.

- T. HIRING OF HAWAII RESIDENTS: The Contractor shall hire local labor whenever practicable.
- U. WATER AND ELECTRICITY: The Contractor shall make all necessary arrangements and pay all expenses for water and electricity used in the construction of this project.
- V. PUBLIC CONVENIENCE AND SAFETY: The Contractor shall conduct construction operations with due regard to the convenience and safety of the public at all times. No materials or equipment shall be stored where it will interfere with the safe passage of public traffic. The Contractor shall provide, install, and maintain in satisfactory condition, all necessary signs, flares and other protective facilities and shall take all necessary precautions for the protection of the work and the convenience and safety of the public. The Engineer shall have the right to suspend the performance of the work in accordance with sub-section 7.20 - Suspension of Work of the General Conditions.
- W. WORK TO BE DONE WITHOUT DIRECT PAYMENT: Whenever the contract that the Contractor is to perform work or furnish materials of any kind for which no price is fixed in the contract, it shall be understood that the Contractor shall perform such work or furnish said materials without extra charge or allowance or direct payment of any sort. The cost of performing such work or furnishing said material is to be included by the Contractor in a unit price for the appropriate item unless it is expressly specified that such work or material is to be paid for as extra work.
- X. AS-BUILT DRAWINGS: As-built drawings, the intent of which is to record the actual in- place construction so that any future renovations or tie-ins can be anticipated accurately, shall be required. All authorizations given by the Engineer to deviate from the plans shall be drawn on the job site plans. All deviations from alignments, elevations and dimensions which are stipulated on the plans shall be recorded on the as-built drawings. Final as-built drawings shall be submitted to the Engineer for review and approval. After the Engineer approves the as-built drawings, the contractor shall submit an electronic copy in Adobe PDF format on CD ROM.
- Y. ASBESTOS CONTAINING MATERIALS: The use of asbestos containing materials or equipment is prohibited. The Contractor shall insure that all materials and equipment incorporated in the project are asbestos-free.
- Z. WORKER SAFETY: The Contractor shall provide, install and maintain in satisfactory condition all necessary protective facilities and shall take all necessary precautions for the protection and safety of its workers in accordance with the Occupational Safety and Health Standards for the State of Hawaii. The Engineer shall have the right to suspend the performance of the work in accordance with sub-section 7.20 - Suspension of Work of the General Conditions.
- AA. TOILET FACILITIES: All toilet facilities constructed at the project site shall be in accordance with the Public Health Regulations of the State Department of Health (DOH). All necessary precautions shall be observed at the project site. The use of sanitary facilities shall be strictly enforced and workers violating these provisions shall be promptly discharged.
- BB. SIGNS: Whenever the project involves closing or obstructing any public thoroughfare, the Contractor shall provide traffic signs conforming to the applicable provisions of the current edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", published by the

Federal Highway Administration as directed by the Engineer for the purpose of diverting or warning traffic prior to the construction area. All traffic signs shall bear proper wording stating thereon the necessary information as to diverting or warning traffic. **A project sign is not required for this project.**

CC. FIELD OFFICE AREA FOR DEPARTMENT: **Not required for this project.**

DD. QUANTITIES: All bids will be compared on the basis of quantities of work to be done as shown in the Proposal; the quantities shown in the Unit Price items are estimated, being given as a basis for comparison of bids. The Board reserves the right to increase or decrease the quantities given under the items or delete items entirely as may be required during the progress of the work.

EE. OTHER HEALTH MEASURES: Forms of work site exposure or conditions which may be detrimental to the health or welfare of workers or of the general public shall be eliminated or reduced to safe levels as required by the DOH codes, standards, and regulations. Suitable first aid kits and a person qualified to render first aid, as specified in the DOH regulations, shall be provided at all times when work is scheduled.

FF. HAWAII BUSINESS OR COMPLIANT NON-HAWAII BUSINESS REQUIREMENT: Bidders (Contractors) shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract, as stipulated in §3-122-112 HAR.

GG. COMPLIANCE WITH §3-122-112 HAR:

As a condition for award of the contract, the contractor shall be in compliance with the following requirements:

A. **TAX CLEARANCE REQUIREMENTS (HRS Chapter 237):** Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by the Department.

B. Department of Labor (DLIR) “**Certificate of Compliance**”. (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers’ Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by the Department.

C. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) “**Certificate of Good Standing**”. Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue; certificates must be valid on the date received by the Department.

## **COMPLIANCE, DOCUMENTATION AND HAWAII COMPLIANCE EXPRESS**

As a condition for award of the contract and as proof of compliance the following requirements of 103D-310(c) HRS:

Vendors are required to be compliant with all applicable state and federal statutes. Proof of compliance (compliance documentation) is required. See the HiePRO Buyer FAQ on the State Procurement website for more information.

Proof of compliance/documentation is obtained through Hawaii Compliance Express (HCE). Vendors shall register in Hawaii Compliance Express (HCE), a program separate from HiePRO. The annual subscription fee to utilize the HCE service is currently \$12.00. Allow 2 weeks to obtain complete compliance status after initial registration. It is highly recommended that vendors subscribe to HCE prior to responding to a solicitation.

The vendor is responsible for maintaining compliance. If the vendor does not maintain timely compliance in HCE, an offer otherwise deemed responsive and responsible may not be awarded.

## SPECIAL PROVISIONS

Amend INTERIM GENERAL CONDITIONS, dated October 1994, as follows:

### Section 2 – Proposal Requirements and Conditions

1. **AMEND** Section 2.1 Qualification of Bidder with the following:

Written Notice of Intent to Bid or Offer: A written Notice of Intent to Bid is not required for the Solicitation.

Standard Qualification Questionnaire: Bidders may be required to complete a standard qualifications questionnaire. When requested, the information shall be furnished within two working days or longer at the discretion of the Engineer. Failure to furnish the requested information within the time allowed may be grounds for a determination of non-responsibility, in accordance with HRS Section 103D-310 and HAR Section 3-122-108.

Hawaii Business or Compliant Non-Hawaii Business Requirement: Bidders shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract, as stipulated in §3-122-112 HAR. A certified letter is not required prior to bid opening.

Compliance with §3-122-112 HAR: As a condition for award of the contract and as proof of compliance with the requirements of 103D-310(c) HRS, the apparent low bidder shall furnish the required documents to the Department. If the valid required certificates are not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. Bidder is responsible to apply for and submit the following documents to the Department.

- A. Tax Clearance (HRS Chapter 237): Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by the Department.
- B. Department of Labor (DLIR) “Certificate of Compliance”. (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers’ Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by the Department.
- C. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) “Certificate of Good Standing”. Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue; certificates must be valid on the date received by the Department.

**Hawaii Compliance Express.** Alternately, instead of separately applying for these certificates at the various state agencies, bidder may choose to use the Hawaii Compliance Express (HCE), which allows businesses to register online through a simple wizard interface at <http://vendors.ehawaii.gov> to acquire a “Certificate of Vendor compliance” indicating that bidder’s status is compliant with requirements of §103D-310(c), HRS, shall be accepted for contracting and final payment purposes.

Bidders that elect to use the new HCE services will be required to pay an annual fee of \$12.00 to the Hawaii Information Consortium, LLC (HIC). Bidders choosing not to participate in the HCE program will be required to provide the paper certificates as instructed in the previous paragraphs.

2. **ADD** Section 2.4a, Pre-Bid Conferences

Required Pre-bid Conferences: For construction and design-build projects with an estimated value of \$500,000 or more and solicited under the competitive sealed bid method (103D-302 HRS); and for construction and design-build projects with an estimated value of \$100,000 or more and solicited under the competitive sealed proposal method (103D-303 HRS); a pre-bid conference is required.

Other Pre-Bid Conferences: The Department may require a pre-bid conference for construction or design-build projects that are below the dollar threshold listed in above or when projects have special or unusual requirements.

Other Conditions: The Department may require the prospective Bidders to make a physical inspection of the project site and make attendance at the pre-bid conference a condition for submitting an offer.

Nothing stated at the pre-bid conference shall change the solicitation unless a change is made by written addendum.

3. **DELETE** Section 2.5, Addenda and Interpretations, in its entirety and replace with the following:

“Discrepancies, omissions, or doubts as to the meaning of drawings and specifications should be communicated using the question and answer section on the HIePRO solicitation for interpretation and must be received in the time frame set in the HIePRO solicitation. Any interpretation, if made and any supplemental instructions will be in the form of written addenda to the plans and specifications and made available prior to the offer due date. It shall be the prospective bidder’s sole responsibility to verify and obtain any said addenda. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.”

**Section 3 – Award and Execution of Contract**

1. **AMEND** Section 3.3, Award of Contract, by deleting “sixty (60)” and replacing with “ninety (90)” in the first paragraph.

2. **AMEND** Section 3.3, Award of Contract, by adding the following after the first paragraph:

“If the contract is not awarded within the ninety (90) days, the Department may request the successful Bidder to extend the time for the acceptance of its bid. The Bidder may reject such a request without penalty; and in such case, the Department may at its sole discretion make a similar offer to the next lowest responsive and responsible bidder and so on until a bid is duly accepted or until the Department elects to stop making such requests.”

3. **AMEND** Section 3.9, Notice to Proceed, by replacing the last paragraph with the following:

“In the event the Notice to Proceed is not issued within three hundred and sixty-five (365) days after the date of bid opening, the Contractor may submit a claim for increased labor and materials costs (but not overhead costs) that will be incurred after 365 days after the date of bid opening plus the contract time allowed for performance of the work. Such claims shall be accompanied with the necessary documentation to justify the claim. No payments will be made for escalation costs that are not fully justified as determined by the State.”

4. **ADD** Section 3.10, Protests:

**“3.10 PROTESTS**—Pursuant to Section 103D-701, Hawaii Revised Statutes, an actual or prospective offeror who is aggrieved in connection with the solicitation or award may submit a protest. Any protest shall be submitting in writing to the Chairperson, Department of Land and Natural Resources, 1151 Punchbowl Street, Honolulu, Hawaii 96813, or designee as specified in the solicitation.

A protest shall be submitted in writing within five (5) working days after the aggrieved person knows or should have known the facts giving rise thereto, provided that a protest based upon the content of the solicitation shall be submitted in writing prior to the date set for receipt of offers. Further provided that a protest of an award or proposed award shall be submitted within five (5) working days after the posting of the award of the contract.

The notice of award, if any, resulting from this solicitation shall be posted on the HIEPRO website.”

### **Section 5 – Control of Work**

**AMEND** Section 5.8 Value Engineering Incentive by deleting “\$100,000” and replacing with “\$250,000” in the first paragraph.

### **Section 6 – Substitution of Materials and Equipment**

**ADD** the following to Section 6.3 Sub-paragraph b:

“4. If the substitution meets all the requirements of the specifications and plans.”

### **Section 7 – Prosecution and Progress**

1. **DELETE** Section 7.2d in its entirety and replace with the following:

#### **“d. INSURANCE REQUIREMENTS**

1. **Obligation of Contractor** - Contractor shall not commence any work until it obtains, at its own expense, all required herein insurance. Such insurance must have the approval of the Department as to limit, form and amount and must be maintained with a company authorized by laws of the State to issue such insurance in the State of Hawaii. Coverage by a “Non- Admitted” carrier is permissible provided the carrier has a AM Best’s Rating of “A-VII” or better.

2. All insurance described herein will be maintained by the Contractor for the full period of the contract and in no event will be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the Department.
3. Certificate(s) of Insurance acceptable to the Department shall be filed with the Engineer prior to commencement of the work. Certificates shall identify if the insurance company is a “captive” insurance company or a “Non-Admitted” carrier to the State of Hawaii. The Best’s Rating must be stated for the “Non-Admitted” carrier. Certificates shall contain a provision that coverages afforded under the policies will not be canceled or changed until at least thirty (30) days written notice has been given to the Engineer by registered mail. The insurance policies shall name the State of Hawaii, its officers and employees as an additional insured and such coverage shall be noted on the certificate. Should any policy be canceled before final acceptance of the work by the Department, and the Contractor fails to immediately procure replacement insurance as specified, the Department, in addition to all other remedies it may have for such breach, reserves the right to procure such insurance and deduct the cost thereof from any money due to the Contractor.
4. Nothing contained in these insurance requirements is to be construed as limiting the extent of Contractor’s responsibility for payment of damages resulting from its operations under this contract, including the Contractor’s obligation to pay liquidated damages, nor shall it affect the Contractor’s separate and independent duty to defend, indemnify and hold the Department harmless pursuant to other provisions of this contract. In no instance will the Department’s exercise of an option to occupy and use completed portions of the work relieve the Contractor of its obligation to maintain the required insurance until the date of final acceptance of the work.
5. All insurance described herein shall cover the insured for all work to be performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including traffic detour work or other work performed outside the work area, and all change order work.
6. The Contractor shall, from time to time, furnish the Engineer, when requested, satisfactory proof of coverage of each type of insurance required or a copy of the actual policies covering the work. Failure to comply with the Engineer’s request may result in suspension of the work and shall be sufficient grounds to withhold future payments due the Contractor and to terminate the contract for Contractor’s default.
7. If the Contractor is self-insured, it shall furnish, upon the request and the satisfaction of the Engineer, any documentation to demonstrate the ability to self-insure itself. The Engineer, from time to time, can conduct an audit to determine the ability of the Contractor to be self-insured. Failure to comply with the Engineer’s request will be considered a material breach of the contract, and at the discretion of the Engineer, may be sufficient grounds to terminate the contract, suspend any work or withhold future payments.
8. It is the responsibility of the Contractor to notify the Department of any changes to its insurance policies or if the Contractor receives a notice of cancellation of any of its insurance policies. The Contractor will immediately provide written notice to the

Department should the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed upon expiration.

9. In addition, the Contractor's insurance policies shall contain the following clauses:
  - (a) The State of Hawaii is added as an additional insured with respect to operations performed for the State of Hawaii.
  - (b) It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy.
  
10. **Types of Insurance** - The Contractor shall purchase and maintain insurance described below which shall provide coverage against claims arising out of the Contractor's operations under the contract, whether such operations be by the Contractor itself or by the subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.
  - (a) **Worker's Compensation.** The Contractor and all subcontractors shall obtain worker's compensation insurance for all persons whom they employ or may employ in carrying out the work under this contract. This insurance shall be in strict conformity with the requirements of the most current and applicable State of Hawaii Worker's Compensation Insurance laws in effect on the date of the execution of this contract and as modified during the duration of the contract.
  - (b) **Commercial General Liability.** The Contractor shall obtain General Liability insurance with a limit of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate. The commercial general liability insurance shall include the State as an additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.
  - (c) **Comprehensive Automobile Liability.** The Contractor shall obtain Auto Liability insurance covering all owned, non-owned and hired autos with a combined single Limit of not less than \$1,000,000 per accident for bodily injury and property damage. The State shall be named as additional insured. The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

Furthermore, the Contractor's commercial general liability insurance and automobile liability insurance shall include coverage for bodily injury, sickness, disease or death of any person, arising directly or indirectly out of, or in connection with, the performance of work under this contract.

The Contractor's property damage liability insurance shall provide for all damages arising out of injury to or destruction of property of others including the Department's, arising directly or indirectly out of or in connection with the performance of the work under this contract including explosion or collapse.

The Contractor shall either:

- i. Require each of its subcontractors to procure and to maintain during the life of its subcontract, subcontractors' comprehensive general liability, automobile liability

and property damage liability insurance of the type and in the same amounts specified herein; or

- ii. Insure the activities of its subcontractors in its own policy.

The Contractor will be permitted, in cooperation with insurers, to maintain a self-insured retention for up to 25% of the per occurrence combined single limits of the commercial general liability and the automobile liability policies. The existence of the self-insured retention must be noted on the certificate of insurance coverage submitted to the Department or else it will be understood that the insurer is providing first dollar coverage for all claims. For all claims within the self-insured retention amount, the rights, duties and obligations between the Contractor and the Department shall be identical to that between a liability insurer and the Department, as an additional insured, as if there was no self-insured retention.

- (d) Builder's Risk Insurance. Unless included in the Specifications of this project, the Contractor shall not be required to provide builder's risk insurance. If required as noted in the Specifications, builder's risk insurance shall be provided during the progress of work and until final acceptance by the Department upon completion of the contract. It shall be "All Risk" (including but not limited to earthquake, windstorm and flood damage) completed value insurance coverage on all completed work and work in progress to the full replacement value thereof. Such insurance shall include the Department as additional name insured. The Contractor shall submit to the Engineer for its approval all items deemed to be uninsurable. The policy may provide for a deductible in an amount of up to 25% of the amount insured by the policy. With respect to all losses up to any deductible amount, the relationship between the Contractor and the Department shall be that of insurer and additional insured as if no deductible existed."

- 2. **DELETE** Section 7.16 in its entirety and replace with the following:

"RESPONSIBILITY FOR DAMAGE CLAIMS; INDEMNITY – The Contractor shall indemnify the State and the Department against all loss of or damage to the State's or the Department's existing property and facilities arising out of any act or omission committed in the performance of the work by the Contractor, any subcontractor or their employees and agents. Contractor shall defend, hold harmless and indemnify the Department and the State, their employees, officers and agents against all losses, claims, suits, liability and expense, including but not limited to attorneys' fees, arising out of injury to or death of persons (including employees of the State and the Department, the Contractor or any subcontractor) or damage to property resulting from or in connection with performance of the work and not caused solely by the negligence of the State or the Department, their agents, officers and employees. The State or the Department may participate in the defense of any claim or suit without relieving the Contractor of any obligation hereunder. The purchase of liability insurance shall not relieve the Contractor of the obligations described herein.

The Contractor agrees that it will not attempt to hold the State and its Departments and Agencies and their officers, representatives, employees or agents, liable or responsible for any losses or damages to third parties from the action of the elements, the nature of the work to be done under these specifications or from any unforeseen obstructions, acts of God, vandalism, fires or encumbrances which may be encountered in the prosecution of the work.

The Contractor shall pay all just claims for materials, supplies, tools, labor and other just claims against the Contractor or any subcontractor in connection with this contract and the surety bond will not be released by final acceptance and payment by the Department unless all such claims are paid or released. The Department may, but is not obligated to, withhold or retain as much of the monies due or to become due the Contractor under this contract considered necessary by the Engineer to cover such just claims until satisfactory proof of payment or the establishment of a payment plan is presented.

The Contractor shall defend, indemnify and hold harmless the State and its Departments and Agencies and their officers, representatives, employees or agents from all suits, actions or claims of any character brought on account of any claims or amounts arising or recovered under the Worker's Compensation Laws or any other law, by-law, ordinance, order or decree."

### **Section 8 – Measurement and Payment**

1. **DELETE** Section 8.7a in its entirety and replace with the following:

"a. Tax Clearances from the State of Hawaii Department of Taxation and Internal Revenue Service, subject to section 103D-328, HRS, current within two months of issuance date indicating that all delinquent taxes levied or accrued under State Statutes against the contractor have been paid."

2. **ADD** Section 8.7d, Certificate of Compliance:

"d. A Certification from the Contractor affirming that the Contractor has, as applicable, remained in compliance with all laws as required by Section 103D-310, HRS, and Section 3-122-112, HAR. A contractor making a false affirmation shall be suspended and may be debarred pursuant to section 103D-702, HRS.

1. Certification of Compliance for Final Payment, State Procurement Office Form-22. Must be Signed Original."

3. **ADD** Section 8.7e, Hawaii Compliance Express:

"e. In lieu of submitting the tax clearances from Taxation and IRS, and SPO Form -22, the Contractor may choose to use the Hawaii Compliance Express as described on page SP-1 of this Special Provisions."

# **TECHNICAL SPECIFICATIONS**

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## **SECTION 01019**

### **GENERAL SPECIFICATIONS**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

Work shall consist of furnishing all labor, tools, materials and equipment necessary and required to construct in place complete all work as indicated on the drawings and as specified herein.

##### **1.02 GENERAL**

- A. Construction Lines, Levels and Grades: The Contractor shall verify all lines, levels, and elevations indicated on the drawings before any clearing, excavation, demolition, or construction begins. Any discrepancy shall be immediately brought to the attention of the Engineer, and any change shall be made in accordance with the Engineer's instruction. The Contractor shall not be entitled to extra payment for failing to report the discrepancies before proceeding with any work whether the area affected or not.
- B. Examination of Premises: The Contractor shall contact the Engineer and obtain permission before visiting the site.
- C. Notices: The Contractor shall notify the Engineer and give at least three (3) working days' notice before starting any work.
- D. Disruption of Utility Services: All work related to the temporary disconnection of the electrical system shall be pre-arranged with the Engineer so that any disruption of such services will be kept to a minimum. In the event temporary power hook-up is required, the Contractor shall provide the necessary services.
- E. Contractor's Operations
  - 1. The Contractor must employ, insofar as possible, such methods and means of carrying out the work so as not to cause any interruption or interference to the facility's operations. Where the Contractor's operations would result in interruptions which would hamper the operations of the facilities, the Contractor shall rearrange the schedule of work accordingly.
  - 2. The Contractor shall always maintain safe passageway to and from the occupied slips and appurtenant facilities and other neighboring facilities for user agency personnel and the public.

3. Keep access roads to the project site free of dirt and debris. Provide, erect and maintain lights, barriers, signs, etc. when working on facility roads, driveways and walkways to protect pedestrians and moped/bicycle riders. Obey facility traffic and safety regulations.
4. All smoking and vaping activities within construction limits on all sites, indoor or outdoor, are prohibited. Violations will be considered a contractual noncompliance by the general contractor.

F. Contractor Use of Premises

1. The Contractor shall review any applicable asbestos survey reports and ensure that they fully understand their contents as to whether and where there may be asbestos containing materials (ACM) where they will be working.
2. The Contractor shall inform its employees, subcontractors and all other persons engaged in the project of the presence (as applicable) of asbestos at the job site in accordance with the requirements of Chapter 110, Article 12-110-2 (f) (1) (B) of the Occupational Safety and Health Standards, State of Hawaii.
3. In the event the Contractor, its subcontractor(s) and/or other persons engaged in the project must work in any building(s) on the site other than designated in the project, the Contractor shall request copies of the asbestos survey report(s) for the building(s) from the Engineer and notify all persons as indicated in Item 2 above.
4. When the project includes paint to be disturbed that was applied prior to 1980, it shall be assumed to contain lead. The Contractor shall inform its employees, subcontractors, and all other persons engaged in the project that lead containing paints are present at the job site and to follow the requirements of the Department of Labor and Industrial Relations, Division of Occupational Safety and Health, Title 12, Subtitle 8, Chapter 148, Lead Exposure in Construction, Hawaii Administrative Rules (Chapter 12-148, HAR).

G. Parking Policy for Contractor

1. The Contractor and its employees will not be allowed to park in zones assigned to facility personnel.
2. Areas to be used by the Contractor shall be as designated by the Engineer. Any areas damaged by the Contractor shall be restored as instructed by the Engineer at no cost to the State.

- H. Toilet Accommodations: The Contractor may use the existing toilet facilities if so designated by the Engineer however, it is the Contractor's responsibility to always keep same clean and in a sanitary condition.
- I. Protection of Property: The Contractor shall continually maintain adequate protection of all its work from damage and shall protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. The Contractor shall repair, replace or pay the expense of repair of damages resulting from its operations.
- J. Use of Power Driven Equipment: The Contractor is cautioned to take all necessary safety precautions to protect the facility personnel, and the public whenever power driven equipment is used.
- K. Safety: The Contractor shall carefully read and strictly comply with the requirements of the Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, as amended, is applicable and made a part of the Contract.
- L. Clean Up Premises: The Contractor shall clean up and remove from premises all debris accumulated from operations as necessary or as directed. See also Section 7.25 of the General Conditions.
- M. Responsibility
  - 1. The State will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the prime Contractor in matters pertaining to other trades employed on the job. The Contractor shall be responsible for coordinating the work of all trades on the job.
  - 2. Should the Contractor discover any discrepancy in the plans or specifications, the Contractor shall immediately notify the Engineer before proceeding any further with the work, otherwise, the Contractor will be held responsible for any cost involved in correction of work placed due to such discrepancy.
- N. Cooperation With Other Contractors: The State reserves the right at any time to contract for or otherwise perform other or additional work within the contract zone limits of this Contract. The Contractor of this project shall, to the extent ordered by the State, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by other contractors.
- O. Division of the Work: The Divisions and Sections into which these Specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to all work specified within each Section.

P. Drawings and Specifications

1. The Contractor shall not make alterations in the drawings and specifications. In the event the contractor discovers any errors or discrepancies, the Contractor shall immediately notify the Engineer in accordance with the General Conditions.
2. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the work.
3. Specifications and drawings are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as "the Contractor shall", "as shown on the drawings", "a", "an", and "the" are intentional. Omitted words and phrases shall be provided by inference to form complete sentences.

Q. Required Submittals

1. Required submittals as specified in the Technical Sections of these specifications include one or more of the following: Shop drawings; color samples; material samples; technical data; schedules of materials; schedules of operations; guarantees; operating and maintenance manuals; and as-built drawings.
2. The Contractor shall make a comprehensive list of the required submittals, by Specification Section, and submit this list to the Engineer within 15 days after notice to proceed.
3. As-Built Drawings: When as-built drawings are required for submittal, the following shall apply:
  - a) As-built drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be required.
  - b) All deviations from alignments, elevations and dimensions which are stipulated on the plans shall be recorded in red on the as-built drawings.
  - c) The following procedure shall be followed:
    - 1) Immediately after these changes are constructed in place, the Contractor shall record them on the field office plans.
    - 2) Within two weeks after final inspection of the project, the Contractor shall transfer the changes marked on the field office

plans onto a clean copy of plans using a red pencil. Any deletions shall be so noted and redrawn as necessary. The Contractor shall stamp or mark the tracings "AS-BUILT", and also sign and date each drawing so marked.

- 3) The Contractor shall submit the as-built drawings together with the marked-up field office plans to the Engineer.
- 4) Any as-built drawing which the Engineer determines does not accurately record the deviation shall be corrected by the State, and the Contractor shall be charged for the services.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 01300**

### **SUBMITTALS**

#### **PART 1 - GENERAL**

##### **1.01 SUMMARY**

- A. Shop drawings shall be required for:
  - 1. Reinforced Plastic Lumber Fendering
  - 2. Marine Hardware
  - 3. Any other as called for in the plans, specifications, or by the Engineer.
  
- B. Other required submittals shall include:
  - 1. Contractor's Key Personnel & Emergency Contacts
  - 2. Project Schedule (Updated every two weeks)
  - 3. Best Management Practices
  - 4. Demolition & Removal Procedures
  - 5. Manufacturer's catalog data, certificates of compliance, and installation instructions and details for products and materials
  - 6. Certificates of Warranty or Manufacturer's Warranty Documentation
  - 7. Any other as called for in the plans, specifications, or by the Engineer.

##### **1.02 BIDDER'S SPECIAL RESPONSIBILITY FOR COORDINATION CONTRACTUAL WORK AND SUBMITTALS:**

- A. The Contractor is responsible for the coordination of all contractual work and submittals.

B. The Contractor shall have a rubber stamp made up in the following format:

CONTRACTOR NAME

PROJECT: \_\_\_\_\_  
\_\_\_\_\_

JOB NO: \_\_\_\_\_  
\_\_\_\_\_

THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF AND WILL INTEGRATE THIS SUBMITTAL INTO THEIR OWN WORK

DATE RECEIVED \_\_\_\_\_

SPECIFICATION SECTION \_\_\_\_\_

SPECIFICATION PARAGRAPH \_\_\_\_\_

DRAWING NUMBER \_\_\_\_\_

SUBCONTRACTOR NAME \_\_\_\_\_

SUPPLIER NAME \_\_\_\_\_

MANUFACTURER NAME \_\_\_\_\_

CERTIFIED BY: \_\_\_\_\_

- C. This stamp, "filled in," should appear on the title sheet of each shop drawing on a cover sheet of submittals in an 8-1/2" x 11" format, or on the face of a cardstock tag (min. 3" x 6") tied to each sample. The tag on the samples should state what the sample is so that, if the tag is accidentally separated from the sample, it can be matched up again. The back of this tag will be used by the Engineer for his receipt, review, and log stamp and for any comments that relate to the sample.
- D. All submittals for material, equipment, and shop drawings listed in the contract documents, including dimensioned plumbing shop drawings, shall be required and shall be reviewed by the Engineer, prior to any ordering of materials and equipment.
- E. Unless otherwise noted, the Contractor shall submit to the engineer for his review eight (8) copies of all shop drawings, piping layout, and/or catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for the construction. Drawings shall be submitted in sufficient time to allow the Engineer not less than twenty (20) regular working days for examining the drawings.

- F. The drawings shall be accurate, distinct, and complete and shall contain all required information, including satisfactory identification of items, units, and assemblies in relation to the contract drawings and specifications.
- G. Unless otherwise approved by the Engineer, shop drawings shall be submitted only by the Contractor, who shall indicate by a signed stamp on the drawings or other approved means that the Contractor has checked the shop drawings and that the work or equipment shown is in accordance with contract requirements and has been checked for dimensions and relationship with work of all other trades involved. All deviations from the plans and specifications shall be listed. The practice of submitting incomplete or unchecked shop drawings for the Engineer to correct or finish will not be acceptable, and shop drawings which, in the opinion of the Engineer, clearly indicate that they have not been checked by the Contractor will be considered as not complying with the intent of the contract documents and will be returned to the Contractor for resubmission in the proper form.
- H. When the shop drawings have been reviewed by the engineer, two (2) sets of submittals will be returned to the Contractor appropriately stamped. If major changes or corrections are necessary, the drawings may be rejected and one set will be returned to the Contractor with such changes or corrections indicated, and the Contractor shall correct and resubmit eight (8) copies of the drawings, unless otherwise directed by the Engineer. No changes shall be made by the Contractor to the resubmitted shop drawings other than those changes indicated by the Engineer. The resubmittal shall be indicated on the shop drawings.
- I. The review of such drawings and catalog cuts by the Engineer shall not relieve the Contractor from responsibility for correctness of the dimensions, fabrication details, and space requirements or for deviation from the contract drawings and specifications, unless the Contractor has called attention to such deviations, in writing, by a letter accompanying the drawings and the Engineer approved the change or deviations, in writing, at the time of submission; nor shall review by the Engineer relieve the Contractor from the responsibility for errors in the shop drawings. When the Contractor does call such deviations to the attention of the Engineer, they shall state in their letter whether or not such deviations involve any deduction or extra cost adjustment.
- J. The approval of the above drawings, lists, prints, specifications, or other data shall in no way release the Contractor from his responsibility for the proper fulfillment of the requirements of this contract nor for fulfilling the purpose of the installation nor from his liability to replace the same should it prove defective or fail to meet the specified requirements.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

**\*\*\* END OF SECTION \*\*\***

Submittals

01300-3

## **SECTION 01505**

### **MOBILIZATION AND DEMOBILIZATION**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

- A. This section covers the requirements for mobilization and demobilization.

##### **1.02 MOBILIZATION**

Mobilization shall consist of the transporting, assembling, constructing, installing, and making ready for use at the job site, all the equipment, machinery, structures, utilities, materials, labor, and incidentals necessary to do the work covered by this contract.

Providing temporary barricades as required for Harbor operations during construction.

##### **1.03 DEMOBILIZATION**

Demobilization shall consist of the dismantling and removal of the above-mentioned equipment, machinery, structures, utilities, materials, and incidentals, and the cleaning up of the site.

#### **PART 2 - PRODUCTS (NOT USED)**

#### **PART 3 – EXECUTION**

##### **3.01 GUIDELINES**

If the Contractor utilizes private lands other than the sites provided by the Department for mobilization purposes, the provisions of this section shall apply, and the mobilization and demobilization work on said private lands shall be in accordance with the agreement between the Contractor and the landowner.

Any and all additional mobilization or demobilization costs in excess of the maximum amounts specified in the Proposal shall be included in the appropriate unit prices bid in the Proposal. The Contractor shall not receive any compensation for mobilization and demobilization in addition to those specified in the Proposal.

All equipment, machinery, buildings, utilities and incidentals mobilized and demobilized under this section shall remain the property of the Contractor.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 01530**

### **BARRICADES**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

- A. Description. This work shall consist of furnishing, installing and maintaining barricades in accordance with the requirements of the contract.

Barricade application shall be provided for in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and as amended.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS**

- A. Lumber: Lumber for rails, frames and braces shall be dry, sound, undamaged, well seasoned, and free from any defect which may impair their strength and durability.
- B. Hardware: Nails shall be galvanized wire nails. As many and as large a size as is practicable shall be used.
- C. Paints: Paints shall be exterior enamel paint of the best grade or first line as made by approved manufacturers.
- D. Sheet Reflecting Material: Sheet reflecting material shall conform to the applicable requirements of Subsection 712.20(C) of the "Standard Specifications for Road and Bridge Construction".
- E. Alternate Designs: Alternate barricade designs such as plastic molded barricades may be used subject to the Engineer's approval. The Contractor shall submit shop drawings or catalog cuts for approval.

#### **PART 3 - EXECUTION**

##### **3.01 CONSTRUCTION REQUIREMENTS**

- A. General: Barricades shall be constructed in a first class, workmanlike manner in accordance with details shown on the plans and as specified herein.

Barricades shall be in good condition and approved by the Engineer for use within the project limits. Barricade application and installation shall be as shown on the plans and as directed by the Engineer in accordance with the guidelines provided in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and any amendments or revisions thereof as may be made from time to time.

Sand bags or other approved weights shall be provided where required or as directed by the Engineer. Sand bags or other approved weights shall not be placed on any striped barricade rail.

Barricades furnished and paid for as provided for as provided herein may be used for temporary detours, construction phasing, or other temporary traffic control work.

Barricades furnished and paid for use in temporary detours or construction phasing may be used for permanent location called for on the plans.

Upon completion of the construction work, barricades shall be left in place, relocated, or removed and disposed of as shown on the plans or as directed by the Engineer. Barricades left in place, or relocated to new permanent locations shall become the property of the State. Barricades directed to be removed and disposed of shall become the property of the Contractor.

- B. Painting: Wooden rails, frames and braces shall be given a prime coat and 2 finish coats of new black exterior enamel paint. Rail faces to be reflectorized may be left unpainted unless otherwise specified or directed.
- C. Reflectorization: Reflectorization of barricade rails shall be done in a first class, workmanlike manner and the attachment of reflective sheeting shall be as shown on the plans, specified herein, or as directed and approved by the Engineer.

Both vertical faces of each barricade rail shall be reflectorized as shown on the plans. Wooden rails shall be reflectorized with one of the following:

1. Reflective sheeting specified in Subsection 712.20(C)(4) of the "Standard Specifications for Road and Bridge Construction" and backed with a 26 gage galvanized steel sheet, or
2. A hardened aluminum backed reflective sheeting as specified in Subsection 712.20(C)(5) of the "Standard Specifications for Road and Bridge Construction."

- D. Color: Rails, frames and braces shall be white.

The front and back faces of barricade rails shall have 6-inch wide alternative colored and white striped sloping downward toward the traveled way at an angle of 45 degrees with the vertical. The colored stripes shall be either orange or red in accordance with the following requirements:

1. Orange and white stripes shall be used in the following conditions:
  - a. Construction work.
  - b. Detours.
  - c. Maintenance work.
2. Red and white stripes shall be used in the following conditions:
  - a. On roadways with no outlet (i.e., dead-ends, cul-de-sacs).

- b. Ramps or lanes closed for operational purposes.
  - c. Permanent or semi-permanent closure or termination of a roadway.
- E. Maintenance: Barricades shall be kept in good condition throughout their usage during construction until the end of the contract.
- F. The Contractor shall repair, repaint, clean or replace the barricades as required and as directed by the Engineer to maintain their effectiveness and appearance.

The Constructor shall immediately replace all lost, stolen or damaged barricades, lamps, sand bags and other approved weights.

Barricades used during construction phasing, temporary detours or other temporary traffic control work shall be cleaned and repaired as necessary, prior to being relocated to a permanent location shown on the plans or as directed.

No extra payment will be made for any repair work, repainting, or cleaning of barricades. The Engineer shall determine the suitable condition of each barricade and shall determine when each barricade shall be repaired, repainted or cleaned.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 01567**

### **ENVIRONMENTAL CONTROL AND PERMITTING**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

With the exception of those measures set forth elsewhere in these Specifications, environmental control shall consist of the prevention of environmental pollution as the result of construction operations under this Contract. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utilization of the environment for aesthetic and recreational purposes.

The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noises, solid waste, radiant energy and radioactive materials, as well as other pollutants.

Contractor shall provide and maintain, during the life of the Contract, environmental protection as defined; plan for and provide environmental protective measures to control pollution that develops during normal construction practice; and comply with Federal, State, and County regulations pertaining to the environment including, but not limited to, water, air, and noise pollution.

A. The work under this section shall include the following:

1. The Contractor shall be responsible to obtain all required permits, approvals and certifications for the project and ensure they are valid for the construction period. This includes preparation and submittal of all permit applications and supporting documents to the respective agency(s) for approval. The contractor shall be solely responsible to determine and obtain all necessary County, State, Federal, and any other required agency approvals prior to starting construction. Permits and certifications may include, but are not limited to:
  - a. US Army Corps of Engineers (USACE) Permit
  - b. State Department of Health, Section 401 Water Quality Certification
  - c. State Department of Health Noise Permit
  - d. Disability and Communication Access Board approval for ADA compliance, including filing fee
2. Provide all air and water quality testing and monitoring work required by the permits during construction where applicable.
3. Provide all facilities, equipment, and structural control BMPs for minimizing adverse impacts upon the environment during the construction period.

4. The Contractor shall be responsible to timely submit requests for and obtain approval for all permit time extensions, should they be required. It shall be the Contractor's responsibility to maintain valid permit coverage throughout the duration of the project.

## **1.02 SUBMITTALS**

The Contractor shall provide all submittals specified in this section to the Engineer for review and approval prior to submitting any documents to the required County, State, or Federal approving agencies.

### Section 401 Water Quality Certification:

- A. The Contractor shall verify with the State Department of Health, Clean Water Branch that the project is covered under their Blanket 401 Water Quality Certification (WQC1092). The Contractor shall be required to submit timely requests and obtain approval for any necessary time extensions or reissuance of Water Quality Certification coverage as required.

### Site-Specific Best Management Practices Plan:

- A. The Contractor shall prepare a Site-Specific Best Management Practices Plan (SSBMPP) as a supporting document to accompany all applicable permit applications. The Contractor shall be responsible for compliance with the SSBMPP and provisions of this section by all subcontractors and suppliers. See Section 3.01 of these specifications for more details on the scope of work that the SSBMP shall entail. The SSBMPP shall include, but not be limited to, the following:
  1. The Contractor's plan for mitigation measures to control turbidity in the harbor basin, in the event that turbidity measurements exceed State Water Quality Standards.
  2. The name of the Contractor's designated individual responsible for all environmental monitoring and reporting. The individual's name and contact telephone numbers will also be provided to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Coast Guard, and National Marine Fisheries Service's Land Use Commission prior to construction activities.
  3. The Contractor's plan to inform employees about the endangered Hawaiian Monk Seal, Green Sea Turtle, Newell's Shearwaters, and any other endangered species that may enter the project vicinity.
  4. The Contractor's plan for fuel storage, spill prevention, and cleanup.
  5. The Contractor's plan for dust control measures.

Daily Field Reports:

- A. Daily Field Report (DFRs) shall be submitted to the Engineer on a weekly basis. DFRs shall identify the work activities, equipment and labor, condition of pollution control measures, monitoring, and photographic documentation of the worksite as appropriate.

**1.03 DESCRIPTION OF WORK**

Applicable Regulations: In order to provide for abatement and control of environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this Contract, the work performed shall comply with the intent of the applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement, including, but not limited to, the following regulations:

1. U.S. Army Corps of Engineers, Honolulu District, Regulatory Branch, Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.
2. State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 54, WATER QUALITY STANDARDS
3. State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 55, WATER POLLUTION CONTROL
4. State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 59, Environmental Control & Permitting 01567-4 AMBIENT AIR QUALITY STANDARDS
5. State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 60.1, AIR POLLUTION CONTROL
6. State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 46, COMMUNITY NOISE CONTROL

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 SUBMISSION OF PERMIT APPLICATIONS**

1. The Contractor shall submit the USACE permit application, including all required supporting documents noted above and required by USACE, within 30 calendar days after receipt of contract award (not Notice to Proceed).
2. The Contractor shall submit the USACE permit application, including all required supporting documents noted above and required by USACE, within 30 calendar days after receipt of contract award (not Notice to Proceed).

### **3.02 PROSECUTION OF WORK**

1. The Contractor shall submit the USACE permit application, including all required supporting documents noted above and required by USACE, within 30 calendar days after receipt of contract award (not Notice to Proceed).

### **3.03 BEST MANAGEMENT PRACTICES**

The Contractor shall comply with the Site-Specific Best Management Practices Plan (SSBMPP) included in the approved permitting documents. The Contractor shall comply with the terms of the SSBMPP throughout the construction period.

In addition to compliance with the SSBMPP, the Contractor shall comply with the following:

1. The Contractor shall abide by all applicable Federal, State, and Local Environmental Protection Standards, Laws and Regulations, including the Best Management Practices plans incorporated or required by U.S. Army Corps of Engineers Nationwide Permits, and Hawaii Administrative Rules, Title 11 Department of Health, Chapter 55, Water Pollution Control.
2. To the extent practicable, work in the aquatic environment must be scheduled to avoid coral spawning and recruitment periods and sea turtle nesting and hatching periods. Coordinate with U.S. Fish and Wildlife Service and National Marine Fisheries Service to identify these time periods.
3. The Contractor shall provide protective measures to capture all debris from demolition and construction activities and ensure that petroleum products or other deleterious materials are not allowed to enter the water.
4. The Contractor shall take measures to prevent sediment runoff from areas disturbed by construction activities from entering the water.
5. The Contractor shall install temporary sediment control filter at any affected drain inlets before any work commences. Sediment control filters shall remain until after completion of construction activities
6. The Contractor shall use full-depth silt curtains to enclose the work area to control turbidity and reduce the anticipated effects of suspension of disturbed sediments or construction debris.
7. The Contractor will capture and dispose of all newly-generated wastes above water. Solid wastes shall be picked up and placed in containers that are regularly emptied. Site contamination shall be prevented when handling and disposing of all wastes. The project site shall be cleaned up at the end of each workday to prevent debris from entering the water.

8. No contamination of adjacent waters of the United States, including special aquatic sites, shall result from project-related activities. Special attention must be paid to fouling on barges, vessels, and equipment to minimize transport and potential introduction and spread of aquatic non-native species.
9. The Contractor shall ensure all tires of construction vehicles are cleaned off such that dirt or debris is not tracked off the construction site. Washing off tires with water will not be accepted unless the wash runoff is contained and does not enter State waters.
10. All project-related materials and equipment to be placed in any aquatic environment shall be inspected and cleaned of pollutants, organic matter, and invasive species prior to use in any aquatic environment.
11. Project-related materials shall not be stockpiled in the aquatic environment or in close proximity such that materials could be carried into waters by wind, rain, or high surf.
12. Fueling of project-related vehicles and equipment shall take place away from the water and a contingency plan to control petroleum products accidentally spilled during project activities shall be developed. Absorbent pads and containment booms shall be stored to facilitate the cleanup of accidental petroleum releases.
  - a. Oil or other hazardous substances shall be prevented from entering the ground, drainage area, or local bodies of water. All temporary fuel oil or petroleum storage tanks shall be contained to prevent accidental release. Fueling and lubrication of equipment and motor vehicles shall be conducted in a manner to protect against leaks or spills, lubricants and excess oil will be disposed in accordance with applicable Federal, State, and Local Regulations.
  - b. All equipment shall be inspected daily for leaks. Any leaks shall be corrected before equipment is used.
  - c. One spill kit each shall be kept on board the work barge and the landside staging area in case of accidental release of any petroleum products.
  - d. All major spills shall be reported to the National Response Center (Phone: 800-424-8802), United States Coast Guard (Phone: 808-842-2600), State Department of Health Hazard Evaluation and Emergency Response Office (Phone: 808-586-4249).

### **3.04 AIR POLLUTION CONTROL**

- A. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made to the satisfaction of the Engineer.

B. Dust:

1. The Contractor, for the duration of the Contract, shall maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas within or outside the project limits free from dust which would cause a hazard to the work, or the operations of other contractors, or to persons or property. Industry-accepted methods of stabilization suitable for the area involved, such as sprinkling or similar methods, will be permitted. Chemicals or oil treating shall not be used.
2. The Contractor shall construct dust screens around all excavated material.

C. Burning shall not be permitted.

**3.05 WATER POLLUTION CONTROL**

- A. Water pollution control shall be in accordance with State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 54, WATER QUALITY STANDARDS and in compliance with the Department of Health, Section 401 Water Quality Certification. Water quality monitoring shall be done in accordance with the Applicable Monitoring and Assessment Plan, if applicable.
- B. In the event that a turbidity plume and/or floating hydrocarbon (oil, gas) products are observed outside of the silt containment devices and structures, in-water work shall be suspended so that appropriate corrective measures are taken. The Honolulu District Regulatory Branch of the U.S. Army Corps of Engineers (Telephone 808-835-4303) shall be notified as soon as practicable and the activity causing the plume will be modified by containment.

**3.06 NOISE CONTROL**

- A. Noise shall be kept within acceptable levels at all times in conformance with State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 46, COMMUNITY NOISE CONTROL. The Contractor shall obtain and pay for noise permits from the State Department of Health when the construction equipment or other devices emit noise at levels exceeding the allowable limits.
- B. Construction equipment shall be equipped with suitable mufflers to maintain noise within levels complying with applicable regulations.
- C. Starting up of construction equipment meeting allowable noise limits shall not be done prior to 6:45 a.m. without prior approval of the Engineer. Equipment exceeding allowable noise limits shall not be started up prior to 7:00 a.m.

**3.07 SOLID WASTES**

The handling of solid wastes shall be in compliance with the requirements stated in the SSBMPP.

- A. Construction waste, such as crates, boxes, building materials, pipes, and other rubbish shall be reduced to a size approved by the County of Hawaii. Large size objects shall be reduced to a size

acceptable by the County Specifications for disposal in their landfills. Other areas or methods proposed by the Contractor will be allowed only if the Engineer determines that their effect on the environment is equal to or less than those described herein.

- B. Dispose of electrolyte solution from lead-acid batteries in accordance with hazardous regulations. Do not dump electrolyte onto the ground or into storm drains or sanitary sewers. Transport the electrolyte to a State-approved hazardous waste disposal site. The method of transportation and equipment shall comply with applicable Federal and State regulations.

### **3.08 THREATENED AND ENDANGERED SPECIES**

The protection of threatened and endangered species shall be in compliance with the requirements in the U.S. Army Corps of Engineers Permit.

### **3.09 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES**

There are no known historical, archaeological, or cultural resources within the Contractor's work area as defined on the plans. However, if items of apparent historical or archaeological interest are discovered in the course of any construction activities, they shall be left undisturbed, and the Contractor shall immediately report the find to the Engineer.

### **3.10 SUSPENSION OF WORK**

- A. The Engineer will notify the Contractor in writing of any observed noncompliance with the Contractor's SSBMPP. The Contractor shall, after receipt of such notice, inform the Engineer of proposed corrective action and take such action as appropriate.
- B. Violation of any of the above requirements or any other pollution control requirements which may be specified in the Specifications herein shall be cause for suspension of the work creating such violation. No additional compensation shall be due the Contractor for remedial measures to correct the offense. Also, no extension of time will be granted for delays caused by such suspensions.
- C. If no corrective action is taken by the Contractor within 72 hours after a suspension is ordered by the Engineer, the State reserves the right to take whatever action is necessary to correct the situation and to deduct all costs incurred by the State in taking such action from monies due the Contractor.
- D. The Engineer may also suspend any operations which he feels are creating pollution problems although they may not be in violation of the above-mentioned requirements.

### **3.11 FINES**

The Contractor shall pay any fines due to violations of environmental regulations and permits as a result of his activities at no additional cost to the State.

### **3.12 MEASUREMENT AND PAYMENT**

Environmental control will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 02050**

### **DEMOLITION AND REMOVAL**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

The work includes demolition and removal as indicated in the plans or specified herein. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the Contractor and shall be removed from the limits of State property. Remove rubbish and debris from the job site daily, unless otherwise directed. Store materials which cannot be removed daily in areas specified by the Engineer. The Contractor shall pay for all necessary permits and certificates that may be required in connection with this work.

##### **1.02 SUBMITTAL**

Submit proposed demolition and removal procedures to the Engineer for approval before work is started. Procedures shall provide for coordination with other work in progress and a detailed description of methods and equipment to be used for each operation, and sequence of operations.

##### **1.03 DUST CONTROL**

Take appropriate action to check the spread of dust to the surrounding area and to avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as flooding or pollution. Comply with all dust regulations imposed by local air pollution agencies.

##### **1.04 PROTECTION**

- A. Existing Improvements: Protect existing improvements that are to remain in place, that are to be reused, or that is to remain the property of the Engineer by temporary covers, shoring, bracing, and supports. Repair items damaged during performance of the work or replace with new to the satisfaction of the Engineer. Do not overload structural elements. Provide new supports or reinforcement for existing construction weakened by demolition, removal, and relocation work. Construction equipment and vehicles shall neither be permitted on, nor shall be stored on the existing work that is to remain in place. Trees and Landscaping: Protect trees and landscaping within and adjacent to the project site which might be damaged during the demolition work.
- B. Public Safety: Where pedestrian and driver safety is endangered in the work or storage areas, use traffic barricades with flashing lights. Notify the Engineer prior to beginning any such work. The Contractor shall conduct operations with minimum interference to streets, driveways, sidewalks, and passageways, etc.
- C. Explosives: Use of explosives will not be permitted.

## **PART 2 – PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 DEMOLITION AND REMOVAL OF EXISTING FACILITIES**

- A. Demolish and remove existing structures and other items as indicated on the plans, or if not specifically indicated, to the extent required to accommodate new work. All glass and other materials that could become hazardous when demolished shall be removed prior to demolition. Pier components shall be removed in sections as large as practicable to prevent the contamination of the harbor with sediment and debris. Provide floating silt curtains and catchments for dust, slurry from saw cutting, and debris, as required to maintain water quality and minimize turbidity. Should a perceived increase in turbidity occur outside of the contained area, immediately stop work and take all actions necessary to restore containment before proceeding with the work. Water within the containment shall be cleared of contaminants such that it is of equal quality to surrounding waters before removing the containment.
- B. Exercise care during demolition and employ methods to preserve components to remain. Any damage caused by the contractor to existing facilities to remain shall be restored to preconstruction condition or better at no additional cost to the State.
- C. Any existing on-grade and below grade utilities found serving the piers shall be secured (capped) and remain in place. Seal and cap utility lines where necessary as required by regulations of the authority having jurisdiction.
- D. The existence of active utility lines traversing the construction area other than those indicated is not definitely known. Should any be encountered, the Contractor shall not disconnect same without authorization of the Engineer, but shall inform the latter immediately of each discovery, and shall follow his instructions.

### **3.02 SAFETY**

- A. Work shall be done in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America.

### **3.03 DEPOSITION OF MATERIALS**

- A. Title to Materials: Title to all materials and equipment to be removed, except as specified otherwise, is vested in the Contractor upon receipt of notice to proceed. The Engineer will not be responsible for the condition or loss of, or damage to, such property after notice to proceed. Materials and equipment shall not be viewed by prospective purchasers or sold on the site. Burning or burying of materials on the site will not be permitted.
- B. When removing the materials from the property, truck loads shall be trimmed and loaded as to prevent spillage.

- C. Demolished materials shall be promptly removed and properly disposed. Stockpiling of construction debris and waste materials at the jobsite is not permitted. Projecting rebars and other items potentially dangerous to personnel shall be removed prior to hauling from the jobsite.

**3.04 CLEAN UP**

- A. Debris and Rubbish: Remove and transport debris and rubbish in a manner that will prevent spillage into ocean or adjacent areas. Clean up spillage from waterways and adjacent areas. The Contractor shall leave the premises clean, neat, and orderly.
- B. Regulations: Comply with Federal, State, and County hauling and disposal regulations.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 06500**

### **REINFORCED PLASTIC LUMBER**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL**

This section covers the furnishing and installing reinforced plastic lumber as shown on the plans and specified herein.

##### **1.02 SUBMITTALS**

The Contractor shall submit six (6) sets of the following for approval.

- A. Manufacturer's catalog data
- B. Shop drawings shall include the color, sizes, layout and connection details to be used to secure the reinforced plastic lumber to the bulkhead.
- C. Certified test report and certificates of compliance furnished by the manufacturer's testing laboratory or independent testing agency attesting that the product and related materials meet or exceed the requirements specified herein.

#### **PART 2 – MATERIALS**

##### **2.01 MATERIALS**

- A. Reinforced plastic lumber shall be "TRIMAX Structural Lumber" manufactured out of recycled plastic, fiberglass, and additives by Renew Plastics; Fiber Reinforced Molded Lumber manufactured by Tangent Sustainable Lumber; or approved equal. All fiberglass reinforced plastic lumber shall be manufactured by the same manufacturer. The reinforced plastic lumber shall have the following material properties per the manufacturer of the product furnished. Where there is a difference between the values listed and another proposed product, the proposed material shall be equal or better in respects to the properties listed for "TRIMAX Structural Lumber."

**TRIMAX Structural Lumber (reinforced plastic lumber) properties:**

<b>MECHANICAL PROPERTIES at 70°F</b>	<b>ASTM Standard</b>	<b>Average Value</b>
Density, lbs / cu. in.	ASTM D6111-09	0.034
Water Absorption	D570-98	< 0.1
Modulus of Rupture (MOR)	D6109-05	4,134 psi
Modulus of Elasticity (MOE)	D6109-05	329,787 psi
Secant MOE @ 1% Strain	D6109-05	288,751 psi
Compression Parallel to Grain	D198-05	3,716 psi
Compression Perpendicular to Grain	D143-94	2,516 psi
Shear Strength	D143-94	1,828 psi
Tensile Strength	D198-05	3,076 psi
Durometer Hardness	D2240-05	68.2
Abrasion Resistance	D4060-10	42 mg
Chemical Resistance	D543-06	5%
Tensile Properties	D638-10	3660 psi
Coefficient of Friction (Dry)	D2047	0.95
Coefficient of Thermal Expansion	D6341-98	0.000021
Screw Withdrawal	D1761-06	938 lbf/in
Flame Spread	E84	Class C

**TANGENT Sustainable Lumber (fiber reinforced molded lumber) properties:**

<b>MECHANICAL PROPERTIES</b>	<b>ASTM Test</b>	<b>Value</b>
Flexural Strength	D6109	2,750 psi
Flexural Modulus Secant @ 1% Strain	D6109	306,080 psi
Compression Strain Parallel to Grain	D6108	2,842 psi
Compression Strength Perpendicular to Grain	D6108	1,482 psi
Compression Modulus Strength Parallel to Grain – Secant @ 1% Strain	D6108	159,576 psi
Compression Modulus Strength Perpendicular to Grain – Secant @ 1% Strain	D6108	54,119 psi
Specific Gravity	D6111	0.93 g/cc
Flash Point	-	644 °F
Moisture Absorption	-	0.06% by Weight
Thermal Expansion	D6341-98	0.000033 in/in/°F
Average Screw Pull Out	D6117	646 lb
Static Coefficient of Friction (Dry)	D2394	0.53
Static Coefficient of Friction (Wet)	D2394	0.51
Sliding Coefficient of Friction (Dry)	D2394	0.23
Sliding Coefficient of Friction (Wet)	D2394	0.51
Flame Spread	E84	62
Flame Speed Classification	E84	60
Smoke Developed	E84	230
Smoke Developed Classification	E84	250
Spontaneous Ignition	D1929	824°F
Tensile Test (skin)	D638	3,623 psi
Shear Strength	D2344	800 psi
Notched Impact Resistance Method A	D256	2.77 ft x lb/in
Abrasion Resistance	D4060	<0.02 oz – with 2.2 lb sample
Ultraviolet (skin)	D4329	<10% change in Type D durometer at 500 hours

Reinforced Plastic Lumber  
06500-3

## **2.02 HARDWARE**

All fender system, bull rail, and cleat anchor bolts, nuts, and washers shall be duplex 2205 stainless steel alloy.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Reinforced plastic lumber shall be installed as shown on the plans with final adjustment (if any) required to fit snugly against the exterior face of the pier structure. Plastic lumber blockings and fillers of the same material shall be used as required to provide solid backing and shall be securely fastened.
- B. All surface bolts and nuts shall be recessed 1/8" from the outboard face of pier to provide a smooth face for fendering.
- C. Reinforced plastic lumber boards shall be cut "square" and smooth to uniform lengths. End gaps shall be provided as recommended by the manufacturer to allow for thermal expansion and manufacturing tolerances. Boards shall be spaced 1/4" apart unless otherwise indicated. All exposed edges shall be smooth and slightly rounded. Corners shall be rounded to a minimum radius of 1/8".
- D. Handle plastic lumber as per manufacturer's recommendations. Provide personal protection from dust and flying debris as recommended by the manufacturer.

**\*\*\* END OF SECTION \*\*\***

## **SECTION 13100**

### **MARINE HARDWARE**

#### **PART 1 – GENERAL**

##### **1.01 GENERAL REQUIREMENTS**

This section includes furnishing and installing complete in place marine hardware for securing plastic lumber fenders, bull rail, and installation of new cleats as indicated on the plans and specified herein.

##### **1.02 SUBMITTALS**

The Contractor shall submit six (6) sets of shop drawings or manufacturer's catalog data, and certificates of compliance for all materials and products.

#### **PART 1 – GENERAL**

##### **2.01 MATERIALS**

- A. All fender system, bull rail, and cleat anchor bolts, nuts, and washers shall be duplex 2205 stainless steel alloy.
- B. Cleats shall be Bluewater Marine & Dock Specialties, Inc., or approved equal. Counterbores shall be provided to recess anchor bolts and hex nuts with flat washers flush with top of cleat.
- C. Fillets shall have at least 1/2 inch radius. Edges shall be rounded to at least 1/4" radius. No sharp corners or edges shall be allowed. Finish shall be smooth and free of sharp or rough edges. Sand or grind faces to true plane prior to galvanizing for steel cleats. Sand or grind faces smooth and flush for aluminum alloy cleats.
- D. Epoxy for filling counterbores shall be gray in color, medium viscosity (self-leveling) and conform to ASTM C881. Epoxy for anchor bolts in bulkhead shall conform to ASTM C881, Type IV or V (Structural Uses), Class C, Grade 2 or 3.

#### **PART 3 – EXECUTION**

##### **3.01 INSTALLATION**

Fender hardware, bull rail hardware, and cleats shall be installed at locations and in accordance the Contract Drawings. Field drill and install anchor bolts in epoxy grout where installing cleats to existing concrete or masonry.

**\*\*\* END OF SECTION \*\*\***