

INVITATION TO BID

State of Ohio
Department of Administrative Services
General Services Division
Office of Procurement Services

The original signed bid must be submitted to the Office of Procurement Services to receive consideration for award.		BIDDER NAME	
BID NUMBER 0B102816	OPENING DATE (1:00 p.m.) May 9, 2016	STREET ADDRESS <input type="checkbox"/> Check if remit address is different and list on separate sheet	
General Services Division Office of Procurement Services 4200 Surface Road Columbus, OH 43228-1395 Attn: Bid Desk		CITY	STATE ZIP
		COUNTY	MBE/EDGE CERTIFICATE NUMBER
		TELEPHONE NO. ()	TOLL FREE NO. 1 - ()
		CONTACT PERSON	FAX NO. ()
REQ./INDEX NO. 000031724	BID NOTICE DATE April 25, 2016	CONTRACTOR'S E-MAIL ADDRESS	
SELECT YOUR PREFERRED METHOD OF RECEIVING PURCHASE ORDERS AND ENTER THE E-MAIL OR FAX NUMBER INFORMATION (ONLY SELECT ONE METHOD)			
<input type="checkbox"/> E-Mail <input type="checkbox"/> Fax			
In addition to the standard terms for payment, the payment terms for state agency(ies) will be 2%, 10 Days, Net 30 Days unless otherwise stated in the following space. If no discount is offered, bidder should circle "Net 30 Days". _____%, _____ Days, Net 30 Days			
BILL TO: OHIO DEPARTMENT OF NATURAL RESOURCES 2045 MORSE RD F-3 COLUMBUS, OH 43229-6693		SHIP TO: ODNR - PUNDERSON STATE PARK 11755 KINSMAN RD NEWBURY TOWNSHIP, OH 44065	
DELIVERY REQUESTED F.O.B./DEST. P.P.D. N.L.T. August 15, 2016		DELIVERY OFFERED (IF DIFFERENT) F.O.B./DEST.P.P.D. _____	
<p>THE DEPARTMENT OF ADMINISTRATIVE SERVICES, OFFICE OF PROCUREMENT SERVICES IS SOLICITING BIDS FOR:</p> <p>FLOATING DOCKS, GANGWAYS AND RAMPS - PUNDERSON STATE PARK BOARDWALK EXTENSION</p> <p>QUANTITY AND DURATION: This Invitation to Bid, which is not a contract, is considered to be a one-time procurement offer for the product(s)/service(s) as listed herein. The successful Contractor may commence performance of the awarded contract upon receipt of an official State of Ohio Purchase Order (ADM0523/ORDE). Upon completion of the contract and upon receipt of proper invoices, payment will be provided by the ordering agency. The contract will then be considered as complete and no further purchases may be placed against the contract. With the exception of approved overrun/underrun tolerances, any deviations from the quantity listed in the awarded contract shall not be permissible nor acceptable.</p> <p>INSTRUCTIONS TO BIDDERS AND CONTRACT TERMS AND CONDITIONS, Revised 10/2013, are a part of this Invitation to Bid. Copies may be downloaded by clicking the link above. All prior versions of Instructions to Bidders, Contract Terms and Conditions are null and void.</p> <p>By submitting this Invitation to Bid, the Contractor certifies that Contractor has truthfully disclosed the location(s) where all services are to be performed; the location(s) where all applicable State contract data is to be maintained or made available; and the principal location of business for the Contractor and all subcontractors. The Contractor further certifies and acknowledges that Contractor will not change the country of the location(s) where services are performed and will not change the country of the location(s) where data is maintained or made available without prior written consent of the State.</p> <p>INQUIRIES: All inquiries should be submitted a minimum of three (3) working days prior to the bid opening date through the Procurement website, http://procure.ohio.gov/. Locate the "Quick Links" menu on the right, select "Bid Opportunities Search"; Step 1, enter the "Bid Number"; Step 2, click "Search"; Step 3, click the "Document/Bid Number." The "Submit Inquiry" button is at the bottom right of the Opportunity Detail page. Bidders will not receive a personalized e-mail response to their question, nor will they receive notification when the question is answered. Responses may be viewed by clicking the "View Q & A" button located beneath the "Submit Inquiry" button.</p>			
PRINTED/TYPED SIGNATURE		AUTHORIZED SIGNATURE (ORIGINAL SIGNATURE ONLY) <i>(Please sign in blue ink)</i>	DATE

The original signed bid must be submitted to the Office of Procurement Services by 1:00 o'clock p.m. on the above listed opening date to receive consideration for award. It is requested that the bidder not sign their bid in black ink. Bidder certifies, by signature affixed to its bid, that the information provided by it in its bid including the certified statements, is accurate and complete. Bidder declares to have read and understood and agrees to be bound by all of the instructions, terms, conditions and specifications of this Invitation to Bid and agrees to fulfill the requirements of any awarded contract at the prices bid.

BID PRICE SCHEDULE:

Bidders shall not insert a unit cost more than 3 digits after the decimal point. Digit(s) beyond 3, after the decimal point, shall be dropped by the Office of Procurement Services and not used in evaluation and any subsequent order.

BID ITEM NO.	DESCRIPTION	MANUFACTURER AND PART NUMBER(S) OFFERED (attach additional sheets if needed)	TOTAL PRICE
1.	PUNDRERSON STATE PARK BOARDWALK EXTENSION TOTAL PROJECT COST DELIVERY BY AUGUST 15, 2016.		\$
* BID ALTERNATIVES – NOT USED IN THE EVALUATION BUT MAY BE AWARDED			
1.	BID ALTERNATE NO. 1: LUMP SUM COST TO PROVIDE ANCHOR SPUD MATERIALS. ANCHOR SPUDS TO BE 2" SCHEDULE 40 GALVANIZED STEEL PIPE WITH ONE END THREADED AND AN END CAP. LENGTH = 12-FT. QUANTITY = 2 EA. PER DOCK SECTION.		\$
2.	BID ALTERNATE NO. 2: LUMP SUM COST TO ACCELERATE THE FINAL COMPLETION DATE AND DELIVER ALL MATERIALS TO THE SITE BY JULY 15, 2016.		\$

MANUFACTURER IDENTIFICATION OF COMMODITY: All bidders are to indicate in the spaces below the manufacturer's name, model, brand or style number for product bid. Failure to comply with this stipulation may result in the bidder being deemed as not responsive

Manufacturer: _____

Model No.: _____

Brand: _____

Standard Warranty: _____

*Contains recycled materials - Y/N: _____, if Yes, _____%.

* Will not be a part of the evaluation

DATA SHEET: Shown below are the specification requirements for equipment that the state desires to purchase. These specifications are only considered as necessary to establish functional requirements. Proprietary design, exact dimensions, capacities, or restrictive features will not preclude acceptance of other recognized alternates meeting comparable performance requirements as determined by the Director, Department of Administrative Services. Bidder signifies compliance or non-compliance with specifications by listing and outlining all deviations from specifications on company letterhead and returning it with the bid. Failure to comply may deem the bid not responsive.

SPECIAL CONTRACT TERMS AND CONDITIONS

AMENDMENTS TO CONTRACT TERMS AND CONDITIONS: The following Amendments to the Contract Terms and Conditions do hereby become a part hereof. In the event that an amendment conflicts with the Contract Terms and Conditions, the Amendment will prevail.

FUNDING APPROVAL: Funding for the purchase of the aforementioned products and/or services involves capital improvement funds. Release of such funds requires Controlling Board approval, at time of award. Therefore, additional time may be required to obtain approval or release of funds, which may delay the awarding of the contract.

SITE VISIT: Prior to submitting their bid response, the bidder should visit the project site and become familiar with the existing docks and project site conditions. The project area is accessible to the public during normal park operation hours, however it is requested that the bidders notify park staff prior to site visit. Park Operations contact: Jon Quisenberry, 216-701-3981 or jon.quisenberry@dnr.state.oh.us. Once a contract is awarded, failure of the bidder to have made a site visit and become familiar with existing conditions and requirements of the bid will be insufficient reason to support any request to be released from the contract.

DESCRIPTIVE LITERATURE: The Bidder may be required to submit descriptive literature of the supplies or services being offered. If requested, the literature will be used in the evaluation process to determine the lowest responsive and responsible bidder. If not provided as part of the bid response, the Bidder must provide said literature within five (5) calendar days after request/notification by the Office of Procurement Services to do so. Any references, that may appear in the descriptive literature, that may alter the terms and conditions and specifications of the bid (e.g. F.O.B. Shipping Point or Prices Subject to Change), will not be part of any contract and will be disregarded by the state of Ohio. Failure of the bidder to furnish descriptive literature either as part of their bid response or within the time specified herein will deem the bidder not responsive.

EVALUATION: Bids will be evaluated in accordance with Article I-17 of the "Instructions to Bidders". In addition, the state will review the descriptive literature and confirm that the item bid meets the requirements outlined in the specifications.

CONTRACT AWARD: The contract will be awarded to the lowest responsive and responsible bidder by Total Price. Failure to bid all items may result in the bidder being deemed not responsive.

AUTHORIZED DEALER: Bidders responding to this bid will be authorized dealers for/or the manufacturers of the products they are offering. Bidders should submit, with the bid, certification attesting to the fact that they are authorized dealers for/or the manufacturer(s). This certification is to be on manufacturer's letterhead, signed by a duly authorized representative of the manufacturer. If not submitted with the bid, Bidders will have three (3) calendar days after request to provide said certification. Failure to submit certification as requested may result in the bidder being deemed as not responsive.

SPECIAL CONTRACT TERMS AND CONDITIONS (cont.)

Bid Automobile Liability Checklist:

Contractor will indicate, by checking the appropriate box(es) below, which mode of transportation will apply to this contract.

- Bidder/Broker ("The Contractor") or their Sub Contractor will make delivery or be performing services using a vehicle that is owned, leased or rented. Provide Certificate of Insurance documenting automobile liability with a Combined Single Limit of \$500,000.00.
- Goods/Services will be delivered via common carrier.
- No employee or representative of the contractor will have cause to be on state property to make deliveries or to perform services.

DISCLOSURE OF SUBCONTRACTORS / JOINT VENTURES (See Standard Contract Terms and Conditions, Section (roman numeral) V. General Provisions:, Paragraph Q.):

List names of subcontractors who will be performing work under the Contract.

_____	_____
_____	_____
_____	_____

By the signature affixed to Page 1 of this Bid, Bidder hereby certifies that the above information is true and accurate. The Bidder agrees that no changes will be made to this list of subcontractors or locations where work will be performed or data will be stored without prior written approval of DAS. Any attempt by the Bidder/Contractor to change or otherwise alter subcontractors or locations where work will be performed or locations where data will be stored, without prior written approval of DAS, will be deemed as a default. If a default should occur, DAS will seek all legal remedies as set forth in the Terms and Conditions which may include immediate cancellation of the Contract. Failure to complete this page may deem your bid not responsive.

Notice on the Use of Social Security Numbers as Federal Tax Identification Numbers

The Department of Administrative Services (Department) requires vendors and contractors wishing to do business with the State to provide their Federal Taxpayer Identification Number to the Department. The Department does this so that it can perform statutorily required "responsibility" analyses on those vendors and contractors doing business with the State and, under limited circumstances, for tax reporting purposes. If you are a vendor or contractor using your Social Security Number as your Federal Taxpayer Identification Number, please be aware that the information you submit is a public record, and the Department may be compelled by Ohio law to release Federal Taxpayer Identification Numbers as a public record. If you do not want to have your Social Security Number potentially disclosed as a Federal Taxpayer Identification Number, the Department encourages you to use a separate Employer Identification Number (EIN) obtained from the United States Internal Revenue Service's to serve as your Federal Taxpayer Identification Number.

SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Furnishing all labor, equipment, and materials necessary to provide the floating boardwalk (dock) sections and transition pieces for the floating boardwalk as shown on the detailed drawings and specified herein (the link to the drawings is on page 17 of this ITB). The assembled sections and associated materials shall to be delivered to the project site, ready for installation on the water. Installation of the sections on the water will be performed by others.
- B. Delivery Point for the floating docks and materials shall be Punderson State Park, 11755 Kinsman Road, Newbury, Ohio 44065. Exact location in the park will be determined by the Park Manager prior to delivery date.
- C. Manufacturer will be responsible for unloading materials and placing on dry pavement.

1.2 DOCK MANUFACTURER

- A. The dock manufacturing shall be performed in accordance with these specifications and shall be accomplished by one firm, corporation, or contractor, qualified by actual consistent dock manufacturing experience. If the contractor does not qualify for this type of work, the contractor shall subcontract this work to a firm, corporation, or contractor, which does qualify. The floating dock manufacturer shall have completed 3 projects over the last five years which included docks of similar size to those called for on this project. Bidders are required to submit documentation showing 3 prior similar projects with the bid submittal. If documentation is not provided with bid submittal bidder will have three (3) business days to submit required documentation from the date of request from DAS State Procurement. Failure to submit required documentation will deem the bid not responsive and no further consideration will be given.
- B. Pursuant to O.R.C. 9.312, DAS and ODNR may consider all of the following factors in determining whether the proposed bidder and/or dock manufacturer to be used by the proposed bidder is responsible: the experience of the bidder or manufacturer, the bidder or manufacturer's financial condition, the bidder or manufacturer's conduct and performance on previous contracts, the bidder or manufacturer's facilities, the bidder or manufacturer's management skills, and the bidders ability to execute the contract properly and on time. Upon request by DAS or ODNR, a bidder shall promptly submit any requested information which will assist in evaluating the bid. The name of the proposed dock manufacturer shall be provided with the bid submittal on the bid price page.
- C. The floating docks shall be fabricated under controlled conditions.
- D. The dock manufacturer shall have a written quality assurance (QA) program, which covers all aspects of components and final assemblies furnished on this project. The QA documentation shall be submitted as part of the shop drawing approval process,
- E. All welding shall be done by certified welders, with AWS certifications appropriate for the welds specified. The copies of the certificates shall be submitted as part of the shop drawing approval process.
- F. The docks and gangways shall be designed by a professional engineer experienced in floating dock, anchorage and gangway design using the criteria set forth below and on the project plans. Upon request by DAS or ODNR, a bidder shall promptly submit any requested information which will assist DAS and ODNR in evaluating experience or qualifications of the professional engineer.

SPECIFICATIONS (cont.)

1.3 APPLICABLE STANDARDS

- A. Applicable standards for design and construction are the latest edition of the following:
1. American Institute of Steel Construction (AISC), Manual of Steel Construction.
 2. American Welding Society (AWS) Structural Welding Code - Steel.
 3. American Welding Society (AWS) Guide for the Visual Inspection of Welds. B 1.11 – 88.
 4. American Society of Testing Materials (ASTM).
 5. The Aluminum Association, Inc. Design Standards.
 6. American Wood Preservers Association (AWPA).
 7. American Society of Civil Engineers, Manual 50 – Planning and Design for Small Craft Harbors, Revised Edition, 1994.
 8. Americans With Disabilities Standards (ADA).
 9. American Iron and Steel Institute, Light Gauge Cold, Formed Structural Steel Members Design Manual.

1.4 SHOP DRAWINGS AND OTHER SUBMITTALS

- A. Shop drawings showing complete fabrication details shall be submitted in 2 copies for draft submittal and 8 (1 to DAS 7 to ODNR) copies for final submittal for approval before the production of docks and gangways begins. All drawings and calculations shall bear the seal of a Registered Professional Engineer experienced in the design of floating dock systems. Drawing standard shall be AISC Drafting Standards. Sheet size shall be 22" x 34" with a 1/4" minimum font size.
- B. Shop drawings and submittals shall contain, at a minimum, the following information:
1. Technical product data for all major components.
 2. Installation and removal instructions.
 3. Layout and fabrication drawings shall be fully dimensional for all structural units, gangways and ramps shall be drawn to scale. Half sized or 50% reduced drawings shall be at a readable scale.
 4. Complete details for flotation for each dock unit.
 5. Complete location details and dimensions for the anchorage system, pile guide and piles. The pile installation locations shall be shown on the shop drawings in the project geometric Northing and Easting coordinates.
 6. Decking layout.
 7. Details of all connections between dock units and access structures.
 8. Complete calculations showing adequacy of design.
 9. Float buoyancy information covering floats to be used on this project. This information shall be obtained by submergence testing and certified by an officer of the float manufacturing company or published and certified for accuracy.
 10. Lifting frame or straps, as required, for docks and gangway at project location, along with certification that the frame or straps are capable of safely lifting the projected loads.
 11. Listing of spare parts being furnished at project location.
 12. Draft winterization plan.
- C. All drawings shall utilize standard A.W.S. symbols. Bolt diameter, lengths and strength shall be shown along with weld requirements.

SPECIFICATIONS (cont.)

- D. Submit 2 draft copies of the maintenance, operating and winterization manual along with a copy of the extended warranty with the shop drawings.
- E. Shop drawings, calculations and other required submittals for this project shall be submitted within 30 days from the date of notice to proceed letter. Complete fabrication drawings and supporting calculations, including all review comments, are due no later than 60 days from the notice to proceed.

1.5 CALCULATIONS

- A. Calculations shall be provided and stamped by the professional engineer on this project for a minimum of the following:
 - 1. Complete flotation buoyancy calculations for all flotation units, noting the references to actual dock dead + live loads and required float sizes meeting freeboard requirements.
 - 2. Freeboards.
 - 3. Main dock and finger deflections.
 - 4. Structural frame design for applied loads.
 - 5. Adequacy of all weld design and bolt sizing and strengths.
 - 6. Strength adequacy of connectors and pile guide attachments.
 - 7. Dock section-lifting rings.
 - 8. Anchorage design and attachments, with exact location of piles.
 - 9. Gangway deflection loads along with handrail design.
 - 10. Lifting frames or straps, as required.

1.6 QUALITY ASSURANCE

- A. Prior to beginning work, the dock manufacturer shall submit their QA program forms showing how their QA program will be properly executed. After the work has been completed, the completed QA forms shall be submitted. This is for steel and aluminum work. It shall include cut sheets, welder identifications and supervisor approvals.
- B. Copies of the certifications for welders who will be doing welds in the QA program are to be submitted as part of the shop drawing approval process, prior to the start of fabrication.

1.7 MAINTENANCE AND CLOSEOUT MANUAL

- A. Before final acceptance of the floating dock system, the contractor shall provide 2 final hard copies of the closeout documents and an electric version in .pdf format. The contractor shall provide two (2) bound operation and maintenance manuals which includes the following:
 - 1. Conformance of design letter by P.E.
 - 2. Individual dock, bridge and/or ramp weights.
 - 3. Calculations and certified float buoyancy listings.
 - 4. Frame strength analysis and design.
 - 5. 11 x 17 as-built drawings.
 - 6. Specifications.
 - 7. Maintenance recommendations.
 - 8. Manufacturers data and cut sheets.
 - 9. Completed quality control sheets.
 - 10. Welders Certifications and weld testing reports as required.
 - 11. Winterization procedures for docks.
 - 12. Written warranty statement.
 - 13. Float test reports for encasement thickness and foam water absorption.
 - 14. Copies of any purchase orders requested to assure materials ordered meet quality of specifications.

SPECIFICATIONS (cont.)

1.8 DESIGN CRITERIA

A. GENERAL DESIGN

1. The dock layout shall be to the configuration shown on the drawings. Dock dimensions for dock square footage calculations shall be measured from the edge to edge of the dock structural frame. Calculations do not include the width of rub rails, bumpers and connections. However, cost of material and labor involving rub rails, bumpers, cleats, hinge cover plates, etc. are included in the dock square footage pricing.
2. It is the contractor/dock manufacturer's responsibility to verify existing site and design a compatible means of connecting the new dock sections to existing.
3. The contractor/dock manufacturer shall review with ODNR the proposed method of winterization to assure agreement with the anchorage system.
4. All equipment and supplies required for winterization of the project site shall be furnished by the contractor. Specific items will be identified in the winterization plans.
5. The floating dock system shall be designed to be operative by the public between the high and low water elevations shown on the drawings. Elevations are defined as follows:

Low pool	Lowest elevation where docks will be in water.
Normal pool	The water elevation for the majority of the boating season.
High pool	Highest elevation where docks will remain in water.

- a. Elevations at the project site (NAVD 88):

	<u>Punderson Lake</u>
Low pool	1140.76 feet
Normal pool	1141.76 feet
High pool	1142.76 feet

6. Dock designs shall be verified by calculations performed by a Registered Professional Engineer experienced in floating dock design. These calculations shall be approved by ODNR prior to dock fabrication.
7. Structural components shall be designed using yield stress not ultimate stress.

B. DOCK DESIGN LOADINGS

1. Dead Load Design.
 - a. Dead load is defined as the weight of the entire assembled dock including all hardware and accessories.
 - b. Dead load freeboard shall be between 18" and 22".
 - c. The floating dock supplier shall list the freeboard of each dock unit on the submittal drawings. Actual dead load freeboard shall be no more than +/- 1 inch of the freeboard listed on the drawings.
 - d. Main docks shall not slope lengthwise or crossways more than 1 inch in 8 foot.

SPECIFICATIONS (cont.)

2. Vertical Live Load Design For Docks
 - a. All dock walking surfaces shall have adequate flotation under them to support all dead loads plus a minimum of 30 pounds per square foot live load.
 - b. The dock and supporting frame shall support a 400 lb. concentrated load on any one square foot area.
 - c. When a 400 pound load is applied in the center of a finger dock, 2 foot from the outer end, there shall be no more than 4 inches loss of freeboard at the end of the dock.
 - d. When a 200 pound load is applied to one outer corner of a finger, there shall be no more than 2 inches of difference in freeboard across the end of a 3 foot wide finger, and proportionally more on wider fingers and end of main docks.

3. Horizontal Live Load Design
 - a. Wind Loads

Wind loads shall be 15 pounds per square foot (77 miles per hour) approaching from any and all directions. Loads shall be calculated perpendicular to diagonally opposite corners of the pier, and perpendicular to the main dock and finger docks.

Wind loads shall be applied to the dock continuously without any deductions for walkways.

Wind loads shall be applied to a vertical plane from the water surface up to the top of the walkway.
 - b. Wave Loads

Docks shall be designed to withstand 0.5 foot continuous waves and occasional waves up to 1'-0" for a duration of four hours.
 - c. Current Loads

Docks shall be designed to withstand up to a 5 foot per second current flow perpendicular to the finger dock. The load shall be applied to the maximum size boat which could normally use that slip with appropriate underwater draft.
 - d. Combined Loads

Anchor guide design shall be adequate to withstand wind and wave loads which shall be applied cumulatively.
 - e. Ice Loads

Docks, fingers, connections and anchor guides shall be designed to withstand the forces of NON-moving ice without damage.
 - f. Impact Loads

All main docks and connections shall be designed to resist the impact of a 20' boat, striking the edge of the dock, at the outer end, at a maximum angle of 10 degrees to the dock centerline at a velocity of 3 feet per second for 1 second deceleration. Maximum boat weights for various boat lengths shall be assumed as follows:

20' – 4,000 pounds

SPECIFICATIONS (cont.)

C. FLEXIBLE CONNECTIONS

1. Each dock unit shall be connected to each adjacent dock unit with flexible connections capable of transmitting all loads and forces upon each dock unit and each series of dock units, including the combined transverse and longitudinal effects of wind action, wave action, and bumping and ramming by average watercraft less than 14-ft. in length. Connections shall be designed for ready disconnection for yearly removal and reinstallation and for periodic maintenance without the removal of plates or structural members. Disconnection shall not require the removal of any bolts underwater. Connection hardware shall be galvanized steel or stainless steel. Lock washers or lock nuts shall be used.

D. DOCK ANCHORAGE

1. The floating docks shall be designed to be held in position using galvanized pipe similar to the system anchoring the existing floating docks near the main lodge building. Cost for anchor spud materials furnished and delivered to be included in Bid Alternate 1. Pockets for the anchor pipe shall be mounted to the dock sections. Anchor pipe to be 2", schedule 40 galvanized steel, length = 12-feet.
2. Any dock anchorage components not designed by ODNR (shore connectors, anchor guides, etc.) shall be detailed on the shop drawings, along with any calculations necessary to show these components have adequate strength to withstand the loading conditions listed in these specifications.

1.9 ACCEPTANCE

Acceptance of the floating dock system shall be no later than the project completion date. The acceptance date shall be after completion of all punch list items, a final inspection covering the floating dock system and receipt of the operating, maintenance and winterization manuals.

1.10 EXTENDED WRITTEN WARRANTY

- A. The vendor shall furnish ODNR with a manufacturer's extended written warranty covering repair of any defects or damages which may develop within 5 years from date of completion and acceptance of work performed under this contract, provided said defects or damages, in the judgment of ODNR, are caused by inadequate design of the floating dock systems for the conditions as specified or can be responsibly expected and providing ODNR operates the facility in accordance with acceptable procedures. If the defects and/or damages are not repairable, the defective or damaged portion shall be replaced to its original condition. This warranty covers all labor, material, shipping and handling costs used in the construction and installation of the docks, but excludes deterioration due to the normal aging and weathering process of the wood and metal parts. A copy of the extended written warranty is required to be submitted prior to award of this bid.

SPECIFICATIONS (cont.)

1.11 INSPECTION BY DOCK MANUFACTURER

A. As part of the warranty, the floating dock manufacturer shall have a qualified employee or contract inspector make an inspection of the docks at the end of one year of service. The inspection shall be made with ODNR and a copy of the inspection report sent to ODNR summarizing all deficiencies on items which need tended to by ODNR as part of their routine maintenance, or required by the dock manufacturer under warranty. Some of the major items to be inspected are:

1. Freeboard.
2. Dead load deflections.
3. Live load deflections.
4. Bolt tightness.
5. Weld quality.
6. Deck condition.
7. Wear or loosening of hinge connections.
8. Anchorage adjustments.
9. Bumper and rub rail damage.
10. Galvanizing needed repair.
11. Deck boards and their attachments.
12. Condition of pile guides.

1.12 MEASUREMENT AND PAYMENT

- A. Measurement of the dock square footage shall be edge to edge of the frame.
- B. Payment for all labor and material to perform the work under this section and all incidentals to make a complete docking system will be at the contract unit price bid for Floating Boardwalk (docks). No partial payments will be made to the contractor for any work prior to the delivery of the docks to the project site. All items listed or shown in the specifications or on the drawings shall be included in the appropriate bid schedule item.

PART 2 - MATERIALS

2.1 STRUCTURAL STEEL

- A. All steel members of the structural frame shall be ASTM A-36 or stronger with minimum material thickness of 3/16". The angles in the structural frame shall be a minimum of 2" x 2" x 3/16", except longitudinal joist webs and cross joist webs. Structural members of greater size called for by the dock manufacturer's calculations shall be furnished by the dock manufacturer at no additional cost to ODNR.
- B. The structural frame includes all members of the framing system to which are attached the decking, floats, cleats, rub rail, pile guides, hinges, etc., which, in other words, includes everything welded together that goes into the galvanizing tank.
- C. All steel members shall be hot dip galvanized after fabrication in accordance with ASTM A-123. All bolt holes, slots, etc. shall be drilled or machined prior to galvanizing. Welding and drilling holes after galvanizing shall not be permitted.

2.2 DECKING ON DOCKS

- A. Decking shall be Southern Yellow Pine (SYP) S4S MCA Wolmanized, or approved equal, treated wood of consistent thickness and suitable for outdoor use in freshwater marine conditions. Grade shall be premium select Architectural grade, or approved equal. Plank sizes shall be nominal 2 x 6 (actual 1½"x 5½") except for boards under cover plates between docks which shall be 1 x 4 (actual ¾" x 3½").

SPECIFICATIONS (cont.)

2.3 RIGID CONNECTIONS

Fastening of metal structural members to each other shall be a combination of bolts and welds. Bolted connections shall conform to standard AISC specifications with lock washers or lock nuts. Welds shall be executed in accordance with the provisions of the American Welding Society specifications. All fasteners shall be stainless steel or hot dip galvanized with adequate coating thickness so that the fasteners will not show rust during the first five year warranty period.

All bolts ½" or greater shall be A325. Bolts 3/8" or smaller shall be SAE grade 5.

2.4 FLOTATION

- A. Flotation material shall be expanded-in-place polystyrene float drums with a minimum density of 0.8 pounds per cubic foot.
- B. Encasements shall be fully foamed inside on all six surfaces with no voids or loose beads.
- C. Flotation encasement shall be high, medium or linear low density polyethylene, black in color, with no regrind material, totally watertight, and with the following properties:
 - 1. Minimum thickness: 0.150".
 - 2. Minimum density: 0.80 pounds per cubic foot.
 - 3. Minimum ultimate tensile strength; 2600 pounds per square inch (ASTM D-638).
 - 4. Minimum flexural modulus: 97,000 pounds per square inch (ASTM D-790).

PART 3 – EXECUTION

3.1 GENERAL

- A. All floating docks and walkway shall be fabricated from approved shop drawings in the dock manufacturer's plant and be complete, with flotation, so that they can be lifted off the truck directly into the water at the project site.
- B. Field fabrication of individual components will not be allowed, with the exception of connecting assembled units together or placement of the anchor guides.
- C. The dock manufacturer shall provide an experienced field representative to supervise unloading of the floating docks, walkways and all associated equipment to ensure all materials have been properly delivered to the project site without damage. The manufacturer shall do a post installation inspection to ensure the docs have been properly installed.

SPECIFICATIONS (cont.)

3.2 DOCK SUBSTRUCTURE

- A. Individual dock units shall be made up of treated SYP S4S MCA fastened together to make a structural frame. The structure shall carry all design loads (as per Part 1.10 B of this specification). Decking and flotation shall not contribute to structural strength calculations.
- B. Modifications to structural frame for anchorage system, attachments, etc. shall be factory fabricated prior to dock assembly and galvanized. The anchor guides may be attached at the jobsite.
- C. Lifting straps or a suitable galvanized lifting frame shall be supplied for the project and shipped first or with the first shipment of docks delivered to the site and shall remain the property of ODNR. Lifting frames shall be designed to provide vertical lifts for all dock and approach structures and shall include a complete set of chains or lifting straps with snap hooks. Design shall be coordinated to work with the Parks proposed lifting equipment.
- D. The contractor shall use lifting straps or a lifting frame to unload the dock sections and to place the docks into the water. Lifting straps or lifting frames shall also be used to move docks at the manufacturing plant and any other point of unloading and reloading.
- E. Damaged dock frames will not be accepted by ODNR.

3.3 FLOTATION

- A. Individual flotation units shall be attached directly to the structural frame, using a minimum 3/8" bolt, 1-3/8" diameter, 7/64" thick washer, lock washer and nut, all hot-dip galvanized or stainless steel and which have a life expectancy as long as the flotation unit itself. Fasteners are not permitted to penetrate float encasements under any circumstances. Attachment shall be in all four corners and on maximum of 2' intervals on sides and ends where attachments holes exist.
- B. All sides and ends of floats shall be supported by the dock frame. Minimum frame support of float drum must be every 48" by 48" or 16 square feet.
- C. Flotation units shall be attached in such a manner as to allow easy removal or replacement of damaged units.
- D. Flotation units shall be designed and protected so that no damage occurs during shipping, handling, or under normal use. Docks which arrive on the job site with damaged flotation units shall have floats replaced at no cost to ODNR.

SPECIFICATIONS (cont.)

3.4 WOOD DECKING ON DOCKS

- A. Deck boards shall be laid perpendicular to the length of the dock, bark side up, and shall be as long as the width of the dock. Factory spacing between boards shall be set at between 1/8" and 1/4" so an even number of full width boards are used on a dock length.
- B. Deck boards shall be attached to structural supports with self-tapping flat head screws at a maximum of 2 foot centers, 2 screws at intermediate and end supports of deck boards. Deck screws shall be minimum 1/4" diameter stainless steel screws. They shall be driven flush with or slightly below the upper surface of the decking so as to not splinter, split the board or enable water to pond in screw head. Screws shall be in straight line patterns.

Prior to inserting screws, pilot holes and counter sinks shall be drilled into the wood.

- C. Structural metal supports for deck boards shall be a minimum of 2" x 2" x 3/16" on 24" maximum spacing.
- D. Decking shall be Southern Yellow Pine (SYP) S4S MCA Wolmanized treated wood of consistent thickness and suitable for outdoor use in freshwater marine conditions. Grade shall be premium select Architectural grade, or approved equal. Cut ends of planks shall be sealed with a clear aqueous wax end sealer immediately after cutting, as per the wood supplier's recommendations. Attachment at all supports shall be made with stainless steel self-tapping screws. Wood decking anchorage and screw spacing from ends and sides of boards shall be as recommended by the wood supplier.
- E. One board under hinge cover plates shall be only 1" x 4" (3/4" thick).
- F. Deck screws shall be self-tapping, flat head stainless steel fasteners, minimum 1/4" diameter.

3.5 CONNECTIONS

- A. Connections between docks shall be made flexible and shall match those used on the existing dock sections. Connections shall be made by double shear, pin connectors at the outer edges of docks. Connection brackets shall be galvanized steel with a stainless steel pin.
- B. Structural parts of connectors shall be of the same base metal as the dock's structural frame. Bolts, nuts & lock washers shall be stainless or galvanized steel.
- C. Connections shall not protrude above the level of the deck and shall present a relatively smooth top surface with no sharp edges, or upward projections. Connections may have sufficient "play" to permit them to work freely, but such "play" shall be controlled to prevent no more than 1/2 inch transverse movement. The maximum difference between the bolt or pin diameter and hole diameter shall be 1/16 inch.
- D. Design of special connections (i.e. cover plates, etc.) shall be approved by ODNR prior to manufacture of the dock(s).
- F. Contractor shall verify field conditions when connecting to any existing abutments or docks prior to fabrication of the docks in order to make any necessary adjustments.
- G. When aluminum connectors attach to galvanized steel, the aluminum shall be isolated with a neutral material such as plastic or rubber.

SPECIFICATIONS (cont.)

3.6 SPARE PARTS

- A. Furnish and deliver the following spare parts to the project site:

Spare Parts	For Dock Projects
Deck Screws	50
Lifting Rings, with bolts, nuts and washers	4
Dock Connector Bolts, with nuts and washers	10
Wood Decking	10 Pieces
Anchor Guides	4 Each

3.7 WINTERIZATION REQUIREMENTS

- A. Complete winterization procedures will be confirmed and written into instructions conforming to the methods presented to ODNR as discussed in paragraph 1.9 A.11.
- B. Two copies of the Winterization manuals shall be included with the final printing of the approved shop drawings.
- C. Demonstrate winterization procedures to local maintenance staff.

PART 4 – SCHEDULE

4.1 GENERAL

- A. Vendor shall provide schedule with anticipated completion date at time of bid.
- B. Final Completion Date: All materials shall be on site and ready for installation on August 15, 2016.

PART 5 – BID ALTERNATES

5.1 GENERAL

- A. Base bid shall be assembled floating boardwalk sections (docks) and anchor materials delivered to the site.
- B. Bid Alternate No. 1: Lump sum cost to provide anchor spud materials. Anchor spuds to be 2" schedule 40 galvanized steel pipe with one end threaded and an end cap. Length = 12-ft. Quantity = 2 ea. Per dock section.
- C. Bid Alternate No. 2: Lump sum cost to accelerate the final completion date and deliver all materials to the site by July 15, 2016.

PUNDERSON BOARWALK EXTENSION PLANS

[Click here for a link to the plans.](#)