



PROJECT SPECIFICATIONS
INSTRUCTIONS TO BIDDERS

Date Issued: 10/18/2022

Project: BU3 (Barge Unloader 3) Controls Upgrade at McDuffie Coal Terminal

Bid Due Date: 11/15/2022

**YOU ARE INVITED TO SUBMIT YOUR PROPOSAL FOR PRICING THE FOLLOWING
“SCOPE OF WORK”:**

Provide all engineering, material, and labor to upgrade the existing controls on the Heyl & Patterson Barge Unloader at the McDuffie Coal Terminal (Alabama State Port Authority). Specific issues to be addressed include:

1. Correct problems with the barge unloader trolley positioning
2. Provide better speed control in the barge haul
3. Make improvements in the operation and reliability of the barge unloader

The terminal seeks to make the barge unloader control system consistent in its ability to establish limits and position during coal unloading operations as well as make operator interface improvements for control of the system.

Barge Trolley System

Restore accurate function in the trolley positioning system so that limits for the bucket elevator can be set and stay consistent in relation to the barge sidewalls throughout its operation in all conditions the system is normally exposed. With the current trolley positioning system, the bucket elevator will occasionally undershoot or overshoot the physical location of the barge sidewall, therefore requiring constant operator intervention with the trolley positioner settings.

Barge Haul System

Better speed control of the barge haul and return through the tandem operation of the haul and return motors is desired. The current control system is subject to variable barge towing load due to river current, coal weight, etc., which causes difficulty in haul speed control using the lever in the control cab.



Requirements and Guidelines

The successful candidate is responsible for providing all of the materials and for overseeing McDuffie Coal Terminal electrical and mechanical installation of the project. This includes engineering as well as electrical or other work that will be subcontracted. The awarded firm shall also meet the requirements in the Technical Specification (Section 9 of this RFP). All language addressing the work within this Request For Proposals and Technical Specification that is not specified to be by Owner shall be by successful candidate. All equipment such as drive/PLC systems & cabinets will be factory-installed/tested at the vendors facility to confirm all systems are in working order before delivery to McDuffie Coal Terminal. Once all systems are in satisfactory working and tested, verification with McDuffie Coal Terminal representatives will take place in person or via zoom meeting. The successful candidate is responsible for providing/furnishing a complete controls upgrade that will be installed by McDuffie Coal Terminal approved contractors and over seen by the winning vendors field service technicians including commissioning and training. Final payment (10% of project total) will be provided after unloading (12) twelve barges without incident.

McDuffie Coal Terminal electrical & mechanical contractor's will be responsible for all scaffolding, rigging, fork trucks, portable cranes, tools, and safety equipment necessary to accomplish all work per the identified Scope.

McDuffie Coal Terminal will furnish the following:

- A) Existing drawings and technical detail on the current system
- B) Electrical service and hook-ups for electrical equipment
- C) Terminal air & water

1. Your **proposal is due before noon (CST) on 11/15/2022.**
Late bids will be rejected.
2. Your bid must be returned in a sealed envelope. The envelope **must** be marked as follows:

Request For Proposal – BU3 Barge Unloader Controls Up-Grade
McDuffie Coal Terminal
1901 Ezra Trice BLVD
Mobile, Alabama 36603
ATTN: Dillon Sims
Associate Buyer
(251) 441-7676
Dillon.Sims@ALPorts.com



3. Bidder is hereby requested to attend a **mandatory Pre-bid meeting held on 11/1/2022 at 1:00 PM (CST) at the McDuffie Coal Terminal. Please call or reply by email to confirm attendance.**
4. Bidder shall submit one (1) original and three (3) copies of the proposal and use the **Required Quotation Sheet(s)** as a cover sheet to the proposal.
5. Your proposal shall conform in all respects with applicable requirements, terms and conditions, and requested submittals referred to herein. Any deviations from or exceptions to this Request For Proposal or required submittals shall be clearly stated on a page of your bid entitled "**BID CLARIFICATIONS AND/OR EXCEPTIONS**". If there are no exceptions please state, sign and date the document.
6. Bidder shall submit his proposal on the enclosed proposal form. The bidder shall include all information requested on the proposal form. Your bid shall be considered incomplete if it does not contain all the requested information. Alternatives or alternates to each proposal will be considered only if the original Request For Proposal is submitted. McDuffie Coal Terminal reserves the right to reject bids for incompleteness. If Bidder's proposal is accepted and the Bidder is awarded the contract, the proposal along with the Scope of Work will be incorporated into the Contract. Alabama State Port Authority assumes no liability or responsibility for the costs incurred by the Bidder for any materials, efforts, or expenses required in the preparation of proposals.
7. Commercial
 - 7.1 All Work shall be governed by the terms and conditions outlined in the **General Services Agreement and Code of Business Conduct.**
 - 7.2 Bid shall be valid for sixty (60) days after the due date of this Request For Proposal and shall be firm for the duration of the project/contract once awarded.
 - 7.3 The bid price(s) shall include all costs to the bidder, including freight FOB McDuffie Coal Terminal Included and Allowed, and profit as a fixed price.
 - 7.4 Alabama State Port Authority reserves the right to accept other than the lowest bid proposal and to accept or reject any proposal in whole or in part, or to reject all proposals with or without notice or reasons, and if no proposal is accepted, to abandon the Work or to have the Work performed in such other manner as McDuffie Coal Terminal may elect.

8. Safety

The safety of both McDuffie Coal Terminal employees and the employees of the successful candidate is of the utmost importance to Alabama State Port Authority. **Failure to submit the following information or confirm that the information is on file with ASPA may result in the rejection of your bid.**

NOTE: A copy of the complete McDuffie Coal Terminal Safety Manual will be sent to the successful Bidder upon request.

8.1 Bidder shall submit or confirm on file the completed *Alabama State Port Authority. Safety Rules* and evidence/attest that all on-site workers are compliant with the *Terminal Safety Program*. These shall be incorporated into any contract or purchase order. **A vendor Safety Management/Project Specific Hazard Analysis must be completed before the start of the Work by the vendor.**

8.2 Bidder shall submit to McDuffie Coal Terminal a safety plan and hazard analysis for the proposed contract. The safety plan shall at a minimum explain how the vendor will safely perform the Work, identify internal safety training program(s), type of safety equipment required of employees all per contractual and OSHA requirements, any identifiable hazards, and/or a risk assessment of each Scope of Work.

9. Technical Specification

9.1 Use of Subcontractors

Bidder shall list any proposed Subcontractor(s). All Subcontractors are subject to Owner approval.

9.2 PLC's

For operator experience, all PLCs implemented shall be Allen Bradley Control Logics processor 1756- L7 or L8. The PLCs should include at least 25% spare I/O for future expansion. The new onboard PLC program shall contain all of the necessary logic to completely control the operation of the continuous barge unloader and barge haul system in all modes of operation. The new logic shall contain easily identified tag names for all elements as well as comprehensive rung descriptions that explain the purpose and operation of all rungs. The new logic shall be written in such a manner as to be easily understood and followed by the average maintenance electrician and contain a complete set of alarms and "Operator Help Messages". The "Operator Help Messages" are momentary alarms that alert the operator that he/she is trying to accomplish something that cannot be done (i.e., raise the bucket ladder/cab when it is at maximum height). All user names and passwords to be provided by McDuffie Coal Terminal.

9.3 Power

Power for the PLCs shall come from a voltage stabilizing device such as a constant voltage transformer (CVT) or automatic voltage stabilizer (AVS) to handle voltage fluctuation issues. The design should utilize the drives for the barge trolley and haul motors already in service. In the event of loss of power to, or failure of, the PLC, the haul and trolley operations shall immediately and safely stop.

9.4 Operation

All controls directly within the barge unloader control system shall be operable with an HMI (Hope Industrial Model# HIS-ML19_STAH) computer supplied and installed by the Contractor in the barge unloader control cab. It is preferred that the operator interface be a current technology such as a touch screen or equivalent and incorporate a two-touch confirmation to prevent accidental operation. A second HMI 19" Hope Industrial color HMI panel (HIS-ML19-STAH) with an onlogic ML500G-30 linked into the current HMI unloader reporting system by fiber shall be provided to report a duplicate of all unloader data currently reported (i.e., unloading hours, number of barges, coal tonnage, etc.) to the T-10 Tower and Main Office. This information shall be archived electronically for easy retrieval in the future.

9.5 Options

An option price should be provided for a swiveling control console in the cab.

9.6 Outage

Successful Bidder shall coordinate any required barge unloader outage with coal yard operations. **The Barge Unloader shall be out of service no longer than 14 continuous days for this project.** An outage is defined by the barge unloader not being able to unload coal at its normal rate without hindrance. The bidder should submit a schedule that minimizes the outage time for the barge unloader. The proposal shall include anticipated equipment (barge unloader, conveyors, etc.) outage information such as number and duration.

9.7 Project Detail

It is to the Bidder’s advantage to make a proposal that simplifies and thus improves the reliability of the barge unloader control system. Elimination of some of the complexities of the current system without compromising any function or interlocking of the control system is necessary. Replacement of old equipment with supporting parts is necessary. The successful bidder shall supply a cable schedule which will include conductor size, number of conductors, length of the cable run, termination points, and any eliminated cables.

9.8 Project Deliverables

Deliverables with the project shall include a hardcopy of logic, drawings, manuals, and sufficient training for operation. Two separate classes are to be conducted on-site at McDuffie Coal Terminal to train operators and I/E personnel about new operating procedures and equipment. Approximately six people will attend each class for four to eight hours. The Contractor shall include in the Bid these expenses and schedule for these services. As-built drawings and manuals shall be provided in electronic format as listed below:

Manuals	Adobe PDF
Drawings	AutoCAD

Startup procedures, program parameters, and instruction manuals shall be supplied before installation begins. A maintenance manual is to be provided upon completion of the startup. This manual shall include all of the necessary maintenance and instructions for each piece of new hardware as well as a description of the operation of the new system, and all of the non – default configuration parameters required to replace in the future. A recommended spare parts list shall also be submitted with pricing with the Bid.

The successful candidate shall ensure the upgraded control system meets the Performance Guarantee per Article 10.

9.9 Liquidated Damages

Liquidated Damages of \$1,000 per day shall apply to each calendar day past the specified lead time for all equipment to be delivered provided by the bidder on the REQUIRED QUOTE SHEET section J. The lead time will begin once the Notice of Award has been issued to the successful bidder.

10. Performance Guarantee

The successful candidate shall ensure the newly upgraded barge unloader controls meet all of the following operational requirements:

10.1 Barge Unloading Cycle Time

It is understood that as a result of the new controls installed by the McDuffie Coal Terminal electrical and mechanical approved contractor's, the speed at which coal is unloaded from the barges could be negatively impacted. **The successful candidate shall ensure that the existing design coal unloading Tons Per Hour (TPH) capability is not reduced.** The successful candidate will not be held responsible for parts of the cycle involving the changing of barges once unloading is complete but shall be responsible for any impediment in the cycle due to operator intervention caused by the control system during normal operating conditions.

10.2 Barge Unloader Trolley Positioning and Automatic Control

The successful candidate shall be able to demonstrate the successful automatic control of the barge trolley and bucket ladder. This means that during coal unloading operation the Bucket Ladder does not undershoot or overshoot the barge sidewalls, thus maximizing the coal removed from the barge and minimizing barge unloading time. Undershooting the barge sidewalls with the bucket ladder results in coal being left against the barge sidewalls and overshooting results in the bucket ladder hitting the barge sidewalls during full normal barge trolley speed. The barge trolley shall operate successfully under normal operating conditions.

10.3 Normal Operating Conditions

The normal operating conditions of the McDuffie Coal Terminal barge unloader range 24 hours a day, 365 days per year. Any weather and river conditions the barge being unloaded is exposed to during the year shall be considered within the normal operating conditions.

10.4 Reliability Run

The successful candidate shall participate in reliability runs during startup and testing. The reliability run shall include Twelve (12) barge unloadings conducted by the Owner's operator. Each unloading shall proceed without incident due to any part of the control system. Each unloading shall meet all requisites defined above. **The successful candidate shall guarantee the successful operation of the Barge Unloader controls during all normal operating conditions for one year.**

11. Bidder shall submit a detailed engineer/procurement/construction plan, per the **Scope of Work**, that verbally depicts the scope and methodology of each aspect of the proposal. All plans must include drawings, type, and quality of materials and equipment and price breakouts proposed to complete the Work. The bidder shall include a detailed schedule for completing the Work. A Final Completion for the Work shall be no more than 14 calendar days. The schedule shall include, at a minimum, milestone dates for material delivery, installation start, installation completion, and startup and testing dates. The format should be in Word and easy to follow.
12. Bidder shall submit three or more references of similar work experience, including at least three (3) projects involving barge unloader controls.
13. Any Bidder that is not a certified vendor with Alabama State Port Authority shall complete the **required information** and submit it along with the proposal to be considered for the Project.
14. Bidder shall state the name and on-site contact of any proposed subcontractor(s) and which portion of the work they propose to perform. Successful candidate must list all employees and subcontractors by name who will be working on the project turned in **with the bid package**. Daily reports will be filled out and attendance documented of worker on site.
15. McDuffie Coal Terminal requires notification of all subcontractor(s) at least 48 hours before subcontractor(s) start Work. Subcontractor(s) will be denied access to McDuffie Coal Terminal without the required notification. McDuffie Coal Terminal requires the same degree of safety to be demonstrated by the subcontractor(s) and that at a minimum the contractor shall impose the same contractual conditions upon the subcontractor(s) that is required by the agreement to this contract. McDuffie Coal Terminal maintains the right to reject any contract or subcontractor personnel or request that same be removed from the site upon request.
16. Payment Schedule

40% At Time of Award / 30% Upon Complete Delivery of all equipment / 20% After Installation is complete / Final 10% After unloading (12) twelve barges without incident.
17. All technical questions should be directed to:

Daniel Gill
Maintenance Manager
McDuffie Coal Terminal
(804) 852-3617
Daniel.Gill@ALPorts.com



REQUIRED QUOTATION SHEET

A. BIDDER'S NAME _____

B. BIDDER'S MAILING ADDRESS _____

C. PRIMARY CONTACT NAME _____

D. TELEPHONE NUMBER _____

E. FAX NUMBER/EMAIL _____

F. REMITTANCE ADDRESS _____

G. FEDERAL TAX I.D. OR SOCIAL SECURITY NUMBER _____

H. Project : McDuffie Coal Terminal BU-3 Barge Unloader Controls Upgrade

I. CERTIFICATE OF INSURANCE (PLEASE ATTACH)

J. CONTRACT PRICE

Full compensation to successful candidate for full and complete performance of all the controls upgrade, compliance with all terms and conditions of this Contract and for vendors payment of all obligations incurred in, or applicable to, performance of the Work (hereinafter referred to as the "Contract Price") shall be the total firm fixed price of:

McDuffie Coal Terminal Barge Unloader Controls Upgrade

Engineering Labor	\$ _____
Labor (Estimated No. of Manhours _____)	
Field Labor	\$ _____
Labor (Estimated No. of Manhours _____)	
Material	\$ _____
Equipment	\$ _____
Other	\$ _____
Lead time for all equipment to be delivered. _____ calendar days.	

FIRM FIXED PRICE: \$ _____

Per Section 9.9 Liquidated Damages of \$1,000 per day shall apply to each calendar day past the specified lead time for all equipment to be delivered

K. OPTIONAL PRICING

Pricing is requested for the following optional items:

**McDuffie Coal Terminal Barge Unloader Controls Upgrade
Optional Pricing – Swiveling Control Console for Barge Cab**

Labor \$ _____
 Labor (Estimated No. of Manhours _____)
 Material \$ _____
 Equipment \$ _____
 Other \$ _____
 Lead time for all equipment to be delivered. _____ calendar days.

FIRM FIXED PRICE: \$ _____

**McDuffie Coal Terminal Barge Unloader Controls Upgrade
Optional Pricing – Replacement of Both Allen Bradley Barge Haul Drives**

Labor \$ _____
 Labor (Estimated No. of Manhours _____)
 Material \$ _____
 Equipment \$ _____
 Other \$ _____
 Lead time for all equipment to be delivered. _____ calendar days.

FIRM FIXED PRICE: \$ _____



L. CHANGE ORDERS

Additional Pricing may be used in the event of a change order situation.
Bidder shall submit a schedule of labor and equipment hourly rates. The bidder should include one sheet for each classification. (PLEASE ATTACH)

Additional Material markup over invoice: _____ 10 _____ %

Additional Rented Equipment over invoice: _____ 10 _____ %

Additional Subcontractor over invoice: _____ 12 _____ %

M. RECOMMENDED SPARE PARTS LIST AND PRICING (PLEASE ATTACH)

One Lot Spares -\$



BID CLARIFICATIONS AND/OR EXCEPTIONS

Bidder offers the following clarifications and/or exceptions taken to any requirement or provision of this Request For Quotation and any proposed modifications or replacement language for each clarification or exception (If none, so state.):

Bidder understands that unless itemized above, no other clarifications or exceptions to this Request For Quotation are taken by the Bidder.

Contractor

Signature of Executing Party

Date

Project Specifications - BU3 Controls Upgrade