

EXPLANATION OF CONSENT AGENDA ITEM E.2.c.(13) April 27, 2016

ITEM:

Consideration of approving a Purchase Order to RS&H under their continuing services engineering contract for bridge repair, structural design and construction inspection services to address necessary repairs to the SR-401 flyover bridge serving the west-side cruise terminals in an amount not to exceed \$173,823. (Crowe)

EXPLANATION:

The SR-401 "fly-over" bridge (FDOT Structure 700218) provides access to southbound SR-401 from the west side cruise terminals CT5, 6, 8 & 10. This bridge was permitted by FDOT; however, is owned and maintained by the Canaveral Port Authority. State statute requires that this bridge undergo a thorough inspection semi-annually.

During the May 28, 2015 inspection, the following deficiencies were noted as needed repair:

- 107 Painted Steel Open Girder: Clean and paint the areas of corrosion throughout the beams, diaphragms and hardware.
- 310 Elastomeric Bearing: Repair the west anchor bolt of Bearing 5-1 at Abutment 5. Tighten all loose and backed off bearing lock nuts. Install missing washers and lock nuts on all anchor bolts of the bearings at the abutments.
- 478 MSE Walls: Repair the closure pour settlement between Abutment 5 and MSE wall coping. Repair lack of cover spalls in the MSE wall coping panels.
- Approach Barriers: Repair the lack of cover spalls/delaminations with exposed rebar in the approach barriers. Repair delamination in the bottom traffic face of the southeast approach barrier at the drainage inlet.

The scope of work includes design sketches of the repair, assistance with selection of a contractor, and construction oversight during the work.

Once the design is completed, staff also requests permission to issue a competitive solicitation for the project and bring back to the Board a recommendation for award of the project.

Funding Review by Finance (Pat Poston):

The total NTE amount of \$173,823 is included in the FY16 Capital Budget and no increase in required. [Budget item 1100 - Road Improvements]

Staff Recommends Approval

Prepared by: Bill Crowe, P.E.





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April 7, 2016

Mr. Bill Crowe
Sr. Director of Facilities, Construction & Engineering Canaveral Port Authority
445 Challenger Road, Suite 301
Cape Canaveral, FL 32920

Dear Mr. Crowe,

In reference to your requirement to provide professional engineering and consulting services and construction management services associated with concrete repairs and steel girder painting for the Overpass Ramp to SR-401 (Str. No. 700218) based on the FDOT Bridge Inspection Report dated 5/28/2015, RS&H submits the following professional services proposal for your review.

PROJECT DESCRIPTION

Canaveral Port Authority (CPA) desires to retain RS&H, Inc. (ENGINEER), to provide professional engineering, consulting services, and construction management services associated with concrete repairs and steel girder painting for the existing four-span continuous steel overpass ramp to SR-401 (Str. No. 700218).

Scope of work includes:

Task 1 Bridge #700218 Concrete Repairs:

1. Contract plans will be provided for the following repairs as noted in the Bridge Inspection Report dated 5/28/15:
 - a. Installation of missing washers and lock nuts and tightening of all loose/backed off bearing lock nuts.
 - b. Repair of closure pour settlement between Abutment 5 and the MSE wall coping.
 - c. Repair spalls in MSE wall coping.
 - d. Repair spalls, delamination, and areas of exposed rebar in approach barriers.
2. Submittals will include: preliminary plans, final plans, estimate of conduction cost, and sign & sealed plans.
3. Contract plans will include a temporary traffic control plan.
4. Post design services will consist of the following: responding to Requests for Information (RFI) during construction (up to 10 RFIs).
5. On site construction review during concrete repairs.

All bridge concrete repair plans and construction management is based on a direct select of a Contractor by CPA through a purchase order. RS&H will recommend a repair Contractor based on their experience working similar bridge repairs, their quality reputation, and their ability to rapidly and cost effectively complete the repairs based on



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RS&H engineering direction. The bridge repair plans will be developed from the PDF files of the as-built plans. All repair plans will be drawn onto the PDF files in red color. The ENGINEER will utilize standard Florida Department of Transportation specifications and will indicate by cover letter that the Canaveral Port Authority will replace as "Client" wherever "FDOT" or the "Department" is indicated.

Task 2 Bridge #700218 Steel Girder Painting:

1. Contract plans will be provided regarding steel superstructure (beams, diaphragms, & hardware) painting of Bridge #700218 as noted in the Bridge Inspection Report dated 5/28/15.
2. This is not a rehabilitation of Bridge #700218. Rehabilitations plans, details, specifications, etc. are not in this scope of services.
3. A field visit will be conducted to determine the plans composition for painting Bridge #700218. This field visit is not a structural inspection of the bridge.
4. The structural integrity and the structural capacity of Bridge #700218 will not be evaluated.
5. A load rating of Bridge #700218 will not be performed.
6. Submittals will include: preliminary plans, final plans, estimate of construction costs, and sign & sealed plans.
7. The Canaveral Port Authority will provide the color of the painting system prior to the final plans submittal.
8. Contract plans will include a temporary traffic control plan.
9. Post design services will consist of the following: responding to Requests for Information (RFI) during construction (15 RFIs total).

SECTION 1 – APPLICABLE STANDARDS

All plans and designs furnished by the ENGINEER are to be prepared with English Units. The current (latest) editions, including updates, at the time this agreement is executed, of the following manuals and guidelines shall be used as resources and reference materials in the performance of ENGINEER's work:

1. Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways, Florida Department of Transportation (FDOT), latest edition (Florida Green Book).
2. AASHTO Roadside Design Guide, latest edition.
3. FDOT Roadway Plan Preparation Manual, latest edition.
4. FDOT Roadway and Traffic Design Standards, latest edition.
5. FDOT Standard Specifications for Road and Bridge Construction, latest edition.
6. MUTCD, latest edition.
7. FDOT Structures Design Guidelines, latest edition.
8. National Electric Code, latest edition.

SECTION 2 – ELECTRONIC FILES

In addition to the number of copies at each submittal phase, the ENGINEER shall provide electronic files of all plans, reports, and specifications. Design progress plans and the final plans will be in PDF format.



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SECTION 3 – PROFESSIONAL SERVICES

The tasks set forth in the Basic Services as listed in Section 3 of this Scope of Services are used to apportion the total man hours required to prepare the complete design and construction documents for this project across the various tasks. Upon receipt of the CPA's purchase order and Notice to Proceed, the ENGINEER shall begin performance of the basic services. The various tasks to be performed are described in the following sections.

3.1 Project Engineering

- A). Project Administration and Management Meetings the ENGINEER will hold one (1) Design Kick-Off Meeting for each contract, the concrete repairs and steel girder painting for the Overpass Bridge, with the CPA Project Manager and other personnel the CPA wishes to attend to discuss proposed project parameters, scheduling, construction issues, and other related items and to obtain input for the repair plans. The ENGINEER shall provide bi-monthly project progress reports by email, letter, or fax.
- B). Field Reviews the ENGINEER shall conduct a visual reconnaissance of the project site.
- C). CPA Coordination and Review the ENGINEER shall prepare and submit Preliminary Engineering Phase Plans and meet with CPA review and comment for each contract, the concrete repairs and steel girder painting projects. The ENGINEER shall then incorporate any changes to the Preliminary Engineering Phase Plans, based on CPA comments, into the final plans prior to submitting final plans to the CPA.
- D). Project Scheduling the ENGINEER shall prepare and submit to the CPA an overall project schedule.
- E). Deliverables:
 - Three (3) sets of (11" X 17") and one (1) PDF format electronic file furnished to the CPA for each submittal of the concrete repair contract;
 - Three (3) sets of (11" X 17") and one (1) PDF format electronic file furnished to the CPA for each submittal of the steel girder painting contract;
 - Project Schedule;
 - Bi-monthly project progress reports;
 - Minutes of each meeting distributed to each attendee and others as requested by the CPA no later than seven (7) calendar days after the meeting;
 - Written responses to CPA comments at each design submittal stage via letter, e-mail or fax.

3.2 Construction Management

The ENGINEER shall provide the following services:

- A). Construction Oversight Concrete Repair the ENGINEER shall provide review of the construction activities as the project progresses toward completion. The Construction Oversight activities are based on an anticipated construction period of three (3) weeks for the concrete repair. Scheduled review include:
 1. Removal of concrete
 2. Cleaning of concrete surfaces
 3. Setting concrete forms



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4. Pouring concrete
5. Review and comment on concrete cylinder compression and shear test report
6. Project cleanup

- B). Construction Oversight Steel Painting** the ENGINEER shall provide review of the construction activities as the project progresses toward completion. The Construction Oversight activities are based on an anticipated construction period of eight (8) weeks for the steel painting. Scheduled review include:
1. Monitor the Contractor's on-site construction activities and inspect materials entering into the work in accordance with the plans, specifications, and special provisions for the Construction Contract to determine that the projects are constructed in reasonable conformity with such documents. Maintain detailed accurate records of the Contractor's daily operations and of significant events that affect the work.
 2. Monitor and inspect Contractor's Work Zone Traffic Control Plan and review modifications to the Work Zone Traffic Control Plan, including Alternate Work Zone Traffic Control Plan.
 3. Perform sampling and testing of component materials and completed work in accordance with the Construction Contract documents.
 4. Determine the acceptability of all materials and completed work items on the basis of either test results or verification of a certification, certified mill analysis.
 5. Attend pre-construction/activity meeting.
 6. Ensure that all painting, repainting, spot painting, removal or repairs that involve removal of materials that contain hazardous waste is done in conformance with this procedure and all local, state and federal regulations.
 7. Ensure that the identification, abatement, handling and disposal of asbestos-containing materials are done in conformance with local, state and federal asbestos regulations and this procedure.
 8. Ensure that the Contractor's work plan and schedule -- and for hazardous coatings removal, the Contractor's Lead in Construction Compliance Program -- complies with requirements of the Specifications.
 9. Ensure the Contractor provide screens, enclosures or any other means available to contain overspray.
 10. Ensure that the Contractor doing the painting and/or removal holds a QP2 certification from the Society for Protective Coatings (SSPC), Painting Contractor's Certification Program and that the certification remains active for the duration of the project.
 11. Ensure blast cleaning is in accordance with SSPC Blast Cleaning Specifications.
 12. Coating of bolts: Verify that bolts are prepared properly before painting and that they meet the specification cleanliness requirements before any paint is applied. Surfaces and edges of bolt heads and nuts must have the specified coating thickness and coverage, gaps between nuts and washers and between washers and plates must be sealed.
 13. Verify that caulking of gaps or seams, is performed in accordance with Section 560-9.3 and 561-8.3. Verify that all seams and gaps are properly caulked before coatings are applied.
 14. Testing for the presences of chlorides, sulfates and nitrates on surfaces to be painted is the responsibility of the Contractor.



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15. Verify that rigging components and hardware comply with the Contractor rigging plan.
16. Ensure stripe coating of welds, corners, crevices, sharp edges, bolts, nuts, rivets, and rough or pitted surfaces, Specification 560-9.7.
17. Ensure surface preparation and cleaning procedure are performed in accordance with SSPC Surface Preparation Specifications.
18. Familiarization with the special provisions to ensure and enforce the Contractor uses the correct paint and applies the correct number of coats as well as other considerations.
19. Ensure the Contractor does not exceed the coatings manufacturer recommended pot life.
20. Ensure during painting the thickness of the paint coat is measured and complies with the specifications. Coat thickness measurements shall be taken at the average rate of one every 25 square feet of painted area.
21. Ensure the Contractor adheres to the manufacturer's temperature restrictions if they are warmer than the conditions specified in the Contract Documents.
22. Vehicles will be equipped with appropriate safety equipment and must be able to effectively carry out requirements of this Agreement. Vehicles shall have the name and phone number of the consulting firm visibly displayed on both sides of the vehicle.
23. Supply survey, inspection, and testing equipment essential to perform services under this Agreement.
24. Maintain responsibility in monitor and inspect the Contractor such that the project is constructed in reasonable conformity with the plans, specifications, and special provisions for the Construction Contract.
25. Observe the Contractor's work to determine the progress and quality of work. Identify discrepancies, report significant discrepancies and direct the Contractor to correct such observed discrepancies.

SECTION 4 – SERVICES PROVIDED BY THE CPA

The CPA will coordinate with the local utilities that will affect the bridge concrete repairs and the steel girder painting schedule for the Utilities to be shut off as required to complete the bridge concrete repairs and steel girder painting.

Price:

This is a time and materials with a not-to-exceed price – only hours needed will be charged:

Task 1 Bridge #700218 Concrete Repairs:

Design Services:

Project Manager	25 hours - \$223.65 per hour rate	\$ 5,591.25
Bridge Design	50 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$ 9,708.50
Bridge Design	90 hours for Bridge Design Engineer - \$144.36 per hour rate	\$12,992.40
MOT Design	10 hours for Senior Design Engineer - \$194.17 per hour rate	\$ 1,941.70
MOT Design	30 hours for Design Engineer - \$144.36 per hour rate	\$ 4,330.80
QA/QC	12 hours for QA/QC - \$199.25 per hour rate	\$ 2,391.00



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Bidding Services:		
Project Manager	5 hours - \$223.65 per hour rate	\$ 1,118.25
Bridge Engineer	10 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$ 1,941.70
Construction Services		
Project Manager	10 hours - \$223.65 per hour rate	\$ 2,236.50
Post Design (RFIs)	40 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$ 7,766.80
CM	30 hours for Senior Project Engineer - \$194.17 per hour rate	\$ 5,825.10
Reimbursable Experiences		\$ 1,000.00

Subtotals:		
Design Services		\$36,955.65
Bidding Services		\$ 3,059.95
Construction Services		\$15,828.40
Reimbursable Expenses		\$ 1,000.00
Total Not to Exceed Price for Task1 Bridge #700218 Concrete Repairs:		\$56,844.00

Task 2 Bridge #700218 Steel Girder Painting:

Design Services:		
Project Manager	20 hours - \$223.65 per hour rate	\$ 4,473.00
Bridge Design	30 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$ 5,825.10
Bridge Design	220 hours for Bridge Design Engineer - \$144.36 per hour rate	\$31,759.20
MOT Design	20 hours for Senior Design Engineer - \$194.17 per hour rate	\$ 3,883.40
MOT Design	60 hours for Design Engineer - \$144.36 per hour rate	\$ 8,661.60
QA/QC	24 hours for QA/QC - \$199.25 per hour rate	\$ 4,782.00
Bidding Services:		
Project Manager	15 hours - \$223.65 per hour rate	\$ 3,354.75
Bridge Engineer	30 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$ 5,825.10
Construction Services		
Project Manager	5 hours - \$223.65 per hour rate	\$ 1,118.25
Post Design (RFIs)	60 hours for Senior Bridge Engineer - \$194.17 per hour rate	\$11,650.20
CM	240 hours for Project Engineer - \$144.36 per hour rate	\$34,646.40
Reimbursable Experiences		\$ 1,000.00

Subtotals:		
Design Services		\$59,384.30
Bidding Services		\$ 9,179.85
Construction Services		\$47,414.85
Reimbursable Expenses		\$ 1,000.00
Total Not to Exceed Price for Task2 Bridge #700218 Steel Girder Painting:		\$116,979.00

Total Not to Exceed Price for developing both contracts for Bridge #700218	\$173,823.00
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RS&H looks forward to the opportunity to continue to support the Canaveral Port Authority as your engineering consultant and thank you for the consideration.

Sincerely,
RS&H, Inc.

A handwritten signature in blue ink that reads "Edward J. Gonzalez". The signature is written in a cursive style.

Edward J. Gonzalez, PE
Vice President, Transportation-Infrastructure