



**Public Health Research Center  
Interior Renovations - Plumbing**

**Project # BC00392344-B**

April 28, 2012

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Project Number: BC00392344-B

Project Name: Public Health Research Center Interior Renovations - Plumbing

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**Section II - Technical Specifications:**

Refer to Drawings for all technical specifications.



# SE-311 Invitation for Minor Construction Quotes

## SCBO NOTES 2, 4 and 5 APPLY TO THIS INVITATION FOR QUOTES

PROJECT NAME: Public Health Research Center Interior Renovations - Plumbing

PROJECT NUMBER: BC00392344-B PROJECT LOCATION: Columbia

BID SECURITY REQUIRED? Yes  No

PERFORMANCE BOND REQUIRED? Yes  No

PAYMENT BOND REQUIRED? Yes  No  CONSTRUCTION COST RANGE: \$10,000.00 - \$50,000.00

**DESCRIPTION OF PROJECT:**

Furnish all labor, materials, equipment and supervision to install complete all plumbing as described per plans and specifications by Jenkins - Peer Architecture, plumbing design engineer - RMF Engineering. Work includes but is not limited to all fixtures, faucets, piping and insulation for complete plumbing systems. Small and minority business participation is encouraged.

A/E NAME: Jenkins - Peer Architects A/E CONTACT: Ben Benson

ADDRESS: 112 South Tryon St. PHONE: 704-372-6665 Fax: \_\_\_\_\_

CITY: Charlotte STATE: NC ZIP: 28284 E-MAIL: bbenson@jenkinspeer.com

PLANS ON FILE AT: AGC:  \_\_\_\_\_

DODGE:  \_\_\_\_\_

OTHER: Vendor is responsible for all downloads from USC's website.

PLANS MAY BE OBTAINED FROM: http://purchasing.sc.edu (See Facilities/Construction Solicitation & Awards)

PLAN DEPOSIT AMOUNT: NONE IS DEPOSIT REFUNDABLE? Yes  No

PRE-QUOTE CONFERENCE?  Yes  No MANDATORY ATTENDANCE?  Yes  No

DATE: 5/8/2012 TIME: 10:00 AM PLACE: 743 Greene Street, Columbia, SC, Conf. Rm. 53

AGENCY: University of South Carolina

NAME AND TITLE OF AGENCY COORDINATOR: Kay Keisler, Procurement Specialist

ADDRESS: 743 Greene Street PHONE: 803-777-5812 Fax: 803-777-8739

CITY: Columbia STATE: SC ZIP: 29208 E-MAIL: kkeisler@fmc.sc.edu

IFQ CLOSING DATE: 5/15/2012 TIME: 2:15 PM LOCATION: 743 Greene St.Cola.SC,Conf.Rm.53

**IFQ DELIVERY ADDRESSES:**

**HAND-DELIVERY:**

University of South Carolina  
743 Greene St., Cola, SC 29208/ATTN:Kay Keisler

**MAIL SERVICE:**

University of South Carolina  
743 Greene St., Cola.,SC 29208 ATTN: Kay Keisler

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one)  YES  NO

APPROVED BY: \_\_\_\_\_

(State Engineer)

(Date)

**SE-331**  
**Quote Form**

2011 Edition

*Quotes shall be submitted only on SE-331*

QUOTE SUBMITTED BY: \_\_\_\_\_  
*(Offeror's Name)*

QUOTE SUBMITTED TO: \_\_\_\_\_ University of South Carolina  
*(Agency Name)*

FOR PROJECT: BC00392344-B Public Health Research Center Interior Renov. - Plumbing  
*(Number) (Name)*

**OFFER**

1. In response to the Form SE-311, *Request for Minor Construction Quotes*, and in compliance with the *Instructions to Bidders* for the above-named Project, the undersigned **OFFEROR** proposes and agrees, if this Quote is accepted, to enter into a Contract with the **AGENCY** in the form included in the Solicitation Documents, and to perform all Work as specified or indicated in the Solicitation Documents, for the prices and within the time frames indicated in the Solicitation and in accordance with the other terms and conditions stated.

2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, **OFFEROR** has submitted Bid Security as follows in the amount and form required by the Solicitation Documents:

Bid Bond with Power of Attorney     Electronic Bid Bond     Cashier's Check  
*(OFFEROR check one, if Bid Security is required)*

3. **OFFEROR** acknowledges the receipt of the following Addenda to the Solicitation documents and has incorporated the effects of said Addenda into its Quote:

**ADDENDUM No:** \_\_\_\_\_

4. **OFFEROR** agrees that this Quote, including all bid alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 30 Days following the Quote Date, or for such longer period of time that **OFFEROR** may agree to in writing upon request of the **AGENCY**.

5. **OFFEROR** agrees that from the compensation to be paid, the **AGENCY** shall retain as Liquidated Damages the amount of for each calendar day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted Contract Time for Substantial Completion, as provided in the Contract Documents.

6. **OFFEROR** herewith submits its offer to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fee, permits, licenses and applicable taxes necessary to complete the following items of construction work:

6.1 **BASE BID** \_\_\_\_\_  
*(enter BASE BID in figures only)*

6.2 **ALTERNATE NO. 1** N/A to be **ADDED/DEDUCTED** from **BASE BID**.  
*(circle one)*

6.3 **ALTERNATE NO. 2** N/A to be **ADDED/DEDUCTED** from **BASE BID**.  
*(circle one)*

FEIN/SSN: \_\_\_\_\_

SC Contractor's License Number: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone/Fax \_\_\_\_\_

E-mail \_\_\_\_\_

This Quote is hereby submitted on behalf of the Offeror named above.

BY: \_\_\_\_\_  
*(Signature of Offeror's Representative)*

\_\_\_\_\_  
*(Print or Type Name of Offeror's Representative)*

ITS: \_\_\_\_\_

USC SUPPLEMENTAL GENERAL CONDITIONS  
FOR CONSTRUCTION PROJECTS

1. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies and stairs. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the building to the work area. Providing safe, accessible, plywood pedestrian ways around construction may be required if a suitable alternative route is not available.
2. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited - zero tolerance!
3. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
4. Contractor's employees must adhere to the University's policy of maintaining a drug-free and smoke-free/tobacco free workplace.
5. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.
6. A welding permit must be issued by the University Fire Marshall before any welding can begin inside a building. Project Manager will coordinate.
7. Contractor must notify the University immediately upon the discovery of suspect material such as those potentially containing asbestos or other such hazardous materials. These materials **must not** be disturbed until approved by the USC Project Manager.
8. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractors work vehicles. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site that are not regular or authorized parking lots. Personal vehicles must 'be parked in the perimeter parking lots. Parking permits can be obtained at the USC Parking Office located in the Pendleton Street parking garage. The lay down area will be clearly identified to the contractor by the PM, with a sketch or drawing provided to Parking. In turn, the contractor will mark off this area with a sign containing the project name, PM name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the PM. The area will be maintained in a neat and orderly fashion.
9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.

10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
11. For all projects over \$100,000, including IDC's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least one (1) times per week. Construction waste must not be placed in University dumpsters. The construction site must be thoroughly cleaned with all trash picked up and properly disposed of on a daily basis and the site must be left in a safe and sanitary condition each day. The University will inspect job sites regularly and will fine any contractor found to be in violation of this requirement an amount up to \$1,000.00 daily per violation.
13. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.
14. Tree protection fencing is required to protect existing trees and other landscape features to be preserved within a construction area. The limits of this fence will be evaluated for each situation with the consultant, USC Arborist and USC Project Manager. The tree protection fence shall be 6' high chain link fence unless otherwise approved by USC Project Manager. No entry or materials storage will be allowed inside the tree protection zone. A 3" layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone if USC Arborist determines that construction may decrease amount of moisture needed to sustain health of tree(s).
15. Contractor shall water trees and other landscape material as directed by USC Arborist until site is returned to Owner.
16. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following measures shall be taken: For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over areas impacted. For single loads over 9,000 lbs., two layers of 3/4" plywood is required.
17. For projects requiring heavy loads to cross walks, tree root zones or lawns on a regular basis (as determined by USC Project Manager), a construction entry road consisting of 10' X 16' oak logging mats placed on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep matting structurally functional.
18. Any damage to existing landscaping (including lawn areas) will be remediated at Contractor's expense before final payment is made.

### **Contractor Vehicle Requirements on Campus**

1. All motorized vehicles on the University campus are expected to travel and park on roadways and/or in parking stalls.
2. All motorized vehicle traffic on USC walkways must first be authorized by USC Grounds Department and USC Project Manager. Violators may be subject to fines and penalties.
3. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
4. Contractors, vendors, and delivery personnel are required to obtain prior parking authorization before parking in a designated space. Violators may be subject to fines and/or penalties. See Item 10 below.
5. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held personally responsible for damages and restoration expense.
6. Vehicle drivers who park on landscape or drives must be able to produce written evidence of need or emergency requiring parking on same.
7. All vehicles parked on landscape, hardscape, or in the process of service delivery, must display adequate safety devices, i.e. flashing lights, cones, signage, etc.
8. All drivers of equipment and vehicles will be respectful of University landscape, equipment, structures, fixtures and signage.
9. All incidents of property damage will be reported to Parking Services or the Work Management Center.
10. Parking on campus is restricted to spaces designated by Parking Services at the beginning of the project. Once the project manager and contractor agree on how many spaces are needed, the project manager will obtain a placard for each vehicle. This placard must be hung from the mirror of the vehicle, otherwise a ticket will be issued and these tickets cannot be Afixed@. Parking spaces are restricted to work vehicles only; no personal vehicles.

Project Name: Public Health Research Center Interior Renovations – Plumbing

Project Number: BC00392344-B

University of South Carolina

**CONTRACTOR’S ONE YEAR GUARANTEE**

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

WE \_\_\_\_\_  
as General Contractor on the above-named project, do hereby guarantee that all work executed under the requirements of the Contract Documents shall be free from defects due to faulty materials and /or workmanship for a period of one (1) year from date of acceptance of the work by the Owner and/or Architect/Engineer; and hereby agree to remedy defects due to faulty materials and/or workmanship, and pay for any damage resulting wherefrom, at no cost to the Owner, provided; however, that the following are excluded from this guarantee;

Defects or failures resulting from abuse by Owner.

Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, or civil commotion.

\_\_\_\_\_  
[Name of Contracting Firm]

\*By \_\_\_\_\_

Title \_\_\_\_\_

\*Must be executed by an office of the Contracting Firm.

SWORN TO before me this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_ (seal)

\_\_\_\_\_ State

My commission expires \_\_\_\_\_



# TECHNICAL SPECIFICATIONS

(Refer to Drawings)















PART 3 - EXECUTION

3.1 GENERAL

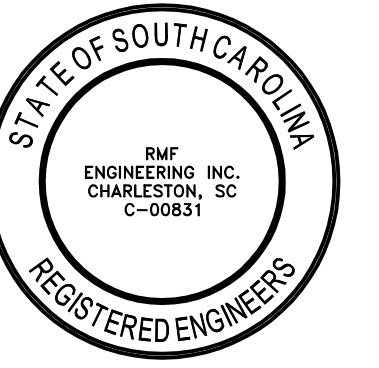
- A. CONDUCT BALANCING AND TESTING IN ACCORDANCE WITH TECHNICAL PORTIONS OF THE ASSOCIATED AIR BALANCING COUNCIL--"NATIONAL STANDARDS FOR FIELD MEASUREMENTS AND INSTRUMENTATION VOL. 2, NO. 12173 - "TOTAL SYSTEM BALANCE" - 1973 EDITION. TEST PROCEDURES NOT IN ACCORDANCE OR NOT DESCRIBED IN THE STANDARDS, I.E., VARIABLE AIR VOLUME SYSTEMS SHALL BE APPROVED BY THE ENGINEER IN WRITING.
- B. PROVIDE ALL LABOR, TESTING EQUIPMENT, AND MATERIALS REQUIRED TO CONDUCT TESTS AND BALANCE SYSTEMS.
- C. SYSTEM SHALL BE OPERATED AT LEAST FOUR (4) HOURS AFTER STABILIZED OPERATING CONDITIONS HAVE BEEN ESTABLISHED BEFORE CONDUCTING CAPACITY.
- D. TESTS, CAPACITY AND PERFORMANCE TESTS OF EQUIPMENT AND SYSTEMS SHALL BE PERFORMED ONLY AFTER BALANCING IS COMPLETE.

3.2 AIR DISTRIBUTION SYSTEMS

- A. ALL AIR DISTRIBUTION SYSTEMS INCLUDING SUPPLY DUCTWORK SHALL BE TESTED AND BALANCED.
- B. WHERE THE SYSTEM CANNOT BE PROPERLY BALANCED OR EQUIPMENT TESTED DUE TO SYSTEM DEFICIENCIES SUCH AS INABILITY TO PROPERLY ADJUST FAN SPEEDS, IMPROPERLY SIZED MOTORS, EXCESSIVELY NOISY EQUIPMENT, MALFUNCTIONING CONTROLS, EXCESSIVELY OUT OF BALANCE AIR DISTRIBUTION SYSTEM BRANCH RUNS, AND SIMILAR ITEMS, FURNISH TO THE ARCHITECT IN WRITING A LIST OF THE DEFICIENCIES PRIOR TO THE SUBMISSION OF THE TEST REPORT.
- C. MAKE OPENINGS IN DUCTS REQUIRED FOR PITOT TUBE INSERTION AND SEAL THOSE OPENINGS WITH SNAP-IN PLUGS. NEATLY REMOVE DUCT INSULATION AS REQUIRED FOR TEST. REPLACEMENT OF INSULATION, AFTER TESTING IS COMPLETED, IS INCLUDED UNDER DIVISION 15 SECTION "INSULATION".
- D. SPECIFIC TESTING AND BALANCING PROCEDURES SHALL INCLUDE:
  1. TEST AND ADJUST SPEED OF ALL AIR APPARATUS.
  2. TEST AND RECORD MOTOR VOLTAGE AND AMPERAGE.
  3. MAKE PITOT TUBE TRAVERSE OF MAIN DUCTS AND OBTAIN DESIGN AIR QUANTITY AT FANS.
  4. TEST AND ADJUST SYSTEMS FOR DESIGN SUPPLY AND RETURN AIR QUANTITIES.
  5. TEST AND RECORD AIR ENTERING AND LEAVING CONDITIONS AT AIR UNIT ON BOTH HEATING AND COOLING MODES.
  6. ADJUST ALL MAIN AND BRANCH DUCTS FOR SUPPLY AND RETURN AIR. SET AND "MARK" ALL VOLUME DAMPERS. IDENTIFY, TEST, AND ADJUST EACH GRILLE, REGISTER, AND DIFFUSER TO WITHIN TEN (10) PERCENT OF DESIGN QUANTITIES.
  7. VERIFY OPERATION OF EACH ROOM THERMOSTAT OVER FULL RANGE OF HEATING AND COOLING TO INSURE PROPER SEQUENCE OF CONTROL. RECORD RESULTS.

3.3 EQUIPMENT PERFORMANCE

- A. CONDUCT PERFORMANCE TESTS ONLY AFTER THE AIR SYSTEMS HAVE BEEN BALANCED AND THE PROPER FLOW RATES ESTABLISHED.
- B. TEST AND RECORD CAPACITY OF HEAT TRANSFER EQUIPMENT INCLUDING ALL COILS. AIR SIDE CAPACITIES MUST AGREE WITHIN FIVE (5) PERCENT OF EACH OTHER. INCLUDE THE MANUFACTURER'S RATED CAPACITY AT THE TEST OPERATING CONDITIONS WITH THE REPORT. PERFORM TESTS WHERE POSSIBLE AT DESIGN CONDITIONS. IF TESTS ARE NOT PERFORMED UNDER DESIGN CONDITIONS, INTERPOLATE RESULTS TO DETERMINE CAPACITY AT FULL LOAD OPERATING CONDITIONS.



PUBLIC HEALTH  
RESEARCH CENTER -  
INTERIOR  
RENOVATIONS

OSE # H27-1988

TAG	DESCRIPTION	DATE

Project: 11USC396  
Drawn By: BEK  
Checked By: CRB  
Date: 5 MAR 2012  
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**MECHANICAL  
SPECIFICATIONS**