



UNIVERSITY OF SOUTH CAROLINA

PRV Replacement Columbia Hall

Specifications

July 19, 2019

Project No. FP00000243
Engineer's Project No. 17590

Swygert & Associates

CONSULTING ENGINEERS

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P. O. Box 11686
1325 State Street

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Columbia, SC 29211
Cayce, SC 29033

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SE-311

INVITATION FOR MINOR CONSTRUCTION QUOTES

(For use on projects between \$50,000 and \$100,000.)

AGENCY/OWNER: University of South Carolina

PROJECT NAME: Columbia Hall PRV Replacement

PROJECT NUMBER: FP00000243 PROJECT LOCATION: Columbia, SC

DESCRIPTION OF PROJECT: Removal of the water pressure relief valve and installation of steam pressure relief valves rated for the steam pressure reducing valve capacity. The existing vent line is not large enough and a new vent line will be routed to the area well above the tunnel and up to a point on the wall 10' above grade. Minority and Small business participation highly encouraged.

QUOTE DUE DATE: 10/23/2019 TIME: 2:00pm CONSTR. COST RANGE: \$ 70,000 to \$ 72,500

AGENCY PROJECT COORDINATOR: Hatice Hikmet

EMAIL: hikmeth@mailbox.sc.edu TELEPHONE: 803-777-9994

DOCUMENTS MAY BE OBTAINED FROM: http://purchasing.sc.edu

DOCUMENT DEPOSIT AMOUNT: \$ 0 IS DEPOSIT REFUNDABLE Yes No N/A

PERFORMANCE AND LABOR & MATERIAL PAYMENT BONDS: The successful Contactor will be required to provide Performance and Labor and Material Payment Bonds, each in the amount of 100% of the Contract Price.

Contractors must obtain Documents/Plans from the above listed source(s) to be listed as an official plan holder. All written communications with official plan holders & Contractors submitting quotes will be via email or website posting.

PUBLIC NOTICES: All notices (Notice of Award) shall be posted at the following location: Lobby, 1300 Pickens St. Columbia, Sc 29208

RIGHT TO PROTEST (SC Code § 11-35-4210)

Any actual bidder, offeror, contractor or subcontractor who is aggrieved in connection with this solicitation or the intended award or award of a contract under this solicitation may protest to the State Engineer in accordance with Section 11-35-4210 at: CPO, Office of State Engineer, 1201 Main Street, Suite 600, Columbia, SC 29201. EMAIL: protest-ose@mso.sc.gov

All questions & correspondence concerning this Invitation shall be addressed to the A/E.

A/E NAME: Swygert & associates Ltd.

A/E CONTACT: Bill Livingston

EMAIL: bill@swygert-associates.com TELEPHONE: 803-791-9300

PRE-QUOTE CONFERENCE: Yes No DATE: 10/9/2019 TIME: 11:00AM

PRE-QUOTE CONFERENCE LOCATION: 1300 Pickens Street, Columbia, SC 29208 100C

QUOTE DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Hatice Hikmet (bid enclosed FP00000243)
1300 Pickens Street
Columbia, SC 29208

MAIL SERVICE:

Attn: Hatice Hikmet (bid enclosed FP00000243)
1300 Pickens Street
Columbia, SC 29208

APPROVED BY: _____ DATE: _____

(OSE Project Manager)

SE-331 QUOTE FORM

Quotes shall be submitted only on SE-331.

QUOTE SUBMITTED BY: _____
(Offeror's Name)

QUOTE SUBMITTED TO: University of South Carolina
(Owner's Name)

FOR: PROJECT NAME: Columbia Hall PRV Replacement
PROJECT NUMBER: FP00000243

OFFER

- In response to the Invitation for Minor Construction Quotes for the above-named Project, the undersigned **OFFEROR** proposes and agrees, if this Quote is accepted, to enter into a Contract with the Owner 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.
- OFFEROR** acknowledges the receipt of the following Addenda to the Solicitation documents and has incorporated the effects of said Addenda into its Quote (*Bidder, check only boxes that apply.*):
 ADDENDA: #1 #2 #3 #4 #5
- OFFEROR** agrees that this Quote, including all alternates, if any, may not be revoked or withdrawn after the opening of quotes, and shall remain open for acceptance for a period of **60** Days following the Quote Date, or for such longer period of time that **OFFEROR** may agree to in writing upon request of the Owner.
- OFFEROR** agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Owner. Offeror agrees to substantially complete the Work within **14** Calendar Days from the Date of Commencement, subject to adjustments as provided in the Contract Documents.
- OFFEROR** agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the amount of \$ **250.00** 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.
- 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 QUOTE \$ _____
(enter BASE QUOTE in figures only)

6.1.1 ALTERNATE NO. 1 \$ _____ to be ADDED / DEDUCTED from BASE QUOTE.
(circle one)

6.1.2 ALTERNATE NO. 2 \$ _____ to be ADDED / DEDUCTED from BASE QUOTE.
(circle one)

SC Contractor's License Number: _____
 Classification(s) & Limits: _____
 Address: _____
 Telephone: _____
 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)
 TITLE: _____

SE-377
MINOR CONSTRUCTION CONTRACT

AGENCY: University of South Carolina

PROJECT NAME: Columbia Hall PRV Replacement

PROJECT NUMBER: FP00000243

THIS AGREEMENT is made this the ____ day of ____ in the year Two Thousand ____ by and between

NAME: University of South Carolina

ADDRESS: 1300 Pickens Street
Columbia, SC 29208

hereinafter called the "Agency", and

NAME: _____

ADDRESS: _____

hereinafter called the "Contractor."

WHEREAS, the Agency solicited for construction services, for the work description below:

WORK DESCRIPTION: _____

WHEREAS, Contractor submitted the lowest responsive and responsible bid to provide the services described above.

NOWHEREFORE, in consideration of the mutual covenants and obligations set forth herein, the Agency and Contractor (hereinafter jointly referred to as the "parties") agree as follows:

1. CONTRACT TERMS AND EXTENSIONS:

- 1.1 The effective date of this agreement shall be the date at the top of this page. The Date of Commencement of the Work shall be ____, 20__ . The Contract Time is established as ____ calendar days and shall be measured from the Date of Commencement.
- 1.2 The Contractor agrees that the Agency shall be entitled to withhold or recover from the Contractor Liquidated Damages in the amount of ____ for each Calendar Day the Contractor fails to achieve Substantial Completion of the Work within the Contract Time specified or adjusted as provided in the Contract Documents.
- 1.3 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be ____, subject to additions and deductions as provided in the Contract documents.
- 1.4 The Construction project is subject to the expenditure limits set forth in SC Code § 11-35-1550 and further explained in the Manual for Planning and Execution of State Permanent Improvements, (the "Manual"). The cost for the original scope of the Contract combined with any modification to the Contract purporting to exceed the limit of \$100,000 is null and void.

2. CONTRACT DOCUMENTS:

- 2.1 Documents forming a part of the contract are:
 - a. This Minor Construction Contract (SE-377);
 - b. Agency purchase requisition form dated ____; and any modifications issued by the Agency pursuant to this Contract,
 - c. The following other documents:
Project Drawings & Specifications dated **July 19, 2019**

- 2.2 The Contract is the entire and integrated agreement between the parties and supersedes prior negotiations, representations, or agreements, whether written or oral.

- 2.3 The Contract can only be modified by written agreement signed by both the Agency and the Contractor. The Contract Documents do not create a contractual relationship between the Contractor and any separate Contractor having a contract with the Agency; between the Agency and any subcontractor to the Contractor of any tier; or between any persons or entities other than the Agency and the Contractor.
- 2.4 The “Work” means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.
- 2.5 The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.
- 2.6 The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

3. AGENCY

- 3.1 The term “Agency” means the Agency or the Agency’s Representative. Agency designates the individual listed below as its Representative, which individual has the authority and responsibility to bind the Agency with respect to all matters regarding the Contract and requiring the Agency’s approval or authorization:

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE: _____ **EMAIL:** _____

- 3.2 The Agency shall furnish, with reasonable promptness, information requested by the Contractor that is necessary for the performance of the Contract Services and under the Agency’s control. Any information or documentation provided by the Agency to the Contractor relating to the Project or Site is provided only for the convenience of the Contractor. The Agency makes no representation or warranty to as to the sufficiency, completeness, or accuracy of such information.
- 3.3 Utility Access and Use:
 - If this box is checked, the Agency shall allow the Contractor to use reasonable quantities of water and electricity for construction purposes without charge, as long as these utilities are available and in close proximity to the Work area. Contractor shall be conscientious in controlling excessive or frivolous use of the utilities or the Agency may charge the Contractor for wasteful usage.
- 3.4 Sanitary Facilities:
 - The Contractor may use those sanitary facilities designated by the Agency as available for use.
 - The Contractor may not use the Agency’s sanitary facilities. The Contractor shall provide sanitary facilities at the job site and maintain same in a clean and sanitary condition for the use of its employees and employees of its subcontractors for the duration of construction. The sanitary facilities shall conform to the requirements of the South Carolina Department of Health and Environmental Control.
- 3.5 Permits, Assessments, and Easements: The Agency shall secure and pay for all building permits, zoning permits, assessments, and easements except as required by the terms of the Contract.
- 3.6 Agency’s Architect-Engineer (A/E): The Agency may retain an independent A/E to prepare design documents for the work. In such event, the A/E will be a representative of the Agency during the performance of such work through final completion of such work. In the absence of an independent A/E, the Agency will assign one of its employees to act as A/E for the work. The Contractor shall cooperate with the A/E in the performance of its duties.
- 3.7 Construction by Agency: The Agency may do work with its own forces or award separate contracts for work on the same project. The Contractor shall allow access to the site by the Agency’s work force or separate Contractor(s) and shall cooperate in coordinating the progress of the work with the Agency. The Agency shall have the responsibility to coordinate the activities of the various Contractors working at the project location.

4. CONTRACTOR

- 4.1 The term “Contractor” means the Contractor or the Contractor’s Representative. Contractor designates the individual listed below as its Contractor’s Representative, which individual has the authority and responsibility to bind the Contractor with respect to all matters regarding the Contract and requiring the Contractor’s approval or authorization:

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE: _____ **EMAIL:** _____

- 4.2 **Supervision and Performance of the Work:** The Contractor shall supervise, perform, and direct the Work, using the professional skill, care, and attention reasonably required for similar projects. The Contractor shall be solely responsible for and have control over means, methods, techniques, sequences, and procedures and for coordinating the Work, unless the Contract Documents give other specific instructions concerning these matters. The Contractor agrees to faithfully and fully perform the terms of this Contract and shall complete the Work in accordance with the Contract Documents and deliver the Work to the Agency free and clear of all liens and claims. The Contractor shall, at all times during the progress of the Work, employ enough skilled workers and have on hand and maintain an adequate supply of materials and equipment to complete the Work in accordance with the agreed to construction schedules.
- 4.3 **Employee Discipline:** The Contractor shall enforce discipline and good order among the Contractor's and subcontractors' employees, and other persons carrying out the Work. Contractor shall be responsible to the Agency for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- 4.4 **Safety:** The Contractor shall comply with all federal and state work site safety requirements and shall be responsible for initiating, maintaining, and supervising reasonable safety precautions and programs in connection with the performance of the Contract Services. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable and appropriate protection to prevent damage, injury or loss to (1) employees on the Work and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein; and (3) other property at the site of the Work or adjacent thereto.
- 4.5 **Waste Materials and Rubbish:** The Contractor shall keep the premises and surrounding areas free from accumulation of waste materials or rubbish caused by the Work. Upon Final Acceptance of the Work, the Contractor shall, to the Agency's satisfaction, remove from and about the site, all waste materials, rubbish, surplus material, and Contractor's tools, equipment, machinery.
- 4.6 **Recycling:** The Contractor shall give preference to the use of products containing recycled content in the performance of the Work. The Contractor shall cooperate with any recycling program established for the site of the work or available through the state or a political subdivision of the state.
- 4.7 **Access to the Work:** The Contractor shall provide the Agency with unrestricted access to the Work in preparation and progress wherever located.
- 4.8 **Use of Site:** The Contractor shall confine its operations to the portions of the site identified in the Drawings or otherwise approved by the Agency and shall not unreasonably encumber the portions of the site used for the Work with materials, equipment, or similar items. The Contractor and all subcontractors shall use only such entrances to the Site as are designated by the Agency. During occupied hours, Contractor shall limit construction operations to methods and procedures that do not adversely affect the environment of occupied spaces within the site, including but not limited to creating noise, odors, air pollution, ambient discomfort, or poor lighting.
- 4.9 **Correction of the Work:**
- 4.9.1 The Agency shall have the right and authority to reject Work that does not conform to the Contract Documents. The Contractor shall promptly correct Work rejected by the Agency for failing to conform to the requirements of the Contract Documents, whether or not fabricated, installed or completed. The provisions of this Section apply to Work done by subcontractors as well as to Work done by direct employees of the Contractor.
- 4.9.2 If the Contractor fails to correct the Work, or any portion thereof, that is not in accordance with the requirements of the Contract Documents or fails to carry out Work or provide information in accordance with the Contract Documents, the Agency may make written demand upon the Contractor to cure its defaults within seven days. Within seven days after receipt of the Agency's demand, the Contractor shall cure its defaults unless the default is such that it is not capable of cure within seven days. If the default is such that it is not capable of cure within seven days, the Contractor shall reach an agreement with the Agency on a plan to cure its defaults within five days after receipt of the Agency's demand. The Contractor shall commence and diligently and continuously pursue the cure of such defaults in accordance with the agreed plan. If the Contractor fails to cure its defaults as heretofore provided, the Agency may order the Contractor, in writing, to stop the Work, or any portion thereof, until the Contractor has eliminated the cause for such order or has provided the Agency with a plan for corrective action acceptable to the Agency. The right of the Agency to stop the Work shall not give rise to a duty on the part of the Agency to exercise this right for the benefit of the Contractor or any other person or entity.
- 4.9.3 **Correction after Substantial Completion:** If, within one year after the date of Substantial Completion of the Work, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Agency to do so. The Contractor's obligation set forth in this Section 4.9.3 is in addition to the Contractor's obligations under Section 4.11.

- 4.9.4 Nothing contained in this Section 4.9 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of such time period as described in this Section 4.9 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- 4.10 **Manufacturers' Warranties:** At Final Completion of the Work, the Contractor shall furnish the Agency two original complete sets of all manufacturers' warranties, guarantees, parts lists, and literature applicable to equipment, systems, fittings, and furnishings included in the Work (collectively referred to as "*Manufacturers' Warranties*"), completed in favor of the Agency. These Manufacturers' Warranties are in addition to and not in lieu of the Contractor's warranty set forth in Section 4.11, and the Agency is entitled to look to the Contractor for remedy in all cases where the Contractor's warranty applies regardless of whether a Manufacturer's Warranty also applies. The Agency shall acknowledge receipt of the sets of Manufacturers' Warranties on the set itself, and the Contractor shall cause six (6) copies of an acknowledged set to be made and furnished to the Agency. All Manufacturers' Warranties will be for applicable periods and contain terms not less favorable to the Agency than those terms that are standard for the applicable industries and will either be issued in the first instance in the name of and for benefit of the Agency or be in a freely assignable form and be assigned to the Agency without limitations.
- 4.11 **Contractor Warranty:** The Contractor warrants to the Agency that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from faults and defects not inherent in the quality required or permitted, that the materials, equipment and Work will conform with the requirements of the Contract Documents, and that the Work will be free from any encumbrances, liens, security interests, or other defects in title upon conveyance of title to the Agency. The Contractor's warranty excludes remedy for damage or defect to the extent caused by (i) abuse by anyone other than the Contractor or those for whose acts the Contractor is responsible, (ii) modifications not approved or executed by the Contractor or subcontractors, (iii) improper or insufficient maintenance or operation not the fault of the Contractor or those for whose acts the Contractor is responsible, or (iv) normal wear and tear under normal usage. If required by the Agency, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment and the recommended maintenance thereto to meet the requirements of this Section.
- 4.12 After completion of the Work but no later than the date of Substantial Completion, the Contractor shall submit operation and maintenance manuals, recommended spare parts lists, and copies of all warranties to the Agency. As-Built drawings shall be submitted no later than the Final Completion Date.
- 4.13 **Compliance with Law:**
- 4.13.1 The Contractor shall comply with and give all notices required by federal, state, county, and municipal laws, ordinances, regulations, and orders bearing on the performance by the Contractor of the duties or responsibilities under this Contract.
- 4.13.2 The Contractor shall promptly remedy any violation of any such law, ordinance, rule, regulation, or order that comes to its attention to the extent that the same results from its performance of the Work. The Contractor shall promptly, and in no event later than the close of the next business day following receipt, give notice to the Agency by telephone, with confirmation in writing, of receipt by the Contractor of any information relating to violations of laws, ordinances, rules, regulations, and orders.
- 4.14 **Subcontractors:**
- 4.14.1 The Contractor shall furnish in writing to the Agency for its approval the names of the subcontractors to whom the Contractor plans to award any portion of the Contract Services.
- 4.14.2 Contracts between the Contractor and subcontractors shall require each subcontractor, to the extent of the Contract Services to be performed by the subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the Agency.
- 4.14.3 The Contractor shall be responsible to the Agency for acts and omissions of the subcontractors, their agents and employees, and any other persons performing portions of the Contract Services, to the same extent as the acts or omissions of the Contractor hereunder.
- 4.15 **Publicity:** Contractor shall not publish any comments or quotes by State employees or include the State in either news releases or a published list of agencies, without the prior written approval of the Agency.

4.16 Indemnification

4.16.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Agency and the Agency’s agents and employees from and against claims, damages, losses and expenses, including, but not limited to, reasonable attorney’s fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, but only to the extent caused by negligent acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

4.16.2 In claims against any person or entity indemnified under Section 4.16.1 by an employee of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section 4.16 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for Contractor or a subcontractor under workers’ or workmen’s compensation acts, disability benefit acts, or other employee benefit acts.

4.17 Insurance

4.17.1 Commercial General Liability, Business Automobile Liability, and Worker’s Compensation: The Contractor shall purchase from and maintain, in a company or companies lawfully authorized to do business in South Carolina, such insurance as will protect Contractor from claims set forth below, which may arise out of or result from Contractor’s operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- a. claims under workers’ compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- b. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor’s employees;
- c. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor’s employees;
- d. claims for damages insured by usual personal injury liability coverage;
- e. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- f. claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- g. claims for bodily injury or property damage arising out of completed operations; and
- h. claims involving contractual liability insurance applicable to the Contractor’s obligations under Section 3.17, Indemnification.

4.17.1.1 The insurance required by Section 4.17.1 shall be written for not less than the limits of liability specified below or required by law, whichever is greater. Coverage shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment and, with respect to the Contractor’s completed operations coverage, until the expiration of the period for correction of Work set forth in Section 4.9 or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

- a. **COMMERCIAL GENERAL LIABILITY:**
 - (1) General Aggregate (per project) \$1,000,000
 - (2) Products/Completed Operations \$1,000,000
 - (3) Personal and Advertising Injury \$1,000,000
 - (4) Each Occurrence \$1,000,000
 - (5) Fire Damage (Any one fire)..... \$50,000
 - (6) Medical Expense (Any one person)..... \$5,000
- b. **BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):**
 - (1) Combined Single Limit\$1,000,000 OR
 - (2) Bodily Injury & Property Damage (each) \$750,000

c. WORKER’S COMPENSATION:

- (1) State Statutory
- (2) Employers Liability\$100,000 per Acc.
\$500,000 Disease, Policy Limit
\$100,000 Disease, Each Employee

In lieu of separate insurance policies for Commercial General Liability, Business Auto Liability, and Employers Liability, the Contractor may provide an umbrella policy meeting or exceeding all coverage requirements set forth in this Section 4.17.1. The umbrella policy limits shall not be less than \$5,000,000.

4.17.1.2 Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, Contractor shall provide to the Agency a written endorsement to the Contractor’s general liability insurance policy that:

- a. names the Agency as an additional insured for claims caused in whole or in part by the Contractor’s negligent acts or omissions during the Contractor’s operations;
- b. provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless all additional insured have been given at least ten (10) days prior written notice of cancellation for non-payment of premiums and thirty (30) days prior written notice of cancellation for any other reason; and
- c. provides that the Contractor’s liability insurance policy shall be primary, with any liability insurance of the Agency as secondary and noncontributory.

4.17.1.3 Before commencement of the Work, and thereafter upon renewal or replacement of each required policy of insurance, Contractor shall provide to the Agency a signed, original certificate of liability insurance (ACORD 25). Consistent with this Section 4.17.1, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Agency as Certificate Holder, provide that the general aggregate limit applies per project, and provide that coverage is written on an occurrence basis. Both the certificates and the endorsements must be received directly from either the Contractor’s insurance agent or the insurance company. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, naming the Agency as an additional insured for claims made under the Contractor’s completed operations, and otherwise meeting the above requirements, shall be submitted with the Contractor’s final request for payment for the Work and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 4.17.1. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

4.17.1.4 A failure by the Agency either (i) to demand a certificate of insurance or written endorsement required by Section 4.17.1, or (ii) to reject a certificate or endorsement on the grounds that it fails to comply with Section 4.17.1, shall not be considered a waiver of Contractor’s obligations to obtain the required insurance.

4.17.2 Property Insurance:

4.17.2.1 Builder’s Risk Insurance: Unless otherwise specified, the Contractor shall purchase property insurance written on a builder’s risk "all risk" or equivalent policy form on a replacement cost basis. Contractor shall maintain such property insurance until the Agency has made final payment for the Work or until no person or entity other than the Agency has an insurable interest in the property required by this Section 4.17.2 to be covered, whichever is later. This insurance shall include and be in an amount sufficient to cover at all times during the performance of the Work, the interests of the Contractor, Subcontractors and Sub-subcontractors in the Project. The property insurance shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, false work, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect’s and Contractor’s services and expenses required as a result of such insured loss.

4.17.2.2 Equipment Breakdown Insurance: In the event the Contractor installs and runs and/or operates (whether for testing or other purposes) heating, air conditioning, and electrical machinery and equipment, the Contractor shall purchase and maintain equipment breakdown (boiler and machinery) insurance, which shall specifically cover such objects during installation and until final acceptance by the Agency. This insurance shall include interests of the Agency, Contractor, and subcontractors at any tier in the Work, and the Agency and Contractor shall both be named insured.

- 4.17.2.3 Before an exposure to loss may occur, the Contractor shall file with the Agency a copy of each policy that includes insurance coverage required by this Section 4.17.2. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project.
- 4.17.2.4 **Waiver of Subrogation:** The Agency and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, for damages caused by fire or other causes of loss to the extent the property insurance provided by the Contractor pursuant to this Section 4.17.2 covers and pays for the damage, except such rights as they have to proceeds of such insurance held by the Contractor. The Agency or Contractor, as appropriate, shall require of the subcontractors, sub-subcontractors, agents and employees, each of the other, by appropriate written agreements, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.
- 4.18 **Performance and Payment Bonds:** Prior to beginning work, the Contractor shall deliver to the Agency a Performance Bond and a Labor & Material Payment Bond. Each bond shall be in the amount of 100% of the Contract Sum. The Contractor's Performance Bond shall be in the form of the SE-355, Performance Bond, and the Labor & Material Payment Bond shall be in the form of the SE-357, Labor & Material Payment Bond. The surety company providing the Bonds shall have, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property - Casualty." Contractor's failure to provide bonds as herein required shall be an event of default justifying the Agency, in its sole discretion, in terminating this Contract for cause.
- 4.19 **Shop Drawings and Samples:**
- 4.19.1 Contractor shall prepare or cause to be prepared shop drawings for fabricated items. Shop drawings shall consist of drawings, diagrams, illustrations, schedules, brochures, and other data which are prepared by the Contractor, sub-Contractor, manufacturer, supplier, or distributor and depict that portion of the work. Shop drawings shall be submitted, reviewed, and approved by the Contractor prior to submitting to the Agency and A/E. Shop drawings approved by the Contractor shall bear a stamp denoting that they have been review and are "approved" or "approved as noted" or similar designation. Contractor shall submit the number of sets as specified in the plans or specifications or in the absence of a specification submit enough copies for the Agency to retain two copies plus the number desired to be returned to the Contractor. The Agency and A/E will review the shop drawings with reasonable promptness but only for conformity with the design.
- 4.19.2 Contractor shall submit samples as required by the Drawings and Specifications. Samples are physical examples furnished by the Contractor of sufficient size and quantity to provide a good representation of the material proposed to be installed. Samples submitted will not be returned unless requested by Contractor and agreed to by the A/E. The Contractor shall pay shipping costs. The final installed product shall match the approved sample.
- 4.20 **Inspection and Testing of Materials:**
- 4.20.1 The Contractor shall leave uncovered all areas of work that will be covered that are called out in the construction documents to be left uncovered, or the Agency or A/E requests to be left uncovered prior to being inspected. The Contractor shall give adequate notice to the Agency and A/E of the time requested for an inspection of areas to be covered.
- 4.20.2 If the Contractor covers areas that were to be left uncovered, the Contractor shall cause the area to be uncovered for inspection. After being inspected, the Contractor shall repair the area with craftsmen skilled in the appropriate trades needed for the repair at no additional cost to the Agency.
- 4.21 **Substitutions:**
- 4.21.1 The Contractor shall submit proposed substitutions to the Agency for the Agency's approval prior to execution of the Work.
- 4.21.2 Reference in the Contract Documents to a designated material, product, thing, or service by specific brand or trade name followed by the words "or equal" and "or approved equal" shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may use the products of other another manufacturer provided it is an 'approved equal' that meets or exceeds the specification for the specified product. The Contractor must submit adequate information about the product to show that the submitted product meets the level of quality as the product specified.
- 4.21.3 The Contractor shall not substitute any product, article, appliance, equipment, or material that is specified without prior written approval of the Agency.
- 4.22 **Receiving and Storing Materials and Equipment:** The Contractor shall have an authorized person or persons to receive all items delivered to the site of the Work and shall properly unload, check for completeness of shipment, and in-transit damage. The Contractor shall properly handle and store materials, supplies, equipment etc. in accordance with the Contract documents or manufacturer's printed instructions for each product.

- 4.23 **Schedule and Reports:** Promptly after the award of the Contract, the Contractor shall present a construction schedule in a form satisfactory to the Agency. The schedule shall not exceed the time limits current under the Contract Documents. The Contractor shall update the schedule at appropriate intervals as required by the conditions of the Work, showing the actual progress of the Work and adjustment in completion dates. If the Work falls behind schedule, the Contractor shall present a plan for completion of the Work by the scheduled date for completion.
- 4.24 **Time for Completion:**
- 4.24.1 If the Contractor is delayed at any time in the commencement or progress of the Work, the Contractor shall make a request for extension of time within seven days of the event giving rise to the request. The Contractor shall adequately document delays of the work that are due to circumstances beyond the control of the Contractor and shall submit the documentation to the Agency with a request for an extension. In the event of ongoing delay, the Contractor shall notify the Agency in its request for an extension of time that the cause of delay is ongoing. In such case, the Contractor shall supplement its request when the cause of delay ends or the project is completed, whichever is sooner.
- 4.24.2 The Agency will review each request for time extension and equitably adjust the time for completion where (1) the event of delay actually impacted the critical path of the project and was beyond the control of the Contractor, and (2) completion of the Work was actually delayed.

5. CONTRACT ADMINISTRATION

5.1 Changes in the Work:

- 5.1.1 Any changes in the work must be approved by the Agency and executed by a modification to the Agency purchase requisition form. The modification must be signed by the Contractor and Agency.
- 5.1.2 At the Owner's request, the Contractor shall prepare a proposal to perform the work of a proposed modification setting forth the amount of the proposed adjustment, if any, in the Contract Sum; and the extent of the proposed adjustment, if any, in the Contract Time. The Owner's request shall include any revisions to the Drawings or Specifications necessary to define the changes in the Work. Within fifteen days of receiving the request, the Contractor shall submit the proposal to the Owner and Architect along with all substantiating documentation.
- 5.1.3 In the absence of a total agreement concerning the item(s) for a contract modification, a Construction Change Directive shall be used.
- 5.1.4 **Agreed Overhead and Profit Rates:**
For any adjustment to the Contract Sum for which overhead and profit may be recovered, the Contractor agrees to charge and accept, as full payment for overhead and profit, the following percentages of costs attributable to the change in the Work. The percentages cited below shall be considered to include all indirect costs including, but not limited to: field and office managers, supervisors and assistants, incidental job burdens, small tools, and general overhead allocations. The allowable percentages for overhead and profit are as follows:
- a. To the Contractor for work performed by the Contractor's own forces, 17% of the Contractor's actual costs.
 - b. To each Subcontractor for work performed by the Subcontractor's own forces, 17% of the subcontractor's actual costs.
 - c. To the Contractor for work performed by a subcontractor, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).

5.2 Payments:

- 5.2.1 Contractor may submit monthly applications for payment for the Work scheduled to last two months or more in duration. Contractor shall submit only one application for payment for the Work scheduled to last less than two months in duration.
- 5.2.2 If the Contractor intends to submit more than one application for payment, the Contractor shall submit to the A/E, within ten days of Contract award, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the A/E may require. This schedule, unless objected to by the A/E, shall be used as a basis for reviewing the Contractor's Applications for Payment. Contractor shall base its monthly applications for payment on work completed up to the date of the application using the approved schedule of values. The sum of all payments to the Contractor shall not exceed the agreed upon cost of the work set forth in the Minor Construction Contract as adjusted by subsequent modifications to the Contract, if any.
- 5.2.3 Contractor's applications for payment may include materials suitably stored on site for use in the Work provided the Contractor submits:
- a. Proof of purchase & delivery;
 - b. Documentation showing the location of the material;
 - c. Certificate of insurance for the material with adequate coverage showing the Agency as the certificate holder.

- 5.2.4 The Agency will make payments to the Contractor for completed work based on the actual units or quantity of work completed. The Agency will make payments on the undisputed amounts of an application for payment within 21 days of receipt of the application.
- 5.2.5 Subcontractor Payments (Chapter 6 of Title 29 of the South Carolina Code of Laws, as amended): The Contractor shall pay each subcontractor no later than seven (7) days after receipt of payment from the Agency the amount to which the subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the subcontractor's portion of the Work. By appropriate agreement with its subcontractors, the Contractor shall require each subcontractor to make payments to Sub-subcontractors in a similar manner.
- 5.2.6 If the Agency does not pay the Contractor within seven (7) days after the time established in Section 5.3.2 the undisputed amount of a payment request, then upon seven (7) additional days written notice to the Agency, the Contractor may stop the Work until the Contractor has received payment of the undisputed amount owing. The Contract Time and the Contract Sum shall be equitably adjusted by the amount of the Contractor's reasonable costs of shut down, delay and start-up, plus interest as provided for in the Contract Documents.
- 5.2.7 Retainage: The Agency, at its option, may withhold retainage as provided in SC Code § 11-35-3030(4).
- 5.2.8 Final Payment: Upon final payment by the Agency to the Contractor for the Work, all rights, title, and interest in and to all improvements and equipment constructed or installed on the premises shall vest in the Agency at no additional cost, free and clear of all any liens and encumbrances created or caused by the Contractor.
- 5.2.9 Withholding of Payments: Payments may be withheld to the extent of, and on account of of:
- a. defective Work not remedied, or Work not performed in accordance with the Contract Documents;
 - b. claims filed by third parties;
 - c. failure of the Contractor to make payments promptly to the subcontractors for labor, materials, or equipment;
 - d. persistent failure to carry perform the Work in accordance with the Contract Documents;
 - e. failure by the Contractor to perform its obligations under the Contract Documents; or
 - f. a default by the Contractor under the Contract Documents.
- The Agency shall promptly notify the Contractor of any reason for withholding payment.
- 5.3 Completion and Closeout: Upon Final Completion of all Work, the Contractor shall notify the Agency of its completion. The Agency shall schedule a Final Inspection and allow the Contractor to demonstrate that all equipment and systems operate as designed. The Agency may elect to have other persons, firms or agencies participate in the inspections. Projects exceeding the Agency's construction procurement certification level shall require an inspection by the Office of State Engineer (OSE) and the State Engineer's issuance of a Certificate of Occupancy. (The Contractor may find Agency construction certification limits on Procurement Services website at <https://procurement.sc.gov/agency/audits/cert-limits>) Final payment will not be due nor retained funds released until:
- a. the Agency agrees that the project is complete;
 - b. OSE or the Agency, which ever has authority, issues a Certificate of Occupancy (SE-585); and
 - c. the Agency receives from the Contractor the following:
 - (1) Affidavit of payment of debts and claims;
 - (2) Consent of Surety, if any, to final payment.

6. DISPUTE RESOLUTION

- 6.1 Both parties shall attempt to resolve disputes through good faith negotiations.
- 6.2 All disputes, claims, or controversies relating to the Contract, that cannot be resolved through good faith negotiations between the parties shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Richland County, State of South Carolina. Contractor agrees that any act by the State regarding the Contract is not a waiver of either the State's sovereign immunity or the State's immunity under the Eleventh Amendment of the United States Constitution. As used herein, "the State" includes the Agency and the State Fiscal Accountability Authority.
- 6.3 Interest: Payments due to the Contractor and unpaid under the Contract Documents shall bear interest only if and to the extent allowed by Title 29, Chapter 6, Article 1 of the South Carolina Code of Laws. Amounts due to the Agency shall bear interest at the rate of one percent a month or a pro rata fraction thereof on the unpaid balance as may be due.

- 6.4 Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any claims or controversies relating to the Contract; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided for the Contractor's Representative or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail.
- 6.5 Continuation of Work: Pending final resolution of any dispute under this Contract, the Contractor will proceed diligently with the performance of its duties and obligations under the Contract Documents, and the Agency will continue to make payments of undisputed amounts in accordance with the Contract Documents.

7. LIMITATION OF LIABILITY

- 7.1 Notwithstanding any other provision of the Contract Documents, but subject to a duty of good faith and fair dealing, the Contractor and Agency waive Claims against each other for listed damages arising out of or relating to this Contract. This mutual waiver includes
- 7.1.1 For the Agency, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) costs suffered by a third party unable to commence work, (vi) reasonable attorney's fees, (vii) any interest, except to the extent allowed by Section 6.3 (Interest), (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency, and (x) damages incurred by the Agency for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- 7.1.2 For the Contractor, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) reasonable attorney's fees, (vi) any interest, except to the extent allowed by Section 6.3 (Interest); (vii) unamortized equipment costs; and (viii) losses incurred by subcontractors for the types of damages the Contractor has waived as against the Agency.
- 7.2 This mutual waiver is applicable, without limitation, to all listed damages due to either party's termination in accordance with Section 10. Nothing contained in this Section 7 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents. This mutual waiver is not applicable to amounts due or obligations under Section 4.16 (Indemnification).

8. HAZARDOUS MATERIALS

- 8.1 Contractor's Responsibilities with Respect to Hazardous Materials: The scope of Work the Contractor is to perform pursuant to this Contract excludes any work or service of any nature associated or connected with the discovery, identification, abatement, cleanup, control, or removal of any currently existing Hazardous Materials or Mold on, in, or nearby the site of the Work. When requesting cost proposals, the Agency will identify known Hazardous Materials or Mold on, in, or nearby the site of the Work. The Agency agrees that all duties and obligations in connection with any Hazardous Materials or Mold currently located in, on or nearby the Site or brought into the Site by a party other than the Contractor or its subcontractors, other than those defined in the Contract affected by the Hazardous Material or Mold, are not the Contractor's responsibility. Should the Contractor become aware, discover or based on reasonable evidence suspect the presence of Hazardous Materials or Mold beyond those addressed in the contract documents affected by the Hazardous Material or Mold, the Contractor will immediately cease work in the affected area, and will promptly notify the Agency of the conditions discovered. Should the Contractor stop work because of such discovery or suspicion of Hazardous Materials or Mold, then the Contract Time will, should the Agency elect to choose to continue the Work after remedy thereof, be reasonably extended by Change Order to cover the period required for abatement, cleanup, or removal of the Hazardous Materials or Mold. The Contractor will not be held responsible for any claims, damages, costs, or expenses of any kind associated with such period during which work has been stopped as a result of Hazardous Materials or Mold.
- 8.2 Hazardous Materials Introduced to the Site by Contractor: If the Contractor, its subcontractors, and any party for whom they may be liable, introduces any Hazardous Materials to the Site then the Contractor, at its sole cost and expense, shall be responsible for any response, removal, cleanup, and/or other remedial action required by applicable law. If any Mold occurs within the Site as the result of the negligent implementation of the Project or the improper functioning of the Conservation Measures, then the Contractor, at its sole cost and expense, shall be responsible for any response, removal, cleanup, or other remedial action required by applicable law. Except as to the Contractor's initial response to an emergency, any such remedial action(s) shall require the prior review and approval of the Agency.

9. MISCELLANEOUS PROVISIONS

- 9.1 **Governing Law:** This Contract shall be governed by the laws of South Carolina, except its choice of law rules.
- 9.2 **Severability:** If any provision of this Contract shall be held to be invalid, illegal, or unenforceable, the validity, legality and enforceability of the remaining provisions shall not be affected or impaired thereby.
- 9.3 **No Waiver:** No course of dealing or failure of the Agency and/or the Contractor to enforce strictly any term, right or condition of this Contract shall be construed as a waiver of such term, right or condition. No express waiver of any term, right, or condition of this Contract shall operate as a waiver of any other term, right, or condition.
- 9.4 **Rights Cumulative:** Except as otherwise provided in this Contract, (i) rights and remedies available to the Agency and/or the Contractor as set forth in this Contract shall be cumulative with and in addition to, and not in limitation of, any other rights or remedies available to the Parties at law and/or in equity, and (ii) any specific right or remedy conferred upon or reserved to the Agency and/or the Contractor in any provision of this Contract shall not preclude the concurrent or consecutive exercise of a right or remedy provided for in any other provision hereof.
- 9.5 **Notices:** Any notices required to be given under this Contract shall be in writing and shall be delivered either by (i) certified mail, return receipt requested, in which case notice shall be deemed delivered three (3) business days after deposit, postage prepaid, in the U.S. mail; (ii) a reputable messenger service or a nationally recognized overnight courier, in which case notice shall be deemed delivered one (1) business day after deposit with such messenger or courier; or (iii) personal delivery with receipt acknowledged in writing, in which case notice shall be deemed delivered when received. All notices shall be sent to the representatives identified in the Part G of the Agreement at the addresses provided therein. The foregoing addresses may be changed from time to time by notice to the other Party in the manner herein provided for.
- 9.6 **Economic Conflict of Interest:** A Contractor shall not have or exercise any official responsibility regarding a public contract in which the Contractor, or a business with which he is associated, has an economic interest. A person working for Contractor shall not have or exercise any official responsibility regarding a public contract in which the person, an individual with whom he is associated, or his family members have an economic interest. If Contractor is asked by any person to violate, or does violate, either of these restrictions, Contractor shall immediately communicate such information to the Agency Representative. The State may rescind, and recover any amount expended as a result of, any action taken, or contract entered in violation of this provision. The terms “business with which he is associated,” “economic interest,” “family member,” “immediate family,” “individual with whom he is associated,” “official responsibility” and “person” have the meanings provided in SC Code § 8-13-100.
- 9.7 **Illegal Immigration:** Contractor certifies and agrees that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable both to Contractor and its subcontractors or sub-subcontractors; or (b) that Contractor and its subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to SC Code § 8-14-60, “A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both.” Contractor agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. (An overview is available at www.procurement.sc.gov)
- 9.8 **Drug-Free Workplace:** The Contractor certifies to the Agency that Contractor will provide a Drug-Free Workplace, as required by Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.
- 9.9 **False Claims:** According to the SC Code § 16-13-240, “a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty” of a crime.
- 9.10 **Non-Indemnification:** Any term or condition is void to the extent it requires the State to indemnify anyone. It is unlawful for a person charged with disbursements of state funds appropriated by the General Assembly to exceed the amounts and purposes stated in the appropriations (SC Code § 11-9-20). It is unlawful for an authorized public officer to enter into a contract for a purpose in which the sum is in excess of the amount appropriated for that purpose. It is unlawful for an authorized public officer to divert or appropriate the funds arising from any tax levied and collected for any one fiscal year to the payment of an indebtedness contracted or incurred for a previous year. (SC Code § 11-1-40)

- 9.11 Enforcement and Interpretation of Building Codes: As required by SC Code § 10-1-180), OSE shall determine the enforcement and interpretation of all building codes and referenced standards on state buildings. The Contractor shall refer any questions, comments, or directives from local officials to the Agency and OSE for resolution. When the amount of the contract exceeds the construction procurement certification of the Agency, the Contractor shall not commence the Work before receiving a copy of the Building permit issued by OSE. (The Contractor may find Agency construction certification limits on Procurement Services website at <https://procurement.sc.gov/agency/audits/cert-limits>)
- 9.12 Assignment: The Agency and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements and obligations contained in this Contract. Neither party to the Contract shall assign the Contract as a whole, or in part, without written consent of the other and then only in accordance with and as permitted by SC Regulation 19-445.2180. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.
- 9.13 Open Trade: During the Contract term, including any renewals or extensions, Contractor will not engage in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code § 11-35-5300.

10. SUSPENSION OR TERMINATION

- 10.1 Agency Right of Suspension: The Agency may, at any time, suspend the work, in whole or in part, with or without cause for such period of time as determined by the Agency. Except in the event of suspension due to a default of the Contractor, the Contract sum will be equitably adjusted to reflect reasonable costs actually incurred by the Contractor due to delay or interruption resulting from such suspension.
- 10.2 Agency Right of Termination:
 - 10.2.1 Termination for Cause: If the Contractor defaults, persistently fails or neglects to perform the Work in accordance with the Contract Documents, or fails to perform a provision of the Contract, the Agency shall provide written notice of such default, failure, or neglect to the Contractor. If the Contractor fails to cure such default, failure, or neglect within fifteen days from receipt of the Agency’s notice, the Agency may, without prejudice to any other right or remedy the Agency may have, terminate the Contract and take possession of the area at the Site affected by the Work.
 - 10.2.2 Termination for Convenience: The Agency may, for its convenience, terminate all or any portion of the Work, or terminate this entire Contract, by ten (10) days written notice stating the effective date of the termination. Thereafter, the Agency shall pay the Contractor for Work actually performed before the date of termination. No payments shall be made for Work not actually performed, and no payment shall be made or due for lost profits on account of Work not performed.
- 10.3 Contractor Right of Termination:
 - 10.3.1 The Contractor may terminate the Contract if work is stopped through no fault of the Contractor, or other persons performing work either directly or indirectly for the Contractor, for a period of time exceeding 60 consecutive calendar days due to a court order or other public authority having jurisdiction; or a Declared National emergency which requires the work to be stopped.
 - 10.3.2 Agency Failure to Make Payment: Subject to the Agency’s right to withhold payments pursuant to Section 5.3.9, if the Agency fails to make payments to the Contractor as set forth in Section 5.3 and any other applicable provisions of the Contract Documents, the Contractor may, upon thirty (30) days’ prior written notice to the Agency, terminate the Contract and recover from the Agency payment for all Work performed and for proven loss with respect to materials, equipment, tools, and machinery, including reasonable overhead, profit and damages applicable to the Work for the Contract Services performed through the date thereof.

<u>AGENCY:</u>	<u>CONTRACTOR:</u>
BY: _____ <i>(Signature of Representative)</i>	BY: _____ <i>(Signature of Representative)</i>
PRINT NAME: _____	PRINT NAME: _____
PRINT TITLE: _____	PRINT TITLE: _____
DATE: _____	DATE: _____

Instructions to Bidders for Minor Construction Projects

1. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The Drawings, Specifications and all Addenda issued prior to execution of the Purchase Order.
2. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
3. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
4. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
5. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
6. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
7. The Bidder by making a Bid represents that the Bidder has read and understands the Bidding Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.
8. The Bid is made in compliance with the Bidding Documents.
9. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
10. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.
11. Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
12. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.
13. Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

14. The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

15. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

16. If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

17. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

18. Addenda will be issued no later than five days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

19. Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

20. Bids shall be submitted on the forms included with the Bidding Documents.

21. All blanks on the bid form shall be legibly executed in a non-erasable medium.

22. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

23. Interlineations, alterations and erasures must be initialed by the signer of the Bid.

24. All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

25. All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

26. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

27. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

28. At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

29. The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

30. It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

31. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

USC SUPPLEMENTAL GENERAL CONDITIONS FOR CONSTRUCTION PROJECTS

WORK AREAS

1. The Contractor shall maintain the job site in a safe manner at all times. This includes (but is not limited to) the provision and/or maintenance of lighting, fencing, barricades around obstructions, and safety and directional signage.
2. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies, stairs and exterior walks. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the work area. Providing safe, accessible, plywood-shielded pedestrian ways around construction may be required if a suitable alternative route is not available.
3. 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 Contractor's work vehicles. The lay-down area will be clearly identified to the contractor by the Project Manager, with a sketch or drawing provided to USC Parking Services. In turn, Parking Services will mark off this area with a sign containing the project name, Project Manager's 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 Project Manager. The area will be maintained in a neat and orderly fashion.
4. Work vehicles parked in the lay down area (or designated parking areas) will be clearly marked and display a USC-furnished placard for identification. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site. Personal vehicles must be parked in the perimeter parking lots or garages. Temporary parking permits can be obtained at the Contractor's expense at the USC Parking Office located in the Pendleton Street parking garage. Refer to the CAMPUS VEHICLE EXPECTATIONS (below) for additional information.
5. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied on a regular basis. 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 of up to \$1,000 per violation.
6. The Contractor shall be responsible for erosion and sediment control measures where ground disturbances are made.

PROJECT FENCING

7. All construction projects with exterior impacts shall have construction fencing at the perimeter. Fencing shall be 6' chain link with black or green privacy fabric (80-90% blockage). For fence panels with footed stands, sandbag weights shall be placed on the inside of the fence. Ripped sandbags shall be replaced immediately.
8. For projects with long fencing runs and/or high profile locations, decorative USC banners shall be used on top of privacy fabric; banners should be used at a ratio of one banner for every five fence panels. USC Project Manager will make arrangements for banner delivery for Contractor to hang.
9. The use of plastic safety fencing is discouraged and shall only be used on a temporary basis (less than four weeks) where absolutely necessary. Safety fencing shall be a neon yellow-green, high-

visibility fencing equal to 'Kryptonight' by Tenax. Safety fencing shall be erected and maintained in a neat and orderly fashion throughout the project.

10. Vehicles and all other equipment shall be contained within a fenced area if they are on site for more than 3 consecutive calendar days.

BEHAVIOR

11. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited.
12. 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.
13. Contractor's employees must adhere to the University's policy of maintaining a drug-free and tobacco-free campus.

HAZARDOUS MATERIALS & SAFETY COMPLIANCE

14. A USC Permit to Work must be signed prior to any work being performed by the general contractor or sub-contractor(s).
15. The contractor will comply with all regulations set forth by OSHA and SCDHEC. Contractor must also adhere to USC's internal policies and procedures (available by request). Upon request, the contractor will submit all Safety Programs and Certificates of Insurance to the University for review.
16. Contractor must notify the University immediately upon the discovery of suspect material which may contain asbestos or other such hazardous materials. These materials must not be disturbed until approved by the USC Project Manager.
17. In the event of an OSHA inspection, the Contractor shall immediately call the Facilities Call Center, 803-777-4217, and report that an OSHA inspector is on site. An employee from USC's Safety Unit will arrive to assist in the inspection.

LANDSCAPE & TREE PROTECTION

18. In conjunction with the construction documents, the USC Arborist shall direct methods to minimize damage to campus trees. Tree protection fencing is required to protect existing trees and other landscape features to be affected by a construction project. The location of this fence will be evaluated for each situation with the USC Arborist, Landscape Architect and Project Manager. Tree protection fencing may be required along access routes as well as within the project area itself. Fence locations may have to be reset throughout the course of the project.
19. The tree protection fence shall be 6' high chain link fence with 80-90% privacy screening unless otherwise approved by USC Arborist and/or Landscape Architect. If the tree protection fence is completely within a screened jobsite fence perimeter, privacy fabric is not required. In-ground fence posts are preferred in most situations for greater protection. If utility or pavement conflicts are present, fence panels in footed stands are acceptable. See attached detail for typical tree protection fencing.
20. No entry, vehicle parking, or materials storage will be allowed inside the tree protection zone. A 4"

layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone.

21. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following protective measures shall be taken:
 - a. For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over 4" of mulch.
 - b. For single loads over 9,000 lbs., two layers of 3/4" plywood shall be placed over 4" of mulch.
 - c. Plywood sheets shall be replaced as they deteriorate or delaminate with exposure.
 - d. For projects requiring heavier loads, a construction entry road consisting of 10' X 16' oak logging mats on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep matting structurally functional.
22. Damage to any trees during construction shall be assessed by the USC Arborist, who will stipulate what action will be taken for remediation of damage. The cost of any and all remediation will be assumed by the contractor at no additional cost to the project. Compensation for damages may be assessed up to \$500 per caliper inch of tree (up to 8") and \$500 per inch of diameter at breast height (for trees over 8").
23. Damage to trunks and limbs, as well as disturbance of the root zone under the dripline of tree, including compaction of soil, cutting or filling, or storage of materials, shall qualify as damage and subject to remediation.
24. Any damage to existing pavements or landscaping (including lawn areas and irrigation) will be remediated before final payment is made.

TEMPORARY FACILITIES

25. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
26. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.

CAMPUS KEYS

27. 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.

WELDING

28. A welding (hot work) permit must be issued by the University Fire Marshall before any welding can begin inside a building. The USC Project Manager will coordinate.

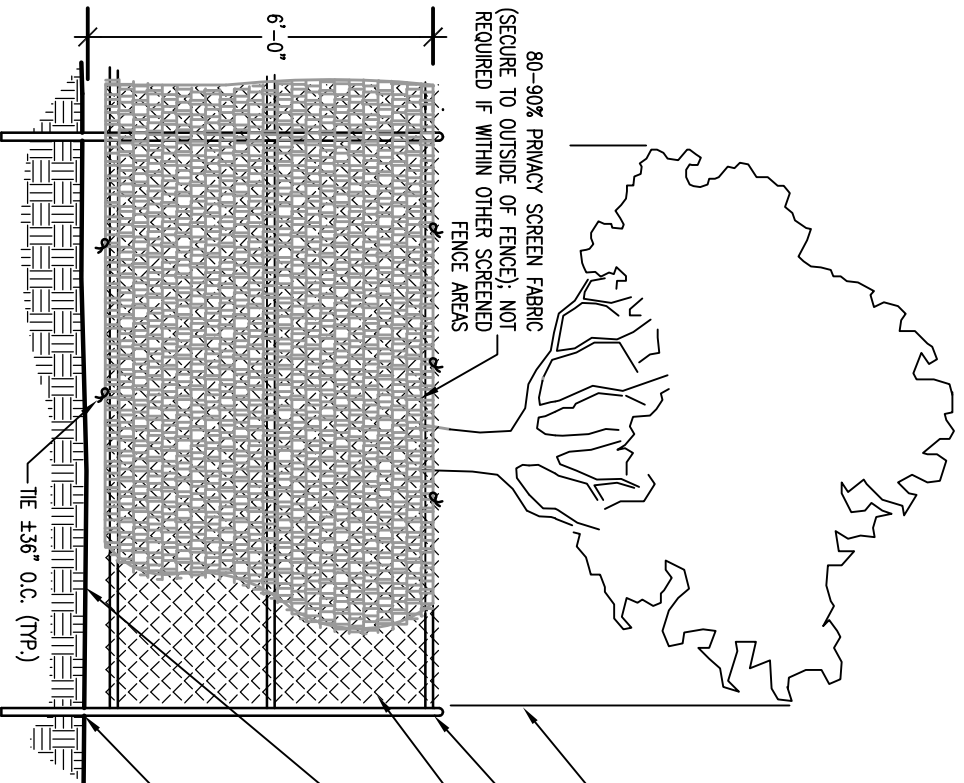
PROJECT EVALUATION & CLOSE-OUT

29. For all projects over \$100,000, including IDCs, a Contractor Performance Evaluation (SE 397) will be 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 by the USC Project Manager and a Construction Performance rating will be established.
30. 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.

CAMPUS VEHICLE EXPECTATIONS

31. Personal vehicles must be parked in the perimeter parking lots or garages. Temporary parking permits can be obtained at the Contractor's expense at the USC Parking Office located in the Pendleton Street parking garage.
32. All motorized vehicle traffic on USC walkways and landscape areas must be approved by the USC Project Manager and Parking Division, have a USC parking placard, and be parked within the approved laydown area. Violators may be subject to ticketing, towing and fines.
33. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
34. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held responsible for damages and restoration expense.
35. 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.
36. All drivers of equipment and vehicles shall be respectful of University landscape, equipment, structures, fixtures and signage.
37. All incidents of property damage shall be reported to Parking Services or the Work Management Center.



TREE CANOPY DRIPLINE:
SEE NOTE #2.

2 1/2" O.D. GALV. FENCEPOST

CHAIN LINK FENCE PANEL

PROVIDE 4" HARDWOOD MULCH AT TREE PROTECTION AREA UPON RECOMMENDATION OF USC ARBORIST

FENCE POSTS TO BE SET INTO GROUND; MARK POST LOCATIONS FOR REVIEW AND APPROVAL BY USC ARBORIST PRIOR TO INSTALLATION. SEE NOTE #4.

NOTES:

1. PROVIDE PROTECTION FENCING FOR ALL TREES WITHIN AREA OF DISTURBANCE AND CONSTRUCTION ACCESS.
2. PROTECTION FENCING SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
3. PROTECTION FENCING TO BE PLACED AT THE OUTSIDE OF THE CANOPY DRIPLINE, OR AT A DISTANCE OF ONE FOOT PER ONE INCH OF TREE DIAMETER, MEASURED AT BREAST HEIGHT, WHICHEVER IS LARGER, UNLESS OTHERWISE INDICATED ON LANDSCAPE PLAN OR APPROVED BY UNIVERSITY ARBORIST.
4. IN-GROUND POSTS ARE STANDARD. IF EXISTING ROOTS, UTILITIES OR PAVEMENT PRECLUDE USE OF IN-GROUND POSTS, FOOTED STANDS ARE ACCEPTABLE. SAND BAGS SHALL BE PLACED ON THE INSIDE OF FENCE.
5. DAMAGE TO ANY TREES DURING CONSTRUCTION SHALL BE ASSESSED BY UNIVERSITY ARBORIST AND THE UNIVERSITY ARBORIST SHALL STIPULATE WHAT ACTION WILL BE TAKEN FOR REMEDIATION OF DAMAGE. THE COST OF ANY AND ALL REMEDIATION WILL BE ASSUMED BY CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
6. DISTURBANCE OF ROOT ZONE UNDER DRIPLINE OF TREE, INCLUDING COMPACTION OF SOIL, CUTTING OR FILLING OR STORAGE OF MATERIALS SHALL QUALIFY AS DAMAGE AND SUBJECT TO REMEDIATION.

TREE PROTECTION FENCING (IN-GROUND) WITH SCREENING

NO SCALE REVISED 8.28.14

SE-355
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that *(Insert full name or legal title and address of Contractor)*

Name: _____
Address: _____

hereinafter referred to as "Contractor", and *(Insert full name and address of principal place of business of Surety)*

Name: _____
Address: _____

hereinafter called the "surety", are jointly and severally held and firmly bound unto *(Insert full name and address of Agency)*

Name: University of South Carolina
Address: 1300 Pickens Street
Columbia, SC 29208

hereinafter referred to as "Agency", or its successors or assigns, the sum of _____ (\$ _____), being the sum of the Bond to which payment to be well and truly made, the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ entered into a contract with Agency to construct

State Project Name: PRV Replacement-Columbia Hall
State Project Number: FP00000243

Brief Description of Awarded Work: Removal of the water pressure relief valve and installation of steam pressure relief valves rated for the steam pressure reducing valve capacity. The existing vent line is not large enough and a new vent line will be routed to the area well above the tunnel and up to a point on the wall 10' above grade.

in accordance with Drawings and Specifications prepared by *(Insert full name and address of A/E)*

Name: Swygert & Associates
Address: P. O. Box 11686
Columbia, SC 29606

which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract.

IN WITNESS WHEREOF, Surety and Contractor, intending to be legally bound hereby, subject to the terms stated herein, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

DATED this _____ **day of** _____, **2** _____
(shall be no earlier than Date of Contract)

BOND NUMBER _____

CONTRACTOR

By: _____
(Seal)

Print Name: _____

Print Title: _____

Witness: _____

SURETY

By: _____
(Seal)

Print Name: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

(Additional Signatures, if any, appear on attached page)

SE-355**PERFORMANCE BOND****NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency for the full and faithful performance of the contract, which is incorporated herein by reference.
2. If the Contractor performs the contract, the Surety and the Contractor have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.
3. The Surety's obligation under this Bond shall arise after:
 - 3.1 The Agency has notified the Contractor and the Surety at the address described in paragraph 10 below, that the Agency is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If the Agency, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the Agency's right, if any, subsequently to declare a Contractor Default; or
 - 3.2 The Agency has declared a Contractor Default and formally terminated the Contractor's right to complete the Contract.
4. The Surety shall, within 15 days after receipt of notice of the Agency's declaration of a Contractor Default, and at the Surety's sole expense, take one of the following actions:
 - 4.1 Arrange for the Contractor, with consent of the Agency, to perform and complete the Contract; or
 - 4.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Agency for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the Agency and the contractor selected with the Agency's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the Agency the amount of damages as described in paragraph 7 in excess of the Balance of the Contract Sum incurred by the Agency resulting from the Contractor Default; or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and:
 - 4.4.1 After investigation, determine the amount for which it may be liable to the Agency and, within 60 days of waiving its rights under this paragraph, tender payment thereof to the Agency; or
 - 4.4.2 Deny liability in whole or in part and notify the Agency, citing the reasons therefore.
5. Provided Surety has proceeded under paragraphs 4.1, 4.2, or 4.3, the Agency shall pay the Balance of the Contract Sum to either:
 - 5.1 Surety in accordance with the terms of the Contract; or
 - 5.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.
 - 5.3 The balance of the Contract Sum due either the Surety or another contractor shall be reduced by the amount of damages as described in paragraph 7.
6. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond 15 days after receipt of written notice from the Agency to the Surety demanding that the Surety perform its obligations under this Bond, and the Agency shall be entitled to enforce any remedy available to the Agency.
 - 6.1 If the Surety proceeds as provided in paragraph 4.4 and the Agency refuses the payment tendered or the Surety has denied liability, in whole or in part, then without further notice the Agency shall be entitled to enforce any remedy available to the Agency.
 - 6.2 Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the Dispute Resolution process defined in the Contract Documents and the laws of the State of South Carolina.
7. After the Agency has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Agency shall be those of the Contractor under the Contract, and the responsibilities of the Agency to the Surety shall those of the Agency under the Contract. To a limit of the amount of this Bond, but subject to commitment by the Agency of the Balance of the Contract Sum to mitigation of costs and damages on the Contract, the Surety is obligated to the Agency without duplication for:
 - 7.1 The responsibilities of the Contractor for correction of defective Work and completion of the Contract; and
 - 7.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
 - 7.3 Damages awarded pursuant to the Dispute Resolution Provisions of the Contract. Surety may join in any Dispute Resolution proceeding brought under the Contract and shall be bound by the results thereof; and
 - 7.4 Liquidated Damages, or if no Liquidated Damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. The Surety shall not be liable to the Agency or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Sum shall not be reduced or set-off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Agency or its heirs, executors, administrators, or successors.
9. The Surety hereby waives notice of any change, including changes of time, to the contract or to related subcontracts, purchase orders and other obligations.
10. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. Definitions
 - 11.1 Balance of the Contract Sum: The total amount payable by the Agency to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts to be received by the Agency in settlement of insurance or other Claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
 - 11.2 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform the Contract or otherwise to comply with the terms of the Contract.

SE-357
LABOR & MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that *(Insert full name or legal title and address of Contractor)*

Name: _____
Address: _____

hereinafter referred to as "Contractor", and *(Insert full name and address of principal place of business of Surety)*

Name: _____
Address: _____

hereinafter called the "surety", are jointly and severally held and firmly bound unto *(Insert full name and address of Agency)*

Name: University of South Carolina
Address: 1300 Pickens Street
Columbia, SC 29208

hereinafter referred to as "Agency", or its successors or assigns, the sum of _____ (\$ _____), being the sum of the Bond to which payment to be well and truly made, the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ entered into a contract with Agency to construct

State Project Name: PRV Replacement Columbia Hall
State Project Number: FP00000243
Brief Description of Awarded Work: Removal of the water pressure relief valve and installation of steam pressure relief valves rated for the steam pressure reducing valve capacity. The existing vent line is not large enough and a new vent line will be routed to the area well above the tunnel and up to a point on the wall 10' above grade.

in accordance with Drawings and Specifications prepared by *(Insert full name and address of A/E)*

Name: Swygert & Associates
Address: P. O. Box 11686
Columbia, SC 29606

which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract.

IN WITNESS WHEREOF, Surety and Contractor, intending to be legally bound hereby, subject to the terms stated herein, do each cause this Labor & Material Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative.

DATED this _____ **day of** _____, **2** _____ **BOND NUMBER** _____
(shall be no earlier than Date of Contract)

CONTRACTOR

By: _____
(Seal)

Print Name: _____

Print Title: _____

Witness: _____

SURETY

By: _____
(Seal)

Print Name: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

(Additional Signatures, if any, appear on attached page)

SE-357**LABOR & MATERIAL PAYMENT BOND****NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency to pay for all labor, materials and equipment required for use in the performance of the Contract, which is incorporated herein by reference.
 2. With respect to the Agency, this obligation shall be null and void if the Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - 2.2 Defends, indemnifies and holds harmless the Agency from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract.
 3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
 4. With respect to Claimants, and subject to the provisions of Title 29, Chapter 5 and the provisions of §11-35-3030(2)(c) of the SC Code of Laws, as amended, the Surety's obligation under this Bond shall arise as follows:
 - 4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him.
 - 4.2 A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.
 - 4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of one year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.
 5. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 5.2 Pay or arrange for payment of any undisputed amounts.
 - 5.3 The Surety's failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.
 6. Amounts owed by the Agency to the Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the Contractor furnishing and the Agency accepting this Bond, they agree that all funds earned by the contractor in the performance of the Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Agency's prior right to use the funds for the completion of the Work.
 7. The Surety shall not be liable to the Agency, Claimants or others for obligations of the Contractor that are unrelated to the Contract. The Agency shall not be liable for payment of any costs or expenses of any claimant under this bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
 8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
 9. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the Agency or the contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
 10. By the Contractor furnishing and the Agency accepting this Bond, they agree that this Bond has been furnished to comply with the statutory requirements of the South Carolina Code of Laws, as amended, and further, that any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
 11. Upon request of any person or entity appearing to be a potential beneficiary of this bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
 12. Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the laws of the State of South Carolina.
- 13. DEFINITIONS**
- 13.1 Claimant: An individual or entity having a direct contract with the Contractor or with a Subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the Contractor and the Contractor's Subcontractors, and all other items for which a mechanic's lien might otherwise be asserted.
 - 13.2 Remote Claimant: A person having a direct contractual relationship with a subcontractor of the Contractor or subcontractor, but no contractual relationship expressed or implied with the Contractor.
 - 13.3 Contract: The agreement between the Agency and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

SE-380

CHANGE ORDER NO.: _____

CHANGE ORDER TO DESIGN-BID-BUILD CONSTRUCTION CONTRACT

AGENCY: University of South Carolina

PROJECT NAME: Columbia Hall PRV Replacement

PROJECT NUMBER: FP00000243

CONTRACTOR: _____ CONTRACT DATE: _____

This Contract is changed as follows: *(Insert description of change in space provided below)*

ADJUSTMENTS IN THE CONTRACT SUM:

1. Original Contract Sum:		\$
2. Change in Contract Sum by previously approved Change Orders:		
3. Contract Sum prior to this Change Order		\$ 0.00
4. Amount of this Change Order:		
5. New Contract Sum, including this Change Order:		\$ 0.00

ADJUSTMENTS IN THE CONTRACT TIME:

1. Original Substantial Completion Date:		
2. Sum of previously approved increases and decreases in Days:		Days
3. Change in Days for this Change Order		Days
4. Total Number of Days added to this Contract including this Change Order		0 Days
5. New Substantial Completion Date:		

CONTRACTOR ACCEPTANCE:

BY: _____ Date: _____
(Signature of Representative)

Print Name of Representative: _____

A/E RECOMMENDATION FOR ACCEPTANCE:

BY: _____ Date: _____
(Signature of Representative)

Print Name or Representative: _____

AGENCY ACCEPTANCE AND CERTIFICATION:

I certify that the Agency has authorized, unencumbered funds available for obligation to this contract.

BY: _____ Date: _____
(Signature of Representative)

Print Name of Representative: _____

Change is within Agency Construction Contract Change Order Certification of: \$ _____ Yes No

AUTHORIZED BY: _____ DATE: _____
(OSE Project Manager)

SUBMIT THE FOLLOWING TO OSE

- SE-380, fully completed and signed by the Contractor, A/E and Agency;
- Detailed back-up information, with OH&P shown, from the Contractor/Subcontractor(s) that justifies the costs and schedule changes shown.
- If any item exceeds Agency certification, OSE will authorize the SE-380 and return to Agency.

Project Name: PRV Replacement Columbia Hall
Project Number: FP00000243
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 _____

SECTION 230010 - GENERAL PROVISIONS - HVAC

PART 1 – GENERAL

1.1 SCOPE:

- A. Bids of work covered by each section of these specifications shall be based on the layout and equipment as shown and specified with only such approved substitutions as are allowed. Drawings show general arrangement of ductwork and piping. Because of small scale of drawings, it is not possible to indicate all offsets, fittings, and accessories, which may be required. Contractor shall carefully investigate structural and finish conditions affecting his work and shall arrange such work accordingly, furnishing such fittings, traps, valves, and accessories as may be required to meet such conditions. Where locations make it necessary or desirable from Contractor's standpoint to make changes in arrangements or details shown on drawings, he may present suggestions for such changes and obtain Engineer's approval prior to making such changes.

1.2 CODES:

- A. All work under this division shall be in strict compliance with "International Codes" and all applicable Codes and Regulations of the Authority Having Jurisdiction.

1.3 MATERIAL AND SHOP DRAWINGS:

- A. Use only new materials and the standard product of a single manufacturer for each article of its type unless specifically mentioned otherwise. Materials and workmanship in the case of assembled items shall conform to the latest applicable requirements of NFPA, ASME, NEC, ASTM, AWWA, NEMA, and ANSI.
- B. Schedule submittals to expedite work. Unless otherwise indicated in this Section, submittals shall be submitted within 30 days of date of Notice to Proceed. Provide electronic copies of submittals in PDF format for review and approval. All submittals shall be bound in a single volume. Partial lists will not be considered and will be returned to the Contractor. Controls may be submitted separately and shall be submitted no later than 60 days of notice to proceed. Identify Project, Contractor, subcontractor, supplier, manufacturer, pertinent drawing sheet and detail numbers, and associated specification section numbers. A table of contents shall be included in the front of the submittal with tabs indicating each section. Identify variations from requirements of Contract Documents.
- C. Contractor responsibilities:
 - 1. Review submittals prior to transmittal. Verify compatibility with field conditions and dimensions, product selections and designations, quantities, and conformance of submittal with requirements of Contract Documents. Return non-conforming submittals to preparer for revision rather than submitting to Engineer. Coordinate submittals to avoid conflicts between various items of work. Failure of Contractor to review submittals prior to transmittal to Engineer shall be cause for rejection. Incomplete, improperly packaged, and submittals from sources other than

Contractor will not be accepted. Submittals not stamped APPROVED and signed by the Contractor will be returned to the Contractor.

2. Where required by specifications or otherwise needed, prepare drawings illustrating portion of work for use in fabricating, interfacing with other work, and installing products. Prepare 1/4" per foot scale drawings of all mechanical rooms when substituting items of equipment that are not the basis for design. All equipment submitted shall be of adequate size and physical arrangement to allow unobstructed access when installed, for routine maintenance, coil removal, shaft removal, motor removal and other similar operations. Contract Drawings shall not be reproduced and submitted as shop drawings. Drawings shall be 8-1/2 by 11 inches minimum and 24 by 36 inches maximum. Title each drawing with Project name and reference the sheet the drawing corresponds to.
3. Provide product data such as manufacturer's brochures, catalog pages, illustrations, diagrams, tables, performance charts, and other material which describe appearance, size, attributes, code and standard compliance, ratings, and other product characteristics. Provide all critical information such as reference standards, performance characteristics, capacities, power requirements, wiring and piping diagrams, controls, component parts, finishes, dimensions, and required clearances. Submit only data which are pertinent. Mark each copy of manufacturer's standard printed data to identify products, models, options, and other data pertinent to project.
4. Control diagrams: Show relative positions of each component as a system diagram. Provide points list, wiring diagram and schedule of all products and components used in system.
5. Engineer will review and return submittals with comments. Do not fabricate products or begin work which requires submittals until return of submittal with Engineer acceptance. Promptly report any inability to comply with provisions. Revise and resubmit submittals as required within 15 days of return from Engineer. Make re-submittals under procedures specified for initial submittals. Identify all changes made since previous submittal.

D. Engineer Review:

1. Engineer will review submittals for sole purpose of verifying general conformance with design concept and general compliance with Contract Documents. Approval of submittal by Engineer does not relieve Contractor of responsibility for correcting errors which may exist in submittal or from meeting requirements of Contract Documents. After review, Engineer will return submittals marked as follows to indicate action taken:
2. No Exception: Part of work covered by submittal may proceed provided it complies with requirements of Contract Documents. Final acceptance will depend upon that compliance. The term "approved" shall only indicate that there is no exception taken to the submittal.

3. No Exception As Corrected: Part of work covered by submittal may proceed provided it complies with notations and corrections on submittal and requirements of Contract documents. Final acceptance will depend upon that compliance.
4. Revise And Resubmit: Do not proceed with part of work covered by submittal including purchasing, fabricating, and delivering. Revise or prepare new submittal in accordance with notations and resubmit.

E. Samples:

1. Submit samples to illustrate functional and aesthetic characteristics of products with all integral parts and attachment devices. Include full range of manufacturer's standard finishes, indicating colors, textures, and patterns for A/E selection. Submit the number of samples specified in individual specification sections. One sample will be retained by A/E.

F. Items Requiring Submittal are as Follows:

1. Insulation
2. All items listed in MANUFACTURERS: Section of 230010

1.4 ASBESTOS:

- A. At any time the Contractor encounters asbestos, he shall immediately stop work in the immediate area and suspend any further work until asbestos is removed. Contractor shall, upon discovery of asbestos, notify owner, or owner's representative, who shall be responsible for the removal of the asbestos, all in accordance with NESHAP (National Emission Standard for Hazardous Air Pollutants). Any form of asbestos removal or demolition shall be by owner. Engineer is not an "Owner or Operator" as defined under NESHAP.
- B. Contractor is responsible for, and shall be aware of all state and federal laws pertaining to asbestos as well as NESHAP requirements.

1.5 LEAD FREE:

- A. All solder, flux and pipe used in water system must be lead free. Lead free is defined as less than 0.2 percent lead in solder and flux and less than 8.0 percent lead in pipes and fittings.

1.6 PERMITS AND FEES:

- A. Obtain permits, licenses, pay fees, etc. as required for performance of Contract. Arrange for necessary inspections required by governing authority and deliver certificates of approval to Architects or their representatives. File plans required by governing body.

1.7 DEFINITIONS:

- A. In this division of the specifications and accompanying drawings, the following definitions apply:
- B. Provide: To purchase, pay for, transport to the job site, unpack, install, and connect complete and ready for operation; to include all permits, inspections, equipment, material, labor, hardware, and operations required for completion and operation.
- C. Install (Installed): To furnish and install complete and ready for operation.
- D. Furnish: To purchase, pay for, and deliver to the job site for installation by others.
- E. The Mechanical Contractor is cautioned that "furnish" requires coordination with others. Such coordination costs shall be included as part of Mechanical Contractor's bid.

1.8 CUTTING AND PATCHING:

- A. Cutting of walls, floors, roofs, partitions, and ceiling, required for proper installation of the systems shall be performed under this contract.
- B. Cutting shall be done in a neat, workmanlike manner. No joist, beams, girders, columns, or other structural members may be cut without written permission from the Engineer. When possible, holes shall be saw-cut or core drilled neat to minimize patching.
- C. Re-routing of existing pipes, insulation, etc. as required for installation of new system is included in this work. All work shall be done in accordance with specifications for new work of the particular type involved.
- D. Patching shall be performed to match existing structures, exterior walls and roofs, and shall form watertight installation. Where existing ductwork, pipe or other items are removed, the walls, floors, roofs, partitions or ceilings shall be patched to match existing finishes by this contractor.

1.9 VERIFICATION OF DIMENSIONS, ETC.:

- A. The Contractor shall visit the premises and thoroughly familiarize himself with all details of the work, working conditions, verify all dimensions in the field, advise the Engineer of any discrepancy, and submit shop drawings of any changes he proposes to make in quadruplicate for approval before starting the work. Contractor shall install all equipment in a manner to avoid building interference.

1.10 COORDINATION WITH OTHER TRADES:

- A. Coordinate all work of each section with work of other sections to avoid interference. Bidders are cautioned to check their equipment against space available as indicated on drawings, and shall make sure that proposed equipment can be accommodated. Before beginning work under each section, inspect installed work of other trades and verify that such work is complete to the point where the installation may properly begin.

- B. Where equipment supplied by an approved manufacturer is substituted for the specified equipment, the Contractor will be responsible for coordinating any changes required in his work or other trades work, including but not limited to electrical requirements, structural steel requirements and space requirements. Any additional costs required to make changes to other trades work shall be borne by this contractor.

1.11 PROTECTION OF ADJACENT WORK:

- A. Protect work and adjacent work at all times with suitable covering. All damage to work in place caused by Contractor shall be repaired and restored to original good and acceptable condition using same quality and kinds of materials as required to match and finish with adjacent work.

1.12 EXISTING EQUIPMENT AND MATERIALS:

- A. All items of equipment removed under this section of the specifications shall become the property of this Contractor shall be promptly removed from this site.

1.13 CLEAN-UP:

- A. At the completion of the contract work, all areas where work has been performed shall be left clean. All trash shall be removed from the site by the Contractor.

1.14 APPROVALS AND SUBSTITUTIONS:

- A. Notwithstanding any reference in the specifications to any article, device, product, material, fixture, form, or type of construction by name, make or catalog number, such references shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition; and the Contractor, in such cases, may at his option use any article, device, product, material, fixture, or type of construction which, in the judgment of the Engineer, expressed in writing, is equal to that specified.
- B. Requests for written approval to substitute materials or equipment considered by the Contractor as equal to those specified, shall be submitted for approval to the Engineer ten (10) days prior to bid date. Requests shall be accompanied by samples, descriptive literature and engineering information as necessary to fully identify and evaluate the product. No increase in the contract sum will be considered when requests are not approved.
- C. The Contractor shall bear the burden and cost of coordinating with all trades any changes in work required by substitutions, including but not limited to electrical connections, additional components required, service clearance, etc.

1.15 AS-BUILT DRAWINGS:

- A. The Contractor shall keep a record set of drawings on the job; and as construction progresses shall show the actual installed location of all items, material, and equipment on these job drawings. Indicate approved changes in red ink.

- B. At the time of final completion, a corrected set of As-Built drawings shall be delivered to the Engineer. A final set of reproducible drawings with job information that reflects the actual installation shall be prepared by the Engineer and given to the Owner.

1.16 WARRANTY:

- A. The Contractor for each section of the work under this division will furnish to the Owner a written warranty for the installation as installed, including controls and all other equipment covered under each section of the specifications, to perform in a quiet, efficient, and satisfactory manner with no more than normal service.
- B. Each warranty shall extend for a period of one year following substantial completion and acceptance of construction. They shall be endorsed by the Contractor. Refrigeration compressors shall have a five (5) year warranty.

1.17 MANUFACTURERS:

- A. In order to define requirements for quality and function of manufactured products, and requirements such as size, gauges, grade selection, color selections and like specifications requirements, the specifications as written hereinafter are based upon products of those manufacturers who are named hereinafter under various specifications for materials.
- B. In addition to products of manufacturers named hereinafter in the specifications, equivalent products of the following named manufacturers will be acceptable under the base bid:
 - 1. Steam Specialties:
 - a) B&G, Muller Company, Crane Company, Sarco Company, Watson McDaniel.
 - 2. Pressure Gages:
 - a) Dwyer Instruments, Weiss Instruments, H.O. Trerice Company, Ellison Draft Gauge Company, Inc., Weksler Instrument
 - 3. Insulation:
 - a) Owens Corning, Johns Manville, CertainTeed Corporation, Knauf Insulation
 - 4. Pipe Hangers:
 - a) Cooper B-Line, Fee and Mason Manufacturing Company, Anvil International, Erico Caddy, Tolco a Division of Nibco

PART 2 - PRODUCTS

2.1 PRESSURE GAUGES:

- A. Pressure gauges shall be installed as indicated on the drawing. Pressure gauges shall be equal to Weiss Instruments model 4CTS. Pressure gauges shall be single spring bourdon tube type with wear resisting moving parts and adjustable linkage. Gauge movement shall be suitable mounted in a cast aluminum case with glass front and plain removable ring.
- B. Each gauge shall be equipped with a brass needle valve.
- C. Each steam gauge shall be equipped with syphon.
- D. Gauges shall be installed in such a manner so as to be accessible and easily read. Range of gauge for each particular point of application shall be selected so that pointer is approximately in midpoint of scale under normal operating conditions.

2.2 SLEEVES AND OPENINGS:

- A. Provide UL certified fire stop sleeving system for all pipe penetrations through fire rated walls, floors, partitions, ceilings, floor-ceiling assemblies and roofs as tested under ASTM E814-02 "Standard Method of Fire Tests of Through Penetration Fire Stops".

PART 3 - EXECUTION

3.1 PIPE FITTINGS:

- A. General: Provide complete systems of piping and fittings for all services as indicated. All pipe, valves, and fittings shall comply with American National Standards Institute, Inc. Code and/or local codes and ordinances. All fittings shall be domestically produced from domestic forgings. Cut pipe accurately to measurements established at building or site, and work into place without springing or forcing, properly clearing all windows, doors, and other openings or obstructions.
- B. Excessive cutting or other weakening of building to facilitate piping installation will not be permitted. Piping shall line up flanges and fittings freely and shall have adequate unions and flanges so that all equipment can be disassembled for repairs. Test all piping prior to insulation or concealing.
- C. All welded pipe and fittings shall be delivered to job with machine beveled ends. Where necessary, beveling may be done in field by gas torch. In which case, surfaces shall be thoroughly cleaned of scale and oxidation after beveling.

3.2 WELDING:

- A. All welding shall be done by certified welders. Welded pipe shall have flanges at valves and elsewhere as required to permit disassembly for maintenance. Tests and reports shall be as follows:

- B. Qualification test of each welder prior to beginning of construction.
- C. One sample of weld of each welder's work selected at random by Engineer during construction period.
- D. Procedure for making tests of welds shall be as outlined in Section 9 of ASME Boiler Construction Code. These tests shall be made by an approved testing laboratory, and a report furnished to Engineer. Report on qualification tests shall be made for gas welding and electric arc welding on steel in horizontal fixed position. A testing laboratory representative shall witness making of welds made for qualification tests. All costs of testing of welds shall be paid by Contractor.

3.3 PIPE:

- A. All piping material shall be as specified in other sections of this division.
- B. Fittings and Connections: All turns and connections shall be made with long radius fittings as scheduled hereinafter. No miter connections will be permitted in welded work.
- C. Pipe joints shall be made in accordance with the following applicable specifications:
 - 1. Make up flanged joints with ring-type gaskets, 1/16 inch thick.
 - 2. Weld-O-Lets, or similar approved fittings, may be used if branch pipe is less than one-half the size of the main. In all other cases, welding fittings shall be used. All welded piping shall be as specified hereinbefore.

3.4 SLEEVES:

- A. Provide all sleeves in floors, beams, wall, roof, etc. as required for installing work of this division unless otherwise specified hereinafter. Size sleeves for insulated pipe to accommodate both pipe and insulation. Construct vertical sleeves in connection with concealed piping of 22 gauge galvanized iron. Sleeves thru fire-rated assemblies shall be firestopped as specified herein and insulation shall not pass thru sleeve unless material complies with firestopping specified.

3.5 PIPE HANGERS, SUPPORTS AND INSERTS:

- A. Pipe hangers, supports and inserts shall comply with Table 305.4 of the 2015 International Mechanical Code and be provided as follows:
- B. All piping shall be supported by forged steel hangers or brackets suitably fastened to structural portion. Wall brackets shall be Fee & Mason Fig. No. 151. Provide lock nuts on all adjustable hanger assemblies.

PIPE SIZE - INCHES

	1/2 – 2	2-1/2 – 4	6 – Up	Wall Plate Hanger
Grinnel	104	260	171	139
Fee & Mason	199	239	170	302
Elcen	92	12	15	---

C. Hanger or Support Spacing (unless specified different hereinafter):

1. Steel Pipe:

12'- 0" intervals and at each change in direction

D. Size hangers on insulated piping to permit insulation and saddles to pass full size through hanger.

E. Special and Additional Supports:

1. Special supports will be required where hangers cannot be used. Horizontal pipes shall be secured to prevent vibration or excessive sway. Where required, provide additional hangers to secure required level, slope or drainage, and also to prevent sagging. Provide a hanger within one foot of each elbow. Provide all miscellaneous steel required for pipe supports, anchors, etc.
2. Pipe supports located on the exterior of the building on grade or on the roof shall be steel with a hot dip galvanized coating.

3.6 INSULATION SHIELDS:

- A. Provide all insulated piping with 10-inch long (16 gauge) protective galvanized sheet metal shields extending 120 degrees around bottom of insulated pipe.

3.7 SWING CONNECTIONS:

- A. Swing connections shall be provided at all points of expansion. Install all connections to equipment, etc. in a manner to allow for normal pipe movement due to thermal expansion without causing undue stresses to be exerted on said equipment.

3.8 REDUCING FITTINGS:

- A. Where pipe lines reduce in size, provide reducing fittings wherever possible. Provide eccentric fittings or reducers where horizontal runs of supply lines reduce in size, and install so that there will be no air trapped in hot or cold water systems. In screwed work, no bushings shall be used unless there is a difference of two standard pipe sizes between inner and outer threads.

3.9 CLEANING:

- A. All surfaces on metal, pipe, insulation covered surfaces, and other equipment furnished and installed under this division of the specifications shall be thoroughly cleaned of grease, scale, dirt and other foreign material.
- B. Upon complete installation of ducts, clean entire system of rubbish, plaster, dirt, etc., before installing any outlets. After installation of outlets and connections to fans are made, blow out entire system with all control devices wide open.

3.10 TESTING (PIPING):

- A. Upon completion of each system of work under this division, and at a designated time, all piping shall be pressure tested for leaks in the presence of the owner. Owner shall be notified five days before testing is to be conducted and all tests shall be conducted in the presence of the owner. All equipment required for test shall be furnished by contractor at his expense. All tests shall be performed as specified hereinafter. If inspection or tests show defects, such defective work or material shall be replaced and inspection and tests repeated at no additional cost to owner. Make tight any leaks. Repeat tests until system is proven tight. Caulking of leaks will not be permitted. All equipment not capable of withstanding the test pressure shall be valved off during the test.
- B. Steam and Condensate Systems: Upon completion of the installation, but before covering, all steam and condensate piping, and all heating equipment shall be given a hydrostatic test of 1-1/2 times the working pressure, but not less than 100 psig, and proven tight. Equipment not designed for this pressure shall be blanked off.

3.11 IDENTIFICATION OF PIPING:

- A. All piping, bare and insulated, installed under this division shall be given two coats of finish painting by this contractor as listed hereinafter. Paint shall be Glidden Industrial Enamel, or equal by Sherwin-Williams or Devoe Paints. Samples of colors and type paint shall be submitted for approval prior to application.
- B. Steam shall be painted with Rose Talbert 7266N "Garden Marigold".

3.12 PIPE CODING:

- A. After all piping has been painted with color-coding, all piping installed under this division shall be coded and marked with "Perma-Code" pipe markers as manufactured by W.H. Brady Company, 712 Glendale Avenue, Milwaukee, Wisconsin. Markers shall be applied to properly identify piping, but in no case shall they be applied more than 20 feet apart. Markers shall be 1-1/8 inch by 7 inches and shall be secured by spiral wrapping with 3/4 inch wide vinyl banding tape, color matching service, at each end of marker.

End of Section 230010

SECTION 230500 – HEATING, VENTILATION and AIR CONDITIONING

PART 1 - GENERAL

1.1 General Requirements:

- A. This Section of the Specifications and related drawings describe requirements pertaining to Air Conditioning, Heating and Ventilation work, including applicable HVAC Insulation in separate Section 230700. All work shall comply with Section 230010 - General Provisions - HVAC.
- B. Construct rectangular ductwork to meet all functional criteria defined in Section VII, of the SMACNA "HVAC Duct Construction Standards Metal and Flexible" 2005 Edition. All ductwork must comply with all local, state and federal code requirements.

PART 2 - PRODUCTS

2.1 QUALITY ASSURANCE:

- A. The contractor must comply with this specification in its entirety. At the discretion of the Engineer, sheet metal gauges, and reinforcing may be checked at various times to verify all duct construction is in compliance.

2.2 PIPE AND FITTINGS:

- A. Schedule of pipe and fittings: Piping and fittings shall conform to requirements as indicated herein.
- B. All pipe shall be domestically produced from domestic forgings.

2.3 SCHEDULE OF PIPING

SERVICE	ITEM	PIPING	FITTINGS	FLANGES/UNIONS
Steam and Condensate	Steam mains 2-1/2" and larger	Black seamless steel ASTM A-106 or electric weld ASTM A-53 Sch. 40	Buttweld black steel Sch. 40	150 lb. forged black steel welding neck or slip-on flat face
	Condensate 2-1/2" & larger	Black seamless steel ASTM A-106 or electric weld ASTM A53 Sch. 80	Buttweld black steel Sch. 80	150 lb. forged black steel slip-on

PART 3 - EXECUTION

3.1 PIPING, GENERAL:

- A. All piping shall conform with Section 230010 - General Provisions - HVAC.
- B. Provide a flange or union in screwed or welded pipe where pipe connects to equipment. At control valves, install union in each pipe connecting to the device. Screwed unions shall not be installed where they will be subjected to bending stresses, as in expansion loops or offsets.
- C. Run pipes parallel to walls and ceilings. Wherever pipes change size, use eccentric fittings. Run piping so as not to obstruct walking or service areas.
- D. Pipe and equipment locations shown are approximate. Exact location of equipment, pipes, and chases to be as approved and determined in field to avoid other pipes and maintain structural clearances. Use actual job dimensions and equipment shop drawings for roughing.
- E. Piping to comply with best trade practice. Provide clearance between pipe and building structure so pipes can expand without damage to building structure.
- F. Pipe water relief drains, blowdown, and other drains to, but not into, the most convenient floor drain or where otherwise directed.

3.2 SUBMITTALS:

- A. Provide submittals as required in Section 230010. At completion of work, submit check-out report of automatic control system. Submit start up reports per Section 230010. Submit test and balance report per 230010. Submit manufacturer's installation, operation, and maintenance instructions.

End of Section 230500

SECTION 230700 – HVAC INSULATION

PART 1 - GENERAL

1.1 WORK INCLUDED:

- A. General Requirements: This section shall include all insulation as required for installation on all items as specified hereinafter and/or as indicated. All insulations shall be installed in a workmanlike manner by qualified workers in the employment of an independent insulation contractor. Costs of insulation shall be included as part of work by contractor as applicable to his section of work. No separate bid is to be included for insulation work.
- B. Fire hazard classification for all material shall not exceed flame spread of 25 and smoke development of 50 as classified by Underwriters Laboratories under Test Method ASTM E-84 and acceptable under NFPA Standards. This is to apply to the complete system and be a composite rating of insulation material with jacket or facings, vapor barrier, joint sealing tapes, mastic and fittings.
- C. Prior to commencing any work, submit data sheets for engineer's approval of all material proposed to be used on this project.

PART 2 - PRODUCTS

2.1 ABOVE GROUND INDOOR PIPING:

- A. Pipe Insulation:
 - 1. All water piping shall be insulated with heavy density fiberglass with all-service jacket equal to Owens-Corning Double Self-Sealing Lap, ASJ/SSL-II, one piece, to be used on all lines above and below ambient temperature from 0°F to 850°F.

2.2 JACKET FOR EQUIPMENT ROOM PIPING:

- A. All insulated piping in equipment rooms shall be covered with eight (8) ounce cotton canvas manufactured in the United States. All hot water piping shall be lagged with Childers CP-9, CP-10 or CP-11 Weather Barrier Coating, or equal. All chilled water piping shall be lagged with Childers CP-30 LO Solvent thinned Vapor Barrier Coating or CP-35 Water Based Vapor Barrier Coating, or equal.

2.3 PIPE INSULATION THICKNESS:

- A. Piping for the following systems shall be insulated to the thickness listed:

<u>Item</u>	<u>Insulation Thickness (Inches)</u>
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Fiberglass K = 0.24

Hot Pipes:

Steam and Condensate

Pipe up to 1-1/2"	2"
Pipe 2" and above	3"

PART 3 - EXECUTION

3.1 PIPE INSULATION:

- A. All insulation shall be applied to clean, dry surfaces butting all sections firmly together and finishing as specified hereinafter.
- B. All vapor barriers shall be sealed, and shall be continuous throughout. No staples shall be used on any vapor barrier jacket unless sealed with vapor barrier coating or vapor barrier tape.
- C. Insulation of all insulated lines shall be interpreted as including all pipe, valves, fittings and specialties comprising the lines, except flanged unions and screwed unions on hot piping.
- D. Where sectional insulation is not practical, the proper insulation cement or block insulation shall be utilized by forming it to the applied surface.
- E. Pipe Insulation Protection: Direct contact between pipe and hangers shall be avoided. Hanger shall pass outside of a sheet metal protection saddle which shall cover a section of high density insulation (cellular glass or calcium silicate), of sufficient length to support the weight of the pipe without crushing the insulation. The vapor barrier shall be continuous behind the saddle or shall be lapped over the saddle and securely cemented thereto.
- F. All pipe covering shall be furnished with self-seal lap and 3" wide butt joint strips. The release paper is pulled from adhesive edge, pipe covering closed tightly around pipe and self-seal lap rubbed hard in place with the blunt edge of an insulation knife. This procedure applied to longitudinal as well as circumferential joints. Staple all longitudinal and circumferential joints with 9/16" staples 6" on center and seal over all staples with Childers CP-30 or equal vapor barrier coating. Care shall be taken to keep jacket clean as it is the finish on all exposed work. All adjoining insulation sections shall be firmly butted together before butt joint strip is applied, and all chilled water and cold water service lines shall have vapor barrier coating thoroughly coated to pipe at butt joints and at all fittings. All fittings, valve bodies, unions, and flanges shall be finished as follows:

1. To the hot insulated fittings, apply a tack coat of Childers CP-10 or CP-11 (use CP-35 on cold piping) or equal at the rate of 2 gallons per 100 S.F. While the tack coat is still wet, a layer of 10 x 10 fiberglass reinforcing mesh shall be embedded with all fabric seams overlapped a minimum of 2". A finish coat, at a coverage rate of 4 gallons per 100 S.F. shall be applied, fully covering the reinforcing mesh.

End of Section 230700