# University of South Carolina Columbia, South Carolina

# Russell House ACM Abatement

Project Number: H27-6094-J

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**2011 Edition** Rev. 11/4/2011

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# REQUEST FOR ADVERTISEMENT

**APPROVED BY** (Office of State Engineer):

<b>2011 Edition</b> Rev. 7/20/2011
asbestos containing materials and/or
sc.edu (Facilities/Construction
]
l. Bidders rely on copies of Bidding
SES ONLY AT (list name and location for
ne purchasing website.
es 🗌 No 🖂
Columbia, SC 29208
onf Rm 57, Columbia, SC 29208
<u>ns</u>
<u>r</u>

DATE:

**PROJECT NAME:** Russell House ACM Abatement PROJECT NUMBER: H27-6094-J PROJECT LOCATION: Columbia, South Carolina Contractor may be subject to performance appraisal at close of project BID SECURITY REQUIRED? Yes ⊠ No □ PERFORMANCE & PAYMENT BONDS REQUIRED? Yes ⊠ No □ **CONSTRUCTION COST RANGE:** \$65K **DESCRIPTION OF PROJECT:** This project includes the remediation and disposal of contaminated materials in the Russell House crawlspace and mechanical room. A/E NAME: Crossroads Environmental, LLC A/E CONTACT: Kay Horton A/E ADDRESS: Street/PO Box: 1258 Boiling Springs Road City: Spartanburg State: <u>SC</u> ZIP: <u>29303-</u> **EMAIL:** khorton@crossroadsenv.net **TELEPHONE:** 864.541.8736 FAX: 864.680.5537 All questions & correspondence concerning this Invitation shall be addressed to the A/E. BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: http://purchasing.s Soliciations & Awards) PLAN DEPOSIT AMOUNT: IS DEPOSIT REFUNDABLE: Yes No Only those Bidding Documents/Plans obtained from the above listed source(s) are official Documents/Plans obtained from any other source at their own risk. BIDDING DOCUMENTS/PLANS ARE ALSO ON FILE FOR VIEWING PURPOS each plan room or other entity): http://purchasing.sc.edu It is the responsibility of the contractor to download all documents for this project from the PRE-BID CONFERENCE? Yes ⊠ No □ MANDATORY ATTENDANCE? Yes **DATE:** 5/15/2013 TIME: 11am PLACE: 743 Greene Street, Conf Rm 57, **AGENCY:** <u>University of South Carolina</u> NAME OF AGENCY PROCUREMENT OFFICER: Juaquana brookins ADDRESS: Street/PO Box: 743 Greene Street City: Columbia State: <u>SC</u> ZIP: <u>29208-</u> EMAIL: jbrookin@fmc.sc.edu **FAX:** 803.777.7334 **TELEPHONE:** 803.777.3596 BID CLOSING DATE: 5/28/2013 TIME: 2pm LOCATION: 743 Greene Street, Co **BID DELIVERY ADDRESSES:** HAND-DELIVERY: **MAIL SERVICE:** Attn: <u>Juaquana Brookins</u> Attn: Juaquana Brooki USC - Facilities Center USC - Facilities Cente 743 Greene Steet 743 Greene Steet Columbia, SC 29208 Columbia, SC 29208 IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one) Yes 🛛 No 🗌

# A701

# Instruction to Bidders (1997 Edition)

Original AIA Document on file at the office of
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208

# **OSE FORM 00201** Revised October 22, 2012

# STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

OWNER: <u>University of South Carolina</u> PROJECT NUMBER: <u>H27-6094-J</u>

PROJECT NAME: Russell House ACM Abatement

PROJECT LOCATION: Columbia, SC

PROCUREMENT OFFICER: Juaquana Brookins

#### 1. STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

- **1.1.** These Standard Supplemental Instructions To Bidders amend or supplement Instructions To Bidders (AIA Document A701-1997) and other provisions of Bidding and Contract Documents as indicated below.
- **1.2.** Compliance with these Standard Supplemental Instructions is required by the Office of State Engineer (OSE) for all State projects when competitive sealed bidding is used as the method of procurement.
- 1.3. All provisions of A701-1997, which are not so amended or supplemented, remain in full force and effect.
- **1.4.** Bidders are cautioned to carefully examine the Bidding and Contract Documents for additional instructions or requirements.

#### 2. MODIFICATIONS TO A701-1997

- **2.1.** *Delete Section 1.1 and insert the following:* 
  - 1.1 Bidding Documents, collectively referred to as the **Invitation for Bids**, include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement, Instructions to Bidders (A-701), Supplementary Instructions to Bidders, the bid form (SE-330), the Intent to Award Notice (SE-370), and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda issued prior to execution of the Contract, and other documents set forth in the Bidding Documents. Any reference in this document to the Agreement between the Owner and Contractor, AIA Document A101, or some abbreviated reference thereof, shall mean the AIA A101, 2007 Edition as modified by OSE Form 00501 Standard Modification to Agreement Between Owner and Contractor. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean the AIA A201, 2007 Edition as modified by OSE Form 00811 Standard Supplementary Conditions.
- **2.2.** In Section 1.8, delete the words "and who meets the requirements set forth in the Bidding Documents".
- **2.3.** In Section 2.1, delete the word "making" and substitute the word "submitting."
- **2.4.** *In Section 2.1.1:*

After the words "Bidding Documents," delete the word "or" and substitute the word "and."

*Insert the following at the end of this section:* 

Bidders are expected to examine the Bidding Documents and Contract Documents thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements. Failure to do so will be at the Bidder's risk. Bidder assumes responsibility for any patent ambiguity that Bidder does not bring to the Owner's attention prior to bid opening.

**2.5.** In Section 2.1.3, insert the following after the term "Contract Documents" and before the period: and accepts full responsibility for any pre-bid existing conditions that would affect the Bid that could have been ascertained by a site visit. As provided in Regulation 19-445.2042(B), A bidder's failure to attend an advertised pre-bid conference will not excuse its responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the State.

**2.6.** *Insert the following Sections* 2.2 *through* 2.6:

#### 2.2 CERTIFICATION OF INDEPENDENT PRICE DETERMINATION

GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.

- (a) By submitting an bid, the bidder certifies that—
  - (1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to—
    - (i) Those prices;
    - (ii) The intention to submit an bid; or
    - (iii) The methods or factors used to calculate the prices offered.
  - (2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
  - (3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit an bid for the purpose of restricting competition.
- (b) Each signature on the bid is considered to be a certification by the signatory that the signatory—
  - (1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or
  - (2)(i) Has been authorized, in writing, to act as agent for the bidder's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification [As used in this subdivision (b)(2)(i), the term "principals" means the person(s) in the bidder's organization responsible for determining the prices offered in this bid];
  - (ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and
  - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.
- (c) If the bidder deletes or modifies paragraph (a)(2) of this certification, the bidder must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

#### 2.3 DRUG FREE WORKPLACE

By submitting a bid, the Bidder certifies that Bidder will maintain a drug free workplace in accordance with the requirements of Title 44, Chapter 107 of South Carolina Code of Laws, as amended.

#### 2.4 CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS

- (a) (1) By submitting an Bid, Bidder certifies, to the best of its knowledge and belief, that-
  - (i) Bidder and/or any of its Principals-
    - (A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
    - (B) Have not, within a three-year period preceding this bid, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in

connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of bids; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

- (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
- (ii) Bidder has not, within a three-year period preceding this bid, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (b) Bidder shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) If Bidder is unable to certify the representations stated in paragraphs (a)(1), Bid must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Bidder's responsibility. Failure of the Bidder to furnish additional information as requested by the Procurement Officer may render the Bidder nonresponsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Bidder is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Bidder knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the State, the Procurement Officer may terminate the contract resulting from this solicitation for default.

#### 2.5 ETHICS CERTIFICATE

By submitting a bid, the bidder certifies that the bidder has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision. If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-1150 to the procurement officer at the same time the law requires the statement to be filed.

#### 2.6 RESTRICTIONS APPLICABLE TO BIDDERS & GIFTS

Violation of these restrictions may result in disqualification of your bid, suspension or debarment, and may constitute a violation of the state Ethics Act. (a) After issuance of the solicitation, bidder agrees not to discuss this procurement activity in any way with the Owner or its employees, agents or officials. All communications must be solely with the Procurement Officer. This restriction may be lifted by express written permission from the Procurement Officer. This restriction expires once a contract has been formed. (b) Unless otherwise approved in writing by the Procurement

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Officer, bidder agrees not to give anything to the Owner, any affiliated organizations, or the employees, agents or officials of either, prior to award. (c) Bidder acknowledges that the policy of the State is that a governmental body should not accept or solicit a gift, directly or indirectly, from a donor if the governmental body has reason to believe the donor has or is seeking to obtain contractual or other business or financial relationships with the governmental body. Regulation 19-445.2165(C) broadly defines the term donor.

#### **2.7.** *Delete Section 3.1.1 and substitute the following:*

**3.1.1** Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement in the number and for the deposit sum, if any, stated therein. If so provided in the Advertisement, the deposit will be refunded to all plan holders who return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

- **2.8.** Delete the language of Section 3.1.2 and insert the word "Reserved."
- **2.9.** In Section 3.1.4, delete the words "and Architect may make" and substitute the words "has made."

#### **2.10.** *Insert the following Section 3.1.5*

**3.1.5** All persons obtaining Bidding Documents from the issuing office designated in the Advertisement shall provide that office with Bidder's contact information to include the Bidder's name, telephone number, mailing address, and email address.

#### **2.11.** *In Section 3.2.2:*

Delete the words "and Sub-bidders"

Delete the word "seven" and substitute the word "ten"

#### **2.12.** *In Section 3.2.3:*

In the first Sentence, insert the word "written" before the word "Addendum."

*Insert the following at the end of the section:* 

As provided in Regulation 19-445.2042(B), nothing stated at the pre-bid conference shall change the Bidding Documents unless a change is made by written Addendum.

#### **2.13.** *Insert the following at the end of Section 3.3.1:*

Reference in the Bidding 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.

#### **2.14.** *Delete Section 3.3.2 and substitute the following:*

**3.3.2** No request to substitute materials, products, or equipment for materials, products, or equipment described in the Bidding Documents and no request for addition of a manufacturer or supplier to a list of approved manufacturers or suppliers in the Bidding Documents 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 established in the Invitation for Bids. Any subsequent extension of the date for receipt of Bids by addendum shall not extend the date for receipt of such requests unless the addendum so specifies. 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.

#### **2.15.** *Delete Section 3.4.3 and substitute the following:*

**3.4.3** Addenda will be issued no later than 120 hours prior to the time for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

- **2.16.** *Insert the following Sections 3.4.5 and 3.4.6:* 
  - **3.4.5** When the date for receipt of Bids is to be postponed and there is insufficient time to issue a written Addendum prior to the original Bid Date, Owner will notify prospective Bidders by telephone or other appropriate means with immediate follow up with a written Addendum. This Addendum will verify the postponement of the original Bid Date and establish a new Bid Date. The new Bid Date will be no earlier than the fifth (5th) calendar day after the date of issuance of the Addendum postponing the original Bid Date.
  - **3.4.6.** If an emergency or unanticipated event interrupts normal government processes so that bids cannot be received at the government office designated for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal government processes resume. In lieu of an automatic extension, an Addendum may be issued to reschedule bid opening. If state offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an Addendum will be issued to reschedule the conference. Useful information may be available at: http://www.scemd.org/scgovweb/weather\_alert.html
- **2.17.** In Section 4.1.1, delete the word "forms" and substitute the words "SE-330 Bid Form."
- **2.18.** *Delete Section 4.1.2 and substitute the following:* 
  - **4.1.2** Any blanks on the bid form to be filled in by the Bidder shall be legibly executed in a non-erasable medium. Bids shall be signed in ink or other indelible media.
- **2.19.** *Delete Section 4.1.3 and substitute the following:* 
  - **4.1.3** Sums shall be expressed in figures.
- **2.20.** *Insert the following at the end of Section 4.1.4:*

Bidder shall not make stipulations or qualify his bid in any manner not permitted on the bid form. An incomplete Bid or information not requested that is written on or attached to the Bid Form that could be considered a qualification of the Bid, may be cause for rejection of the Bid.

- **2.21.** *Delete Section 4.1.5 and substitute the following:* 
  - **4.1.5** All requested Alternates shall be bid. The failure of the bidder to indicate a price for an Alternate shall render the Bid non-responsive. Indicate the change to the Base Bid by entering the dollar amount and marking, as appropriate, the box for "ADD TO" or "DEDUCT FROM". If no change in the Base Bid is required, enter "ZERO" or "No Change." For add alternates to the base bid, Subcontractor(s) listed on page BF-2 of the Bid Form to perform Alternate Work shall be used for both Alternates and Base Bid Work if Alternates are accepted.
- **2.22.** *Delete Section 4.1.6 and substitute the following:* 
  - **4.1.6** Pursuant to Title 11, Chapter 35, Section 3020(b)(i) of the South Carolina Code of Laws, as amended, Section 7 of the Bid Form sets forth a list of subcontractor specialties for which Bidder is required to list only the subcontractors Bidder will use to perform the work of each listed specialty. Bidder must follow the Instructions in the Bid Form for filling out this section of the Bid Form. Failure to properly fill out Section 7 may result in rejection of Bidder's bid as non-responsive.
- **2.23.** *Delete Section 4.1.7 and substitute the following:* 
  - **4.1.7** Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
- **2.24.** *Delete Section 4.2.1 and substitute the following:* 
  - **4.2.1** If required by the Invitation for Bids, each Bid shall be accompanied by a bid security in an amount of not less than five percent of the Base Bid. The bid security shall be a bid bond or a certified cashier's check. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

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#### **2.25.** *Delete Section 4.2.2 and substitute the following:*

**4.2.2** If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney. The bid bond shall:

- .1 Be issued by a surety company licensed to do business in South Carolina;
- .2 Be issued by a surety company having, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property-Casualty", which company shows a financial strength rating of at least five (5) times the contract price.
- .3 Be enclosed in the bid envelope at the time of Bid Opening, either in paper copy or as an electronic bid bond authorization number provided on the Bid Form and issued by a firm or organization authorized by the surety to receive, authenticate and issue binding electronic bid bonds on behalf the surety.

#### **2.26.** *Delete Section 4.2.3 and substitute the following:*

**4.2.3** By submitting a bid bond via an electronic bid bond authorization number on the Bid Form and signing the Bid Form, the Bidder certifies that an electronic bid bond has been executed by a Surety meeting the standards required by the Bidding Documents and the Bidder and Surety are firmly bound unto the State of South Carolina under the conditions provided in this Section 4.2.

#### **2.27.** *Insert the following Section 4.2.4:*

**4.2.4** The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and performance and payment bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

#### **2.28.** *Delete Section 4.3.1 and substitute the following:*

**4.3.1** 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, unless hand delivered by the Bidder, be addressed to the Owner's designated purchasing office as shown in the Invitation for Bids. The envelope 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 or special delivery service (UPS, Federal Express, etc.), the envelope should be labeled "BID ENCLOSED" on the face thereof. Bidders hand delivering their Bids shall deliver Bids to the place of the Bid Opening as shown in the Invitation for Bids. Whether or not Bidders attend the Bid Opening, they shall give their Bids to the Owner's procurement officer or his/her designee as shown in the Invitation for Bids prior to the time of the Bid Opening.

#### **2.29.** *Insert the following Section 4.3.6 and substitute the following:*

**4.3.5** The official time for receipt of Bids will be determined by reference to the clock designated by the Owner's procurement officer or his/her designee. The procurement officer conducting the Bid Opening will determine and announce that the deadline has arrived and no further Bids or bid modifications will be accepted. All Bids and bid modifications in the possession of the procurement officer at the time the announcement is completed will be timely, whether or not the bid envelope has been date/time stamped or otherwise marked by the procurement officer.

#### **2.30.** *Delete Section 4.4.2 and substitute the following:*

**4.4.2** Prior to the time and date designated for receipt of Bids, a Bid submitted may be withdrawn in person or by written notice to the party receiving Bids at the place designated for receipt of Bids. Withdrawal by written notice shall be in writing over the signature of the Bidder.

#### **2.31.** *In Section 5.1, delete everything following the caption "OPENING OF BIDS" and substitute the following:*

**5.1.1** Bids received on time will be publicly opened and will be read aloud. Owner will not read aloud Bids that Owner determines, at the time of opening, to be non-responsive.

- 5.1.2 At bid opening, Owner will announce the date and location of the posting of the Notice of Intended Award.
- **5.1.3** Owner will send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the Bid Opening.

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- **5.1.4** If Owner determines to award the Project, Owner will, after posting a Notice of Intended Award, send a copy of the Notice to all Bidders.
- **5.1.5** If only one Bid is received, Owner will open and consider the Bid.
- **2.32.** In Section 5.2, insert the section number "5.2.1" before the words of the "The Owner" at the beginning of the sentence.
- **2.33.** *Insert the following Sections 5.2.2 and 5.2.3:* 
  - **5.2.2** The reasons for which the Owner will reject Bids include, but are not limited to:
    - .1 Failure by a Bidder to be represented at a Mandatory Pre-Bid Conference or site visit;
    - **.2** Failure to deliver the Bid on time:
    - .3 Failure to comply with Bid Security requirements, except as expressly allowed by law;
    - .4 Listing an invalid electronic Bid Bond authorization number on the bid form;
    - .5 Failure to Bid an Alternate, except as expressly allowed by law;
    - **.6** Failure to list qualified Subcontractors as required by law;
    - .7 Showing any material modification(s) or exception(s) qualifying the Bid;
    - .8 Faxing a Bid directly to the Owner or their representative; or
    - **.9** Failure to include a properly executed Power-of-Attorney with the bid bond.
  - **5.2.3** The Owner may reject a Bid as nonresponsive if the prices bid are materially unbalanced between line items or sub-line items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Owner even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.
- **2.34.** *Delete Section 6.1 and substitute the following:*

#### 6.1 CONTRACTOR'S RESPONSIBILITY

Owner will make a determination of Bidder's responsibility before awarding a contract. Bidder shall provide all information and documentation requested by the Owner to support the Owner's evaluation of responsibility. Failure of Bidder to provide requested information is cause for the Owner, at its option, to determine the Bidder to be non-responsible

- **2.35.** Delete the language of Section 6.2 and insert the word "Reserved."
- **2.36.** Delete the language of Sections 6.3.2, 6.3.3, and 6.3.4 and insert the word "Reserved" after each Section Number.
- **2.37.** Insert the following Section 6.4

#### **6.4 CLARIFICATION**

Pursuant to Section 11-35-1520(8), the Procurement Officer may elect to communicate with a Bidder after opening for the purpose of clarifying either the Bid or the requirements of the Invitation for Bids. Such communications may be conducted only with Bidders who have submitted a Bid which obviously conforms in all material aspects to the Invitation for Bids and only in accordance with Appendix D (Paragraph A(6)) to the Manual for Planning and Execution of State Permanent Improvement, Part II. Clarification of a Bid must be documented in writing and included with the Bid. Clarifications may not be used to revise a Bid or the Invitation for Bids. [Section 11-35-1520(8); R.19-445.2080]

- **2.38.** *Delete Section 7.1.2 and substitute the following:* 
  - **7.1.2** The performance and payment bonds shall conform to the requirements of Section 11.4 of the General Conditions of the Contract. If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid.
- **2.39.** Delete the language of Section 7.1.3 and insert the word "Reserved."
- **2.40.** In Section 7.2, insert the words "CONTRACT, CERTIFICATES OF INSURANCE" into the caption after the word "Delivery."

#### **2.41.** *Delete Section 7.2.1 and substitute the following:*

**7.2.1** After expiration of the protest period, the Owner will tender a signed Contract for Construction to the Bidder and the Bidder shall return the fully executed Contract for Construction to the Owner within seven days thereafter. The Bidder shall deliver the required bonds and certificate of insurance to the Owner not later than three days following the date of execution of the Contract. Failure to deliver these documents as required shall entitle the Owner to consider the Bidder's failure as a refusal to enter into a contract in accordance with the terms and conditions of the Bidder's Bid and to make claim on the Bid Security for re-procurement cost.

#### **2.42.** Delete the language of Section 7.2.2 and insert the word "Reserved."

#### **2.43.** Delete the language of Article 8 and insert the following:

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on South Carolina Modified AIA Document A101, 2007, Standard Form of Agreement Between Owner and Contractor as modified by OSE Form 00501 – Standard Modification to Agreement Between Owner and Contractor.

#### **2.44.** *Insert the following Article 9:*

#### **ARTICLE 9 MISCELLANEOUS**

# 9.1 NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING IMPORTANT TAX NOTICE - NONRESIDENTS ONLY

Withholding Requirements for Payments to Nonresidents: Section 12-8-550 of the South Carolina Code of Laws requires persons hiring or contracting with a nonresident conducting a business or performing personal services of a temporary nature within South Carolina to withhold 2% of each payment made to the nonresident. The withholding requirement does not apply to (1) payments on purchase orders for tangible personal property when the payments are not accompanied by services to be performed in South Carolina, (2) nonresidents who are not conducting business in South Carolina, (3) nonresidents for contracts that do not exceed \$10,000 in a calendar year, or (4) payments to a nonresident who (a) registers with either the S.C. Department of Revenue or the S.C. Secretary of State and (b) submits a Nonresident Taxpayer Registration Affidavit - Income Tax Withholding, Form I-312 to the person letting the contract.

For information about other withholding requirements (e.g., employee withholding), contact the Withholding Section at the South Carolina Department of Revenue at 803-898-5383 or visit the Department's website at: www.sctax.org

This notice is for informational purposes only. This Owner does not administer and has no authority over tax issues. All registration questions should be directed to the License and Registration Section at 803-898-5872 or to the South Carolina Department of Revenue, Registration Unit, Columbia, S.C. 29214-0140. All withholding questions should be directed to the Withholding Section at 803-898-5383.

PLEASE SEE THE "NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING" FORM (FORM NUMBER I-312) LOCATED AT: http://www.sctax.org/Forms+and+Instructions/withholding/default.htm .

#### 9.2 CONTRACTOR LICENSING

Contractors and Subcontractors listed in Section 7 of the Bid Form who are required by the South Carolina Code of Laws to be licensed, must be licensed at the time of bidding.

#### 9.3 SUBMITTING CONFIDENTIAL INFORMATION

For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Bidder contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged & confidential, as that phrase is used in Section 11-35-410. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Bidder contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that Bidder contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire bid as confidential, trade secret, or protected! If your bid, or any part thereof, is improperly marked as confidential or trade

secret or protected, the State may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation, Bidder (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, & documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, & (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on Bidders's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Bidder agrees to defend, indemnify & hold harmless the State of South Carolina, its officers & employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the State withholding information that Bidder marked as "confidential" or "trade secret" or "PROTECTED".

#### 9.4 POSTING OF INTENT TO AWARD

Notice of Intent to Award, SE-370, will be posted at the following location:

Room or Area of Posting: <u>Lobby</u> **Building Where Posted:** Facilities Center

Address of Building: 743 Greene Street, Columbia, SC 29208 WEB site address (if applicable): <a href="http://purchasing.sc.edu">http://purchasing.sc.edu</a>

**Posting date will be announced at bid opening.** In addition to posting the notice, the Owner will promptly send all responsive bidders a copy of the notice of intent to award and the final bid tabulation

#### 9.5 PROTEST OF SOLICITATION OR AWARD

Any prospective bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the solicitation of a contract shall protest within fifteen days of the date of issuance of the applicable solicitation document at issue. Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract shall protest within ten days of the date notification of intent to award is posted in accordance with Title 11, Chapter 35, Section 4210 of the South Carolina Code of Laws, as amended. A protest shall be in writing, shall set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided, and must be received by the State Engineer within the time provided.

Any protest must be addressed to the CPO, Office of State Engineer, and submitted in writing:

- (a) by email to protest-ose@mmo.sc.gov,
- (b) by facsimile at 803-737-0639, or
- (c) by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201.

By submitting a protest to the foregoing email address, you (and any person acting on your behalf) consent to receive communications regarding your protest (and any related protests) at the e-mail address from which you sent your protest.

#### 9.6 SOLICITATION INFORMATION FROM SOURCES OTHER THAN OFFICIAL SOURCE

South Carolina Business Opportunities (SCBO) is the official state government publication for State of South Carolina solicitations. Any information on State agency solicitations obtained from any other source is unofficial and any reliance placed on such information is at the bidder's sole risk and is without recourse under the South Carolina Consolidated Procurement Code.

#### 9.7 BUILDER'S RISK INSURANCE

Bidder's are directed to Article 11.3 of the South Carolina Modified AIA Document A201, 2007 Edition, which, unless provided otherwise in the bid documents, requires the contractor to provide builder's risk insurance on the project.

#### 9.8 TAX CREDIT FOR SUBCONTRACTING WITH MINORITY FIRMS

Pursuant to Section 12-6-3350, taxpayers, who utilize certified minority subcontractors, may take a tax credit equal to 4% of the payments they make to said subcontractors. The payments claimed must be based on work performed directly for a South Carolina state contract. The credit is limited to a maximum of fifty thousand dollars annually. The taxpayer is eligible to claim the credit for 10 consecutive taxable years beginning with the taxable year in which the first payment is made to the subcontractor that qualifies for the credit. After the above ten consecutive taxable years, the taxpayer is no longer eligible for the credit. The credit may be claimed on Form TC-2, "Minority Business Credit." A copy of the subcontractor's certificate from the Governor's Office of Small and Minority Business (OSMBA) is to be attached to the contractor's income tax return. Taxpayers must maintain evidence of work performed for a State contract by the minority subcontractor. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803) 898-5786, Fax: (803) 898-5888. The subcontractor must be certified as to the criteria of a "Minority Firm" by the Governor's Office of Small and Minority Business Assistance (OSMBA). Certificates are issued to subcontractors upon successful completion of the certification process. Questions regarding subcontractor certification are to be referred to: Governor's Office of Small and Minority Business Assistance, Phone: (803) 734-0657, Fax: (803) 734-2498. Reference: SC §11-35-5010 – Definition for Minority Subcontractor & SC §11-35-5230 (B) – Regulations for Negotiating with State Minority Firms.

§ 9.9 (	OTHER S	SPECIAL C	CONDITIO	NS OF THE	WORK
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				END OF I	DOCUMENT

# **AIA 310**

Bid Bond (2010 Edition)

Original AIA Document on file at the office of
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208

\_\_\_\_, which sum is hereafter called the Base Bid.

# SE-330 – LUMP SUM BID BID FORM

BID FORM
Bidders shall submit bids on only Bid Form SE-330.
BID SUBMITTED BY:
(Bidder's Name)
BID SUBMITTED TO: University of South Carolina
(Owner's Name)
FOR PROJECT: PROJECT NAME Russell House ACM Abatement
PROJECT NUMBER H27-6094-J
<u>OFFER</u>
§ 1. In response to the Invitation for Construction Bids and in compliance with the Instructions to Bidders for the above-named Project, the undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with the Owner on the terms included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.
§ 2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, Bidder has submitted Bid Security a follows in the amount and form required by the Bidding Documents:
☐ Bid Bond with Power of Attorney ☐ Electronic Bid Bond ☐ Cashier's Check  (Bidder check one)
§ 3. Bidder acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into this Bid:
ADDENDUM No:
§ 4. Bidder accepts all terms and conditions of the Invitation for Bids, including, without limitation, those dealing with the disposition of Bid Security. Bidder agrees that this Bid, including all Bid Alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 60 Day following the Bid Date, or for such longer period of time that Bidder may agree to in writing upon request of the Owner.
§ 5. Bidder herewith offers to provide all labor, materials, equipment, tools of trades and labor, accessorie appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessar to complete the following items of construction work:
§ 6.1 BASE BID WORK_(as indicated in the Bidding Documents and generally described as follows): This projection includes the remediation and disposal of asbestos containing materials and/or contaminated materials in the Russe House crawlspace and mechanical room.

(Bidder - insert Base Bid Amount on line above)

# SE-330 – LUMP SUM BID BID FORM

§ 6.2 BID ALTERNATES - as indicated in the Bidding Documents and generally described as follow
ALTERNATE # 1 (Brief Description):
ADD TO or DEDUCT FROM BASE BID:
(Bidder to Mark appropriate box to clearly indicate the price adjustment offered for each alternate)
ALTERNATE # 2 (Brief Description):  ADD TO or DEDUCT FROM BASE BID: (Bidder to Mark appropriate box to clearly indicate the price adjustment offered for each alternate)
ALTERNATE # 3 (Brief Description):
ADD TO or DEDUCT FROM BASE BID:
(Ridder to Mark appropriate hox to clearly indicate the price adjustment offered for each alternate)

# SE-330 – LUMP SUM BID BID FORM

§ 7. LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED – (See Instructions on the following page BF-2A)

Bidder shall use the below-listed Subcontractors in the performance of the Subcontractor Specialty work listed:

SUBCONTRACTOR SPECIALTY By License Classification and/or Subclassification (Completed by Owner)	SUBCONTRACTOR'S PRIME CONTRACTOR'S NAME (Must be completed by Bidder) BASE BID	SUBCONTRACTOR'S PRIME CONTRACTOR'S SC LICENSE NUMBER
None Required		
	ALTERNATE 1	
	ALTERNATE 2	
	ADTERIORE 2	
	ALTERNATE 3	

If a Bid Alternate is accepted, Subcontractors listed for the Bid Alternate shall be used for the work of both the Alternate and the Base Bid work.

## SE-330 – LUMP SUM BID BID FORM

# INSTRUCTIONS FOR SUBCONTRACTOR LISTING

- **1.** Section 7 of the Bid Form sets forth a list of subcontractor specialties for which bidder is required to identify by name the subcontractor(s) Bidder will use to perform the work of each listed specialty. Bidder must identify only the subcontractor(s) who will perform the work and no others.
- **2.** For purposes of subcontractor listing, a Subcontractor is an entity who will perform work or render service to the prime contractor to or about the construction site. Material suppliers, manufacturers, and fabricators that will not perform physical work at the site of the project but will only supply materials or equipment to the bidder or proposed subcontractor(s) are not subcontractors and Bidder should not insert their names in the spaces provided on the bid form. Likewise, Bidder should not insert the names of sub-subcontractors in the spaces provided on the bid form but only the names of those entities with which bidder will contract directly.
- **3.** Bidder must only insert the names of subcontractors who are qualified to perform the work of the listed specialties as specified in the Bidding Documents and South Carolina Licensing Laws.
- **4.** If under the terms of the Bidding Documents, Bidder is qualified to perform the work of a specialty listed and Bidder does not intend to subcontract such work but to use Bidder's own employees to perform such work, the Bidder must insert its own name in the space provided for that specialty.
- **5.** If Bidder intends to use multiple subcontractors to perform the work of a single specialty listing, Bidder must insert the name of each subcontractor Bidder will use, preferably separating the name of each by the word "and". If Bidder intends to use both his own employees to perform a part of the work of a single specialty listing and to use one or more subcontractors to perform the remaining work for that specialty listing, bidder must insert his own name and the name of each subcontractor, preferably separating the name of each with the word "and".
- **6.** Bidder may not list subcontractors in the alternative nor in a form that may be reasonably construed at the time of bid opening as a listing in the alternative. A listing that requires subsequent explanation to determine whether or not it is a listing in the alternative is non-responsive. If bidder intends to use multiple entities to perform the work for a single specialty listing, bidder must clearly set forth on the bid form such intent. Bidder may accomplish this by simply inserting the word "**and**" between the name of each entity listed for that specialty. Owner will reject as non-responsive a listing that contains the names of multiple subcontractors separated by a blank space, the word "or", a virgule (that is a /), or any separator that the Owner may reasonably interpret as a listing in the alternative.
- **7.** If Bidder is awarded the contract, bidder must, except with the approval of the owner for good cause shown, use the listed entities to perform the work for which they are listed.
- **8.** If bidder is awarded the contract, bidder will not be allowed to substitute another entity as subcontractor in place of a subcontractor listed in Section 7 of the Bid except for one or more of the reasons allowed by the SC Code of Laws.
- **9.** Bidder's failure to insert a name for each listed specialty subcontractor will render the Bid non-responsive.

## SE-330 – LUMP SUM BID BID FORM

§ 8. LIST OF MANUFACTURERS, MATERIAL SUPPLIERS, AND SUBCONTRACTORS OTHER THAN SUBCONTRACTORS LISTED IN SECTION 7 ABOVE (FOR INFORMATION ONLY): Pursuant to instructions in the Invitation for Bids, if any, Bidder will provide to Owner upon the Owner's request and within 24 hours of such request, a listing of manufacturers, material suppliers, and subcontractors, other than those listed in Section 7 above, that Bidder intends to use on the project. Bidder acknowledges and agrees that this list is provided for purposes of determining responsibility and not pursuant to the subcontractor listing requirements of SC Code Ann § 11-35-3020(b)(i).

#### § 9. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

- a. CONTRACT TIME: Bidder agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Owner. Bidder agrees to substantially complete the Work within <u>21</u> calendar days from the Date of Commencement, subject to adjustments as provided in the Contract Documents.
- b. LIQUIDATED DAMAGES: Bidder further agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the sum of \$100.00 for each calendar day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents. This sum is intended by the parties as the predetermined measure of compensation for actual damages, not as a penalty for nonperformance.

#### § 10. AGREEMENTS

- a. Bidder agrees that this bid is subject to the requirements of the law of the State of South Carolina.
- b. Bidder agrees that at any time prior to the issuance of the Notice to Proceed for this Project, this Project may be canceled for the convenience of, and without cost to, the State.
- c. Bidder agrees that neither the State of South Carolina nor any of its agencies, employees or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project canceled for any reason prior to the issuance of the Notice to Proceed.

#### § 11. ELECTRONIC BID BOND

By signing below, the Principal is affirming that the identified electronic bid bond has been executed and that the Principal and Surety are firmly bound unto the State of South Carolina under the terms and conditions of the AIA Document A310, Bid Bond, included in the Bidding Documents.

Electronic Bid Bond	Number:
Signature and Title:	

# SE-330 – LUMP SUM BID BID FORM

## BIDDER'S TAXPAYER IDENTIFICATION

DIDDER O THE HTER IDENTIFICATION	
FEDERAL EMPLOYER'S IDENTIFICATION NUM	IBER:
OR	
SOCIAL SECURITY NUMBER:	
CONTRACTOR'S CLASSIFICATIONS AND SU	BCLASSIFICATIONS WITH LIMITATIONS
Classification(s)& Limits:	
Subclassification(s) & Limits:	
SC Contractor's License Number(s):	
CERTIFICATIONS MADE BY BOTH THE PERSOLLIMITATION, THOSE APPEARING IN ARTIC	
BY:(Signature)	DATE:
TITLE:	_
TELEPHONE:	-
EMAIL:	_

# A101

# Standard form of Agreement Between Owner and Contractor (2007 Edition)

Original AIA Document on file at the office of
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208

#### **OSE FORM 00501**

Rev. 7/11/2011

# STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

OWNER: <u>University of South Carolina</u> PROJECT NUMBER: <u>H27-694-J</u>

PROJECT NAME: Russell House ACM Abatement

#### 1. STANDARD MODIFICATIONS TO AIA A101-2007

**1.1.** These Standard Modifications amend or supplement the *Standard Form of Agreement Between Owner and Contractor* (AIA Document A101-2007) and other provisions of Bidding and Contract Documents as indicated below.

**1.2.** All provisions of A101-2007, which are not so amended or supplemented, remain in full force and effect.

#### 2. MODIFICATIONS TO A101

**2.1.** *Insert the following at the end of Article 1:* 

Any reference in this document to the Agreement between the Owner and Contractor, AIA Document A101, or some abbreviated reference thereof, shall mean the AIA A101, 2007 Edition as modified by OSE Form 00501 – Standard Modification to Agreement Between Owner and Contractor. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean the AIA A201, 2007 Edition as modified by OSE Form 00811 – Standard Supplementary Conditions.

- **2.2.** *Delete Section 3.1 and substitute the following:* 
  - **3.1** The Date of Commencement of the Work shall be the date fixed in a Notice to Proceed issued by the Owner. The Owner shall issue the Notice to Proceed to the Contractor in writing, no less than seven days prior to the Date of Commencement. Unless otherwise provided elsewhere in the contract documents, and provided the contractor has secured all required insurance and surety bonds, the contractor may commence work immediately after receipt of the Notice to Proceed.
- **2.3.** *Delete Section 3.2 and substitute the following:* 
  - **3.2** The Contract Time shall be measured from the Date of Commencement as provided in Section 9(a) of the Bid Form (SE-330) for this Project. Contractor agrees that if the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, the Owner shall be entitled to withhold or recover from the Contractor liquidated damages in the amounts set forth in Section 9(b) of the Bid Form (SE-330, subject to adjustments of this Contract Time as provided in the Contract Documents.
- **2.4.** In Section 5.1.1, insert the words "and Owner" after the phrase "Payment submitted to the Architect."
- **2.5.** *Delete Section 5.1.3 and substitute the following:* 
  - **5.1.3** The Owner shall make payment of the certified amount to the Contractor not later than 21 days after receipt of the Application for Payment.
- **2.6.** In Section 5.1.6, Insert the following after the phrase "Subject to other provisions of the Contract Documents":

and subject to Title 12, Chapter 8, Section 550 of the South Carolina Code of Laws, as amended (Withholding Requirements for Payments to Non-Residents)

In the spaces provided in Sub-Sections 1 and 2 for inserting the retainage amount, insert "three and one-half percent (3.5%)."

2011 Edition

#### **OSE FORM 00501**

Rev. 7/11/2011

# STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

2.7. *In Section 5.1.8, delete the word "follows" and the colon and substitute the following:* 

set forth in S.C. Code Ann. § 11-35-3030(4).

- 2.8. In Section 5.1.9, delete the words "Except with the Owner's prior approval, the" before the word " Contractor."
- 2.9. In Section 5.2.2, delete the number 30 and substitute the number 21, delete everything following the words "Certificate for Payment" and place a period at the end of the resulting sentence.
- 2.10. Delete the language of Sections 6.1 and 6.2 and substitute the word "Reserved" for the deleted language of each Section.
- 2.11. Delete the language of Section 8.2 and substitute the word "Reserved."
- In Section 8.3, make the word "Representative" in the title plural, delete everything following the title, and 2.12. substitute the following:
  - 8.3.1 Owner designates the individual listed below as its Senior Representative ("Owner's Senior Representative"), which individual has the responsibility for and, subject to Section 7.2.1 of the General Conditions, the authority to resolve disputes under Section 15.6 of the General Conditions:

Name: Tom Opal

**Title:** Sr. Project Manager

Address: 743 Greene Street, Columbia, SC 29208

**Telephone:** 803.777.7076 **FAX:** 

Email: tnopal@fmc.sc.edu

8.3.2 Owner designates the individual listed below as its Owner's Representative, which individual has the authority and responsibility set forth in Section 2.1.1 of the General Conditions:

Name: Ty Russell Title: Project Manager

Address: 743 Greene Street, Columbia, SC 29208

**Telephone:** 803.777.1208 **FAX:** \_\_\_\_\_

Email: trusse@fmc.sc.edu

- In Section 8.4, make the word "Representative" in the title plural, delete everything following the title, and 2.13. substitute the following:
  - 8.4.1 Contractor designates the individual listed below as its Senior Representative ("Contractor's Senior Representative"), which individual has the responsibility for and authority to resolve disputes under Section 15.6 of the General Conditions:

Name:		
Title:		
Address:		
Telephone:	<b>FAX:</b>	
Email·		

2011 Edition

# **OSE FORM 00501** Rev. 7/11/2011

# STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

**8.4.2** Contractor designates the individual listed below as its Contractor's Representative, which individual has the authority and responsibility set forth in Section 3.1.1 of the General Conditions:

	Name: Title: Address: Telephone: FAX: Email:
<b>2.14</b> .	Add the following Section 8.6.1:
	<b>8.6.1</b> The Architect's representative:
	Name: Kay Horton Title: Designer Address: 1258 Broiling Springs Road, Spartanbury, SC 29303 Telephone: 864.541.8736 FAX: Email: khorton@crossroadsenv.net
2.15.	In Section 9.1.7, Sub-Section 2, list the following documents in the space provided for listing documents:
	Invitation for Construction Bids (SE-310) Instructions to Bidders (AIA Document A701-1997) Standard Supplemental Instructions to Bidders (OSE Form 00201) Contractor's Bid (Completed SE-330) Notice of Intent to Award (Completed SE-370) Certificate of procurement authority issued by the SC Budget & Control Board

**2.16.** *In Article 10, delete everything after the first sentence.* 

#### END OF DOCUMENT

# A201

# General Conditions of the Contract for Construction (2007 Edition)

Original AIA Document on file at the office of
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208

OWNER: <u>University of South Carolina</u> PROJECT NUMBER: H27-6094-J

PROJECT NAME: Russell House ACM Abatement

#### 1 GENERAL CONDITIONS

The *General Conditions of the Contract for Construction*, AIA Document A201, 2007 Edition, Articles 1 through 15 inclusive, is a part of this Contract and is incorporated as fully as if herein set forth. For brevity, AIA Document A201 is also referred to in the Contract Documents collectively as the "General Conditions."

#### 2 STANDARD SUPPLEMENTARY CONDITIONS

- 2.1 The following supplements modify, delete and/or add to the General Conditions. Where any portion of the General Conditions is modified or any paragraph, Section or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of the General Conditions shall remain in effect.
- 2.2 Unless otherwise stated, the terms used in these Standard Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

#### 3 MODIFICATIONS TO A201-2007

3.1 *Insert the following at the end of Section 1.1.1:* 

Any reference in this document to the Agreement between the Owner and Contractor, AIA Document A101, or some abbreviated reference thereof, shall mean the AIA A101, 2007 Edition as modified by OSE Form 00501 – Standard Modification to Agreement Between Owner and Contractor. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean the AIA A201, 2007 Edition as modified by OSE Form 00811 – Standard Supplementary Conditions.

- 3.2 Delete the language of Section 1.1.8 and substitute the word "Reserved."
- 3.3 Add the following Section 1.1.9:

#### 1.1.9 NOTICE TO PROCEED

Notice to Proceed is a document issued by the Owner to the Contractor, with a copy to the Architect, directing the Contractor to begin prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed shall fix the date on which the Contract Time will commence.

3.4 *Insert the following at the end of Section 1.2.1:* 

In the event of patent ambiguities within or between parts of the Contract Documents, the contractor shall 1) provide the better quality or greater quantity of Work, or 2) comply with the more stringent requirement, either or both in accordance with the Architect's interpretation.

- 3.5 Delete Section 1.5.1 and substitute the following:
  - **1.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as a violation of the Architect's or Architect's consultants' reserved rights.

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- **3.6** *Delete Section 2.1.1 and substitute the following:* 
  - **2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization, except as provided in Section 7.1.2. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's Representative. [Reference § 8.2 of the Agreement.]
- **3.7** *Delete Section 2.1.2 and substitute the following:* 
  - **2.1.2** The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to post Notice of Project Commencement pursuant to Title 29, Chapter 5, Section 23 of the South Carolina Code of Laws, as amended..
- **3.8** *Delete Section 2.2.3 and substitute the following:* 
  - **2.2.3** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. Subject to the Contractor's obligations, including those in Section 3.2, the Contractor shall be entitled to rely on the accuracy of information furnished by the Owner pursuant to this Section but shall exercise proper precautions relating to the safe performance of the Work.
- **3.9** Replace the period at the end of the last sentence of Section 2.2.4 with a semicolon and insert the following after the inserted semicolon:

"however, the Owner does not warrant the accuracy of any such information requested by the Contractor that is not otherwise required of the Owner by the Contract Documents. Neither the Owner nor the Architect shall be required to conduct investigations or to furnish the Contractor with any information concerning subsurface characteristics or other conditions of the area where the Work is to be performed beyond that which is provide in the Contract Documents."

- **3.10** *Delete Section 2.2.5 and substitute the following:* 
  - **2.2.5** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor with ten copies of the Contract Documents. The Contractor may make reproductions of the Contract Documents pursuant to Section 1.5.2. All copies of the drawings and specifications, except the Contractor's record set, shall be returned or suitably accounted for to the Owner, on request, upon completion of the Work.
- 3.11 Add the following Sections 2.2.6 and 2.2.7:
  - **2.2.6** The Owner assumes no responsibility for any conclusions or interpretation made by the Contractor based on information made available by the Owner.
  - **2.2.7** The Owner shall obtain, at its own cost, general building and specialty inspection services as required by the Contract Documents. The Contractor shall be responsible for payment of any charges imposed for reinspections.
- **3.12** *Delete Section 2.4 and substitute the following:* 
  - **2.4** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect, including but not limited to providing necessary resources, with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Directive shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

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3.13 *Insert the following at the end of Section 3.2.1:* 

The Contractor acknowledges that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Owner.

- 3.14 In the third sentence of Section 3.2.4, insert the word "latent" before the word "errors."
- 3.15 In the last sentence of Section 3.3.1, insert the words "by the Owner in writing" after the word "instructed."
- **3.16** Delete the third sentence of Section 3.5 and substitute the following sentences:

Work, materials, or equipment not conforming to these requirements shall be considered defective. Unless caused by the Contractor or a subcontractor at any tier, the Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage.

3.17 *Insert the following at the end of Section 3.6:* 

The Contractor shall comply with the requirements of Title 12, Chapter 9 of the South Carolina Code of Laws, as amended, regarding withholding tax for nonresidents, employees, contractors and subcontractors.

3.18 In Section 3.7.1, delete the words "the building permit as well as for other" and insert the following sentence at the end of this section:

Pursuant to Title 10, Chapter 1, Section 180 of the South Carolina Code of Laws, as amended, no local general or specialty building permits are required for state buildings.

**3.19** *Delete the last sentence of Section 3.7.5 and substitute the following:* 

Adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 7.3.3.

**3.20** *Delete the last sentence of Section 3.8.2.3 and substitute the following:* 

The amount of the Change Order shall reflect the difference between actual costs, as documented by invoices, and the allowances under Section 3.8.2.1.

3.21 In Section 3.9.1, insert a comma after the word "superintendent" in the first sentence and insert the following after the inserted comma:

acceptable to the Owner,

3.22 Delete Section 3.9.2 and substitute the following:

**3.9.2** The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the name and qualifications of a proposed superintendent. The Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner has reasonable objection to the proposed superintendent or (2) that the

Owner requires additional time to review. Failure of the Owner to reply within the 14-day period shall constitute notice of no reasonable objection.

3.23 After the first sentence in Section 3.9.3, insert the following sentence:

The Contractor shall notify the Owner, in writing, of any proposed change in the superintendent, including the reason therefore, prior to making such change.

**3.24** *Delete Section 3.10.3 and substitute the following:* 

**3.10.3** Additional requirements, if any, for the constructions schedule are as follows: (*Check box if applicable to this Contract*))

The construction schedule shall be in a detailed precedence-style critical path management (CPM) or primavera-type format satisfactory to the Owner and the Architect that shall also (1) provide a graphic representation of all activities and events that will occur during performance of the work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). Upon review and acceptance by the Owner and the Architect of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents and attached to the Agreement as Exhibit "A." If not accepted, the construction schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and the Architect and resubmitted for acceptance. The Contactor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. Whenever the approved construction schedule no longer reflects actual conditions and progress of the work or the Contract Time is modified in accordance with the terms of the Contract Documents, the Contractor shall update the accepted construction schedule to reflect such conditions. In the event any progress report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time, any Milestone Date, or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

3.25 Add the following Section 3.10.4:

**3.10.4** Owner's review and acceptance of Contractor's schedule is not conducted for the purpose of either determining its accuracy and completeness or approving the construction means, methods, techniques, sequences or procedures. The Owner's approval shall not relieve the Contractor of any obligations. Unless expressly addressed in a Modification, the Owner's approval of a schedule shall not change the Contract Time.

**3.26** Add the following Section 3.12.5.1:

**3.12.5.1** The fire sprinkler shop drawings shall be prepared by a licensed fire sprinkler contractor and shall accurately reflect actual conditions affecting the required layout of the fire sprinkler system. The fire sprinkler contractor shall certify the accuracy of his shop drawings prior to submitting them for review and approval. The fire sprinkler shop drawings shall be reviewed and approved by the Architect's engineer of record who, upon approving the sprinkler shop drawings will submit them to the State Fire Marshal or other authorities having jurisdiction for review and approval. The Architect's engineer of record will submit a copy of the State Fire Marshal's approval letter to the Contractor, Architect, and OSE. Unless authorized in writing by OSE, neither the Contractor nor subcontractor at any tier shall submit the fire sprinkler shop drawings directly to the State Fire Marshal or other authorities having jurisdiction for approval.

3.27 In the fourth sentence of Section 3.12.10, after the comma following the words "licensed design professional," insert the following:

who shall comply with reasonable requirements of the Owner regarding qualifications and insurance and

3.28 In Section 3.13, insert the section number "3.13.1" before the before the opening words "The Contractors shall."

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- **3.29** Add the following Sections 3.13.2 and 3.13.3:
  - **3.13.2** Protection of construction materials and equipment stored at the Project site from weather, theft, vandalism, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall perform the work in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.
  - **3.13.3** The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the Project site without the prior written consent of the Owner.
- 3.30 In the first sentence of Section 3.18.1, after the parenthetical "...(other than the Work itself),..." and before the word "...but...", insert the following:

including loss of use resulting therefrom,

- **3.31** *Delete Section 4.1.1 and substitute the following:* 
  - **4.1.1** The Architect is that person or entity identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- **3.32** *Insert the following at the end of Section 4.2.1:*

Any reference in the Contract Documents to the Architect taking action or rendering a decision with a "reasonable time" is understood to mean no more than fourteen days, unless otherwise specified in the Contract Documents or otherwise agreed to by the parties.

**3.33** *Delete the first sentence of Section 4.2.2 and substitute the following:* 

The Architect will visit the site as necessary to fulfill its obligation to the Owner for inspection services, if any, and, at a minimum, to assure conformance with the Architect's design as shown in the Contract Documents and to observe the progress and quality of the various components of the Contractor's Work, and to determine if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents.

**3.34** *Delete the first sentence of Section 4.2.3 and substitute the following:* 

On the basis of the site visits, the Architect will keep the Owner informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work.

3.35 In Section 4.2.5, after the words "evaluations of the" and before the word "Contractor's," insert the following:

Work completed and correlated with the

- **3.36** *Delete the first sentence of Section 4.2.11 and substitute the following:* 
  - **4.2.11** The Architect will, in the first instance, interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. Upon receipt of such request, the Architect will promptly provide the non-requesting party with a copy of the request.

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**3.37** *Insert the following at the end of Section 4.2.12:* 

If either party disputes the Architects interpretation or decision, that party may proceed as provided in Article 15. The Architect's interpretations and decisions may be, but need not be, accorded any deference in any review conducted pursuant to law or the Contract Documents.

**3.38** *Delete Section 4.2.14 and substitute the following:* 

The Architect will review and respond to requests for information about the Contract Documents so as to avoid delay to the construction of the Project. The Architect's response to such requests will be made in writing with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information. Any response to a request for information must be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. Unless issued pursuant to a Modification, supplemental Drawings or Specifications will not involve an adjustment to the Contract Sum or Contract Time.

- **3.39** *Delete Section 5.2.1 and substitute the following:* 
  - **5.2.1** Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, within fourteen days after posting of the Notice of Intent to Award the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (excluding Listed Subcontractors but including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner has reasonable objection to any such proposed person or entity. Failure of the Owner to reply within the 14 day period shall constitute notice of no reasonable objection.
- **3.40** *Delete Section 5.2.2 and substitute the following:* 
  - **5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and timely objection. The Owner shall not direct the Contractor to contract with any specific individual or entity for supplies or services unless such supplies and services are necessary for completion of the Work and the specified individual or entity is the only source of such supply or services.
- 3.41 In the first sentence of Section 5.2.3, delete the words "...or Architect..." in the two places they appear.
- 3.42 Delete the words "...or Architect..." in the in the first sentence of Section 5.2.4 and insert the following sentence at the end of Section 5.2.4:

The Contractor's request for substitution must be made to the Owner in writing accompanied by supporting information.

- **3.43** *Add the following Section 5.2.5:* 
  - **5.2.5** A Subcontractor identified in the Contractor's Bid in response the specialty subcontractor listing requirements of Section 7 of the Bid Form (SE-330) may only be substituted in accordance with and as permitted by the provisions of Title 11, Chapter 35, Section 3021 of the South Carolina Code of Laws, as amended. A proposed substitute for a Listed Subcontractor shall be subject to the Owner's approval as set forth is Section 5.2.3.
- 3.44 In Section 5.3, delete everything following the heading "SUBCONTRACTUAL RELATIONS" and insert the following Sections 5.3.1, 5.3.2, 5.3.3, and 5.3.4:
  - **5.3.1** By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not

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prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise herein or in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

- § 5.3.2 Without limitation on the generality of Section 5.3.1, each Subcontract agreement and each Sub-subcontract agreement shall include, and shall be deemed to include, the following Sections of these General Conditions: 3.2, 3.5, 3.18, 5.3, 5.4, 6.2.2, 7.3.3, 7.5, 7.6, 13.1, 13.12, 14.3, 14.4, and 15.1.6.
- § 5.3.3 Each Subcontract Agreement and each Sub-subcontract agreement shall exclude, and shall be deemed to exclude, Sections 13.2.1 and 13.6 and all of Article 15, except Section 15.1.6, of these General Conditions. In the place of these excluded sections of the General Conditions, each Subcontract Agreement and each Sub-subcontract may include Sections 13.2.1 and 13.6 and all of Article 15, except Section 15.1.6, of AIA Document A201-2007, Conditions of the Contract, as originally issued by the American Institute of Architects.
- § 5.3.4 The Contractor shall assure the Owner that all agreements between the Contractor and its Subcontractor incorporate the provisions of Subparagraph 5.3.1 as necessary to preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the work to be performed by Subcontractors so that the subcontracting thereof will not prejudice such rights. The Contractor's assurance shall be in the form of an affidavit or in such other form as the Owner may approve. Upon request, the Contractor shall provide the Owner or Architect with copies of any or all subcontracts or purchase orders.
- **3.45** Delete the last sentence of Section 5.4.1.
- **3.46** *Add the following Sections 5.4.4, 5.4.5 and 5.4.6:* 
  - § 5.4.4 Each subcontract shall specifically provide that the Owner shall only be responsible to the subcontractor for those obligations of the Contractor that accrue subsequent to the Owner's exercise of any rights under this conditional assignment.
  - § 5.4.5 Each subcontract shall specifically provide that the Subcontractor agrees to perform portions of the Work assigned to the Owner in accordance with the Contract Documents.
  - § 5.4.6 Nothing in this Section 5.4 shall act to reduce or discharge the Contractor's payment bond surety's obligations to claims arising prior to the Owner's exercise of any rights under this conditional assignment.
- 3.47 Delete the language of Section 6.1.4 and substitute the word "Reserved."
- **3.48** *Insert the following at the end of Section 7.1.2:*

If the amount of a Modification exceeds the limits of the Owner's Construction Change Order Certification (reference Section 9.1.7.2 of the Agreement), then the Owner's agreement is not effective, and Work may not proceed, until approved in writing by the Office of State Engineer.

- **3.49** *Delete Section 7.2.1 and substitute the following:* 
  - **7.2.1** A Change Order is a written instrument prepared by the Architect (using State Form SE-480 "Construction Change Order") and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:
    - .1 The change in the Work;

- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.
- **3.50** Add the following Sections 7.2.2, 7.2.3, 7.2.4, and 7.2.5:
  - **7.2.2** If a Change Order provides for an adjustment to the Contract Sum, the adjustment must be calculated in accordance with Section 7.3.3.
  - **7.2.3** At the Owner's request, the Contractor shall prepare a proposal to perform the work of a proposed Change Order 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. Any proposed adjustment in the Contract sum shall be prepared in accordance with Section 7.2.2. The Owner's request shall include any revisions to the Drawings or Specifications necessary to define any 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 documentation required by Section 7.6.
  - **7.2.4** If the Contractor requests a Change Order, the request shall set forth the proposed change in the Work and shall be prepared in accordance with Section 7.2.3. If the Contractor requests a change to the Work that involves a revision to either the Drawings or Specifications, the Contractor shall reimburse the Owner for any expenditures associated with the Architects' review of the proposed revisions, except to the extent the revisions are accepted by execution of a Change Order.
  - **7.2.5** Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, any adjustments to the Contract Sum or the Contract Time.
- **3.51** *Delete 7.3.3 and substitute the following:*

#### 7.3.3 PRICE ADJUSTMENTS

- § 7.3.3.1 If any Modification, including a Construction Change Directive, provides for an adjustment to the Contract Sum, the adjustment shall be based on whichever of the following methods is the most valid approximation of the actual cost to the contractor, with overhead and profit as allowed by Section 7.5:
  - .1 Mutual acceptance of a lump sum;
  - **.2** Unit prices stated in the Contract Documents, except as provided in Section 7.3.4, or subsequently agreed upon;
  - .3 Cost attributable to the events or situations under applicable clauses with adjustment of profits or fee, all as specified in the contract, or subsequently agreed upon by the parties, or by some other method as the parties may agree; or
  - .4 As provided in Section 7.3.7.
- § 7.3.3.2 Consistent with Section 7.6, costs must be properly itemized and supported by substantiating data sufficient to permit evaluation before commencement of the pertinent performance or as soon after that as practicable. All costs incurred by the Contractor must be justifiably compared with prevailing industry standards. Except as provided in Section 7.5, all adjustments to the Contract Price shall be limited to job specific costs and shall not include indirect costs, overhead, home office overhead, or profit.
- **3.52** *Delete Section 7.3.7 and substitute the following:* 
  - **7.3.7** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall make an initial determination, consistent with Section 7.3.3, of the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in Section 7.5. In such case, and also under Section 7.3.3.1.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

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- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.
- **3.53** *Delete Section 7.3.8 and substitute the following:* 
  - **7.3.8** Using the percentages stated in Section 7.5, any adjustment to the Contract Sum for deleted work shall include any overhead and profit attributable to the cost for the deleted Work.
- **3.54** *Add the following Sections 7.5 and 7.6:*

#### 7.5 AGREED OVERHEAD AND PROFIT RATES

- **7.5.1** For any adjustment to the Contract Sum for which overhead and profit may be recovered, other than those made pursuant to Unit Prices stated in the Contract Documents, 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:
  - .1 To the Contractor for work performed by the Contractor's own forces, 17% of the Contractor's actual costs.
  - .2 To each Subcontractor for work performed by the Subcontractor's own forces, 17% of the subcontractor's actual costs.
  - .3 To the Contractor for work performed by a subcontractor, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).

#### 7.6 PRICING DATA AND AUDIT

#### § 7.6.1 Cost or Pricing Data.

Upon request of the Owner or Architect, Contractor shall submit cost or pricing data prior to execution of a Modification which exceeds \$500,000. Contractor shall certify that, to the best of its knowledge and belief, the cost or pricing data submitted is accurate, complete, and current as of a mutually determined specified date prior to the date of pricing the Modification. Contractor's price, including profit, shall be adjusted to exclude any significant sums by which such price was increased because Contractor furnished cost or pricing data that was inaccurate, incomplete, or not current as of the date specified by the parties. Notwithstanding Subparagraph 9.10.4, such adjustments may be made after final payment to the Contractor.

§ 7.6.2 Cost or pricing data means all facts that, as of the date specified by the parties, prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental; and are verifiable. While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred.

#### § 7.6.3 Records Retention.

As used in Section 7.6, the term "records" means any books or records that relate to cost or pricing data that Contractor is required to submit pursuant to Section 7.6.1. Contractor shall maintain records for three years from the date of final payment, or longer if requested by the chief procurement officer. The Owner may audit Contractor's records at reasonable times and places.

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- **3.55** Delete Section 8.2.2 and substitute the following:
  - **8.2.2** The Contractor shall not knowingly commence operations on the site or elsewhere prior to the effective date of surety bonds and insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such surety bonds or insurance.
- **3.56** *Delete Section 8.3.1 and substitute the following:* 
  - **8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the control of the Contractor and any subcontractor at any tier; or by delay authorized by the Owner pending dispute resolution; or by other causes that the Architect determines may justify delay, then to the extent such delay will prevent the Contractor from achieving Substantial Completion within the Contract Time and provided the delay (1) is not caused by the fault or negligence of the Contractor or a subcontractor at any tier and (2) is not due to unusual delay in the delivery of supplies, machinery, equipment, or services when such supplies, machinery, equipment, or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery, the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.
- 3.57 *Insert the following at the end of Section 9.1:*

All changes to the Contract Sum shall be adjusted in accordance with Section 7.3.3.

**3.58** *Delete Section 9.2 and substitute the following:* 

#### 9.2 SCHEDULE OF VALUES

**9.2.1** The Contractor shall submit to the Architect, within ten days of full execution of the Agreement, 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 Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. As requested by the Architect, the Contractor and each Subcontractor shall prepare a trade payment breakdown for the Work for which each is responsible, such breakdown being submitted on a uniform standardized format approved by the Architect and Owner. The breakdown shall be divided in detail, using convenient units, sufficient to accurately determine the value of completed Work during the course of the Project. The Contractor shall update the schedule of values as required by either the Architect or Owner as necessary to reflect:

- .1 the description of Work (listing labor and material separately);
- .2 the total value;
- .3 the percent and value of the Work completed to date;
- .4 the percent and value of previous amounts billed; and
- .5 the current percent completed and amount billed.
- **9.2.2** Any schedule of values or trade breakdown that fails to include sufficient detail, is unbalanced, or exhibits "front-loading" of the value of the Work shall be rejected. If a schedule of values or trade breakdown is used as the basis for payment and later determined to be inaccurate, sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Work.
- **3.59** *Delete Section 9.3.1 and substitute the following:*

Monthly, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2., for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require (such as copies of requisitions from Subcontractors and material suppliers) and shall reflect retainage and any other adjustments provided in Section 5 of the Agreement. If required by the Owner or Architect, the Application for Payment shall be accompanied by a current construction schedule.

**3.60** In Section 9.3.2, add the following words to the end of the second sentence:

provided such materials or equipment will be subsequently incorporated in the Work

*Insert the following at the end of Section 9.3.2:* 

The Contractor shall 1) protect such materials from diversion, vandalism, theft, destruction, and damage, 2) mark such materials specifically for use on the Project, and 3) segregate such materials from other materials at the storage facility. The Architect and the Owner shall have the right to make inspections of the storage areas at any time.

3.61 In Section 9.4.2, in the first sentence, after the words "Work has progressed to the point indicated," insert the following:

in both the Application for Payment and, if required to be submitted by the Contractor, the accompanying current construction schedule

In the last sentence, delete the third item starting with "(3) reviewed copies" and ending with "Contractor's right to payment,"

3.62 In Section 9.5.1, in the first sentence, delete the word "may" after the opening words "The Architect" and substitute the word "shall."

*In Section 9.5.1, insert the following sentence after the first sentence:* 

The Architect shall withhold a Certificate of Payment if the Application for Payment is not accompanied by the current construction schedule required by Section 3.10.1.

3.63 In Section 9.6.2, delete the word "The..." at the beginning of the first sentence and substitute the following:

Pursuant to Chapter 6 of Title 29 of the South Carolina Code of Laws, as amended, the

**3.64** *Delete Section 9.7 and substitute following:* 

#### 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment to the Owner, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the time established in the Contract Documents the amount certified by the Architect or awarded by a final dispute resolution order, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased, in accordance with the provisions of Section 7.3.3, 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.

**3.65** *Insert the following words at the end of the sentence in Section 9.8.1:* 

and when all required occupancy permits, if any, have been issued and copies of same have been delivered to the Owner.

- 3.66 In Section 9.8.2, insert the word "written" after the word "comprehensive" and before the word "list."
- **3.67** *Delete Section 9.8.3 and substitute the following:* 
  - **9.8.3.1** Upon receipt of the Contractor's list, the Architect, with the Owner and any other person the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable to the Architect, Owner, and Contractor, to determine whether the Work or designated portion thereof is substantially complete. The Contractor shall furnish access for the inspection and testing as provided in this Contract. The inspection shall include a

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demonstration by the Contractor that all equipment, systems and operable components of the Work function properly and in accordance with the Contract Documents. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If more than one Substantial Completion inspection is required, the Contractor shall reimburse the Owner for all costs of reinspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor.

- **9.8.3.2** If the Architect and Owner concur in the Contractor's assessment that the Work or a portion of the Work is safe to occupy, the Owner and Contractor may arrange for a Certificate of Occupancy Inspection by OSE. The Owner, Architect, and Contractor shall be present at OSE's inspection. Upon verifying that the Work or a portion of the Work is substantially complete and safe to occupy, OSE will issue, as appropriate, a Full or Partial Certificate of Occupancy.
- **3.68** *In the second sentence of Section 9.8.5, delete the words "and consent of surety, if any."*
- 3.69 In the first sentence of Section 9.9.1, delete the words "Section 11.3.1.5" and substitute the words "Section 11.3.1.3."
- **3.70** *Delete Section 9.10.1 and substitute the following:* 
  - 9.10.1 Unless the parties agree otherwise in the Certificate of Substantial Completion, the Contractor shall achieve Final Completion no later than thirty days after Substantial Completion. Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect, with the Owner and any other person the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable to the Architect, Owner, and Contractor, and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. If more than one Final Completion inspection is required, the Contractor shall reimburse the Owner for all costs of reinspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor. If the Contractor does not achieve final completion within thirty days after Substantial Completion or the timeframe agreed to by the parties in the Certificate of Substantial Completion, whichever is greater, the Contractor shall be responsible for any additional Architectural fees resulting from the delay.
- **3.71** *Delete the first sentence of Section 9.10.2 and substitute the following:*

Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner, (6) required Training Manuals, (7) equipment Operations and Maintenance Manuals, (8) any certificates of testing, inspection or approval required by the Contract Documents and not previously provided (9) all warranties and guarantees required under or pursuant to the Contract Documents, and (10) one copy of the Documents required by Section 3.11.

3.72 Delete the first sentence of Section 9.10.3 and substitute the following:

If, after Substantial Completion of the Work, final completion thereof is delayed 60 days through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted.

**3.73** *Delete Section 9.10.5 and substitute the following:* 

**§9.10.5** Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those specific claims in stated amounts that have been previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

**3.74** Add the following Section 9.10.6:

**9.10.6** If OSE has not previously issued a Certificate of Occupancy for the entire Project, the Parties shall arrange for a representative of OSE to participate in the Final Completion Inspection. Representatives of the State Fire Marshal's Office and other authorities having jurisdiction may be present at the Final Completion Inspection or otherwise inspect the completed Work and advise the Owner whether the Work meets their respective requirements for the Project.

**3.75** *Delete Section 10.3.1 and substitute the following:* 

10.3.1 If the Contractor encounters a hazardous material or substance which was not discoverable as provided in Section 3.2.1 and not required by the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons or serious loss to real or personal property resulting from such material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. Hazardous materials or substances are those hazardous, toxic, or radioactive materials or substances subject to regulations by applicable governmental authorities having jurisdiction, such as, but not limited to, the S.C. Department of Health and Environmental Control, the U.S. Environmental Protection Agency, and the U.S. Nuclear Regulatory Commission.

**3.76** *Insert the following at the end of Section 10.3.2:* 

In the absence of agreement, the Architect will make an interim determination regarding any delay or impact on the Contractor's additional costs. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15. Any adjustment in the Contract Sum shall be determined in accordance with Section 7.3.3.

**3.77** *Delete Section 10.3.3 and substitute the following:* 

10.3.3 The Work in the affected area shall be resumed immediately following the occurrence of any one of the following events: (a) the Owner causes remedial work to be performed that results in the absence of hazardous materials or substances; (b) the Owner and the Contractor, by written agreement, decide to resume performance of the Work; or (c) the Work may safely and lawfully proceed, as determined by an appropriate governmental authority or as evidenced by a written report to both the Owner and the Contractor, which is prepared by an environmental engineer reasonably satisfactory to both the Owner and the Contractor.

3.78 In Section 10.3.5, delete the word "The" at the beginning of the sentence and substitute the following:

In addition to its obligations under Section 3.18, the

**3.79** Delete the language of Section 10.3.6 and substitute the word "Reserved."

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**3.80** *Insert the following at the end of Section 10.4:* 

The Contractor shall immediately give the Architect notice of the emergency. This initial notice may be oral followed within five days by a written notice setting forth the nature and scope of the emergency. Within fourteen days of the start of the emergency, the Contractor shall give the Architect a written estimate of the cost and probable effect of delay on the progress of the Work.

#### **3.81** *Delete 11.1.2 and substitute the following:*

11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified below or required by law, whichever coverage is greater. Coverages shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until the 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 or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

#### (1) COMMERCIAL GENERAL LIABILITY:

(a) General Aggregate (per project)	\$1,000,000
<b>(b)</b> Products/Completed Operations	\$1,000,000
(c) Personal and Advertising Injury	\$1,000,000
(d) Each Occurrence	\$1,000,000
(e) Fire Damage (Any one fire)	¢50,000
(f) Medical Expense (Any one person)	\$5,000

(2) BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):

(a) Combined Single Limit \$1,000,000

#### (3) WORKER'S COMPENSATION:

(a) State Statutory

<b>(b)</b> 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 11.1.2. The umbrella policy limits shall not be less than \$3,000,000.

#### **3.82** *Delete Section 11.1.3 and substitute the following:*

**11.1.3** Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, Contractor shall provide to the Owner a written endorsement to the Contractor's general liability insurance policy that:

- (i) names the Owner as an additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations;
- (ii) provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless all additional insureds 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
- (iii) provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the Owner as secondary and noncontributory.

Prior to commencement of the Work, and thereafter upon renewal or replacement of each required policy of insurance, Contractor shall provide to the Owner a signed, original certificate of liability insurance (ACORD 25). Consistent with this Section 11.1, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Owner a Consultants 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

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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 Owner as an additional insured for claims made under the Contractor's completed operations, and otherwise meeting the above requirements, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. 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.

- **3.83** *Delete Section 11.1.4 and substitute the following:* 
  - **11.1.4** A failure by the Owner either (i) to demand a certificate of insurance or written endorsement required by Section 11.1, or (ii) to reject a certificate or endorsement on the grounds that it fails to comply with Section 11.1 shall not be considered a waiver of Contractor's obligations to obtain the required insurance.
- **3.84** *In Section 11.3.1, delete the first sentence and substitute the following:*

Unless otherwise provided in the Contract Documents, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis.

- **3.85** Delete the language of Section 11.3.1.2 and substitute the word "Reserved."
- **3.86** Delete the language of Section 11.3.1.3 and substitute the word "Reserved."
- **3.87** *Delete Section 11.3.2 and substitute the following:*

#### 11.3.2 BOILER AND MACHINERY INSURANCE

The Contractor shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall both be named insureds.

**3.88** *Delete Section 11.3.3 and substitute the following:* 

#### 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. To the extent any losses are covered and paid for by such insurance, the Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

- **3.89** *Delete Section 11.3.4 and substitute the following:* 
  - **11.3.4** If the Owner requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Contractor shall, if possible, include such insurance, and the cost thereof shall be charged to the Owner by appropriate Change Order.
- **3.90** Delete the language of Section 11.3.5 and substitute the word "Reserved."
- **3.91** *Delete Section 11.3.6 and substitute the following:* 
  - 11.3.6 Before an exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Owner.

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#### Rev. 9/7/2011 STANDARD SUPPLEMENTARY CONDITIONS

3.92 Delete the first sentence of Section 11.3.7 and substitute the following:

> The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, subsubcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent the property insurance provided by the Contractor pursuant to this Section 11.3 covers and pays for the damage, except such rights as they have to proceeds of such insurance held by the Contractor as fiduciary.

3.93 Delete the first sentence of Section 11.3.8 and substitute the following:

> A loss insured under the Contractor's property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10.

3.94 Delete Section 11.3.9 and substitute the following:

> 11.3.9 If required in writing by a party in interest, the Contractor as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Contractor's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Contractor shall deposit in a separate account proceeds so received, which the Contractor shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor.

3.95 Delete Section 11.3.10 and substitute the following:

> 11.3.10 The Contractor as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Contractor's exercise of this power; if such objection is made, the dispute shall be resolved in the manner provided in the contract between the parties in dispute as the method of binding dispute resolution. The Contractor as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with a final order or determination issued by the appropriate authority having jurisdiction over the dispute..

3.96 Delete Section 11.4.1 and substitute the following:

> 11.4.1 Before commencing any services hereunder, the Contractor shall provide the Owner with Performance and Payment Bonds, each in an amount not less than the Contract Price set forth in Article 4 of the Agreement. The Surety 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". In addition, the Surety shall have a minimum "Best Financial Strength Category" of "Class V", and in no case less than five (5) times the contract amount. The Performance Bond shall be written on Form SE-355, "Performance Bond" and the Payment Bond shall written on Form SE-357, "Labor and Material Payment Bond", and both shall be made payable to the Owner.

3.97 *Delete Section 11.4.2 and substitute the following:* 

11.4.2 The Performance and Labor and Material Payment Bonds shall:

- .1 be issued by a surety company licensed to do business in South Carolina;
- .2 be accompanied by a current power of attorney and certified by the attorney-in-fact who executes the bond on the behalf of the surety company; and
- remain in effect for a period not less than one (1) year following the date of Substantial Completion .3 or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer.

### STANDARD SUPPLEMENTARY CONDITIONS

- **3.98** *Add the following Sections 11.4.3 and 11.4.4:* 
  - **11.4.3** Any bonds required by this Contract shall meet the requirements of the South Carolina Code of Laws and Regulations, as amended.
  - **11.4.4** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.
- **3.99** *Delete Section 12.1.1 and substitute the following:* 
  - **12.1.1** If a portion of the Work is covered contrary to the to requirements specifically expressed in the Contract Documents, including inspections of work-in-progress required by all authorities having jurisdiction over the Project, it must, upon demand of the Architect or authority having jurisdiction, be uncovered for observation and be replaced at the Contractor's expense without change in the Contract Time.
- **3.100** In Section 12.2.2.1, delete the words "and to make a claim for breach of warranty" at the end of the third sentence.
- **3.101** *In Section 12.2.2.3, add the following to the end of the sentence:*

unless otherwise provided in the Contract Documents.

**3.102** *Insert the following at the end of Section 12.2.4:* 

If, prior to the date of Substantial Completion, the Contractor, a Subcontractor, or anyone for whom either is responsible, uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment, or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

**3.103** *Delete Section 13.1 and substitute the following:* 

#### 13.1 GOVERNING LAW

The Contract, any dispute, claim, or controversy relating to the Contract, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules.

**3.104** Delete Section 13.2, including its Sub-Sections 13.2.1 and 13.2.2, and substitute the following:

#### 13.2 SUCCESSORS AND ASSIGNS

The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. 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 Regulation 19-445.2180 of the South Carolina Code of Regulations, as amended. 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.

**3.105** Delete Section 13.3 and substitute the following:

#### 13.3 WRITTEN NOTICE

Unless otherwise permitted herein, all notices contemplated by the Contract Documents shall be in writing and shall be deemed given:

- .1 upon actual delivery, if delivery is by hand;
- .2 upon receipt by the transmitting party of confirmation or reply, if delivery is by electronic mail, facsimile, telex or telegram;
- .3 upon receipt, if delivery is by the United States mail.

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Notice to Contractor shall be to the address provided in Section 8.3.2 of the Agreement. Notice to Owner shall be to the address provided in Section 8.2.2 of the Agreement. Either party may designate a different address for notice by giving notice in accordance with this paragraph.

**3.106** *In Section 13.4.1, insert the following at the beginning of the sentence:* 

Unless expressly provided otherwise,

**3.107** *Add the following Section 13.4.3:* 

**13.4.3** Notwithstanding Section 9.10.4, the rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses:

1.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service;

3.5 Warranty

3.17 Royalties, Patents and Copyrights

3.18 Indemnification

7.6 Cost or Pricing Data

11.1 Contractor's Liability Insurance

11.4 Performance and Payment Bond

15.1.6 Claims for Listed Damages

15.1.7 Waiver of Claims Against the Architect

15.6 Dispute Resolution

15.4 Service of Process

**3.108** *Delete Section 13.6 and substitute the following:* 

#### 13.6 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 Owner 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.

- **3.109** *Delete the language of Section 13.7 and substitute the word "Reserved."*
- **3.110** Add the following Sections 13.8 through 13.16:

#### 13.8 PROCUREMENT OF MATERIALS BY OWNER

The Contractor accepts assignment of all purchase orders and other agreements for procurement of materials and equipment by the Owner that are identified as part of the Contract Documents. The Contractor shall, upon delivery, be responsible for the storage, protection, proper installation, and preservation of such Owner purchased items, if any, as if the Contractor were the original purchaser. The Contract Sum includes, without limitation, all costs and expenses in connection with delivery, storage, insurance, installation, and testing of items covered in any assigned purchase orders or agreements. Unless the Contract Documents specifically provide otherwise, all Contractor warranty of workmanship and correction of the Work obligations under the Contract Documents shall apply to the Contractor's installation of and modifications to any Owner purchased items,

#### 13.9 INTERPRETATION OF BUILDING CODES

As required by Title 10, Chapter 1, Section 180 of the South Caroline Code of Laws, as amended, 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 Owner and OSE for resolution.

#### STANDARD SUPPLEMENTARY CONDITIONS

#### 13.10 MINORITY BUSINESS ENTERPRISES

Contractor shall notify Owner of each Minority Business Enterprise (MBE) providing labor, materials, equipment, or supplies to the Project under a contract with the Contractor. Contractor's notification shall be via the first monthly status report submitted to the Owner after execution of the contract with the MBE. For each such MBE, the Contractor shall provide the MBE's name, address, and telephone number, the nature of the work to be performed or materials or equipment to be supplied by the MBE, whether the MBE is certified by the South Carolina Office of Small and Minority Business Assistance, and the value of the contract.

#### 13.11 SEVERABILITY

If any provision or any part of a provision of the Contract Documents shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable Legal Requirements, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

#### 13.12 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 subsubcontractors; or (b) that Contractor and its subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 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)

#### **13.13 SETOFF**

The Owner shall have all of its common law, equitable, and statutory rights of set-off.

#### 13.14 DRUG-FREE WORKPLACE

The Contractor certifies to the Owner that Contractor will provide a Drug-Free Workplace, as required by Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

#### 13.15 FALSE CLAIMS

According to the S.C. Code of Laws § 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.

#### 13.16 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. (§ 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. (§ 11-1-40)

#### **3.111** *Delete Section 14.1.1 and substitute the following:*

- **14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 45 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:
  - .1 Issuance of an order of a court or other public authority having jurisdiction that requires substantially all Work to be stopped; or

- An act of government, such as a declaration of national emergency that requires substantially all Work to be stopped.
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents and the Contractor has stopped work in accordance with Section 9.7
- **3.112** *Insert the following at the end of Section 14.1.3:*

Any adjustment to the Contract Sum pursuant to this Section shall be made in accordance with the requirements of Article 7.

- 3.113 In Section 14.1.4, replace the word "repeatedly" with the word "persistently."
- **3.114** *Delete Section 14.2.1 and substitute the following:* 
  - 14.2.1 The Owner may terminate the Contract if the Contractor
    - .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials, or otherwise fails to prosecute the Work, or any separable part of the Work, with the diligence, resources and skill that will ensure its completion within the time specified in the Contract Documents, including any authorized adjustments;
    - .2 fails to make payment to Subcontractors for materials or labor in accordance with the Contract Documents and the respective agreements between the Contractor and the Subcontractors;
    - .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
    - .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.
- 3.115 In Section 14.2.2, delete the parenthetical statement ", upon certification by the Initial Decision Maker that sufficient cause exists to justify such action," immediately following the word "Owner" in the first line.
- 3.116 In Section 14.2.4, replace the words "Initial Decision Maker" with the word "Architect"
- **3.117** *Add the following Section 14.2.5:* 
  - **14.2.5** If, after termination for cause, it is determined that the Owner lacked justification to terminate under Section 14.2.1, or that the Contractor's default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Owner under Section 14.4.
- **3.118** *Delete the second sentence of Section 14.3.2 and substitute the following:*

Any adjustment to the Contract Sum made pursuant to this section shall be made in accordance with the requirements of Article 7.3.3.

- **3.119** *Delete Section 14.4.1 and substitute the following:* 
  - **14.4.1** The Owner may, at any time, terminate the Contract, in whole or in part for the Owner's convenience and without cause. The Owner shall give written notice of the termination to the Contractor specifying the part of the Contract terminated and when termination becomes effective.
- **3.120** *Delete Section 14.4.2 and substitute the following:* 
  - **14.4.2** Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall
    - .1 cease operations as directed by the Owner in the notice;
    - .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work;

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- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders; and
- .4 complete the performance of the Work not terminated, if any.
- **3.121** *Delete Section 14.4.3 and substitute the following:* 
  - **14.4.3** In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, costs incurred by reason of such termination, and any other adjustments otherwise allowed by the Contract. Any adjustment to the Contract Sum made pursuant to this Section 14.4 shall be made in accordance with the requirements of Article 7.3.3.
- **3.122** *Add the following Sections 14.4.4, 14.4.5, and 14.5:* 
  - **14.4.4** Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not (i) affect the Owner's right to require the termination of a subcontract, or (ii) increase the obligation of the Owner beyond what it would have been if the subcontract had contained an appropriate clause.
  - **14.4.5** Upon written consent of the Contractor, the Owner may reinstate the terminated portion of this Contract in whole or in part by amending the notice of termination if it has been determined that:
    - the termination was due to withdrawal of funding by the General Assembly, Governor, or Budget and Control Board or the need to divert project funds to respond to an emergency as defined by Regulation 19-445.2110(B) of the South Carolina Code of Regulations, as amended;
    - .2 funding for the reinstated portion of the work has been restored;
    - .3 circumstances clearly indicate a requirement for the terminated work; and
    - .4 reinstatement of the terminated work is advantageous to the Owner.

#### 14.5 CANCELLATION AFTER AWARD BUT PRIOR TO PERFORMANCE

Pursuant to Title 11, Chapter 35 and Regulation 19-445.2085 of the South Carolina Code of Laws and Regulations, as amended, this contract may be canceled after award but prior to performance.

**3.123** *Insert the following sentence after the second sentence of Section 15.1.1:* 

A voucher, invoice, payment application or other routine request for payment that is not in dispute when submitted is not a Claim under this definition.

**3.124** *Delete Section 15.1.2 and substitute the following:* 

#### 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Architect. Such notice shall include sufficient information to advise the Architect and other party of the circumstances giving rise to the claim, the specific contractual adjustment or relief requested and the basis of such request. Claims by either party arising prior to the date final payment is due must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later except as stated for adverse weather days in Section 15.1.5.2. By failing to give written notice of a Claim within the time required by this Section, a party expressly waives its claim.

**3.125** *Delete Section 15.1.3 and substitute the following:* 

#### 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, including any administrative review allowed under Section 15.6, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will issue Certificates for Payment in accordance with the initial decisions and determinations of the Architect.

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3.126 *Insert the following at the end of Section 15.1.5.1:* 

Claims for an increase in the Contract Time shall be based on one additional calendar day for each full calendar day that the Contractor is prevented from working.

- **3.127** *Insert the following Sub-Sections at the end of Section 15.1.5.2:* 
  - .1 Claims for adverse weather shall be based on actual weather conditions at the job site or other place of performance of the Work, as documented in the Contractor's job site log.
  - .2 For the purpose of this Contract, a total of five (5) calendar days per calendar month (non-cumulative) shall be anticipated as "adverse weather" at the job site, and such time will not be considered justification for an extension of time. If, in any month, adverse weather develops beyond the five (5) days, the Contractor shall be allowed to claim additional days to compensate for the excess weather delays only to the extent of the impact on the approved construction schedule. The remedy for this condition is for an extension of time only and is exclusive of all other rights and remedies available under the Contract Documents or imposed or available by law.
  - .3 The Contractor shall submit monthly with their pay application all claims for adverse weather conditions that occurred during the previous month. The Architect shall review each monthly submittal in accordance with Section 15.5 and inform the Contractor and the Owner promptly of its evaluation. Approved days shall be included in the next Change Order issued by the Architect. Adverse weather conditions not claimed within the time limits of this Subparagraph shall be considered to be waived by the Contractor. Claims will not be allowed for adverse weather days that occur after the scheduled (original or adjusted) date of Substantial Completion.
- **3.128** *Delete Section 15.1.6 and substitute the following:*

#### 15.1.6 CLAIMS FOR LISTED DAMAGES

Notwithstanding any other provision of the Contract Documents, including Section 1.2.1, but subject to a duty of good faith and fair dealing, the Contractor and Owner waive Claims against each other for listed damages arising out of or relating to this Contract.

- **15.1.6.1** For the Owner, 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) attorney's fees, (vii) any interest, except to the extent allowed by Section 13.6 (Interest), (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency.
- **15.1.6.2** 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) attorney's fees, (vi) any interest, except to the extent allowed by Section 13.6 (Interest); (vii) unamortized equipment costs; and, (viii) losses incurred by subcontractors for the types of damages the Contractor has waive as against the Owner. Without limitation, this mutual waiver is applicable to all damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 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 3.18 (Indemnification).
- **3.129** *Add the following Section 15.1.7:*

#### 15.1.7 WAIVER OF CLAIMS AGAINST THE ARCHITECT

Notwithstanding any other provision of the Contract Documents, including Section 1.2.1, but subject to a duty of good faith and fair dealing, the Contractor waives all claims against the Architect and any other design professionals who provide design and/or project management services to the Owner, either directly or as independent contractors or subcontractors to the Architect, for listed damages arising out of or relating to this Contract. The 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)

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attorney's fees, (vi) any interest; (vii) unamortized equipment costs; and, (viii) losses incurred by subcontractors for the types of damages the Contractor has waive as against the Owner. This mutual waiver is not applicable to amounts due or obligations under Section 3.18 (Indemnification).

- 3.130 Delete the language of Sections 15.2, 15.3, and 15.4, including all Sub-Sections, and substitute the word "Reserved" for the deleted language of each Section and Sub-Section.
- **3.131** *Add the following Sections 15.5 and 15.6 with their sub-sections:*

# 15.5 CLAIM AND DISPUTES - DUTY OF COOPERATION, NOTICE, AND ARCHITECTS INITIAL DECISION

- **15.5.1** Contractor and Owner are fully committed to working with each other throughout the Project to avoid or minimize claims. To further this goal, Contractor and Owner agree to communicate regularly with each other and the Architect at all times notifying one another as soon as reasonably possible of any issue that if not addressed may cause loss, delay, and/or disruption of the Work. If claims do arise, Contractor and Owner each commit to resolving such claims in an amicable, professional, and expeditious manner to avoid unnecessary losses, delays, and disruptions to the Work.
- **15.5.2** Claims shall first be referred to the Architect for initial decision. An initial decision shall be required as a condition precedent to resolution pursuant to Section 15.6 of any Claim arising prior to the date of final payment, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered, or after all the Architect's requests for additional supporting data have been answered, whichever is later. The Architect will not address claims between the Contractor and persons or entities other than the Owner.
- **15.5.3** The Architect will review Claims and within ten days of the receipt of a Claim (1) request additional supporting data from the claimant or a response with supporting data from the other party or (2) render an initial decision in accordance with Section 15.5.5.
- **15.5.4** If the Architect requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Architect when the response or supporting data will be furnished or (3) advise the Architect that all supporting data has already been provided. Upon receipt of the response or supporting data, the Architect will render an initial decision in accordance with Section 15.5.5.
- 15.5.5 The Architect will render an initial decision in writing; (1) stating the reasons therefor; and (2) notifying the parties of any change in the Contract Sum or Contract Time or both. The Architect will deliver the initial decision to the parties within two weeks of receipt of any response or supporting data requested pursuant to Section 16.4, or within such longer period as may be mutually agreeable to the parties. If the parties accept the initial decision, the Architect shall prepare a Change Order with appropriate supporting documentation for the review and approval of the parties and the Office of State Engineer. If either the Contractor, Owner, or both, disagree with the initial decision, the Contractor and Owner shall proceed with dispute resolution in accordance with the provisions of Section 15.6.
- **15.5.6** In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

#### 15.6 DISPUTE RESOLUTION

**15.6.1** If a claim is not resolved pursuant to Section 15.5 to the satisfaction of either party, both parties shall attempt to resolve the dispute at the field level through discussions between Contractor's Representative and Owner's Representative. If a dispute cannot be resolved through Contractor's Representative and Owner's Representative, then the Contractor's Senior Representative and the Owner's Senior Representative, upon the request of either party, shall meet as soon as conveniently possible, but in no case later than twenty-one days after such a request is made, to attempt to resolve such dispute. Prior to any meetings between the Senior Representatives, the parties will exchange relevant information that will assist the parties in resolving their dispute. The meetings required by this Section are a condition precedent to resolution pursuant to Section 15.6.2.

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**15.6.2** If after meeting in accordance with the provisions of Section 15.6.1, the Senior Representatives determine that the dispute cannot be resolved on terms satisfactory to both the Contractor and the Owner, then either party may submit the dispute by written request to South Carolina's Chief Procurement Officer for Construction (CPOC). Except as otherwise provided in Article 15, all claims, claims, or controversies relating to the Contract 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 in the absence of jurisdiction 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 State's Constitution.

**15.6.3** If any party seeks resolution to a dispute pursuant to Section 15.6.2, the parties shall participate in non-binding mediation to resolve the claim. If the claim is governed by Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws as amended and the amount in controversy is \$100,000.00 or less, the CPOC shall appoint a mediator, otherwise, the mediation shall be conducted by an impartial mediator selected by mutual agreement of the parties, or if the parties cannot so agree, a mediator designated by the American Arbitration Association ("AAA") pursuant to its Construction Industry Mediation Rules. The mediation will be governed by and conducted pursuant to a mediation agreement negotiated by the parties or, if the parties cannot so agree, by procedures established by the mediator.

**15.6.4** Without relieving any party from the other requirements of Sections 15.5 and 15.6, either party may initiate proceedings in the appropriate forum prior to initiating or completing the procedures required by Sections 15.5 and 15.6 if such action is necessary to preserve a claim by avoiding the application of any applicable statutory period of limitation or repose.

#### 15.6.5 SERVICE OF PROCESS

Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any claims, 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 Senior 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.

**3.132** *Add the following Article 16:* 

ARTICLE 16 PROJECT-SPECIFIC REQUIREMENTS AND INFORMATION
<b>16.1. Inspection Requirements:</b> (Indicate the inspection services required by the Contract)
Special Inspections are required and are not part of the Contract Sum. (see section 01400)
Building Inspections are required and are not part of the Contract Sum. (see section 01400)
Building Inspections are required and are part of the Contract Sum. The inspections required for this Work
are: (Indicate which services are required and the provider)
☐ Civil:
Structural:
Mechanical:
Plumbing:
Electrical:
Gas:
Other ( <i>list</i> ):
Remarks:

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- **16.1.1** Contractor shall schedule and request inspections in an orderly and efficient manner and shall notify the Owner whenever the Contractor schedules an inspection in accordance with the requirements of Section 16.1. Contractor shall be responsible for the cost of inspections scheduled and conducted without the Owner's knowledge and for any increase in the cost of inspections resulting from the inefficient scheduling of inspections.
- **16.2** List Cash Allowances, if any. (*Refer to attachments as needed* If *none, enter NONE*) NONE
- **16.3.** Requirements for Record Drawings, if any. (*Refer to attachments as needed.* If *none, enter NONE*) See Specifications
- **16.4.** Requirements for Shop Drawings and other submittals, if any, including number, procedure for submission, list of materials to be submitted, etc. (*Refer to attachments as needed. If none, enter NONE*)

  See Specifications
- **16.5.** Requirements for signage, on-site office or trailer, utilities, restrooms, etc., in addition to the Contract, if any. (*Refer to attachments as needed. If none, enter NONE*)

  <u>See Specifications</u>
- **16.6.** Requirements for Project Cleanup in addition to the Contract, if any. (*Refer to attachments as needed. If none, enter NONE*)

  See Specifications
- **16.7.** List all attachments that modify these General Conditions. (*If none, enter NONE*) See Specifications

# USC SUPPLEMENTAL GENERAL CONDITIONS FOR CONSTRUCTION PROJECTS

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

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- 9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
- 10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
- 11. For all projects over \$100,000, including IDC's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
- 12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least <u>one</u> times per week. Construction waste must not be placed in University dumpsters. THE CONSTRUCTION SITE MUST BE THOROUGHLY CLEANED WITH ALL TRASH PICKED UP AND PROPERLY DISPOSED OF ON A DAILY BASIS AND THE SITE MUST BE LEFT IN A SAFE AND SANITARY CONDITION EACH DAY. THE UNIVERSITY WILL INSPECT JOB SITES REGULARLY AND WILL FINE ANY CONTRACTOR FOUND TO BE IN VIOLATION OF THIS REQUIREMENT AN AMOUNT OF UP TO \$1,000 PER VIOLATION.
- 13. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.
- 14. 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). As requested, the contractor will submit all Safety Programs and Certificates of Insurance to the University for review.
- 15. Tree protection fencing is required to protect existing trees and other landscape features to be preserved within a construction area. The limits of this fence will be evaluated for each situation with the consultant, USC Arborist and USC Project Manager. The tree protection fence shall be 5' high chain link fence unless otherwise approved by USC Project Manager. No entry or materials storage will be allowed inside the tree protection zone. A 4" layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone.
- 16. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following measures shall be taken: For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over areas impacted. For single loads over 9,000 lbs., two layers of 3/4" plywood is required.
- 17. For projects requiring heavy loads to cross walks tree root zones or lawns. A construction entry road consisting of 10' X 16' oak logging mates on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep

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- matting structurally functional.
- 18. Any damage to existing landscaping (including lawn areas) will be remediated before final payment is made.
- 19. Orange safety fence to be provided by the contractor. (USC Arborist, Kevin Curtis may be contacted at 777-0033 or 315-0319)

#### **Campus Vehicle Expectations**

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

Updated: July 15, 2011

Project Name: Russell House ACM Abatement

Project Number: H27-6094-J

University of South Carolina

# CONTRACTOR'S ONE YEAR GUARANTEE

STATE OF
COUNTY OF
WE
as 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

SE-355 2011 Edition

# **Performance Bond**

KNOW ALL MEN BY THESE PRESENTS, that (Ins	ert full name or legal title and address of Contractor)
Name:	
Address:	
hereinafter referred to as "Contractor", and (Insert full nan	ne 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: <u>University of South Carolina</u>	
Address: 743 Greene Street	
Columbia, SC 29208	continue the same C (the continue that the
	assigns, the sum of(\$), being the sum of the Contractor and Surety bind themselves, their heirs, executors,
administrators, successors and assigns, jointly and sever	· · · · · · · · · · · · · · · · · · ·
WHEREAS Contractor has by written agreement dated	d entered into a contract with Agency to construct
State Project Name: Russell House ACM Abat	
State Project Number: H27-6094-J	<u>ement</u>
Brief Description of Awarded Work, as found	on the SE-330, Bid Form: This project includes the
	g materials and/or contaminated materials in the Russell
House crawlspace and mechanical room.	
in accordance with Drawings and Specifications prepare	ed by (Insert full name and address of A/E)
Name: <u>Crossroads Environmental, LLC</u> Address: <u>1258 Boiling Springs Road</u>	
Spartanburg, SC 29303	
which agreement is by reference made a part hereof, and	l is hereinafter referred to as the Contract.
	ending to be legally bound hereby, subject to the terms stated
representative.	ally executed on its behalf by its authorized officer, agent or
•	
·	OND NUMBER
(shall be no earlier than Date of Contract)	
CONTRACTOR	SURETY
Ву:	Ву:
(Seal)	(Seal)
Print Name:	Print Name:
	Time ivanie.
Print Title:	Print Title:
	(Attach Power of Attorney)
Witness:	Witness:
(A 1122 1 C)	

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

#### 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
- ${\bf 5.2}$  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 <u>Labor and Material Payment Bond</u>

Rev. 8/9/2011

KNOW ALL MEN BY THESE PRESENTS, that (Insert fit	ull name or legal title and address of Contractor)
Name:	
Address	
hereinafter referred to as "Contractor", and (Insert full name and	d address of principal place of business of Surety)
Name:Address:	
hereinafter called the "surety", are jointly and severally held	d and firmly bound unto (Insert full name and address of Agency)
Name: <u>University of South Carolina</u> Address: 743 Greene Street Columbia, SC 29208	
hereinafter referred to as "Agency", or its successors or assi Bond to which payment to be well and truly made, the Cont administrators, successors and assigns, jointly and severally	ractor and Surety bind themselves, their heirs, executors,
WHEREAS, Contractor has by written agreement dated	entered into a contract with Agency to construct
Project Name: Russell House ACM Abatement	
Project Number: <u>H27-6094-J</u> Brief Description of Awarded Work, as found on t	he SE-330, Bid Form: This project includes the
remediation and disposal of asbestos containing m House crawlspace and mechanical room.	naterials and/or contaminated materials in the Russell
in accordance with Drawings and Specifications prepared b	y (Insert full name and address of A/E)
Name: <u>Crossroads Environmental, LLC</u> Address: <u>1258 Boiling Springs Road</u> Springs Road	
Spartanburg, SC 29303 which agreement is by reference made a part hereof, and is	hereinafter referred to as the Contract.
<b>IN WITNESS WHEREOF</b> , Surety and Contractor, intend herein, do each cause this Labor and Material Payment E officer, agent or representative.	
DATED thisday of, 2 BON (shall be no earlier than Date of Contract)	D NUMBER
CONTRACTOR	SURETY
By:	By:
(Seal)	(Seal)
Print Name:	Print Name:
Print Title:	Print Title:(Attach Power of Attorney)
Witness:	Witness:

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



#### SPECIFICATION FOR ASBESTOS ABATEMENT

# UNIVERSITY OF SOUTH CAROLINA RUSSELL HOUSE CRAWLSPACE AND MECHANICAL ROOM

STATE PROJECT NUMBER: H27-6094-J

**April 22, 2013** 

# PREPARED FOR: UNIVERSITY OF SOUTH CAROLINA FACILITIES 743 GREENE STREET COLUMBIA, SOUTH CAROLINA 29208

PREPARED BY:
CROSSROADS ENVIRONMENTAL, LLC
1258 BOILING SPRINGS RD.
SPARTANBURG, SOUTH CAROLINA 29303
CRE PROJECT NUMBER: PD10-0344-11110

Prepared by: Kay H. Horton ASB-23184, Exp. 3/08/14

# **STATE PROJECT # H27-6094-J**

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# UNIVERSITY OF SOUTH CAROLINA RUSSELL HOUSE ASBESTOS ABATEMENT

# **STATE PROJECT # H27-6094-J**

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#### **SECTION 01040 – GENERAL REQUIREMENTS**

#### A. DEFINED SCOPE OF WORK

**Description of the Project:** This data is provided for informational purposes only, and is based on the best information available at the time of specification preparation. Nothing in this section may be interpreted as limiting the scope of work otherwise required by this contract and related documents. All drawings are for informational purposes only and may differ from the actual building; the building owner and the building owner's representatives are providing information that is to best of their knowledge. As with any remediation, there may be unknown conditions, but these conditions do not limit the responsibility of the contractor to complete the contract. This project includes the remediation and disposal of all asbestos-containing containing materials and/or contaminated materials in the following approximate quantities and descriptions:

PROJECT TITLE: UNIVERSITY OF SOUTH CAROLINA –
RUSSELL HOUSE ACM ABATEMENT
CRAWLSPACE AND MECHANICAL ROOM

STATE PROJECT NUMBER: #H27-6094-J

#### **BUILDING DESCRIPTION**

THE RUSSELL HOUSE, WHICH HOUSES THE UNIVERISTY OF SOUTH CAROLINA'S (USC) UNIVERSITY **UNION AND STUDENT** AFFAIRS, ENCOMPASSES OVER 225,000 SQUARE FEET. THE ORIGINAL CONSTRUCTION WAS IN 1955, WITH ADDITIONS TO THE BUILDING MADE IN 1958, 1967, AND THE MOST RECENT ADDITION WAS A FOUR-STORY STRUCTURE, WHICH HOUSES A BALLROOM, BOOKSTORE, POST OFFICE AND OTHER STUDENT FACILITIES. IN 1984, THE BASEMENT WAS PARTIALLY RENOVATED INTO THE CAROLINA MALL. THE DISHWASHER CRAWLSPACE AND MECHANICAL ROOM ARE THE ONLY AREAS THAT WILL BE INCLUDED IN THE ABATEMENT.

#### MATERIAL DESCRIPTION

THIS ABATEMENT PROJECT WILL BE PERFORMED IN PREPARATION OF REPLACEMENT OF THE DISHWASHER SYSTEM IN THE GRAND MARKET PLACE OF THE RUSSELL HOUSE. AS PART OF THE RENOVATION, SECTIONS OF SANITARY SEWER LINES, STEAM LINES, CONDENSATE LINES AND DOMESTIC HOT WATER LINES WILL BE REPLACED.

THE MAJORITY OF THE WORK WILL TAKE PLACE IN THE CRAWLSPACE DIRECTLY UNDERNEATH AND ADJOINING THE DISHWASHER AREA OF THE KITCHEN. THIS AREA OF THE CRAWLSPACE, HEREAFTER REFERRED TO AS CRAWLSPACE, IS HIGHLIGHTED ON THE DRAWING INCLUDED IN APPENDIX B.

THE ASBESTOS REMEDIATION CONTRACTOR, HEREAFTER REFERRED TO AS CONTRACTOR, WILL BE RESPONSIBLE FOR ABATEMENT AND PROPER

Crossroads environmental. Ilc DISPOSAL OF ALL ASBESTOS-CONTAINING INSULATION IN THE CRAWLSPACE, REMOVAL OF ALL NON-ASBESTOS (ASBESTOS-CONTAMINATED) INSULATION IN THE CRAWLSPACE, ABATEMENT OF ALL ASBESTOS-CONTAINING MATERIAL (ACM) IN THE ADJACENT MECHANICAL ROOM, CLEAN-UP OF THE CRAWLSPACE, INSTALLATION OF A SPECIFIED LINING IN THE CRAWL SPACE, AND DEMOLITION OF SPECIFIED PIPING.

CRAWLSPACE ABATEMENT MUST BE PERFORMED UNDER NEGATIVE PRESSURE ENCLOSURE. MECHANICAL ROOM ABATEMENT MUST BE PERFORMED UTILIZING GLOVEBAG METHODOLOGY.

(PLEASE NOTE: ALL DATES ARE ANTICIPATED AND SUBJECT TO CHANGE BASED ON ACTUAL PROJECT START DATE (DATE OF COMMENCEMENT. HOWEVER, THE NUMBER OF DAYS ALLOTTED FOR THE PROJECT SHALL REMAIN THE SAME.)

#### START AND COMPLETION DATES

PROJECT START DATE: COMPLETION DATE:

JUNE 24, 2013 JULY 15, 2013 BY 5:00 PM

The date of FINAL COMPLETION shall be TWENTY-ONE (21) CALENDAR DAYS (INCLUDING HOLIDAYS) from the date of commencement as set forth in the SE-390, subject to adjustments as provided in the Contract Documents.

The project is considered complete when all abatement, piping demolition, and floor barrier has been performed to the Building Owner and Building Owner's Representative's satisfaction, and the area has passed clearance air monitoring as set forth in Sections 01410 and 01711.

(PLEASE NOTE: ALL DATES ARE ANTICIPATED AND SUBJECT TO CHANGE BASED ON ACTUAL PROJECT START DATE (DATE OF COMMENCEMENT. HOWEVER, THE NUMBER OF DAYS ALLOTTED FOR THE PROJECT SHALL REMAIN THE SAME.)

BELOW IS A BRIEF DESCRIPTION OF THE ESTIMATED QUANTITIES OF ASBESTOS-CONTAINING OR ASBESTOS-CONTAMINATED TO BE REMOVED. THIS DATA IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, AND IS BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF SPECIFICATION PREPARATION. NOTHING IN THIS SECTION MAY BE INTERPRETED AS LIMITING THE SCOPE OF WORK OTHERWISE REQUIRED BY THIS CONTRACT AND/OR RELATED DOCUMENTS.

MATERIAL	QUANTITY
CRAWLSPACE	
- ACDECTOC CONTAINING DIDE INCLIFATION	100 I N ET

ASBESTOS-CONTAINING PIPE INSULATION
 ASBESTOS-CONTAMINATED PIPE INSULATION
 ASBESTOS DEBRIS
 200 SQ. FT.



The Contractor will also be responsible for removal of miscellaneous debris to create a smooth surface for the floor barrier to be installed over. The miscellaneous debris includes, BUT IS NOT LIMITED TO, poly, broken light bulbs, pieces of concrete, metal hangers, pieces of brick, rocks, and pieces of insulation. ALL debris other than rocks, concrete, and bricks must be removed. Rocks and pieces of concrete and/or brick that are less that 2" in diameter may be left in place. For reference, a golf ball is 1.68" in diameter. All debris must be considered as asbestos-contaminated and disposed of as such.

#### MECHANICAL ROOM

• ASBESTOS-CONTAINING PIPE INSULATION 405 LN. FT. (INCLUDES FRIABLE TSI AND FOAMGLASS WITH ASBESTOS-CONTAINING MASTIC)

#### PIPING TO BE DEMOLISHED AND DISPOSED OF (ALL IN CRAWLSPACE)

•	1/2" COPPER WATER LINES (BLUE)-CUT AND CAP	30 LN. FT.
•	STEAM LINES (YELLOW)-CUT AND CAP	25 LN . FT.
•	UNKNOWN HANGING, ABANDONED (ORANGE)	12 LN. FT.
•	ABANDONED SEWER LINE (GREEN)-CUT AND CAP	110 LN. FT.
•	ABANDONED, UNKNOWN LINE ALONG WALL (ORANGE)	100 LN. FT.

#### **BUILDING OWNER:**

University of South Carolina 743 Greene Street Columbia, SC 29208

Point of Contact: Mr. Ty Russell

(803) 777-1208 (Office)

E-mail address: trusse@fmc.sc.edu

#### PROJECT DESIGNER/OWNER'S REPRESENTATIVE:

Crossroads Environmental, LLC 1258 Boiling Springs Road Spartanburg, SC 29303

Point of Contact: Ms. Kay Horton

Office: (864) 541-8736 Cell: (864) 680-5537

E-mail address: khorton@crossroadsenv.net



#### **OSECTION 01043 - PROJECT PERSONNEL AND COORDINATION**

#### **ASBESTOS REMEDIATION CONTRACTOR'S PERSONNEL:**

#### **GENERAL SUPERINTENDENT:**

Provide a General Superintendent licensed in Asbestos work who is experienced in administration, environmental remediation, general contracting coordinating, including work practices, protective measures for building and personnel, disposal procedures, etc. This person is responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing materials as outlined in OSHA 29 CFR 1926.1101, and including 1926.20 through 1926.32. The Superintendent needs to be knowledgeable of the South Carolina Department of Health and Environmental Control Asbestos Regulation 61 61-86.1: Standards of Performance for Asbestos Projects, Effective May 27, 2011, and EPA NESHAP 61.140 Subpart M-National Emission Standard for Asbestos.

Experience and Training: The General Superintendent must be accredited as an Asbestos Remediation Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C and as amended February 3, 1994 (ASHARA) and be licensed as a SCDHEC Supervisor. He/she must have had a minimum of Five (5) years on-the-job training in asbestos abatement procedures and have worked at least eight (8) projects, three (3) of which are comparable in complexity and size to this project.

#### **ASBESTOS SUPERVISOR(S):**

Provide full time Supervisor(s) for inside the asbestos work area with experience in asbestos Remediation projects including work practices, protective measures for building and personnel, disposal procedures, etc. One inside supervisor must be able to communicate in the language of the workers and be able to communicate in English to the Owner's Representative(s) and/or state regulatory personnel. All inside supervisor(s) are responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing materials as outlined in OSHA 29 CFR 1926.1101, and including 1926.20 through 1926.32. The Supervisor(s) need to be knowledgeable of the South Carolina Department of Health and Environmental Control Asbestos Regulation 61 61-86.1: Standards of Performance for Asbestos Projects, Effective May 27, 2011, and EPA NESHAP 61.140 Subpart M-National Emission Standard for Asbestos.

Experience and Training: The Asbestos Supervisor(s) (competent person) must be accredited as an Asbestos Remediation Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C and as amended February 3, 1994 (ASHARA) and be licensed as SCDHEC Supervisors. The inside asbestos supervisors must have had a minimum of Three (3) years on-the-job training in asbestos abatement procedures and have worked at least five (5) projects, two (2) of which are comparable in complexity and size to this project.



#### **OSHA Requirements:**

It is the Remediation Contractor's responsibility to fulfill all the Occupational Safety and Health Administration (OSHA) requirements under Respiratory Protection Standard CFR 1910.134, Hazard Communication Standard 29 CFR 1910.1200 and all other safety requirements that may be required by the work site.

#### **NON-SUPERVISORY PERSONNEL:**

Provide an adequate number of qualified personnel to meet the schedule requirements of the project. Submit to the Owner's Representative a request for approval for any person intended to be employed in the project with said employees' name, social security number, qualifications, "Certificate of Workers' Acknowledgment", and "Affidavit of Medical Surveillance and Respiratory Protection".

<u>Experience and Training</u>: All workers employed for Remediation throughout the project shall be accredited as an Asbestos Remediation Workers in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C and as amended February 3, 1994 (ASHARA) and be licensed as SCDHEC Asbestos Workers.

Submit to the Owner's Representative, prior to beginning work, a request for approval for any person intended to be employed in the project with said employees' name, qualifications, and "Affidavit of Medical Surveillance and Respiratory Protection". The Building Owner and Owner's Representative reserve the privilege of approving all General Superintendents and/or Supervisor(s) named for said project. The Building Owner and Owner's Representative also reserves the privilege of requesting that any General Superintendent, Supervisor and/or workers that do not perform in an acceptable professional manner leave the worksite either on a temporary or permanent basis.

#### **PRE-CONSTRUCTION CONFERENCE:**

The Owner's Representative upon receipt, review, and substantial approval of all preconstruction submittals will arrange for a preconstruction meeting between the Asbestos Remediation Contractor, General Superintendent, Supervisor(s), Building Owner, and Owner's Representative. The purpose of the meeting is to discuss any aspects of the submittals needing clarification and to discuss any aspects of the project execution and the sequence of operations. The Asbestos Remediation Contractor and his employees shall be prepared to provide any supplemental evidence and information to the Owner or Owner's representative pertaining to any aspects of the submittals or the materials and equipment. Upon satisfactory resolution of any outstanding items or questions, the Owner's Representative will issue a written order to proceed to the Asbestos Remediation Contractor. No Remediation work of any kind described in the following provisions of these specifications shall be initiated prior to the written order to proceed. The start date or the completion date of this project will not be extended due to the Asbestos Remediation Contractor not having paperwork prepared for submittal, unless said paperwork is not outlined in this specification or by the South Carolina State Manual for Planning and Execution of State Permanent Improvements, Part II.



#### ASBESTOS REMEDIATION CONTRACTOR'S SUPERINTENDENT DAILY LOG:

Maintain within the on-site job office a daily log documenting the dates and times at a minimum the following items:

- Meetings; purpose, attendees, brief discussion
- Visitations; authorized and unauthorized
- Personnel, by name, entering and leaving the work area
- Special or unusual events, i.e. barrier breaching, equipment failures, accidents
- Documentation of supervisor and/or workers accreditations, licenses, employees' medicals, and fit tests.
- Air monitoring tests and test results
- Safety meetings
- Personal Safety Monitor for the Day
- Record who was responsible for the locking and unlocking of the work area within the building
- Amount of material that was removed and/or handled

#### Documentation of Asbestos Remediation Contractors performing the following:

- Inspection and smoke check of work area preparation prior to start of removal and of each shift of work thereafter
- Removal of any sheet plastic critical barriers
- Asbestos Remediation Contractor's inspections prior to lock down, final visual request, spray back, fire stop placement or any other operation that will conceal the condition of asbestos-containing materials or the substrate from which such materials have been removed
- Chart recording of manometer readings
- Removal of waste materials from work area
- Decontamination of equipment (list items)
- Asbestos Remediation Contractor's final inspection and request for final air test analysis.

Provide two (2) copies of this log to Project Administrator at the final closeout of this project as a project closeout submittal. Have log available for the Building Owner, Owner's Representative, and/or a Regulatory Inspector for review during the project.

#### **SPECIAL REPORTS:**

Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Owner's Representative and others affected by occurrence.

• Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating,



response by Asbestos Remediation Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date.

- Reporting Accidents: Prepare and submit reports of significant accidents, at site and
  anywhere else that work is in progress. Record and document data and actions; comply
  with industry standards. For this purpose, a significant accident is defined to include
  events where personal injury is sustained, property loss of substance is sustained, or
  where the event posed a significant threat of loss or personal injury or where there is a
  contaminant released into the environment.
- Report Discovered Conditions: When an unusual condition of the building is discovered during the work (e.g. leaks, termites, corrosion) prepare and submit a special report indicating condition discovered.

#### JOB SPECIFIC PLAN

Prepare and deliver to the Building Owner and/or Building Owner's representative a Job Specific Plan within 5 calendar days prior to the first preconstruction meeting. This Job Specific Plan should identify the specific decontamination or work area isolations, the time schedule for each containment, number of workers, supervisors, subcontractors timeframes, phasing of the, placement of dumpster, etc. NO work can begin until the Job Specific Plan (Plan of Action) has been submitted to the Building Owner and/or the Building Owners Representative(s) and the Asbestos Remediation Contractor has received it back signed and dated approval from the Building Owner and/or the Building Owner's Representative. The Asbestos Remediation Contractor cannot remodel the plan without obtaining new approval (through the same process) for the plan.

<u>Schedule</u>: Provide proposed detailed schedule including work dates, work shift time, number of employees, dates of start and completion dates of each phase of work, including preparation work, removal, demolition, and final inspection dates. <u>Include in the schedule any holidays that the Asbestos Remediation Contractor expects to work</u>. Building Owner or Building Owner's Representative will give approval on all scheduling.

Include in the Job Specific Plan site-specific emergencies response that include fire, accident, power failure, pressure differential system failure, or any other event that may require modification, abridgment of decontamination, or work area isolation procedures. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

<u>Post</u>: In clean room of Personnel Decontamination Unit and in the General Superintendent Office the telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company (in all appropriate languages).



The Asbestos Remediation Contractor will repair any damage caused by any phase of the work operations including damage to landscape properties, sidewalks, storm drains, unless otherwise noted in writing or identified for demolition. Asbestos Remediation Contractor is responsible for all clarifications. All damage will be repaired at the cost of the Asbestos Remediation Contractor.

- A. Keep all public and work areas free from accumulation of waste, rubbish or construction debris. Provide safety protection to the pedestrians that are utilizing these areas during the project (Pedestrians may have visual and/or hearing limitations). Asbestos Remediation Contractor will maintain the cleanliness of the work site on daily and/or weekly bases. Asbestos Remediation Contractor will provide at least one outside light to the jobsite for safety purposes. Keep all fences locked at the end of each work day.
- B. **Smoking or other tobacco use** or open fires will not be permitted on the premises. A smoking area <u>may be</u> designated by the building owner; this area will be at the convenience of the building owner. Any employee found smoking outside a designated area may either be given a warning and/or asked to leave the premises permanently. If a said smoking area is designated, the Asbestos Remediation Contractor will responsible for the supplying a bucket(s) with sand for the butts and will be responsible for cleaning of all butts and/or other trash located in the area.
- C. Asbestos Remediation Contractor will provide their work office. The building owner will not provide a work office for the contractor.

#### DRIVEWAYS AND PARKING AREAS:

Keep the existing driveways and entrances serving the premises clear and available to the Owner and his employees at all times. Do not use these areas for parking or storage of materials. Asbestos Remediation Contractor will be given a specific lay down area and parking area. Any employee found parking outside the designated area(s) can be asked to leave the premises. A vehicle found outside the designated area is subject to tickets and/or towing at the cost of the owner of the vehicle.

- A. Unreasonable encumbering of the jobsite with materials or equipment will not be permitted. Confine stockpiling of materials and/or location of storage sheds to the areas indicated by the building owner or the building owner's representative. If additional storage is necessary, obtain and pay for such storage outside of the campus area.
- B. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, to prevent unauthorized use. Do not leave such vehicles or equipment unattended with



the motor running or the ignition key in place or accessible to unauthorized persons. Asbestos Remediation Contractor is responsible for the securing of all vehicles and thief will be at the owner of the vehicle responsibility, the building owner will not assume any responsibility for thief and/or damage to vehicles.

- C. Follow all Posted Speed Signs through out the campus and inform all employees that pedestrian always have the right a way.
- D. Contractor and/or employers of the contractor are not permitted to carry firearms onto the work site either on their person or in their vehicles. This is a crime and a person who is found to have a firearm will be open to criminal charges that can include arrest and fines.

#### **NOTIFICATIONS**

#### **ALL OTHER TRADES:**

The disturbance or dislocation of asbestos-containing materials may cause a release into the building's atmosphere, thereby creating a potential health hazard to workers and building occupants. Apprise in writing with documentation of the air monitoring results of any hazardous materials to the building owner, all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures that must be followed. Take appropriate continuous measures as necessary to protect all building occupants and other trade workers from the potential hazard of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state, and local agencies.

#### NOTIFY EMERGENCY SERVICE AGENCIES:

Including fire, ambulance, police, or other agency that may service the remediation work site in case of an emergency. Notification is to include methods of entering work area, emergency entry and exit locations, modifications to fire notification or fire fighting equipment, and other information needed by agencies providing emergency services.

#### **NOTIFICATIONS OF EMERGENCY:**

Any individual at the job site may notify emergency service agencies if necessary without effect on this Contract or the Contract Sum.

#### **TEMPORARY FACILITIES**

Use qualified tradesmen and/or license trades people, if necessary under law, for installation of temporary services and facilities. Building Owner will provide temporary water and electrical services, but the contractor is responsible for all connections and disconnections to the service. Asbestos Remediation Contractor will connect to the facilities where indicated by the Building Owner and will use these designed facilities for the entire project to prevent minimum interference with the campus activities.



• Require that tradesmen accomplishing any electrical work be licensed and/or accredited as required by local authority for the work performed.

#### **MATERIALS AND EQUIPMENT:**

Provide new or used materials and equipment to perform the work that is in undamaged and in serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use, by compliance with appropriate standards. If equipment is placed onsite that is damaged to the degree that the equipment is not in serviceable condition or the equipment is deemed unsafe the Project Manager and/or IH may request said equipment to be removed and replaced. This does not release the Asbestos Remediation Contractor of their duty to provide safe and useable equipment for their employees. The Project Manger and the IH will not accept responsible for the safety of the Asbestos Remediation Contractor's employees.

#### **WATER SERVICE:**

Owner will provide temporary water service connection, the Asbestos Remediation Contractor must provide the connection (and complete the connection) that is equipped with backflow protection. Valves shall be temperature and pressure rated for operation at the temperatures and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.

Water connection (without charge) to Owner's existing potable water system is limited to one 3/4" pipe-size connection, and a maximum flow of 10 gpm each to cold water supply. Install using vacuum breakers or other backflow preventer as required by local authority. Supply hot and cold water to the Decontamination Unit.

Maintain hose connections and outlet valves in leak-proof condition. Where finish work below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize the possibility of water damage. Drain water promptly from pans as it accumulates. Should the water connection cause damage, the Asbestos Remediation Contractor is responsible for the repair at no cost to the building owner.

Employ heavy-duty abrasion-resistant water hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each work area and to each Decontamination Unit. Provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment.

<u>Hot Water Heater</u>: Provide UL rated 40-gallon electric hot water heater to supply hot water for the Decontamination Unit shower. Activate from 30 amp circuit breaker located within the Decontamination Unit sub-panel. Provide with relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans



shall consist of a 12" X 12" X 6" deep pan, made of 19 gauge-galvanized steel, with handles. A 3-quart kitchen saucepan may be substituted for this purpose. Drip pan shall be securely fastened to the hot water heater with bailing wire or similar material. Wiring of the hot water heater shall be in compliance with NEMA, NECA, and UL standards.

Building Owner will provide the Asbestos Remediation Contractor access to water.

#### **ELECTRICAL SERVICE:**

Environmental Remediation Contractor will be responsible for providing or hiring a subcontractor that is a South Carolina licensed electrician and/or electrical company that is competent to complete the electrical connection for the temporary power box.

There is power on site that the Contractor may utilize.

The Asbestos Remediation Contractor is responsible for the safety of their personnel. All lines should be considered active with electrical power, unless it has been determined by their own licensed electrician that the line is completely discharged of energy.

Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.

Provide temporary power service to Decontamination Unit sub-panel with minimum 60 amp, 2 pole circuit breaker or fused disconnect connected to the buildings main distribution panel. Sub-panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work.

Provide a weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of work during the construction period. Install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of work.

<u>Voltage Differences</u>: Provide identification-warning signs at power outlets that are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets. Dry type transformers shall be provided where required to provide voltages necessary for work operations.

Ground Fault Protection: Equip all circuits for any purpose entering Work Area with ground fault circuit interrupters (GFCI). Locate GFCIs exterior to Work Area so that all circuits are protected prior to entry to Work Area. Provide circuit breaker type ground fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in work area, decontamination units, exterior, or as otherwise required by national electrical code, OSHA or other authority. Locate in panel exterior to Work Area. Protect each circuit with a ground fault circuit interrupter (GFCI) of proper size located in the temporary panel. Do not use outlet type GFCI devices.



<u>Electrical Power Cords</u>: Use only GFCI protected extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.

#### **TEMPORARY ELECTRICAL PANEL:**

Provide temporary electrical panel(s) sized and equipped to accommodate all electrical equipment and/or lighting required by the work. The connection of the temporary panel(s) to existing building electrical system is the contractors responsibility. Protect with circuit breaker or fused disconnect. Locate temporary panel as directed by Owner or Owner's Representative.

#### **POWER DISTRIBUTION SYSTEM:**

Provide circuits of adequate size and proper characteristics for each use. In general, run wiring overhead, and rise vertically where wiring will be at least exposed to damage from construction operations.

<u>Temporary Wiring</u>: In the Work Area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors. Provide liquid tight enclosures or boxes for wiring devices.

<u>Number of Branch Circuits</u>: Provide sufficient branch circuits as required by the work. All branch circuits are to originate at temporary electrical panel. At minimum provide the following:

One Circuit for each HEPA filtered fan unit

For power tools and task lighting, provide one temporary 4-gang outlet in the following locations. Provide a separate 110-120 Volt, 20 Amp circuit for each 4-gang outlet (4 outlets per circuit).

- One outlet in the work area for each 2500 square feet of work area
- One outlet at each decontamination unit, located in equipment room

110-120 volt 20 amp branch circuits with 4-gang outlet for Owner's exclusive use while conducting air sampling during the work as follows:

- One in each work area
- One at clean side of each Decontamination Unit.
- One at each exhaust location for HEPA filtered fan units

110-120 volt 20 amp branch circuits with 4-gang outlet for Owner's exclusive use for conducting final air sampling as set forth in Section 01714 Work Area Clearance as follows:

- Five inside work area
- Two outside work area in location designated by Owner's Representative



#### **FIRST AID:**

Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury. In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person with a valid certificate in first-aid training from the US Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first aid. In addition, all certified first aid employees shall comply with OSHA 29 CFR 1910.1030, Occupational Exposure to Bloodborne Pathogens.

First-aid supplies approved by the consulting physician shall be easily accessible when required. The first-aid kit shall consist of materials approved, by the Asbestos Remediation Contractor's consulting physician, in a weatherproof container with individual sealed packages for each type of item. The contents of the first-aid kit shall be checked by the employer before it is sent out on each job and at least weekly on each job to ensure that the expended items are replaced. Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service, shall be provided. The telephone number of the physicians, hospital, or ambulances shall be conspicuously posted, in all appropriate languages.

#### FIRE EXTINGUISHER:

Provide Type "A" fire extinguisher(s) for temporary offices, and through out the work site and similar spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In other locations, provide type "ABC" dry chemical extinguisher(s), or a combination of several extinguisher(s) of NFPA recommended types for the exposures in each case. Comply with the applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguisher". Locate fire extinguisher(s) where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each Work Area, in the Equipment Room, One outside Work Area in the Clean Room and one in the Construction Trailer.

#### **SANITARY FACILITIES:**

The Building Owner will provide the Contractor with a designated restroom adjoining the load-out area. The Contractor is responsible for keeping the restroom clean, and for providing toilet paper, soap, and paper towels. In addition, the restroom must be cleaned/sanitized by the Contractor upon completion of abatement. If the Contractor elects to provide a sanitary facility, the Contractor must follow OSHA Regulation 29 (CFR1926.51 (c)) "Toilets at construction jobsites." Toilets shall be provided for employees according to the following table: Table D-1 Number of employees 20 or less, one toilet; 20 or more, 1 toilet seat and 1 urinal per 40 workers. These toilets must be scheduled for clean-outs no less than once a week.

**END OF SECTION - 01043** 



#### SECTION 01092 - DEFINITIONS, CODES, REGULATIONS, AND STANDARDS

A substantial amount of specification language constitutes definitions for terms found in other contract documents, including the drawings. (Drawings must be recognized as diagrammatic in nature and not completely descriptive of the requirements indicated thereon.) Certain terms used in Contract Documents are defined in this article.

This section sets forth governmental regulations and industry standards that are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits that are known to the Owner and that must be applied for and received, or which must be given to governmental agencies before start of work.

Requirements include adherence to work practices and procedures set forth in applicable codes, regulations, and standards.

Requirements include obtaining permits, licenses, inspections, releases, similar documentation, as well as payments, statements, and similar requirements associated with codes, regulations, and standards.

#### **CODES AND REGULATIONS**

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to accreditations, licensing, work practices, hauling, disposal, protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold the Owner and Owner's Representative harmless for failure to comply with any applicable accreditations, licensing, work, hauling, disposal, safety, health, or other regulation on the part of himself, his employees, or his subcontractors.

#### **INDUSTRY STANDARDS**

<u>Applicability of Standards</u>: Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

<u>Referenced industry standards</u> take precedence over standards that are not referenced but recognized in the construction industry as applicable.



<u>Unreferenced industry standards</u> are not directly applicable to the work, except as a general requirement of whether the work complies with recognized construction industry standards.

<u>Publication Dates</u>: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

<u>Updated Standards</u>: At the request of the Owner's Representative, Contractor or authority having jurisdiction, submit a Change Order proposal where applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected. The Owner's Representative will decide whether to issue a Change Order to proceed with the updated standard.

<u>Conflicting Requirements</u>: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Owner's Representative for a decision before proceeding.

Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the Owner's Representative for decision before proceeding.

<u>Copies of Standards</u>: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entities' construction activity. Copies of applicable standards are not bound with the Contract Documents.

Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

Although copies of standards needed for enforcement of requirements may be part of required submittals, the Owner's Representative reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

<u>Abbreviations and Names</u>: Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.



<u>Permits, Licenses and Certificates</u>: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

The insurance certificate/policy shall state that Sunset clause or similar clause or clauses of intent are not included in the coverage. In addition, <u>Asbestos Pollution Liability Insurance</u> is required. A completed Certificate of Insurance for Asbestos Pollution Liability Insurance must be submitted at such time as the contract for actual work is awarded naming the Building Owner, the Owner's Managing Agent and the facility as an additional named insured. See specific requirements as required by the University of South Carolina.

- A South Carolina General Contractor's/or Bidder's License is not required for this Project.
- The Prime Contractor (and subcontractor(s) if used) must be able to meet the insurance qualification as outlined by the state and as stated above.

<u>Local Requirements</u>: Abide by all local requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials.

#### **STANDARDS:**

Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.

The Contractor shall assume full responsibility and liability for the compliance with all standards pertaining to accreditations, licensing, work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Owner and Owner's Representative harmless for failure to comply with any applicable standard on the part of himself, his employees, or his subcontractors.

#### **EPA GUIDANCE DOCUMENTS:**

EPA Guidance Documents that discuss asbestos abatement work or hauling and disposal of asbestos waste materials are listed below for the Contractor's information only. These documents do not describe the work and are not a part of the work of this contract. These documents present information useful to anyone involved with asbestos abatement work. EPA publications can be ordered from (800) 825-6700.

### SOUTH CAROLINA OFFICE OF STATE ENGINEERS CONTRACT DOCUMENTS AND FORMS



http://www.mmo.sc.gov/MMO/ose/MMO-ose-manual.phtm, the Manual for Planning and Execution of State Permanent Improvements

#### **NOTIFICATIONS:**

Notification to SCDHEC will be made by the Building Owner. SCDHEC permit fees will be paid by the Building Owner. Upon project start-up, all notifications/revisions will become the responsibility of the Asbestos Remediation Contractor. Revisions must be made if the waste hauler, disposal site, and/or start or completion dates change.

#### **PERMITS:**

All asbestos containing waste is to be transported by an entity maintaining a current "Waste Shipment Record" specifically for asbestos-containing materials, as required for transporting of waste asbestos-containing materials to a disposal site.

Hazardous Waste Material will be transported by an entity licensed to recycle and/or dispose of hazardous material. A waste shipment record will be required.

#### **LICENSES**:

Maintain current accreditations and/or licenses as required by South Carolina State or local jurisdictions for companies and employees for the removal, transporting, disposal, or other regulated activity relative to the work of this contract.

#### POSTING AND FILING OF REGULATIONS

Post all notices required by applicable federal, state, and local regulations. Maintain two (2) copies of applicable federal, state, and local regulations and standards. Maintain one copy of each at job site. Keep on file one copy of each in Contractor's office.

CHECK ALL SECTIONS OF THE SPECIFICATION FOR FURTHER CODES, REGULATIONS, AND OR STANDARDS THAT MAY BE REQUIRED. END OF SECTION - 01092



#### SECTION 01301 - SUBMITTALS

#### **SUMMARY**

This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:

Pre-qualification requirements of the apparent low bidder Site Specific Plan of Action Contractor's construction schedule Daily construction reports Samples (as required) Miscellaneous Submittals

#### SUBMITTAL REQUIREMENTS OF THE APPARENT LOW BIDDER:

The apparent low bidder shall be prepared to submit some or all of the following items to the University of South Carolina and Crossroads Environmental, LLC after the bid opening, if requested. The University of South Carolina may send a request by sending OSE Form SE-350 to the apparent low bidder by registered mail. When the contractor completes this form, **it should not be interpreted to only show projects completed in South Carolina**. If requested, the contractor shall have seven (7) calendar days after receipt to return this form with the requested information to the University of South Carolina or the contractor shall be considered **Non-Responsible**.

(Form OSE SE-350 can be obtained and reviewed on the internet at <a href="http://www.mmo.sc.gov/MMO/ose/MMO-ose-manual.phtm">http://www.mmo.sc.gov/MMO/ose/MMO-ose-manual.phtm</a>, in the Manual for Planning and Execution of State Permanent Improvements – Part II, Appendices, Appendix A.)

Failure to submit the following documentation within the specified timeframe will render the Contractor non-responsible.

- 1. Contractor shall provide a list **of all asbestos permitted projects** that they have been issued a license (permit) for within the past six months. Include names and telephone numbers of references for verification of completion and quality of work.
- 2. Contractor shall provide a minimum of five projects that they have completed within the past 5 years that are similar in scope of work and size of project. Include names and telephone numbers of references for verification of completion and quality of work and the name of the supervisor that completed each project.
- 3. Contractor shall provide a listing of all closed and/or pending citations issued by regulatory agencies and/or judgments against the Bidder from a court of law within the last three (3) years. This includes SC-DHEC, NCDHHS, and/or OSHA or any other state regulatory body. If no citations and/or judgments have been issued then a letter to this effect shall be submitted. Serious violations issued from regulatory



- agency or the omission of listing citations may render the Contractor non-responsive.
- 4. Contractor shall provide a listing of all assessed or pending penalties or liquidated damages, and the project in which it occurred within the last three (3) years. If no assessed penalties or liquidated damages have been incurred or is pending within the past three (3) years than a letter to this effect shall be submitted. Assessed or pending penalties or liquidated damages may render the Contractor non-responsive.
- 5. Contractor shall provide a listing of any contract terminations or pending termination by the building owner or contractor within the last Three (3) years. If no such contract terminations have occurred than a letter to this effect shall be submitted.
- 6. Contractor shall provide a Job Specific Work Plan for this project.
- 7. Contractor must provide a copy of their current SC-DHEC Asbestos Abatement Contractor License.
- 8. Contractor shall provide a list of any and/or all subcontractors that will be utilized during the project, if applicable. The Contractor should plan on this list being a constant, unless prior notification has been given to the contract administrator and building owner representative. Building Owner has the right review the qualifications of the subcontractor(s) retained and the building owner retains the right consider the contractor non-responsible for utilizing non-qualified subcontractors. The building owner also retains the right to deny the change of subcontractor during the project.
- 9. Contractor shall provide a list of workers and their credentials that will be utilized on the project. The certification that will be accepted is a list of the employees and their SC-DHEC license number. The document should be signed by a corporate officer of the contracting company. If this is not provided the contractor may be considered non-responsible.
- 10. Contractor shall provide a list with an explanation for any legal technical issues or pending claims that have yet to be settled and that has occurred on completed or current projects over the past three (3) years. If no such legal claims are occurring or pending than a letter to this effect shall be submitted.
- 11. Contractor must comply with bidding and insurance requirements/submittals that meet all requirements of the University of South Carolina.



#### SUBMITTAL PROCEDURES

<u>Coordination</u>: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.

The Owner's Representative reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

<u>Processing</u>: Allow sufficient review time so that installation will not be delayed because of the time required to process submittals, including time for re-submittals.

<u>Submittal Deviations</u>: Indicate in the front of the submittal package, any deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

<u>Transmittal Form</u>: Use a transmittal form from Appendix A Submittal Forms or a reasonable facsimile thereof that is pre-approved by the Building Owner's Representative.

## <u>CONTRACTOR'S JOB SPECIFIC PLAN (SEE SECTION 01043 PROJECT PERSONNEL AND COORDINATION)</u>

<u>Schedule</u>: Provide proposed detailed schedule including work dates, work shift time, number of employees, dates of start and completion including dates of preparation work, removal, and final inspection dates. <u>Include in the schedule any holidays that the contractor expects to work</u>. Building Owner or Building Owner's Representative will give approval on all scheduling.

<u>Work Stages</u>: Indicate important stages of construction for each major portion of the work, including clearance testing. Include indication of start and finish times for the following:

- 1. Submittal of all contractual paperwork
- 2. Set up of and/or loading of equipment onsite
- 3. Complete any utility cut-offs and/or connections that is necessary prior to the beginning of the project
- 4. Preparation for the Environmental Remediation work
- 5. Environmental Remediation
- 6. Clearance testing



<u>Distribution</u>: Following response to the initial submittal, print and distribute copies to the Owner's Representative, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project Administrator's field office, project meeting room, and temporary field office. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

<u>Schedule Updating</u>: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

#### Progress Meetings:

In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, Owner's Representative will hold general progress meetings on a weekly basis. Each entity then involved in planning, coordination or performance of work is to be properly represented at each meeting. All subcontractors must be present at weekly meetings beginning no later than one week prior to be start of their scheduled work.

#### **SUBMITTAL SCHEDULE**

<u>Listing</u>: At the end of this section is a listing of the principal submittals required for the work. This <u>listing is not necessarily complete</u>, nor does the listing reflect the significance of each submittal requirement. The listing is included only for the convenience of users of the Contract Documents.

After review and action on the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule of submittals within 10 days of the date required for establishment of the Contractor's construction schedule or within the designated time period indicated during the Pre-Construction meeting.

Prepare the submittal schedule in chronological order; include submittals required before start of construction.

Building Owner <u>will not</u> provide Contractor with office space. Asbestos Remediation Contractor should plan a workspace that is not provided by the building owner.

#### **MISCELLANEOUS SUBMITTALS**:

Material Safety Data Sheets: Process material safety and data sheets as "product data."

<u>Inspection and Test Reports</u>: Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.



<u>Records of Actual Work</u>: Furnish 1 copy of records of actual work, one of which will be returned for inclusion in the record documents as specified in section "Project Closeout".

<u>Closeout Submittals</u>: Refer to section "Project Closeout" and to individual sections of these specifications for specific submittal requirements of project closeout information.

The Building Owner or his representative may request additional submittals if required by the project.



#### SUBMITTAL CHECK LIST

Submittal for section <u>Before Start of Work</u> must be turned in to the Owner or the Owner's Representative at the Pre-Construction Meeting and no later than 5 calendar days before the start of work. The Owner or Owner's Representative will then give the contractor written permission to begin work. The Contractor will not begin work without written permission. **If there is a delay due to Asbestos Remediation Contractor's non-responsible with submittal requirements there will be no additional time allotted to the contractor for the project under these circumstances.** 

Bet	ore	Start of Work and updated as the work progresses:
	1	Three signed copies of the agreement between the Contractor and Building Owner
		with correct start and completion dates (if dates have been changed, Building Owner
		must initial new dates); any copies of subcontract agreements should also be included,
		if applicable. Agreement must be executed and submitted to Owner's Representative prior to job start.
	2	Copy of the performance bond with proper project identification
	3	Certificate of Insurance with proper project identification (verify, if necessary); must also have a <u>Certificate of Insurance from subcontractors</u> (including waste haulers)
	4	Copy of completed SC-DHEC Asbestos Removal Notification Form filled out by Contractor
	5	Copy of SC-DHEC authorization to proceed with project ID number, fee information, and disposal site authorization for asbestos abatement and for the demolition
	6	Copy of SC-DHEC Abatement Contractor's License.
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	7	Copy of any subcontractors licenses, if necessary.
	8	Copies of SC-DHEC Licenses for each individual that will be working on the job site. (Worker's that have submitted their training certification to SC-DHEC who have not yet received their license must be verified by our office and approved in writing before they are allowed on the job site.)
	9	Completed Notification Log Form with information for contingency plans and notification of local emergency personnel
	10	Project Title Page with Contractor's Acknowledgment of proper contact procedures for project administration problems, including a list of phone numbers for both the consultant and the building owner and an exclusive list of the personnel to be contacted
	11	A complete detailed job specific plan that includes a time line exemplifying all phasing of the work to be performed.
	12	A detailed site specific safety plan.

Submittal for the section <u>Periodically During Work or Before Project Closeout</u> must be submitted to the Owner or Owner's Representative with the Progressive Payment Request. If Progressive Payments are not indicated, then the submittals must be turned into the Owner or Owner's



Representative Office before the Project Closeout. Contractor must have written permission from Owner or Owner's Representative before beginning Project Closeout.

PERIODI	CA	LLY DURING WORK OR BEFORE PROJECT CLOSEOUT
	13	Copy of containment checklist completed by the IH and signed the Contractor
		including original smoke test documentation
	14	Daily Logs filled out and signed by the Project Supervisor
		Daily Sign In\Sign Out Sheets
	16	Contractor's copy of Initial Exposure Assessment
		Contractor's copy of Negative Exposure Assessment
		Contractor's copy of Daily Air Monitoring Results
	19	Accident and Incident Investigation Report
	20	Visitor Log and signed Visitor's Authorization Form
	21	Documentation of Manometer Readings, Asbestos Filtration (AFD) and Water
		Filtration (WFD) Device Inspections, documentation of smoke tests per shift
	22	Application for Final Visual Inspection(s)
		the section <u>At Project Closeout</u> must be submitted to the Owner or Owner's with the Final Payment Request.
AT PROJ	EC.	Γ CLOSEOUT*
	23	Certification of Removal
	24	Asbestos Chain-of-Custody Form (Trip Ticket) completed by and signed by the
		Contractor Representative, Transporter and Disposal Site Representative within 35 days as required by NESHAPS 61.150 vii(3)(4)
	25	Contractor Application for Payment (Invoice)
	- C/F	

NOTE: PROJECT CLOSEOUT CANNOT BEGIN UNTIL AIR CLEARANCE RESULTS ARE OBTAINED

Copies of the submittals for the section <u>Items to be Submitted by the Air Monitoring Firm</u> should also be obtained by the Contractor and included in the Contractor Submittals as indicated above.



# ITEMS TO BE SUBMITTED BY THE AIR MONITORING FIRM(S) 26 Background and Area Air monitoring reports 27 Final Clearance Air Monitoring Reports (This must be completed before Project Closeout begins.) 28 Personnel Air monitoring reports

**END OF SECTION - 01301** 



#### **SECTION 01410 - AIR MONITORING**

#### **DESCRIPTION OF THE WORK**

This section describes air monitoring work being performed by the Owner. This work is not in the Contract Sum. The Owner will be conducting air monitoring throughout the course of the project.

Air monitoring required by OSHA is work of the Contractor and is not covered in this section. Contractor must conduct OSHA compliance air monitoring throughout the course of the project.

The Owner's Industrial Hygienist (IH) will perform the necessary monitoring, inspection, testing and other support services of existing areas and systems affected by the abatement work and to ensure that employees and visitors will not be adversely impacted and that the abatement work proceeds in accordance with these specifications, and the abated areas or abated building have been successfully decontaminated. The work of the Owner's IH in no way relieves the abatement contractor from his responsibility to perform his work in accordance with contract documents, to perform continuous inspections, monitoring, and testing for the safety of his employees, and to perform other such services as specified in this section. The cost of the IH consultant and his services will be born by the Owner except for repeated final inspections and testing that may be required due to unsatisfactory initial results. All costs associated with these repeated final inspections and testing will be paid for by the contractor, prior to contractor/s final payment and release. Repeated final inspections and testing will be defined as more than one set of Transmission Electron Microscopy (TEM) Final Clearance Monitoring.

If fibers counted by the Owner's IH during abatement work, either inside or outside the work area utilizing NIOSH 7400 Method exceed the specified respective limits, then contractor shall stop work. Asbestos contractor may request confirmation of above results by analysis of samples with TEM. Request must be in writing and submitted to the Owner's IH. Cost for the confirmation of results will be paid by the contractor for both the collection and analysis of samples and for the time delay that may result from this confirmation.

#### **DAILY AREA AIR MONITORING:**

The purpose of the Owner's daily area air monitoring is to evaluate quality, resolve problems, and minimize the potential for the spread of contamination beyond the work area. In addition, the work of the Owner's IH includes performance of the final visual inspection and testing to determine whether a space or a building has been adequately decontaminated. All daily air monitoring is to be performed utilizing Phase Contrast Microscopy (PCM) except for Final Clearance Monitoring as specified in the following paragraphs. Owner's IH will perform the following task:

- 1. Establish background levels inside and outside of containment before abatement work starts. This will include taking background samples; the number and location to be determined by the Owner's IH, while meeting all SCDHEC requirements.
- 2. Perform continuous air monitoring, inspection and testing inside (dirty room) and outside the work area during actual abatement work to detect any faults in the work area isolation and any adverse impact on surrounding areas from work area activities



3. Perform final inspection and testing of decontaminated areas or buildings at the conclusion of the abatement and clean-up work to certify compliance with decontamination standard.

All data, inspection results, and testing results generated by the Owner's IH will be available to the contractor for information and consideration. Contractor shall provide cooperation and support to the Owner's IH for efficient and smooth performance of their work.

Monitoring and inspection results of the IH may be used to issue any stop removal orders to the contractor during abatement work and to accept or reject an area or a building as decontaminated.

This section also sets forth airborne fiber levels both inside and outside the work area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.

#### **STOP ACTION LEVELS:**

<u>Inside Work Area</u>: Maintain an average airborne count in the work area of less than .05 f/cc. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8 hour period exceeds the Stop Action Level, stop all work except corrective action, leave pressure differential and air circulation system in operation and notify Owner's Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Representative.

If airborne fiber counts exceed 0.1 f/cc cease all work except corrective action. Notify Owner's Representative. Do not recommence work other than corrective action for 24 hours unless otherwise authorized, in writing, by Owner's Representative.

<u>Outside Work Area</u>: If any air sample taken outside of the Work Area exceeds 0.01 f/cc or the base line established by background air monitoring, immediately and automatically stop all work except corrective action. The Owner's Representative will determine the source of the high reading and notify the Contractor in writing.

If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:

- Immediately erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (eg. wall, ceiling, floor).
- > Decontaminate the affected area in accordance with Project Decontamination Procedures.
- > Require that respiratory protection as set forth in Respiratory Protection be worn in affected area until area is cleared for re-occupancy in accordance with Final Clearance Monitoring.



- ➤ Leave Critical Barriers in place until completion of work and ensure that the operation of the pressure differential system in the Work Area results in a flow of air from the affected area into the existing Work Area.
- ➤ If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a separate decontamination facility consisting of a Shower Room and Changing Room.
- After Certification of Visual Inspection in the Work Area, remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area as set forth in Final Clearance Monitoring.

If the high fiber reading was the result of other causes, initiate the corrective action as determined by the Owner's Representative.

#### CONTRACTOR RELEASE CRITERIA FOR FINAL WORK AREA CLEARANCE:

#### **VISUAL INSPECTION:**

Final Clearance Monitoring will not begin until the Asbestos Abatement Work Area airborne asbestos structure concentrations have been reduced to the level specified and described in Project Decontamination is complete, the area has passed a thorough visual inspection by the Owner's IH and the Project Manager and successful completion of these requirements has been certified by the Owner's IH and Project Manager.

#### **METHOD OF FINAL AIR CLEARANCE ANALYSIS:**

Upon approval from SC-DHEC, the crawlspace will be cleared using PCM analysis following completion of abatement, and TEM analysis following completion of all work in crawlspace (installation of floor barrier and removal of specified piping). The mechanical room will be cleared using TEM analysis.

TEM samples will be secured as indicated below:

Sampling sensitivity in the tables below refer to:

Detection Limit for PCM analysis as set forth in the analytical method used or Analytical Sensitivity for TEM analysis as set forth in the analytical method used and/or the AHERA regulation

#### TRANSMISSION ELECTRON MICROSCOPY:

In each homogeneous work area after completion of all cleaning work, a minimum of 13 samples will be taken and analyzed as follows:

Location	Number of	Analysis	Analytical	Recommended	Rate in
Sampled	Samples	Method	Sensitivity	Volume (liters)	Liters per



			(fibers/cc)		Minute (LPM)
Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Outside Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Work Area Blank	1	TEM	0.005	0	Open for 30 Seconds
Outside Blank	1	TEM	0.005	0	Open for 30 Seconds
Laboratory Blank	1	TEM	0.005	0	Do Not Open

<u>Analysis</u> will be performed using the analysis method set forth in the AHERA Regulation 40 CFR Part 763 Appendix A.

<u>Asbestos Structures</u> referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.

<u>Release Criteria</u>: Decontamination of the work site is complete if either of the following two sets of conditions are met:

Work Area Samples are not statistically different from Outside samples

All sample volumes except for blanks are greater than 560 liters for a 25 mm. sampling cassette.

The average asbestos concentration of the three blanks is below the filter background level of 70 structures per square millimeter of filter area.

Average asbestos concentrations in Work Area Samples are not statistically different from Outside samples, as determined by the Z-test calculation found in 40 CFR Part 763, Subpart E, Appendix A (Z is less than or equal to 1.65)

If these conditions are not met then the decontamination is incomplete and the cleaning procedures of Project Decontamination shall be repeated.



<u>Termination of Analysis</u>: if the arithmetic mean (average) asbestos concentration on the blank filters exceed 70 structures per square millimeter of filter area the analysis will cease and new samples collected.

#### **EFFECT ON CONTRACT SUM:**

If stop work action levels occur Contractor is responsible to complete corrective work with no change in the Contract Sum if high airborne fiber counts were caused by Contractor's activities. The Contract Sum and schedule will be adjusted for additional work caused by high airborne fiber counts beyond the Contractor's control. If visual inspection is unsatisfactory or Air Clearance Levels are not met, the Contractor must complete corrective work with no change in the Contract sum. The time frame for all work, including final clearance and clean-up of the site following final results, shall be no later than **5:00 PM** on the specified completion date. Contractor shall be responsible for Project Administration and/or Owner's IH costs on an hourly basis should work continue beyond this time if the delay is the result of the Contractor's activities.

#### **LABORATORY TESTING AND ANALYTICAL METHODS:**

#### TRANSMISSION ELECTRON MICROSCOPY (TEM):

Analysis will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A. Samples will be sent by overnight courier for analysis by Transmission Electron Microscopy. Samples will not be carried on weekends, so that samples shipped on Friday will arrive on the following Monday. Faxed and Verbal results will normally be available during the 2ND working day after receipt of samples by the laboratory. The laboratory is capable of analyzing a maximum of 13 such samples from this project at any one time. All Transmission Electron Microscopy results will be available to the Contractor.

#### **SAMPLE VOLUMES:**

The number and volume of air samples taken by the Owner will be in accordance with all regulations and standards governing air monitoring. Additional samples may be taken at Owner's or Owner's Representatives discretion. If airborne fiber counts exceed allowed limits additional samples will be taken as necessary to monitor fiber levels.

#### **SAMPLE CASSETTES**:

<u>PCM</u>: Samples will be collected on 25 mm. cassettes as follows:

<u>TEM:</u> 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0 micron mixed cellulose ester backing filter.

#### **WRITTEN REPORTS:**

Written reports will be posted at the job site on a daily basis. Location will be determined by Owner's IH and Contractor's General Superintendent.



#### **ADDITIONAL TESTING:**

The Contractor may conduct his own air monitoring and laboratory testing. If he elects to do this the cost of such air monitoring and laboratory testing shall be at no additional cost to the Owner.

#### **PERSONAL MONITORING:**

Contractor is responsible for performing air monitoring to meet Contractor's OSHA requirements for personnel sampling or any other purpose.

**END OF SECTION - 01410** 



#### <u>SECTION 01513 - NEGATIVE PRESSURE DIFFERENTIAL AND AIR CIRCULATION</u> SYSTEM

#### NEGATIVE PRESSURE DIFFERENTIAL ISOLATION

Isolate the Work/isolation Area from all adjacent areas or systems of the building with a Negative Pressure Differential that will cause a movement of air from outside to inside at any breach in the physical isolation of the Work Area.

Continuously maintain relative pressure in the Work/Isolation Area at an air pressure that is lower than that in any surrounding space in the building, or at any location in the immediate proximity outside of the building envelope. This pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of: -0.02 inches of water.

Accomplish the pressure differential by exhausting a sufficient number of HEPA filtered fan units from the Work/isolation Area. The number of units required will depend on machine characteristics, the seal at barriers, and required air circulation. The number of units will increase with increased make-up air or leaks into the Work/isolation Area. Determine the number of units required for pressure isolation by the following procedure:

- Establishing the required air circulation in the Work/isolation Area, personnel, and equipment decontamination units
- Exhausting a sufficient number of units from the Work/isolation Area to develop the required pressure differential

The required number of units is the number determined by the above requirements. Extra units must be available onsite to compensation for change in pressure due to removal of walls, ceilings, etc.

#### **QUALITY ASSURANCE:**

Monitor pressure differential at locations approved by the Building Owner's Representative or the Owner's IH with a differential pressure meter equipped with a continuous recorder. General Superintendent or Supervisor will mark the strip chart at the beginning and end of each work shift with the date, time, and their initials. The strip chart shall also be marked if any unusual events affecting the pressure differential occur such as a power loss or a breach of the Work/isolation Area isolation barriers. Meters shall be equipped with a warning buzzer that will sound if pressure differential drops below -0.02 inches of water. If the differential pressure meters have variable settings, it may be set at -0.02 inches of water. OSHA requires the use of ventilation smoke tubes to be used at the beginning of each shift to test for negative pressure. The Building Owner's Representative may require additional pressure differential monitoring around the perimeter of the Work/isolation Area to check the system performance. Contractors should be prepared to provide no less than 2 manometer units.



On a weekly basis (if applicable): Submit printout from pressure differential monitoring equipment. Mark printout twice daily with date, time, and initials. Use printout paper that indicates elapsed time in intervals no greater than 4 hours. Indicate on each day's record, times of starting and stopping remediation/demolition work, type of work in progress, breaks for lunch or other purposes, periods of stop work, and filter changes. Cut printout into segments by day, attach to 8 1/2" by 11" paper. Label with project name, contractors name, and date.

#### **HEPA FILTERED FAN UNITS:**

Supply the required number of HEPA filtered fan units to the site in accordance with these specifications. Use units that meet the following requirements.

Cabinets are to be constructed of durable materials able to withstand damage from rough handling and transportation. The width of the cabinet should be less than 30 inches to fit through standard-size doorways. Provide units whose cabinets are:

- Factory-sealed to prevent asbestos-containing dust from being released during use, transport, or maintenance
- Arranged to provide access to and replacement of all air filters from intake end
- Mounted on casters or wheels
- Rate capacity of fan according to usable air movement capacity under actual operating conditions.

ALL UNITS SHOULD HAVE NEW HEPA FILTERS INSTALLED PRIOR TO PLACEMENT ON PROJECT SITE. IF A UNIT IS FOUND TO CONTAIN A DIRTY UNIT THE CONTRACTOR WILL BE REQUIRED TO HAVE NEW HEPA FILTERS INSTALLED IMMEDIATELY OR HAVE THE UNIT WITH THE DIRTY FILTER REMOVED FROM THE JOBSITE.

#### ADDITIONAL HEPA FILTERED FAN UNITS (SCRUBBERS):

Along with the required number of HEPA filtered fan units to be used to maintain negative pressure in the work/isolation area, additional HEPA Filtered fan units may be required to be utilized as scrubber machines to circulate air to reduce air monitoring counts or to help with the reduction of heat in the work area. These machines will meet all standards for the HEPA Filtered fan units as stated in the above section. These units will be placed strategically throughout the work/isolation area to reduce the air counts.

#### **SAFETY AND WARNING DEVICES:**

Provide units with the following safety and warning devices:

- Electrical (or mechanical) lockout to prevent fan from operating without a HEPA filter
- Automatic shutdown system to stop fan in the event of a rupture in the HEPA filter or blocked air discharge



- Warning lights to indicate normal operation (green), too high a pressure drop across the filters (i.e., filter overloading) (yellow), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge) (red)
- Audible alarm if unit shuts down due to operation of safety systems
- Provide units with electrical components approved by the National Electrical Manufacturers
  Association (NEMA) and Underwriter's Laboratories (UL). Each unit is to be equipped
  with overload protection sized for the equipment. The motor, fan, fan housing, and cabinet
  are to be grounded

#### **HEPA FILTERS:**

Provide units whose final filter is the HEPA type with the filter media folded into closely pleated panels and completely sealed on all edges with a structurally rigid frame. Provide units with a continuous rubber gasket located between the filter and the filter housing to form a tight seal. Provide HEPA filters that are individually tested and certified by the manufacturer to have an efficiency of not less than 99.97 percent when challenged with 0.3 um dioctylphthalate (DOP) particles when tested in accordance with Military Standard Number 282 and Army Instruction Manual 136-300-175A. Provide filters that bear a UL586 label to indicate ability to perform under specified conditions. Provide filters that are marked with the name of the manufacturer, serial number, airflow rating, efficiency, and resistance, and the direction of test air flow.

#### **PRE-FILTERS:**

Prefilters that protect the final filter by removing the larger particles are required to prolong the operating life of the HEPA filter. Two stages of prefiltration are required. Provide units with the following prefilters:

- First-stage prefilter: low-efficiency type (e.g., for particles 100 um and larger):
- Second-stage (or intermediate) filter: medium efficiency (eg., effective for particles down to 5 um):
- Provide units with prefilters and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps. :

CONTRACTOR WILL PROVIDE SUFFICIENT NUMBER OF PRE-FILTERS TO BE CHANGED AT A MINIMUM OF ONCE A DAY DURING PREP AND FINE CLEANING WORK AND AT A MINIMUM OF TWICE A DAY DURING GROSS REMOVAL. THIS DOES NOT LIMIT THE ACTUAL CHANGING OF FILTERS AS NEEDED OR AS OBSERVED TO BE DIRTY.

#### **VENT HEPA FILTERED FAN UNITS TO OUTSIDE OF BUILDING:**

Unless authorized in writing by Owner's Representative all units will be vented to the outside of the building. Mount units to exhaust directly or through disposable ductwork. Use only new ductwork except for sheet metal connections and elbows, use ductwork and fittings of same diameter or larger than discharge connection on fan unit. Use inflatable, disposable plastic ductwork in lengths not greater than 100 feet or use spiral wire-reinforced flex duct in lengths not greater than 50 feet.



Arrange exhaust as required to inflate duct to rigidity sufficient to prevent flapping. If direction of discharge from fan unit is not aligned with duct, use sheet metal elbows to change direction. Use six feet of spiral wire reinforced flex duct after direction change.

## <u>CALCULATION FOR AIR CIRCULATION IN THE WORK/ISOLATION AREA FOR VENTED HEPA FAN UNITS</u>

This section refers to the introduction of outside air to the Work/isolation Area. Air circulation in the Work/isolation Area is a minimum requirement intended to help maintain airborne fiber counts at a level that does not significantly challenge the Work/isolation Area isolation measures. The Contractor may also use this air circulation as part of the engineering controls in his worker protection program.

• Provide an operational air circulation system supplying a minimum of the following air circulation rate: 4 air changes per hour to achieve required air circulation according to the following procedure:

Determine the volume in cubic feet of the Work/isolation area by multiplying floor area by ceiling height.

Determine total air circulation requirement in cubic feet per minute (CFM) for the Work/isolation Area by dividing this volume by the air change rate and multiplying by 60.

Air Circulation Required in Cubic Feet of Air per Minute (CFM) =

Volume of Work/isolation Area (cu. ft.) X Number of air changes per hour 60 (minutes per hour)

Divide the air circulation requirement (CFM) above by capacity of HEPA filtered fan unit(s) used. Capacity of a unit for purposes of this section is the capacity in cubic feet per minute with fully loaded filters (pressure differential which causes loaded filter warning light to come on) in the machine's labeled operating characteristics or 50% of the manufacturer's rated capacity for the unit. The capacity of the combined units shall at least be capable of maintaining a negative pressure differential of 0.02 inches of water around the entire perimeter of the Work/isolation Area.

Provide a minimum of 2 additional units as backups in case of equipment failure or machine shutdown for filter changing.

(Contractor is responsible for calculating the correct number of units per containment and for providing enough units during the removal process to ensure negative pressure.)

<u>Location of HEPA Filtered Fan Units</u>: Locate fan unit(s) so that makeup air enters <u>Work/isolation</u> Area primarily through decontamination facilities and traverses Work/isolation Area as much as



possible. This may be accomplished by positioning the HEPA filtered fan unit(s) at a maximum distance from the worker access opening or other makeup air sources. The location of these units must be designated on drawings submitted by the Contractor to the Building Owner's Representative prior to the Pre-Construction Meeting. Place End of the Fan Unit at intake duct or its exhaust duct through an opening in the plastic barrier or wall covering. Seal plastic around the unit or duct with tape.

<u>Decontamination Units</u>: Arrange <u>Work/isolation</u> Area and decontamination units so that the majority of make up air comes through the Decontamination Units. <u>Use only personnel or equipment Decontamination Unit at any one time and seal the other so that make up air passes through unit in use. Personnel and equipment Decontamination Units may be used at the same time only if prior permission is obtained from the Building Owner's Representative or the Owner's IH.</u>

## <u>DEMONSTRATION OF THE PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM:</u>

<u>Testing the System</u>: Test pressure differential system before any asbestos-containing material is wetted or removed. After the <u>Work/isolation</u> Area has been prepared, the decontamination facility set up, and the fan unit(s) installed, start the unit(s) (one at a time). Demonstrate operation and testing of pressure differential system to Owner's Representative and/or the Project Administrator before start of work/isolation by performing smoke test to check for leaks and breaches as outlined in OSHA CFR 1926.1101 (i)(B)(1). <u>Smoke tests are to be completed at the beginning of each shift and documented on the superintendents daily logs.</u>

#### **USE OF SYSTEM DURING REMEDIATION OPERATIONS:**

After the pressure differential system has been tested and approved by the Building Owner's IH and remediation/demolition work has begun, run units continuously to maintain a constant pressure differential and air circulation until decontamination of the Work/isolation Area is complete and final clearance air monitoring results have been obtained. Do not turn off fan units at the end of the work shift or when remediation/demolition operations temporarily stop or during final clearance air monitoring.

Do not shut down air pressure differential system during encapsulating procedures, unless approved by applicable regulatory authorities and authorized by the Owner's Representative in writing. Supply sufficient pre-filters to allow frequent changes (frequent changes can be interpreted, as when the exterior pre-filter is visibly dirty it needs to be changed).

Start remediation/demolition work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all remediation/demolition work and do not resume until power is restored and fan units are operating again. Document the date and time of the power failure on the pressure differential monitor strip chart and notify the Building Owner's Representative and/or the Owner's IH immediately.



Where the contractor cannot produce a negative exposure assessment, or where exposure monitoring shows that a PEL is exceeded, the contractor shall ventilate the regulated area to move contaminated air away from the breathing zone of employees toward a HEPA filtration or collection device.

After the pressure differential system has been tested and approved by the Building Owner's IH and remediation/demolition work has begun, run units continuously to maintain a constant pressure differential and air circulation until decontamination of the Work/isolation Area is complete and final clearance air monitoring results have been obtained. Do not turn off fan units at the end of the work shift or when remediation/demolition operations temporarily stop or during final clearance air monitoring.

Do not shut down air pressure differential system during encapsulating procedures, unless approved by applicable regulatory authorities and authorized by the Owner's Representative in writing. Supply sufficient pre-filters to allow frequent changes (frequent changes can be interpreted, as when the exterior pre-filter is visibly dirty it needs to be changed).

Start remediation/demolition work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all remediation/demolition work and do not resume until power is restored and fan units are operating again. Document the date and time of the power failure on the pressure differential monitor strip chart and notify the Building Owner's Representative and/or the Owner's IH immediately.

Where the contractor cannot produce a negative exposure assessment, or where exposure monitoring shows that a PEL is exceeded, the contractor shall ventilate the regulated area to move contaminated air away from the breathing zone of employees toward a HEPA filtration or collection device.

#### **DISMANTLING THE SYSTEM:**

When a final inspection and the results of final air tests indicate that the area has been decontaminated, fan units may be removed from the Work/isolation Area. Before removal from the Work/isolation Area, remove and properly dispose of pre-filter, decontaminate exterior of machine and seal intake to the machine with 6-mil polyethylene to prevent environmental contamination from the filters.

**END OF SECTION - 01513** 



#### **SECTION 01526 - TEMPORARY ENCLOSURES**

#### **DESCRIPTION OF WORK**

The establishment of work/isolation areas from all the adjacent areas of the campus. Work in the section is to be carried out sequentially. Complete each activity before proceeding to the next.

#### **REGULATED AREA:**

The Regulated area is the location where environmental remediation work occurs. All class I, II, and III asbestos work as defined in OSHA CFR 1926.1101 (b) shall be conducted within regulated areas. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos.

The Critical barriers and the negative pressure enclosure shall be demarcated as the regulated area. Signs shall be provided and displayed. Access to the regulated area shall be limited to authorized persons and to persons authorized by the regulations to enter the regulated area.

Prohibited activities within the regulated area include but are not limited to, no eating, drinking, smoking, chewing of tobacco or gum, or applying of cosmetics. The competent person shall ensure that all asbestos work performed within regulated area is supervised by a competent person, which is defined in South Carolina as a licensed Supervisor.

#### **WORK/ISOLATION AREA:**

The Work/Isolation area that is located within the regulated area is a variable of the extent of work of the Contract. It may be a portion of an area, or a complex of areas. A "Work/Isolation Area" is considered contaminated during the work, and must be separated from the balance of the building, and decontaminated at the completion of the asbestos-control work.

Completely separate the Work/Isolation Area from other parts of the building to prevent asbestos-containing dust or debris from passing beyond the work/isolated area. Should the area beyond the Work/Isolation Area(s) become contaminated with asbestos-containing dust or debris because of the work, clean those areas in accordance with the specifications. Perform all such required cleaning or decontamination at no additional cost to owner.

Place all tools, scaffolding, staging, etc. necessary for the work in the area to be separated prior to completion of Work/Isolation Area separation.

Lockout the power to circuits running through work area, wherever possible, by switching off all breakers or removing fuses serving these circuits. Label breakers with tape over breaker with notation "DANGER circuit being worked on". Lock panel and have all keys under control of Contractor's Superintendent or Building Owner's designated lockout/tagout representative. If circuits cannot be shut down for any reason, label at intervals 4'-0" on



center with tags reading, "DANGER live electric circuit. Electrocution hazard." Label circuits in hidden locations but which may be affected by the work in a similar manner.

#### **EMERGENCY EXITS:**

Provide emergency exits and emergency lighting as set forth. At each existing exit door from the Work Area provide the following means for emergency exiting:

- Arrange exit door so that it is secure from outside the Work area but permits exiting from the Work Area.
- Provide a visible sign at each exit, written in appropriate language(s).
- Provide battery-operated emergency lighting that can be manually switched on or will switch on automatically in the event of a power failure.

#### **CONTROL ACCESS:**

Submit to Owner's Representative a list of doors and other openings that must be secured to Work/Isolation Area. Include on the list a notation if door or opening is in an indicated exit route.

Locked Access: Arrange Work/Isolation Area so that the only access into area is through lockable doors to personnel and equipment decontamination units. Use existing locksets whenever possible and arrange for obtaining the keys from the Building Owner's Representative at the Pre-Construction meeting. Provide additional locksets and/or padlocks as needed and provide one key for each lock to Building Owner, Owner's Representative, and maintain one key in project office area (3 total). It will be the responsibility of the Contractor to ensure that the work/isolation areas of the building are secured at all times and until which time the building is demolished. If a decontamination unit is built outside the building, a wooden door into the decontamination unit will be required, with a key being provided to the air monitor, a representative of the building, along with the supervisor.

<u>Visual Barrier</u>: Where the Work Area is immediately adjacent to or within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil in thickness so that the work procedures are not visible to building occupants. Where this visual barrier would block natural light, substitute frosted or woven rip-stop sheet plastic in locations approved by the Owner's Representative. **However, allow for viewing ports of plexi-glass for the Building Owner, inspectors and his representatives, measuring 24 inches by 24 inches in an external wall of the contained work area. A viewing port needs to be placed at each end of the containment.** 

<u>Provide Warning Signs</u> at each access to Regulated Area on doors and/or critical barriers. Post an approximately 20 inch by 14 inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by OSHA 29 CFR 1926.1101:



#### **LEGEND:**

#### **DANGER**

#### **ASBESTOS**

## CANCER AND LUNG DISEASE HAZARD RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Provide spacing between respective lines at least equal to the height of the respective upper line.

#### **CRITICAL BARRIER REQUIREMENTS**:

Prior to erecting critical barriers, conduct a pre-cleaning of each affected area utilizing personal protective equipment including a minimum of half mask air purifying respirator, double disposable suits, and hard hat. Use a HEPA vacuum immediately adjacent to any inaccessible housings or ductwork that must be cleaned. The onsite Industrial Hygienist will conduct an initial visual inspection of the affected areas prior to the erection of the critical barriers.

<u>Provide Sheet Plastic</u> at least two (2) layers of 6-mil in thickness and can be put in place utilizing duct tape and/or spray adhesive.

Repair of Damaged Polyethylene Sheeting: Remove and replace plastic sheeting that has been damaged by removal operations or where seal has failed allowing water to seep between layers. Remove affected sheeting and wipe down entire area. Install new sheet plastic only when area is completely dry. Critical barriers are to be inspected at the beginning of each shift, periodically throughout the shift, and again at the end of each shift. All inspections are to be documented on the supervisor's daily logs.

Complete all of the following procedures in erecting the critical barriers:

Completely Separate the Work/Isolation Area from other portions of the building, and the outside by closing all openings with sheet plastic barriers. The following critical barriers shall be erected as defined. If the Environmental/Demolition Contractor prefers alternate methods of containing the Work/Isolation Area, these alternate methods may be submitted to the Owner's Representative for approval. Submittal of alternate methods must provide, at a minimum, the same level of protection for the building and its occupants as specified in this contract document. If such alternate methods are submitted, they must comply with all existing regulations for Federal and State agencies. The Contractor cannot assume that the alternate methods will be accepted; all alternatives must be reviewed and the Contractor given written approval of these alternate methods before altered work practices can be initiated.



<u>Critical barriers at the end of the hallways: Provide at least two layers of poly 6-mil in thickness to contain each area of the work/isolation areas.</u> <u>One layer will remain in place after the project is complete until clearance is achieved.</u>

#### Doorways, windows, drains, and miscellaneous openings:

Is to be sealed with a minimum of two (2) layers of polyethylene sheeting at least 6 mil in thickness taped securely or spray glued in place. Maintain seal until all work including Project Decontamination is completed.

#### PROVIDE NEGATIVE PRESSURE DIFFERENTIAL SYSTEM PER SECTION 01513.

#### PRIMARY BARRIER (S):

Since the crawl space is considered contaminated, the walls and ceiling are considered part of the abatement project, and shall not be covered.

#### **STOP WORK:**

If the Critical or Primary barrier falls or is breached in any manner stop work immediately. Do not start work until authorized in writing by the Owner's Representative.

#### Extension of Work/Isolation Area:

If the Critical Barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, notify the Building Owner's Representative and the Owner's IH. Upon their instruction, add the affected area to the Work/Isolation Area, enclose it as required by this Section of the specification, and decontaminate it as described in Section 01711 Project Decontamination.

#### **ALTERNATE METHODS OF ENCLOSURE:**

Alternate methods of containing the Work/Isolation Area may be submitted to the Owner's Representative for approval. Do not proceed with any such method(s) without prior written approval of the Owner's Representative. If such alternate method is submitted, it must comply with all existing regulations for Federal and State agencies.

#### **QUALITY ASSURANCE:**

Contact the Building Owner's Representative or the Owner's IH when work in this section is completed so that the Pre-Containment Checklist provided in Appendix A can be executed. Perform corrective action as instructed by the Building Owner's Representative or the Owner's IH. Obtain a copy of the Pre-Containment Checklist signed by the Building Owner's Representative or the Owner's IH indicating that all items on the checklist have been satisfactorily completed **before proceeding with the Work.** 

#### **END OF SECTION – 01526**



#### **SECTION 01560 - WORKER PROTECTION**

#### **DESCRIPTION OF WORK:**

This section describes the equipment and procedures required for protecting workers against asbestos, and other work place hazards except for respiratory protection, **See Section** 01562-Respiratory Protection/Personnel Monitoring.

#### **ASBESTOS**

#### **MEDICAL EXAMINATIONS:**

<u>Provide medical examinations</u> for all workers who may encounter an airborne fiber level of 0.1 f/cc or greater for an 8 hour Time Weighted Average. Provide medical examinations for all workers who will enter the Regulated Work/Isolation Area for any reason. Examination shall as a minimum meet OSHA requirement as set forth in OSHA 29 CFR 1926.1101(m). In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

The Medical Examination must have been conducted within the previous 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the Regulated Area.

#### PROTECTIVE CLOTHING:

<u>Coveralls</u>: Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the Work/Isolation Area. Provide a sufficient number for all required changes, for all workers in the Work/Isolation Area. Each time Work/Isolation Area is entered remove <u>all</u> street clothes in the Changing Room of the Personnel Decontamination Unit and put on new disposable coverall, new head cover, and a clean respirator. <u>Disposable undergarments or nylon swimsuit must be worn under disposable coveralls.</u> Proceed through shower room to equipment room and put on work boots.

<u>Boots</u>: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Do not allow boots to be removed from the Work/Isolation Area for any reason, after being contaminated with asbestos-containing material. All boots <u>will have the toes of painted a fluorescent color</u> that will be agreed upon by the environmental/demolition contractor and the project manager. Thoroughly clean, decontaminate and bag boots before removing them from Work/Isolation Area at the end of the work. Package and label boots as asbestos-contaminated waste at the end of the work. Any worker found wearing the boots that have been designated for the work area outside of the work area, the worker may be asked to be reprimanded up to leaving the work site for the day or permanently.

<u>Hard Hats</u>: Provide head protection (hard hats) as required by OSHA for all workers, and provide 4 spares for use by Owner's Representative, Project Administrator, and Owner. Provide hard hats of type with plastic strap type suspension. **Require hats be worn in the building and outside facility grounds during the entire project.** Thoroughly clean, decontaminate and bag hats before



removing them from Work/Isolation Area at the end of the work. Package and label hats as asbestos-contaminated waste at the end of the work. <u>If hardhats are required within the asbestos work area, these hats are also to be painted with the same fluorescent color paint as the boots.</u>

<u>Goggles</u>: Provide eye protection (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity that may potentially cause eye injury. Thoroughly clean, decontaminate and bag goggles before removing them from Work/Isolation Area at the end of the work. Package and label goggles as asbestos-contaminated waste at the end of the work.

Gloves for inside asbestos areas: Provide work gloves to all workers and require that they be worn at all times in the Work/Isolation Area. Do not remove gloves from Work/Isolation Area and dispose of as asbestos-contaminated waste at the end of the work. Provide one color glove for inside the asbestos containment area and another color for outside the work area.

<u>Gloves</u>: Provide work gloves to all workers and require that they be worn at all times in the Work/Isolation Area.

## PROVIDE ADDITIONAL PROTECTIVE EQUIPMENT DURING REMEDIATION FOR IH, PROJECT MANAGER, AND/OR REGULATORY PERSONNEL:

Respirator filters, disposable coveralls, head covers, and footwear covers shall be provided by the Contractor for the Owner, Owner's Representative, Project Administrator, and other authorized representatives who may inspect the job site. Provide six (6) complete coveralls and, where applicable, six (6) respirator filters changes per day for these visitors.

If PAPRs are required on the jobsite contractor will provide at a minimum two (2) extra units for the Project Administrator and/or Owner to utilized if necessary.

#### **DECONTAMINATION PROCEDURES:**

Require all workers to adhere to the following personal decontamination procedures whenever they leave the Work/Isolation Area:

When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.

Still wearing respirators, proceed to showers. Showering is <u>mandatory</u>. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:

- 1. Thoroughly wet body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.
- 2. With respirator still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR. Pay particular attention to seal between face and respirator and under straps.



- 3. Take a deep breath; hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breath.
- 4. Carefully wash the face piece of the respirator inside and out.

\*\*If using PAPR: shut down in the following sequence, first cap inlets to filter cartridges, and then turn off blower unit (this sequence will help keep debris which has collected on the inlet side of filter from dislodging and contaminating the outside of the unit). Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Be extremely cautious of getting water in battery pack, as this will short out and destroy battery.

#### WITHIN REGULATED AREA:

Require that workers <u>NOT</u> eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Regulation and/or Work/Isolation Area. To eat, chew, drink, or smoke, workers shall follow the procedure described above, and then dress in street clothes before entering the non-regulated areas of the building.

IF A WORKER IS FOUND VIOLATING AN OSHA RESPIRATOR REQUIREMENT, THE WORKER MAY BE ASKED TO BE REPRIMANDED UP TO LEAVING THE WORK SITE FOR THE DAY OR PERMANENTLY.

**END OF SECTION - 01560** 



#### SECTION 01562 - RESPIRATORY PROTECTION/PERSONNEL AIR MONITORING

#### **DESCRIPTION OF WORK:**

#### Permissible practice.

- 1. In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section.
- 2. Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee. The employer shall provide the respirators that are applicable and suitable for the purpose intended.
- 3. Instruct and train each worker involved in asbestos abatement or maintenance and repair of Class I, II, and III asbestos-containing materials in proper respiratory use. Require that each worker always wear a respirator, properly fitted on the face in the Work/Isolation Area from the start of any operation that may cause airborne asbestos fibers until the Work/Isolation Area is completely decontaminated. Use respiratory protection appropriate for the fiber level encountered in the work place or as required for other toxic or oxygen-deficient situations encountered.

#### **RESPIRATORY PROTECTION PROGRAM:**

Comply with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and OSHA 29 CFR 1910.134 and CFR 1926.1101. Require that respiratory protection be used at all times where there is any possibility of disturbance of **asbestos-containing materials** whether intentional or accidental. Require that a respirator be worn by anyone in a Work/Isolation Area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers until the area has been cleared for re-occupancy in accordance with Section 01711 or until a negative exposure assessment has been completed

The employer shall provide respirators, and ensure that they are used where required. Respirators shall be used in the following circumstances:

#### **ASBESTOS**

- During all Class I asbestos jobs.
- During all Class II work where the ACM is not removed in a substantially intact state.
- During all Class II and III asbestos jobs where the employer does not produce a "negative exposure assessment".
- During all Class III jobs where TSI or surfacing ACM or PACM is being disturbed.



- During all Class IV work performed within the regulated areas where employees performing other work are required to wear respirators.
- During all work where employees are exposed above the TWA (0.1 f/cc) or excursion limit (1.0 f/cc).
- During all work where employees are exposed to chemicals at or above the PEL, STEL or Ceiling Limits.

#### **STANDARDS:**

Except to the extent that more stringent requirements are written directly into the Contract Documents, the following regulations and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies were bound herewith. Where there is a conflict in requirements set forth in these regulations and standards, meet the more stringent requirement.

OSHA- U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards 29 CFR 1910, Section 1001 and Section 1910.134.29 CFR

1926.1101.

CGA- Compressed Gas Association, Inc., New York, Pamphlet G-7, "Compressed Air for

Human Respiration", and Specification G-7.1 "Commodity Specification for Air".

ANSI- American National Standard Practices for Respiratory Protection, ANSI

Z88.2-1992.

NIOSH- National Institute for Occupational Safety and Health

#### **FIT TESTING:**

Fit Testing Procedures--General Requirements

<u>Initial Fitting</u>: Provide initial fitting of respiratory protection. Fit the respirator to be actually worn by each individual as needed. Allow an individual to use only those respirators for which training and fit testing has been provided.

At least once every year there after, check the fit of each worker's respirator by completing one of the fit test methods as outlined in OSHA 1910.134.

#### FIT CHECK UPON EACH WEARING:

Require that each time an air purifying respirator is put on it be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z88.2 (1992).

#### **ASBESTOS RESPIRATORY PROTECTION REQUIREMENTS:**

<u>Respiratory Protection</u> that supplies an airborne fiber level inside the respirator at or below .01 f/cc as an 8-Hour Time Weighted Average (TWA) and/or .05 f/cc as a 30-Minute Short Term Excursion Limit (STEL) is the minimum level of protection allowed. Contractor is responsible for collecting air sampling data for TWA and STEL measurements.



For Class I asbestos work, until the contractor conducts exposure monitoring and documents that employees on the job will not be exposed in excess of the PEL's or otherwise makes a negative exposure assessment the contractor shall presume that the workers are exposed in excess of the TWA and excursion limit.

#### PERSONNEL AIR MONITORING:

<u>Periodic Monitoring</u>: The contractor shall conduct daily monitoring that is representative of the exposure of each worker who is assigned to work within a regulated area and who is performing Class I or II work, unless the contractor has a negative exposure assessment for the entire operation. EXCEPTION: When all workers required to be monitored daily are equipped with supplied-air respirators operated in the positive-pressure mode, the contractor may dispense with the daily monitoring required by this paragraph.

<u>Termination of monitoring</u>: If periodic monitoring reveals that worker exposures, as indicated by statistically reliable measurement, are below the permissible exposure limit and excursion limit the contractor may discontinue monitoring for those employees whose exposure are represented by such monitoring.

Additional monitoring: The contractor shall institute the exposure monitoring whenever there has been a change in process, control equipment, personnel or work practices that may result in new or additional exposure above the permissible exposure limit and/or excursion limit. Also, the contractor shall institute exposure monitoring when the employer has any reason to suspect that a change may result in new or additional exposure above the permissible exposure limit and/or excursion limit. Such additional monitoring is required regardless of whether a "negative exposure assessment" was previously produced for a specific job.

<u>Observation of monitoring</u>: The contractor shall provide affected employees and their designated representative an opportunity to observe any monitoring of workers exposure to asbestos conducted in accordance with OSHA CFR 1926.1101.

<u>Special Notation</u>: For all Class I jobs where the contractor cannot produce a negative exposure assessment, or where exposure monitoring shows that a PEL is exceeded, the contractor shall ventilate the Work/Isolation Area to move contaminated air away from the breathing zone of workers toward a HEPA filtration or collection device.

#### **AIR PURIFYING RESPIRATORS:**

<u>Negative pressure - half or full facemask</u>: Supply a sufficient quantity of respirator filters approved for asbestos, so that workers can change filters during the workday. Require that respirators be wetrinsed, and filters discarded, each time a worker leaves the Work/Isolation Area. Require that new filters be installed each time a worker re-enters the Work/Isolation Area. Store respirators and filters at the job site in the changing room and protect totally from exposure to asbestos prior to their use. Equip full-face respirators with a nose cup or other anti-fogging device.



Powered air purifying - half or full face mask: Supply a sufficient quantity of high efficiency respirator filters approved for asbestos so that workers can change filters at any time that flow through the face piece decreases to the level at which the manufacturer recommends filter replacement. Require that regardless of flow, filter cartridges be replaced after 40 hours of use. Require that HEPA elements in filter cartridges be protected from wetting during showering. Require entire exterior housing of respirator, including blower unit, filter cartridges, hoses, battery pack, facemask, belt, and cords, and be washed each time a worker leaves the Work/Isolation Area. Caution should be used to avoid shorting battery pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use.

<u>Filter Cartridges</u>: Provide, at a minimum, HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z88.2 (1992). In addition, a chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.

Provide equipment capable of producing air of the quality and volume required by the above reference standards applied to the job site conditions and crew size. Comply with provisions of this specification if more stringent than the governing standard.

**END OF SECTION - 01562** 



#### **SECTION 01563 - DECONTAMINATION UNITS**

#### **DESCRIPTION OF WORK:**

Provide separate Personnel and Equipment Decontamination facilities for each work/isolation area. Require that the Personnel Decontamination Unit be the only means of entrance and exit for the Work/Isolation Area. Require that all materials exit the Work/Isolation Area through the Equipment Decontamination Unit.

#### FOR WORK IN THE CRAWLSPACE, THERE ARE THREE ACCESSES, AS FOLLOW:

- 1) ACCESS AT GRATE (NEAR ATM)-THIS ACCESS MAY BE USED FOR EXHAUST PURPOSES ONLY. A VIEWPORT MAY ALSO BE INSTALLED IN THIS LOCATION. THE EXHAUST MUST TERMINATE WITHIN THE HOLE (BELOW THE GRATE), AND <u>AT NO</u> TIME IS GRATE TO BE LEFT OFF OF ACCESS.
- 2) MECHANICAL ROOM ACCESS (BASEMENT LEVEL)-THIS ACCESS MUST BE UITLIZED FOR PLACEMENT OF PERSONNEL DECONTAMINATION UNIT. THE ACCESS IS ELEVATED (VIA LADDER ACCESS). THE LADDER ACCESS MUST BE ENCLOSED AND TIED INTO THE DECON UNIT SITUATED ON THE FLOOR.
- 3) KITCHEN ACCESS (1<sup>ST</sup> FLOOR LEVEL)-THE KITCHEN ACCESS CONSISTS OF A FLOOR HATCH, LOCATED IN THE DISHWASHER AREA OF THE KITCHEN. THIS ACCESS MUST BE UTILIZED FOR LOAD OUT, WASTE HOLDING, AND PIPE HOLDING DURING THE PIPE DEMOLITION PHASE. THIS AREA OF THE KITCHEN WILL NOT BE OPERATIONAL DURING THE TIME OF ABATEMENT, BUT MUST BE ISOLATED FROM THE OPERATING PORTION OF THE KITCHEN BY THE ASBESTOS ABATEMENT CONTRACTOR. THE DIVIDING WALL MUST BE CONSTRUCTED OF 6-MIL BLACK POLYETHYLENE SHEETING, AT A MINIMUM. THE WALL MUST BE MONITORED TO ENSURE THAT IT REMAINS IN PLACE AT ALL TIMES. IF THE POLY WALL IS NOT INSTALLED IN A WAY THAT IT REMAINS SEALED AT ALL TIMES, THE CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTED A WOODEN BARRIER, AT NO ADDITIONAL COST TO THE BUILDING OWNER.

THE HATCH TO THIS ACCESS MUST BE ENCLOSED/INCLUDED IN THE FIRST STAGE OF THE LOAD-OUT. THIS STAGE IS TO BE UTILIZED FOR PLACING A SECOND BAG ON BAGGED WASTE.

DURING THE PIPE DEMOLITION PHASE, CLEAN PIPING MAY BE HELD IN THIS AREA OF THE KITCHEN UNTIL IT IS REMOVED FROM THE BUILDING FOR DISPOSAL/RECYCLING. TWO LAYERS OF 6-MIL POLYETHYLENE SHEETING MUST BE TAPED TO THE FLOOR TO PLACE THE CLEAN PIPING ON.

<u>Locked Access</u>: Arrange Work/Isolation Area so that the only access into Work/Isolation Area is through lockable doors at the personnel and equipment decontamination units. Use existing locksets whenever possible and arrange for obtaining the keys from the Building Owner's Representative at the Pre-Construction meeting. If existing locksets are unavailable, provide additional locksets and/or padlocks as needed and provide one key for each door to the Building Owner, the Owner's Representative or the Owner's IH, and maintain one key in project office area



(3 total). The area in which the personnel decon will be located is within a fenced, lockable area.

### <u>CONSTRUCTION OF THE DECONTAMINATION UNITS (LOAD-OUT AND PERSONNEL DECON):</u>

Walls and Ceiling: Construct airtight walls and ceiling using opaque polyethylene sheeting, at least 6 mil in thickness. Use sturdy wooden or PVC framework..

<u>Floors</u>: Use 2 layers (minimum) of 6 mil polyethylene sheeting to cover floors in all areas of the Decontamination Units. Use only clear plastic to cover floors.

<u>Doors</u>: Follow an overlapping door configuration that will maintain negative pressure in the Work/Isolation Area. Put arrows on the doors to indicate direction of overlap and/or travel. Provide a minimum of six feet (6') between entrance and exit of any room. Provide a minimum of three feet (3') between doors to airlocks.

<u>Electrical</u>: Provide sub panel to accommodate all removal equipment. Wire the power sub panel directly from a building electrical panel. Connect all electrical branch circuits in Decontamination unit and particularly any pumps in shower room to a ground-fault circuit protection device.

<u>Filters</u>: Provide cascaded filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from the Work/Isolation Area. Provide units with disposable filter elements including a Primary Filter that passes particles 20 microns or less and a Secondary Filter that passes particles 5 microns and smaller. Connect so that discharged water passes through primary filter and output of primary filter passes through secondary filter. Discharge all filtered water to a sanitary sewer system.

<u>Hose Bib</u>: Provide heavy bronze angle type with wheel handle, vacuum breaker, and 3/4" National Standard male hose outlet.

<u>Elastomeric membrane</u>: Provide uniform flat sheets of flexible sheet roofing material fabricated from EPDM (ethylene propylenedienemonomers) or Neoprene (polychloroprene), in a nominal 45-mil thickness.

Lumber: If used, provide kiln dried lumber of any grade or species.

<u>Sump Pump</u>: Unless written permission is obtained from the Building Owner's Representative, provide totally submersible waterproof sump pump with integral float switch. Provide unit sized to pump 2 times the flow capacity of all showers or hoses supplying water to the sump, through the filters specified herein when they are loaded to the extent that replacement is required. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination



procedures without damage to mechanism of pump. Adjust float switch so that a minimum of 3" remains between top of liquid and top of sump pan.

Wastewater filtration device: Provide 20 micron and 5 micron wastewater filters in line to drain or waste water storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan. Provide hose bib.

#### SPECIFICS FOR PERSONNEL DECONTAMINATION UNIT:

Provide a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, Changing Room, airlock, Shower Room, airlock, and Equipment Room. Require all persons without exception to pass through this Decontamination Unit for entry into and exiting from the Work/Isolation Area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit. Provide temporary lighting within Decontamination Units as necessary to reach a lighting level of 100-foot candles.

Changing Room (clean room): Provide a room that is physically and visually separated from the rest of the building for the purpose of changing into protective clothing. Construct using polyethylene sheeting, at least 6-mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building. Locate so that access to Work/Isolation Area from Changing Room is through Shower Room. Separate Changing Room from the building by 3-sheet plastic flapped doorway, a doorway equipped with a floating HEPA filter, or a lockable door. Require workers to remove all street clothes in this room, dress in clean, disposable coveralls, and don respiratory protection equipment. Do not allow asbestos-contaminated items to enter this room. Require Workers to enter this room either from outside the structure dressed in street clothes, or from the showers. If clean room is not large enough to allow private changing, and storage of all streets clothes for all workers, then an extension of the clean room (adjacent changing area) must be provided. This area must be constructed with using black poly. Protect all surfaces of room with sheet plastic as set forth in Section 01526 Temporary Enclosures. Maintain floor of changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in changing room. Damp wipe all surfaces twice after each shift change with a disinfectant solution. Provide posted information for all emergency phone numbers and procedures. Provide storage for each employee for clothing and personal items.

<u>Airlock</u>: Provide an airlock between Changing Room and Shower Room. This is a transit area for workers. Separate this room from Changing Room by 3-sheet plastic flapped doors, closable doorways, or a solid door connected to the Equipment Room doorway in such a way that both doors are never open at the same time. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene. Separate this room from the Changing Room with airtight walls fabricated of 6-mil polyethylene.

<u>Shower Room</u>: Provide a completely watertight operational shower to be used for transit by cleanly dressed workers heading for the Work/Isolation Area from the Changing Room, or for showering by workers headed out of the Work/Isolation Area after undressing in the Equipment Room.



Construct room by providing a shower pan and 2 shower walls in a configuration that will cause water running down walls to drip into pan. Provide one-piece waterproof shower pan 4' x 8' by 6" deep. Fabricate from seamless fiberglass minimum 1/16" thick reinforced with wood, 18 ga. stainless or galvanized steel with welded seams, copper or lead with soldered seams, or a seamless liner of minimum 60 mil thick elastomeric membrane. Install a freely draining wooden floor in shower pan at elevation of top of pan. Provide walls fabricated from rigid, impervious, waterproof material, either corrugated fiberglass roofing or equivalent approved by the Building Owner's Representative. Structurally support as necessary for stability. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene. Separate this room from the Changing Room and Airlock with airtight walls fabricated of 6-mil polyethylene. Provide splash proof entrances to Changing Room and Airlock with doors. Provide a factory-made showerhead producing a spray of water that can be adjusted for spray size and intensity. Feed shower with water mixed from hot and cold supply lines. Arrange so that control of water temperature, flow rate, and shut off is from inside shower without outside aid. Provide a soap dish and a continuously adequate supply of soap and maintain in sanitary condition. Arrange so that water from showering does not splash into the Changing or Equipment Rooms. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the Work/Isolation Area. Provide flexible hose shower head. Pump wastewater to drain or to storage for use in amended water. If pumped to drain, provide 20 micron and 5 micron wastewater filters in line to drain or waste water storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan. Provide hose bib.

<u>Airlock</u>: Provide an airlock between Shower Room and Equipment Room. This is a transit area for workers. Separate this room from Equipment Room by a 3-sheet flapped doorway. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene. Separate this room from the Equipment Room and Shower Room with airtight walls fabricated of 6-mil polyethylene. Separate from Equipment Room by 3-sheet plastic flapped doorway or equivalent barrier.

Equipment Room (contaminated area): Require work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers. Separate this room from the Work/Isolation Area by a 3-sheet plastic flapped doorway, a closable doorway, or a solid door connected to the Equipment Room doorway in such a way that both doors are never open at the same time. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene. Separate this room from the Shower Room and Work/Isolation Area with airtight walls fabricated of 6-mil polyethylene. Provide a drop cloth layer of sheet plastic on floor in the Equipment Room for every shift change expected. Roll drop cloth layer of plastic from Equipment Room into Work/Isolation Area after each shift change. Replace before next shift change. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.



<u>Work/Isolation Area</u>: Separate Work/Isolation Area from the Equipment Room by polyethylene barriers. Damp wipe clean all surfaces after each shift change. Provide one additional floor layer of 6-mil polyethylene per shift change and remove contaminated layer after each shift.

<u>Decontamination Sequence</u>: Require that all workers adhere to the following sequence when entering or leaving the Work/Isolation Area.

<u>Entering Work/Isolation Area</u>: Worker enters Changing Room and removes street clothing, puts on clean disposable overalls and respirator, and passes through the Shower Room into the Equipment Room. Any additional clothing and equipment left in Equipment Room needed by the worker are put on in the Equipment Room. Worker proceeds to Work/Isolation Area.

Exiting Work/Isolation Area: Before leaving the Work/Isolation Area, require the worker to remove all gross contamination and debris from overalls and feet. The worker then proceeds to the Equipment Room and removes all clothing except respiratory protection equipment and nylon swimsuit, if worn. Extra work clothing such as boots, hard hats, goggles, and gloves are to be stored in contaminated end of the Equipment Room. Disposable coveralls and disposable undergarments are placed in a bag for disposal with other material.

Require that Decontamination procedures found in Section 01560 be followed by all individuals leaving the Work/Isolation Area. After showering, the worker moves to the Changing Room and dresses in either new coveralls for another entry or street clothes if leaving.

#### **EQUIPMENT DECONTAMINATION UNIT/LOAD-OUT:**

The load-out shall be located over and enclosing hatch in kitchen.

<u>Wash Room</u>: Provide washroom for cleaning of bagged or containerized asbestos-containing waste materials passed from the Work/Isolation Area. Construct washroom of nominal 2" x wood framing or PVC piping, and opaque polyethylene sheeting, at least 6-mil in thickness and located so that packaged materials, after being wiped clean, can be passed to the Holding Room. Provide a drop cloth layer of plastic on floor in the Wash Room for every load-out operation. Roll this drop cloth layer of plastic from Wash Room into Work/Isolation Area after each load-out. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.

<u>Airlock</u>: Provide an airlock between Wash Room and Holding Room. This is a transit area. Separate this room from 3-sheet plastic flapped doors. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.

<u>Holding Room</u>: Provide Holding Room as a drop location for bagged asbestos-containing materials passed from the Wash Room. Construct Holding Room of nominal 2" x wood framing and opaque polyethylene sheeting, at least 6-mil in thickness and located so that bagged materials cannot be



passed from the Wash Room through the Holding Room to the Clean Room. Separate this room from the adjacent rooms by 3-sheet flap doors fabricated from 6-mil sheet plastic.

<u>Decontamination Sequence</u>: Take all equipment or material from the Work/Isolation Area through the Equipment Decontamination Unit. At the wash down station, thoroughly wet clean all contaminated equipment or sealed polyethylene bags and pass into the Wash Room. When passing equipment or containers into the Wash Room, close all doorways of the Equipment Decontamination Unit, other than the doorway between the Wash down Station and the Wash Room. Keep all outside personnel clear of the Equipment Decontamination Unit. Once inside the washroom, wet clean the bags and/or equipment. When cleaning is complete, pass items into Holding Room. Close all doorways except the doorway between the Holding room and the Clean Room. Workers from the building exterior enter Holding Area and remove decontaminated equipment and/or containers for disposal.

#### **CLEANING OF DECONTAMINATION UNITS:**

Clean debris and residue from inside of Decontamination Units on a daily basis or as otherwise indicated or needed. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis or as needed. If the Changing Room of the Personnel Decontamination Unit becomes contaminated with asbestos-containing debris, abandon the entire Decontamination Unit and erect a new Decontamination Unit. Use the former Changing Room as an inner section of the new Equipment Room.

#### **SIGNS:**

Post an approximately 20 inch by 14 inch manufactured caution sign at each entrance to the Work/Isolation Area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

#### **LEGEND**

#### DANGER

# ASBESTOS CANCER AND LUNG DISEASE HAZARD RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Provide spacing between respective lines at least equal to the height of the respective upper line.

**END OF SECTION - 01563** 



#### SECTION 01711 - PROJECT DECONTAMINATION

#### **DESCRIPTION OF REQUIREMENTS:**

This is a four-step procedure. There are two cleanings of the Primary Barrier plastic prior to its removal and two cleanings of the room surfaces to remove any new or existing contamination. Unless specifically indicated, all materials are considered damaged or friable for purposes of this section. Operation of the pressure differential system during the performance of the work of this section is used to remove airborne fibers generated by the remediation work.

#### **RELATED WORK SPECIFIED ELSEWHERE:**

<u>Removal of Gross Debris</u> is integral with the performance of remediation work and as such is specified in **Section 02081** Removal of Environmental Waste (Controlled Materials) Materials.

<u>Work/Isolation Area Clearance</u>: Air testing and other requirements that must be met before release of Contractor and re-occupancy of the work area are specified in Section 01410 Monitoring Requirements.

<u>Visual Inspection</u> shall be performed in accordance with ASTM E 1368-90 "Standard Practice for Visual Inspection of Asbestos Remediation Projects" as specified in Section 01092 Codes, Regulations, and Standards and per the Agency for Toxic Substances & Disease Registry (ATSDR) Indoor Air Quality for the mercury levels.

#### **ASBESTOS**

#### WORK OF THIS SECTION:

Work of this section includes the decontamination of air in the Work/Isolation Area which has been, or may have been, contaminated by the elevated airborne asbestos fiber levels generated during remediation activities and/or during the removal of the asbestos. The work also covers lowering any previously elevated fiber levels due to friable asbestos-containing materials in the space; the cleaning, decontamination, and removal of temporary facilities installed prior to remediation work, including Primary and Critical Barriers, Decontamination Units, and Negative Pressure Differential System components. It also includes the cleaning, and decontamination of all surfaces (ceilings, walls, floors, dirt) of the Work/Isolation Area, and all furniture or equipment in the Work/Isolation Area.

<u>SUBMITTAL</u>: Upon completion of the final visual inspection, submit a copy of the "Certificate of Visual Inspection" found in Appendix A with original signatures of the Building Owner's Representative and/or the Owner's IH and the Contractor's Supervisor. <u>Final payment will not be made until this Certification is executed.</u>

#### **START OF WORK:**

During completion of the asbestos remediation work specified in other sections, all gross debris generated by the asbestos remediation work will be disposed of in a certified landfill. Work of



this section begins with the cleaning of the work/isolated area. At the start of work the following items will be in place:

- 1. Critical Barrier (an airtight barrier between the Work/Isolation Area and other portions of the building or the outside);
- 2. Critical Barrier Sheeting (over any item that will not be removed until demolition, and other openings);
- 3. Decontamination Units for personnel and equipment in operating condition;
- 4. Negative Pressure Differential System in operation.

#### **FIRST CLEANING:**

Carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and/or a High Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum may fail if used with wet material.) **Do not perform dry dusting or dry sweeping**. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces.

Replace All Filters in Air Handling System(s) and dispose of as asbestos-containing waste in accordance with requirements of **Section 02084** Disposal of Asbestos-Containing Waste Material.

#### **SECOND CLEANING:**

Carry out a second cleaning of all surfaces in the work area in the same manner as the first cleaning.

#### **FINAL CLEANING:**

Carry out a final cleaning of all surfaces in the Work/Isolation Area in the same manner as the previous cleaning.

<u>Contractor's Cleaning</u>: At the completion of the above cleaning visually inspect all surfaces. Reclean if any dust, debris, etc. is found. At completion of this inspection sweep entire Work/Isolation Area including walls, ceilings, ledges, floors and other surfaces in the Work/Isolation Area with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). Do not direct forced air equipment at any seal in any critical barrier. If any debris or dust is found, repeat the final cleaning. Continue this process until no debris, dust or other material is found while sweeping of all surfaces with forced air equipment.

#### **VISUAL INSPECTION:**

Following Final Cleaning the Project Superintendent and/or Supervisor shall complete a final visual inspection of the entire Work/Isolation Area including: all surfaces, ceiling, walls, floor, decontamination unit, piping, all plastic sheeting, seals over ventilation openings, and other



openings; look for debris from any sources, residue on surfaces, dust or other matter. Ensure that no standing moisture or condensation is visible prior to performing the inspection. Ensure that all waste has been removed from the work area. If any debris, residue, dust, or other matter is found, repeat final cleaning and continue decontamination procedure from that point.

When the area is visually clean, complete the Certificate of Visual Inspection found in Appendix A and request the performance of the Final Visual Inspection by Building Owner's Representative and/or the Owner's IH. Area is not ready for Clearance Air Monitoring until Visual inspection is complete and confirmed in writing by IH and/or the Project Manager on the Certificate of Visual Inspection.

<u>Lifts</u>: Provide ladders, scaffolding, and lifts as required to provide access to all surfaces in the area to be subjected to visual inspection by the IH. The definition of "access" is to allow touching of all surfaces.

### <u>Final Visual Clearance will not begin until requested by the General Superintendent of</u> the project.

Only after the work area has passed a thorough visual inspection by the Owner's IH and/or the Project Manager, and successful completion of these requirements has been certified by the Owner's IH can the area be sprayed with lock-down (encapsulate).

#### **LOCKBACK:**

<u>Encapsulation of substrate</u>: After the area has passed a visual inspection by the IH, perform encapsulation of substrates as specified in Section **09805** before Removal of Work/Isolation Area Isolation as specified below. Maintain Pressure Differential System in operation during encapsulation work.

<u>Waiting Period:</u> Wait 96 Air Changes or an equivalent approved by the Building Owner's Representative or the Owner's IH to allow HEPA filtered fan units to clean air of airborne asbestos fibers. Maintain Negative Pressure Differential System in operation for the entire waiting period.

### METHOD OF FINAL AIR CLEARANCE ANALYSIS (ALSO SEE SECTION 01410 AIR MONITORING):

Upon approval from SCDHEC, the crawlspace will be cleared using PCM analysis following abatement, and TEM analysis upon completion of all work. PCM clearance shall be performed in accordance with SCDHEC Regulations, and analyzed utilizing NIOSH 7400 Method.



<u>TEM samples</u> will be secured as indicated below:

<u>Sampling sensitivity</u> in the tables below refer to:

Detection Limit for PCM analysis as set forth in the analytical method used or Analytical Sensitivity for TEM analysis as set forth in the analytical method used and/or the AHERA regulation.

#### TRANSMISSION ELECTRON MICROSCOPY:

In each homogeneous work area after completion of all cleaning work, a minimum of 13 samples will be taken and analyzed as follows:

Location Sampled	Number of Samples	Analysis Method	Analytical Sensitivity (fibers/cc)	Recommended Volume (liters)	Rate in Liters per Minute (LPM)
Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Outside Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Work Area Blank	1	TEM	0.005	0	Open for 30 Seconds
Outside Blank	1	TEM	0.005	0	Open for 30 Seconds
Laboratory Blank	1	TEM	0.005	0	Do Not Open

<u>Analysis</u> will be performed using the analysis method set forth in the AHERA Regulation 40 CFR Part 763 Appendix A.

<u>Asbestos Structures</u> referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.

<u>Release Criteria</u>: Decontamination of the work site is complete if either of the following two sets of conditions are met:

Work Area Samples are not statistically different from Outside samples



All sample volumes except for blanks are greater than 560 liters for a 25 mm. sampling cassette.

The average asbestos concentration of the three blanks is below the filter background level of 70 structures per square millimeter of filter area.

Average asbestos concentrations in Work Area Samples are not statistically different from Outside samples, as determined by the Z-test calculation found in 40 CFR Part 763, Subpart E, Appendix A (Z is less than or equal to 1.65)

If these conditions are not met then the decontamination is incomplete and the cleaning procedures of Project Decontamination shall be repeated.

<u>Termination of Analysis</u>: if the arithmetic mean (average) asbestos concentration on the blank filters exceed 70 structures per square millimeter of filter area the analysis will cease and new samples collected.

#### **EFFECT ON CONTRACT SUM:**

If stop work action levels occur Contractor is responsible to complete corrective work with no change in the Contract Sum if high airborne fiber counts were caused by Contractor's activities. The Contract Sum and schedule will be adjusted for additional work caused by high airborne fiber counts beyond the Contractor's control. If visual inspection is unsatisfactory or Air Clearance Levels are not met, the Contractor must complete corrective work with no change in the Contract sum. The time frame for all work, including final clearance and clean-up of the site following final results, shall be no later than **5:00 PM** on the specified completion date. Contractor shall be responsible for Project Administration and/or Owner's IH costs on an hourly basis should work continue beyond this time if the delay is the result of the Contractor's activities.

#### <u>LABORATORY TESTING AND ANALYTICAL METHODS:</u>

#### TRANSMISSION ELECTRON MICROSCOPY (TEM):

Analysis will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A. Samples will be sent by overnight courier for analysis by Transmission Electron Microscopy. Samples will not be carried on weekends, so that samples shipped on Friday will arrive on the following Monday. Faxed and Verbal results will normally be available during the 2ND working day after receipt of samples by the laboratory. The laboratory is capable of analyzing a maximum of 13 such samples from this project at any one time. All Transmission Electron Microscopy results will be available to the Contractor.

#### Removal of Work/Isolation Area:

After all requirements of this section and Section 01410 Monitoring and Sampling Requirements have been met, shut down and remove the Pressure Differential System. Seal



HEPA filtered fan units, HEPA vacuums, and similar equipment with 6-mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from Work/Isolation Area. Remove Personnel Decontamination Unit. Remove the Critical Barriers separating the Work/Isolation Area from the rest of the building. Remove any small quantities of residual material found upon removal of the plastic sheeting with wet wiping, HEPA filtered vacuum cleaners and poly sheeting. If significant quantities, as determined by the Owner's Representative, are found then the entire area affected shall be decontaminated as specified. Cleaning & Decontamination Procedures. Remove all equipment, materials, and debris from the work site. Dispose of all asbestos-containing waste material as specified in Section **02084** Disposal of Asbestos Containing Waste Material.

**END OF SECTION - 01711** 



#### SECTION 02081 - REMOVAL OF ENVIRONMENTAL WASTE

#### **WORKER PROTECTION:**

Before beginning work of this section provide workers with the required protective equipment as outlined in Section 01562 or by the OSHA Regulations that is outlined for the type of work being completed. Require that appropriate protective equipment be used at all times.

Environmental/Demolition Contractor is responsible for obtaining any variances from SC-DHEC in completing the Temporary Enclosure for the crawlspace.

#### SUMMARY OF STEPS TO BE TAKEN IN CRAWL SPACE:

- 1) REMOVE EXISTING POLY AND ALL DEBRIS
- 2) ABATE ALL FRIABLE TSI USING GLOVEBAG METHODS
- 3) REMOVE ALL REMAINING PIPE INSULATION
- 4) AFTER PASSING VISUAL, ENCAPSULATE ENTIRE AREA
- 5) AFTER PASSING PCM CLEARANCE, REMOVE SPECIFIED PIPING
- 5) INSTALL FLOOR BARRIER
- 6) TEM CLEARANCE

#### A. REMOVAL OF DEBRIS

Remove all visible TSI debris, as well as other miscellaneous debris. The miscellaneous debris includes, BUT IS NOT LIMITED TO, poly, broken light bulbs, pieces of concrete, metal hangers, pieces of brick, rocks, and pieces of insulation. ALL debris other than rocks, concrete, and bricks must be removed. Rocks and pieces of concrete and/or brick that are less that 2" in diameter may be left in place. For reference, a golf ball is 1.68" in diameter. All debris must be considered as asbestos-contaminated and disposed of as such.

The soil directly beneath friable TSI debris is to be removed so that no visible debris is seen. Remove the loose soil (down to hardpan) directly beneath debris.

B. REMOVAL OF NON ASBESTOS-CONTAINING (CONTAMINATED FIBERGLASS, ETC.) AND NON-FRIABLE ASBESTOS-CONTAINING PIPE INSULATION (FOAMGLASS WITH ASBESTOS-CONTAINING MASTIC) IN THE CRAWLSPACE:

ALL INSULATION (INCLUDING NON-ASBESTOS INSULATION) IS TO BE REMOVED AS ASBESTOS-CONTAINING/CONTAMINATED MATERIAL.

ALL NON ABESTOS-CONTAINING PIPE INSULATION (CONTAMINATED FIBERGLASS INSULATION, ETC. AND NON-FRIABLE PIPE INSULATION



(FOAMGLASS WITH ASBESTOS-CONTAINING MASTIC) MAY BE REMOVED BY WETTING THE MATERIAL, CUTTING, AND PLACING, WHILE WET, INTO A PROPER DISPOSAL BAG. MANUAL METHODS (NO ELECTRIC POWERED EQUIPMENT) MUST BE USED ON REMOVAL OF ALL NON-FRIABLE ACM.

### C. REMOVAL OF FRIABLE PIPE INSULATION IN CRAWLSPACE AND ALL ASBESTOS-CONTAINING PIPE INSULATION IN MECHANICAL ROOM (INCLUDING FOAMGLASS WITH ACM MASTIC)

Use glovebag procedures in compliance with federal and state regulations for the removal of small sections of TSI. Place a Primary Barrier of at least one layer of 6 mil polyethylene as a drop cloth below material to be removed extending at least 10 feet in all directions, and provide pressure differential prior to performance of the work. Provide minimum 6 mil polyethylene, polyvinylchloride or equivalent plastic sack with two inward projecting long sleeved gloves or mittens, preprinted with same warning notice as a disposal bag, equipped with a pouch for storage of tools, with designated location for wand or HEPA vacuum wand, and sufficient capacity to hold removed materials and permit sealing as specified. Provide a hand pump type pressure-can garden sprayer fabricated out of either metal or plastic, equipped with a metal wand at the end of a hose that can deliver a stream or spray of liquid under pressure. Check pipe where the work will be performed. Wrap damaged (broken lagging, hanging, etc.), pipe in 6 mil plastic and "candy-stripe" with duct tape. Place one layer of duct tape around undamaged pipe at each end where the glove bag will be attached. Slit top of the glove bag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two inches longer than the pipe diameter). Place necessary tools into pouch located inside glovebag. This will usually include at least the following items: bone saw, utility knife, rags, scrub brush, wire cutters, tin snips and prewetted cloth. Place one strip of duct tape along the edge of the open top slit of glove bag for reinforcement. Place the glove bag around section of pipe to be worked on and staple top together through reinforcing duct tape. Next, duct tape the ends of glove bag to pipe itself, where previously covered with plastic or duct tape. Use smoke tube and aspirator bulb to test seal. Place tube into water sleeve (two-inch opening to glove bag) squeezing bulb and filling bag with visible smoke. Remove smoke tube and twist water sleeve closed. While holding the water sleeve tightly, gently squeeze glove bag and look for smoke leaking out, (especially at the top and ends of the glove bag). If leaks are found, tape closed using duct tape and re-test. Insert wand from garden sprayer through water sleeve. Duct tape water sleeve tightly around the wand to prevent leakage. Thoroughly wet material to be worked on with amended water or removal encapsulant and allow to soak in. Wet adequately to penetrate and soak material through to substrate. One person places his hands into the long-sleeved gloves while the second person directs garden sprayer at the work. Use bone saw, if required, to cut insulation at each end of the section



to be removed. A bone saw is a serrated heavy gauge wire with ring-type handles at each end. Throughout this process, spray amended water or removal encapsulant on the cutting area to keep dust to a minimum. Remove insulation using putty knives or other tools. Place pieces in bottom of bag without dropping. Rinse all tools with water inside the bag and place back into pouch. Using scrub brush, rags and water, scrub and wipe down the exposed pipe. Remove water wand from water sleeve and attach the small nozzle from HEPA-filtered vacuum. Turn on the vacuum only briefly to collapse the bag. Remove the vacuum nozzle, twist water sleeve closed and seal with duct tape. From outside the bag, pull the tool pouch away from the bag. Place duct tape over twisted portion and then cut the tool bag from the glove bag, cutting through the twisted/taped section. Contaminated tools may then be placed directly into next glove bag without cleaning. Alternatively, tool pouch with the tools can be placed in a bucket of water, opened underwater, and tools cleaned and dried. Discard rags and scrub brush with asbestos waste. With removed insulation in the bottom of the bag, twist the bag several times and tape it to keep the material in the bottom during removal of the glove bag from the pipe. Slip a 6 mil disposal bag over the glove bag (still attached to the pipe). Remove tape or cut bag, open the top of the glove bag, and fold it down into disposal bag. Clean all surfaces in the Work Area using disposable cloths wetted with water with surfactant or removal encapsulant added. When the surfaces have dried, clean them with a HEPA filtered vacuum. Seal exposed ends of remaining pipe insulation and exposed pipe. Collapse the bag with a HEPA vacuum twist top of bag, seal with at least 3 wraps of duct tape, bend over, and seal again with at least 3 wraps of duct tape.

<u>Dispose</u> of all rags, plastic sheet, etc. in accordance with requirements "Disposal of Procedures".

<u>Decontaminate Equipment</u>: After the completion of all work, decontaminate all equipment and machinery used for work of this section.

#### FOR ALL REMOVAL:

Accomplish misting the work area by a fine spray (mist) of amended water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the Asbestos-Containing Material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water. Saturate material through to the substrate sufficiently to wet to the substrate without causing excess dripping. Allow time for amended water to penetrate material thoroughly. Spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.



Mist the work area continuously with amended water whenever necessary to reduce airborne fiber levels.

<u>Dispose</u> of all rags, plastic sheet, etc. in accordance with requirements "Disposal of Procedures".

<u>Decontaminate Equipment</u>: After the completion of all work, decontaminate all equipment and machinery used for work of this section.

#### **CLEAN UP**

<u>Dispose</u> of all rags, plastic sheet, etc. in accordance with requirements of Section 02084, "Disposal of Environmental Containing Waste Material".

<u>Decontaminate Equipment</u>: After the completion of all work, decontaminate all equipment and machinery used for work of this section. Accomplish decontamination as required by the section on Project Decontamination.

<u>Compatibility</u>: At the completion of all work, leave substrates in such a state as to comply with all requirements and recommendations of manufacturer for replacement materials.

**END OF SECTION - 02081** 



#### SECTION 02084 - DISPOSAL OF ENVIRONMENTAL WASTE MATERIAL

#### **DESCRIPTION OF THE WORK:**

This section describes the disposal of Environmental waste materials. Disposal includes packaging of asbestos containing waste materials and microbial waste. Disposal may be accomplished by placing the waste in a landfill. Comply with Section **01560**-Worker Protection—and Section **01562** Respiratory Protection/Personnel Monitoring during all phases of this work.

#### STORAGE OF ASBESTOS WASTE

- 1. Asbestos waste is not stored at a location other than the facility site without prior written approval from the Department of South Carolina.
- 2. Stored asbestos waste is maintained in a secured locked location where access is controlled.

#### **DISPOSAL BAGS:**

Place adequately wet asbestos containing waste material into 6 mil thick leak-tight polyethylene bags; evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing. Place first bagged waste into a second disposal bag; use the **"gooseneck"** procedure to seal bags. These procedures is accomplished by twisting the neck of the bags, wrapping the twist with duct tape then bending the neck of the bag over, and seal the twists again with duct tape. Clean outside of bags and move the bags to the Wash down Station adjacent to Equipment Decontamination Unit.

#### **DISPOSAL BAG AND DRUM:**

Place adequately wet asbestos containing waste material into 6 mil thick leak-tight polyethylene bags; evacuate air from disposal bag with a HEPA filtered vacuum cleaner before sealing. Use the **''gooseneck''** procedure to seal bag, this is accomplished by twisting the neck of the bags, wrapping the twist with duct tape then bending the neck of the bag over, and sealing the twists again with duct tape. Clean outside of the bag at the Wash down Station adjacent to Equipment Decontamination Unit and place in a fiber or steel drum.

#### LABELING OF DISPOSAL CONTAINERS FOR ASBESTOS:

Waste generator labels are:

- (1) Written legibly and in indelible ink.
- (2) Displayed in a prominent location on the outer most area of the bag or container chosen disposal container the following three labels must be placed and visible:

**First Label**: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:



### DANGER CONTAINS ASBESTOS FIBERS

#### AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD

### BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH

**Second Label**: Until October 1, 1993, provide in accordance with U. S. Department of Transportation regulation on hazardous waste marking, 49 CFR parts 171 and 172. Hazardous Substances: Final Rule. Published November 21, 1986 and revised February 17, 1987:

RQ HAZARDOUS SUBSTANCE, SOLID, NOS, ORM-E, NA 9188 (ASBESTOS)

**Third Label**: Provide in accordance with 40 CFR Part 61 (AMENDED), subpart M, section 61.150(a)(1)(v) of EPA's National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Provision, published November 20, 1990.

CONTRACTOR:
WASTE GENERATOR NAME:
ADDRESS OF WORKSITE:
CITY: STATE: ZIP:

All waste is to be hauled by a waste hauler with all required licenses from all state and local authorities with jurisdiction.

As per NESHAPS 61.150 vii (3)(4) waste shipment records shall obtained from the landfill/or hauler within 35 days, if not received within 45 days, EPA shall be notified by the contractor of unresponsive records.

Asbestos waste is disposed of at a landfill approved or permitted to accept asbestos waste.

#### ASBESTOS WASTE TRANSPORTATION

Asbestos waste is transported and disposed of in a manner that will not permit the release of asbestos fibers into the air. Also, the asbestos waste is transported in accordance with the following procedures:

1. The cargo area of the transport vehicle shall be free of debris and lined with 6-mil polyethylene sheeting. Floor sheeting shall be installed first and shall extend up the side



walls at least 12 inches and shall be taped securely into place. Wall sheeting shall overlap by at least six inches and be taped into place. Ceiling sheeting shall extend down the side of the walls at least six inches and be taped into place.

- 2. If asbestos waste is transported exclusively in leak-tight clean drums, or other leak-tight, rigid containers approved by the US Department of Transportation as appropriate shipping containers for asbestos waste, then polyethylene sheeting is not required.
- 3. Drums, bags, wrapped components, and other leak-tight containers that have been removed from the work area shall be labeled in accordance with H.1.a. of this section prior to being loaded into an appropriate vehicle for transportation.
- 4. Any debris or residue observed on containers or surfaces outside of the work area resulting from abatement activities shall immediately be cleaned using wet methods and a vacuum equipped with a HEPA filter.
- 5. Containers shall be carefully placed and not thrown into the truck cargo area. Drums shall be placed on a level surface in the cargo area and packed tightly or blocked and braced to prevent shifting and tipping. Large structural components shall be secured to prevent shifting.
- 6. Asbestos waste which is removed from a facility site shall be transported directly to an approved landfill unless it is stored in the location designated in a temporary storage license issued to the owner/operator by the Department.
- 7. Metal dumpsters or containers in which asbestos waste is temporarily stored at the abatement site shall be lined with 6-mil polyethylene sheeting to prevent contamination, and shall have doors and tops. The doors and tops shall be closed and locked except during loading or unloading asbestos waste.
- 8. Metal dumpsters or containers used for waste storage shall be labeled in accordance with OSHA 29 CFR 1926.1101, August 10, 1994 as amended, and any subsequent amendments and editions.
- 9. Bags shall be free of splits, rips and tears, and shall be carefully placed, not thrown, into the transport vehicle.
- 10. Any equipment, materials, or supplies stored in the waste transport vehicle shall be isolated from the asbestos waste by a leak-tight barrier. All containers and wrappings shall be free of asbestos contamination.



- 11. Non-asbestos waste shall not be placed in waste containers or bags labeled as asbestos waste.
- 12. The vehicle used to transport asbestos wastes shall be labeled in accordance with 40 CFR 61.149(d)(1)(I, ii, and iii) as amended, and any subsequent amendments and editions.
- 13. Commercial rental vehicles shall not be used to transport any asbestos, asbestos-containing, or asbestos-contaminated waste. This prohibition does not apply to tractors, but does apply to cargo compartment areas which are used to store and/or transport asbestos waste. Rental vehicles do not include leased vehicles.

#### DISPOSAL OF WASTE AT LANDFILL

The owner/operator shall dispose of asbestos waste in accordance with the following procedures:

- 1. Upon reaching the landfill, vehicles shall approach the dump location as closely as possible to unload asbestos waste.
- 2. Bags, drums and wrapped components shall be inspected when unloaded at the disposal site. Material in damaged containers shall be rewrapped, or shall be repacked in empty drums or bags.
- 3. Waste containers shall be placed on the ground at the disposal site, not dropped or thrown out.
- 4. Unloading of metal dumpsters or containers by tipping or tilting is permitted without reinspecting individual bags or drums provided there are no visible emissions.
- 5. Following the removal of all containerized waste, polyethylene sheeting shall be removed and discarded in bags or drums along with contaminated cleaning materials and protective clothing.
- 6. After asbestos waste has been unloaded, the truck cargo area, including the floor, walls and ceiling, shall be decontaminated using wet methods or a vacuum equipped with a HEPA filter until no visible residues remain.
- 7. A copy of a completed waste shipment record shall be submitted to the Department by the asbestos contractor within 45 days of completion of abatement.
- 8. A waste shipment record shall be used and shall include the names of the facility owner, contractor and disposal site, the estimated quantity of asbestos waste, and the type and number of containers used. Each time the material changes custody, the record shall be



- signed by the persons receiving the waste. If a separate hauler is used, the hauler's name, address, telephone number and the driver's signature shall also appear on the record.
- 9. The owner/operator shall ensure that asbestos-containing or asbestos-contaminated waste materials are not burned or recycled.

**END OF SECTION - 02084** 



#### SECTION 02090 - PIPE DEMOLITION

This section includes the Demolition of designated piping, and removal of piping from the site.

All piping specified to be removed must be stripped, de-contaminated, and encapsulated (following passing TEM clearance), prior to removal. Piping must be cut in sections that can be easily removed from crawlspace, taken through load-out, and stored in specified area (See Sections 1563 and 1711). When piping is removed from the building, it must be taken out covered, through the nearest exit (loading dock exit), and immediately placed in dumpster.

All specified piping must be cut and capped at nearest valve or steam trap (where applicable).

#### PIPING TO BE DEMOLISHED AND DISPOSED OF (ALL IN CRAWLSPACE)

•	1/2" COPPER WATER LINES (BLUE)	30 LN. FT.
•	STEAM LINES (YELLOW)	25 LN. FT.
•	UNKNOWN HANGING, ABANDONED (ORANGE)	12 LN. FT.
•	ABANDONED SEWER LINE (GREEN)	110 LN. FT.
•	ABANDONED, UNKNOWN LINE ALONG WALL (ORANGE)	100 LN. FT.

#### PROTECTION OF EXISTING WORK

All contractors are responsible for protecting any utility that is scheduled to remain from damage.

#### **DISPOSITION OF MATERIALS**

#### General

- 1. Completely remove material resulting from demolition operations, except as otherwise specified, and dispose of in accordance with applicable laws and regulations.
- 2. Control rubbish, debris, and dust by approved methods, as required by local noise, dust, and erosion control regulations.

#### Title to Materials

- 1. Title to materials to be demolished is owned by the Awarded Asbestos Abatement Contractor upon receipt of notice to proceed.
- 2. The Owner will not be responsible for condition, loss, or damage to such property after Contractor receives notice to proceed.
- 3. Do not sell salvaged material on site.
- 4. Contractor is responsible for removing all materials from the site even if it is salvaged by the contractor before completion of the Work. The project will not be given a substantial completion if not all materials are removed from the site.

<u>Solid Waste Disposal</u>: In accordance with federal, state, and local codes and ordinances, disposal of solid waste in open dumps is prohibited. See Section 02084 Disposal of Environmental and Construction Waste.



#### **CLEANUP**

Remove debris and rubbish from site in an expedient manner. Piping can be held in building until disposal, as outlined in Section 01563. Remove debris and rubbish and transport the same in a manner to prevent spillage on streets or adjacent areas, follow South Carolina requirements that all waste be covered during transport. The jobsite is to be kept clean at all times. Contractor should place in their **Job Specific Plan** how the jobsite will be kept clean and the level of cleanliness that can be expected at the end of each work shift and at the end of each week.

**END OF SECTION - 02090** 



#### SECTION 09251-INSTALLATION OF FLOOR BARRIER IN CRAWLSPACE

The Asbestos Remediation Contractor will be responsible for installing a barrier on the floor following abatement, clean-up, visual inspection by Owner's Representative, and Encapsulation.

- 1) Install 6 mil reinforced polyethylene sheeting throughout large section of crawlspace. Poly sheeting should completely cover crawlspace floor in the area indicated, and turn up wall a minimum of six inches. Poly must be secured to walls using mounting hardware that is anchored to the walls and a face plate that is mechanically fastened to the mount via screws. This will effectively clamp the poly between the face plate and the mounting plate, adding greater rigidity and lessening the chance of the poly falling down or moving around. This system also lends itself to easy poly replacement should the material deteriorate or tear.
- 2) Overlap poly and secure with high-grade, abrasion resistant polyethylene seam tape at all seams to create a completely sealed barrier, and stake down at seams to prevent shifting and separation of the poly.
- Install a 60 mil <u>elastomeric membrane on main walking/crawling areas</u>: Provide uniform flat sheets of flexible sheet roofing material fabricated from 60 mil EPDM (ethylene propylenedienemonomers). The sheeting must be installed throughout the small end of the crawlspace leading from the mechanical room hatch to kitchen floor hatch. Directly below the kitchen hatch, install a durable 10' x 10' pad, and secure to EPDM sheeting.
- 4) In long section of crawlspace, install a 5' wide strip of 60 mil EPDM running the length of the crawlspace and leading to the mat under the kitchen hatch. EPDM should be secured to the reinforced poly using high-strength EPDM seam tape at seams.
- 5) Alternate material may be used in lieu of EPDM upon approval by Building Owner. If Contractor elects to use an alternate material, samples must be submitted to Building Owner for approval.
- 6) Following installation of floor barriers, an inspection will be performed by the Building Owner's Representative, and/or the Building Owner. Installation must meet approval of Building Owner and Building Owner's Representative.
- 7) Any dust or debris generated by installation must be cleaned off of the surface of the barriers upon completion of the installation inspection.

#### **END OF SECTION- 09251**



#### SECTION 09805 - ENCAPSULATION OF ENVIRONMENTAL WASTE MATERIALS

#### **DESCRIPTION OF WORK:**

The Extent of encapsulation work is as herein specified:

#### **ENCAPSULANT:**

Provide penetrating and bridging type encapsulant specifically designed for application to asbestos-containing material.

#### **QUALITY ASSURANCE:**

<u>Installation of Spray-On Encapsulation Materials</u>: Install spray-on materials by a firm and personnel approved by the manufacturer of the primary materials.

<u>Testing</u>: Test material to be encapsulated using methods set forth in ASTM Proposed Specification P-189 "Specification for Encapsulant for Friable Asbestos Containing Building Materials".

<u>Fire Safety</u>: Use only materials that have a flame spread index of less than 25, when dry, when tested in accordance with ASTM E-84.

#### **JOB CONDITIONS:**

Apply encapsulating materials only when environmental conditions in the work area are as required by the manufacturer's instructions and in compliance with federal, state, and local regulations.

Apply encapsulant with an airless spray gun with air pressure and nozzle orifice as recommended by the encapsulant manufacturer.

#### **DELIVERY AND STORAGE:**

Deliver materials to the job site in original, new, and unopened packages and containers bearing manufacturer's name and label, together with a copy of the OSHA Material Safety Data Sheet for the material.

#### **WORKER PROTECTION:**

Before beginning work of the section, provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times. In addition to protective breathing equipment required by OSHA requirements or by this specification, use painting prefilters on respirators to protect the dust filters when organic solvent-based encapsulant are in use.

#### Lockdown Encapsulants:

Provide penetrating or bridging type encapsulants specifically designed for application to the substrate from which asbestos-containing and asbestos-contaminated materials have been removed. Select appropriate encapsulants from those rated as "Acceptable" when tested under the procedures



of: "Battelle Columbus Laboratories' Tests for the Evaluation of Encapsulants for Friable Asbestos-Containing Materials." An updated list is maintained by the EPA.

Apply two (2) coats of encapsulant to the surfaces where environmental contaminated materials have been removed. Apply in strict accordance with the manufacturer's printed instructions for use of the encapsulant as a penetrant.

<u>Fire Safety</u>: Use only materials that have a flame spread index of less than 25, when dry, when tested in accordance with ASTM E-84.

<u>Do Not Commence Application</u> of encapsulating materials until all removal work within the work area has been completed, the final visual inspection by the Building Owner's Representative and/or the Owner's IH has been successfully completed, and the compatibility of the product with replacement materials has been determined.

Apply encapsulant with an airless spray gun with air pressure and nozzle orifice as recommended by the encapsulant manufacturer.

**END OF SECTION - 09805** 



## APPENDIX A SUBMITTAL FORMS

## APPENDIX A CROSSROADS ENVIRONMENTAL, LLC PROJECT CONTACTS PAGE

Project:	Project Number				
Project Address:					
Project Manager:	Project Supervisor:				
Project Site Telephone:	Fax:				
Contractor Name:	Contact Name:				
Address:	Phone:				
Building Owner:	Contact Name:				
Address:	Phone:				
Owner Representative/Engineering C	Co.:				
Contact Name:	Phone:				
Address:					
Environmental Monitoring Co.:					
Contact Name:	Phone:				
Address:					
OSHA Monitoring Co.:					
Contact Name:	Phone:				
Address:					
Reinsulation Co.:					
Contact Name:	Phone:				
Address:					
Subcontractor:	Contact Name:				
Address:	Phone Number:				
Subcontractor Scope of Work:					

## APPENDIX A CROSSROADS ENVIRONMENTAL, LLC NOTIFICATION LOG

Project:	Project Number					
Project Address:						
Contractor Name:		Con	tact Nam	e:		
Address:						
Original Dates:	1st	Revised Date		2	and Revised D	ate
Start Date:				_		
Finish Date:				_		
Note: Call agency to notify t	hem of da	te revisions, and	d initial.			
Agency & Full Address	Date	Letter Sent	1st	2nd	Phone	
	Letter	By	Rev.	Rev.		
	Sent					
Fire						
Emergency Squad						
Police					1	$\left\  \cdot \right\ $
Owner						$\exists$

**Building Representative** 

Others

#### APPENDIX A CROSSROADS ENVIRONMENTAL, LLC SITE SPECIFIC SAFETY CHECKLIST

Project:	Project Nur	nber		
Project Address:				
Contractor:	_Contact Name:			
Phone Location:				
Method for notifying emergency response	teams:			
Location of fire extinguishers:				·
Preferred emergency exits:				
		Yes	No	N/A
Emergency Evacuation Plan Posted				
Emergency exits marked				
Arrows to emergency exits posted				
Emergency lighting provided				
Electrical lockout complete				
Notification letters sent	•••••			
All employees reviewed and signed compar	ny safety policy			
Conducted a safety meeting prior to start of	of the project			
Building has a operating sprinkler system.				
Fire Extinguisher(s) located onsite				
List any other safety items:				
A/E, IH Monitor, or Consultant Name and Signatu	re		Date	
Contractor's Representative Name and Signature			Date	



### PRE-CONTAINMENT CHECKLIST

Project Name\_\_\_\_\_\_Project No.\_\_\_\_\_

	Project AddressContainm	nent Number	_
	Write in N/A if item is not applicable to this proje	ect	
A	Site Security	YES	NO
1.	Danger signs posted at entrances		
2.	Area access restricted & barriers in place		
3.	Visitors release forms & logs at access points		
4.	Security guards		
В.	Documentation	YES	NO
1.	Project log & records		
2.	Copy of OSHA, EPA, state, & local regulations		
3.	Proof of employee's asbestos training		
4.	Proof of worker respirator training		
5.	Proof of worker medical exams		
6.	Copy of EPA notification letter		
7.	Copies of permits & licenses		
8.	Emergency / fire plan posted		
9.	Emergency telephone numbers posted		
10.	Respiratory protection program		
11	Pre-work damage inventory report ( video tape / photo )		
12.	Hazard communication program & MSDS		
13.	OSHA poster, Accident log		
C.	Decontamination Unit	YES	NO
1.	Clean room		
2.	Equipment room		
3.	Shower room with hot & cold water		
4.	Towels, soap, & shampoo		
5.	Approved construction		
6.	Waste water filter system  Locker & lunch break areas		
7.	Locker & lunch break areas		
n	Equipment & Metariele	VEC	NO
<b>D.</b> 1.	Equipment & Materials  AFD's providing 4 air changes per hour @ 75 % of rated capacity	YES	NO
2.	HEPA vacuums		
3.	Amended water, encapsulant, & applicators		
4.	Air monitoring pumps & filters		
5.	Approved respirators cartridges & spare parts		
6.	Sufficient protective clothing		
7.	Eye protection & hard hats available		
8.	Hand tools (scrapers, brushes, etc.)		
9.	Cleaning equipment (disposable cloths, etc.)		
10.	Polyethylene film (4-6-10 mil.)		
11	Glovebags		
12.	Waste disposal bags, drums, & bins, labels		
13.	Scaffolding/ladders, hoists, etc.		
14.	Duct tape & spray adhesive		
15.	Spare AFDs		
16.	Emergency power provisions		
	, <del>v</del> 1	L	

G.	Miscellaneous	YES	NO
1.	First aid kits available		
2.	Fire extinguishers available throughout site		
3.	Sprinkler system operable, not impeded		
4.			
5.			
6.			
7.			

Comments:	
Signature certifies that you understand project specificat adequately monitored all items, and have received prope asbestos abatement.	
Owner or Owner's Representative Name & Signature	Date

Signatures certify that you understand the check list, it is completely filled out in ink, any cross outs are initialed and dated, and give approval to proceed with the abatement work.



Pre-Containment Checklist	<b>Page</b> 3 of .	
Project		
Project No.	Containment Number	
· ·	_	



## APPENDIX A CROSSROADS ENVIRONMENTAL, LLC PRE-WORK DAMAGE INVENTORY REPORT

Project:Project Number				
Project	Address:			
Owner 1	Name:		Project Manager:	
Owner'	s Representative:			
Contrac	ctor Name:		_Contact Name:	
Address	S:		Phone:	
			prior to asbestos abatement. T quipment, and permanent struc	
Video Ta	pe: Yes No S	Still Pictures: Yes No _	Attach additional information whe	re necessary.
	ITEM	LOCATION	COMMENT ON SPECIFIC	DAMAGE
1.				
2				
3				
1				
5				
6.				
7				
8.				
13. —				
15. —				
16. —				
17. —				
18.				
A/E, IH N	Monitor, or Consultan	t Name and Signature	Dat	e
Contracto	or's Representative N	ame and Signature	Dat	e

### APPENDIX A CROSSROADS ENVIRONMENTAL, LLC ALPHABETIZED SUPERVISOR AND SUPERINTENT TRAINING AND ELIBILITY FORM

Submit this certification signed and certified by an officer of the abatement contracting firm that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

Worker's Name	Training Cert. #	Medical Exam Date	Fit Test Date	Type of Respirator	State License

The undersigned Contractor certifies that to the best of his k	nowledge and belief the above information is accurate and is being kept in
conformance with 29 CFR 1926.	
Contractor:	Corporate Officer Signature:
Typed Name:	Title:
Cornorate Seal:	

## APPENDIX A CROSSROADS ENVIRONMENTAL, LLC VISITOR LOG

Project:	Project Number		
Project Address:			
Contractor Name:	Contact Name:		
Address:	Phone:		

Date	Visitor Name	Company	Waiver Signed (Yes/No)	Time In	Out
-			(103/110)		
			1		
			+		
			1		
					<u> </u>

### APPENDIX A CROSSROADS ENVIRONMENTAL, LLC ALPHABETIZED WORKER TRAINING AND ELIBILITY FORM

Submit this certification signed and certified by an officer of the abatement contracting firm that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

Worker's Name	Training Cert. #	Medical Exam Date	Fit Test Date	Type of Respirator	State License

The undersigned Contractor certifies that to the best of his knowledge and belief the above information is accurate and is being kept in conformance with 29 CFR 1926.

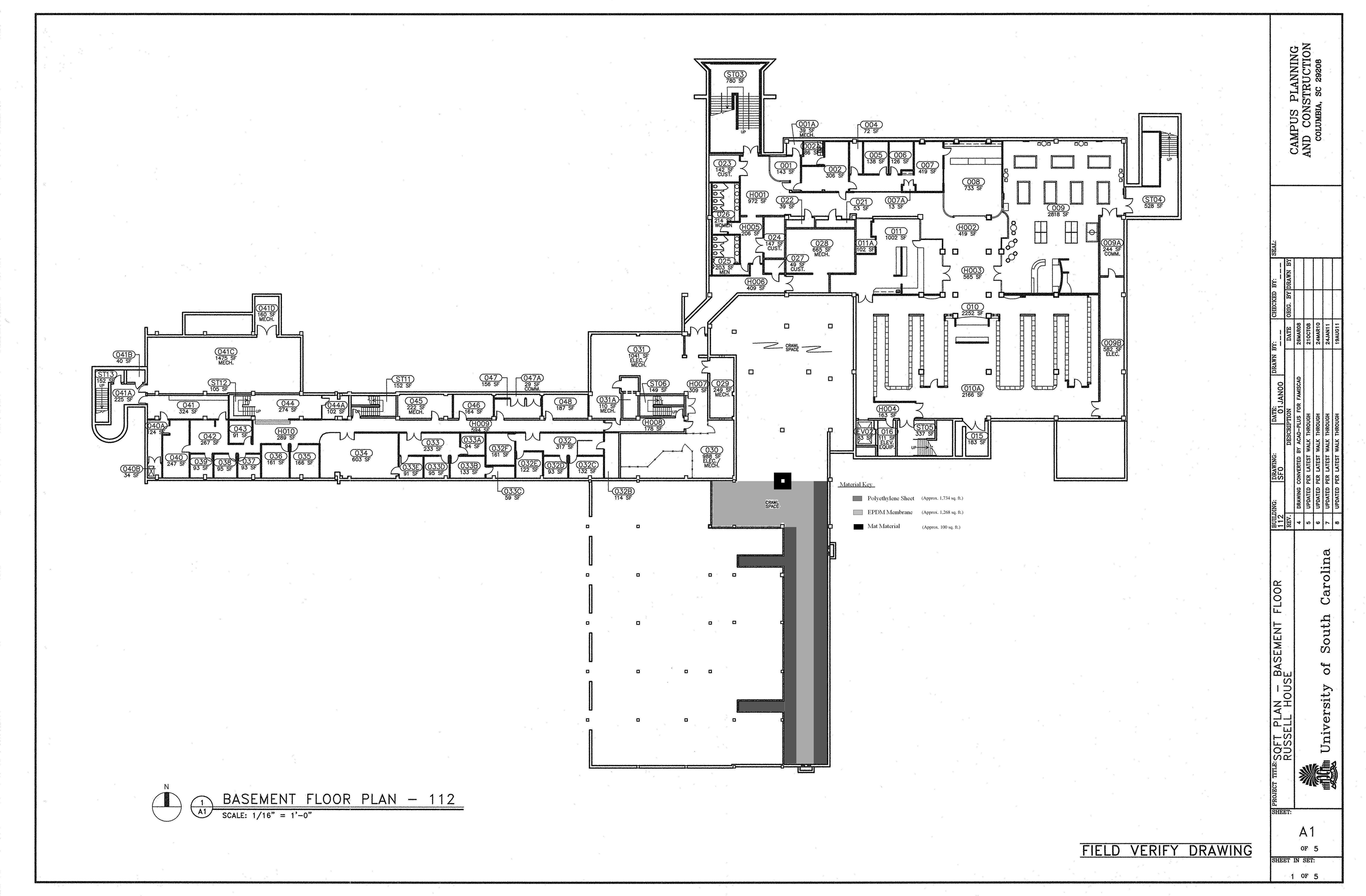
Contractor:	Corporate Officer Signature:	
Typed Name:	Title:	
Corporate Seal:		

## APPENDIX A CROSSROADS ENVIRONMENTAL, LLC FINAL AIR CLEARANCE CERTIFICATION

Project Name	Project Number		
Project Address:			
Contractor Name:			
Area Prepared for Final Visual	Inspection Area:		
Visual Requested by Contractor	's Representative:		
Date Visual was Requested:	Time Visual was Requested:		
A. The owner's representative surfaces for visible ACM dus	certifies that they have visually insp st, debris, and residue:	ected the following	
IH has checked the following ap debris, or fiber residue.	plicable surfaces to be completely free of	of visible ACM dust,	
Floor	Lights and fixtures	Other	
Horizontal Surfaces	Equipment & fixed items	Other	
Pipes	Ductwork	<del></del>	
Ventilation Equip.	Walls and ceiling(s)		
of sheet if more room is need	unsatisfactory and specify the correctived.)	e action. (Use back	
C. Areaapplied.	has been cleared	to have encapsulant	
	ted: Aggressive Static M TEM (Only critical barrie is performed.)	Date	
<del>-</del>	hereby certifies that the contractor sual clearance criteria and is ready for f	_	
Owner's Representative Name a	and Signature	Date	
Contractor Representative Nam	e and Signature	Date	

#### APPENDIX B

**DRAWING(S)** 



SE-357

#### **Labor and 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 o ne 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.