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Owner:

UNIVERSITY OF SOUTH CAROLINA

Columbia, SC 29208

**A PROJECT MANUAL FOR THE
MCKISSICK MUSEUM
ROOF REPLACEMENT PROJECT
816 BULL STREET, COLUMBIA SC
JUNE 2012**



State Project No. H27-6094-G
S & A Project Number: PF 11012.005.004
June 2012
WBS: ajk

**MCKISSICK MUSEUM
ROOF REPLACEMENT PROJECT
816 BULL STREET COLUMBIA, SC**

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END OF TABLE OF CONTENTS

**SE-310
REQUEST FOR ADVERTISEMENT**

2011 Edition
Rev. 7/20/2011

PROJECT NAME: McKissick Museum Roof Replacement Project
PROJECT NUMBER: H27-6094-G
PROJECT LOCATION: USC Horseshoe - 816 Bull Street, Columbia SC 29208

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: \$150,000 - \$250,000

DESCRIPTION OF PROJECT: RAs 1-8: Removal of existing roofing, wood deck and framing down to the structural concrete deck, and the new installation of rigid insulation, retrofit roof drains at all main drain locations, liquid applied roof membrane, liquid applied and metal flashings, traffic coat in locations designated on R1, and associated misc. work. At limestone dome: remove existing sealant from panel joints, prepare joints, install new sealant and perform designated tuck pointing.

A/E NAME: Shepard & Associates, LLC
A/E CONTACT: Wm. Blount Shepard, AIA
A/E ADDRESS: Street/PO Box:3547 Dreher Shoals Road, Suite 6
City: Irmo
State: SC ZIP: 29063-

EMAIL: shepard-admin@sc.rr.com
TELEPHONE: 803-407-8284 **FAX:** 803-407-8206

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

BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: http://purchasing.sc.edu
PLAN DEPOSIT AMOUNT: \$0.00 **IS DEPOSIT REFUNDABLE:** Yes No

Only those Bidding Documents/Plans obtained from the above listed source(s) are official. Bidders rely on copies of Bidding Documents/Plans obtained from any other source at their own risk.

BIDDING DOCUMENTS/PLANS ARE ALSO ON FILE FOR VIEWING PURPOSES ONLY AT *(list name and location for each plan room or other entity):*

http://purchasing.sc.edu

It is the Contractor's responsibility to obtain any drawings/specifications, addendums, award and any other documents related to the project from the website.

PRE-BID CONFERENCE? Yes No **MANDATORY ATTENDANCE?** Yes No
DATE: 10/31/2012 **TIME:** 10:00 AM **PLACE:** 743 Greene Street, Columbia, SC 29208

AGENCY: USC
NAME OF AGENCY PROCUREMENT OFFICER: Ms. Juaquana Brookins
ADDRESS: Street/PO Box:743 Greene Street
City: Columbia
State: SC ZIP: 29208-

EMAIL: jbrookin@fmc.sc.edu **TELEPHONE:** 803-777-3596 **FAX:** 803-777-7334

BID CLOSING DATE: 11/13/2012 **TIME:** 3:00 PM **LOCATION:** 743 Greene Street, Columbia SC 29208
BID DELIVERY ADDRESSES:

HAND-DELIVERY:	MAIL SERVICE:
Attn: <u>Ms. Juaquana Brookins</u>	Attn: <u>Ms. Juaquana Brookins</u>
<u>University of South Carolina</u>	<u>University of South Carolina</u>
<u>743 Greene Street</u>	<u>743 Greene Street</u>
<u>Columbia, SC 29208</u>	<u>Columbia, SC 29208</u>

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one) Yes No

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

**AIA DOCUMENT A701-1997
INSTRUCTIONS TO BIDDERS IS A
PART OF THESE BID DOCUMENTS AS
IF PRINTED HEREIN IN ITS ENTIRETY.
DOCUMENT IS AVAILABLE FOR
REVIEW AT THE OFFICE OF**

**Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063
803-407-8284**

**OSE FORM 00201 –
STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS**

2011 Edition

OWNER: _____

PROJECT NUMBER: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

PROCUREMENT OFFICER: _____

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 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.

3.16. *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 may 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.

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:

4.3.6 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.

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-Army 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-responsive

2.35. Delete the language of Section 6.2 and insert the word "Reserved."

2.36. Insert the following Section 6.3:

6.3 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]

2.37. Delete the language of Sections 6.3.2, 6.3.3, and 6.3.4 and insert the word "Reserved" after each Section Number.

2.38. 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: _____

Building Where Posted: _____

Address of Building: _____

WEB site address (if applicable): _____

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.state.sc.us,

(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 capped at \$25,000 per year or the total tax liability; whichever is lesser. The taxpayer is eligible to claim the credit for 6 consecutive taxable years beginning with the taxable year in which the credit is first claimed. There is no carry forward of unused credits. 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 SPECIAL CONDITIONS OF THE WORK

END OF DOCUMENT

DRAFT AIA® Document A310™ - 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

« »
« »
« »

SURETY:

(Name, legal status and principal place of business)

« »
« »
« »

OWNER:

(Name, legal status and address)

«University of South Carolina»
«Columbia, SC 29208»
«»

BOND AMOUNT: \$ « »

PROJECT:

(Name, location or address, and Project number, if any)

McKissick Museum Roof Replacement Project»
« USC Horseshoe - 816 Bull Street, Columbia, SC 29208»
« State Project No. H27-6094-G »

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this « » day of « », «2012 »

(Witness)

(Witness)

« »

(Contractor as Principal) (Seal)

« »

(Title)

« »

(Surety) (Seal)

« »

(Title)



**BID FORM
SE-330**

2011 Edition

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: H27-6094-G McKissick Museum Roof Replacement Project
(Number) (Name)

OFFER

§ 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 as 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 Days 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, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following items of construction work:

§ 6.1 BASE BID WORK *(as indicated in the Bidding Documents and generally described as follows):*

Roof Areas 1, 2, 3, 4, 5, 6, 7 & 8: Work covered by this Contract includes furnishing all labor, materials, and equipment necessary to perform the work in accordance with the Contract Documents.

Removals: Prior to the application of any new materials, remove and dispose of existing built-up roofing assembly down to the surface of the wood substrate. Similarly remove and dispose of bituminous flashings (mastic at base flashing laps ACM) and cants, existing wood decking, framing, and abandoned metal deck vents down to the surface of the structural concrete deck. Remove any anchors or obstructions that may remain in the structural concrete deck. Remove existing main roof drain assemblies and cut off vertical drain leader extending above structural concrete roof deck. Remove existing copper counter flashing and receiver trim and discard. Remove any obstruction that will prevent the proper installation of the new liquid applied roofing assembly. Remove, store and reinstall existing hot wire on RA 1 west parapet wall.

Preparations: After removals are complete, inspect the substrate structural concrete decking, making repairs as necessary.

Installations: Upon completion of all removals and preparations, install new flat and tapered polyisocyanurate insulation adhered to the concrete deck, retrofit roof drains at all main drain locations, liquid applied roofing membrane, liquid applied and metal roof flashings, metal copings, overflow scupper liner, liquid applied trafficking coat in locations designated on R1, and associated miscellaneous work as specified.

Limestone Dome: Masonry repair sub-contractor shall cut out and remove existing sealant and grout from all dome and dome two course foundation limestone joints. Clean and prepare joints to receive new sealant or tuck-pointing. Install new bond breaker tape and silicone sealant at all horizontal joints. Install new bond breaker tape and urethane sealant at all vertical joints except in the second course of the foundation ring. At this location, tuck point the joints with new mortar to match existing.

_____, which sum is hereafter called the Base Bid.
(enter BASE BID in figures only)

§ 6.2 ADD ALTERNATE No. 1 WORK (*modifies the Base Bid work as follows and generally described as follows*):

At Roof Areas 5 & 6: If the roofing contractor discovers during the removal of the roof assembly, wood deck and framing that the existing expansion joint in the roof assembly is a true building expansion joint with an interruption in the structural concrete roof deck, the roof contractor is to provide all labor, materials, and equipment necessary to install a new wood framed expansion joint, liquid applied flashings, metal expansion joint flange and metal expansion joint cap, and associated miscellaneous work as specified.

_____, which sum is hereafter called Add Alternate No. 1.

§ 6.3 UNIT PRICE WORK:

BIDDER offers for the Owner’s consideration and use the following UNIT PRICES. The UNIT PRICES offered by BIDDER indicate the amount to be added to or deducted from the Contract Sum for each item-unit combination. UNIT PRICES include all costs to the Owner, including those for materials, labor, equipment, tools of trades and labor, fees, taxes, insurance, bonding, overhead, profit, etc. The Owner reserves the right to include or not to include any of the following UNIT PRICES in the Contract and to negotiate the UNIT PRICES with BIDDER.

<u>No.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>COST to ADD or DEDUCT</u> <u>(one price)</u>
1.	Structural Concrete Replacement	Cubic Foot	_____
2.	Install Zinc Coping Cap	Linear Foot	_____

§ 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-3)

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) OR PRIME CONTRACTOR'S NAME (Must be completed by Bidder) BASE BID	SUBCONTRACTOR'S SC LICENSE NUMBER
_____	_____	_____
Masonry Repair Sub-Contractor	_____	_____

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.

§ 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 and Bidder shall substantially complete the Work within 60 calendar days from the Date of Commencement, subject to adjustments as provided in the Contract Documents. Contractor shall normally work five days per week, Monday - Friday, inclusive.

b. LIQUIDATED DAMAGES: Bidder further agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the sum of \$ 200.00 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)

**BID FORM
SE-330**

2011 Edition

BIDDER'S TAXPAYER IDENTIFICATION

FEDERAL EMPLOYER'S IDENTIFICATION NUMBER: _____

OR

SOCIAL SECURITY NUMBER: _____

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATIONS

Classification(s) & Limits: _____

Subclassification(s) & Limits: _____

SC Contractor's License Number(s): _____

BY SIGNING THIS BID, THE PERSON SIGNING REAFFIRMS ALL REPRESENTATIONS AND CERTIFICATIONS MADE BY BOTH THE PERSON SIGNING AND THE BIDDER, INCLUDING WITHOUT LIMITATION, THOSE APPEARING IN ARTICLE 2 OF THE INSTRUCTIONS TO BIDDER. THE INVITATION FOR BIDS, AS DEFINED IN THE INSTRUCTIONS TO BIDDERS, IS EXPRESSLY INCORPORATE BY REFERENCE.

SIGNATURE

(Legal Name of Person, Firm or Corporation Submitting Bid)

(Mailing Address for the above)

BY: _____
(Signature)

DATE: _____

TITLE: _____

TELEPHONE: _____

**AIA DOCUMENT A101-2007
STANDARD FORM OF AGREEMENT BETWEEN
OWNER AND CONTRACTOR IS A PART OF
THESE BID DOCUMENTS AS
IF PRINTED HEREIN IN ITS ENTIRETY.
DOCUMENT IS AVAILABLE FOR
REVIEW AT THE OFFICE OF**

**Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063
803-407-8284**

OSE FORM 00501
STANDARD MODIFICATIONS TO AGREEMENT BETWEEN
OWNER AND CONTRACTOR

OWNER: University of South Carolina

PROJECT NUMBER: H27-6094-G

PROJECT NAME: McKissick Museum Roof Replacement Project

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%).”

**OSE FORM 00501
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.”*

2.12. *In Section 8.3, make the word “Representative” in the title plural, delete everything following the title, and 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: Mr. Tom Opal
Title: Senior Project Manager
Address: 743 Greene Street, Columbia, SC 29208
Telephone: 803-777-7076 **FAX:** 803-777-8045
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: Mr. Dale Branham
Title: Project Manager
Address: 743 Greene Street, Columbia, SC 29208
Telephone: 803-7771288 **FAX:**
Email: branhamd@fmc.sc.edu

2.13. *In Section 8.4, make the word “Representative” in the title plural, delete everything following the title, and 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: **FAX:**
Email:

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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: _____

2.14. *Add the following Section 8.6.1:*

8.6.1 The Architect's representative:

Name: Wm. Blount Shepard III
Title: Principal
Address: 3547 Dreher Shoals Road, Suite 6, Irmo, SC 29063
Telephone: 803-407-8284 **FAX:** 803-407-8206
Email: shepard-admin@sc.rr.com

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

**AIA DOCUMENT A201-2007
GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION IS A PART OF
THESE BID DOCUMENTS AS IF
PRINTED HEREIN IN ITS ENTIRETY.
DOCUMENT IS AVAILABLE FOR
REVIEW AT THE OFFICE OF**

**Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063
803-407-8284**

OSE FORM 00811 STANDARD SUPPLEMENTARY CONDITIONS

2011 Edition

OWNER: _____
PROJECT NUMBER: _____
PROJECT NAME: _____

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 A201-1997

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.

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

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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 and fourth sentences 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 under Section 3.8.2.1, as documented by invoices, and the allowance amounts.

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

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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 construction schedule are as follows:
(Owner initial 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 Contractor 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

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

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 word “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

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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 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 claimants for 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.

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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.

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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:

- .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

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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.

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

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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.

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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 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.

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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.

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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.”

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) 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) 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.

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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 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.

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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.

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, sub-subcontractors, 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..

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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 be 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
- .3** remain in effect for a period not less than one (1) year following the date of Substantial Completion or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer.

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 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.

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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.

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.

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 sub-subcontractors; 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)

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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
- .2** 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*

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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;
- .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:

- .1** 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.

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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.

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) 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.

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.

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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

16.1. Inspection Requirements: *(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 *(list)*

Remarks: _____

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)*

16.3. Requirements for Record Drawings, if any. *(Refer to attachments as needed. If none, enter NONE)*

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)*

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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)*

16.6. Requirements for Project Cleanup in addition to the Contract, if any. *(Refer to attachments as needed. If none, enter NONE)*

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

USC SUPPLEMENTAL GENERAL CONDITIONS
FOR CONSTRUCTION PROJECTS

1. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies and stairs. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the building to the work area. Providing safe, accessible, plywood pedestrian ways around construction may be required if a suitable alternative route is not available.
2. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited-zero tolerance!
3. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
4. Contractor's employees must adhere to the University's policy of maintaining a drug-free and smoke-free/tobacco free workplace.
5. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.
6. A welding permit must be issued by the University Fire Marshall before any welding can begin inside a building. Project Manager will coordinate.
7. Contractor must notify the University immediately upon the discovery of suspect material such as those potentially containing asbestos or other such hazardous materials. These materials **must not** be disturbed until approved by the USC Project Manager.
8. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the 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.

9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
11. For all projects over \$100,000, including IDC 's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least one time 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.

SE-355
Performance Bond

KNOW ALL MEN BY THESE PRESENTS, that

(Insert full name or legal title and address of Contractor)

hereinafter referred to as "Contractor", and

(Insert full name and address of principal place of business of Surety)

hereinafter called the "surety", are jointly and severally held and firmly bound unto

The University of South Carolina
743 Greene Street, Columbia , SC 29208

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

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

McKissick Museum Roof Replacement Project, USC Horseshoe - 816 Bull Street, Columbia, SC 29208; State Project
Number H27-6094-G; to include removals and disposals of existing BUR roofing assembly, wood deck and framing,
and other designated materials/ assemblies/equipment; prepare the structural concrete roof deck for installation of new
roofing; and the new installation of adhered flat and tapered insulation, liquid applied roof membrane and flashings,
liquid applied traffic coating in designated areas, retrofit roof drains at all main drain locations, metal coping cap, metal
flashings; and perform designated associated miscellaneous work, as specified.

(Insert project Name and Number and Brief Description of Awarded Work)

in accordance with Drawings and Specifications prepared by Shepard & Associates, LLC, 3547 Dreher Shoals Road,
Suite 6, Irmo, SC 29063

(Insert full name and address of A/E)

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

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

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

CONTRACTOR:	SURETY:
_____ (Seal)	_____ (Seal)
By:	By:
Print Name:	Print Name:
Print Title:	Print Title:
Witness:	(Attach Power of Attorney)
	Witness:

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

Performance Bond**Performance Bond****NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency for the full and faithful performance of the contract, which is incorporated herein by reference

2. If the Contractor performs the contract, the Surety and the Contractor have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. The Surety's obligation under this Bond shall arise after:

3.1 The Agency has notified the Contractor and the Surety at the address described in paragraph 10 below, that the Agency is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If the Agency, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the Agency's right, if any, subsequently to declare a Contractor Default; or

3.2 The Agency has declared a Contractor Default and formally terminated the Contractor's right to complete the Contract.

4. The Surety shall, within 15 days after receipt of notice of the Agency's declaration of a Contractor Default, and at the Surety's sole expense, take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Agency, to perform and complete the Contract; or

4.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Agency for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the Agency and the contractor selected with the Agency's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the Agency the amount of damages as described in paragraph 7 in excess of the Balance of the Contract Sum incurred by the Agency resulting from the Contractor Default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and:

4.4.1 After investigation, determine the amount for which it may be liable to the Agency and, within 60 days of waiving its rights under this paragraph, tender payment thereof to the Agency; or

4.4.2 Deny liability in whole or in part and notify the Agency, citing the reasons therefore.

5. Provided Surety has proceeded under paragraphs 4.1, 4.2, or 4.3, the Agency shall pay the Balance of the Contract Sum to either:

5.1 Surety in accordance with the terms of the Contract; or

5.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

5.3 The balance of the Contract Sum due either the Surety or another contractor shall be reduced by the amount of damages as described in paragraph 7.

6. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond 15 days after receipt of written notice from the Agency to the Surety demanding that the Surety perform its obligations under this Bond, and the Agency shall be entitled to

enforce any remedy available to the Agency.

6.1 If the Surety proceeds as provided in paragraph 4.4, and the Agency refuses the payment tendered or the Surety has denied liability, in whole or in part, then without further notice the Agency shall be entitled to enforce any remedy available to the Agency.

6.2 Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the Dispute Resolution process defined in the Contract Documents and the laws of the State of South Carolina.

7. After the Agency has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Agency shall be those of the Contractor under the Contract, and the responsibilities of the Agency to the Surety shall those of the Agency under the Contract. To a limit of the amount of this Bond, but subject to commitment by the Agency of the Balance of the Contract Sum to mitigation of costs and damages on the Contract, the Surety is obligated to the Agency without duplication for:

7.1 The responsibilities of the Contractor for correction of defective Work and completion of the Contract; and

7.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

7.3 Damages awarded pursuant to the Dispute Resolution Provisions of the Contract. Surety may join in any Dispute Resolution proceeding brought under the Contract and shall be bound by the results thereof; and

7.4 Liquidated Damages, or if no Liquidated Damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. The Surety shall not be liable to the Agency or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Sum shall not be reduced or set-off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Agency or its heirs, executors, administrators, or successors.

9. The Surety hereby waives notice of any change, including changes of time, to the contract or to related subcontracts, purchase orders and other obligations.

10. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. Definitions

11.1 Balance of the Contract Sum: The total amount payable by the Agency to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts to be received by the Agency in settlement of insurance or other Claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.

11.2 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform the Contract or otherwise to comply with the terms of the Contract.

Labor and Material Payment Bond

KNOW ALL MEN BY THESE PRESENTS, that

(Insert full name or legal title and address of Contractor)

hereinafter referred to as "Contractor", and

(Insert full name and address of principal place of business of Surety)

hereinafter called the "surety", are jointly and severally held and firmly bound unto

The University of South Carolina
743 Greene Street, Columbia, SC 29208

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

WHEREAS, Contractor has by written agreement dated _____ entered into a contract with Agency to construct: McKissick Museum Roof Replacement Project, USC Horseshoe - 816 Bull Street, Columbia, SC 29208; State Project Number H27-6094-G; to include removals and disposals of existing BUR roofing assembly, wood deck and framing, and other designated materials/ assemblies/equipment; prepare the structural concrete roof deck for installation of new roofing; and the new installation of adhered flat and tapered insulation, liquid applied roof membrane and flashings, liquid applied traffic coating in designated areas, retrofit roof drains at all main drain locations, metal coping cap, metal flashings; and perform designated associated miscellaneous work, as specified.
(Insert project Name and Number and Brief Description of Awarded Work, as found on the SE-330, Bid Form)

in accordance with Drawings and Specifications prepared by:
Shepard & Associates, LLC, 3547 Dreher Shoals Road, Suite 6, Irmo, SC 29063.
(Insert full name and address of A/E)

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

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

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

CONTRACTOR: _____

(Seal)

By: _____

Print Name: _____

Print Title: _____

Witness: _____

SURETY: _____

(Seal)

By: _____

Print Name: _____

Print Title: _____

(Attach Power of Attorney)

Witness: _____

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

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 §11-35-3020(2)(c) of the SC Code of Laws, as amended, the Surety's obligation under this Bond shall arise as follows:
 - 4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him.
 - 4.2 A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.
 - 4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of one year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.
5. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 5.2 Pay or arrange for payment of any undisputed amounts.
 - 5.3 The Surety's failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.
6. Amounts owed by the Agency to the Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the Contractor furnishing 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.

**AIA DOCUMENT G701-1997
CHANGE ORDER
IS A PART OF THESE BID DOCUMENTS AS IF
PRINTED HEREIN IN ITS ENTIRETY.
DOCUMENT IS AVAILABLE FOR REVIEW
AT THE OFFICE OF**

**Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063
803-407-8284**

**AIA DOCUMENT G702-1992 and G703-1992
APPLICATION AND CERTIFICATE FOR PAYMENT
IS A PART OF THESE BID DOCUMENTS AS
IF PRINTED HEREIN IN ITS ENTIRETY.
DOCUMENT IS AVAILABLE FOR
REVIEW AT THE OFFICE OF**

**Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063
803-407-8284**

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Work covered by this contract includes furnishing all labor, materials, tools, devices, appliances, and equipment necessary to perform all the work described in the Contract Documents.
- 1.1.2 All work is located at the McKissick Museum, University of South Carolina - USC Horseshoe, 816 Bull Street, Columbia, SC 29208.

1.2 BASE BID WORK

- 1.2.1 Roof Areas 1, 2, 3, 4, 5, 6, 7 & 8: Work covered by this Contract includes furnishing all labor, materials, and equipment necessary to perform the work in accordance with the Contract Documents.
 - 1.2.1.1 **Removals:** Prior to the application of any new materials, remove and dispose of existing built-up roofing assembly down to the surface of the wood substrate. Similarly remove and dispose of bituminous flashings (mastic at base flashing laps ACM) and cants, existing wood decking, framing, and abandoned metal deck vents down to the surface of the concrete deck. Remove any anchors or obstructions that may remain in the structural concrete deck. Remove existing main roof drain assemblies and cut off vertical drain leader extending above structural concrete roof deck. Remove existing copper counter flashing and receiver trim and discard. Remove any obstruction that will prevent the proper installation of the new liquid applied roofing assembly. Remove, store and reinstall existing hot wire on RA 1 west parapet wall.
 - 1.2.1.2 **Preparations:** After removals are complete, inspect the substrate concrete decking, making repairs as necessary.
 - 1.2.1.3 **Installations:** Upon completion of all removals and preparations, install new flat and tapered polyisocyanurate insulation adhered to the concrete deck, retrofit roof drains at all main drain locations, liquid applied roofing membrane, liquid applied and metal roof flashings, metal copings, overflow scupper liner, liquid applied trafficking coat in locations designated on R1, and associated miscellaneous work as specified herein.
- 1.2.2 Limestone Dome: Masonry repair sub-contractor shall cut out and remove existing sealant and grout from all dome and dome two course foundation limestone joints. Clean and prepare joints to receive new sealant or tuck-pointing. Install new bond breaker tape and urethane sealant at all horizontal joints. Install new bond breaker tape and silicone sealant at all vertical joints except in the second course of the foundation ring. At this location, tuck point

the joints with new mortar to match existing.

1.3 ADD ALTERNATE No. 1 WORK

1.3.1 At Roof Areas 5 & 6: If the roofing contractor discovers during the removal of the roof assembly, wood deck and framing that the existing expansion joint in the roof assembly is a true building expansion joint with an interruption in the structural concrete roof deck, the roof contractor is to provide all labor, materials, and equipment necessary to install a new wood framed expansion joint, liquid applied flashings, metal expansion joint flange and metal expansion joint cap, and associated miscellaneous work as specified herein.

1.4 UNIT PRICES: Include in the BASE BID the following quantities of unit price materials:

1.4.1 Unit Price 1 - Removal and replacement of any wet, damaged, or deteriorated structural concrete. 100 CF

1.4.2 Unit Price 2 - Install new locking cleat, 20 mil PVC flashing and zinc coping cap over existing limestone coping stone. RA's 1, 2, 3, 4, 5, 6, 7 & 8

1.5 CONTRACT METHOD

1.5.1 Construct the work as a single lump sum contract. For the items that are bid on a unit price basis, follow procedure indicated on the Bid Form and as specified in Section 01025 MEASUREMENT AND PAYMENT.

1.6 REFERENCE STANDARDS

1.6.1 For products specified by the association or trade standards, comply with requirements of the standard except when more rigid requirements are specified or are required by applicable codes.

1.7 EXISTING SITE CONDITIONS

1.7.1 Information in this section is provided only to establish a general description and is not necessarily accurate. The Contractor is responsible for visiting the site and satisfying himself/herself of existing conditions, size of site, subsurface and other site drainage, soffit areas, fascia linear footage, etc. before submitting his/her bid.

1.7.2 Approximate Square Footage by Roof Area:

- 1.7.2.1 Roof Area 1 – 1,227 square feet.
- 1.7.2.2 Roof Area 2 – 313 square feet.
- 1.7.2.3 Roof Area 3 – 923 square feet.
- 1.7.2.4 Roof Area 4 – 209 square feet.
- 1.7.2.5 Roof Area 5 – 2,843 square feet.
- 1.7.2.6 Roof Area 6 – 2,843 square feet.
- 1.7.2.7 Roof Area 7 – 133 square feet.
- 1.7.2.8 Roof Area 8 – 133 square feet.
- Total Area – 8,624 square feet.

1.7.3 Limestone Dome – Approximate Linear Footage by Joint Type:

1.7.3.1 Vertical Joints

a.	Foundation Ledge –	108 LF
b.	Foundation Foot –	100 LF
c.	1 st Course –	136 LF
d.	2 nd Course –	96 LF
e.	3 rd Course –	118 LF
f.	4 th Course –	104 LF
g.	5 th Course –	96 LF
h.	6 th Course –	88 LF
i.	7 th Course –	80 LF
	<u>Total –</u>	<u>926 LF</u>

1.7.3.2 Horizontal Bed Joints

a.	Foundation Foot –	143 LF
b.	1 st Course –	121 LF
c.	2 nd Course –	112 LF
d.	3 rd Course –	101 LF
e.	4 th Course –	85 LF
f.	5 th Course –	68 LF
g.	6 th Course –	52 LF
h.	7 th Course –	35 LF
i.	<u>Capstone –</u>	<u>22 LF</u>
	<u>Total –</u>	<u>739 LF</u>

1.7.4 Roof Areas (RAs) 1, 2, 3, 4, 5, 6, 7 & 8

1.7.4.1 Existing roof system assembly consists of a BUR assembly with a mineral surfaced cap sheet, installed over a 1” wood deck, mechanically attached to 2x4 framing spaced at approximately 16” O.C. attached to 2x2 sleepers spaced at approximately 42” O.C. attached to the structural concrete slab.

1.7.4.2 Water drains to internal 4” main roof drains. Secondary drainage is to through parapet overflow scuppers.

1.7.4.3 Slope in the roof structure is minimal to none.

1.7.4.4 The general shape of each roof area is rectilinear.

1.7.4.5 Roof Area 1 is approximately 48 feet above finished grade. Roof Areas 2, 4, 7 & 8 are approximately 35 feet above finished grade. Roof Area 3 is approximately 38 feet above finished grade. Roof Areas 5 & 6 are approximately 45 feet above finished grade.

1.7.5 Limestone Dome

1.7.5.1 Existing dome consists of limestone cladding with a keystone cap placed over a cast in place reinforced concrete dome. The reinforced concrete has been waterproofed in a trowel grade bituminous product.

- 1.7.5.2 Limestone units are placed in a running bond pattern for seven courses above a second foundation course which has a ledge element that varies in width from 1.5" to 12".
- 1.7.5.3 There is a first foundation course that runs around the base of the dome, measuring a constant 15" wide.
- 1.7.5.4 The dome cap measures approximately 7 feet in diameter.
- 1.7.5.5 The ledge elements associated with the foundation courses are sloped at 1":12".
- 1.7.5.6 Water drains over limestone cladding to the first foundation course drip edge and onto RA 1 below.
- 1.7.5.7 Joints in the limestone cladding are filled with multiple layers of aged sealant.
- 1.7.5.8 The limestone dome is approximately 15 feet above RA 1 at its base. The height of the limestone dome is approximately 13 feet above the second foundation course.

1.8 WORK SEQUENCE

- 1.8.1 Initial setup is to be determined in a pre-work conference. Work is to be performed in a manner so that prepared surfaces are not damaged as a result of subsequent surface coatings. Phased construction is unacceptable.
- 1.8.2 The Contractor shall strive to cause a minimum of disruption to the building operations and occupancy during construction activities. There may be times when the Contractor will not be allowed to work due to the operations of the occupants.
- 1.8.3 The roofing contractor is to coordinate material storage area at grade and daily reroofing work activity with the Owner's separate window contractor who will be restoring windows around the project site.

1.9 COMPLETION DATE

- 1.9.1 Scheduling and speed of construction are of prime importance in the completion of the Work. Demolition, Preparation and New Construction shall commence as established in the Notice to Proceed. BIDDER agrees that the BASE BID WORK will be substantially complete and ready for final payment in accordance with the General Conditions within 60 calendar days after Notice to Proceed. BIDDER agrees further that construction will normally be performed Monday - Friday, inclusive. BIDDER acknowledges that in case of inclement weather during normal work days, additional weekend work may be required to complete the Work within the allotted time.

1.10 LIQUIDATED DAMAGES

1.10.1 Liquidated damages will be assessed in the amount of \$200.00 for each calendar day the actual Contract Time for Substantial Completion exceeds the specified Contract Time.

1.11 CONTRACTOR USE OF PREMISES

1.11.1 Limit use of premises for construction operations to allow for Owner occupancy.

1.11.2 Coordinate use of premises under direction of Owner.

1.11.3 The Contractor shall be held liable for any damages to the building, the building contents, or its occupants resulting from work under this Contract. The Contractor shall take all precautions necessary to protect the occupants and the building during the construction period.

1.11.4 The Contractor shall have an established fall protection plan in place and must be able to provide this plan to the Owner if requested.

1.11.5 The Contractor is to maintain the existing building in a safe, weather tight, and secure condition throughout the construction period. The Contractor is to repair any damage caused by him or any of his subcontractors. Should damage be to finishes or construction that is not defined in these Contract Documents, then repairs shall be made in compliance with the specifications approved by and at the sole discretion of the Owner.

1.11.6 The Contractor is to confine his operations to the site of the building. The site beyond this building is not to be disturbed. The Owner will identify parking for the Contractor and his employees.

1.11.7 The Contractor is to keep existing driveways and entrances serving the premises clear and available at all times. Do not use for parking or storage of materials or equipment. The stockpiling of materials must be confined to the area identified by the Owner.

1.11.8 The Contractor and his personnel are to lock their vehicles and other mechanical or motorized construction equipment when parked and unattended. Do not leave vehicles or equipment unattended with motor running or ignition key in place.

1.11.9 Open fires will not be permitted on the premises.

1.11.10 Utilities and Services: The Contractor will be provided water to the extent of the existing sources. The Contractor shall be responsible for any taps or connections that may be needed or desired by him/her. Contractor is also responsible for getting the service to any location where needed or desired. The Contractor will be provided without charge reasonable quantities of available utilities; however if the services are abused, they will be withdrawn. The Contractor shall provide temporary portable electric generators for electricity required during construction.

1.12 ASBESTOS PRODUCTS:

- 1.12.1 Products containing asbestos fibers are present in the mastic at base flashing side laps. Base flashings and mastic are to be disposed of as ACM.
- 1.12.2 No asbestos bearing materials are to be incorporated into the work as a part of this contract. No existing asbestos containing material is to be left or incorporated into the work of this contract.
- 1.12.3 In the event the Contractor finds asbestos-containing materials not previously identified, then Contractor shall stop all work in the affected area and notify the Owner and Architect. Contractor shall provide all materials necessary to temporarily dry-in or isolate the affected area in the Base Bid. Additional work caused by the discovery, if authorized by the Owner, will be handled as a Change Order to this Contract.

1.13 CONTRACTOR'S CONDUCT: The following requirements are expressed to the Contractor, and he is asked to ensure that all employees, subcontractors, and suppliers are aware of these warnings.

- 1.13.1 No drugs, alcohol, or firearms will be permitted on the grounds of the facility.
- 1.13.2 There will be no favors or fraternizing with occupants or employees of the facility.
- 1.13.3 Contractor and subcontractors are to take necessary precautions to protect all occupants and employees of the facility, Contractor personnel, and personal property from any damage from their operations.
- 1.13.4 The Contractor, subcontractors, and material suppliers are to be careful during placement of materials and equipment. The Owner will in no way be responsible for equipment and materials lost as the result of being left unattended or misplaced.
- 1.13.5 The use of foul, obscene, or abusive language by the Contractor's or subcontractors' employees is prohibited on the grounds of the facility. Violations of this policy may result in the dismissal of the Contractor.
- 1.13.6 Smoking or use of any tobacco products by the Contractor's or subcontractors' employees is NOT allowed on the USC campus.

1.14 OWNER OCCUPANCY REQUIREMENTS

- 1.14.1 Owner will occupy premises during entire period of construction for conducting normal operations. Contractor is to cooperate with the Owner's operations.
- 1.14.2 Owner may require that the Contractor cease work with a prior days notice.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01010

Enclosure(s): USC Hazmat Survey Results
Chao and Associates, Inc. Seismic Report

FM00380581

USC Work Order

Description MCKISSICK- HAZMAT SURVEY

Site	COLUMBIA	Assigned To	JPROVENCE
Building	015 MCKISSICK	Crew	HAZMAT
Floor	ROOF	Start Date	16-FEB-12
Room:		Priority	5
Equipment		Due date	
		Request Date	01-NOV-11
		by	BLMCGEE

Request #	FM00380581	Description	MCKISSICK- HAZMAT SURVEY
Parent WO #			

CP Number	CP00336856	CRF DM MCKISSICK ROOF REPLACEMENT
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State/Internal Project Number	H27-6094
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Requestor	BRANHAM,DALE	Project Manager	BRANHAM, DALE
Telephone	7-1288	Telephone	777-1288
Alternate		Estimated Cost	\$ 0.00
Telephone		Billing	FIXED PRICE
Non-Available Time			53100-W791-57140 (DEFERRED MAINTENANCE)

Task List
 (CHECK ALL THAT APPLY AND PROVIDE ADDITIONAL INFORMATION AS NEEDED)

HAZMAT SURVEY(S) REQUESTED FOR THE FOLLOWING

- FLOOR TILE
- JOINT COMPOUND
- WALLS
- MASTIC
- CEILING TILE
- PIPE INSULATION
- VINYL SHEET FLOORING
- FIREPROOFING
- FUME HOODS/TABLE TOPS
- ROOFING MATERIALS
- FIRE DOORS
- GASKETS/VALVES
- BOILER INSULATION
- ACOUSTICAL POPCORN CEILING
- DUCT WORK
- OTHER (PLEASE DESCRIBE BELOW)

DATE WORK STARTED	CAUSE
DATE WORK COMPLETED	CONDITION
EQUIPMENT	
CLOSING REMARKS	
BENCHSTOCK MATERIALS	
Qty	Description
	Price Per Unit

Supervisor's Approval _____

Note Date	Title

29-FEB-12 HAZMAT SURVEY RESULTS

SURVEY DATE:2-22-2012

INSPECTOR #: DARRYL WASHINGTON II BI-00568

STATUS: THE FOLLOWING MATERIALS HAVE BEEN TESTED FOR ASBESTOS CONTAINING MATERIALS

ROOFING MATERIALS - NEGATIVE FOR ASBESTOS CONTAINING MATERIALS

MASTIC (ON SEAMS AND CORNERS OF FLASHINGS)- POSITIVE FOR ASBESTOS CONTAINING MATERIALS

ALL NOB'S CONFIRMED PER TEM ANALYSIS.

IF YOU ENCOUNTER ANY SUSPECT MATERIALS IN PLACE AND DEEM IT SUSPECT FOR ASBESTOS PLEASE STOP WORK AND CALL THE ASBESTOS PROGRAM MANAGER FOR FURTHER TESTING OR ASBESTOS ABATEMENT

REFER TO THE SURVEY RESULTS DOCUMENT ATTACHED TO THE WO FOR DETAILED INFORMATION.

02-APR-04 ASBESTOS MAY BE PRESENT IN THIS BUILDING

WARNING - ASBESTOS EXPOSURE ALERT - EXPOSURE TO ASBESTOS MAY BE HARMFUL TO YOUR HEALTH

AS OF 12/15/2003 THE FOLLOWING AREAS WITHIN THE BUILDING HAVE BEEN IDENTIFIED BY SURVEY TO CONTAIN ASBESTOS:

BLDG 015 MCKISSICK MUSEUM
RADIATORS --> STEAM LINES [500 LIN. FT.]
PIPE CHASE --> HOT WATER AIR CELL [100 LIN. FT.]
STEAM DISTRIBUTION --> ELBOWS [100 LIN. FT.]

THE FOLLOWING COMMON TYPES OF BUILDING COMPONENTS COULD CONTAIN MATERIALS THAT, WHEN DISTURBED, MIGHT EXPOSE YOU TO ASBESTOS:

1. FLOOR TILE
2. PIPE INSULATION
3. BLACK MASTIC
4. HVAC DUCT MASTIC
5. SPRAYED-ON FIREPROOFING
6. SPRAYED-ON CEILINGS
7. SHEETROCK JOINT COMPOUND

BEFORE DISTURBING THESE TYPES OF COMPONENTS, CONFIRM THAT THEY DO NOT CONTAIN ASBESTOS AND TAKE PROPER PRECAUTIONS AT ALL TIMES

05-AUG-10 2009-09-23 BLDG COMPONENT ASBESTOS/LEAD EXPOSURE UPDATE

BELOW ARE THE ASBESTOS AND LEAD TESTING RESULTS FOR THE MCKISSICK MUSEUM:

SHEET ROCK: NEGATIVE FOR ASBESTOS CONTAINING MATERIALS
JOINT COMPOUND: NEGATIVE FOR ASBESTOS CONTAINING MATERIALS
WHITE WALL PAINT: NEGATIVE FOR LEAD BASE PAINT
FLOOR TILES & BLACK MASTIC: POSITIVE FOR ASBESTOS CONTAINING MATERIALS
1X1 CEILING TILES: MAY CONTAIN ASBESTOS

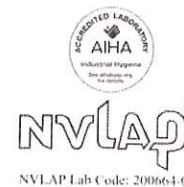
DO NOT DRILL, CONTACT THE ASBESTOS PROGRAM MANAGER

IF YOU AND/ OR CONTRACTORS NEED TO DISTURB ANY MATERIALS YOU DEEM SUSPECT THAT ARE NOT LISTED ABOVE, STOP WORK AND CONTACT THE ASBESTOS PROGRAM MANAGER, 777-1208. IF YOU NEED TO DISTURB ANY MATERIAL LISTED AS POSITIVE, YOU MUST CONTACT THE ASBESTOS PROGRAM MANAGER TO ARRANGE FOR REMOVAL. THIS INFORMATION MUST BE PASSED ALONG TO ALL CONTRACTORS, SUB-CONTRACTORS, AND INDIVIDUALS WORKING IN THIS BUILDING



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: University of South Carolina
743 Greene St
Columbia, SC 29208

Attn: Darryl Washington

Lab Order ID: 1203225

Analysis ID: 1203225PLM

Date Received: 2/27/2012

Project: McKissick Roof

Date Reported: 2/28/2012

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
1	Roofing material	None Detected	20% Cellulose 10% Fiber Glass 5% Synthetic Fibers	65% Other	Black Non Fibrous Heterogeneous
1203225PLM_1					Dissolved
2	Roofing material	None Detected	20% Cellulose 10% Fiber Glass 5% Synthetic Fibers	65% Other	Black Non Fibrous Heterogeneous
1203225PLM_2					Dissolved
3	Roofing material	None Detected	20% Cellulose 10% Fiber Glass 5% Synthetic Fibers	65% Other	Black Non Fibrous Heterogeneous
1203225PLM_3	TEM				Dissolved
4	Mastic	10% Chrysotile		90% Other	Black Non Fibrous Heterogeneous
1203225PLM_4					Dissolved
5	Mastic	Not Analyzed			
1203225PLM_5					
6	Mastic	Not Analyzed			
1203225PLM_6					

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Estimated MDL is 0.1%.

Bart Huber (6)

Analyst

Nathaniel Durham, MS or Approved Signatory

1203225



Building # MCKISSICK ROOF

Type of Analysis: Lead / Asbestos Date: 02-20-2012

Sample Analysis

Turn Around Time 24 HRS

Area	Sample ID	Material Sampled	Material Location	F/NF	Cond	Quantity	Pot to Disturb
A	1	ROOFING MATERIAL	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
A	2	ROOFING MATERIAL	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
A	3	ROOFING MATERIAL (Part 1)	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
B	4	MASTIC	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
B	5	MASTIC	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
B	6	MASTIC (Part 2)	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
			NO FLASHING (HOMOGENIUS ROLLED UP ROOFING				
			MATERIAL IN PLACE)				

License # A451-00563 FM# 06389187 Signature [Signature] Requestor Mike Brumham

Send lab results in PDF format as soon as possible to:
 Ed Pitts 803-777-3296
 Darryl Washington 803-777-2399
 720 College St.
 Columbia, SC 29208
 EHP@fmc.sc.edu
 WashinDH@fmc.sc.edu

Ty Russell 803-777-1208
 720 College St.
 Columbia, SC 29208
 NTRussse@fmc.sc.edu

Fax # 803-777-3990



Bulk Asbestos Analysis by Transmission Electron Microscopy

Semi-Quantitative

Chatfield SOP 1988-02 Rev. 1

Client: University of South Carolina
743 Greene St
Columbia, SC 29208

Attn: Darryl Washington
Ed Pitts

Lab Order ID: 1203322

Analysis ID: 1203322_TBS

Date Received: 2/28/2012

Date Reported: 2/28/2012

Project: McKissick Roof

Sample ID	Description	Organic (Wt. %)	Acid Sol. (Wt. %)	Asbestos (Wt. %)	LCL-UCL (Wt. %)
<i>Lab Sample ID</i>	<i>Lab Notes</i>				
3	Roofing material	58%	-%	None Detected	
1203322TBS_1					

Matt Thomas (1)

Analyst

Approved Signatory

1203225

120322



Building # MCKISSICK ROOF

Sample Analysis Type of Analysis: Lead / Asbestos Date: 02-20-2012

Turn Around Time 24 HRS

Area	Sample ID	Material Sampled	Material Location	F/NF	Cond	Quantity	Pot to Disturb
A	1	ROOFING MATERIAL	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
A	2	ROOFING MATERIAL	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
A	3	ROOFING MATERIAL (Top 1/4")	ROOFING MATERIALS OF THE BUILDING	NF	G	>5000 SQ FT	LOW
B	4	MASTIC	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
B	5	MASTIC	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
B	6	MASTIC (Top 1/4")	MISC LOCATIONS ON PARTS OF ROOF AND CORNERS	NF	G	<2000 SQ FT	LOW
			NO FLASHING (HOMOGENIUS ROLLED UP ROOFING				
			MATERIAL IN PLACE)				

License # A551-00567 FM# 06359187 Signature Ty Russell Requestor Det. Brantley

Send lab results in PDF format as soon as possible to:
 Ed Pitts 803-777-3296
 Darryl Washington 803-777-2399
 720 College St.
 Columbia, SC 29208
 EHP@finc.sc.edu

Ty Russell 803-777-1208
 720 College St.
 Columbia, SC 29208
 TRRussell@finc.sc.edu

Fax # 803-777-3990



March 27, 2012

Mr. Dale Branham
Project Manager
University of South Carolina
743 Greene Street
Columbia, SC 29208

RE: Seismic Design Category Evaluation for USC McKissick Museum Columbia, SC
C&A Project No. 393203B

Dear Mr. Branham:

As requested, Chao & Associates, Inc. (Chao) performed a seismic design category evaluation of the above referenced site.

GENERAL INFORMATION

USC McKissick Museum is a four-story structure with a fifth floor dome at the center of the building. The University intends to re-roof some areas of the existing roof. During the process of preparing re-roofing documents, it was discovered that the parapet is constructed of brick masonry. Due to the Existing Building Code requirements (Section 507.2.2), the unreinforced brick masonry is required to be braced if the building seismic design category is determined to be "D, E or F" when issuing the re-roofing permit.

SCOPE OF SERVICE

Chao was engaged to conduct a site soil geotechnical investigation and a seismic design category evaluation. The purpose of determining the seismic design category was to determine the applicability of the paragraph 507.2.2 of Existing Building Code referencing requirements for parapet bracing and wall anchoring.

This report is based on Geotechnical site investigation. It represents the professional opinion and judgment of a Licensed Professional Engineer. No material testing or uncovering were performed and are beyond the scope of service. If further information is provided or becomes available, the initial findings will be reviewed which may result in the need to modify the opinion rendered initially.

This report is solely for the benefit of the client to whom it is addressed. Any reuse of this report without the expressed written consent of Chao & Associates Inc. is prohibited.



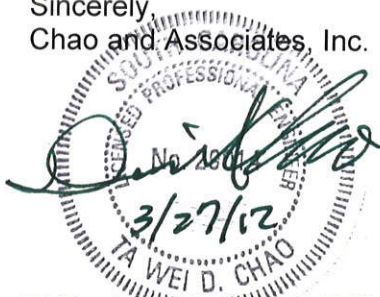
This report is solely for the benefit of the client to whom it is addressed. Any reuse of this report without the expressed written consent of Chao & Associates Inc. is prohibited.

OBSERVATIONS, CONCLUSIONS & RECOMMENDATIONS

The geotechnical investigation report indicates the McKissick Museum site soil condition is classified as "Site Class C" based on the International Building Code 2006 and 2009 edition (IBC 2006, 2009) (Please see attached Geotechnical Report). Evaluating the site class data with the Earthquake Ground Motion parameters, the seismic Design Spectral Response, SDs and SD1, were determined to be 0.43 and 0.16. Based on IBC 2009 table 1613.5.6(1) and 1613.5.6(2), the seismic design category for McKissick Museum, was determined to be Seismic design category C. Therefore the Existing Building Code Section 507.2.2 is not applicable.

It is a pleasure to provide our engineering service to you. Please do not hesitate to call us if you have any questions.

Sincerely,
Chao and Associates, Inc.



T. David Chao, P.E., LEED AP
Director of Structural Engineering



March 21, 2012

Chao and Associates, Inc.
7 Clusters Court
Columbia, South Carolina 29210

Attention: Mr. David Chao, P.E.

**Reference: Letter of Seismic Site Classification
McKissick Museum – Roof Renovations
South of the Intersection of Bull Street and Pendleton Street
The University of South Carolina
Columbia, South Carolina
GS2 Project No.: 12-3747-G**

Corporate Headquarters
1200 Veterans Road, Suite A
Columbia, South Carolina 29209

Columbia Office
241 Business Park Boulevard
Columbia, South Carolina 29203

Charleston Office
4301 Dorchester Road, Suite 12A
North Charleston, South Carolina 29405

Greenville Office
350 Feaster Road, Suite A
Greenville, South Carolina 29405

Florence Office
2353-D Walker Swinton Road
Timmonsville, South Carolina 29161

www.gs2engineering.com

Dear Mr. Chao;

This letter presents our Seismic Site Classification of the McKissick Museum – Roof Renovations site for the University of South Carolina, in downtown Columbia, South Carolina. Information obtained from our mechanically-augered soil boring, as well as our knowledge of the general area from a previous CPT sounding conducted within a 2 block radius of the site, have been used to evaluate the existing site conditions for the use of developing seismic design parameters for the site. This work was performed in general accordance with industry standards and our proposal number P3532-12 dated February 16, 2012.

Recommendations detailed in this letter are specific to the soil conditions in the immediate vicinity of the boring location for this particular project. This letter does not include any environmental assessment of soils, surface water or groundwater, the determination of wetlands, the determination of noise impact, the assessment of air quality, the identification of cultural resources, and the identification of endangered species. These services are beyond the scope of services of a seismic site classification.

PROPOSED DEVELOPMENT

We understand that the proposed development will include renovations to the roof of the existing McKissick Museum, on The Horseshoe, on the campus of the University of South Carolina, in Columbia, South Carolina. Furthermore, we understand that the design and construction of the proposed renovations at the site will be governed under the International Building Code, 2006 Edition or 2009 Edition.

SITE SETTING

Site Location: The subject site is located to the south of the intersection of Bull Street and Pendleton Street, on The Horseshoe, within the University of South Carolina campus, in downtown Columbia, South Carolina. The location of the site relative to the nearby streets is shown in the *Site Location Map*, Figure 1 attached.

Corporate
(803) 776-2105
(803) 776-5572

Columbia
(803) 699-7900
(803) 699-7911

Charleston
(843) 225-3031
(843) 225-3249

Bluffton
(843) 297-2035
(843) 225-3249

Greenville
(864) 234-0151
(864) 234-0152

Florence
(843) 407-6755
(843) 407-6756

Myrtle Beach
(843) 444-2766
(843) 444-2799

Site Description: The subject site is generally rectangular in shape, and at the time of our visit, was noted to be developed with an existing asphalt paved parking lot associated with The Osborne Building. The soil test boring was performed within this parking lot in order to be in as close proximity as possible to the existing McKissick Museum, without intruding on the landscape/hardscape of The Horseshoe.

Site Topography: Topographically, the site is located on the general peak of a ridge in the Upper Coastal Plain Physiographic Province. In general, the subject site appears to be sloping to the east towards the surrounding infrastructure and eventually into Rocky Branch Creek. Ground surface elevations across the site appear to be on the order of 314 feet above mean sea level. General topographic information was obtained from the USGS Southwest Columbia topographic quadrangle, as shown on the *USGS Topographic Map*, Figure 2 attached.

Site Geology: The site is located in an old river terrace formed in the Upper Coastal Plain Physiographic Province of South Carolina, in downtown Columbia. The soils of this terrace are composed of a mixture of re-deposited material washed from upstream sources of ancient rivers, and are typically mixed with rocks that vary in size and depth which have been rounded through years of exposure to flowing water. The deposits in these areas are highly variable and may cover areas of the river bed and associated flood plains, which when deposited were established in very loose and wet conditions. Ultimately these terraces are underlain by firmer materials of the Piedmont Physiographic Province.

More specifically, the geology and geomorphology of the city of Columbia are dictated by several key factors of which the Fall Line and the local River Systems are the most dominant. Upstream from the Fall Line rivers and streams typically have very small floodplains, while downstream these floodplains widen greatly. T. Frank Johnson's 1972 mapping of the Columbia quadrangles depicts the near surface soil composition for areas along the east banks of the Broad River, to about Assembly Street, and west of the Broad River to consist of material that weathered from Phyllites and Granite, with the coastal plain sediments in this area typically 35 to 50 feet thick. Additionally, geological mapping of the Columbia quadrangles depicts the near surface soil composition for areas of Columbia east of Assembly Street to consist of coastal plain and river terrace sediments on the order of 80 to 90 feet thick. In both cases the coastal plain sediments are underlain by several feet of weathered rock and Potassium Feldspar-rich Granite. The granite underlying the surface deposits is known to be metamorphic in nature, and relatively weathered.

SUMMARY OF FIELD EXPLORATION

The subsurface conditions at the site were explored with one (1) mechanically-augered soil boring with Standard Penetration Tests (SPT), performed in accordance with ASTM D1586, taken at regular intervals, while the recovered samples were visually and texturally classified by ASTM D2488 *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. The soil boring was extended to a termination depth of 50 feet below the existing ground surface.

The approximate boring location is shown on the attached *Boring Location Plan*, Figure 3. The boring was located in the field by measuring from existing building corners.



SUBSURFACE CONDITIONS

Soil Conditions: The subsurface conditions encountered at the boring location are detailed on the attached *Soil Test Boring Log*. This log represents our interpretation of the subsurface conditions at the boring location based on our visual and textural examination of the recovered soil samples. The horizontal lines in the Soil Description column of the boring log represent an approximate interface between various soil strata. It is important to understand that these horizontal lines represent an estimated depth of soil variance where as the actual soil change may be gradual.

Surface materials, in the form of asphalt and base course sand approximately 3½ inches in thickness, respectively, were encountered at the ground surface at the boring location. Beneath the surface materials, the boring encountered native Coastal Plain deposits consisting of clayey sands (SC) to a depth of roughly 15 feet below the existing ground surface, underlain by a roughly 5 foot layer of slightly clayey sands (SP), followed by clayey sands (SC) to the termination depth of 50 feet below the existing ground surface.

The upper clayey sandy (SC) soils exhibited SPT N-values noted to range from 5 to 14 blows per foot (bpf), indicating loose to firm relative densities, while the 5 foot layer of slightly clayey sandy (SP) soils exhibited SPT N-values on the order of 11 bpf, indicating a firm relative density. The underlying clayey sandy (SC) soils exhibited SPT N-values noted to range from 11 to 53 bpf, indicating firm to very dense relative densities.

Groundwater Conditions: Free groundwater was encountered in the boring at a depth of approximately 49½ feet below the existing ground surface at the time of drilling. For safety the borehole was backfilled upon completion, therefore, 24-hour stabilized groundwater readings were not obtained.

SEISMIC CONSIDERATIONS

Regional Seismic Conditions: This site is situated approximately 110 miles northwest of Charleston, South Carolina, which is the most prominent area of seismicity along the Atlantic Seaboard. The Charleston earthquake of 1886 was the largest seismic event that has occurred in this region and damage was extensive throughout the Charleston area. The epicenter was located approximately 15 miles northwest of Charleston between the town of Summerville and Middleton Place Plantation.

Recent discoveries of relict liquefaction in the Low Country region of South Carolina have expanded knowledge about seismicity in the area. Evidence indicates that at least five episodes of strong prehistoric ground shaking large enough to produce widespread liquefaction have occurred within the Charleston area within the last 7500 years. The Charleston region continues to experience earthquakes of smaller magnitudes yearly.

IBC2006 and 2009 Seismic Site Class: Our analysis of the soil seismic conditions was based on the information obtained from our SPT boring, utilizing these results to correlate to the Shear Wave Velocities of the previously mentioned CPT sounding previously performed within a 2 block radius of this site, as well as known site and vicinity geological conditions, known regional seismic conditions, and seismic design parameters established in data published in the International Building Code 2006 and 2009 (IBC 2006 and 2009), section 1613. Therefore, from the known regional conditions, the SPT N-values measured, the correlated Shear Wave Velocities, and the parameters established in the IBC 2006 and 2009, we have determined that the site is best defined to have a **Site Class C**.



Earthquake Ground Motion: Earthquake ground motion parameters at the bedrock for this site were obtained from the International Building Code (IBC2006/2009) section 1613. The values for this site are presented in Table 1. Ground motions were obtained utilizing the mapped accelerations, with the design responses for both ground motions represented in the following sections.

Table 1: Probabilistic Ground Motion Values

Spectral Response Acceleration	Ground Motion Values for Recurrence Period (g)
	2% in 50 Years
0.2 sec S_a ¹	0.552
1.0 sec S_a	0.149

Note: 1. S_a is the Spectral Response Acceleration at the noted period.

Based on the information presented in the preceding table, and the IBC 2006/2009 section 1613.5.3, the corresponding site coefficients for the site are calculated to be:

- $F_a = 1.179$
- $F_v = 1.651$

Design Spectral Response: Based on the information presented in the preceding table, and the corresponding site coefficients for the site, we have calculated the Design Spectral Response Acceleration Parameters, according to IBC 2006/2009 section 1613.5.4, for this site to be:

- $S_{DS} = 0.43$
- $S_{D1} = 0.16$

BASIS FOR RECOMMENDATIONS

The recommendations presented in this letter are based on our understanding of the project information, our interpretation of the data obtained during our investigation and our experience with similar soil and project conditions. The Standard Penetration Tests (SPT) values obtained at the boring location have been used to estimate existing soil conditions at this specific site. Regardless of the thoroughness of this investigation, it is possible that the soil conditions intermediate of the boring vary from the soil conditions encountered at the boring location.

CLOSING

Once again we appreciate the opportunity to provide our services for your geotechnical consulting needs. If there are any questions concerning our recommendations or if additional information becomes available please contact us.

Sincerely,
GS2 ENGINEERING & ENVIRONMENTAL CONSULTANTS, INC.

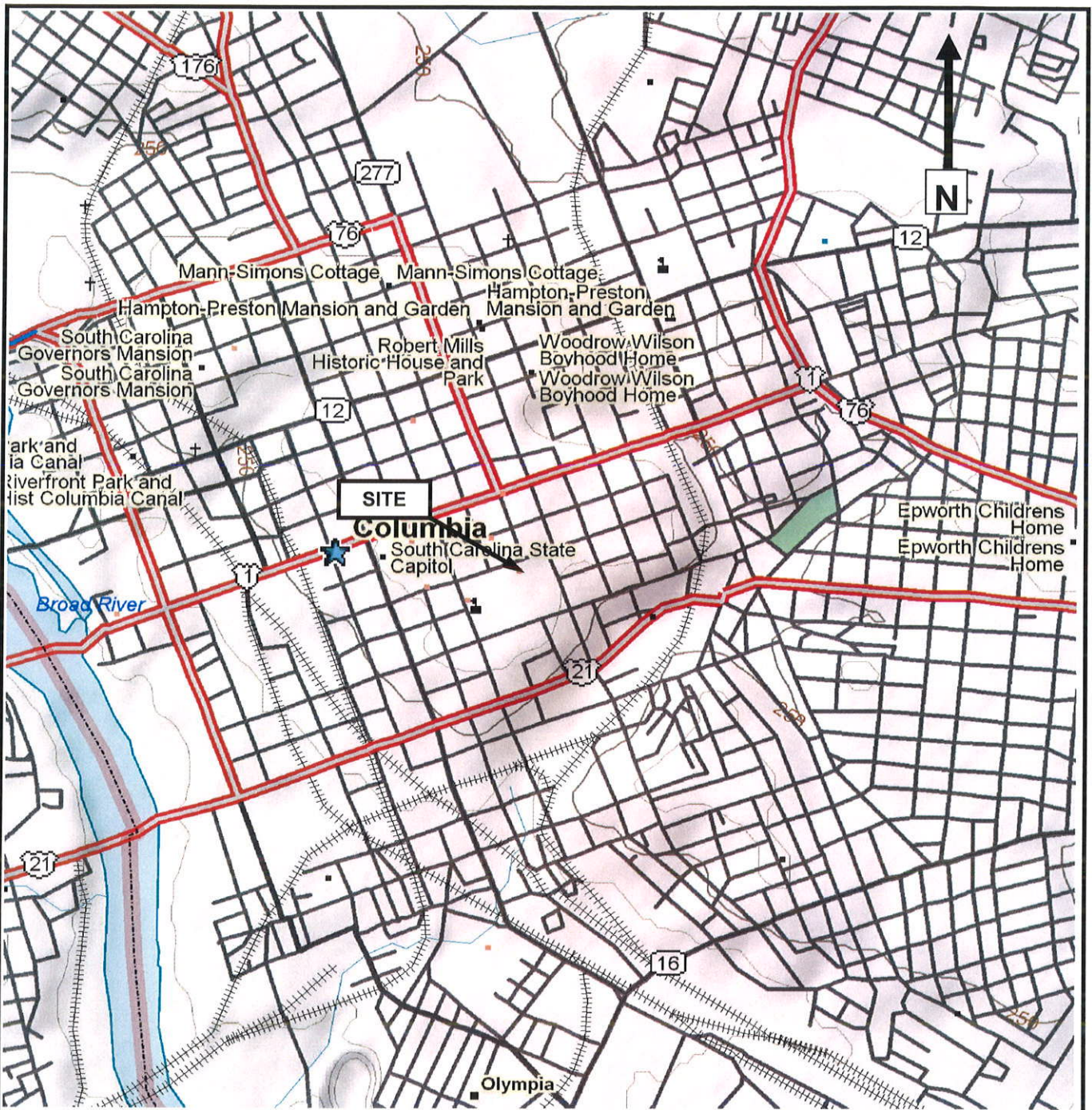


William J. Britt, III, EIT
Operations Manager, VP



Robert C. Bruorton, P.E.
Chief Geotechnical Engineer, AVP





Source: Presented by DeLorme, dated 1999.

Prepared By\Date: RCB-03/12
 Checked By\Date: WJB-03/12

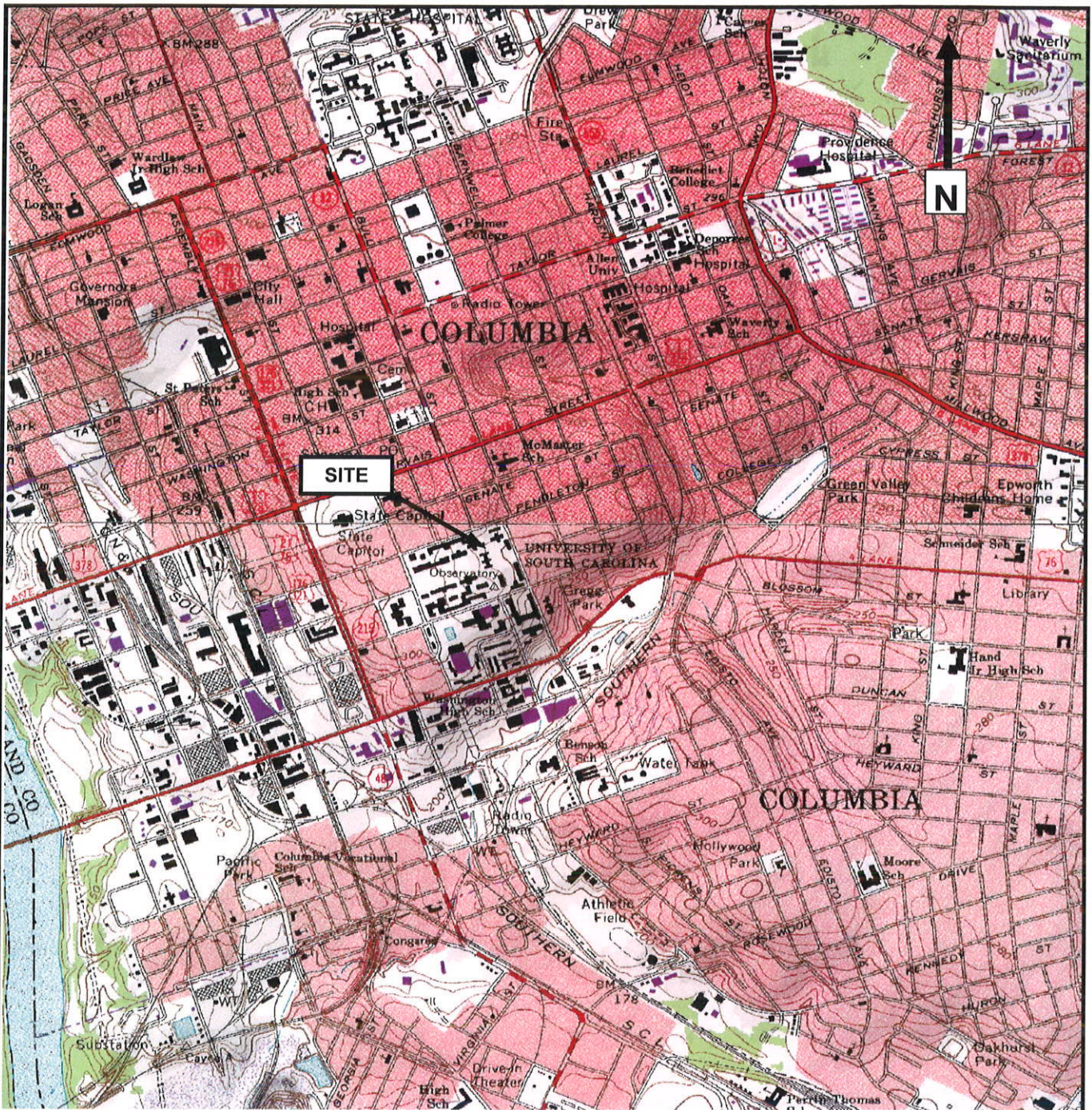


Site Location Map
 McKissick Museum - Roof Renovations
 GS2 Project Number 12-3747-G
 South of the Intersection of Bull and Pendleton Streets
 Columbia, South Carolina

Chao and Associates, Inc.
 7 Clusters Court
 Columbia, South Carolina 29210

Scale
 1 inch = 2300 feet

Figure 1



Source: Presented by DeLorme, dated 1999.

Prepared By/Date: RCB-03/12
 Checked By/Date: WJB-03/12

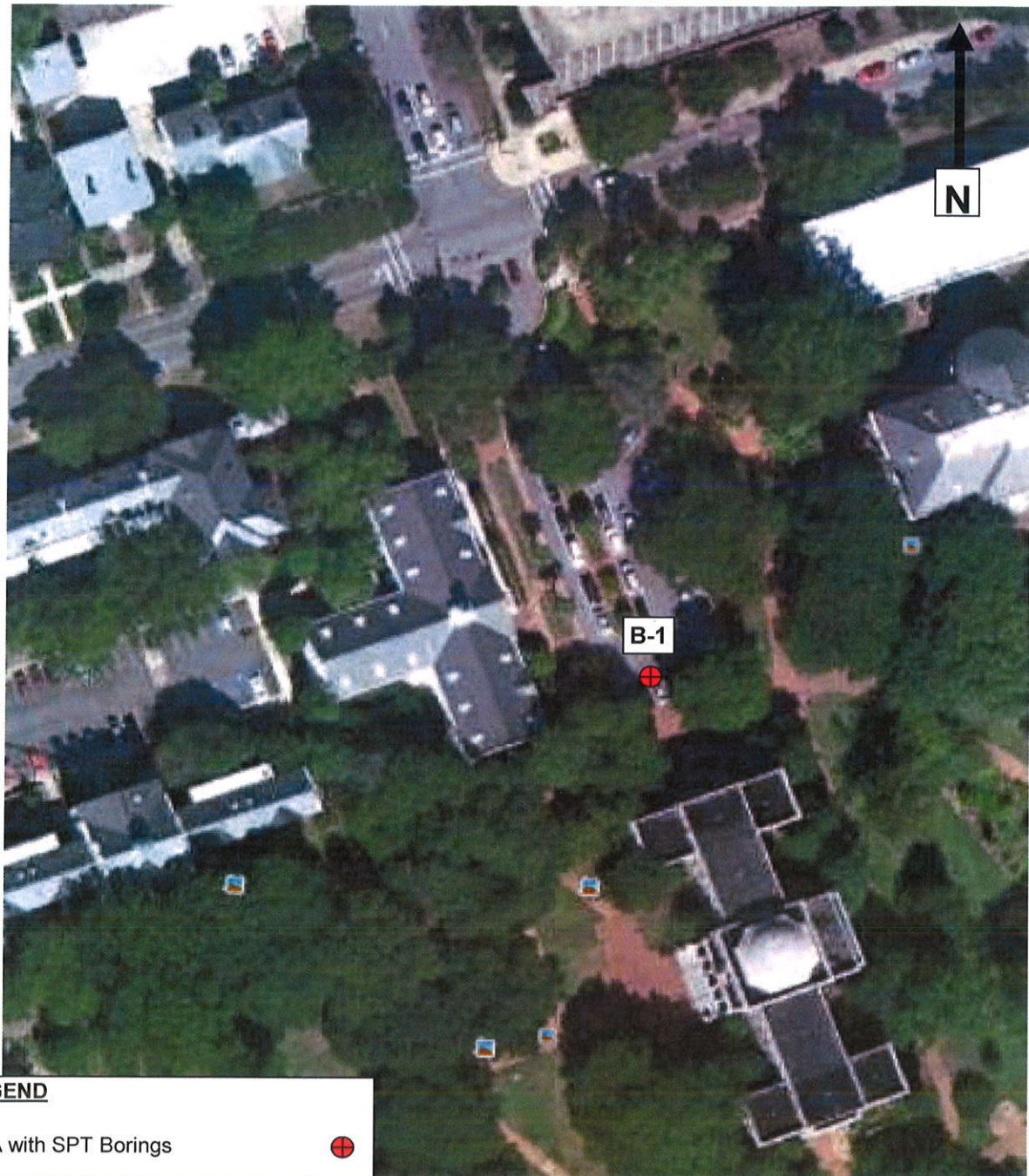


USGS Topographic Map
 McKissick Museum - Roof Renovations
 GS2 Project Number 12-3747-G
 South of the Intersection of Bull and Pendleton Streets
 Columbia, South Carolina

Chao and Associates, Inc.
 7 Clusters Court
 Columbia, South Carolina 29210

Scale
 1 inch = 2000 feet

Figure 2



LEGEND

HSA with SPT Borings



Source: Aerial Photograph

Prepared By\Date: RCB-03/12
 Checked By\Date: WJB-03/12



Boring Location Plan
 McKissick Museum - Roof Renovations
 GS2 Project Number 12-3747-G
 South of the Intersection of Bull and Pendleton Streets
 Columbia, South Carolina

Chao and Associates, Inc.
 7 Clusters Court
 Columbia, South Carolina 29210

Scale
 NOT TO SCALE

Figure 3

SOIL TEST BORING LOG KEY

COLOR SCHEME (Primary Soil Type):



SURFACE MATERIALS

Generally consist of Asphalt, Graded Aggregate Base Course, Concrete or Topsoils. Topsoils typically combine a mixture of soils and organic materials. Topsoils are typically recognized through texture and odor.



SANDS

Sands are considered to be a granular soil type with no cohesive properties. Grain sizes are categorized as fine (falls between 0.075 and 0.420 mm. in diameter), medium (falls between 0.420 and 2 mm. in diameter) or coarse (falls between 2 and 4.75 mm. in diameter).



SILTS

Silt grain sizes typically fall between 0.002 and 0.075 mm. in diameter. The Atterberg's limits for silts typically plot below the A-Line on a Plasticity Chart. Silts are typically distinguished as having a Low Plasticity (P.I. is between 0 and 22) or as having a High Plasticity (P.I. is between 22 and 59). Silts exhibit some cohesive properties.



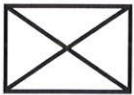
CLAYS

Clay grain sizes typically are smaller 0.002 mm. in diameter. The Atterberg's limits for clays typically plot on or above the A-Line on a Plasticity Chart. Clays are typically distinguished as having a Low Plasticity (P.I. is between 0 and 22) or as having a High Plasticity (P.I. is between 22 and 59). Clays exhibit strong cohesive properties.



COOPER MARL

The Cooper Marl Formation is typically olive green in color and classifies as a silty sand or sandy silt. It is composed of overconsolidated marine deposits and is highly reactive to hydrochloric acid. The Cooper Marl sometimes contains cemented layers of phosphate. This formation is native to the Low Country Area of South Carolina.



NO RECOVERY

Denotes that there was no recovery in the split-spoon sampler barrel upon its retrieval from the borehole. No recovery may be due to very hard soil layers that are unable to be penetrated by the barrel or super-saturated soils that are unable to be retained in the barrel.

PATTERN SCHEME: (Secondary Soil Type)



SANDY

Denotes a soil that has a percentage of sand. The portion of the soil that is sandy in nature is considered coarse-grained. When used in conjunction with the yellow color scheme, this pattern means the soil has more than 50% retained on the No. 200 sieve (i.e 0.075 mm in diameter).



SILTY

Denotes a soil that has a percentage of silt. The portion of the soil that is silty in nature is considered fine-grained. When used in conjunction with the gray color scheme, this pattern means the soil has more than 50% passing the No. 200 sieve (i.e 0.075 mm in diameter).



CLAYEY

Denotes a soil that has a percentage of clay. The portion of the soil that is clayey in nature is considered fine-grained. When used in conjunction with the red color scheme, this pattern means the soil has more than 50% passing the No. 200 sieve (i.e 0.075 mm in diameter).



PARTIALLY WEATHERED ROCK

Denotes a soil that is considered Partially Weathered Rock (PWR). PWR is defined as residuum that exhibits SPT N-values in excess of 100 bpf



DEBRIS LADEN

Denotes a soil that is laden with debris. Debris may consist of anything man-made, including, but not limited to, house hold trash, construction debris (concrete, brick, metal, etc.) or may consist of natural debris, such as organics. Depending on the severity and type of the debris, these materials may require excavation and replacement.



OLD FILL

Denotes a soil that is assumed or known to be previously placed, possibly untested, old fill. As there is no known record of its placement, these soils are undocumented, and may require excavation and replacement.

Note:

The above detailed color schemes are indicative of the predominant primary soil type observed in the indicated soil strata at the Boring locations for the subject site. Secondary soil types are detailed by the pattern scheme. Both the color and pattern scheme are detailed in the Remarks column of the SOIL TEST BORING LOG. All soil descriptions are based on visual and textural properties observed in the recovered soils. No laboratory tests were performed on the soils described in this report, unless noted within the remarks column of the logs.

SOIL TEST BORING LOG

Project Name: McKissick Museum - Roof Renovations

Project Number: 12-3747-G

Date of Test: March 20, 2012



Boring Number: B-1

Depth (feet)	Soil Description	Sample Interval	Blow Counts*	Remarks
1	SURFACE MATERIALS: 3-1/2 inches of ASPHALT underlain by base course sand			
2	COASTAL PLAIN: Loose to Firm Red Clayey Fine to Medium SAND. (SC)	0 to 1-1/2'	5	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16	Firm Light Orange Slightly Clayey Fine to Medium SAND.. (SP)	13-1/2' to 15'	14	
17				
18				
19				
20				
21	Firm Orange Clayey Fine to Medium SAND. (SC)	18-1/2' to 20'	11	
22				
23				
24				
25				
		23-1/2' to 25'	11	

Depth of Boring (ft): <u>50 Feet</u>	Location of Boring: <u>see Boring Location Plan</u>
Depth of Groundwater T.O.B. (feet): <u>49-1/2 Feet</u>	Method of Drilling: <u>Hollow Stem Auger</u>
Depth of Groundwater 24 hrs. (feet): <u>Not Available</u>	Performed By: <u>GS2 Drilling</u>

* The Blow Counts given above are recorded for a 140 pound hammer (falling 30 inches/blow) to drive a 2 inch O.D., 1.375 inch I.D. split-barrel sampler 12 inches, after an initial 6 inch seating increment.

SOIL TEST BORING LOG

Project Name: McKissick Museum - Roof Renovations

Project Number: 12-3747-G

Date of Test: March 20, 2012



Boring Number: B-1 (continued)

Depth (feet)	Soil Description	Sample Interval	Blow Counts*	Remarks
26	...continued Firm Orange Clayey Fine to Medium SAND. (SC)	28-1/2' to 30'	15	
27				
28				
29				
30				
31	Very Firm Mottled Orange and Tan Clayey Fine to Medium SAND. (SC)	33-1/2' to 35'	21	
32				
33				
34				
35				
36	Very Dense Mottled Orange, Tan and White Clayey Fine to Medium SAND. (SC)	38-1/2' to 40'	53	
37				
38				
39				
40				
41	Very Firm Mottled Light Orange and Light Tan Clayey Fine to Medium SAND. (SC)	43-1/2' to 45'	28	MOIST
42				
43				
44				
45				
46	Dense Mottled Light Orange, Tan and Light Gray Clayey Fine to Medium SAND. (SC)	48-1/2' to 50'	44	MOIST
47				
48				
49				
50	Boring Terminated at 50 feet.			

Depth of Boring (ft): <u>50 Feet</u>	Location of Boring: <u>see Boring Location Plan</u>
Depth of Groundwater T.O.B. (feet): <u>49-1/2 Feet</u>	Method of Drilling: <u>Hollow Stem Auger</u>
Depth of Groundwater 24 hrs. (feet): <u>Not Available</u>	Performed By: <u>GS2 Drilling</u>

* The Blow Counts given above are recorded for a 140 pound hammer (falling 30 inches/blow) to drive a 2 inch O.D., 1.375 inch I.D. split-barrel sampler 12 inches, after an initial 6 inch seating increment.

SECTION 01021

CASH ALLOWANCES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

1.1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section specifies administrative and procedural requirements for allowances and unit prices.

1.2.2 An Allowance is an amount determined by the Owner for work of indeterminate scope and cost. Each Bidder shall include the allowance amount in the Base Bid price.

1.2.3 Contingency Allowance included in the BASE BID for the Work, as specified in these Contract Documents, is \$ 5,000.00.

1.2.3.1 The cost for work performed by the Contingency Allowance covers items not anticipated or specifically delineated in the documents and shall be determined in accordance with the Change Order procedures of the Contract Documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01021

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUMMARY

- 1.1.1 A payment or payments made to Contractor for work performed shall not constitute acceptance or approval of the work and shall in no way relieve Contractor from the requirements of the Contract.
- 1.1.2 All sums received by the Contractor for any part or parts of the work furnished or performed by a subcontractor shall be paid promptly to the latter by Contractor and while in the hands of the Contractor shall constitute trust funds held for the use and benefit of Owner.
- 1.1.3 Contractor shall submit with payment request lien releases from material suppliers which state that suppliers have been paid for materials supplied to the project. Payment requests may be delayed if not received in a timely manner.
- 1.1.4 If payments are to be made on account of materials or equipment not incorporated in the work, but delivered and suitably stored at the Site, or at such other location agreed upon in writing, such payments shall be conditioned upon submission by Contractor of bills of sale or other documents satisfactory to the Owner establishing Owner's title to such materials or equipment or otherwise protecting Owner's interest therein including the prepayment of applicable insurance and transportation charges to the Site.
- 1.1.5 Contractor shall submit with payment application all claims for weather related delays on a monthly basis.

1.2 APPLICATION FOR PAYMENT

- 1.2.1 Monthly Application for Payment shall be submitted in triplicate to Architect for review and forwarding to Owner on AIA Documents G702 and G703. Provided an Application for Payment is received by the Architect not later than the 25th day of a month, the Owner shall make payment to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner no later than 30 days after the Architect receives the Application for Payment. Contractor shall be furnished copy of Owner's Payment Schedule indicating payment dates and outline for receipt of payment requests.
- 1.2.2 Ninety-six and one-half percent (96.5%) of the value of materials stored at the site and 96.5% of work accomplished, less previous payments, shall be paid by Owner to Contractor in monthly installments upon Architect's certification.
- 1.2.3 Final payment shall be made 30 days after Architect has certified completion to the Owner, and specified warranties are provided in accordance with Section 01740.

1.3 UNIT PRICES

- 1.3.1 A Unit Price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
- 1.3.2 Before proceeding with work, Contractor shall survey the work to be covered under Unit Prices in the presence of the Architect for verification of quantities for the Project.
- 1.3.2.1 Unit Price Schedule: Unit Prices shall include costs of materials, delivery, labor (to remove and replace), insurance, rental of tools and equipment, overhead and margin of profit. The final contract amount will be adjusted by change order increasing or decreasing the final contract price based on the actual replacement made during the course of the work using the quoted unit prices.
- 1.3.2.2 Include 100 cubic feet in the Base Bid costs for removal and replacement of any wet, damaged, or deteriorated structural concrete. Quote a separate unit price (per cubic foot) for such work.
- 1.3.2.3 Include all copings on RAs 1, 2, 3, 4, 5, 6, 7 & 8 in the Base Bid costs to install new metal locking cleats, 20 mil PVC flashing and zinc coping cap over existing limestone coping stone. Quote a separate unit price (per linear foot) for such work.
- 1.3.3 Contractor shall maintain a daily log showing dates, location, and exact quantities of unit price work. Copies of log and appropriate change order forms shall be submitted with each request for payment from the contractor unless no unit price work is accomplished during the payment period. If appropriate, Payment Applications containing unit price work will not be processed unless unit price logs are attached.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01025

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 PROCEDURES

- 1.1.1 Each transmitted document shall identify the project name and Contractor. Material submittals shall also identify the type and trade name of materials, material manufacturer, intended use, and specification number. Deviations from Contract Documents shall be identified.
- 1.1.2 Submittals shall bear the Contractor's stamp and indicate Contractor approval and date. Submittals shall be identified in numerical order, beginning with Submittal No. 1.
- 1.1.3 After Architect's review of materials, revise and resubmit as required, identifying changes made since previous submittal.

1.2 BID SUBMITTALS

- 1.2.1 Refer to Invitation to Bid, Instructions to Bidders, & Supplementary Instructions to Bidders.
- 1.2.2 Drug-Free Workplace Statement (a part of bid form agreements). The BIDDER certifies that it will provide a "Drug-Free Workplace" as that term is defined in Section 44-107-30 of the SC Code of Laws, and shall comply with the requirements set forth in Title 44, Chapter 107.
- 1.2.3 Illegal Immigration Reform Act of 2008 (a part of bid form agreements). The BIDDER certifies that it is in compliance with the requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the State upon written request any documentation required to establish that he/she and his/her sub-contractors or sub-subcontractors are in compliance with Title 8, Chapter 14.

1.3 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- 1.3.1 Contractor submittals shall be forwarded to Architect within 14 calendar days after receipt of signed Contract. The successful Contractor shall submit 5 copies of the required information to the Architect. Two copies will be returned to the Contractor for his use.
- 1.3.2 Refer to Section 01340 "Shop Drawings, Product Data and Samples."

1.4 CONTRACTOR INFORMATION

- 1.4.1 Submit to Architect on or before Pre-Construction Conference the following documents:
 - 1.4.1.1 A letter from the Contractor, on Contractor letterhead, identifying the

brand name, manufacturer and material proposed for use; including a statement that all proposed materials meet the specification requirements. Obtain Owner's approval before placing orders.

- 1.4.1.2 Emergency contact information including phone numbers of principals, superintendent, foreman, and project manager.
- 1.4.1.3 Foreman's Statement (copy attached).
- 1.4.1.4 Material Safety Data Sheets (3 copies).
- 1.4.2 If Project Specifications indicate that removal and disposal of Asbestos Containing Material (ACM) is required, copies of the Application for an Asbestos Disposal Permit and the SCDHEC Asbestos Disposal Permit for this Project shall be furnished to the Project Architect prior to start of roof removal work.
- 1.4.3 Submit with each Monthly Payment Application a fully executed Contractor's Affidavit of Payment of Debts and Claims, AIA G706, and Contractor's Affidavit of Waiver and Release of Liens, AIA G706A,
- 1.4.4 Submit to Architect within 2 weeks of project startup and which must be approved prior to Contractor's First Application for Payment:
 - 1.4.4.1 A copy of AIA Document G703 listing each phase of the work and its scheduled value for approval.
 - 1.4.4.2 Furnish Manufacturer's Certificates of Compliance with materials' specifications for materials to be incorporated into the work. Certificates are to be signed by a responsible officer of the manufacturing firm and notarized.
- 1.4.5 Submit to Architect upon completion of the work and prior to Contractor's Final Application for Payment:
 - 1.4.5.1 Certificate of Substantial Completion, AIA G704.
 - 1.4.5.2 List of Subcontractors by specialty, including address and telephone number.
 - 1.4.5.3 Consent of Surety to Final Payment, AIA G707.
 - 1.4.5.4 Final Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
 - 1.4.5.5 Final Contractor's Affidavit of Release of Liens, AIA G706A.
 - 1.4.5.6 Contractor's Waiver and Release of Liens Conditional Upon Receipt of Final Payment.
 - 1.4.5.7 "No Asbestos" Certification (Statement on Contractor's letterhead that no asbestos containing materials were used in the completion of the Work.)

1.4.5.8 Contractor's 2 Year Warranty to Owner, using form included in Project Specifications without alteration.

1.4.5.9 Manufacturer's Specified 10 yr. Material Warranty to Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 TIMING

3.1.1 Make all submittals in accordance with schedules specified herein.

3.1.2 A minimum of 10 calendar days shall be allowed for review by the Architect following his receipt of the submittal.

3.1.3 If a submittal contains more than 10 shop drawings, Contractor shall indicate which drawings must be returned within 10 calendar days. Architect shall have an additional 10 days to return the balance of submittals.

3.1.4 Delays caused by tardiness in receipt of submittals shall not be an acceptable basis for extension of the Contract completion date.

3.2 REVIEW

3.2.1 Review by the Architect shall be directed to the general method of construction and shall not be construed as a complete check nor shall the review relieve the Contractor from responsibility for errors and/or omissions which may exist.

3.2.2 The notations "Reviewed" or "Make Corrections as Noted" shall authorize the Contractor to proceed with fabrication, purchase, or both, subject to the revisions, if any, required by the Architect's review comments.

3.2.3 The Contractor shall make all revisions as required. If the Contractor considers any required revisions to constitute a change, he shall notify the Architect under the provisions of the General Conditions.

3.2.4 Only those revisions directed or approved by the Architect shall be shown on the resubmittal.

3.2.5 After a submittal has been approved by the Architect, substitution of materials, equipment, and/or procedures shall not be considered unless accompanied by an acceptable explanation for the substitution.

END OF SECTION 01300

ENCLOSURE: Foreman's Statement Form

FOREMAN'S STATEMENT

A PROJECT MANUAL FOR THE
ROOF REPLACEMENT PROJECT
AT THE MCKISSICK MUSEUM

USC HORSESHOE – 816 BULL STREET
COLUMBIA, SC 29208

JUNE 2012

I, _____ (Print Name), an employee of
_____ (Print Contractor Name) hereby

state that I have my own personal copy of the above referenced project specifications and drawings, have thoroughly read them, and have visited the work site.

By _____

Date _____

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.1 SHOP DRAWINGS

- 1.1.1 Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data prepared by the Contractor, Subcontractor, manufacturer, supplier or distributor which illustrates some portion of the Work.
- 1.1.2 Shop drawings are to be submitted by transmittal letter with the following information:
 - 1.1.2.1 State Project Number
 - 1.1.2.2 Architect's Project Number
 - 1.1.2.3 Submittal Date
 - 1.1.2.4 Submittal Number
 - 1.1.2.5 Project Title
 - 1.1.2.6 Name of Contractor and Approval Date
 - 1.1.2.7 Reference to Specification Section, Paragraph and/or Drawing
 - 1.1.2.8 The location of the work covered by the shop drawing
 - 1.1.2.9 Any qualification, deviation or departure from Contract
 - 1.1.2.10 Any additional information required by the Specifications for the particular material being furnished
- 1.1.3 Each shop drawing shall be numbered. The same numbering system shall be retained through all revisions. Each drawing shall have a clear space for the approval stamps of Contractor and Consultant.
- 1.1.4 In submitting shop drawings for approval, all associated shop drawings related to a complete assembly shall, where possible, be submitted at the same time so that each may be checked in relation to the entire proposed assembly.
- 1.1.5 Contractor shall prepare composite shop drawings and installation layouts, when required, to depict proposed solutions for tight field conditions.
- 1.1.6 With respect to standard manufactured items, Contractor shall submit to Architect manufacturer's illustrated cuts of the items to be furnished showing details, sizes and dimensions, and all other pertinent information. Sufficient copies of cuts shall be furnished so that Architect may maintain a minimum of 2 copies and return to Contractor the number required for Contractor's use.
- 1.1.7 Contractor shall submit 5 copies of each drawing. Two final approved copies will be returned to the Contractor.

1.2 PRODUCT DATA

- 1.2.1 On Contractor's letterhead, in a list form, submit a complete description of the materials to be used on the project, and a statement that all the listed items meet the requirements of the project specifications.
- 1.2.2 Submit each manufacturer's technical specifications and installation procedures for each major component required.
- 1.2.3 Minimum required components include wood blocking, fasteners, insulation, cants, adhesives, retrofit roof drain, liquid applied roof membrane, metal and liquid applied flashings.
- 1.2.4 Submit shop drawings for new metal access ladder to be wall mounted through the existing limestone veneer.

1.3 RELATED SECTIONS

- 1.3.1 Section 01300 "Submittals."

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01340

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 QUALITY CONTROL – CONTRACTOR

- 1.1.1 Maintain quality control over products, services, site conditions, and workmanship to produce work of specified quality.

1.2 QUALITY CONTROL – OWNER

- 1.2.1 The Owner reserves the right, at his discretion, to retain the services of an independent construction monitoring representative to provide full or periodic inspection of the project. If Owner engages this service, the Contractor will be informed. Testing may be performed to determine any deficiencies in the assembly.
- 1.2.2 Work found in violation of the Specifications, or not in conformance with acceptable workmanship practices/standards, shall be subject to rejection including complete removal and replacement with new materials at Contractor's expense.
- 1.2.3 Failure of Owner or Architect to discover or reject defective work, or work not in accordance with the Contract, shall not be deemed an acceptance thereof, or a waiver of Owner's rights to Contractor's compliance with the Contract or performance of the work, or any part thereof. No partial or final payment, or partial or entire occupancy, by Owner shall be deemed to be an acceptance of work or of material which is not strictly in accordance with the Contract, nor shall it be deemed a waiver by Owner or any of Owner's rights pursuant to this Contract or otherwise.
- 1.2.4 Contractor may be required to uncover work in-place to determine the quantity and quality of material and workmanship. Contractor photographs may or may not be accepted to validate fasteners, fastener frequency, unit price work, and other elements of the work concealed by project finishes.

1.3 QUALITY ASSURANCE

- 1.3.1 Roofing Contractor Qualifications: A Roofing Contractor experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance. Installer employing workers trained and approved by manufacturer. The Roofing Contractor shall be licensed as a specialty roofing contractor with at least 5 years of contracting experience in the type of work involved in this project, and must have performed work similar to the proposed scope of work. Evidence of qualifications must be available by the Contractor upon request of the Owner.

- 1.3.2 Contractor must have specific experience in the following areas of the work and provide as an attachment to the Bid Form a list of relevant projects performed within the last five years where experience has been gained:

1.3.2.1 Liquid-Applied Roofing Installations

All subcontract trades to the Roofing Contractor must be licensed in their specialty trade area if specialty area is governed by SC Department of Labor, Licensing and Regulation. Evidence of qualifications must be available by the Contractor upon request of the Owner.

- 1.3.3 Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

1.4 QUALITY CONTROL

- 1.4.1 Owner Responsibilities: Owner will provide inspections during the work. Such inspections may be daily or periodic.

- 1.4.2 Contractor Responsibilities: Contractor will provide a fully qualified, full-time project superintendent in addition to the working crew foreman. The crew foreman will be an English-speaking Foreman, and will be experienced in the application of the specified roofing system.

- 1.4.3 Safety and Health Program: Contractor shall have and maintain a written safety and health program in the form of a dedicated safety and health manual. The manual and program shall conform to applicable OSHA requirements. If requested by the Owner, a copy of the manual shall be made available to the Owner.

- 1.4.4 Superintendent responsibilities will include, but are not limited to the following:

1.4.4.1 Scheduling and coordination of the work;

1.4.4.2 Maintain daily log which will include quantities of unit price work;

1.4.4.3 Project safety, both general and specific to the daily activity;

1.4.4.4 Material delivery and storage;

1.4.4.5 Overall quality control regarding removals, preparations, and the installation of the new components;

1.4.4.6 Point of Contact with the Owner's designated point of contact and the Architect.

- 1.4.5 Additional Contractor Responsibilities: Unless otherwise indicated, provide quality-control inspections with Contractor's own work force. Repair or replace nonconforming work.

- 1.4.6 Associated Services: Cooperate with agencies performing inspections and similar quality-control services, and provide reasonable auxiliary services as requested. Provide the following:
 - 1.4.6.1 Access to the Work.
 - 1.4.5.2 Incidental labor and materials necessary to facilitate inspections.
- 1.4.7 Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate inspections.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 REPAIR AND PROTECTION

- 3.1.1 General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 3.1.1.1 Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- 3.1.2 Protect construction exposed by or for quality-control service activities.

END OF SECTION 01400

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION

- 1.1.1 Contractor shall provide for temporary facilities and controls required for the performance of the project except as otherwise noted. Such items include, but are not necessarily limited to, water, electricity, and telephone; sanitary facilities; protection, security, and safety materials; and enclosures such as tarpaulins, barricades, fences, and canopies.
- 1.1.2 All equipment furnished by Contractor shall comply with all pertinent safety requirements.
- 1.1.3 Ladders, planks, hoists, chutes and all similar items furnished in the execution of the work are to comply with all requirements of OSHA and any other regulatory agency having jurisdiction over this project.
- 1.1.4 All temporary facilities will be subject to the Owner's approval.

1.2 PRODUCT HANDLING

- 1.2.1 Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
- 1.2.2 All required connections to existing utility systems shall be made with minimum disruption. If disruption of existing service is required, notice shall be given to the Owner and connections shall not be made without Owner's approval. If necessary, Contractor shall provide for alternate temporary service.

PART 2 PRODUCTS

2.1 TEMPORARY UTILITIES

- 2.1.1 Electricity: Owner will not furnish electricity to the Contractor during this project. Contractor to provide temporary power as necessary to complete the work of this project.
- 2.1.2 Water: The Contractor will be provided water to the extent of the existing sources. The Contractor shall be responsible for any additional water that may be needed or desired by them. They are also responsible for getting the water to any location where needed or desired.
- 2.1.3 Telephone: The project foreman and superintendent must have a cell phone, and it must be active the entire construction period.
- 2.1.4 Connects and Disconnects: In the event it is necessary to disconnect any electrical wiring or connections, plumbing lines, gas lines, or other building services, notify the Owner 72 hours in advance to provide sufficient advance time to minimize disruption of service. Contractor shall not disconnect or connect services unless authorized in writing by Owner.

2.2 TEMPORARY FACILITIES

- 2.2.1 Sanitary Facilities: The Contractor shall provide and maintain proper temporary self-contained sanitary facilities in the quantity required for use of all personnel. All facilities shall be maintained in a sanitary condition at all times.
- 2.2.2 Ventilated Storage Facilities: Provide, as required, facilities to maintain specific storage conditions as described within this Specification and as recommended by the materials' manufacturers for use in construction.

2.3 CONSTRUCTION AIDS

- 2.3.1 Roof Access: The Contractor shall provide equipment for access to the roof unless otherwise directed by Owner.
- 2.3.2 Ladders: If ladders are used, the Contractor shall remove all ladders from the work areas and site at the end of work each day. Ladders may be stored in locked storage trailer.
- 2.3.3 Fire Extinguishers: Contractor shall provide adequate sized fire extinguishers for the project site.
- 2.3.4 Contractor is to insure all moving equipment has a "Kill Switch" or emergency stop button. Switch is designed to disengage movement of equipment instantly.
- 2.3.5 Enclosures: The Contractor shall provide fencing, barricades, warning signs, and all necessary safeguards to warn and prevent workers, pedestrians, and Owner's personnel from being exposed to dangers or hazards created by this project.
- 2.3.6 Protective Fencing: The Contractor shall enclose the construction storage area, debris removal area and hoisting area with portable chain link fencing a minimum height of 6'. Contractor will cover protective fencing with mesh or paneling to obstruct viewing into the blocked off area.
- 2.3.7 Temporary Construction: The Contractor shall furnish, install, and maintain for the duration of the project all scaffolds, ladders, tarpaulins, platforms, bridges, canopies, steps, and other temporary construction required to properly facilitate completion of the project in compliance with all safety and other regulations.
- 2.3.8 Signs: No signs or advertising of any kind shall be allowed on the project site unless approved in advance by Owner.
- 2.3.9 Parking: Contractor's construction vehicles shall enter the project site and park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt ongoing operations of the Owner.

PART 3 EXECUTION

Not Used.

END OF SECTION 01500

SECTION 01560

CONSTRUCTION CLEANING

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Scrap, debris, waste material, and other items from all operations shall not be allowed to accumulate on the Project site. Debris shall be removed and properly disposed of daily in accordance with all Federal, State, and Local regulations in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way.
- 1.1.2 The buildings and site shall be maintained in a clean condition throughout the duration of the Project. Contractor shall comply with all requirements for cleanliness described in other sections of these Specifications.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- 2.1.1 Contractor shall provide all required manpower, material, and equipment to maintain the specified standard of cleanliness.
- 2.1.2 Contractor shall use only those materials and equipment which are compatible with the surface being cleaned as recommended by the manufacturer or approved by the Architect.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

- 3.1.1 Contractor shall conduct daily inspections to ensure that the requirements for cleanliness are being met. Building exterior and grounds in work area shall be cleaned before close of work each day.
- 3.1.2 Contractor shall provide storage containers for all items awaiting removal from the site. Storage containers and locations shall be approved by the Architect and promptly disposed of when at capacity.

3.2 STORED MATERIALS

- 3.2.1 Stored items shall be kept in an orderly arrangement allowing maximum access and shall not impede drainage or traffic.
- 3.2.2 Contractor shall inspect all arrangements of materials stored on the Project site on a minimum weekly basis and shall service all arrangements in accordance with the requirements of paragraph 3.1.1 of this Section.

END OF SECTION 01560

SECTION 01610

STORAGE AND PROTECTION

PART 1 GENERAL

1.1 FACILITY PROTECTION

- 1.1.1 Limit size of work sections to safeguard adjacent materials, structures, etc. and to minimize dust and noise.
- 1.1.2 Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload new or existing construction with demolition debris, equipment, new materials etc.
- 1.1.3 Protect existing facilities from fire. Contractor shall provide suitable and adequate fire extinguishers conveniently located on the premises at staging areas, storage areas, and at areas of equipment. Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire protection.
- 1.1.4 Plywood, minimum 3/4 inch thick, or other suitable materials shall be used to protect roof areas from damage that may be caused by concentrated loads, foot traffic, and falling objects from upper roof areas.
- 1.1.5 Site and roof traffic shall be confined to work areas. Contractor shall be responsible for leaks that develop in traffic areas during and after Project completion. Grounds damaged by work shall be restored to pre-work condition and shall include, but is not limited to, hauling in new acceptable fill dirt material and reseedling of the affected site.
- 1.1.6 Contractor shall protect interior operations from adverse weather during exterior repair operations. This requirement extends beyond the immediate project scope of work to adjacent contiguous building areas.
- 1.1.7 The Contractor is responsible and shall be held liable for any damages to the adjacent roof assemblies, building, building contents, its occupancy, grounds, or landscaping resulting from work under the Contract. In the event of damage, Contractor will restore property to a condition equivalent to that at the time the Project started. Restoration may be necessary to construction assemblies not specified in this project manual. In such cases, repair methods and materials are subject to approval by Owner.
- 1.1.8 The Contractor shall keep existing drainage facilities clear of debris during construction.

1.2 MATERIAL PROTECTION

- 1.2.1 Products shall be transported by methods which avoid damage. Damaged material shall be subject to rejection by the Architect.
- 1.2.2 Materials stored in open shall be placed on pallets with wood blocks underneath to provide ventilation.
- 1.2.3 It is the responsibility of the Contractor to ensure repair products are adequately protected from damage.
- 1.2.4 Damaged materials will be designated by spray painting and must be removed from the project site within 24 hrs.

1.3 STORAGE

- 1.3.1 Contractor shall be responsible for proper storage of equipment, materials, and devices furnished by themselves and/or their subcontractors and suppliers.
- 1.3.2 All storage areas are subject to approval by the Owner or Owner's authorized representative.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01610

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 FINAL CLEANING

- 1.1.1 Except as specifically provided otherwise, "clean" shall be interpreted as meaning the level of cleanliness generally attainable by skilled cleaners using commercially available building maintenance equipment and materials.
- 1.1.2 Execute cleaning prior to final inspection.
- 1.1.3 Unless otherwise directed by the Architect, the Contractor shall clean all adjacent areas on the site and completely remove all resultant debris.
- 1.1.4 Clean all roof areas and drainage systems. Clean interior and exterior surfaces exposed to view; remove stains and foreign substances. Such work shall be accomplished at no additional cost to the Owner.
- 1.1.5 Clean equipment as required.
- 1.1.6 Clean site; sweep paved areas; rake clean other areas.
- 1.1.7 All tools, equipment, construction materials, scrap, debris, and waste shall be removed from the project site.
- 1.1.8 Restore grass areas by filling ruts, compacting soil, raking, seeding, and fertilizing. Replace any damaged sidewalks or pavement.
- 1.1.9 Remove portable sanitary facilities from site. Clean and disinfect area as necessary to ensure sanitary health conditions.

1.2 Contractor Inspection and Punch-list Prior to Request for Substantial Completion

- 1.2.1 Contractor shall inspect all aspects of this project and prepare a punch-list of uncompleted and/or deficient work. All work and deficiencies will be corrected by Contractor before a Final Inspection is scheduled.

1.3 FINAL INSPECTION

- 1.3.1 Architect's representative will conduct a final inspection with Owner's representative and the Contractor's representative.
- 1.3.2 Any scheduled inspection reports by Local Jurisdiction Inspectors, if required, shall be furnished prior to Final Inspection and Contract Closeout.

1.4 WARRANTIES AND BONDS

- 1.4.1 Refer to Section 01740 "Warranties and Bonds" for requirements.

1.5 CLOSE-OUT

1.5.1 Final payment will be made to the Contractor only after the following have been submitted. Please provide (3) copies of the following documents.

1.5.1.1 Certificate of Substantial Completion, AIA G704.

1.5.1.2 List of Subcontractors by specialty, including address and telephone number.

1.5.1.3 Consent of Surety to Final Payment, AIA G707.

1.5.1.4 Contractor's Affidavit of Payment of Debts and Claims, AIA G706.

1.5.1.5 Contractor's Affidavit of Release of Liens, AIA G706A.

1.5.1.6 Roofing Contractor's Affidavit of Waiver and Release of Liens Conditional Upon Receipt of Final Payment.

1.5.1.7 "No Asbestos" Certification (Statement on Contractor's letterhead that no asbestos containing materials were used in the completion of the Work.)

1.5.1.8 Contractor's 2 Year Warranty to Owner.

1.5.1.9 Manufacturer's Specified 10 yr. Material Warranty to Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01700

SECTION 01740

WARRANTIES, INSURANCE, AND BONDS

PART 1 GENERAL

1.1 SECTION INCLUDES

1.1.1 Upon completion of the work and prior to the final payment, the Contractor shall submit the following items to the Architect:

- 1.1.1.1 Copies of all manufacturers' punch lists and documentation of completion.
- 1.1.1.2 Copies of all punch lists prepared by the Architect and documentation of completion.
- 1.1.1.3 Contractor's 2 Year Watertight Warranty to Owner.
- 1.1.1.4 Roof Manufacturer's 10 Year Material Warranty to Owner.
- 1.1.1.5 Sealant Manufacturer's 10 Year Material Warranty to Owner.
- 1.1.1.6 Asbestos Free Warranty

1.2 RELATED SECTION

1.2.1 Submit all items required by this Section as part of Contract Closeout, Section 01700.

1.3 WARRANTIES

1.3.1 Contractor's Warranty: Comply with the General Conditions of the Contract concerning warranties and bonds. The Contractor shall agree that the work covered under this Contract shall remain free from any water penetration and physical defects caused by defective workmanship or materials for a period of 2 years from the date of final acceptance by Owner. Warranty shall be in the form enclosed at the end of this section.

1.3.1.1 Emergency repairs to defects and leaks shall be performed within two working days of receiving notice from Owner. As soon as weather permits, permanent repairs and restoration of affected areas shall be accomplished in a manner in conformance with the original Contract requirements. This work shall be done without additional cost to the Owner, except if it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hail storm, or other unusual phenomena.

1.3.1.2 In addition, the Contractor and Owner's representative shall conduct an inspection approximately 30 days prior to the end of the Contractor's warranty to determine the present physical condition of the roofing system. The Owner's representative shall then submit a written report as to the findings of this inspection. The Roofing Contractor, at his own expense, shall repair any defects covered under the scope of this contract.

1.3.1.3 The warranties shall also state that the Owner has the right, at any time

during the 2 year Contractor's warranty period and the Manufacturer's warranty period, to make emergency repairs to protect the contents of the building or the building itself from damage due to leaking. The cost of emergency repairs made during the first two years of the warranty period shall be borne by the Contractor and action by the Owner shall not invalidate the warranty.

- 1.3.2 Roof Manufacturer's 10 Year Material Warranty: Contractor shall furnish Owner the Manufacturer's warranty covering all materials issued by the roofing materials manufacturer for a period of 10 years from the date of substantial completion.
- 1.3.3 Sealant Manufacturer's 10 Year Material Warranty: Contractor shall furnish Owner the Manufacturer's warranty covering all materials issued by the sealant materials manufacturer for a period of 10 years from the date of substantial completion.
- 1.3.4 Asbestos Free Warranty: Contractor shall obtain and submit an ASBESTOS FREE WARRANTY from each subcontractor, material supplier, and equipment manufacturer upon completion of the work and prior to final payment. Each shall be in the form of that found at the end of this section and shall be properly executed and printed on the Contractors' or material and/or equipment suppliers' standard letterhead.

1.4 INSURANCE AND BONDS

- 1.4.1 Reference Supplemental Conditions Page 5 Article 11 INSURANCE AND BONDS.
- 1.4.2 There is a requirement for Bid Bonds in an amount equal to 5% of the Contract Base Bid price issued by a surety authorized to do business in the State of South Carolina.
- 1.4.3 Successful Contractor shall be required to provide Performance Bond in the amount of 100% of the contract for construction issued by a surety authorized to do business in the State of South Carolina.
- 1.4.4 Successful Contractor shall be required to provide Labor and Materials Payment Bond in the amount of 100% of the contract for construction issued by a surety authorized to do business in the State of South Carolina.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 Roofing Installer's Warranty and Asbestos Free Warranties

- 3.1.1 Following this section there are sample Roofing Installer's Watertight Warranty and ASBESTOS FREE WARRANTY forms. Prior to final payment, submit these documents as written on the corporate letterhead of the appropriate party.

END OF SECTION 01740

ENCLOSURES: Contractor's Two Year Warranty
ASBESTOS FREE WARRANTY

(CONTRACTOR'S LETTERHEAD)
TWO YEAR WARRANTY

Known all men by these presents, that we, (Insert Contractor Name), having installed liquid applied roofing, insulation, retrofit roof drains, flashings, and sheet metal work, and having accomplished certain other work on the **McKissick Museum Roof Replacement Project** under contract between the **University of South Carolina** and (Insert Contractor Name), warrant to the **University of South Carolina** with respect to said work that for a period of two years from date of final acceptance of said work, the roofing systems including insulation, retrofit roof drains, liquid-applied roofing and flashings; and sealant joint repairs at the limestone dome shall be absolutely watertight and free from all leaks, provided however that the following are excluded from this warranty:

- a. Defects or failures resulting from abuse by the Owner.
- b. Defects in design involving failure of (1) structural frame, (2) load-bearing walls, and (3) foundations.
- c. Damage caused by fire, tornado, hurricane, acts of God, wars, riots, or civil commotion.

We, (Insert Contractor Name), agree that should any leaks occur in the roofing, we will promptly remedy said leaks in a manner to restore the roof to a watertight condition by methods compatible to the system and acceptable under industry standards and general practice.

We, (Insert Contractor Name), further agree that for a period of two years from date of final acceptance referred to above, we will make repairs at no expense to the Owner to any defects which may develop in the work including, but not limited to, blisters, wrinkles, ridges, splits and loose membrane and/or metal flashings, sheet metal copings, scuppers, conductor heads, and outlets in a manner compatible to the system and acceptable under industry standards and general practice.

We, (Insert Contractor Name), also agree that the Owner has the right, at any time during the two-year warranty period, to make emergency repairs to protect the contents of the building or the building itself from damage due to leaking. The cost of emergency repairs made during the first five years of the warranty period shall be borne by the Contractor, and action by the Owner shall not invalidate the warranty.

IN WITNESS WHEREOF, we have caused this instrument to be duly executed, this ____ day of _____, 20 ____.

CONTRACTOR:

WITNESS:

by _____
President (Owner)

Notary Public

Asbestos Free Warranty

Owner: University of South Carolina
 Location of Building: USC Horseshoe 816 Bull Street, Columbia, SC 29205
 Name of Building: McKissick Museum, University of South Carolina
 Date of Substantial Completion: _____

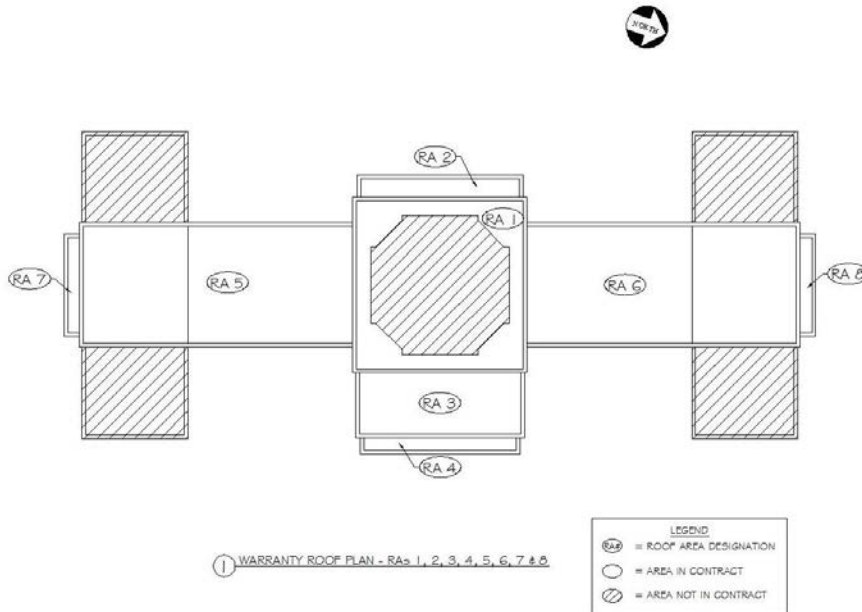
Know all men by these presents that we, _____
(Contractor, Subcontractor, Material Supplier or Equipment Manufacturer)

having furnished labor, materials, equipment and/or supplies; removed designated roof assembly, wood deck and framing and/or miscellaneous roof system components; accomplished certain repairs to existing substrate; installed new tapered polyisocyanurate insulation, retrofit roof drains, liquid applied roof membrane and flashings, metal flashings, liquid applied traffic coating, tube sealant, mortar and/or miscellaneous roof system components from, to, and/or on the McKissick Museum as under contract between

_____ and _____
(Owner or Contractor) (Contractor and/or Subcontractor, Material Supplier or Equipment Supplies)

warrant to Owner with respect to said work that no materials containing asbestos fibers were incorporated into the work, and that to our knowledge and belief, no materials containing asbestos remain in or are covered by the work.

Exceptions: _____
If there are no exceptions, state "No Exceptions" here.



IN WITNESS WHEREOF, we have caused this instrument to be duly executed, this _____ day of _____, 20_____.

WITNESS:

 Company

 By

 Notary Public

SECTION 04900

MASONRY CLEANING AND RESTORATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- 1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.

1.2 SUMMARY

- 1.2.1 This Section includes, but is not limited to, the following:

- 1.2.1.1 Limestone Repairs and Restoration

- 1.2.1.2 Limestone Cleaning and Afterwash

1.3 SUBMITTALS

- 1.3.1 Product Data: Submit manufacturer's technical data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.

- 1.3.2 Samples: Submit, for verification purposes, samples of the following:

- 1.3.2.1 Each type of chemical cleaning material data.

- 1.3.2.2 Each type of chemical clear sealer provide manufacturers data.

- 1.3.2.3 Stone masonry patching materials product data and application instructions.

1.4 DELIVERY, STORAGE AND HANDLING

1.4.1 Delivery

- 1.4.1.1 Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.

- 1.4.1.2 Provide labels bearing manufacturer's name and recommended installation and reducing procedures.

1.4.2 Storage and handling

- 1.4.2.1 Store materials where directed by the Owner's Representative.

- 1.4.2.2 Protect masonry restoration materials during storage and construction from wetting by rain, snow or ground water, and from staining or intermixture with earth or other types of materials.
- 1.4.2.3 Maintain neat, clean conditions in storage area; remove rags and waste materials at end of each day's work.
- 1.4.2.4 Close containers at end of day's work. Leave no materials open.

1.5 JOB CONDITIONS

1.5.1 Environmental requirements

- 1.5.1.1 Comply with manufacturer's recommendations regarding environmental conditions under which materials may be applied.
- 1.5.1.2 Apply no materials in spaces where dust is being generated.

1.5.2 Protection: Cover finished work of other trades, prefinished items, and surfaces not indicated to be cleaned, coated, or repaired.

1.5.3 Test Area: Test a minimum 4 ft. by 4 ft. area on each type of masonry. Use manufacturer's application instructions. Let the test panel dry 3 to 7 days before inspection. Keep test panels available for comparison throughout the cleaning project.

1.5.4 Safety precautions

- 1.5.4.1 Provide temporary fire protection equipment in materials storage area.
- 1.5.4.2 Prohibit smoking in storage areas.

1.6 QUALITY CONTROL

1.6.1 Masons must have a minimum of five years' experience with repointing historic masonry buildings to be eligible to bid on the project. Any bidders who have performed poorly on other projects can be eliminated from consideration on this basis, even if they have the lowest prices.

1.6.2 The following masonry repair sub-contractors have been pre-approved for bidding the work associated with the limestone dome joint repairs:

- 1.6.2.1 Carolina Restoration Services, Inc.; PO Box 3445, Cary, NC; Phone: (919) 469-1955; Fax (919) 469-5592.
- 1.6.2.2 Watertight Systems, Inc.; 360 Riverchase Way, Lexington, SC; Phone (803) 796-9695; Fax (803) 926-1976.
- 1.6.2.3 Western Waterproofing Company; 2500 Allen Road South, Charlotte, NC; Phone: (704) 598-5098.

1.6.3 Material manufacturer technical representative shall perform 1 initial and 1 interim pull test on in place sealants.

PART 2 PRODUCTS

2.1 MANUFACTURERS

2.1.1 Joint Sealant

2.1.1.1 Acceptable manufacturers: Except as otherwise noted, products specified as the required quality standard are manufactured by Pecora Corporation, 165 Wambold Road, Harleysville, PA, 19438. Products of other manufacturers meeting the quality standard of the named product in composition and performance are acceptable for use, subject to specific approval by the Architect.

2.1.1.2 Products

- a. Bond Breaker Tape: Pecora 531, black polyethylene tape, used to prevent 3 point adhesion in shallow caulk joints. ¼", 3/8" & ½" widths typical.
- b. Primer: Pecora P150
- c. Sealant: One Component, high performing silicone sealant, such as Pecora 895-NST, color to matching existing mortar color as approved by Architect and Owner.

2.1.2 Tuck Pointing

2.1.2.1 Acceptable manufacturers: Except as otherwise noted, products specified as the required quality standard are manufactured by Holcim (US) Inc., 6211 N. Ann Arbor Road, PO Box 122, Dundee, MI 48131, Phone: (800) 854-4656; Fax: (734) 529-4110. Products of other manufacturers meeting the quality standard of the named product in composition and performance are acceptable for use, subject to specific approval by the Architect.

2.1.2.2 Products

- a. Mortar: Type N, such as Holcim Mortamix Rainbow Custom Color Cement-Lime mortar, color to matching existing mortar color as approved by Architect and Owner.

2.1.3 Limestone Cleaning

2.1.3.1 Acceptable manufacturers: Except as otherwise noted, products specified as the required quality standard are manufactured by PROSOCO, Inc., 3741 Greenway Circle, Lawrence, KS 66046. Phone: (800) 255-4255; Fax: (785) 830-9797. Products of other manufacturers meeting the quality standard of the named product in composition and performance are acceptable for use, subject to specific approval by the Architect.

2.1.3.2 Products

- a. Masonry Cleaner: Enviro Klean[®] BioKlean[™].
- b. Masonry Afterwash: Sure Klean Afterwash.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- 3.1.1 Protect existing surfaces and systems that are not indicated to be cleaned or repaired.
- 3.1.2 Coordinate with Owner to shut down air intake equipment in the vicinity of the Work.

3.2 LIMESTONE REPAIRS AND RESTORATION

- 3.2.1 Allowable tools for removing old mortar:
 - 3.2.1.1 Hand chisels and mash hammers;
 - 3.2.1.2 Small pneumatically-powered chisels can be used to remove mortar on this historic building as long as the masons maintain appropriate control over the equipment. If these procedures, using power equipment, are not carried out safely and effectively without damaging adjacent stones then Architect can prohibit their use.
 - 3.2.1.3 If the masonry repair sub-contractor can demonstrate that they can perform removals in a sample area without damaging adjacent stones, then a thin diamond-bladed grinder may be used to cut out horizontal joints only on hard Portland cement mortar.
 - 3.2.1.4 Use of power saws or grinders is prohibited.
- 3.2.2 Joint Sealing: Install new bond breaker tape and urethane sealant at all vertical and horizontal joints except in the second course of the foundation ring.
 - 3.2.2.1 Cut out old sealant and mortar using a toothing chisel to uniform minimum depth of 1/4" or until sound mortar is reached. Take care not to damage limestone edges.
 - 3.2.2.2 Remove dust and debris from joints by brushing, blowing with air, or rinsing with water.
 - 3.2.2.3 Prior to the application of the new sealant; old mortar should be removed cleanly from the limestone units, leaving square corners at the back of the cut.
 - 3.2.2.4 Install new bond breaker tape in the bottom of the prepared limestone joint.

- 3.2.2.5 Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient.
- 3.2.2.6 Allow primer to dry before applying sealant. Depending on temperature and humidity, primer will be tack free in 15 -120 minutes. Priming and sealing must be done on the same working day.
- 3.2.2.7 Apply sealant by professional caulking gun. Do not open cartridges, sausages, or pails until preparatory work has been completed.
- 3.2.2.8 Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint.
- 3.2.2.9 Dry tooling is recommended. Do not use soapy water when tooling. Tooling results in the correct bead shape, a neat joint and maximum adhesion.
- 3.2.3 Tuck Pointing: The vertical joints in the second course of the foundation ring require tuck-pointing and cleaning.
 - 3.2.3.1 Cut out old sealant and mortar using a toothing chisel to uniform depth of 3/4" or until sound mortar is reached. Take care not to damage limestone edges.
 - 3.2.3.2 Remove dust and debris from joints by brushing, blowing with air, or rinsing with water.
 - 3.2.3.3 Prior to the application of the new mortar; old mortar should be removed cleanly from the limestone units, leaving square corners at the back of the cut.
 - 3.2.3.4 If possible, duplicate proportions of original mortar. Otherwise, use only Type N mortar using the following proportions:
 - a. Type N: Cement/Lime-Damp Loose Aggregate 1:2-1/4 to 3.
 - 3.2.3.5 Provide a continual mist of water for two hours on the work to be accomplished prior to the application of the new mortar in any given day's work.
 - 3.2.3.6 Dampen joints to be tuck-pointed to insure surrounding limestone absorbs all surface water, but with no standing water present.
 - 3.2.3.7 Pre-hydrate tuck-pointing mortar to reduce excessive shrinkage. Mix thoroughly, adding only enough clean water to produce a damp, workable consistency which will retain its shape when formed into a ball.
 - 3.2.3.8 Pack mortar tightly into joints in max. 1/4" thick layers. Each layer should be "thumbprint hard" before applying next layer.
 - 3.2.3.9 Tool joints to match original profile after last layer is "thumbprint hard".

3.3 LIMESTONE CLEANING AND AFTERWASH

- 3.3.1 After all repairs to the limestone dome have been complete, clean areas with brush and water. Acid or cleaning chemicals shall not be used except with Owner's approval.
- 3.3.2 Protect brick walls adjacent to and below limestone dome prior to cleaning. Apply Enviro Klean BioKlean limestone and brick masonry cleaner to the entire dome, complying in all respects with manufacturer's instructions.
- 3.3.3 Use in concentration required to achieve complete removal of discoloration. For light biological deposits, mix 1 part BioKlean™ with up to 10 parts clean water. For moderate biological deposits, mix 1 part BioWash® with up to 5 parts clean water. For heavy biological deposits, use in concentrate.
- 3.3.4 Working from bottom to top, apply generously to dry surface until surface is thoroughly wet.
- 3.3.5 Leave on the surface for 2-3 minutes. If needed, apply more to keep the surface wet.
- 3.3.6 Mist treat surfaces with water and gently scrub with a non-metallic, short-fibered scrub brush to loosen biological soiling.
- 3.3.7 Working from bottom to top, rinse thoroughly with clean water. Use only light rinsing pressure as needed, especially for fragile or deteriorated limestone surfaces. Equipment should be adjustable to reduce water flow rate and rinsing pressure as required for controlled cleaning of more sensitive surfaces. See also "Equipment" section of Product Data Sheet.
- 3.3.8 Application of Afterwash
 - 3.3.8.1 Afterwash works as part of a two-part cleaning system to restore and neutralize limestone surfaces. Before applying, read "Preparation" and "Safety Information" sections in Manufacturer's Product Data Sheet for BioKlean™ or similar sections of approved substitute.
 - 3.3.8.2 Immediately after rinsing BioKlean from limestone surfaces, apply the diluted Afterwash to the wet surface. Let stand on the surface for three to five minutes.
 - 3.3.8.3 Pressure rinse from the bottom of the treated area to the top. Make sure to cover each portion of the limestone surface with a concentrated stream of water. To avoid streaking, keep wall surfaces immediately below area being cleaned running wet and free of cleaner and residues.
 - 3.3.8.4 Use masonry washing equipment generating 400-1000 psi with a water flow rate of 6-8 gallons per minute delivered through a 15-45 degree fan spray tip.

- 3.3.8.5 Using pH papers, pH pen, or pH indicator solutions, check treated surfaces to insure neutralization has been achieved. Repeat above afterwash steps as needed until surface pH is 5.0 to 9.0.

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

1.1.1 This Section includes the following:

1.1.1.1 Metal ladders and safety cages.

1.2 SUBMITTALS

1.2.1 Shop Drawings: Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

1.2.2 Templates: For anchors and bolts.

PART 2 PRODUCTS

2.1 MANUFACTURERS

2.1.1 In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

2.1.1.1 Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

2.2 METALS

2.2.1 Metal Surfaces, General: Provide materials with smooth, flat surfaces without blemishes.

2.2.2 Ferrous Metals:

2.2.2.1 Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.2.2.2 Steel Tubing: ASTM A 500, cold-formed steel tubing.

2.2.2.3 Galvanized Finish: ASTM A 123/A 123M.

2.3 FASTNERS

2.3.1 General: Masonry $\frac{3}{4}$ " epoxy anchors at exterior walls such as manufactured by SIMPSON VGC75 or equal.

2.4 FABRICATION

2.4.1 General: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.

- 2.4.1.1 Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.
 - 2.4.1.2 Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. Obtain fusion without undercut or overlap. Remove welding flux immediately. Finish exposed welds smooth and blended.
 - 2.4.1.3 Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- 2.4.1 Miscellaneous Framing and Supports: Provide steel framing and supports not specified in other Sections as needed to complete the Work. Fabricate units from steel shapes, plates, and bars of welded construction. Cut, drill, and tap units to receive ladder rungs, and similar items.
- 2.4.2 Exterior Steel Ladders and Safety Cages: Comply with ANSI A14.3, unless otherwise indicated.
- 2.4.2.1 Space siderails 24" apart, unless otherwise indicated.
 - 2.4.2.2 Steel Ladder Construction: 2" x 3" Tubular Steel siderails, with 1-inch- (19-mm-) diameter steel pipe rungs fitted in centerline of siderails, plug-welded, and ground smooth on inner rail faces.
 - 2.4.2.3 Fabricate ladder safety cages to comply with ANSI A14.3. Fabricate from same metal as ladders to which safety cages are attached and assemble by welding or riveting.
 - 2.4.2.4 Exterior Steel Ladders and Safety Cages: Galvanized Steel.

2.5 FINISHES

- 2.5.1 Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Finish metal fabrications after assembly.
- 2.5.2 Steel Finishes:
- 2.5.2.1 Hot Dipped Galvanized

PART 3 EXECUTION

3.1 INSTALLATION

- 3.1.1 General: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, with edges and surfaces level, plumb, and true.
- 3.1.1.1 Fit exposed connections accurately together. Weld connections that are not to be left as exposed joints but cannot be shop welded.

END OF SECTION 05500

SECTION 06100
ROUGH CARPENTRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section includes but is not limited to the following:

1.2.1.1 Wood blocking and nailers.

1.2.2 Related Sections include the following:

1.2.2.1 Division 7 Section 07591 "Removals and Preparation".

1.2.2.2 Division 7 Section 07560 "Liquid Applied Roofing".

1.3 DEFINITIONS

1.3.1 Lumber grading agencies, and the abbreviations used to reference them, include the following:

1.3.1.1 NLGA - National Lumber Grades Authority.

1.3.1.2 SPIB - Southern Pine Inspection Bureau.

1.3.1.3 ALSCBR - American Lumber Standards Committee Board of Review

1.4 SUBMITTALS

1.4.1 Material Certificates: Prior to start of work, submit Wood Preservative and Treatment Facility Certificate of Compliance with the material specifications of this section, signed by a responsible officer of the facility and notarized.

1.4.1.1 Certify as to Treatment Process; Treatment Chemical; and Chemical Retention.

1.4.1.2 Certify as to Moisture Content after post-treatment kiln drying.

1.5 QUALITY ASSURANCE

1.5.1 Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, with the experience and capability to conduct the testing indicated as documented according to ASTM E 548.

PART 2 PRODUCTS

2.1 MANUFACTURERS

2.1.1 Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.1.1.1 Lumber:

2.1.1.1.1 Boise Cascade Corporation.

2.1.1.1.2 Georgia-Pacific Corporation.

2.1.1.1.3 Louisiana-Pacific Corporation.

2.1.1.1.4 International Paper Corp.

2.2 WOOD PRODUCTS, GENERAL

2.2.1 Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

2.2.1.1 Factory mark each piece of lumber with grade stamp of grading agency.

2.2.1.2 Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified.

2.2.1.3 Provide dry lumber with 19 percent maximum moisture content for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

2.3 MISCELLANEOUS LUMBER

2.3.1 For concealed boards, provide lumber with 19 percent maximum moisture content and of the following species and grades:

2.3.1.1 Mixed southern pine, No. 2 grade; SPIB.

2.3.2 Do not use material that is warped or does not comply with requirements for untreated material.

2.3.3 Application: Treat all rough carpentry for use "above grade" to include, but not limited to, the following:

2.3.3.1 Nailers, curbs, blocking, stripping, and similar members in connection with roofing, flashing, and waterproofing.

2.4 FASTENERS

2.4.1 Reference Division 7 Section 07591 "Reroofing Removals & Preparation.

2.4.2 All fasteners, connections, clips or strap anchors for preservative-treated wood shall be either hot-dipped zinc coated galvanized steel or stainless steel (Type 304 or 316 SS).

PART 3 EXECUTION

3.1 INSTALLATION, GENERAL

3.1.1 Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate blocking and similar supports to comply with requirements for attaching other construction.

3.1.2 Separate any aluminum metal component from preservative treated lumber with minimum divorcing layer of 15-lb asphalt saturated building paper. Use appropriate ring-shank, stainless steel fasteners.

3.1.3 Never use aluminum fasteners with preservative treated wood. Only use hot-dipped galvanized or stainless steel fasteners with treated wood.

3.1.4 All wood nailers shall be of sufficient thickness so as to finish flush with the adjacent insulation. Securely anchor wood blocking with appropriate fasteners a minimum of two (2) for every 16". Perimeter wood blocking and at openings shall be a minimum nominal width of 6".

3.1.5 Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

3.1.6 Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

3.1.6.1 Published requirements of metal framing anchor manufacturer.

3.1.6.2 Table 2304.9.1, "Fastening Schedule," in the International Building Code.

3.1.7 For wood to wood connections use ring shanked, hot dipped galvanized nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

END OF SECTION 06100

SECTION 07560

LIQUID APPLIED ROOFING

PART 1 GENERAL

1.1 DESCRIPTION

1.1.1 Liquid applied flexible acrylic waterproofing system over Polyisocyanurate (ISO) Insulation. This work shall include the preparation of the structural concrete roof deck, application of the roof system, flashing system, and clean up.

1.2 DESCRIPTION OF FLUID APPLIED ROOFING SYSTEM

1.2.1 The liquid applied roofing system must consist of a reinforced elastomeric system specifically designed for use on a roof. The system must have been approved by FMRC (Factory Mutual Research Corporation) according to Standard 4470 for Class 1 Roof Constructions which includes: Spread of Flame Fire, Windstorm Pressure, Windstorm Pull, Hail Damage, Resistance to Foot Traffic, and Susceptibility to Leakage Classifications.

1.3 RELATED WORK

1.3.1 The Contractor shall review all sections of these specifications to determine items of work that will interface with the application of this roofing system. Coordination and execution of related sections shall be the responsibility of the Contractor.

1.4 REFERENCES

1.4.1 ASTM B117 - Test Method of Salt Spray (Fog) Testing.

1.4.2 ASTM G-29 - Test Methods for Algae Resistance.

1.4.3 ASTM E-108 - Test Method for Fire Test of Roof Coverings.

1.4.4 ASTM D-1653 - Water Vapor Transmission of Materials.

1.4.5 ASTM G26 - Practice for Operating Light- and Water-Exposure Apparatus (Xenon Arc Type) for Exposure of Nonmetallic Materials.

1.4.6 ASTM D-412 - Ultimate Tensile Strength at Break.

1.4.7 ASTM D-6083 - Standard Specification for Liquid Applied Acrylic Coatings used in roofing.

- 1.4.8 ASTM C1549 - Standard test method for determination of solar reflectance near ambient temperature using a portable solar reflectometer.
- 1.4.9 ASTM C1371- Standard test method for determination of emittance of materials near room temperature using portable emissometers.
- 1.4.10 FM 4470 - Standard for Class 1 Spread of Flame Fire, Windstorm Pressure, Windstorm Pull, Hail Damage, Resistance to Foot Traffic, and Susceptibility to Leakage Classifications.

1.5 SUBMITTALS

- 1.5.1 Shop Drawings: Submit a scaled drawing showing the layout of joint reinforcing and all flashing details.
- 1.5.2 Product Data: Provide manufacturer's technical literature on products that make up the roofing system. This shall include, but is not limited to, coatings, reinforcing fabrics, flashing materials, roof drains, fasteners, etc.
- 1.5.3 Manufacturer's Installation Instructions: Submit all data sheets available from the manufacturer on the installation of the roofing system applicable to the work.
- 1.5.4 Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.

1.6 QUALIFICATIONS

- 1.6.1 Applicator Qualifications: The applicator of the roofing material specified herein shall be an approved applicator (designated by the Manufacturer). Proof of this qualification shall be provided in written form from the manufacturer of the roofing system. Qualified applicators must provide proof that they have successfully completed a Manufacturer Labor and Material warranty project in excess of \$100,000.00 within the last five years.

1.7 QUALITYCONTROL

- 1.7.1 Codes and Standards: The contractor shall make him/herself thoroughly familiar with all codes, regulations, and standards governing the specified work. Any contradiction between the manufacturer's requirements and these specifications shall be brought to the attention of the manufacturer and the specifier.
- 1.7.2 Deviations: There shall not be any deviations from these specifications unless the deviation is submitted in writing to the specifier. The request for deviation must have a letter from the roofing manufacturer's technical department approving the details of the deviation.

- 1.7.3 An Approved Applicator (as designated by the Manufacturer) shall be on site during all applications of any Manufacturer products.
- 1.7.4 Manufacturer's Technical Representative: An employee of the roofing material manufacturer shall be on site at least once every 7-calendar days during the work specified herein. Upon request the technical representative shall provide a written inspection report, during each site visit and submit the reports to the Owner/Owner's representative. The manufacturer's representative must approve the application process at specific stages before the Contractor may continue including: Prior to the application of the Foundation Coat and fabric, at the completion of the Foundation Coat and fabric, and after the Finish Coat is applied.

1.8 DELIVERY, STORAGE, AND HANDLING

- 1.8.1 Deliver materials to site in manufacturer's unopened and undamaged containers bearing the following information:
 - 1.8.1.1 Name of manufacturer.
 - 1.8.1.2 Name of contents and products code.
 - 1.8.1.3 Net volume of contents.
 - 1.8.1.4 Lot or batch number.
 - 1.8.1.5 VOC content.
 - 1.8.1.6 Storage temperature limits.
 - 1.8.1.7 Shelf life expiration date.
 - 1.8.1.8 Mixing instructions and proportions of contents.
 - 1.8.1.9 Safety information and instructions.
- 1.8.2 Store and protect materials from damage and weather in accordance with manufacturer's instructions.
- 1.8.3 Store materials at temperatures between 50 and 90 degrees F (10 and 32 degrees C). Keep out of direct sunlight.
- 1.8.4 Support stored material containers on pallets and cover with tarpaulin tied to bottom of pallets.

1.9 ENVIRONMENTAL REQUIREMENTS

- 1.9.1 Do not apply if ambient temperatures are expected to fall below 40 degrees F (4.5 degrees C) or if rain is expected before the application has time to dry.

1.10 WARRANTY

- 1.10.1 Provide ten-year Manufacturer's Labor and Material warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER

2.1.1 Hydro-Stop, LLC
1465 Pipefitter Street
North Charleston, SC 29405

Toll Free: (800) 739-5566
Phone: (843) 745-9600
Fax: (843) 745-9602
Web: www.hydro-stop.com

2.2 MEMBRANE COMPOUND MATERIAL

2.2.1 Waterproofing Material: PremiumCoat three-stage, fabric reinforced, flexible acrylic coating, fluid applied in successive stages to form one continuous, seamless, watertight membrane; 40 mil (.04 inches / 1.016 millimeters) minimum cured total system thickness; comprised of the following:

2.2.1.1 Foundation and Saturation Coats: PremiumCoat FoundationCoat (highly flexible water based 100% pure acrylic polymer resin coatings).

2.2.1.2 Fabric: Hydro-Stop polyester, non-woven, stitch-bonded, and heat-set fabric.

2.2.1.3 Finish Coat: PremiumCoat FinishCoat (ultraviolet light resistant, blend of highly flexible water based 100% pure acrylic polymer resin coating).

2.2.1.3.1 Color of Hydro-Stop finish coat is to be White.

2.2.2 Reinforcing Fabric: This material shall be non-woven 100% polyester, stitch bonded, heat set fabric with the following characteristics:

Weight:	3 oz / per square yard (106.31 grams / square meter)		
Tensile Strength:	Warp 74lbs. (33.60 kg)	per ASTM D 5034	
	Fill 45 lbs. (20.43 kg)		
Elongation @ Break:	Warp 21.3%	per ASTM D 5034	
	Fill	51.3%	
Ball Burst:	111 lbs. (50.39 kg)	per ASTMD 3787	
Trapezoid:	Warp 13.5 lbs. (6.13 kg)	per ASTMD 117	
	Fill 24.2 lbs.(10.99 kg)		
Thickness:	.018 inches (.457 mm)	per ASTM D-1777	

2.2.3 Cured Membrane Characteristics:

PROPERTY	TEST	RESULT
Elongation	ASTM D638	>300% elastomeric
Tensile Strength (cured)	ASTM D412	>2000 PSI (13,789 kPA)
Density		12.1 lb/gal
Volume Solids		≥ 53%
Weight Solids		≥ 66%
Algae Resistance	ASTM G29	No Growth Supported
Moisture Vapor	ASTM E96	3 Perms
Weathering	ASTM G26	No Effect After 3,000 hrs.
Salt Spray Test	ASTM B117	No Effect
Fire Rating	ASTM E108	Class A
VOC (calculated)		<72 g/L
Susceptibility to Leakage	FM 4470	No Signs of Water Leakage
Windstorm Pressure	FM 4470	Meets Class 1-90
Windstorm Pull	FM 4470	Class 1-270 on EPS
Severe Hail Test	FM 4470	No Separation or Rupture 1-SH
Resistance to Foot Traffic	FM 4470	No Sign of Tearing or Cracking
Liquid Applied Acrylic	ASTM D6083	Approved
Solar Reflectance	ASTM C1549	≥ 0.90
Thermal Emittance	ASTM C1371	≥ 0.79
OTC (Ozone Transport Commission)		Compliant
California Title 24		Compliant
CRRC (Cool Roof Rating Council)		Approved
Energy Star (White or Cotton Finish Only)		Approved

2.3 INSULATION BOARD MATERIALS

2.3.1 Polyisocyanurate Insulation – 1.5" minimum thickness, a minimum of 1.5 lb/ft³ density. Maximum board size is 4ft. x 4ft.

2.3.2 Tapered polyisocyanurate Insulation – Provide factory-tapered polyisocyanurate insulation boards fabricated to slope of 1/8 inch per 12 inches, as indicated in Contract Documents. Provide factory-tapered polyisocyanurate insulation boards fabricated to slope of ½ inch per 12 inches at all crickets. Use monolithic board only, factory laminated board is not acceptable. Maximum board size is 4ft. x 4ft.

2.4 ACCESSORIES

- 2.4.1 Adhesive: Insta-Stik, OlyBond, or FM approved polyurethane adhesive, dispensed from pre-pressurized containers. Application guidelines should be dictated by the adhesive manufacturer.
- 2.4.2 Cant Strips: Polyisocyanurate insulation, a minimum of 1.5 lb/ft³ density. Cant strips are to be installed at all internal corners, around curbs, and at all 90 degree angles specified by the Manufacturer.
- 2.4.3 Hydro-Fiber: Bulking material used in conjunction with Foundation Coat or BarrierGuard slurry (as specified by Manufacturer Technical Representative) to fill cracks, voids, or low depressions on various substrates.
- 2.4.4 StableRust Primer: water based surfactant-free primer used in direct metal applications to stabilize and protect metal surfaces.
- 2.4.5 Traffic Topping: Hydro-Stop Traffic Coat acrylic based coating designed for light traffic areas. Color to be selected by Owner.

PART 3 EXECUTION

3.1 EXAMINATION

- 3.1.1 Verify substrate surfaces are durable, free of frozen matter, dampness, loose particles, cracks, pits, projections, or foreign matter detrimental to adhesion or application of waterproofing system.
- 3.1.2 Verify that substrate surfaces are smooth and not detrimental to full contact bond of waterproofing materials.
- 3.1.3 Verify items that penetrate surfaces to receive waterproofing are securely installed.
- 3.1.4 Verify that substrate areas are adequately supported and firmly fastened in place.
- 3.1.5 Verify that roof deck has a minimum slope of 1/8 inch / foot (2.083cm/meter).
- 3.1.6 Verify that roof does not have ponding water areas.
- 3.1.7 Verify that all attached vertical walls are properly waterproofed.

3.2 PREPARATION

- 3.2.1 Protect adjacent surfaces not designated to receive waterproofing.

- 3.2.2 Do not apply waterproofing to surfaces unacceptable to manufacturer.
- 3.2.3 Reference Section 07591 Removals and Preparation for work required prior to the installation of new insulation and roof system.

3.3 INSTALLATION- INSULATION

- 3.3.1 Adhere insulation to deck with polyurethane adhesive in accordance with manufacturer's installation instructions to meet a minimum uplift requirement of 1-90. Please verify the proper uplift requirements with the specifier or your local building code authority.
 - 3.3.1.1 At all roof areas, install a base layer of 1.5" polyisocyanurate insulation in ribbons of low rise foam adhesive spaced 12" O.C. Reduce ribbon spacing to 6" O.C. at perimeter and corner conditions.
 - 3.3.1.2 Install 1/8" tapered insulation in ribbons of low rise foam adhesive spaced 12" O.C. starting with 1/2" thickness at the drain valley. Reduce ribbon spacing to 6" O.C. at perimeter and corner conditions.
- 3.3.2 Stagger all board end joints off of preceding rows by a minimum 2 feet.
- 3.3.3 Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- 3.3.4 Apply no more insulation than can be covered with waterproofing on the same day.
- 3.3.5 Install cant strips at internal corners, around curbs, and at all 90 degree angles.

3.4 WATERPROOFING APPLICATION

- 3.4.1 Foundation Coat & Fabric Components - Consists of one coat of FoundationCoat applied to the substrate, Hydro-Stop PremiumCoat Fabric (sizes vary) laid into the wet FoundationCoat, and finally a second coat of FoundationCoat saturating the fabric from above. Care should be given to ensure that adjacent runs of fabric are overlapped a minimum of 4 inches (10.16 cm). Foundation coats are applied at a total rate of 25-40 ft²/gal (.594 -.951 m²/liter) depending on substrate. FoundationCoat should only be applied with the use of approved roof brushes. Rolling and spraying of the FoundationCoat are absolutely forbidden.
 - 3.4.1.1 Insulation Board Seams - Using 6 inch (30.48 centimeters) fabric and the foundation components (as described above), waterproof all board seams, cracks, and non-working joints. Center 6 inch (15.24 centimeters) fabric over all seams.

- 3.4.1.2 Roof Perimeter - Using 12 inch (30.48 centimeters) fabric and the foundation components (described above), waterproof entire roof perimeter. Continue waterproofing up vertical surfaces and onto deck a minimum of 6 inches (15.24 centimeters) in each direction.
- 3.4.1.3 Roof Penetrations - Using 12 inch (30.48 centimeters) fabric and the foundation components (described above), seal items projecting through waterproofing material watertight. Waterproof up penetrations a minimum of 6" (15.24 centimeters).
- 3.4.1.4 Roof Field - Using 40 in. (1.016 m) fabric and the foundation components (as described above) seal the entire roof field. Overlap adjacent runs of fabric 4 inches (10.16 cm) minimum.
- 3.4.2 Finish Coat Component - Apply 2 coats of FinishCoat at a combined total rate of 70 ft²/gal (1.664 m²/liter) over entire roof area. Minimum millage requirements are 11.5 mils (.0115 inches / 1.292 millimeters) wet and 6.1 mils (.0061 inches / .155 millimeters) dry per coat. Allow to dry between coats. Total Finish Coat dry thickness should be a minimum of 12.2 mils (.0122 inches / .31 millimeters).
- 3.4.3 Completed PremiumCoat System - System must be installed to a minimum 40 mil (.04 inches 11.016 millimeters) total cured thickness.
- 3.4.4 Traffic Coat – At RA 1 and roof access points identified on drawing sheet R1, apply 2 coats of Traffic Coat at a combined total minimum rate of 65 ft²/gal (1.54 m²/liter). Allow to dry between coats.
- 3.4.5 Monitor finished system for 7 day, sweeping off birdbaths to allow for full cure.

3.5 CLEANING

- 3.5.1 Clean unscheduled surfaces receiving waterproofing in accordance with manufacturer's instructions.

END OF SECTION 07560

SECTION 07591

ROOFING REMOVALS & PREPARATION

PART 1 GENERAL

1.1 SUMMARY

1.1.1 This Section includes the following:

1.1.1.1 Removals

1.1.1.2 Preparations

1.1.1.3 Disposal

1.2 RELATED WORK SPECIFIED ELSEWHERE

1.2.1 Allowances: Refer to Division 1 Section 01021 "Cash Allowances" for description of Work in this Section affected by allowances.

1.2.2 Unit Prices: Refer to Division 1 Section 01025 "Measurement and Payment" for description of Work in this Section affected by unit prices.

1.3 SUBMITTALS

1.3.1 Product Data: Reference Section 01300 "Submittals."

1.3.2 Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.

1.4 QUALITY ASSURANCE

1.4.1 Installer Qualifications: Reference Section 01400 "Quality Control."

1.4.2 Pre-roofing Conference: Prior to the work beginning conduct a pre-construction conference with the Owner and Architect on site with the Contractor's project foreman and project manager in attendance.

1.5 PROJECT CONDITIONS

1.5.1 Owner will occupy all of the building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1.5.2 Coordinate work activities daily with Owner so Contractor can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area if desired.

- 1.5.3 Before working over occupied or structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated prior to proceeding with work over the impaired deck area.
- 1.5.4 Protect building to be roofed, building interiors, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from roofing operations. Repair affected areas to original existing condition prior to roofing project.
- 1.5.5 Protect occupants and property below roofing activity at all times until work overhead is complete to the point that protection is no longer required.
- 1.5.6 Maintain access to existing walkways, corridors and other occupied or used facilities.
 - 1.5.6.1 Do not close or obstruct walkways, corridors and other occupied or used facilities without written permission from authorities having jurisdiction.
- 1.5.7 Limit construction loads on roof to 20 lbs/SF for uniformly distributed loads which includes rooftop equipment wheel loads.
- 1.5.8 Weather Limitations: Proceed with roofing preparation only when existing and forecasted weather conditions permit work to proceed without water entering into existing roofing system or building.

PART 2 PRODUCTS

2.1 AUXILIARY ROOFING MATERIALS

- 2.1.1 General: Use only auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new liquid applied roofing system.
- 2.1.2 Wood blocking to structural concrete: Corrosion resistant masonry spikes with low profile head such as Powers Fasteners Spike® fastener.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- 3.1.1 Protect existing roofing systems that are indicated not to be reroofed.
- 3.1.2 Coordinate with Owner to shut down air intake equipment in the vicinity of the Work. Cover air intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- 3.1.3 Check all internal roof drains for clear passage of storm water. Report any clogged drains, drain leaders, gutters or downspouts to OWNER prior to the start of reroofing work. Contractor's start of work is regarded as Contractor's

acceptance of clear drainage. Contractor will be responsible for all work required to clear drainage path after work under this contract has begun.

- 3.1.4 Raise mechanical equipment, ductwork, and curbs as necessary to maintain minimum 8" base flashing height.
 - 3.1.4.1 Extend sanitary vents as necessary to a minimum height of 8" above the finished roof surface.
- 3.1.5 Maintain roof drainage path in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drainage path and conductors. For internal drainage systems, use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- 3.1.6 It is anticipated that hazardous materials will be encountered in the work of this project. Products containing asbestos fibers are present in the black mastic at base flashing end laps at RAs 1, 2, 3, 4, 5, 6, 7 & 8. Reference Section 01010 Summary of Work.
 - 3.1.6.1 If other encountered materials are suspected of containing hazardous materials, do not disturb; immediately notify Architect and Owner. Hazardous materials not currently identified in the contract documents will be removed by Owner as a Change Order to the Contract or under separate contract with separate specialty contractor.
- 3.1.7 Storage or sale of removed items or materials on-site will not be permitted.
- 3.1.8 Utility Service: Maintain existing utilities in service and protect them against damage during the selective demolition operations.
 - 3.1.8.1 Maintain security and fire protection facilities in service during selective demolition operations.
 - 3.1.8.2 When unanticipated mechanical, electrical or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit in writing a report to the Architect.
 - 3.1.8.3 Verify that rooftop utilities and service piping have been shut off before commencing work which may not be safe if service is left on.
 - 3.1.8.4 Coordinate shutdown or disconnect of rooftop utilities or service piping with Owner, no less than 72 hours before shutdown or disconnect is scheduled.
- 3.1.9 Site Access and Temporary Controls: Conduct removals, preparations and roofing installation operations to ensure minimum interference with roads, streets, walks, walkways and other adjacent occupied and used facilities.
 - 3.1.9.1 Do not close or obstruct roads, streets, walks, walkways and other adjacent occupied and used facilities without written permission from

Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

3.1.9.2 Erect temporary protection where required by authorities having jurisdiction.

3.1.10 Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

3.1.10.1 Provide Temporary toilet facilities on site in location to be determined by Owner and Architect.

3.2 ROOF REMOVALS

3.2.1 General: Notify Owner each day of extent of roof tear-off proposed and obtain authorization to proceed from Owner's point of contact.

3.2.2 Roof System Removals:

3.2.2.1 Remove existing two ply BUR roof membrane with cap sheet surfacing, base flashings (black mastic at base flashing end laps ACM), metal flashings and receivers, metal scupper liners, 5/4x6 wood decking, 2x4 framing, 2x2 sleepers and shims, batt insulation, deck vents and other roofing system components down to the structural concrete roof deck and discard.

3.2.2.1.1 For Asbestos Containing Material (ACM) use protocol as required by all regulatory agencies having jurisdiction.

3.2.2.2 Remove and discard the wood expansion joint on RAs 5 & 6.

3.2.2.2.1 If the roofing contractor discovers during the removal of the roof assembly, wood deck and framing that the existing expansion joint in the roof assembly is a true building expansion joint with an interruption in the structural concrete roof deck, the roof contractor is to install a new wood framed expansion joint.

3.2.2.2.2 Prior to the installation of wood blocking over the structural concrete roof deck, apply a 12" strip of foundation coat and fabric to separate non-treated wood blocking from the structural concrete roof deck.

3.2.2.2.3 Install new 2x4 stud wall with vertical 2x4's spaced at 16" O.C. on either side of the existing building expansion joint and fasten through liquid applied flashing to existing structural concrete deck with spikes at 16" centers.

3.2.2.2.4 Overall height of new expansion joint stud wall will be 19" on the high side and 18" on the low side.

- 3.2.2.2.5 New expansion joint wall is to be covered on both sides with ¾" plywood sheathing, recessed beneath upper 2 x 6 plate, as detailed.
- 3.2.2.2.6 The inside of the new expansion joint must be clean and dry when plywood sheathing is installed.
- 3.2.2.2.7 Both sides and top of the new expansion joint are to be covered with 45 mil peel-and-stick SAWU membrane on the same day wall sections are installed.
- 3.2.2.2.8 Cut the top of a 2 X 6 at a 10° angle, as shown in the Project Drawings and fasten to the top of the new 2 X 4's with wood screws at 12" centers, staggered.
- 3.2.2.2.9 Create an envelope fold in the void between the wood blocking with 20 mil PVC and fill completely with batt insulation.
- 3.2.2.2.10 Cover top of the expansion joint with 20 mil PVC, extending over and down the vertical face of the locking cleat, and over the low side flange; such that, membrane flashing finishes outside the hem in the new metal expansion joint flashing.
- 3.2.2.3 Cut existing roof drain bowl assembly and drain leaders off level with the existing structural concrete roof deck.
 - 3.2.2.3.1 Flash cut drain leader to the structural concrete deck with a 12" strip of foundation coat and fabric, turned down into the drain leader a minimum of 2".
- 3.2.2.4 Remove or repair any obstruction which may interfere with the proper application of new materials.

3.3 PREPARATIONS:

- 3.3.1 Inspect deck after tear-off of BUR roofing system.
- 3.3.2 If structural concrete decking is damaged or deteriorated, repair or replace in accordance with Section 13001 Repairs.
- 3.3.3 If deck surface is not suitable for receiving new roofing, or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.
- 3.3.4 Using 6 inch fabric and the foundation components, waterproof all cracks and non-working joints in the structural concrete roof deck. Center 6 inch fabric over all seams.
- 3.3.5 Provide solid 5/4" x 6" wood blocking below new retrofit roof drain flanges.

3.4 EXISTING BASE FLASHINGS

- 3.4.1 Remove existing base flashings, backer plies and cants around parapets, curbs, walls, and penetrations.
- 3.4.2 For Asbestos Containing Material (ACM) use protocol as required by all regulatory agencies having jurisdiction.
- 3.4.3 Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.

3.5 DISPOSAL

- 3.5.1 Collect and place demolished materials in containers daily. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- 3.5.2 For Asbestos Containing Material (ACM) use protocol as required by all regulatory agencies having jurisdiction. Utilize disposal site as selected by the Owner.
- 3.5.3 Do not burn demolished material on site.
- 3.5.4 Transport demolished materials off Owner's property and dispose legally.

3.6 DOCUMENTATION

- 3.6.1 Provide SCDHEC permit, trip manifests as well as required documentation for those personnel working with the ACM removals.

END OF SECTION 07591

SECTION 07620

FLASHING AND SHEET METAL

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Fabrication and installation of new metal coping.
- 1.1.2 Fabrication and installation of new metal counter flashing.
- 1.1.3 Installation of new retrofit roof drain assembly.
- 1.1.4 Fabrication and installation of new expansion joint cap.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- 1.2.1 Rough Carpentry - Section 06100
- 1.2.2 Liquid Applied Roofing - Section 07560

1.3 QUALITY ASSURANCE

- 1.3.1 Qualifications of the Manufacturer: Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Architect.
- 1.3.2 Qualifications of the Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this section.

1.4 SHOP DRAWINGS

- 1.4.1 Submit shop drawings in accordance with specifications.
- 1.4.2 Indicate material profile, jointing pattern, jointing details, fastening methods, and installation details.

1.5 SUBMITTALS

- 1.5.1 Submit to Architect a 12-inch length of each sheet metal configuration prior to fabrication. The Contractor shall verify existing field conditions. Minor dimensional detail changes may be required to fit existing conditions.

1.6 STORAGE AND HANDLING

- 1.6.1 Store materials dry in accordance with Specifications.
- 1.6.2 Stack material to prevent twisting, bending, or abrasion.

1.6.3 During storage prevent material contact with any substance that would discolor or stain, including soil and water.

1.7 SCHEDULING

1.7.1 All new sheet metal work shall be closely coordinated with the installation of the new roofing membrane such that roofing membrane terminations will not be left unprotected by metal.

1.7.2 New sheet metal components shall be installed directly after roofing work such that roofing membrane terminations will not be left unprotected by metal.

1.8 GUARANTEE

1.8.1 All new materials and workmanship covering work provided under this section of the specifications shall be guaranteed in writing by the Contractor to maintain all sheet metal flashing in a watertight condition without cost to the Owner for a period of two (2) years after date of final completion.

PART 2 PRODUCTS

2.1 SHEET METAL MATERIALS

2.1.1 Zinc Alloy Sheet: 99.995 percent electrolytic high-grade zinc with alloy additives of copper (0.08 percent to 0.20 percent), titanium (0.07 percent to 0.12 percent), and aluminum (0.015 percent).

2.1.2 Solder for Zinc-Alloy: ASTM B 32, 60 percent lead and 40 percent tin with low antimony, as recommended by panel manufacturer.

2.2 METAL COMPONENT WEIGHT & FINISH SUMMARY:

2.2.1 coping cap .070 zinc alloy

2.2.2 expansion joint cap .070 zinc alloy

2.2.3 expansion joint flange .070 zinc alloy

2.2.4 locking cleat .080 zinc alloy

2.2.5 counter flashings .070 zinc alloy

2.3 ACCESSORY MATERIALS

2.3.1 All clamps, straps and supports to be stainless steel.

2.3.2 Nails: Shall be hot-dipped galvanized ring shank nails, size as required by construction.

2.3.3 Metal to Metal Screws: Shall be ITW Buildex SCOTS stainless steel 12-14x1" (Part No. 1165209) with bonded washer.

2.3.4 Caulking: Shall be as approved by membrane manufacturer. In Sealant cove at counterflashing, NP-1 by Sonneborn or equal.

2.3.5 Masonry Expansion Fasteners: Shall be Powers Zamac Nailin drive anchor with Type 304 stainless steel nail 1/4" x 2" (Catalog No. 2876).

2.4 RETROFIT ROOF DRAIN

2.4.1 Hurcules RetroDrain as manufactured by OMG, Inc., 153 Bowles Road, Agawam, Massachusetts 01001. 800-633-3800. Fax 413-821-0417. www.olyfast.com. info@olyfast.com.

2.4.1.1 Size: 4 inches

2.4.1.2 Compliance: ANSI/SPRI RD-1.

2.4.1.3 Drain Body:

2.4.1.3.1 Material: 1-piece, 11-gauge (0.125-inch), spun aluminum.

2.4.1.3.2 Flange: 17-1/2-inch diameter.

2.4.1.3.3 Drain Stem Length: 12 inches

2.4.1.3.4 Flange Includes: Six 1 1/2-inch-long, aluminum studs.

2.4.1.3.5 Sump Area: Depressed.

2.4.1.4 Strainer Dome:

2.4.1.4.1 Material: Cast aluminum.

2.4.1.4.2 Height: 7.25 inches.

2.4.1.4.3 Outside Base Diameter: 9.77 inches.

2.4.1.4.4 Inlet Area: 72 square inches.

2.4.1.5 Backflow Seal:

2.4.1.5.1 Compression Seal: Watertight, "U-Flow" mechanical seal.

2.4.1.5.2 Material: Polyamide and EPDM rubber.

2.4.1.5.3 Required for Activation: "U-Flow" screwdriver.

2.4.1.6 Hardware:

2.4.1.6.1 Locknuts: 6, stainless steel, for studs.

2.4.1.6.2 Screws: 3, stainless steel, to attach strainer to clamping ring.

2.5 FABRICATION

- 2.5.1 Fabricate and install sheet metal sections in 10 foot lengths except where shorter lengths are required by construction.
- 2.5.2 Form sections square, true, and accurate to size, free from distortion, sharp edges, and other defects detrimental to appearance or performance.
- 2.5.3 Junctures, intersections, corners, and unions of sheet metal shall be held to 18 inch legs or less.
- 2.5.4 Interior and exterior corners, joints of coping cap shall be formed with 1 inch standing seams.

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Inspect all surfaces to which metal is to be applied to verify they are clean, smooth, free of depressions, waves, or projections and have solidly supported joints. Do not install metal unless surfaces are even, sound, clean, dry and free from defects that might affect the application of the new material.

3.2 REMOVAL

- 3.2.1 Reference Section 07591 Roofing Removals and Preparation

3.3 INSTALLATION

- 3.3.1 Dissimilar metals shall be kept separate to prevent galvanic action. Preventative measures shall include separation by suitable electrolysis breaking material.
- 3.3.2 Separate any aluminum components from preservative treated lumber with a minimum divorcing layer of 15-lb. asphalt saturated building felt. NEVER USE ALUMINUM FASTENERS IN PRESERVATIVE TREATED LUMBER.
- 3.3.3 All metal flanges shall be installed on top of membrane in accordance with membrane manufacturer's written installation instructions.
- 3.3.4 Flash in metal flanges per roofing system manufacturer's written recommendations and contract document detail drawings.
- 3.3.5 Install metal to be water and weather tight with lines, arises, and angles sharp and true with plane surfaces free of waves or buckles.
- 3.3.6 All exposed edges of sheet metal shall be folded back or hemmed on concealed surfaces (minimum 1/2").
- 3.3.7 All hemmed edges to be engaged in locking cleats shall have 3/4" hem with a folded back return of 5/8". Hem angle maximum 30°. Reference SMACNA Architectural Sheet Metal Manual (Fifth Edition) Figure 2-1 Detail 1.

- 3.3.8 All locking cleats to be one gauge heavier than metal fabrication being secured by the cleat.
- 3.3.9 Install shop formed coping caps, control joint caps and counter flashings in 10 foot lengths maximum with a minimum number of pieces for each straight run.
- 3.4 FABRICATION AND INSTALLATION OF NEW METAL COPING CAP
 - 3.4.1 Form and install new metal coping cap in accordance with SMACNA Architectural Sheet Metal Manual Figure 3-4 A and project drawings.
 - 3.4.1.1 Form new metal coping cap on RAs 5 & 6 to have a hemmed edge on the outside face of the parapet wall and a counter flashing receive on the inside face of the parapet wall.
 - 3.4.2 Attach metal locking cleats through the top of the inside and outside face of the parapet wall with fasteners spaced at 6" O.C.
 - 3.4.3 Prior to the application of the metal coping cap, install a strip of 20 mil PVC flashing in as long a strip as practical over the coping stone and metal locking cleats. Lap ends 6" minimum and seal with three beads of sealant.
 - 3.4.4 Use maximum 10' sections with minimum number of sections in each straight run. Form 1" standing seam at ends of sections and seal.
- 3.5 FABRICATION AND INSTALLATION OF NEW METAL COUNTER FLASHING
 - 3.5.1 Form and install new counter flashing metal with lap in joints a minimum of 3 inches and lock joints. Notch and lap counter flashing sections a minimum of 3 inches.
 - 3.5.2 At masonry parapet and exterior walls, remove existing raggle mounted counter flashing and clean out reglet to receive new counter flashing receiver. Install counter flashing receiver with lead wedges at 6" O.C. Apply sealant to reglet once receiver and wedges have been installed.
 - 3.5.3 Pop rivet new counter flashing to receiver at 6" O.C.
- 3.6 INSTALLATION OF NEW RETROFIT ROOF DRAIN ASSEMBLY
 - 3.6.1 Examine existing roof drain leaders to receive retrofit roof drains.
 - 3.6.2 Notify Architect of conditions that would adversely affect installation or subsequent use.
 - 3.6.3 Do not begin installation until unacceptable conditions are corrected.
 - 3.6.4 Clean existing drain leader pipe of bitumen, dirt, and debris.
 - 3.6.5 Install new 2x6 wood blocking to support the new retrofit roof drain flange. Fasten the blocking with spikes, embedded a minimum of 1 ¼", into the concrete deck

through the previously installed liquid applied base coat and reinforcing.

- 3.6.6 Install retrofit roof drains in accordance with manufacturer's instructions at locations indicated on the Drawings.
 - 3.6.7 Install retrofit roof drains into existing drain leaders in accordance with manufacturer's instructions.
 - 3.6.8 Fasten drain flange to the wood blocking with a minimum of three pan-head fasteners, evenly spaced around the flange.
 - 3.6.9 Install flashing in accordance with membrane roofing manufacturer's instructions.
 - 3.6.10 Install retrofit roof drains to provide watertight connection to existing plumbing and membrane roofing systems.
 - 3.6.11 Protect installed retrofit roof drains to ensure that, except for normal weathering, retrofit roof drains will be without damage or deterioration at time of Substantial Completion.
- 3.7 NEW EXPANSION JOINT COVER INSTALLATION:
- 3.7.1 Form and install new metal expansion joint cover in accordance with SMACNA Architectural Sheet Metal Manual (Sixth Edition) Figure 5-5A.
 - 3.7.2 Install new fiberglass batt insulation inside the 20 mil PVC envelope folded between new wood curbs.
 - 3.7.3 Install new metal expansion joint flange and fasten to substrate with fasteners at 4 "O.C. staggered.
 - 3.7.4 Prior to the application of the expansion joint cover, install a strip of 20-mil PVC flashing in as long a strip as practical over the flange and insulation envelope. Lap ends 6" minimum and cement with flashing cement.
 - 3.7.5 Use maximum 10' sections with minimum number of sections in each straight run. Form 1" standing seam at ends of sections and seal.

END OF SECTION

SECTION 13001

ROOF REPAIRS

PART 1 GENERAL

1.1 SUMMARY

1.1.1 This Section includes the provisions for repairs as described in Section 01010 Summary of Work.

1.2 SUBMITTALS

1.2.1 Submit letter stating materials, material's manufacturer, and product description for bituminous roof repair on Contractor's letterhead.

PART 2 PRODUCTS

2.1 REFER TO OTHER SECTIONS OF THIS SPECIFICATION TO OBTAIN PRODUCT DESCRIPTIONS FOR METAL AND LIQUID APPLIED ROOFING PRODUCTS DESCRIBED IN THIS SPECIFICATION SECTION.

PART 3 EXECUTION

3.1 STRUCTURAL CONCRETE ROOF DECK REPAIR

3.1.1 Repair rough, spalled, or deteriorated concrete roof deck with quick-setting epoxy-concrete grout prior to application of concrete primer.

3.1.2 Cover any abandoned openings in deck up to 12 inches square with a 14 gauge steel plate, 4" wider, in each direction than the opening being covered and coated both sides with Rust-Oleum primer.

3.1.2.1 Fasten the repair plate to the concrete deck with 1/4" x 1-1/2' drive pins placed at corners and at 6" centers on each side.

3.1.2.2 Cover repair plate with foundation coat and reinforcing fabric and allow to cure prior to application of the new tapered insulation and liquid applied roofing system.

END OF SECTION 13001