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**UNIVERSITY OF
SOUTH CAROLINA**

SPECIFICATIONS FOR
RE BID JONES PSC
ROOF REPLACEMENT
UNIVERSITY OF SOUTH CAROLINA
COLUMBIA, SOUTH CAROLINA
PROJECT NO. H27-6094-Z



Project No. FH146903

BID DOCUMENTS

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PROJECT NUMBER: H27-6094-Z

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SE-310

INVITATION FOR CONSTRUCTION SERVICES

PROJECT NAME: RE BID Jones PSC Roof ReplacementPROJECT NUMBER: H27-6094-ZPROJECT LOCATION: University of South Carolina, Columbia, South CarolinaBID SECURITY REQUIRED? Yes No PERFORMANCE BOND REQUIRED? Yes No PAYMENT BOND REQUIRED? Yes No

NOTE: Contractor may be subject to a performance appraisal at the close of the project.

CONSTRUCTION COST RANGE: \$ 750,000

DESCRIPTION OF PROJECT: Remove and replace approx. 15,220 square feet of the existing roof system and associated components with new two ply modified bitumen membrane roofing system and associated components. Small and minority business participation is encouraged. Bidders are responsible for obtaining all bidding documents from the USC purchasing website: <http://purchasing.sc.edu>.

BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: <http://purchasing.sc.edu>PLAN DEPOSIT AMOUNT: \$ 0 IS DEPOSIT REFUNDABLE Yes No N/A

Bidders must obtain Bidding Documents/Plans from the above listed source(s) to be listed as an official plan holder. Only those Bidding Documents/Plans obtained from the above listed source(s) are official. Bidders that rely on copies of Bidding Documents/Plans obtained from any other source do so at their own risk. All written communications with official plan holders & bidders **WILL** **WILL NOT** be via email or website posting.

IN ADDITION TO THE ABOVE OFFICIAL SOURCE(S), BIDDING DOCUMENTS/PLANS ARE ALSO AVAILABLE AT:

It is the Contractor's responsibility to obtain plans, specifications, addenda, award and any other related documents from the purchasing website <http://purchasing.sc.edu>

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

A-E NAME: Stafford Consulting EngineersA-E CONTACT: Keith CappellutiA-E ADDRESS: Street/PO Box: 2020-E Starita RoadCity: CharlotteState: NCZIP: 28206EMAIL: krcappelluti@terracon.comTELEPHONE: 704-594-8914FAX: 704-509-1888AGENCY: University of South CarolinaAGENCY PROJECT COORDINATOR: Juaquana BrookinsADDRESS: Street/PO Box: 743 Greene StreetCity: ColumbiaState: SCZIP: 29208EMAIL: jbrookin@fmc.sc.eduTELEPHONE: 803-777-3596FAX: 803-777-7334PRE-BID CONFERENCE: Yes No MANDATORY ATTENDANCE: Yes No PRE-BID DATE: 9/10/15 TIME: 10:00 a.m.PLACE: 743 Greene Street, Conf. Rm. 53, Columbia, SCBID CLOSING DATE: 9/22/15 TIME: 2:00 p.m.PLACE: 743 Greene Street, Conf. Rm. 53, Columbia, SC

BID DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Ms. Juaquana BrookinsUniversity of South Carolina743 Greene Street, Columbia, SC 29208

MAIL SERVICE:

Attn: Ms. Juaquana BrookinsUniversity of South Carolina743 Greene Street, Columbia, SC 29208IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency *MUST* check one)Yes No

APPROVED BY: _____

(OSE Project Manager)

DATE: _____

AIA DOCUMENT (BY REFERENCE ONLY)

**AIA DOCUMENT A701 – INSTRUCTIONS TO BIDDERS IS A PART OF THESE BIDDING
DOCUMENTS BY REFERENCE ONLY.
DOCUMENTS MAY BE VIEWED AT THE UNIVERSITY OF SOUTH CAROLINA.**

OSE FORM 00201

STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

AGENCY: University of South Carolina

PROJECT NAME: RE BID Jones PSC Roof Replacement

PROJECT NUMBER: H27-6094-Z

PROJECT LOCATION: University of South Carolina

PROCUREMENT OFFICER: Juaquana Brookins

1. STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

- 1.1 These Standard Supplemental Instructions to Bidders amend or supplement Instructions to Bidders (AIA Document A701-1997) and other provisions of Bidding and Contract Documents as indicated below.
- 1.2 Compliance with these Standard Supplemental Instructions is required by the Office of State Engineer (OSE) for all State projects when competitive sealed bidding is used as the method of procurement.
- 1.3 All provisions of the 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 Notice of Intent to Award (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.

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

- 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—
 - a. Those prices;
 - b. The intention to submit an bid; or
 - c. 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 a 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.
 - a. 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.a, the term "principals" means the person(s) in the bidder's organization responsible for determining the prices offered in this bid];
 - b. As an authorized agent, does certify that the principals referenced in subdivision B.2.a 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
 - c. 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-
- a. Bidder and/or any of its Principals-
 - (i) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
 - (ii) 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
 - (iii) 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.a.(ii) of this provision.
 - b. 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, Bidder 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.

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

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 a Bidder is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- D. 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 IRAN DIVESTMENT ACT CERTIFICATION

(a) The Iran Divestment Act List is a list published by the Board pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: <http://procurement.sc.gov/PS/PS-iran-divestment.phtm>(.) Section 11-57-310 requires the government to provide a person ninety days written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material inducement for the State to award a contract to you. (b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List.

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.

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2.11 *In Section 3.2.2:*

Delete the words “and Sub-bidders”

Delete the word “seven” and substitute the word “ten”

2.12 *In Section 3.2.3:*

In the first Sentence, insert the word “written” before the word “Addendum.”

Insert the following at the end of the section:

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

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

Reference in the Bidding Documents to a designated material, product, thing, or service by specific brand or trade name followed by the words “or equal” and “or approved equal” shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition.

2.14 *Delete Section 3.3.2 and substitute the following:*

3.3.2 No request to substitute materials, products, or equipment for materials, products, or equipment described in the Bidding Documents and no request for addition of a manufacturer or supplier to a list of approved manufacturers or suppliers in the Bidding Documents will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids established in the Invitation for Bids. Any subsequent extension of the date for receipt of Bids by addendum shall not extend the date for receipt of such requests unless the addendum so specifies. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

2.15 *Delete Section 3.4.3 and substitute the following:*

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

2.16 *Insert the following Sections 3.4.5 and 3.4.6:*

3.4.5 When the date for receipt of Bids is to be postponed and there is insufficient time to issue a written Addendum prior to the original Bid Date, Owner will notify prospective Bidders by telephone or other appropriate means with immediate follow up with a written Addendum. This Addendum will verify the postponement of the original Bid Date and establish a new Bid Date. The new Bid Date will be no earlier than the fifth (5th) calendar day after the date of issuance of the Addendum postponing the original Bid Date.

3.4.6 If an emergency or unanticipated event interrupts normal government processes so that bids cannot be received at the government office designated for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal government processes resume. In lieu of an automatic extension, an Addendum may be issued to reschedule bid opening. If state offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an Addendum will be issued to reschedule the conference.

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.

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2.21 *Delete Section 4.1.5 and substitute the following:*

4.1.5 All requested Alternates shall be bid. The failure of the bidder to indicate a price for an Alternate shall render the Bid non-responsive. Indicate the change to the Base Bid by entering the dollar amount and marking, as appropriate, the box for "ADD TO" or "DEDUCT FROM". If no change in the Base Bid is required, enter "ZERO" or "No Change." For add alternates to the base bid, Subcontractor(s) listed on page BF-2 of the Bid Form to perform Alternate Work shall be used for both Alternates and Base Bid Work if Alternates are accepted.

2.22 *Delete Section 4.1.6 and substitute the following:*

4.1.6 Pursuant to Title 11, Chapter 35, Section 3020(b)(i) of the South Carolina Code of Laws, as amended, Section 7 of the Bid Form sets forth a list of subcontractor specialties for which Bidder is required to identify only those 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

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shall give their Bids to the Owner's procurement officer or his/her designee as shown in the Invitation for Bids prior to the time of the Bid Opening.

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

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

2.30 *Delete Section 4.4.2 and substitute the following:*

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

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

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

5.1.2 At bid opening, Owner will announce the date and location of the posting of the Notice of Intended Award.

5.1.3 Owner will send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the Bid Opening.

5.1.4 If Owner determines to award the Project, Owner will, after posting a Notice of Intended Award, send a copy of the Notice to all Bidders.

5.1.5 If only one Bid is received, Owner will open and consider the Bid.

2.32 *In Section 5.2, insert the section number "5.2.1" before the words of the "The Owner" at the beginning of the sentence.*

2.33 *Insert the following Sections 5.2.2 and 5.2.3:*

5.2.2 The reasons for which the Owner will reject Bids include, but are not limited to:

- .1** Failure by a Bidder to be represented at a Mandatory Pre-Bid Conference or site visit;
- .2** Failure to deliver the Bid on time;
- .3** Failure to comply with Bid Security requirements, except as expressly allowed by law;
- .4** Listing an invalid electronic Bid Bond authorization number on the bid form;
- .5** Failure to Bid an Alternate, except as expressly allowed by law;
- .6** Failure to list qualified Subcontractors as required by law;
- .7** Showing any material modification(s) or exception(s) qualifying the Bid;
- .8** Faxing a Bid directly to the Owner or their representative; or
- .9** Failure to include a properly executed Power-of-Attorney with the bid bond.

5.2.3 The Owner may reject a Bid as nonresponsive if the prices bid are materially unbalanced between line items or sub-line items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Owner even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

2.34 *Delete Section 6.1 and substitute the following:*

6.1 CONTRACTOR'S RESPONSIBILITY

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

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

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

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

2.37 *Insert the following Section 6.4*

6.4 CLARIFICATION

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

2.38 *Delete Section 7.1.2 and substitute the following:*

7.1.2 The performance and payment bonds shall conform to the requirements of Section 11.4 of the General Conditions of the Contract. If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid.

2.39 *Delete the language of Section 7.1.3 and insert the word "Reserved."*

2.40 *In Section 7.2, insert the words "CONTRACT, CERTIFICATES OF INSURANCE" into the caption after the word "Delivery."*

2.41 *Delete Section 7.2.1 and substitute the following:*

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

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

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

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

2.44 *Insert the following Article 9:*

ARTICLE 9 MISCELLANEOUS**9.1 NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING
IMPORTANT TAX NOTICE - NONRESIDENTS ONLY**

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

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

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

PLEASE SEE THE "NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING" FORM (Available through SC Department of Revenue).

OSE FORM 00201**STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS****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: Lobby

Building Where Posted: Facilities Center

Address of Building: 743 Greene Street, Columbia, SC 29208

WEB site address (if applicable): http://purchasing.sc.edu

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

9.5 PROTEST OF SOLICITATION OR AWARD

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

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

- A. by email to protest-ose@mmo.sc.gov,
- B. by facsimile at 803-737-0639, or
- C. by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201.

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

OSE FORM 00201

STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

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

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

9.8 TAX CREDIT FOR SUBCONTRACTING WITH MINORITY FIRMS

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

9.9 OTHER SPECIAL CONDITIONS OF THE WORK

N/A

END OF DOCUMENT

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
743 Greene Street
Columbia, South Carolina 29208 »
« »

BOND AMOUNT: \$ « »

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

«RE BID Jones PSC Roof Replacement
«University of South Carolina
Columbia, South Carolina»
«Project No. H27-6094-Z »

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.

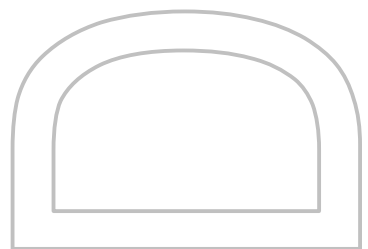
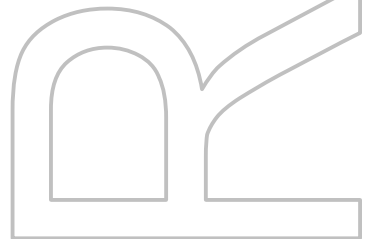
When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement 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 « », « »

(Witness)

(Witness)

« »

(Contractor as Principal) (Seal)

« »

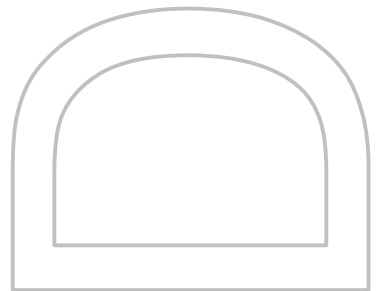
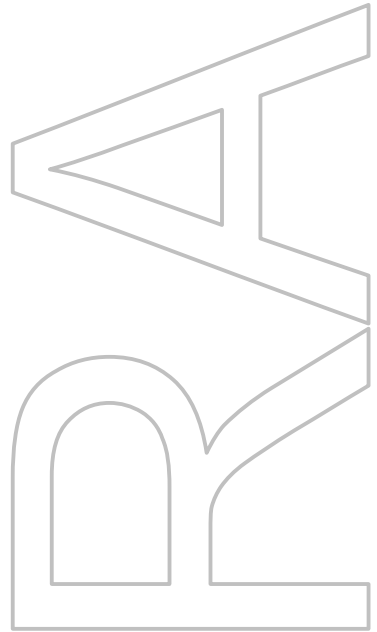
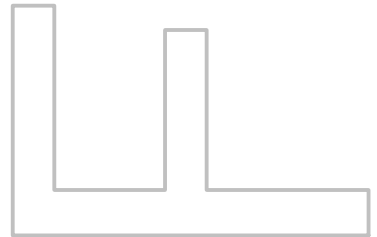
(Title)

« »

(Surety) (Seal)

« »

(Title)



**SE-330
LUMP SUM BID FORM**

Bidders shall submit bids on only Bid Form SE-330.

BID SUBMITTED BY: _____
(Bidder's Name)

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

FOR: PROJECT NAME: RE BID Jones PSC Roof Replacement

PROJECT NUMBER: H27-6094-Z

OFFER

§ 1. In response to the Invitation for Construction Services 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 11-35-3030(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:

(Bidder, check all that apply. Note, there may be more boxes than actual addenda. Do not check boxes that do not apply)

- ADDENDA:** #1 #2 #3 #4 #5

§ 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):* Remove and replace existing roof system and associated components with new two-ply modified bitumen membrane roofing system and associated components.

\$ _____, which sum is hereafter called the Base Bid.

(Bidder - insert Base Bid Amount on line above)

**SE-330
LUMP SUM BID FORM**

§ 6.2 **BID ALTERNATES** as indicated in the Bidding Documents and generally described as follows:

ALTERNATE # 1 (Brief Description): _____

ADD TO or **DEDUCT FROM BASE BID: \$** _____

(Bidder to Mark appropriate box to clearly indicate the price adjustment offered for each alternate)

ALTERNATE # 2 (Brief Description): _____

ADD TO or **DEDUCT FROM BASE BID: \$** _____

(Bidder to Mark appropriate box to clearly indicate the price adjustment offered for each alternate)

ALTERNATE # 3 (Brief Description): _____

ADD TO or **DEDUCT FROM BASE BID: \$** _____

(Bidder to Mark appropriate box to clearly indicate the price adjustment offered for each alternate)

§ 6.3 **UNIT PRICES:**

BIDDER offers for the Agency’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 Agency, including those for materials, labor, equipment, tools of trades and labor, fees, taxes, insurance, bonding, overhead, profit, etc. The Agency 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**.

No.	ITEM	Unit of Measure	ADD	DEDUCT
<u>1.</u>	<u>4" drain leader</u>	<u>lin. ft.</u>	<u>\$</u>	<u>\$</u>
<u>2.</u>	<u>Replace damaged/deteriorated wood blocking</u>	<u>bd. ft.</u>	<u>\$</u>	<u>\$</u>
<u>3.</u>	_____	_____	<u>\$</u>	<u>\$</u>
<u>4.</u>	_____	_____	<u>\$</u>	<u>\$</u>
<u>5.</u>	_____	_____	<u>\$</u>	<u>\$</u>
<u>6.</u>	_____	_____	<u>\$</u>	<u>\$</u>

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LUMP SUM BID FORM

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

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

SUBCONTRACTOR CLASSIFICATION By License Classification and/or Subclassification <i>(Completed by Owner)</i>	SUBCONTRACTOR'S PRIME CONTRACTOR'S NAME <i>(Must be completed by Bidder)</i>	SUBCONTRACTOR'S PRIME CONTRACTOR'S SC LICENSE NUMBER <i>(Requested, but not Required)</i>
BASE BID		
ALTERNATE #1		
ALTERNATE #2		
ALTERNATE #3		

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

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LUMP SUM BID FORM

**INSTRUCTIONS FOR
SUBCONTRACTOR LISTING**

1. Section 7 of the Bid Form sets forth an Owner developed list of contractor/subcontractor specialties by contractor license category and/or subcategory for which bidder is required to identify the entity (subcontractor(s) and/or himself) Bidder will use to perform the work of each listed specialty..
 - a. **Column A:** The Owner fills out this column, which identifies the contractor/subcontractor specialties for which the bidder must list either a subcontractor or himself as the entity that will perform this work. Subcontractor specialties are identified by contractor license categories or subcategories listed in Title 40 of the South Carolina Code of laws. If the owner has not identified a specialty, the bidder does not list a subcontractor.
 - b. **Columns B and C:** In these columns, the Bidder identifies the subcontractors it will use for the work of each specialty listed by the Owner in Column A. Bidder must identify only the subcontractor(s) who will perform the work and no others. Bidders should make sure that their identification of each subcontractor is clear and unambiguous. A listing that could be any number of different entities may be cause for rejection of the bid as non-responsive. For example, a listing of M&M without more may be problematic if there are multiple different licensed contractors in South Carolina whose names start with M&M.
2. **Subcontractor Defined:** 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 pursuant to a contract with the prime contractor. Bidder should not identify sub-subcontractors in the spaces provided on the bid form but only those entities with which bidder will contract directly. Likewise, do not identify 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).
3. **Subcontractor Qualifications:** Bidder must only list subcontractors who possess a South Carolina Contractor's license with the license classification and/or subclassification identified by the Owner in the first column on the left. The subcontractor license must also be within the appropriate license group for the work of the specialty. If Bidder lists a subcontractor who is not qualified to perform the work, the Bidder will be rejected as non-responsive.
4. **Use of Own forces:** If under the terms of the Bidding Documents, Bidder is qualified to perform the work of a listed specialty 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. **Use of Multiple Subcontractors:**
 - a. 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**". Bidder must use each entity listed for the work of a single specialty listing in the performance of that work.
 - b. **Optional Listing Prohibited:** Bidder may not list multiple subcontractors for a specialty listing, in a form that provides the Bidder the option, after bid opening or award, to choose to use one or more but not all the listed subcontractors to perform the work for which they are listed. A listing, which on its face requires subsequent explanation to determine whether it is an optional listing, 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 names of each entity listed for that specialty. Agency 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 Agency may reasonably interpret as an optional listing.
6. If Bidder is awarded the contract, bidder must, except with the approval of the Agency for good cause shown, use the listed entities to perform the work for which they are listed.
7. 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.
8. Bidder's failure to identify an entity (subcontractor or himself) to perform the work of a subcontractor specialty listed in the first column on the left will render the Bid non-responsive.

SE-330 LUMP SUM BID FORM

§ 8. LIST OF MANUFACTURERS, MATERIAL SUPPLIERS, AND SUBCONTRACTORS OTHER THAN SUBCONTRACTORS LISTED IN SECTION 7 ABOVE (*FOR INFORMATION ONLY*):

Pursuant to instructions in the Invitation for Construction Services, if any, Bidder will provide to Owner upon the Owner's request and within 24 hours of such request, a listing of manufacturers, material suppliers, and subcontractors, other than those listed in Section 7 above, that Bidder intends to use on the project. Bidder acknowledges and agrees that this list is provided for purposes of determining responsibility and not pursuant to the subcontractor listing requirements of SC Code Ann § 11-35-3020(b)(i).

§ 9. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

a) CONTRACT TIME

Bidder agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Owner. Bidder agrees to substantially complete the Work within 120 Calendar Days from the Date of Commencement, subject to adjustments as provided in the Contract Documents.

b) LIQUIDATED DAMAGES

Bidder further agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the amount of \$ 250 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 amount 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 laws of the State of South Carolina.
- b) Bidder agrees that at any time prior to the issuance of the Notice to Proceed for this Project, this Project may be canceled for the convenience of, and without cost to, the State.
- c) Bidder agrees that neither the State of South Carolina nor any of its agencies, employees or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project canceled for any reason prior to the issuance of the Notice to Proceed.

§ 11. ELECTRONIC BID BOND

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

ELECTRONIC BID BOND NUMBER: _____

SIGNATURE AND TITLE: _____

**SE-330
LUMP SUM BID FORM**

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION

SC Contractor's License Number(s): _____

Classification(s) & Limits: _____

Subclassification(s) & Limits: _____

By signing this Bid, the person signing reaffirms all representation and certification made by both the person signing and the Bidder, including without limitation, those appearing in Article 2 of the Instructions to Bidders, is expressly incorporated by reference.

BIDDER'S LEGAL NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____

TITLE: _____

AIA DOCUMENT (BY REFERENCE ONLY)

**AIA DOCUMENT A101 – STANDARD FORM OF AGREEMENT BETWEEN
OWNER AND CONTRACTOR IS A PART OF THESE BIDDING
DOCUMENTS BY REFERENCE ONLY.
DOCUMENTS MAY BE VIEWED AT THE UNIVERSITY OF SOUTH CAROLINA.**

OSE FORM 00501

STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

AGENCY: University of South Carolina

PROJECT NAME: RE BID Jones PSC Roof Replacement

PROJECT NUMBER: H27-6094-Z

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 3.3 and substitute the following:*
3.3 The Contract Time as provided in Section 9(a) of the Bid Form (SE-330) for this Project shall be measured from the Date of Commencement. 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%).”
- 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.”*

OSE FORM 00501**STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR**

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, University of South Carolina

Title: Senior Project Manager

Address: 743 Greene Street, Columbia, SC 29208

Telephone: 803-777-7076

FAX: _____

Email: tnopal@fmc.sc.edu

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

Name: Mr. Dale Branham, University of South Carolina

Title: Manager, Maintenance Support Group

Address: 743 Greene Street, Columbia, SC 29208

Telephone: 803-777-1288

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: _____

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: Keith Cappelluti, Stafford Consulting Engineers

Title: Project Manager

Address: 2020-E Starita Road, Charlotte, NC 28206

Telephone: 704-594-8914

FAX: 704-509-1888

Email: krcappelluti@terracon.com

OSE FORM 00501
STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

2.15 *In Section 9.1.7, Sub-Section 2, list the following documents in the space provided for listing documents:*

Invitation for Construction Services (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)

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

END OF DOCUMENT

AIA DOCUMENT (BY REFERENCE ONLY)

**AIA DOCUMENT A201 – GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION IS A PART OF THESE BIDDING
DOCUMENTS BY REFERENCE ONLY.
DOCUMENTS MAY BE VIEWED AT THE UNIVERSITY OF SOUTH CAROLINA.**

OSE FORM 00811

STANDARD SUPPLEMENTARY CONDITIONS

AGENCY: University of South Carolina

PROJECT NAME: RE BID Jones PSC Roof Replacement

PROJECT NUMBER: H27-6094-Z

1. GENERAL CONDITIONS

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

2. STANDARD SUPPLEMENTARY CONDITIONS

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

3. MODIFICATIONS TO A201-2007

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

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

3.2 *Delete the language of Section 1.1.8 and substitute the word "Reserved."*

3.3 *Add the following Section 1.1.9:*

1.1.9 NOTICE TO PROCEED

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

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

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

3.5 *Delete Section 1.5.1 and substitute the following:*

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

3.6 *Delete Section 2.1.1 and substitute the following:*

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization, except as provided in Section 7.1.2. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's Representative. [Reference § 8.2 of the Agreement.]

3.7 *Delete Section 2.1.2 and substitute the following:*

2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to post Notice of Project Commencement pursuant to Title 29, Chapter 5, Section 23 of the South Carolina Code of Laws, as amended.

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STANDARD SUPPLEMENTARY CONDITIONS

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.

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

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

3.14 *In the third sentence of Section 3.2.4, insert the word "latent" before the word "errors."*

3.15 *In the last sentence of Section 3.3.1, insert the words "by the Owner in writing" after the word "instructed."*

3.16 *Delete the third sentence of Section 3.5 and substitute the following sentences:*

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

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

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

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

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

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

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

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

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

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

acceptable to the Owner,

3.22 *Delete Section 3.9.2 and substitute the following:*

3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the name and qualifications of a proposed superintendent. The Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner has reasonable objection to the proposed superintendent or (2) that the Owner requires additional time to review. Failure of the Owner to reply within the 14-day period shall constitute notice of no reasonable objection.

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

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

3.24 *Delete Section 3.10.3 and substitute the following:*

3.10.3 Additional requirements, if any, for the constructions schedule are as follows:

(Check box if applicable to this Contract)

The construction schedule shall be in a detailed precedence-style critical path management (CPM) or primavera-type format satisfactory to the Owner and the Architect that shall also (1) provide a graphic representation of all activities and events that will occur during performance of the work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as “Milestone Dates”). Upon review and acceptance by the Owner and the Architect of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents and attached to the Agreement as Exhibit “A.” If not accepted, the construction schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and the Architect and resubmitted for acceptance. The 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.

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3.26 *Add the following Section 3.12.5.1:*

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

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

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

3.28 *In Section 3.13, insert the section number "3.13.1" before the 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 which the Contractor is responsible shall not erect any sign on the Project site without the prior written consent of the Owner.

3.30 *In the first sentence of Section 3.18.1, after the parenthetical "... (other than the Work itself), ..." and before the word "...but...", insert the following:*

including loss of use resulting therefrom,

3.31 *Delete Section 4.1.1 and substitute the following:*

4.1.1 The Architect is that person or entity identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

3.32 *Insert the following at the end of Section 4.2.1:*

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

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

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

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

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

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

Work completed and correlated with the

3.36 *Delete the first sentence of Section 4.2.11 and substitute the following:*

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

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

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

3.38 *Delete Section 4.2.14 and substitute the following:*

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

3.39 *Delete Section 5.2.1 and substitute the following:*

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, within fourteen days after posting of the Notice of Intent to Award the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (excluding Listed Subcontractors but including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner has reasonable objection to any such proposed person or entity. Failure of the Owner to reply within the 14 day period shall constitute notice of no reasonable objection.

3.40 *Delete Section 5.2.2 and substitute the following:*

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and timely objection. The Owner shall not direct the Contractor to contract with any specific individual or entity for supplies or services unless such supplies and services are necessary for completion of the Work and the specified individual or entity is the only source of such supply or services.

3.41 *In the first sentence of Section 5.2.3, delete the words "...or Architect..." in the two places they appear.*

3.42 *Delete the words "...or Architect..." in the in the first sentence of Section 5.2.4 and insert the following sentence at the end of Section 5.2.4:*

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

3.43 *Add the following Section 5.2.5:*

5.2.5 A Subcontractor identified in the Contractor's Bid in response the specialty subcontractor listing requirements of Section 7 of the Bid Form (SE-330) may only be substituted in accordance with and as permitted by the provisions of Title 11, Chapter 35, Section 3021 of the South Carolina Code of Laws, as amended. A proposed substitute for a Listed Subcontractor shall be subject to the Owner's approval as set forth in Section 5.2.3.

3.44 *Add the following Section 5.2.6:*

5.2.6 The Iran Divestment Act List is a list published by the Board pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: <http://procurement.sc.gov/PS/PS-iran-divestment.phtm>(.) Consistent with Section 11-57-330(B), the Contractor shall not contract with any person to perform a part of the Work, if, at the time you enter into the subcontract, that person is on the then-current version of the Iran Divestment Act List.

3.45 *In Section 5.3, delete everything following the heading "SUBCONTRACTUAL RELATIONS" and insert the following Sections 5.3.1, 5.3.2, 5.3.3, and 5.3.4:*

5.3.1 By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not 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

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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.

3.46 *Delete the last sentence of Section 5.4.1.*

3.47 *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.

3.48 *Delete the language of Section 6.1.4 and substitute the word "Reserved."*

3.49 *Insert the following at the end of Section 7.1.2:*

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

3.50 *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.

3.51 *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.

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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 expenditure 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.

3.52 *Delete 7.3.3 and substitute the following:*

7.3.3 PRICE ADJUSTMENTS

7.3.3.1 If any Modification, including a Construction Change Directive, provides for an adjustment to the Contract Sum, the adjustment shall be based on whichever of the following methods is the most valid approximation of the actual cost to the contractor, with overhead and profit as allowed by Section 7.5:

- .1** Mutual acceptance of a lump sum;
- .2** Unit prices stated in the Contract Documents, except as provided in Section 7.3.4, or subsequently agreed upon;
- .3** Cost attributable to the events or situations under applicable clauses with adjustment of profits or fee, all as specified in the contract, or subsequently agreed upon by the parties, or by some other method as the parties may agree; or
- .4** As provided in Section 7.3.7.

7.3.3.2 Consistent with Section 7.6, costs must be properly itemized and supported by substantiating data sufficient to permit evaluation before commencement of the pertinent performance or as soon after that as practicable. All costs incurred by the Contractor must be justifiably compared with prevailing industry standards. Except as provided in Section 7.5, all adjustments to the Contract Price shall be limited to job specific costs and shall not include indirect costs, overhead, home office overhead, or profit.

3.53 *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.

3.54 *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.

3.55 *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:

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- .1 To the Contractor for work performed by the Contractor's own forces, 17% of the Contractor's actual costs.
- .2 To each Subcontractor for work performed by the Subcontractor's own forces, 17% of the subcontractor's actual costs.
- .3 To the Contractor for work performed by a subcontractor, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).

7.6 PRICING DATA AND AUDIT

7.6.1 Cost or Pricing Data.

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

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

7.6.3 Records Retention.

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

3.56 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.

3.57 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.

3.58 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.

3.59 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

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of completed Work during the course of the Project. The Contractor shall update the schedule of values as required by either the Architect or Owner as necessary to reflect:

- .1 the description of Work (listing labor and material separately);
- .2 the total value;
- .3 the percent and value of the Work completed to date;
- .4 the percent and value of previous amounts billed; and
- .5 the current percent completed and amount billed.

9.2.2 Any schedule of values or trade breakdown that fails to include sufficient detail, is unbalanced, or exhibits "front-loading" of the value of the Work shall be rejected. If a schedule of values or trade breakdown is used as the basis for payment and later determined to be inaccurate, sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Work.

3.60 *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.

3.61 *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.

3.62 *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,"

3.63 *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.

3.64 *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

3.65 *Delete Section 9.7 and substitute following:*

9.7 FAILURE OF PAYMENT

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

3.66 *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 have been delivered to the Owner.

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3.67 *In Section 9.8.2, insert the word “written” after the word “comprehensive” and before the word “list.”*

3.68 *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.

3.69 *In the second sentence of Section 9.8.5, delete the words “and consent of surety, if any.”*

3.70 *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.”*

3.71 *Delete Section 9.10.1 and substitute the following:*

9.10.1 Unless the parties agree otherwise in the Certificate of Substantial Completion, the Contractor shall achieve Final Completion no later than thirty days after Substantial Completion. Upon receipt of the Contractor’s written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect, with the Owner and any other person the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable to the Architect, Owner, and Contractor, and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect’s knowledge, information and belief, and on the basis of the Architect’s on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect’s final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor’s being entitled to final payment have been fulfilled. If more than one Final Completion inspection is required, the Contractor shall reimburse the Owner for all costs of reinspections or, at the Owner’s option, the costs may be deducted from payments due to the Contractor. If the Contractor does not achieve final completion within thirty days after Substantial Completion or the timeframe agreed to by the parties in the Certificate of Substantial Completion, whichever is greater, the Contractor shall be responsible for any additional Architectural fees resulting from the delay.

3.72 *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.

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3.73 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.

3.74 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.

3.75 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.

3.76 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.

3.77 Insert the following at the end of Section 10.3.2:

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

3.78 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.

3.79 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

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

3.81 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.

3.82 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.

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- (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.

3.83 *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.

3.84 *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.

3.85 *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.

3.86 *Delete the language of Section 11.3.1.2 and substitute the word "Reserved."*

3.87 *Delete the language of Section 11.3.1.3 and substitute the word "Reserved."*

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3.88 Delete Section 11.3.2 and substitute the following:

11.3.2 BOILER AND MACHINERY INSURANCE

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

3.89 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.

3.90 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.

3.91 Delete the language of Section 11.3.5 and substitute the word "Reserved."

3.92 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.

3.93 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.

3.94 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.

3.95 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.

3.96 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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3.97 *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.

3.98 *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.

3.99 *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.

3.100 *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.

3.101 *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.*

3.102 *In Section 12.2.2.3, add the following to the end of the sentence:*

unless otherwise provided in the Contract Documents.

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

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

3.104 *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.

3.105 *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.

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3.106 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.

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

Unless expressly provided otherwise,

3.108 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
- 15.6.5** Service of Process

3.109 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.

3.110 Delete the language of Section 13.7 and substitute the word "Reserved."

3.111 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 Carolina 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.

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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)

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)

3.112 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

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3.113 *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.

3.114 *In Section 14.1.4, replace the word “repeatedly” with the word “persistently.”*

3.115 *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.

3.116 *In Section 14.2.2, delete the parenthetical statement “, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action,” immediately following the word “Owner” in the first line.*

3.117 *In Section 14.2.4, replace the words “Initial Decision Maker” with the word “Architect”*

3.118 *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.

3.119 *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.

3.120 *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.

3.121 *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.

3.122 *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.

3.123 *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.

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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.

3.124 *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.

3.125 *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.

3.126 *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.

3.127 *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.

3.128 *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) 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 and days the contractor was already scheduled to work. 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.

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3.129 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.

15.1.6.3 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).

3.130 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).

3.131 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.

3.132 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.

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- 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.
- 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.

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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.

3.133 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)*

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)*

See Section 01210 - Allowances and Section 01270 - Unit Prices

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

See AIA Document A201, 00811-OSE and requirements in the technical specifications

16.4. Requirements for Shop Drawings and other submittals, if any, including number, procedure for submission, list of materials to be submitted, etc. *(Refer to attachments as needed. If none, enter NONE)*

See AIA Document A201, 00811-OSE and requirements in the technical specifications

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

See Section 01000 - General Requirements

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

See Section 01000 - General Requirements and specification instructions in the technical specifications

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

USC Supplemental General Conditions for Construction Projects

SE-355
PERFORMANCE BOND

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

Name: _____

Address: _____

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

Name: _____

Address: _____

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

Name: University of South Carolina

Address: 743 Greene Street

Columbia, SC 29208

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

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

State Project Name: RE BID Jones PSC Roof Replacement

State Project Number: H27-6094-Z

Brief Description of Awarded Work, as found on the SE-330 or SE-332, Bid Form: Remove and replace approx. 15,220 square feet of the existing roof system and associated components with new two ply modified bitumen membrane roofing system and associated components. Small and minority business participation is encouraged. Bidders are responsible for obtaining all bidding documents from the USC purchasing website: http://purchasing.sc.edu.

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

Name: Stafford Consulting Engineers

Address: 2020-E Starita Road

Charlotte, NC 28206

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

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

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

BOND NUMBER _____

CONTRACTOR

SURETY

By: _____
(Seal)

By: _____
(Seal)

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

Witness: _____

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

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

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

SE-357

LABOR & MATERIAL PAYMENT BOND

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

Name: _____
Address: _____

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

Name: _____
Address: _____

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

Name: University of South Carolina
Address: 743 Greene Street
Columbia, SC 29209

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

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

State Project Name: RE BID Jones PSC Roof Replacement
State Project Number: H27-6094-Z

Brief Description of Awarded Work, as found on the SE-330 or SE-332, Bid Form: RRemove and replace approx. 15,220 square feet of the existing roof system and associated components with new two ply modified bitumen membrane roofing system and associated components. Small and minority business participation is encouraged. Bidders are responsible for obtaining all bidding documents from the USC purchasing website: http://purchasing.sc.edu.

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

Name: Stafford Consulting Engineers
Address: 2020-E Starita Road
Charlotte, NC 28206

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 _____, 20____
(shall be no earlier than Date of Contract)

BOND NUMBER _____

CONTRACTOR

SURETY

By: _____ (Seal)

By: _____ (Seal)

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

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 §11-35-3030(2)(c) of the SC Code of Laws, as amended, the Surety's obligation under this Bond shall arise as follows:

4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him.

4.2 A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.

4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of one year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.

5. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

5.2 Pay or arrange for payment of any undisputed amounts.

5.3 The Surety's failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.

6. Amounts owed by the Agency to the Contractor under the Contract shall be used for the performance of the Contract and to

satisfy claims, if any, under any Performance Bond. By the Contractor furnishing and the Agency accepting this Bond, they agree that all funds earned by the contractor in the performance of the Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Agency's prior right to use the funds for the completion of the Work.

7. The Surety shall not be liable to the Agency, Claimants or others for obligations of the Contractor that are unrelated to the Contract. The Agency shall not be liable for payment of any costs or expenses of any claimant under this bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

9. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the Agency or the contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

10. By the Contractor furnishing and the Agency accepting this Bond, they agree that this Bond has been furnished to comply with the statutory requirements of the South Carolina Code of Laws, as amended, and further, that any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

11. Upon request of any person or entity appearing to be a potential beneficiary of this bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

12. Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the laws of the State of South Carolina.

13. DEFINITIONS

13.1 Claimant: An individual or entity having a direct contract with the Contractor or with a Subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the Contractor and the Contractor's Subcontractors, and all other items for which a mechanic's lien might otherwise be asserted.

13.2 Remote Claimant: A person having a direct contractual relationship with a subcontractor of the Contractor or subcontractor, but no contractual relationship expressed or implied with the Contractor.

13.3 Contract: The agreement between the Agency and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

SE-380

CHANGE ORDER NO.: _____

CHANGE ORDER TO CONSTRUCTION CONTRACT

AGENCY: University of South Carolina

PROJECT NAME: RE BID Jones PSC Roof Replacement

PROJECT NUMBER: H27-6094-Z

CONTRACTOR: _____ CONTRACT DATE: _____

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

ADJUSTMENTS IN THE CONTRACT SUM:

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

ADJUSTMENTS IN THE CONTRACT TIME:

1. Original Substantial Completion Date:	
2. Sum of previously approved increases and decreases in Days:	Days
3. Change in Days for this Change Order	Days
4. New Substantial Completion Date:	

CONTRACTOR ACCEPTANCE:

BY: _____ Date: _____
(Signature of Representative)

Print Name: _____

ARCHITECT RECOMMENDATION FOR ACCEPTANCE:

BY: _____ Date: _____
(Signature of Representative)

Print Name: _____

AGENCY ACCEPTANCE AND CERTIFICATION:

BY: _____ Date: _____
(Signature of Representative)

Print Name: _____

- Change is within Agency Construction Contract Change Order Certification of: \$ _____
- Change is not within Agency Construction Contract Change Order Certification of: \$ _____

Office of the State Engineer Authorization for change exceeding Agency Construction Contract Change Order 1234 Certification:

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

USC SUPPLEMENTAL GENERAL CONDITIONS FOR CONSTRUCTION PROJECTS

WORK AREAS

1. The Contractor shall maintain the job site in a safe manner at all times. This includes (but is not limited to) the provision and/or maintenance of lighting, fencing, barricades around obstructions, and safety and directional signage.
2. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies, stairs and exterior walks. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the work area. Providing safe, accessible, plywood-shielded pedestrian ways around construction may be required if a suitable alternative route is not available.
3. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractor's work vehicles. The lay-down area will be clearly identified to the contractor by the Project Manager, with a sketch or drawing provided to USC Parking Services. In turn, Parking Services will mark off this area with a sign containing the project name, Project Manager's name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the Project Manager. The area will be maintained in a neat and orderly fashion.
4. Work vehicles parked in the lay down area (or designated parking areas) will be clearly marked and display a USC-furnished placard for identification. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site. Personal vehicles must be parked in the perimeter parking lots or garages. Temporary parking permits can be obtained at the Contractor's expense at the USC Parking Office located in the Pendleton Street parking garage. Refer to the CAMPUS VEHICLE EXPECTATIONS (below) for additional information.
5. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied on a regular basis. Construction waste must not be placed in University dumpsters. The construction site must be thoroughly cleaned with all trash picked up and properly disposed of on a daily basis and the site must be left in a safe and sanitary condition each day. The University will inspect job sites regularly and will fine any contractor found to be in violation of this requirement an amount of up to \$1,000 per violation.
6. Where it is necessary to jump curbs, dimensional lumber and plywood must be built up to appropriate curb elevation to protect curbs from damage. Contractor will be responsible for any project related damage.
7. The Contractor shall be responsible for erosion and sediment control measures where ground disturbances are made.

PROJECT FENCING

8. All construction projects with exterior impacts shall have construction fencing at the perimeter. Fencing shall be 6' chain link with black or green privacy fabric (80-90% blockage). For fence panels with footed stands, sandbag weights shall be placed on the inside of the fence. Ripped sandbags shall be replaced immediately.
9. For projects with long fencing runs and/or high profile locations, decorative USC banners shall be used on top of privacy fabric; banners should be used at a ratio of one banner for every five fence

panels. USC Project Manager will make arrangements for banner delivery for Contractor to hang.

10. The use of plastic safety fencing is discouraged and shall only be used on a temporary basis (less than four weeks) where absolutely necessary. Safety fencing shall be a neon yellow-green, high-visibility fencing equal to 'Kryptonight' by Tenax. Safety fencing shall be erected and maintained in a neat and orderly fashion throughout the project.
11. Vehicles and all other equipment shall be contained within a fenced area if they are on site for more than 3 consecutive calendar days.

BEHAVIOR

12. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited.
13. 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.
14. Contractor's employees must adhere to the University's policy of maintaining a drug-free and tobacco-free campus. Tobacco product trash that is found on the jobsite may result in a \$25/piece fee.

HAZARDOUS MATERIALS & SAFETY COMPLIANCE

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

LANDSCAPE & TREE PROTECTION

19. In conjunction with the construction documents, the USC Arborist shall direct methods to minimize damage to campus trees. Tree protection fencing is required to protect existing trees and other landscape features to be affected by a construction project. The location of this fence will be evaluated for each situation with the USC Arborist, Landscape Architect and Project Manager. Tree protection fencing may be required along access routes as well as within the project area itself. Fence locations may have to be reset throughout the course of the project.
20. The tree protection fence shall be 6' high chain link fence with 80-90% privacy screening unless otherwise approved by USC Arborist and/or Landscape Architect. If the tree protection fence is completely within a screened jobsite fence perimeter, privacy fabric is not required. In-ground

fence posts are preferred in most situations for greater protection. If utility or pavement conflicts are present, fence panels in footed stands are acceptable. See attached detail for typical tree protection fencing.

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

TEMPORARY FACILITIES

26. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
27. Contractor must provide its own electrical power supply. Water may be available to the extent of existing sources. Any needed or desired taps, connections, or metering devices, shall be at the sole expense of the contractor.
28. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.

CAMPUS KEYS

29. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.

WELDING

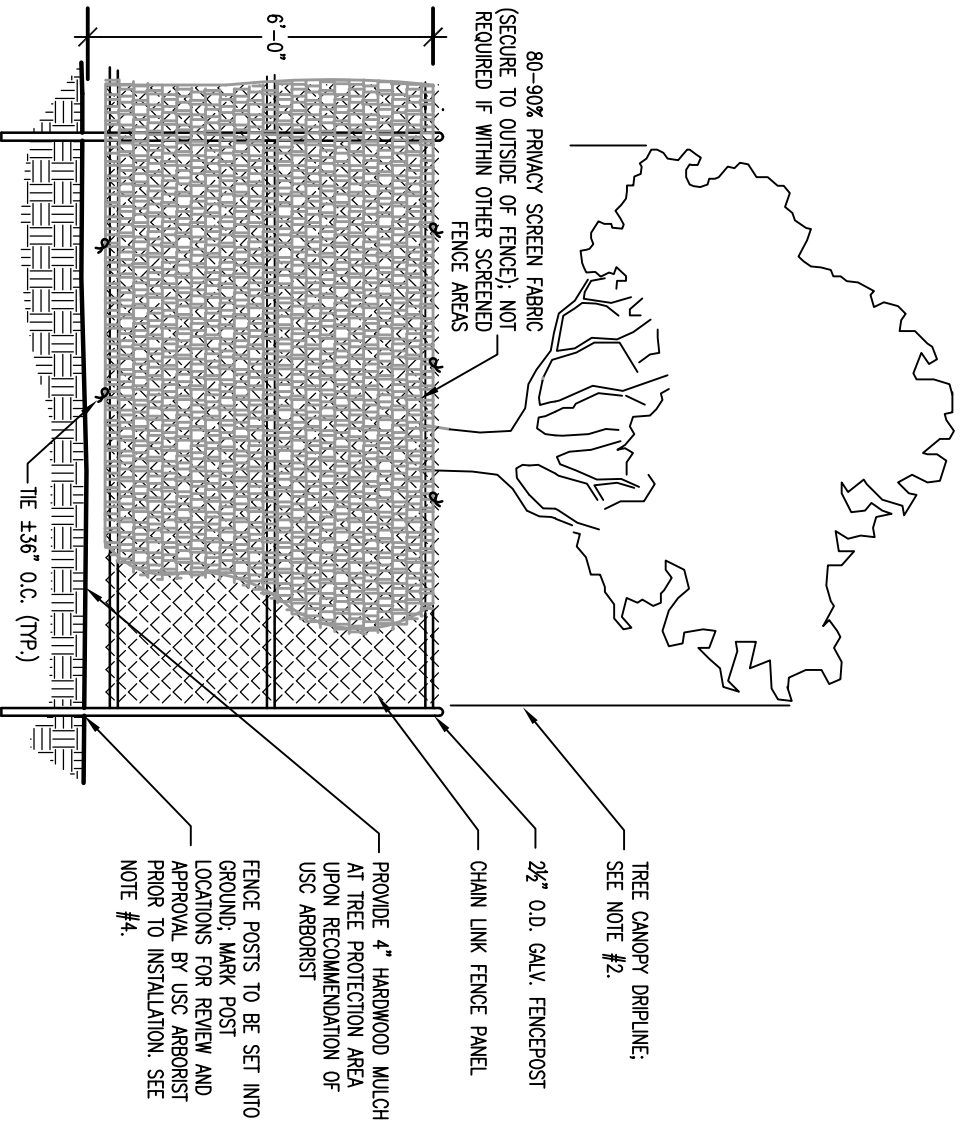
30. A welding (hot work) permit must be issued by the University Fire Marshall before any welding can begin inside a building. The USC Project Manager will coordinate.

PROJECT EVALUATION & CLOSE-OUT

31. For all projects over \$100,000, including IDCs, a Contractor Performance Evaluation (SE 397) will be reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed by the USC Project Manager and a Construction Performance rating will be established.
32. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.

CAMPUS VEHICLE EXPECTATIONS

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



TREE PROTECTION FENCING (IN-GROUND) WITH SCREENING

NOTES:

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

SECTION 01000 – GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Drawings and general provisions of the Contract, including General and Supplementary Conditions of the Specifications apply to this section. Applicable parts of other technical specifications that require coordination with the work specified in this Section also apply to this Section.

1.2 PROJECT NAME

- A. The name of this project is Jones PSC Roof Replacement, Project Number H27-6094-Z.

1.3 PROJECT LOCATION

- A. The work specified under this contract is located at Jones Physical Science Building on the main campus of the University of South Carolina, 745 Main Street, Columbia, South Carolina.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work under the Base Bid is on Areas A, B, C and D and generally consists of the following and all associated miscellaneous work as specified herein.
 - 1. Roof Replacement – Areas A, B, C and D: The work specified under this project generally consists of the complete removal and disposal of all existing roofing, lightweight concrete, flashings, metal flashings, pitch pockets, abandoned equipment, exterior staircase, roof drains; and the installation of new flat and tapered insulation, crickets, cover board, two-ply modified bitumen roofing with a granular cap sheet, flashings and metal flashings, coping caps, expansion joint covers, roof drains, overflow scuppers and all associated miscellaneous work specified herein. The work also includes, but is not limited to, all necessary coordination, temporary traffic control, protection of adjacent facilities, final cleaning, and warranties associated with the construction of this project. The Contractor is responsible for verifying all quantities and dimensions.
 - 2. Walls and Parapet Walls – Area C: Removal of masonry units where specified on the roof plan; and the installation of new through-wall flashing and new masonry units. Installation of metal panels is specified on parapet walls identified on the roof plan.
 - 3. Staircase – Area C: The removal of the existing exterior staircase and installation of staircase specified within the project documents is included in the scope of work.
 - 4. Lightning Protection – Area C: Repairs to the existing lightning protection system as specified within the project documents are included in the scope of work.

1.5 WORK BY OWNER

- A. The Owner may be performing work adjacent to this site during the construction period.

1.6 ACCESS TO THE SITE

- A. The Contractor shall have full access to the site during normal working hours. It is anticipated that work will occur between 7:00 a.m. and 6:00 p.m. daily. Access to the roof will be granted to the Contractor internally at designated locations.
 - 1. There may be times when work must stop or may not be able to start due to events occurring at the facility.

1.7 COORDINATION WITH THE OWNER

- A. Coordination of this work with the Owner is of utmost importance. The Owner must have access to the site and adjoining areas to be able to continue ongoing programs.
- B. The Contractor shall maintain the site in a clean and safe condition so that use by the Owner will not be unreasonably impeded.
- C. There will be continual vehicular and pedestrian traffic in and adjacent to the work site. The Contractor shall be responsible for any safety barricading of the work site to insure the safety of the site for these pedestrians.
- D. The Contractor shall be responsible for providing any and all traffic control devices necessary for the prosecution of this work.

1.8 PROJECT MEETINGS

- A. Pre-construction Conference: Prior to the start of work, there shall be a conference attended by the Contractor, Subcontractor(s), the Owner's representative, roofing manufacturer's representative, ACM abatement contractor or contractor certified abatement employee who will be responsible for abatement, and other parties who may be designated by the Owner, to be convened at the work site for the purpose of reviewing the specifications and job condition and resolving any questions arising. The date and time of this pre-construction conference shall be coordinated with both the Owner and the Engineer.

1.9 WORK SCHEDULES AND PHASING REQUIREMENTS

- A. The Contractor shall accomplish the scope of work specified in these documents in such manner as to minimize traffic disruption. The method and schedule that the Contractor proposes to accomplish the work shall be approved by the Owner prior to beginning the work.

1.10 USE OF SITE

- A. The Contractor shall have full use of the site as required to accomplish the specified construction, limited only by the Owner's right to perform maintenance operations on adjacent facilities and to accommodate any special events that may arise that require use of the site.
- B. The Contractor shall limit the construction operations to the areas noted on the Drawings and in the Contract Documents. Particular care shall be taken in avoiding existing trees and other landscape material within the confines of or adjacent to the construction area.

- C. The Contractor shall resume full responsibility for the protection and safe-keeping of materials, equipment, and ongoing work on the site. Do not unreasonably encumber the site with materials and equipment that may pose unnecessary risk to both pedestrian and vehicular traffic.
- D. See Section 01400 – Quality Requirements concerning access to the work area and use of the building.

1.11 TESTING LABORATORY SERVICES

- A. The Owner may contract laboratory testing services directly with a qualified testing firm. The Contractor shall coordinate and be responsible for scheduling any required testing with the testing laboratory. The Contractor shall also be responsible for payment to the laboratory for retesting of any installation failing initial testing.

1.12 SANITARY FACILITIES

- A. The Contractor shall furnish and maintain a portable chemical toilet for use by all contract forces on the project. Use of any University facilities is not permitted. The location of the chemical toilet shall be coordinated with the Owner's Representative.

1.13 TEMPORARY BARRICADES

- A. The Contractor shall be responsible for furnishing and maintaining all necessary barricades, fencing, and other required barriers to ensure the safety of the site as required by law, good safety practices, and as directed by USC's project manager and USC's Safety Department.

1.14 FIELD ENGINEERING

- A. The Contractor shall be responsible for all field engineering and site layout work and for the verification of all field dimensions and material quantities required for the execution of this project.

1.15 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

- A. The Contractor shall be responsible for the legal disposal of all construction waste and debris that is generated on this project. This includes both waste produced by specified demolition as well as domestic waste generated by the Contractor's personnel on the site. Disposal of all waste must be at a properly licensed solid waste landfill.

1.16 FINAL CLEANING

- A. Prior to requesting an inspection for Substantial Completion, clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with the manufacturer's instructions in the use of cleaning equipment, materials, or products.

- B. Clean the site of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits.

- C. Remove any temporary protection and facilities installed for protection of work during construction.

PART 2 - PRODUCTS – (Not Used)

PART 3 - EXECUTION – (Not Used)

END OF SECTION 01000

SECTION 01100 – GENERAL INFORMATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and other Division 1 Specifications Sections, apply to this section.

1.2 DESCRIPTION OF THE EXISTING SYSTEMS

- A. Information in this Section is provided only to establish a general description of the existing systems. The Contractor is responsible for visiting the site and becoming satisfied as to the existing conditions, size of roof area, etc. before preparation and submission of bid. Receipt of bid will be considered evidence Contractor has inspected roof or otherwise become satisfied on all details relating to the work.

- B. Existing System is as follows:

- 1. Roof Area in Contract (see Roof Plan):

- a. Four-ply built-up roof with gravel surfacing
 - b. Lightweight concrete system
 - c. Structural concrete deck over a metal form deck

- C. Slope is approximately 1/4 inch per foot and is in the lightweight concrete system.

- D. Drainage on roof areas is to internal roof drains.

- E. Roof Area D has a wooden deck and walkway that surrounds the existing satellite. The walkway and deck are mounted to I-beams that penetrate through the deck to interior supports.

- F. Base flashings generally consist of built-up backer and flashing ply.

- G. The approximate size and height of each roof areas is as follows:

<u>Roof Area</u>	<u>Size</u>	<u>Height</u>
A	2,520	16'
B	2,520	16'
C	5,670	85'
D	4,510	100'

- H. Metals generally consist of aluminum and copper.

- I. USC sampled and tested roofing and associated components for asbestos containing materials. For more details, the full report can be found in Section 01733. Asbestos containing materials are present in the roof system.

- J. Various lines, including but not necessarily limited to conduit, wires and cables are present on roof surface. Contractor is responsible to become familiar with the locations, purposes and types of lines present and to ensure that all lines are properly protected during the course of the work, remain in service during the course of the work and are repositioned in their appropriate places at the conclusion of the work unless specifically indicated otherwise herein or on drawings. Contractor is to carefully coordinate any activities relating to such lines with the Owner prior to conducting such activities.
 - 1. Prior to the commencement of work, USC personnel will identify all lines, conduit and cables that are not active. Contractor shall remove all lines, conduit, and cables marked by USC personnel for removal.

- K. Contractor shall be responsible to document all existing damage to facility prior to beginning work and producing documentation acceptable to Engineer prior to starting work. Damage discovered during the project which was not documented and which is not clearly the responsibility of others may be presumed by the Engineer or Owner as the responsibility of the contractor. Documentation may be in the form of written statements and/or drawings but must also be supported with photographs and/or video tape supplied by contractor.

1.3 DEFINITIONS

- A. Project Identification: The project consists of roof replacement of Areas A, B, C and D at Jones Physical Science Center (PSC). Refer to Roof Plan R-100.
- B. Project Location: 745 Main Street, Columbia, South Carolina 29208.
- C. Project Owner: University of South Carolina
- D. The terms "Architect" and "Engineer" used in the contract documents are that individual, partnership, or corporation engaged by the Owner for the preparation of certain of the Contract Documents, and referred to in the Contract Documents. The "Architect" or "Engineer" may, however, be an Architect, Architect-Engineer, Engineer or other design professional authorized by the Owner to perform such functions and the terms are interchangeable.
- E. Engineer Identification: The Owner has elected to designate Stafford Consulting Engineers, Charlotte, North Carolina as Engineer for this Project.
- F. Furnish all labor, materials, tools, equipment, devices, appliances, utilities, transportation, and other facilities and services necessary to accomplish the work described in these specifications.

1.4 SAFETY AND PROTECTION

- A. PROTECTION OF BUILDING AND PROPERTY
 - 1. Contractor will note that building will remain occupied during work. He is responsible for taking all precautions necessary to protect building, contents, and personnel from damage or injury from his operations, and from water entry into the building during construction. Dirt and dust must be kept to a minimum.
 - 2. Contractor is required to wear protective boot covers at all times when entering the interior of the building.

3. Contractor is required to clean all handrails located at interior access at the completion of the project.
4. At conclusion of each day's work, Contractor shall carefully inspect work including temporary daily tie-offs to ensure system is completely water tight; all stored materials are suitably protected from the weather and all equipment is stored in such a manner as not to interfere with facility operations.
5. On normal workdays when contractor does not work due to inclement weather or other reasons, Contractor's superintendent shall visit the site no later than his normal start time and verify that the system is completely water tight; all stored materials are suitably protected from the weather and all equipment is stored in such a manner as not to interfere with facility operations. Contractor shall be prepared to implement emergency repairs as necessary to prevent leakage into the facility up to and including placing containers to collect water should it pass into the building. Contractor will be responsible for all damages due to water intrusion.
6. Prior to starting work Contractor shall obtain approval of the Owner for locations, with the intention of causing minimal disruption to traffic flow to the facility and normal operations. Storage of equipment and materials shall not block or impede entrances, exits, and vehicular or pedestrian traffic. Work will be restricted to approved locations.
7. Submit plans for removal and reroofing to Owner for his approval prior to starting work so that, if necessary, inside operations can be coordinated with the roofing work.
8. All debris and removed material shall be removed from the site in a timely manner to minimize accumulation. At the end of each work day, Contractor is to clear site of all trash, debris, or materials associated with the roofing work.
9. Contractor will be responsible for any damage to grounds and landscaping. In the event of damage he shall restore damaged property to a condition equivalent to that at time of start of operations. All asphalt stains or spills resulting from the roofing work shall be removed.
10. Before moving equipment or materials over a roof, the Owner, Roofing Contractor, and any of their agents must protect the existing roof from damage during and following roofing work. Movement of equipment and materials without roof protection shall be cause for the Owner, Roofing Contractor or Engineer to stop work until protection is provided and any damage is corrected. The Owner's roofing inspector shall record all such violations.
11. The Contractor, as a specific requirement of the project, is required to take all necessary precautions including, but not limited to, providing temporary floor covering during the project in the building and exit corridors necessary in the removal course of the project to be utilized by the Contractor and Subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. This protection is not limited to floors, but also includes walls, ceilings, and furnishings in and along the construction pathway. The Contractor shall be required to clean, repair, or replace any building surface or furnishing damaged by the work force.

B. FENCING AND BARRICADES

1. The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of, and will provide the necessary precaution to prevent damage, injury or loss to:
 - a. All employees on the work and other persons who may be affected thereby.
 - b. All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

- c. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
2. The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. All damage, injury or loss to any property caused, directly or indirectly in whole or in part, by the Contractor, and Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, will be remedied by the Contractor.
3. The Contractor is responsible for maintaining an alternate route/flow of traffic where road closures are necessary.
 - a. Contractor shall bear all cost associated with road closures and bagging parking meters.

C. NOISE BARRIERS

1. Contractor shall control noise from operations so that building occupants are not affected.
2. Owner reserves the right to postpone or restrict work due to noise, fumes or disruptions to the building and occupants. There may be instances in which work must be relocated to another area or section.
 - a. Project time extension is the only remedy the Contractor may pursue for any postponement or restriction.

1.5 GROUNDS AND LANDSCAPING PROTECTION

- A. Protect grounds and landscaping from damage. In the event of damage, restore damaged property to a condition equivalent to that at time of start of operations. See USC Supplemental General Conditions for Construction Projects.

1.6 EROSION AND SEDIMENT CONTROL

- A. The Contractor shall be responsible for strict compliance with all sediment and erosion control measures as specified in any applicable South Carolina DHEC Erosion and Sediment Control Permit and as indicated on the Drawings.

1.7 GUARANTEES AND WARRANTY

- A. Upon completion of the work, and before final payment, Contractor shall furnish Owner a Warranty, properly executed and printed on the Contractor's standard letterhead form. Warranty shall be in the form included herein.
- B. Upon completion of work, furnish from manufacturer a standard twenty (20) year finish warranty for all prefinished metal.

- C. Upon completion of the work, and before final payment and/or release of retainage, Contractor shall submit and shall obtain from each subcontractor, material supplier, and equipment manufacturer, an asbestos free warranty, properly executed and printed on Contractor's subcontractors', materials suppliers' or equipment manufacturers' standard letterhead form. The asbestos free warranty shall be in the form included herein and signed by a responsible officer of the Contractor, subcontractor, material supplier and equipment manufacturer and notarized.

- D. Upon completion of the work, furnish from manufacturer a standard Twenty (20) Year No Dollar Limit Warranty for all roof membrane systems. See Section 07552.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01100

SECTION 01210 – ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and other Division 1 Specifications Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Lump Sum Allowances.
- C. Related Sections include the following:
 - 1. Division 1 Section “Contract Modification Procedures.”
 - 2. Division 1 Section “Unit Prices.”

1.3 ALLOWANCE PROCEDURES

- A. Prior to the conclusion of the project, credit the amount of unused allowance to Owner by Change Order.
- B. Deductive amounts of unit price work included in the Contract Sum will be calculated at 100% of the quoted unit price.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION

3.1 UNIT PRICE ALLOWANCE SCHEDULE

- A. Include the following unit price allowances in the Contract Sum:
 - 1. Allowance No. 1: Remove existing drain leaders and install 200 linear feet of new 4 inch cast iron drain leader.
 - 2. Allowance No. 2: Replace 300 board feet of damaged or deteriorated wood blocking.

END OF SECTION 01210

SECTION 01250 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and other Division 1 Specifications Sections, apply to this section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 1 Section "Allowances."
 - 2. Division 1 Section "Unit Prices."

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Engineer are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a Proposal Request Form estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made.
 - b. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for change to Engineer.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made.

3. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship.

C. Proposal Request Form: Use AIA Document G709 for proposal requests.

1.4 CHANGE ORDER PROCEDURES

A. When the original construction contract is within the Agency's construction certification limit, Change Orders shall be authorized as follows:

1. If the Change Order does not cause the total construction amount to exceed the Agency's construction certification limit, then the Agency may authorize the work. The agency does not need to notify the OSE of these Change orders.
2. If the Change Order causes the total construction contract amount to exceed the Agency's construction certification limit, then the Change Order must be approved by the State Engineer prior to the Contractor performing any work.
 - a. The agency shall submit the Change Order to the OSE on Form SE-380, along with all items listed in Chapter 3, paragraph 3.13 (describing how the construction contract was procured) for review and approval.
 - b. The construction contract shall thereafter be administered as a contract that originally exceeded the Agency's construction certification limit, as described in Paragraph 7.14.

B. When the original construction contract award exceeds the Agency's construction certification limit, Change Orders shall be authorized as follows:

1. If the Change Order has any item or change in work which exceeds the Agency's construction change order certification limit, then the Change Order shall be authorized by the State Engineer prior to the contractor performing any work.
 - a. The agency shall send the Change Order, along with all substantiating data to the OSE for review and approval.
 - b. This applies to a change in work which deducts from the contract amount as well as a change in work that adds to the contract amount.

C. Change Order proposal shall be submitted by the Contractor to the Engineer with a breakdown suitable for proper review. At a minimum, the breakdown should include line items for materials, labor, insurance, bonds and overhead and profit. If the proposal is approved by the Engineer, a recommendation will be made to the Owner. If approved by Owner, Engineer will provide written confirmation to the Contractor to proceed with proposed work.

1. The Contractor shall not commence work or purchase materials for such proposed work until written approval is received.
2. All changes in the work must be reviewed by Engineer and forwarded to Owner.

- D. On Owner's approval of a Proposal Request, Engineer will issue a Change Order for signatures of Owner and Contractor on SE-380, Construction Change Order, included within these specifications.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION – Not Used

END OF SECTION 01250

SECTION 01270 – UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and other Division 1 Specifications Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - 1. Division 1 Section "Allowances."
 - 2. Division 1 Section "Contract Modification Procedures."
 - 3. Division 6 Section "Rough Carpentry."
 - 4. Division 7 Section "Preparation."

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Include in unit prices all necessary material, plus cost for delivery, installation, insurance, taxes, overhead and profit.
- B. 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 application for payment unless no unit price work is accomplished during the period covered by the application.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

A. Unit Price No. 1 – Install new 4 inch drain leader.

1. Description: Remove existing drain leaders and install new 4 inch cast iron drain leaders according to Division 7 Section "Roofing Preparation."
2. Unit of Measurement: Per linear foot.

B. Unit Price No. 2 – Replace damaged or deteriorated wood blocking

1. Description: Replace damaged or deteriorated wood blocking according to Division 7 Section "Roofing Preparation."
2. Unit of Measurement: Per board foot

END OF SECTION 01270

SECTION 01290 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
2. Prior to start of any work, Contractor must submit to Owner a Schedule of Values on a copy of AIA Document G703 listing each phase of the work and its scheduled value. Contractor must be prepared to verify all material costs by producing supplier invoices, bills of lading, etc. upon request by Owner.
3. Schedule of Values, shall include labor and material line items for all material components with a material value of more than \$2,000.00 or 5% of the contract amount (whichever is least). The schedule of values must include, as a minimum, line items for any of the following which are applicable to this project including separate labor and material line items where applicable.
 - a. Mobilization
 - b. Performance and Payment Bonds
 - c. Demolition
 - d. Base Flashings
 - e. Roof Insulation
 - f. SBS Modified Bitumen Membrane Roofing
 - g. Carpentry
 - h. Sheet Metal Flashing and Trim
 - i. Masonry
 - j. Staircase
 - k. Metal Panels
 - l. Lightning Protection
 - m. Allowance

- n. Demobilization
 - o. Site Cleanup
 - p. Manufacturer's Inspections
 - q. Warranties
- 4. Schedule Updating: Update and resubmit the Schedule of Values before the next Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
 - 5. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - 6. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

1.4 APPLICATIONS FOR PAYMENT

- A. Monthly pay estimates shall be submitted to Engineer in quadruplicate on AIA Document G702 and AIA Document G703.
- B. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owner will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- C. Applications for payment requesting payment for materials will not be certified or approved unless accompanied with Manufacturer's Certificates of Compliance for those materials. It is suggested that Contractor request material certificates of compliance from material suppliers at the time materials are ordered.
- D. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. List of Contractor's staff assignments.
 - 5. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 - 6. Initial progress report.
 - 7. Report of preconstruction conference.
 - 8. Certificates of insurance and insurance policies.
- E. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- F. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01290

SECTION 01330 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples and other miscellaneous submittals.
- B. Division 1 Section “Payment Procedures” for submitting Applications for Payment and the Schedule of Values.

1.3 SUBMITTAL

- A. All submittals shall be due to Engineer ten (10) days after the date of the Notice to Proceed.
- B. Give the Engineer a written Materials List containing the brand name and manufacturer of each material proposed for use and include a statement that all proposed materials meet the specification requirements. Obtain Engineer's approval prior to placing orders.
- C. Furnish Manufacturer's Certificates of Compliance with materials' specifications, for materials incorporated into the work, signed by a responsible officer of the manufacturing firm and notarized.
- D. Prior to start of any work, Contractor must submit to Engineer a copy of AIA Document G703 listing each phase of the work and its scheduled value.
- E. Prior to the start of any work, Contractor shall submit to Engineer copies of Material Safety Data Sheets (MSDS) for all materials to be used in conjunction with this project.
- F. Contractor must submit to Engineer, prior to start of work, schedule of work (plans for removal and reroofing).
- G. Contractor must submit to Engineer, prior to start of work, written safety procedures to include, but not limited to, spill containment, fall protection, etc.
- H. Upon completion of the work, and before final payment, Contractor shall furnish Engineer a Manufacturer's Certificate clearly stating that the specified roof covering meets the requirements for an Underwriters' Laboratories, Inc. Class A roof covering.

1.4 SHOP DRAWINGS AND SUBMITTALS

- A. Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by Contractor or any Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor which illustrate some portion of the work. Samples are physical examples furnished by Contractor to illustrate materials, equipment or workmanship and establish standards for the work.
- B. Within ten (10) days after the date of the Notice to Proceed, Contractor shall provide Engineer with a schedule of the dates for submission of each shop drawing and sample required by the Contract. The sequence of submittals shall permit an orderly review by Engineer with reasonable time allowed for checking, correction and rechecking corrections, as well as returning the approved or rejected shop drawings and samples to Contractor and, in turn, to any Subcontractor.
- C. The aforesaid schedule shall provide Engineer with at least 10 working days from the date Engineer receives a submittal until the date the submittal is required to be returned to Contractor. If a submittal contains more than 10 shop drawings, Contractor shall indicate which drawings must be returned within the period of 10 working days, and, in such event, Engineer shall have an additional 10 working days to return the balance of the submittal.
- D. Contractor shall be responsible for coordinating the schedule for submittal of shop drawings and samples with Contractor's progress schedule and the requirements of the Contract. Failure of Contractor to schedule and submit shop drawings and samples in ample time for checking, correction and rechecking will not justify any delay in the timely performance of the work. All shop drawings and samples shall bear the following information and shall be submitted by transmittal form:
 - 1. Owner's and Engineer's respective project numbers.
 - 2. Date of submittal.
 - 3. Submittal Number.
 - 4. Title of Project.
 - 5. Name of Contractor and date of Contractor's approval.
 - 6. Name of Subcontractor or supplier and date of submittal to contractor.
 - 7. Reference to Specification Section and Paragraph and/or Drawing Number(s).
 - 8. The specific location of that portion of the work covered by the submission.
 - 9. Any qualification, departure or deviation from the requirements of the Contract.
 - 10. Any additional information required by the Specifications for the particular material being furnished.

Note: Enclosed form of transmittal is for convenience and may be used at contractor's option, except that its use does not relieve contractor from the obligation to satisfy all submittal requirements. Should contractor elect not to use the enclosed form, then all required information must be provided on form supplied by contractor.

- E. Each shop drawing shall be numbered. The same numbering system shall be retained throughout all revisions. Each drawing shall have a clear space for the approval stamps of Contractor, Engineer and Engineer's consultants, if any.
- F. In submitting shop drawings for approval, all associated shop drawings relating 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.

- G. Contractor shall prepare composite shop drawings and installation layouts, when required, to depict proposed solutions for tight field conditions. The composite shop drawings and field installation layouts shall be coordinated in the field by Contractor and its Subcontractors for proper relationship to the work of all other trades involved in the work.
- H. Prior to submission, Contractor shall review, affix an impress stamp on, and indicate approval of all shop drawings and samples. Contractor shall determine and verify field measurements and availability of the material, and shall have coordinated each shop drawing and sample with requirements of the Contract.
- I. With respect to standard manufactured items, Contractor shall submit to Engineer 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 Engineer may retain a minimum of three (3) copies of such cuts and return to Contractor the number of copies required for Contractor's use and distribution. Simultaneously, Contractor shall submit one copy of the same documents to Owner, using copies of the transmittal to Engineer.
- J. For all other shop drawings, submit a minimum of three (3) black and white prints of each drawing. The drawing will be returned to Contractor after review, comment and stamping by Engineer.
- K. Engineer will review Shop Drawings and Samples to determine conformance with the design concept of the Project and with the information given in the Contract. Engineer's approval of a separate item shall not be construed to mean approval of the assembly of which such item is a part.
- L. Engineer's approval of Shop Drawings or Samples shall not relieve Contractor of responsibility for any deviation from the requirements of the Contract unless Contractor has informed Engineer in writing of such deviation at the time of submission and Engineer has given written approval to the specific deviation, nor shall Engineer's approval relieve Contractor from responsibility for errors or omissions in the shop drawings or samples.
- M. Contractor shall make any corrections required by Engineer and shall resubmit corrected copies of shop drawings or new samples until approved. Contractor shall direct specific attention in writing, or on resubmitted shop drawings, to revisions other than the corrections required by Engineer. The number and distribution of copies shall be the same as in Contractor's first submission.
- N. In the event that Engineer shall mark shop drawings "approved" or "approved as noted," make such corrections, if any, as may be noted. Correction shall be made on, and prints for final distribution shall be made from, the drawings bearing Engineer's notations and impress stamps. Final distribution of prints shall be made by Contractor.
- O. No portion of the Work requiring a shop drawing or sample submission shall be commenced until the submission has been approved by Engineer. All such portions of the work shall be in accordance with approved shop drawings and samples.
- P. Any work which will result in structural changes in walls, steel, floors and masonry shall not be commenced by Contractor prior to Engineer's written approval. Contractor's submission for such work shall fully describe all details of methods, shoring and bracing.

1.5 LIST OF PROJECT SUBMITTALS

- A. Refer to Project Document Checklist for submittals that will be required from Contractor and approved by Engineer prior to start of work. Submit all materials on checklist in one submittal package. Should any items not apply or the information is not currently available, state in a letter on Contractor letterhead why the items were not submitted.

PART 2 - PRODUCTS – (Not Used)

PART 3 - EXECUTION – (Not Used)

SUBMITTAL TRANSMITTAL

Date: _____

From: _____ To: Stafford Consulting Engineers

2020 Starita Road, Ste. E
Charlotte, NC 28206

Project Name: Jones PSC Roof Replacement

Owner: The University of South Carolina

Owner's Project Number: H27-6094-Z

Stafford Consulting Engineers Project Number: FH146903

Submittal Number: _____ No. of Copies: _____

Specification Section and Paragraph Reference(s): _____

Drawing/Detail Reference(s): _____

Location of Work: _____

Product Manufacturer: _____

Supplier/Subcontractor: _____

Date submitted to Contractor: _____

Qualifications/Deviations From Specifications: _____

CONTRACTOR'S APPROVAL

THIS SUBMITTAL HAS BEEN PREPARED BY THE CONTRACTOR OR THOROUGHLY REVIEWED BY THE CONTRACTOR AND IS A CONTRACTOR APPROVED SUBMITTAL SUBJECT TO ANY QUALIFICATIONS MADE HEREON OR ON THE ATTACHMENTS.

SIGNED: _____
NAME: _____

DATE: _____

ENGINEER'S APPROVAL

APPROVED _____; APPROVED AS NOTED _____; NOT APPROVED - RESUBMIT _____;
REVIEWED _____; APPROVED FOR CONSTRUCTION ACCORDING TO NOTATIONS.
REVISE AND RESUBMIT _____; REFER TO APPROVAL STAMP ON ATTACHMENT _____

Checking by Engineer is only for conformance with the design concept of the project and compliance with the information given in the contract documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction, and for coordination of the work of all trades.

SIGNED: _____

DATE: _____

PROJECT DOCUMENT CHECKLIST

SUBMITTALS

- Materials List
- Materials Certificate of Compliance
 - Prefinished Aluminum
 - Metal Panels
 - Staircase
 - Sealant
 - Base Ply Membrane
 - Base Ply Cap Sheet
 - Gypsum Cover Board
 - Polyisocyanurate Insulation
 - Base Flashing
 - Base Flashing Backer Sheet
 - Wood Fiber Cant Strips
 - Wood Fiber Tapered Edge Strips
 - Stainless Steel
 - Self-adhering Underlayment
 - Roof Drains
- Manufacturer's Application Procedures
- Written Materials List and Installation Procedures for Repairing Lightning Protection
- Copies of Authorizations and Licenses from Authorities having jurisdiction
- AIA Document G703, Schedule of Values
- Material Safety Data Sheets
- Schedule for Removal and Installation
- Written Safety Procedures
- Underwriter's Laboratories, Inc. Class A Roof Covering Certificate from Roofing System Manufacturer
- Shop Drawings
- Metal Samples
- Color Chart
- Documentation of Existing Conditions
- Certification from Manufacturer that Contractor is an Approved Installer
- List of Subcontractors, if applicable
- List of Contractor Staff Assignments and Qualifications
- Staircase Drawings with Engineering Seal
- Tapered Insulation and Cricket Layout`

END OF SECTION 01330

SECTION 01400 – QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for quality assurance and quality control.

1.3 INSTALLER QUALIFICATIONS

- A. Installer must be licensed contractors of the class required by South Carolina Statutes for executing the work being performed. Contractor's name, address, State license number, and date of license must appear on the outside of envelope containing Contractor's proposal.
- B. Installer shall be a licensed Contractor with at least five (5) years of contracting experience in the type of work involved, and shall have performed work similar in scope to the work proposed in this project. Evidence of qualifications shall be available upon request by Owner. The contracting firm's experience will be considered in the enforcement of this provision. All experience must have been acquired by the bidding contractor named on the form of proposal. Firms using aliases, or who have changed names during the five (5) year period are subject to disqualification at the discretion of the Owner. Contractor shall demonstrate experience on a minimum of five (5) projects of similar size, scope and complexity to this project.
- C. Contractor shall submit certification from the roofing manufacturer that the Contractor is acceptable to the manufacturer as an installer of the manufacturer's system in all regards and no warranties required by the contract documents will be withheld by the manufacturer solely as a result of the Contractor's qualifications to perform the work.

1.4 SUPERINTENDENT

- A. For the purpose of these Specifications the designation "superintendent" is hereby defined as the individual present on the job site at all times work is being performed, and whose primary responsibility is to supervise and direct the performance of the work.
- B. The superintendent shall not be changed except with the consent of the Owner and Engineer, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employment.
- C. The superintendent shall be in attendance at the project site at all times during the progress of the work and his duties as superintendent shall be limited to this project only. The superintendent shall supervise and instruct workmen. Should the superintendent be absent

temporarily from the project at any time, he shall designate a competent foreman to assume his duties.

- D. The superintendent shall have had a minimum of five (5) years continuous experience as a job superintendent.
- E. Only the project superintendent (or the designated foreman in the superintendent's absence) will be permitted inside the facility, except when accompanied by the superintendent to perform work or in cases of emergency.
- F. The Contractor shall provide the Owner, in writing, the name of the proposed project manager, job superintendent and foreman for approval no later than seven (7) days prior to the prework conference. Also include chronological listing of superintendent's experience by project name, type system, size and required warranty.
- G. Once approved, neither the project manager nor the superintendent will be changed except with the consent of the Owner unless either proves to be unsatisfactory to the Owner or Contractor, or ceases to be in the Contractor's employment.
- H. Promotion or reorganization within the company will not be an acceptable cause for reassignment of project manager or superintendent.
- I. It shall be the superintendent's responsibility to communicate all matters pertaining to the Work with the Owner and/or Engineer. In case of emergency or safety, superintendent shall communicate directly with the Owner or Owner's representative, and, immediately thereafter, notify the Owner and/or Engineer. No decisions regarding changes in the Work will be made without the Owner's knowledge.
- J. Each day before work begins, superintendent shall indicate on the Roof Plan the area to be reroofed that day. Color markers are appropriate for this purpose. If changes in the work schedule occur, the Owner shall be notified accordingly.
- K. The job superintendent will have a local contact phone number.

1.5 WORKMANSHIP

- A. None but skilled foremen and workmen shall be employed on work requiring special qualifications. Any person employed on the work who fails, refuses, or neglects to obey the instructions in anything relating to this work, or who appears to be disorderly, insubordinate, unfaithful, or incompetent, shall upon the order of the Owner be at once discharged and not again employed on any part of the work. Any interference with, or abusive or threatening conduct toward the Engineer or his assistants by the Contractor or his employees or agents, shall be authority for the Owner to annul the Contract and re-let the work.

1.6 INSPECTION OF WORK

- A. Work found to be in violation of specifications or not in accordance with established workmanship practices and standards will be subject to complete removal and proper replacement with new materials at Contractor's expense.
- B. Owner will provide inspection during the work. Such inspection may be periodic or daily.

- C. The words “supervise” and “inspect” wherever used herein in connection with the duties or activity of the Owner shall in no way, expressed or implied, relieve the contractor from his responsibilities for the safety of the workmen, the preservation of the work or proper performance under this contract. The Owner shall not be responsible for the safety of the workmen, the safeguarding of the work, or the proper performance of the Contractor.
- D. No Inspector shall have the power to waive the obligations resting upon the Contractor to furnish good material and do good work as herein prescribed. Any failure or omission on the part of any Inspector or the Engineer to observe, object to or condemn any defective material or work shall not release the Contractor from the obligation to at once tear out, remove, and properly replace or rebuild the same at any time upon discovery of the defect and upon notice from the Owner or Engineer to do so.
- E. Materials stored on site which are marked by the Inspector, Engineer or Owner as not meeting the requirements of the contract documents are to be removed from the site by the contractor immediately.
- F. Failure of Owner or Engineer to discover or reject defective work, or work not in accordance with the Contract, shall not be deemed an acceptance thereof, nor 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 to be a waiver by Owner of any of Owner's rights pursuant to this Contract or otherwise.
- G. Final Inspection shall be conducted as follows:
 - 1. The Engineer and Owner will conduct a final inspection of all work included in the contract as soon as possible after receiving written notification by the Contractor that the work is complete and ready for inspection.
 - 2. The final inspection report shall be prepared by the Engineer and Owner listing observed deficiencies and furnished to the Contractor.
 - 3. Engineer, with Owner approval, shall prepare and execute in triplicate a Certificate of Substantial Completion, AIA Document G704, and forward to the Contractor for processing after final inspection.
 - 4. Upon satisfactory completion of all deficiencies, Contractor shall initial each item on the report certifying his compliance and return to the Engineer.
 - 5. No portion of the final payment will be made until all items have been satisfactorily corrected and the project closeout documents submitted to the Engineer. Final payment shall be made within thirty (30) days of receipt of closeout documents.
 - 6. All project completion documents are to be submitted within thirty (30) days following acceptance by the Owner.

1.7 PERMITS

- A. Contractor is responsible to provide all permits for the project. Contractor shall bear all cost associated with permits for the project.
- B. Contractor must provide all protective structures, barriers, or other means of protection necessary to assure the public safety and to fulfill all requirements by governmental authorities.

-
- C. Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority having jurisdiction of Contractor's performance of the work or any part thereof. If Contractor knows, or should know that any requirement of these Specifications is at variance with any such laws, ordinances, rules, regulations or orders in any respect, Contractor shall promptly notify Engineer in writing and obtain written instructions before proceeding with the portion of the work thereby affected. If Contractor performs any work which is contrary to such laws, ordinances, rules and regulations without receiving Engineer's instructions, Contractor shall assume full responsibility therefor and shall bear all penalties and costs of remedying the work attributable thereto. However, this section shall not be construed to require Contractor to perform detailed engineering calculations normally performed by Engineer except when specifically provided.

1.8 CONTRACTOR PERSONNEL FACILITIES

- A. Contractor personnel may not use toilet or washroom facilities in existing buildings.
- B. Contractor will be responsible to provide portable toilet facilities and facilities for washing and clean-up as necessary. Facilities will be located at sites approved by the Owner.
- C. Campus lunchroom facilities will not be available to Contractor personnel.
- D. Tobacco products will not be permitted on the premises.
- E. Access to the roof will be provided to the Contractor by internal means.
1. Access to building interior will be permitted by the Owner at designated locations.
- F. The University of South Carolina shall coordinate staging and material storage with the successful bidder at the preconstruction conference.

1.9 SUBCONTRACTORS

- A. Use of Subcontractors to accomplish such miscellaneous or associated work as structural steel, masonry, plumbing, relocation of conduit, service piping and/or HVAC equipment, etc. is permitted. Do not subcontract any part of the roofing work specified herein without the prior written consent of the Owner.

1.10 PRECONSTRUCTION CONFERENCE

- A. Prior to the start of work there shall be a conference attended by the Contractor, the Asbestos Contractor, the representative of the Owner, and other parties who may be designated by the Owner, to be convened at the work site for the purpose of reviewing the specifications and job conditions and resolving any questions then arising.
1. The Contractor will need to contact the University fire marshal prior to mobilization, starting of work, and on the first day of construction.

1.11 MANUFACTURER'S INSPECTIONS

- A. A technical representative of the roof system manufacturer shall conduct periodic inspections throughout the course of the work. The representative shall prepare a written report for each

inspection and shall promptly provide a copy of each report to the Owner, Contractor and Engineer. Each report shall note any deficiencies the representative observes which require correction. Inspections by the manufacturer's technical representative shall be as follows:

1. First day of tear-off.
2. Before installation of cap sheet.
3. Final Inspection.

PART 2 - PRODUCTS – (Not Used)

PART 3 - EXECUTION – (Not Used)

END OF SECTION 01400

SECTION 01700 – EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. General installation of products.
 - 2. Progress cleaning.
 - 3. Protection of installed construction.
 - 4. Correction of the Work.
- B. Related Sections include the following:
 - 1. Division 1 Section "Submittal Procedures"

1.3 SUBMITTALS

- A. Manufacturer's Field Services Submissions: Where product manufacturers are required by the individual sections of the Specifications to provide qualified personnel to observe conditions of surfaces or other project conditions, installation or workmanship, start up or adjustment of equipment, tests or other activities, and to initiate instructions when necessary, the following shall be submitted to the Contracting Officer's Representative:
 - 1. Qualifications: For approval, submit qualifications of observer at least 30 calendar days in advance of scheduled activities.
 - 2. Report: For information, submit report of activities and findings within 15 calendar days after the successful execution of the specified work. Include logs and other documented data where applicable.

1.4 QUALITY ASSURANCE

- A. Workmanship Standards: Initiate and maintain procedures to ensure personnel performing the work are skilled and knowledgeable in the methods and craftsmanship needed to produce the required levels of workmanship in the completed work. Remove and replace work that does not comply with workmanship specified and standards recognized in the construction industry for the applications indicated. Remove and replace work damaged or deteriorated by faulty workmanship or replacement of other work.
 - 1. Manufacturer's Instructions: Where installations include manufactured products, comply with manufacturer's applicable installation instructions and recommendations to the

- extent that those instructions and recommendations are more explicit or stringent than requirements contained in the Contract Documents.
2. Specialists: Where the individual sections of the specifications require specialists to perform the work, comply with the requirements specified in the Construction Contract Clauses. The assignment of a specialist shall not relieve the Contractor from complying with applicable regulations, union jurisdictional settlements or similar conventions, and the final responsibility for fulfillment of the entire requirements remains with the Contractor.
 3. Minimum Quality and Quantity: The quality level or quantity shown or specified shall be the minimum required for the work. Except as otherwise indicated, the actual work shall comply exactly with that minimum or may be superior to that minimum within limits acceptable to the Contracting Officer's Representative. Specified numeric values are either minimums or maximums as indicated or as appropriate for the context of the requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 1. Before construction, verify the location and points of connection of utility services. USC personnel will assist with identifying abandoned systems.
- B. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit

to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.

2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.6 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

END OF SECTION 01700

SECTION 01733 – ASBESTOS PRODUCTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements relating to asbestos-containing materials.
- B. Related Sections include the following:
 - 1. Division 7 Section “Reroofing Preparation.”

1.3 PROCEDURES

- A. It is the intention of these Specifications that no asbestos-containing materials be incorporated into the work and that, unless specifically designated to remain, no existing asbestos-containing materials incorporated in the existing roof system will remain subsequent to completion of the work. In the event additional hidden or unanticipated asbestos-containing materials are present in the existing roof system, stop all work in the affected area, notify the Engineer and provide temporary protection as required. Costs incurred, if any, due to the presence of hidden and/or unanticipated asbestos-containing materials will be resolved by Change Order to this Contract.
- B. Products containing asbestos fibers are present on roof areas on which work is specified. Include in the Base Bid all costs for compliance with all regulatory agency requirements in effect on the bid date, or scheduled to become effective prior to completion of the work. Cost incurred, if any, due to changes in existing or scheduled regulatory requirements will be resolved by Change Order to this Contract or by such other means as may be deemed in the best interest of the Owner.
 - 1. The roofing and related materials have been tested by USC personnel and have been found to contain asbestos. See attached report for exact location.
- C. Attached to the end of this Section:
 - 1. USC Work Order for HAZMAT.
 - 2. Bulk Asbestos Analysis

1.4 SAFETY AND HEALTH COMPLIANCE

- A. Contractor Responsibilities:
 - 1. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices,

transporting, disposal, and protection of workers, visitors, to the site, and persons occupying areas adjacent to the site. Matter of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work.

1.5 SUBMITTALS

A. Training:

1. The Contractor shall submit copies of supervisor(s) and workers certificates from a DHEC approved course for each employee who will disturb asbestos as evidence that each asbestos employee is accredited as required by USC.

B. Asbestos Abatement Work Plan:

1. The Contractor shall submit a detailed written work plan outlining the asbestos abatement sequencing, method(s) of removal, work areas, etc. must be accepted in writing by the Owner prior to start of any asbestos work.

C. Asbestos Waste Shipments:

1. The Contractor shall submit the asbestos waste manifest within five (5) days of the final waste disposal if not previously submitted.

1.6 WARRANTY

- A. Upon completion of the work, and before final payment and/or release of retainage, submit, and obtain from each subcontractor, material supplier and equipment manufacturer and submit, a properly executed Asbestos Free Warranty. Provide Warranty in the form included herein. Ensure forms are signed by a responsible officer of the Contractor, subcontractor, material supplier and equipment manufacturer and are notarized.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

ASBESTOS FREE WARRANTY
(on Contractor's standard letterhead)

Owner: The University of South Carolina
Location of Building: Columbia, South Carolina
Name of Building: Jones PSC

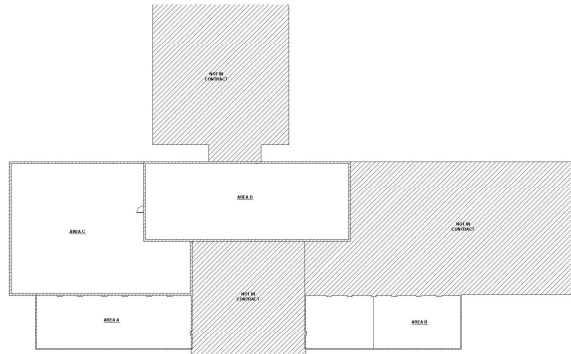
Know all men by these presents that we, _____
(Contractor, Subcontractor, Material Supplier or Equipment Manufacturer)

having furnished labor, materials, equipment and/or supplies; removed roofing, roof insulation, vapor retarder, flashings and/or miscellaneous roof system components; accomplished certain repairs to existing roof system; installed new roofing, roof insulation vapor retarder, flashing and/or miscellaneous roof system components;

from, to and/or on _____ as shown on the roof plan below under
(Buildings, Roof Areas, etc.)

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

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

END OF SECTION 01733

Description HAZMAT SURVEY - BLDG 090 - PSC ROOF

Site	COLUMBIA	Assigned To	JPROVENCE
Building	090 JONES PHYSICAL SCIENCES CENTER	Crew	HAZMAT
Floor	ROOF	Start Date	16-DEC-14
Equipment	Room:	Due date	15-JAN-15
		Request Date	16-DEC-14
		Priority	5
		by	CAMOORE

Request #	FM00476028	Description	HAZMAT SURVEY - BLDG 090 - PSC ROOF
Parent WO #			

CP Number	CP00419415	JONES PSC 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

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

Supervisor's Approval _____

Note Date	Title
06-FEB-15	HAZMAT SURVEY RESULTS
SURVEY DATE: 2/3/15	
INSPECTOR #: BRIAN WOOD (GR-00052)	
STATUS: THE FOLLOWING MATERIALS HAVE BEEN TESTED FOR ASBESTOS AND THE RESULTS FOLLOW.	
MAIN ROOF	
WALL FLASHING – POSITIVE FOR ASBESTOS	
LIGHT GRAY CAULK – POSITIVE FOR ASBESTOS	
PATCHING MATERIAL – POSITIVE FOR ASBESTOS	
ROOF MEMBRANE – NEGATIVE FOR ASBESTOS (DO NOT CUT, SAW OR GRIND THE ROOF MEMBRANE! WHILE THE ROOF MEMBRANE DID NOT MEET THE SCDHEC OR OSHA DEFINITION OF ASBESTOS CONTAINING MATERIALS, ASBESTOS WAS IDENTIFIED AT LESS THAN 1 PERCENT IN ONE ROOFING SAMPLE AND ONE FELT SAMPLE. AS A RESULT, WE DO NOT WANT TO RENDER THE ROOF MEMBRANE FRIABLE AND INCREASE THE CHANCE OF ASBESTOS FIBERS BEING RELEASED.)	

LOWER ROOFS

ROOF MEMBRANE – NEGATIVE FOR ASBESTOS
WALL FLASHING (ROOFING AND FELT) – NEGATIVE FOR ASBESTOS
GRAY CAULK – NEGATIVE FOR ASBESTOS
OFF-WHITE CAULK – NEGATIVE FOR ASBESTOS

INSPECTOR'S NOTES:

IF YOU ENCOUNTER ANY OTHER MATERIALS IN PLACE AND DEEM THEM SUSPECT FOR ASBESTOS AND/OR LEAD, PLEASE STOP WORK AND CONTACT THE ASBESTOS PROGRAM MANAGER FOR FURTHER TESTING OR ABATEMENT.

PLEASE NOTE THAT THE MATERIAL QUANTITY PROVIDED ON THE FIELD SHEET IS ONLY AN ESTIMATE FOR SAMPLING PURPOSES. THE QUANTITY SHOULD BE FIELD VERIFIED FOR ALL OTHER PURPOSES INCLUDING ABATEMENT.

REFER TO THE SURVEY RESULTS ATTACHED TO THE WORK ORDER FOR DETAILED INFORMATION.



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

563

EMSL ANALYTICAL, INC
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: University of South Carolina		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 743 Greene Street		Third Party Billing requires written authorization from third party	
City: Columbia	State/Province: SC	Zip/Postal Code: 29208	Country: US
Report To (Name): USC Hazmat		Telephone #: 803-509-3376	
Email Address: asbestos@mailbox.sc.edu		Fax #:	Purchase Order:
Project Name/Number: JONES PSC		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)	<input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	<u>Other</u>
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled:

Samplers Name: _____ Samplers Signature: _____

Sample #	HA #	Sample Location	Material Description
		TEM if neg	
		Stop positive	

Client Sample # (s): _____ Total # of Samples: 24

Relinquished (Client): _____ Date: _____ Time: _____

Received (Lab): GH Date: 2-4-15 Time: 10:20

Comments/Special Instructions:
① EMSL FX 7901 3222 4307

563



Building # 090 - JONES PSC

Type of Analysis: Lead / Asbestos

Sample Analysis Date: 2/3/15

Turn Around Time 24 HOUR

Area	Sample ID	Material Sampled	Material Location	F/NF	Cond	Quantity	Pot to Disturb
A	1	ROOF MEMBRANE	LOWER ROOFS	NF	GOOD	<4,500 SF	LOW
A	2	ROOF MEMBRANE	LOWER ROOFS	NF	GOOD	<4,500 SF	LOW
A	3	ROOF MEMBRANE	LOWER ROOFS	NF	GOOD	<4,500 SF	LOW
B	4	WALL FLASHING	LOWER ROOFS	NF	GOOD	<4,500 SF	LOW
B	5	WALL FLASHING	LOWER ROOFS	NF	GOOD	<4,500 SF	LOW
B	6	WALL FLASHING	LOWER ROOFS	NF	GOOD	<500 SF	LOW
C	7	ROOF MEMBRANE	LOWER ROOFS	NF	GOOD	<500 SF	LOW
C	8	ROOF MEMBRANE	MAIN ROOF	NF	GOOD	<11,000 SF	LOW
C	9	ROOF MEMBRANE	MAIN ROOF	NF	GOOD	<11,000 SF	LOW
D	10	WALL FLASHING	MAIN ROOF	NF	GOOD	<1,000 SF	LOW

License # GR-00062

FM# 00476028

Signature: *[Handwritten Signature]*

Requestor: D. BRANHAM

Send lab results in PDF and CSV format as soon as possible to: asbestos@mailbox.sc.edu

Reset Form

Print Form

563



Reset Form

Print Form

Building # 090 - JONES PSC

Sample Analysis Type of Analysis: Lead / Asbestos Date:

Turn Around Time 24 HOUR

Area	Sample ID	Material Sampled	Material Location	F/NF	Cond	Quantity	Pot to Disturb
D	11	WALL FLASHING	MAIN ROOF	NF	GOOD	<1,000 SF	LOW
D	12	WALL FLASHING	MAIN ROOF	NF	GOOD	<1,000 SF	LOW
E	13	GRAY CAULK	LOWER ROOFS	NF	GOOD	<5 LF	LOW
E	14	GRAY CAULK	LOWER ROOFS	NF	GOOD	<5 LF	LOW
E	15	GRAY CAULK	LOWER ROOFS	NF	GOOD	<5 LF	LOW
F	16	OFF-WHITE CAULK	LOWER ROOFS	NF	GOOD	<5 LF	LOW
F	17	OFF-WHITE CAULK	LOWER ROOFS	NF	GOOD	<150 LF	LOW
F	18	OFF-WHITE CAULK	LOWER ROOFS	NF	GOOD	<150 LF	LOW
G	19	LIGHT GRAY CAULK	MAIN ROOF	NF	GOOD	<15 LF	LOW
G	20	LIGHT GRAY CAULK	MAIN ROOF	NF	GOOD	<15 LF	LOW

License # GR-00052 FM# 00476028

Signature _____ Requestor D. BRANHAM

Send lab results in PDF and CSV format as soon as possible to: asbestos@mailbox.sc.edu

563



Reset Form

Print Form

Building # 090 - JONES PSC Sample Analysis Type of Analysis: Lead / Asbestos Date: Turn Around Time 24 HOUR

Table with columns: Area, Sample ID, Material Sampled, Material Location, F/NF, Cond, Quantity, Pot to Disturb. Rows include samples G-21, H-22, H-23, H-24 with details on material type and location.

License # GR-00052 FM# 00476028 Signature Requestor D. BRANHAM

Send lab results in PDF and CSV format as soon as possible to: asbestos@mailbox.sc.edu

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

Phone/Fax: (336) 992-1025 / (336) 992-4175

<http://www.EMSL.com>greensborolab@emsl.com

EMSL Order:	021500563
CustomerID:	UNSC62
CustomerPO:	
ProjectID:	


Attn: USC Hazmat University of South Carolina 743 Greene Street Columbia, SC 29208	Phone: (803) 777-7000 Fax: (803) 777-3990 Received: 02/04/15 10:20 AM Analysis Date: 2/4/2015 Collected:
Project: 90 Jones PSC	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 <i>021500563-0001</i>	Roof Membrane	Black Fibrous Homogeneous	12% Glass <1% Cellulose	88% Non-fibrous (other)	None Detected
2 <i>021500563-0002</i>	Roof Membrane	Black Fibrous Homogeneous	12% Glass <1% Cellulose	88% Non-fibrous (other)	None Detected
3 <i>021500563-0003</i>	Roof Membrane	Brown/Black Fibrous Homogeneous	12% Glass	88% Non-fibrous (other)	None Detected
4-Roofing <i>021500563-0004</i>	Wall Flashing	Gray/Black Fibrous Heterogeneous	<1% Cellulose 10% Glass	90% Non-fibrous (other)	None Detected
4-Fiberglass Felt <i>021500563-0004A</i>	Wall Flashing	Black Fibrous Homogeneous	10% Glass <1% Cellulose	90% Non-fibrous (other)	None Detected
5-Roofing <i>021500563-0005</i>	Wall Flashing	Gray/Black Fibrous Heterogeneous	10% Glass	90% Non-fibrous (other)	None Detected
5-Fiberglass Felt <i>021500563-0005A</i>	Wall Flashing	Black Fibrous Homogeneous	12% Glass	88% Non-fibrous (other)	None Detected
6-Roofing <i>021500563-0006</i>	Wall Flashing	Gray/Black Fibrous Homogeneous	5% Glass	95% Non-fibrous (other)	None Detected

Analyst(s)

 Kristie Elliott (8)
 Stephen Bennett (19)


 Stephen Bennett, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from 02/05/2015 09:06:24

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-Fiberglass Felt <i>021500563-0006A</i>	Wall Flashing	Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (other)	None Detected
7-Roofing <i>021500563-0007</i>	Roof Membrane	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
7-Felt <i>021500563-0007A</i>	Roof Membrane	Black Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
7-Lightweight Concrete <i>021500563-0007B</i>	Roof Membrane	Gray Non-Fibrous Homogeneous		10% Mica 15% Ca Carbonate 75% Non-fibrous (other)	None Detected
8-Roofing <i>021500563-0008</i>	Roof Membrane	Black Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
8-Felt <i>021500563-0008A</i>	Roof Membrane	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
8-Lightweight Concrete <i>021500563-0008B</i>	Roof Membrane	Beige Non-Fibrous Homogeneous		10% Mica 15% Ca Carbonate 75% Non-fibrous (other)	None Detected
9-Roofing <i>021500563-0009</i>	Roof Membrane	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9-Felt <i>021500563-0009A</i>	Roof Membrane	Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected
9-Light Weight Concrete <i>021500563-0009B</i>	Roof Membrane	Gray Non-Fibrous Homogeneous		15% Mica 10% Ca Carbonate 75% Non-fibrous (other)	None Detected
10 <i>021500563-0010</i>	Wall Flashing	Black Fibrous Heterogeneous	6% Cellulose	66% Non-fibrous (other)	28% Chrysotile
11 <i>021500563-0011</i>	Wall Flashing				Stop Positive (Not Analyzed)
12 <i>021500563-0012</i>	Wall Flashing				Stop Positive (Not Analyzed)
13 <i>021500563-0013</i>	Gray Caulk	Gray Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
14 <i>021500563-0014</i>	Gray Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
15 <i>021500563-0015</i>	Gray Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
16 <i>021500563-0016</i>	Off-White Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
17 <i>021500563-0017</i>	Off-White Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
18 <i>021500563-0018</i>	Off-White Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
19 <i>021500563-0019</i>	Light Gray Caulk	Gray/White Non-Fibrous Heterogeneous	<1% Cellulose	97% Non-fibrous (other)	3% Chrysotile
20 <i>021500563-0020</i>	Light Gray Caulk				Stop Positive (Not Analyzed)
21 <i>021500563-0021</i>	Light Gray Caulk				Stop Positive (Not Analyzed)
22 <i>021500563-0022</i>	Patching Material	Black Fibrous Heterogeneous	<1% Cellulose	85% Non-fibrous (other)	15% Chrysotile
23 <i>021500563-0023</i>	Patching Material				Stop Positive (Not Analyzed)

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
24 021500563-0024	Patching Material				Stop Positive (Not Analyzed)

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 Collected:

Project: **90 Jones PSC**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM
via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
3 021500563-0003	Roof Membrane	Brown/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
6-Roofing 021500563-0006	Wall Flashing	Gray/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
6-Fiberglass Felt 021500563-0006A	Wall Flashing	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
9-Roofing 021500563-0009	Roof Membrane	Black Fibrous Heterogeneous	99.7	None	0.26% Chrysotile
9-Felt 021500563-0009A	Roof Membrane	Black Fibrous Heterogeneous	100	None	<0.1% Chrysotile
15 021500563-0015	Gray Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
18 021500563-0018	Off-White Caulk	Gray Fibrous Heterogeneous	100	None	No Asbestos Detected

Analyst(s) _____
 Stephen Bennett (7)


 Stephen Bennett, Laboratory Manager
 or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.
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SECTION 04820 – BRICK MASONRY ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section includes the following:
 - 1. Brick masonry and accessories.
- B. Related Sections:
 - 1. Division 7 Section "Sheet Metal Flashing and Trim."

1.3 REFERENCES

- A. American Society of Testing and Materials C67 Method of Sampling and Testing Brick and Structural Clay Tile and C216 Facing Brick.
- B. Brick Institute of America, Technical Notes on Brick Construction.
- C. American Concrete Institute (ACI) 530.1 Specification for Masonry Structures.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For the following:
 - 1. Masonry Units: Show sizes, profiles, and coursing.
 - 2. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection: For the following:
 - 1. Face brick, in the form of straps of five or more bricks.
 - 2. Mortar.
 - 3. Weep vents.
 - 4. Masonry accessories.

- D. Material Certificates: Provide for each type and size of the following:
1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For exposed brick, include material test report for efflorescence according to ASTM C 67.
 2. Cementitious materials. Include brand, type, and name of manufacturer.
 3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients. Include test reports substantiating mortar mix complies with ASTM C270 requirements for mortar properties.
 4. Grout mixes. Include description of type and proportions of ingredients.
 5. Anchors, ties, and metal accessories.
- E. Mix Designs: For each type of mortar. Include description of type and proportions of ingredients.
1. Include test reports, per ASTM C 780, for mortar mixes required to comply with property specification.
- F. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements.
- G. Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with hot-weather requirements.

1.5 MASONRY INSTALLER QUALIFICATIONS

- A. Qualifications: Materials and workmanship for masonry work are subject to the following qualifications:
1. Installer: Experienced in masonry workmanship of high quality; regularly engaged in masonry construction and have plant and personnel sufficient to complete the work.
 2. Each material item shall be from same source and mix design shall remain constant for entire project.
- B. Masonry Supervisor:
1. Qualifications: Must be skilled in the type of masonry required for the work with a successful history of not less than five (5) consecutive years of supervising or performing similar type of masonry work on projects of similar or greater scope and size to this Project.
 - a. Supervisor to be specialist, engaged full time in masonry work.
 - b. Documentation of work history, complete with specific jobs, locations, completion dates, Contractor, Owner, Architect/Engineer, with names and telephone numbers of representatives of each to be furnished to Engineer, through Contractor, upon request.

2. Duties:

- a. Must be present full time on job during masonry work to direct masonry means and methods.
- b. Use his expertise to complete the masonry work of this Project in accordance with the Contract Documents, at a quality level acceptable to the Architect, and within the time limits of the approved job schedule so as not to delay the Project.

1.6 QUALITY ASSURANCE

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover partially completed masonry when construction is not in progress.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 1. Protect surrounding construction from mortar splatter by spreading coverings on roof and over wall surface.
 2. Protect surrounding roof from mortar droppings.
 3. Protect surfaces of window and window frames from mortar droppings.

- C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- D. Take all necessary measures and precautions to protect the surrounding roof. Protective measures shall not be attached to the surrounding roof in such a manner as to damage it. All damage to surrounding roof and existing building components shall be repaired/ replaced by Contractor at no cost to Owner. Coordinate the work to accomplish the masonry work prior to the removal of the existing roof.

PART 2 - PRODUCTS

2.1 BRICK

- A. Face Brick: Clay or shale units complying with ASTM C 216; Grade SW; Type FBS. Provide brick showing no efflorescence when tested in accordance with ASTM C 67.
- B. Provide brick identical in size, texture and physical properties to those currently on the existing building. Field verify to match existing materials installed prior to purchase of replacement units.
- C. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."

2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Aggregate for Mortar: ASTM C 144, clean sharp natural sand; 5 to 15 percent shall pass.
- D. Water: Clean, clear and suitable for drinking.

2.3 MIXES

- A. Mortar: ASTM C 270, Type N.
- B. Color: Match existing mortar at brick masonry.

2.4 MASONRY ACCESSORIES

- A. Weep/Vent Products: Free draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer width; in color selected from manufacturer's standard; Mortar Net Weep Vents or approved equal.
- B. Cavity Drainage Material: Free draining mesh, made from polymer strands that will not degrade within the wall cavity. Provide strips full depth of cavity and 10 inches wide with dovetail shaped notches 7 inches deep.

-
- C. Wall Ties: Meeting ACI 530-1/ASCE 6/TME 602. Provide minimum 2 inch embedment into mortar. POS-I-Tie® Triangle Wire Tie as manufactured by Heckman Building Products, Inc. or approved equal.
1. Wire 3/16 inch diameter.
 2. Hot dipped galvanized.

2.5 MASONRY CLEANER

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned. Approved manufacturers include Diedrich Technologies, Inc., EaCo Chem, Inc., and ProSoCo, Inc.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Proceed with installation only after approval of installation of new through-wall flashings, by Owner and/or Owner's representative.

3.2 INSTALLATION, GENERAL

- A. Coordinate work activities to minimize the duration that the masonry wall cavities are open. Provide temporary weather protection of all wall openings.
- B. All masonry work is to be accomplished prior to installation of new roofing contiguous with wall.
1. Contractor is to provide any and all means necessary to protect existing roof membrane and flashings from puncture or any other damage. Contractor will be responsible for all damage caused by this project at no additional expense to the Owner.
- C. Lay brick plumb and true to lines.
- D. Comply with construction tolerances in ACI 530.1, ASTM and BIA technical notes. Match existing width of head and bed joints.
- E. Lay with completely filled mortar joints.
- F. Wet brick thoroughly before applying fresh mortar. Brick should be in a saturated-surface dry condition.
- G. Clean all stains and efflorescence from surfaces of brick and concrete masonry unit surfaces.

- H. Thickness: Build cavity walls to match existing.
- I. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Install cut units with cut surfaces and, where possible, cut edges concealed.
- J. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
 - 1. Mix units from several pallets or cubes as they are placed.
- K. Contractor is to utilize any and all procedures necessary to ensure cavity walls, through-wall flashings and weeps are clear of mortar and/or debris.
- L. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
 - 1. Locate through-wall flashing to achieve a minimum of 8 inch base flashing height above the new finished roof surface. At slope roof areas, Contractor shall stair-step through-wall flashing to maintain maximum 12 inch flashing height.
 - 2. Through-wall flashing at higher elevations shall overlap lower by a minimum of 12 inches. Provide 1 inch high end dams at all terminations.
 - 3. At parapet walls, continue through-wall installation vertically up and above the parapet wall at least one course and extend minimum of 8 inches beyond the parapet exterior face.

3.3 MASONRY INSTALLATION

- A. Begin removing brick masonry in 4' long sections. Alternate 4' long work sections so that at no time are any two sections closer than 3' apart. Do not remove brick masonry in one section around corners.
- B. Remove a minimum of three (3) courses of brick in each work section. Additional courses of brick may require removal depending on location of brick joints.
- C. Furnish and install new 24 gauge stainless steel through-wall receiver flashing as shown in Drawings and specified in Division 7 Section "Sheet Metal Flashing and Trim."
- D. Install flexible flashing as specified in Division 7 Section "Sheet Metal Flashing and Trim."
- E. Furnish and install new brick units to match existing as specified herein.
 - 1. Use Type N prehydrated lime and portland cement mortar which is thoroughly mixed. Mortar shall match existing as closely as possible.
 - 2. Do not use salvage brick. Discard all removed brick.
 - 3. Install new wall ties at brick courses above through-wall flashings at masonry walls. Secure wall ties to masonry walls behind cavity with appropriate fasteners. Seal all fastener heads with permanent non-shrinking sealant.
 - 4. Tool exposed joints with a round jointer, slightly larger than width of joint. Flush cut all joints not tooled.

5. Contractor shall remove all excess mortar from joints on the interior side of the new brick wall and ensure excess mortar does not fall into wall cavity and onto new through-wall flashings.
 6. Place cavity drainage material in cavities to comply with requirements for cavity drainage material.
 7. Lay brick plumb and true to lines.
 8. Butter ends of brick units with sufficient mortar to fill head joints. At every third brick unit, keep the head joint open. Furnish and install new specified weep vents which fill the entire head joint.
 9. Tool joint to match the existing joints and remove excess mortar.
 10. After the mortar has been allowed its initial set, brush lightly to remove burrs.
 11. Power wash excess mortar off of brick, taking care not to damage mortar. Use a diluted muriatic acid wash, as required. Thoroughly wash wall to remove all acid.
- F. Upon completion of the initial 4' long work sections allow mortar to cure for three (3) days (minimum). Remove the other sections and install new through-wall flashings as specified in these specifications.

3.4 REPAIRING, POINTING AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance.
- C. In-Process Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Owner's approval of sample cleaning before proceeding with cleaning of masonry.
 3. Protect adjacent non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

3.5 FIELD QUALITY CONTROL

- A. Inspectors: Engineer will perform inspections and prepare reports. Allow Engineer access to scaffolding and work areas, as needed to perform inspections.
 - 1. Place masonry only after inspectors have verified compliance of flashings, etc.

END OF SECTION 04820

SECTION 06100 – ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Rooftop equipment bases and support curbs.
 - 2. Plywood sheathing.
 - 3. Wood blocking.
- B. Related Sections:
 - 1. Division 1 Section "Allowances" for work associated with allowances.
 - 2. Division 1 Section "Unit Prices" for work associated with unit prices.
 - 3. Division 7 Section "SBS Modified Bituminous Membrane Roofing."

1.3 DELIVERY, STORAGE AND HANDLING

- A. Supply and keep all materials dry at all times prior to application.
- B. Store all lumber/plywood in dry, covered storage, or on platforms, and with weatherproof coverings. Coverings shall be waterproof breathable type material such as heavy canvas. Materials which are not stored under specified covers are subject to removal from the site at Engineer's or Owner's discretion.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS

- A. Lumber: No. 2 grade (or better) southern yellow pine or douglas fir unless specifically noted otherwise. Each piece of lumber shall bear the inspection stamp of the Southern Pine Inspection Bureau (SPIB) or the Western Wood Products Association (WWPA) indicating the grade and type of lumber.
 - 1. Wood Preservative: Alkaline Copper Quaternary (ACQ) pressure-treatment conforming to AWWPA Standard C-2 (above ground). Retention of preservative shall be 0.25 pcf. All material shall be kiln-dried after treatment to 19 percent or less moisture content.
- B. Plywood: APA Rated Sheathing (CDX) with waterproof glue for exterior applications in thicknesses specified. All plywood shall comply with the requirements of U.S. Product

Standard PS1-09 and each sheet shall clearly bear the APA trademark of the American Plywood Association. Plywood shall be 3/4 inch thick.

2.2 FASTENERS

- A. Provide stainless steel fasteners at all locations where fastener will come into contact with pressure-treated lumber.
- B. For securing lumber or plywood to lumber, provide stainless steel ring shank nails of sufficient length to penetrate a minimum of 1½ inches into the underlying member but not smaller than 8d nails.
- C. For securing wood to concrete or masonry, secure using Tapcon masonry fasteners at 12 inches on center, staggered. Length shall be sufficient to penetrate material being secured and to obtain embedment into substrate 1½ inches or as indicated on Drawings.
- D. For securing wood to steel, secure using self-drilling/self-tapping fasteners.
- E. Anchor Bolts: 1/2 inch diameter, length to embed in concrete a minimum of 8 inches, with appropriately-sized nuts and washers.

PART 3 - EXECUTION

3.1 GENERAL

- A. Secure wood nailers over existing nailers with ring shank fasteners or screws in two rows staggered and spaced not over 8 inches in each row.
- B. Stagger fasteners when securing nominal 6 inch wide lumber or wider.
- C. At tops of CMU walls, secure wood nailers to walls with anchor bolts. Space bolts at 2 feet on center within 8 feet of building corners and 4 feet on center at remaining locations. Recess nuts and washers into wood blocking.

3.2 ROOF EQUIPMENT

- A. Furnish and install new wood blocking at all roof mounted equipment as required to provide a minimum flashing height of 8 inches above finished roof level.
 - 1. Blocking must be installed under integral equipment curbs as required to maintain full cant face above roof level and/or to allow installation of new cant strips.

3.3 PARAPET WALLS

- A. Furnish and install new wood blocking over top of parapets as required to provide a minimum flashing height of 8 inches above finished roof level.

3.4 PLYWOOD SHEATHING INSTALLATION

- A. Install new 3/4 inch plywood sheathing at parapet walls as specified herein.
 - 1. Plywood sheathing shall be installed at parapet wall receiving new base flashing.
- B. Secure plywood to parapet wall using specified fasteners at 8 inches on center along top and bottom and along center.
- C. Space plywood a minimum of 1/8 inch at ends.
- D. Secure ends of sheets using a minimum of three (3) fasteners.

3.5 WOOD BLOCKING INSTALLATION

- A. Furnish and install new wood blocking at all roof mounted equipment as required to provide a minimum flashing height of 8 inches above finished roof level.
 - 1. Blocking must be installed under integral equipment curbs as required to maintain full cant face above roof level and/or to allow installation of new cant strips.
 - 2. At equipment with metal cants, elevate by adding wood blocking.
- B. Install new wood blocking at all expansion joints as required to provide a minimum flashing height of 8 inches above finished roof level.
- C. Install first layer of wood blocking to concrete deck using Tapcon masonry fasteners spaced 12 inches on center (two rows staggered).
- D. Furnish and install new nominal 1-1/2 inch wood blocking over top of parapets and 3/4 inch plywood along the face of the wall as required to provide a minimum flashing height of 8 inches above finished roof level.

3.6 STUD WALL INSTALLATION

- A. Furnish and install new stud walls to raise curb height as specified per Detail D4.
- B. Stud wall height to be required to finish a minimum of 8 inches above finished roof level.
- C. Space studs at 12 inches on center. Refer to drawings. Install new batt insulation between studs.
- D. Secure 2x4 top plate and sole plates to ends of studs by end nailing using three (3) wood screws at each end.
- E. Secure sole plate to underlying substrate with two (2) rows of Tapcon masonry fasteners spaced 12 inches on center (staggered).
- F. Install new 3/4 inch thick plywood. Fasten along perimeter and to each stud at spacings of 6 inches on center. Leave 1/8 inch gap between plywood joints.

3.7 ROOF SCUTTLE

- A. Install existing roof hatch as specified herein.
- B. Secure flange of scuttle to wood blocking using ring shank fasteners at 9 inches on center.
- C. Remove existing insulation from metal curb of roof scuttle and discard. Replace insulation with new wood blocking to match thickness of existing insulation.
- D. Secure each piece of new wood blocking to outside of metal curb with wood screws in two (2) rows installed from inside of curb. Space rows approximate 4 inches apart and space screws 8 inches on center.
- E. Install screws to penetrate at least 1/2 inch into blocking but under no circumstances shall screws protrude through wood blocking.

END OF SECTION 06100

SECTION 07000 – ROOFING PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Removals.
 - 2. Preparations.
 - 3. Deck Repairs.
- B. Related Sections include the following:
 - 1. Division 1 Section "Allowances" for work associated with allowances.
 - 2. Division 1 Section "Unit Prices" for work associated with unit prices.

PART 2 - PRODUCTS

2.1 ABANDONED PENETRATION REPAIR MATERIALS

- A. Steel Plate: 1/8 inch thick galvanized steel.
- B. Masonry Anchors: Drive-pin fastener with alloy sleeve and stainless steel nail insert for use in concrete, brick or concrete masonry units, 1/4 inch diameter, 1-1/4 inch length, flat head.

2.2 DRAIN AND LEADER MATERIALS

- A. Roof Drains: Coated cast iron body with cast iron low-profile dome, with clamping ring and deck clamp assembly. 4 inch diameter. No hub connection.
- B. Drain Leaders: Cast iron pipe, CISPI 310, hubless, service weight, with cast iron fittings, 4 inch diameter.
- C. Insulation: ASTM C 547, glass fiber, rigid molded, noncombustible, with white kraft paper vapor retarder reinforced with glass fiber yarn and bonded to aluminized film, 1/2 inch thick.

2.3 ROOF TOP FALL PROTECTION MATERIALS

- A. Safety Rails: Peak Fall Protection Guard Rail with wall mounting brackets and removable hand rails or approved equal.

1. Top and mid rail provided in accordance with OSHA Standards – 29 CFR 1910.23.
 - a. Railings: 1-5/8 inches O.C. hot rolled pickled electic weld tubing, free of sharp edges and snag points.
 2. Structural Load: 200 lbs. minimum in any direction to all components in accordance with OSHA Standards – 29 CFR 1926.502.
 3. Height: 42 inches.
- B. Mounting Brackets: Single face mounted brackets provided by the safety rail manufacturer in accordance with OSHA Standards 1910.23.
- C. Hardware: Securing tamperproof 3/8 inch bolts, 1010 carbon steel, zinc plated.
- D. Finish: Hot dipped zinc galvanized.

2.4 LIGHTNING PROTECTION

- A. Repair lightning protection system, furnishing all necessary parts to restore the system back to its original condition.
1. Repairs and materials installed shall be of the same size and material as Roof Area D.

2.5 FIXED ALUMINUM INDUSTRIAL STAIRWAY INSTALLATION

- A. The system is a fixed aluminum industrial stairway designed to be permanently attached top and bottom. Pitch of 30° to 50° as measured from the horizontal is required by code. Treads shall be flat, slip free minimum of 22 inches of clear space. Two line 1-1/2 inch OD (1 ¼" schedule 40 aluminum pipe) handrails required on both sides of stairway.
- B. Delivery and Handling: Examine stairway when it arrives on site. Notify the carrier and manufacturer of any damage
- C. Quality Assurance:
1. Manufacturer's Qualifications: A firm experienced in producing aluminum stairs similar to those indicated within this specification and with professional engineering competent in design and structural analysis to fabricate stairs, platforms and railings in compliance with industry standards and local codes.
 2. Installer Qualifications: Competent and experienced firm capable of selecting fasteners and installing stairways to attain operational and structural performance.
 3. Product Qualifications: Product design shall comply with OSHA 1910.24 standard for fixed industrial stairs.
- D. Warranty: The unit carries a limited warranty of one (1) year against defective material and workmanship, covering parts and freight only, no labor. Defective parts, if deemed so by the manufacturer, will be replaced no charge, freight included, upon inspection at manufacturer's plant which warrants same.
- E. Maintenance:

1. Under normal usage, the stairway shall require no preventive maintenance.
2. No "spare parts" shall be required.

F. Products: Precision Ladders Fixed Aluminum Ladders, Model PS-** with platform or approved equal.

G. Stairway Materials:

1. Stringers (siderails) shall be aluminum channel 8" X 2.29" X 1/4" (6000 series).
2. Treads shall be formed aluminum (6005-T5) Anti-Slip grit plate or bar grating aluminum treads (standard) both welded and bolted to stringer to withstand minimum 1000 pound loading. (depth determined by rise & run).
3. Mounting Brackets:
 - a. Floor 4" X 4" X 1/4" aluminum angle.
 - b. Top 4 3/4" X 2" aluminum 6" angle.
4. Handrails:
 - a. 1 1/4" Schedule 40 Aluminum pipe (6005-T5) providing a 1.6" OD.
 - b. Internal aluminum fittings. Welds will be raised but smooth.
5. Safety:
 - a. Textured "slip resistance" Anti-Slip grit plate or bar grating aluminum treads (standard) both welded and bolted to stringer.

2.6 SATELLITE DECK

- A. Wood Products: Lumber: No. 2 grade (or better) southern yellow pine or douglas fir unless specifically noted otherwise. Each piece of lumber shall bear the inspection stamp of the Southern Pine Inspection Bureau (SPIB) or the Western Wood Products Association (WWPA) indicating the grade and type of lumber.
- B. Fasteners: For securing lumber to lumber or plywood/OSB to lumber, galvanized ring shank nails of sufficient length to penetrate a minimum of 1-1/2 inches into the underlying member but not smaller than 8d nails. Where circumstances warrant shorter fasteners, consult Engineer.

PART 3 - EXECUTION

3.1 DECK PENETRATION REPAIRS

- A. For covering openings, 1/8 inch thick, single sheet sized to extend 6 inches beyond opening in all directions.
- B. Secure steel plate to the existing concrete deck using specified fasteners at 6 inches on center.

3.2 REMOVALS

- A. Remove all existing roofing, lightweight concrete, membrane and metal flashings and discard.

- B. Remove or correct any obstruction which might interfere with the proper application of new materials.
- C. Lift or remove all existing equipment so that existing flashings can be totally removed and new flashings installed.
- D. Carefully relocate all electrical, co-axial, telephone, fiber optic, intercom and miscellaneous wires, cables, etc. as required to accomplish work specified herein. Accomplish such relocation without interrupting the service provided by these lines except as specifically authorized by the Owner. Become familiar with each line and the level of precaution necessary to relocate them or work around them. Upon completion of roofing work, relocate lines to their original positions and secure them as originally secured unless indicated otherwise in these specifications or on the project drawings.
- E. Remove all existing drains, clamping rings and strainers.
- F. Roof drain leader on Area D that discharges onto Area C is to be raised to a new finished height that is above the top termination of the new through-wall flashing.
 - 1. Remove the portion of the drain leader as required and discard.
 - 2. Remove brick and block as required to access existing pipe.
 - 3. Install new drain leader to match existing size and materials and connect to existing.
 - 4. Turn new leader out through block and brick wall.
- G. Remove the existing exterior staircase and associated supports.
- H. Remove all equipment identified as abandoned.
- I. Partially remove wooden deck identified for removal.
- J. Remove all abandoned wood deck supports.
- K. Remove concrete pads and plywood supporting satellite I-beams above the existing concrete curb.
- L. Bird wire is to be removed and discarded.

3.3 PREPARATION, GENERAL

- A. Prior to installing new drains, inspect all existing roof drains leaders for free flow operation with Owner's maintenance personnel present. Report drain leader restrictions to Owner. Replace restricted drain leaders in accordance with Unit Price No. 1. Should drains become clogged at any time after the start of work, correct the condition at no additional expense to the Owner.
- B. Prior to the installation of any new roofing, flashings, and metal flashings, clean surfaces of all dust, dirt and other foreign matter.
- C. Extend all existing vents through the roof to the height required by the local plumbing code but not less than 8 inches above finished roof level.

3.4 ABANDONED EQUIPMENT TO REMAIN IN PLACE

- A. Raise all abandoned equipment identified on the roof plan to remain in place to achieve a minimum flashing height of 8 inches.
- B. Cover openings with 3/4 inch plywood and secure.
- C. Cover plywood with metal covers and secure.
 - 1. Fabricate metal covers with built-in slope to shed water.
 - 2. Counterflash metal covers identical to counterflashing specified for curbs.

3.5 LIGHTNING PROTECTION

- A. On Area C, repair lightning protection system, furnishing all necessary parts including air terminals, mounting plates and cables, to restore the system back to its original condition.
 - 1. Repairs and materials (copper) installed shall be of the same size and material as Roof Area D.
 - 2. Repairs are along entire perimeter of Area C.
 - 3. Mounting shall be to coping cap spaced at 24 inches on center.
- B. Contractor shall submit a material list prior to installation.

3.6 ROOF DRAIN REPLACEMENT

- A. Remove all existing roof drains and associated components.
- B. Perform all drain replacement work during after hours or during weekends. Coordinate with USC staff for access to the building interior.
- C. Install new roof drains at existing roof drain locations indicated on Drawings.
- D. Place new drain bowl in existing deck openings. Modify opening, as necessary, to accommodate new drain bowl.
- E. Set drain bowl next to deck and secure bowl to underside of deck with under-deck clamp supplied by drain manufacturer.
- F. If the underside of the deck is not accessible, secure drain by other means acceptable to Engineer. Consult drain manufacturer for alternative means of securement and submit shop drawings to Engineer for approval prior to ordering drain materials.
- G. Install new drain extensions, if required to match new insulation thicknesses, over drain bowl using manufacturer-supplied extensions, gaskets, and fasteners.
- H. Seal drain to roof leaders in accordance with manufacturer's latest printed instructions for type of drain specified using only manufacturer-supplied gaskets, seals, clamps, etc.
- I. Thoroughly water test all joints upon completion.

- J. Upon installation of membrane and flashing installation at drains, install drain clamping rings at all new and existing drains with new manufacturer-supplied bolts of sufficient length to properly engage drain bowl lugs.
 - 1. Clamping rings to be installed at the end of every work day.
- K. Insulate all drain bodies with specified insulation in accordance with insulation manufacturer's instructions.
- L. Install new drain extensions, if required to match new insulation thicknesses, over drain bowl using manufacturer's supplied extensions, gaskets, and fasteners.
- M. Drain plugs are required at all drain locations in proximity to where work is being performed. Drain plugs shall be removed at the end of each work day.

3.7 PAINTING OF ROOF-MOUNTED EQUIPMENT

- A. At all roof top equipment, remove loose rust by wire brushing and apply rust-inhibitor primer. Provide two (2) coats of paint in a color to suit Owner.

3.8 SATELLITE DECK MODIFICATIONS

- A. Remove the existing wooden deck, stairs, walkway and supports identified on the drawings.
 - 1. The remainder of the deck is to remain.
 - a. Contractor shall repair the existing deck to remain in place.
- B. Install wooden stairs and railing at location identified on the drawings.
 - 1. Install stairs so that the bottom stair tread is mounted on a curb per Detail D14.
 - 2. Install railing to comply with current codes.
- C. Install hand railing and perform all repairs in compliance with current codes.
- D. Install specified fall protection railing around the perimeter of the deck.

3.9 SATELLITE CONCRETE CURB

- A. Install plywood to the vertical surface of the existing curbs.
- B. Flash existing satellite curbs with specified membrane flashing materials.
- C. Install liquid flashing and fleece on all vertical and horizontal surface of the curb.
 - 1. Extend beyond flashing out on the roof membrane approximately 6 inches.

3.10 DECK REPLACEMENT

- A. Where skylights and equipment are to be abandoned, provide and install new 5" x 3" x 5/8" Z-angle secured through the structural concrete and metal form deck.
- B. Provide and install new Type N metal decking.
- C. Fasten metal decking to perimeter L-angle using specified fasteners at no less than every other rib and along mid-span support a maximum of 6 inches on center.
 - 1. Secure metal decking to L-angle with #12 TEK5 fasteners.
- D. Mechanically attach 2 inch polyisocyanurate to the new metal decking.
 - 1. Attach additional layers necessary to bring level with concrete deck using low-rise foam adhesive 9 inches on center.

3.11 SCUPPER INSTALLATION

- A. Locate bottom of overflow scupper 2 inches above surface of the roof system adjacent to the nearest roof drain (excluding sump).
- B. Remove existing masonry as required and store for reuse if in good condition. Reinstall masonry units to extent possible. Provide new brick or concrete masonry units (as required) to match existing.
- C. Extend opening through entire thickness of parapet. Take precautions to avoid damaging adjacent wall surfaces.
- D. Provide finished openings as indicated on the drawings.
- E. Use prehydrated Type N mortar comprised of one part Portland cement, one part hydrated lime and six parts sand.
 - 1. Wet joints and masonry thoroughly before applying fresh mortar so masonry is in a saturated-surface dry condition.
 - 2. Install new bricks of same type, size and finish to match existing. Set units in full beds of mortar to match adjacent joints in thickness. Tool joints as required.
- F. Repair exterior finish to match adjacent surfaces.

END OF SECTION 07000

SECTION 07552 – SBS-MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Two-ply SBS-modified bituminous membrane roofing.
 - 2. Overlay cover board.
 - 3. Tapered insulation.
 - 4. Cricket insulation.
 - 5. Base insulation.
- B. Related Sections include the following:
 - 1. Division 6 Section "Rough Carpentry"
 - 2. Division 7 Section "Sheet Metal Flashing and Trim"

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Provide a roofing system that complies with the requirements of Underwriters' Laboratories, Inc. for a Class A roof covering. Provide a UL Class A certificate, generated by Roofing System Manufacturer, to Owner at project close-out.

1.5 SUBMITTALS

- A. Materials List: Give written notification of the brand name and manufacturer of each material proposed for use and include a statement that all proposed materials meet the specification requirements. Obtain approval prior to placing orders.
 - 1. Submittal of catalog cut sheets, etc. in lieu of the materials list required above is not acceptable. Do not submit cut sheets unless specifically requested.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
 - 1. Base flashings, cants, and membrane terminations.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Manufacturer Certificates: Original document signed by a responsible officer of the manufacturing firm, notarized, on manufacturer's standard letterhead, certifying materials furnished for project comply with the referenced standard. Certificate shall specifically reference the project and applicable compliance standard.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- F. Maintenance Data: For roofing system to include in maintenance manuals.
- G. Warranties: Special warranties specified in this Section.
- H. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.
- I. Tapered Insulation Shop Drawings: Submit proposed tapered insulation and cricket system for approval prior to start of work. Provide drawings for each area and include, at a minimum, concise tapered layouts, material identification, cross sections of typical sections with each board labeled, board stagger pattern, slopes and cricket widths.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

- D. Supply and keep all materials dry at all times prior to application.
- E. Store all insulation, insulating board cants, tapered edge strips and lumber/plywood in dry, covered storage, or on platforms, and with weatherproof coverings. Coverings shall be waterproof breathable type material such as heavy canvas. Insulation wrappers are not sufficient. Materials which are not stored under specified covers are subject to removal from the site at Owner's discretion.
- F. Store all roll goods on end on clean floors or platforms. Do not use flattened rolls or rolls with ends damaged.
- G. Materials which, in the opinion of the Owner, have been prematurely exposed to the weather are subject to immediate removal by the contractor and replaced with new materials at contractor's expense. Owner may, at Owner's option, mark such materials with paint or other indelible materials while they remain on-site.
- H. Store solvent bearing materials in dry, cool storage and keep lids tight on partially used containers to prevent escape of solvents.
- I. Store all emulsions in dry storage at temperatures above 40°F.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.8 WARRANTY

- A. Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
 - 1. Special warranty includes roofing membrane, base flashings, roof insulation, fasteners, cover boards, and other components of roofing system.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, and walkway products, for the following warranty period:
 - 1. Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Listed in this section are specifications for materials required generally for use in accomplishing the work specified. Materials not listed may also be required.

- B. Except as specifically noted herein, all reference standards included herein are to be presumed to be the latest published editions of such standards available as of the issue date of these specifications.
- C. Brand or manufacturer names are used as standards of quality where no other appropriate reference is available. Submit substitution requests under requirements listed in other Sections.
- D. Where a generic product or a general manufacturer's product is specified and more than one such product is offered by the manufacturer, provide the manufacturer's premium materials.

2.2 MANUFACTURERS

- A. For purposes of these documents, the roof system manufacturer is defined as the manufacturer of the primary roof membrane. The roof system is intended to encompass, but is not necessarily limited to, all components above the deck including underlayment and/or vapor retarder components, roof insulation, roof membrane, membrane flashings and any proprietary flashing/components of the system manufacturer. Subject to compliance with the material specifications of these documents, all materials are to be supplied by the same manufacturer.
- B. All materials used in systems to be covered by a Manufacturer's Guarantee must be supplied by the same manufacturer, unless the manufacturer issuing the guarantee waives this requirement in writing.
- C. The following material manufacturers are approved for this project. Such approval does not relieve the Contractor from the requirement to supply materials which meet all other requirements of these Specifications.
- D. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. SBS-Modified Bituminous Membrane Roofing:
 - a. Siplast, Inc.
 - b. Soprema Roofing and Waterproofing Inc.
 - c. Johns Manville

2.3 SBS-MODIFIED ASPHALT-SHEET MATERIALS

- A. Roofing Membrane Sheet: ASTM D 6163, Grade S, Type I, glass-fiber-reinforced, SBS-modified asphalt sheet; smooth surfaced; suitable for application method specified.
- B. Cap Sheet: ASTM D 5147 and D 6162, Type I, II or III, Grade G, SBS-modified asphalt sheet with composite woven or non-woven polyester and glass fiber mat reinforcing, granular surfaced, suitable for application method specified and as follows:
 - 1. Granule Color: White.

2.4 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: ASTM D 6163, Grade S, Type I, glass-fiber-reinforced, SBS-modified asphalt sheet; smooth surfaced; suitable for application method specified.
- B. Flashing Sheet: ASTM D 6298, glass fiber reinforced, SBS-modified asphalt sheet; granular surfaced, suitable for application method specified, and as follows:
 - 1. Granular Color: White.

2.5 AUXILIARY ROOFING MEMBRANE MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.
- B. Asphalt Primer: ASTM D 41.
- C. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required by roofing system manufacturer for application.
- D. Liquid Membrane Flashing System: Seamless liquid membrane with reinforcing polyester fleece to meeting roofing system manufacturer's warranty.
- E. Metal Flashing Sheet: Metal flashing sheet is specified in Division 7 Section "Sheet Metal Flashing and Trim."
- F. Roofing Granules: Ceramic-coated roofing granules, No. 11 screen size with 100 percent passing No. 8 sieve and 98 percent of mass retained on No. 40 sieve, color to match roofing membrane.
- G. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.6 INSULATION BOARD/GOODS

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Insulation Cant Strips: ASTM C 208, Type II, Grade 1, wood fiber insulation board.
- C. Tapered Edge Strips: ASTM C 208, wood fiberboard 1-1/2 inch at thick edge.
- D. Polyisocyanurate Roof Insulation: ASTM C 1289, Type II, with felt or glass-fiber mat on both major surfaces, manufactured to meet the following requirements:
 - 1. Nominal Compressive Strength: 20 psi.
 - 2. Dimensional Stability: 2% maximum linear change when conditioned at 158°F and 97% relative humidity.
 - 3. Minimum Curing Time: 24 hrs. plus 24 hrs. for each inch of thickness at a minimum of 60°F before shipment from manufacturer.
 - 4. Maximum Board Thickness: 2 inches.
 - 5. Maximum Board Size: 4' x 4'

- E. Gypsum Board: ASTM C 1396 / C 1396M, Type X, glass mat, water-resistant substrate, to be used as cover board, 1/2 inch thick.
 - 1. Product: Subject to compliance with requirements. Provide "Dens-Deck Prime" by Georgia Pacific Corporation.
 - 2. Maximum Board Size: 4' x 4'.
- F. Insulation Adhesive: Two component, low rise polyurethane foam, approved by membrane manufacturer for insulation and substrates on this project.

2.7 WALKWAYS

- A. Walkway Pads: Mineral-granule-surfaced, reinforced asphaltic composition, slip-resisting pads, manufactured as a traffic pad for foot traffic and acceptable to roofing system manufacturer, 1/2 inch thick, minimum.
 - 1. Pad Size: 32 inch by 32 inch.

PART 3 - EXECUTION

3.1 GENERAL SCHEDULE

- A. Refer to Table 3-1 for a general schedule of the primary roof components (described from the bottom up) for each roof area. Methods of installation and related materials are in other sections of these specifications.

Table 3-1

Roof System
Existing metal form deck
Existing structural concrete deck
New 2" polyisocyanurate (adhered)
New 2" polyisocyanurate (adhered)
New 1/4" per foot tapered polyisocyanurate (adhered)
New 1/2" per foot polyisocyanurate crickets (adhered)
New 1/2" primed gypsum cover board (adhered)
New two-ply modified bitumen roofing (torch applied)

3.2 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
 - 1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION, GENERAL

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Do not apply materials on wet or damp surfaces, over dust, dirt or other foreign matter. Foaming of hot bitumen at application is evidence that the surface is too wet for application.
- D. Do not apply bituminous materials when ambient air temperature is below 40°F unless equipment can be operated and materials handled without exceeding maximum allowable temperatures and without damage to materials, and then only with approval of the Engineer.
- E. Do not apply emulsions when ambient air temperature is below 40°F or is expected to be below freezing within 24 hours after application.
- F. Accomplish application of roofing materials so that each area will be complete at the end of each workday.
- G. Protect edges and incomplete flashings against water entry at all times. Remove cut-offs and temporary protection prior to resumption of work.
- H. Prime all concrete, masonry and metal surfaces to receive bituminous materials, using approximately one gallon of primer per 100 square feet of surface. Allow primer to dry thoroughly before application of bituminous materials.
- I. Set insulating board cant strips and tapered edge strips in a generous bed of black plastic roof cement so that they are tightly cemented to both horizontal and vertical surfaces.
- J. Torch apply base flashing.
- K. Torch Operations: For a minimum of two hours following daily completion of torch applications, maintain a fire watch inside and outside the building in the area of torch application. Utilize a fully-functional hand-held infrared device suitable for detecting areas of elevated temperature.

3.4 ROOF INSULATION APPLICATION

- A. Unless otherwise indicated, comply with roofing system manufacturer's written instructions for installing roof insulation.
- B. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes greater than 45 degrees.
 - 1. Set insulating board cant strips in a generous bed of black plastic roof cement so that they are tightly cemented to both horizontal and vertical surfaces.

-
- C. Furnish and install new polyisocyanurate insulation over substrate, followed by cover board, as specified herein.
 - D. Refer to Roof System Schedule for all locations to receive new insulation.
 - E. Stagger all joints off those of preceding layer.
 - F. Apply insulation with end joints staggered approximately one-half the length of units.
 - G. Fit all insulation units snugly to each other and to all vertical surfaces.
 - H. Install polyisocyanurate insulation and cover board using manufacturer approved insulation adhesive in 1/2 inch wide ribbons spaced as follows:
 - 1. 12 inches on center in the field.
 - 2. 9 inches on center at perimeter (8 feet in from roof perimeter).
 - 3. 4 inches on center at corners (8' x 8' at roof corners).
 - I. Ensure full adhesion of all layers of insulation and take whatever steps necessary to achieve full adhesion including, if necessary, temporary ballasting of insulation until adhesion.
 - 1. Trimming or slitting of boards may be required on uneven surfaces.
 - 2. Walk the boards into the adhesive and roll using 30 inch wide, 100-150 pound weighted steel roller.
 - J. Form tapered insulation system using factory tapered polyisocyanurate insulation units and polyisocyanurate insulation fill units.
 - 1. Provide a completed slope of 1/4 inch per foot.
 - K. Taper insulation down to drains beginning at a point approximately 24 inches from edge of drain. Sumps at drains are to be formed using wood fiberboard tapered edge strips and factory tapered insulation units as needed. .
 - L. Form crickets between drains using factory tapered polyisocyanurate insulation units and polyisocyanurate insulation fill units and tapered edge strips.
 - M. Form crickets along the upslope side of all curb-mounted equipment with base widths exceeding 24 inches using factory tapered polyisocyanurate insulation units and polyisocyanurate insulation fill units and tapered edge strips
 - N. Unless noted otherwise, fabricate all crickets from tapered stock as required to provide an installed slope matching that of the adjacent roof area. For example, where the roof slope is 1/4 inch per foot, fabricate crickets from 1/2 inch per foot stock to provide an installed slope of 1/4 inch per foot.
 - O. Start cricket construction by striking chalk lines for outer edges of tapered edge strips. Install edge strips along chalk lines, mitering and fitting at the points where lines break.
 - P. Apply over all insulation a minimum 1/2 inch cover board as required by manufacturer for system. Apply using adhesive at same rates as insulation.

3.5 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
- B. Clean surfaces of all dirt, dust and other foreign matter.

3.6 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install modified bituminous roofing membrane sheet and cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
 - 1. Fully adhere membrane and cap sheet to substrate using torch applied.
 - 2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 - 3. Cut rolls in maximum 18 foot lengths.
 - 4. Apply pressure on the sheet to ensure full contact with the substrate and complete adhesion.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps a minimum of 36 inches. Completely bond and seal laps, leaving no voids.
 - 1. Repair tears and voids in laps and lapped seams not completely sealed.
 - 2. Apply roofing granules to cover exuded bead at laps.
 - 3. Lap ends at least 6 inches and sides at least 4 inches.
 - 4. Stagger side laps of base ply and cap sheet.
 - 5. Install in all adhesive over-runs roofing granules matching the cap sheet surface. Finished surfaces must be reasonably uniform without streaks or spots.
- C. Install roofing membrane sheets so side and end laps shed water.
- D. At internal roof drains, extend roofing sheets across drain body opening. Do not allow interply adhesive to enter drain bowl. Cut sheets across drain body opening and trim flush with the inside face of the drain body.

3.7 TORCH OPERATIONS

- A. All torch operations are to comply with Certified Roofing Torch Applicator (CERTA) and NRCA requirements. Torch operators shall be fully certified by CERTA. Contractor shall provide copy of certification for all torch applicators prior to work commencing.
 - 1. For a minimum of two hours following daily completion of torch applications, maintain a fire watch inside and outside the building in the area of torch application. Utilize a fully-functional hand-held infrared device suitable for detecting areas of elevated temperature.
 - 2. Contractor shall maintain two (2) fully operational fire extinguishers at the site at all times.

3. Apply two-ply base flashing backer sheet at wood curbs. Take all measures necessary to protect wood curbs from open flames.
4. Contractor shall use "torch-and-flop" method at all base flashings.

3.8 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
 1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 2. Backer Sheet Application: Install backer sheet and adhere to substrate in adhesive at rate required by roofing system manufacturer. Prime masonry and wood substrates as required by manufacturer.
 3. Flashing Sheet Application: Torch flashing sheet to substrate as required by roofing system manufacturer.
- B. Extend base flashing up walls or parapets a minimum of 8 inches above roofing membrane and 4 inches onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing at 4 inches on center.
 1. Immediately thereafter cover top edge and fasteners with a continuous 1/8 inch thick trowelling of flashing cement.
- D. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to roofing system manufacturer's written instructions except as specified herein.
- E. Roof Drains: Set 36-by-36-inch lead flashing in bed of asphalt roofing cement on completed roofing membrane. Cover lead flashing with roofing membrane cap-sheet stripping and extend a minimum of 6 inches beyond edge of metal flashing onto field of roofing membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
 1. Install stripping according to roofing system manufacturer's written instructions.
- F. Check all laps as required by the manufacturer's specifications, reheat and seal as required to obtain full adhesion.

3.9 LIQUID MEMBRANE FLASHING SYSTEM

- A. At roof penetrations and at roof area where shown on roof plan, install liquid membrane flashing and reinforcement as specified herein.
 1. Follow manufacturer's latest printed installation instructions. Refer to Drawings. Submit three (3) copies to Engineer prior to start of work.
 2. Prep surfaces as required by roofing system manufacturer. Install sealant to fill voids where roofing membranes terminate at penetrations.
 3. Using masking tape, mask the perimeter of the area to receive the flashing system. Apply resin primer to substrates requiring additional preparation and allow primer to set.

4. Pre-cut fleece to ensure a proper fit at transitions and corners prior to membrane application.
5. Apply an even, generous base coat of flashing resin using a roller at the minimum rate specified by the resin manufacturer to prepared surfaces requiring flashing coverage. Work the fleece into the wet, catalyzed resin using a brush or roller to fully embed the fleece in the resin and remove trapped air. Lap fleece layers a minimum of 2 inches and apply an additional coat of catalyzed resin between layers of overlapping fleece. Again using a roller, apply an even top coat of catalyzed resin at the minimum rate specified by the resin manufacturer immediately following embedment of the fleece, ensuring full saturation of the fleece. Ensure that the flashing resin is applied to extend a 0.25 inch beyond the fleece. Remove the tape before the catalyzed resin sets. Make allowances for saturation of roller covers and application equipment.
6. Should work be interrupted for more than 12 hours or the surface of the catalyzed resin becomes dirty or contaminated by the elements, wipe the surface to be lapped with new flashing resin using the specified cleaner/solvent. Allow the surface to dry for a minimum 20 minutes and a maximum 60 minutes before continuing work.
7. Apply the color finish over the installed field membrane after the membrane is set, dry and has been in place for a minimum 2 hours.
8. Using the specified cleaner/solvent, wipe field surfaces to receive the color finish layer. Allow the surface to dry for a minimum 20 minutes before continuing work.
9. Apply an even top coat of catalyzed color finish resin at the minimum rate specified by the resin manufacturer. Allow 2 hours cure time prior to exposing the membrane to foot traffic.

3.10 WALKWAY INSTALLATION

- A. Walkway Pads: Install walkway pads using units of size indicated or, if not indicated, of manufacturer's standard size according to walkway pad manufacturer's written instructions.
 1. Set walkway pads in adhesive.
 2. Install new walkway pads at all sides of smoke vents at Roof Area A.
 3. Install new walkway on all sides of all major equipment (motorized equipment, scuttles, or any rooftop unit with any single dimension greater than 4 feet).
 4. Set units so that long edges are aligned and units are spaced about 2 inches apart.

WARRANTY
(on Contractor's Standard Letterhead)

Owner: University of South Carolina
Installer: _____
Location of Building: Columbia, South Carolina
Name of Building: Jones PSC
Roof Areas: A, B, C and D
Date of Substantial Completion: _____

Know all men by these presents, that we, Installer as defined above, having installed insulation, roofing, flashings and sheet metal work, and having accomplished certain other work on the roof areas identified above under contract between Owner and Contractor, warrant to Owner, with respect to said work that for a period of two (2) years from date of Substantial Completion of said work, the roofing including insulation, roofing membrane, flashings and sheet metal work, shall be absolutely watertight and free from all leaks, provided however that the following are excluded from this warranty:

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

We, Installer, 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, Installer, further agree that for a period of two (2) years from date of Substantial Completion 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 open laps, blisters, wrinkles, ridges, splits, warped insulation, and loose flashings in a manner compatible to the system and acceptable under industry standards and general practice.

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

WITNESS: _____ by _____

Notary Public

(Installer)

President

The undersigned named Owner agrees, from the date of acceptance of the project, to maintain the roof in accordance with the manufacturers written requirements and agrees to avoid damage to the roof surface by any parties under his control working or walking on the roof. The Owner recognizes his responsibility to inspect the roof semi-annually.

Owner Date

END OF SECTION 07552

SECTION 07620 – SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Sheet metal flashing and trim.
- B. Related Sections include the following:
 - 1. Division 7 Section “SBS-Modified Bituminous Membrane Roofing.”

1.3 SUBMITTALS

- A. Materials List: Give written notification of the brand name and manufacturer of each material proposed for use and include a statement that all proposed materials meet the specification requirements. Obtain approval prior to placing orders.
 - 1. Submittal of catalog cut sheets, etc. in lieu of the materials list required above is not acceptable.
- B. Submit shop drawings of all specified types of metal shapes, showing details of proposed installation where appropriate.
- C. Submit two 6 inch long samples of each metal shape.
- D. Manufacturer Certificates: Original document signed by a responsible officer of the manufacturing firm, notarized, on manufacturer's standard letterhead, certifying materials furnished for project comply with the referenced standard. Certificate shall specifically reference the project and applicable compliance standard.
- E. Obtain approval of shop drawings, samples and certifications prior to fabrication and installation.
- F. No sheet metal item is to be purchased, fabricated, or installed until all required shop drawings and related submittals for each item are approved. Items purchased, fabricated and/or installed which are not in compliance with approved shop drawings are subject to immediate removal from the project at contractor's expense.

1.4 STORAGE

- A. Restrict on-site storage to minimum for work in progress. Protect all stored metal from exposure to weather and physical damage.

1.5 WARRANTIES

- A. Upon completion of the work, furnish from manufacturer a standard twenty (20) year finish warranty.

PART 2 - PRODUCTS

2.1 SHEET METAL MATERIALS

- A. Prefinished Galvanized Steel: Aluminum-zinc alloy-coated sheet meeting ASTM A 792, Class A750, coating designation, Grade 40 (Class AZM 150 Coating designation, Grade 275) structural quality with Kyner 500.
- B. Stainless Steel: ASTM A 167 chromium-nickel steel sheet AISI Type 304
- C. Solder: ASTM B 32-88T with 50% lead and 50% tin unless otherwise specified herein. Follow metal manufacturer's recommended procedure for soldering.
- D. Metal Siding: 24 gauge prefinished steel wall panels, hot dipped, ASTM A446-85, Grade C, G-90 coating. ASTM A 653-94 and A 924-94. Finish shall be Kynar 500 fluoro-carbon coating with top side film thickness of 0.80 to 0.90 mil over 0.20 to 0.25 mil prime coat such as Berridge "M" Panel or equivalent. Color shall be selected by Owner. Contractor to provide color chart.
- E. Hat Channels: 22 gauge aluminum furring channels 2-1/6" x 3/4" with 1 inch flange.
- F. Flexible Flashing: Copper fabric flashing, copper core with fiberglass fabric laminated to each copper face with rubber based adhesive, 5 oz. per square foot with a minimum of 10x20 threads per inch; York Multi-Flash 500 Series or equal.

2.2 AUXILIARY MATERIALS

- A. Self-adhering membrane.
- B. Sealant: ASTM C 920, Type S, Grade NS, Class 25, one-part polyurethane sealant.
- C. Lead: 4 lb. soft lead.
- D. Masonry Anchors: Stainless steel screw anchor for use in concrete, brick or concrete masonry units manufactured with threads for cutting into walls of pre-drilled opening to provide tight friction fit, 1/4 inch diameter, 1.5 inch length.

2.3 SHEET METAL SCHEDULE

- A. Scupper Liner: 24 gauge stainless steel.

B.	Coping Caps:	24 ga. prefinished galvalume.
C.	Counterflashing:	24 ga. prefinished galvalume.
D.	Through-wall Counterflashing/Receiver:	24 gauge stainless steel.
E.	Flexible Flashing:	5 oz. fiberglass laminated copper.
F.	Vent Caps:	24 ga. stainless steel.
G.	Roof Opening Covers:	24 ga. stainless steel.
H.	Expansion Joint Cover:	24 ga. prefinished galvalume.
I.	Drain Flashing:	4 lb. lead.
J.	Metal Panels:	24 ga. prefinished galvalume.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Inspect all surfaces to which metal is to be applied. Do not install metal unless surfaces are even, sound, clean, dry and free from defects that might affect the application.
- B. Follow recommendations of Sheet Metal and Air Conditioning Contractors National Association Architectural Sheet Metal Manual (Seventh Edition, 2012) for fabricating in-shop and on-site, and for installation, unless otherwise specified herein or on Drawings.
- C. Follow published instructions of the product manufacturer for installation of extruded or proprietary metal products, unless otherwise specified herein or on Drawings.
- D. Use nails, screws, bolts, cleats or other fasteners of the same material or, if approved by Engineer, of material chemically compatible with the contacted metal.
 - 1. Use stainless steel fasteners at all locations in contact with pressure-treated lumber.
- E. Fabricate cleats to be one gauge heavier than metal to be secured by cleat unless otherwise noted.
 - 1. Secure cleats to substrate with fasteners specifically manufactured for the purpose at spacings of 6 inches, on center. Fasteners are to be manufactured of metal chemically compatible with the contacted metal. Fasteners to be used in wood substrates are to be ring shank. Fasteners are to be located as close to hem of cleat as practical but no more than 2 inches from hem unless specifically indicated otherwise herein or on drawings.
- F. Solder metal, where required, using standard industry techniques in accordance with the requirements of the metal manufacturer and the SMACNA Architectural Sheet Metal Manual for the types of metal to be soldered. Joints shall be thoroughly sweated to ensure full penetration of solder in the joint and to ensure a secure connection. Riveted joints shall be fully soldered to eliminate rivet holes or potential for corrosion.

- G. Install metal to be water and weathertight with lines, arrises and angles sharp and true and with plane surfaces free of waves or buckles. All raw edges of exposed or finish sheet metal shall be hemmed.
- H. Install shop-formed flashings in 10 foot lengths maximum and with minimum number of pieces in each straight run.
- I. Do not place dissimilar metals in direct contact or in positions where water sheds across both metals.
- J. Miter and seal all inside and outside corners of coping cap. Shop fabricated corner pieces are preferable.
- K. Shop form all metal shapes, which are to be formed of prefinished metal, with protective plastic film in place. Do not remove plastic film until just prior to (or, if possible, after) installation.
- L. At all corners, shop form corner pieces of coping cap with 18 inch legs (joints no more than 18 inches from corner). Seal joint of corner piece.
- M. Form faces of coping cap with vertical faces of sufficient width to extend a minimum of 1 inch below wood blocking.
- N. Hem all metal raw edges.

3.2 SCUPPER LINER INSTALLATION

- A. Install new scupper liners at overflow scuppers as specified herein. Refer to Drawings and SMACNA Architectural Sheet Metal Manual Figure 1-30B.
- B. Refer to sheet metal schedule for gauge and metal type.
- C. Cover all masonry surfaces to be in contact with scupper liner with a bed of mastic or flashing cement.
- D. Install scupper liner. Strip flanges using manufacturer approved stripping material.

3.3 COPING CAP INSTALLATION

- A. Install new coping cap at parapet walls as specified herein. Refer to SMACNA Architectural Sheet Metal Manual Figure 3-4A.
- B. Refer to sheet metal schedule for gauge and metal type.
- C. Prior to installation of metal coping cap, apply a strip of self-adhering membrane across the top of the blocking and extending down the outside and inside face approximately the width of the vertical sections of the coping cap. Use strips as long as practical, lapping the ends 6 inches.
- D. Secure both vertical sections with a continuous cleat nailed to wood blocking. Use drive pins where securing to concrete.

-
- E. Refer to SMACNA Architectural Sheet Metal Manual Figure 2-1, Detail 1 for cleat and coping hem dimensions
 - F. Join sections with 1 inch vertical single-lock standing seams and caulk with approved sealant. Refer to SMACNA Architectural Sheet Metal Manual Figure 3-3, Seam 22.
 - G. At step-up locations on parapets, extend the lower parapet up the vertical face and lap under the upper coping cap.
 - H. Where new coping interfaces with existing coping, provide a new 1 inch vertical single-lock standing seam.
 - I. Where coping cap terminates at wall, provide surface mounted counterflashing above, covering vertical leg of coping cap and extending 4 inches beyond coping on each side.

3.4 COUNTERFLASHING INSTALLATION

- A. Install new counterflashings at machinery unit flashings as specified herein.
- B. Refer to sheet metal schedule for gauge and metal type.
- C. Install new counterflashing at all roof mounted equipment. Extend new counterflashing across top of curb beneath seating flange of unit. Extend flange down a minimum of 4 inches over base flashing. Secure counterflashing to top of curb, or to integral flange of unit with appropriate fasteners at 4 inches on center.
- D. Secure counterflashing to vertical surface with appropriate fasteners.
- E. Notch and lap joints and inside corners. Notch and seam outside corners. Do not rivet or otherwise secure joints and corners.
- F. Lap ends of counterflashing 4 inches. Crimp hem of overlapping section around hem of underlapping section.
- G. Insert upper edge of counterflashing in metal receiver. Bend receiver neatly and snugly to face of counterflashing.
 - 1. Notch and seal receiver at corners.
- H. At roof mounted equipment with integral flashing, slide new counterflashing behind existing integral flashing and secure using stainless steel pop rivets at 6 inches on center.

3.5 FLEXIBLE THROUGH-WALL FLASHING INSTALLATION

- A. General; Install flashing to dry surfaces at air and surface temperatures of -4°C (25°F) and above in accordance with manufacturer's recommendations at locations indicated on construction documents.
- B. Install stainless steel receiver to be laid over specified sealant and formed 2 inches up substrate wall.

- C. Install all through-wall flashing in one piece across width and height of opening. Splicing materials prohibited unless flashing detail requires material wider than normally manufactured.
- D. Lap end joints 6 inches minimum. Seal joints completely with specified flashing adhesive. Fold flashing ends at end of openings to form end dam.
- E. At back up wall:
 - 1. Flashing width: Start flashing outside of face of exterior wythe, extend through cavity, and up wall 6 inches.
 - 2. Bed in full bed of flashing manufacturer's adhesive against sheathing material; install termination bar to flashing face at flashing top; fasten to wall with headed fastener at 6 inches on center.
 - 3. Cover flashing top and termination bar in specified sealant.
- F. Lay flashing in continuous mastic bed on through-wall flashing.
- G. Fold ends of flashing termination to form 2-inch high end dam. Do not cut flashing at end dam.
- H. Inside corners: Folded, not cut. Seal.
- I. Outside corners: Make in industry accepted manner using outside corner and splice material.
- J. Patch minor punctures with tape or adhesive and material in accordance with manufacturer's installation instructions.
- K. Replace ripped, torn, or severely damaged flashing with new material.
- L. Install reglet mounted counterflashing in the back up CMU wall joint.

3.6 VENT CAP INSTALLATION

- A. Furnish and install new vent cap flashing at existing vent caps as specified herein.
- B. Form new vent cap flashing from 24 gauge stainless steel. Form new metal base flashing from 22 gauge stainless steel. Refer to drawings.
- C. Extend flange of metal base flashing at least 4 inches. Extend metal base flashing above finished roof level at least 8 inches.
- D. Vertical flange of cap flashing is to overlap the base at least 3 inches. Secure flange of cap flashing to base flashing using stainless steel screws (through EPDM washers).
- E. Secure cap flashing to the base with stainless steel bar 1/4 inch thick.
- F. Provide membrane flashings at flange in accordance with manufacturer's instructions.

3.7 ROOF OPENING COVER INSTALLATION

- A. Install new roof opening covers at abandoned equipment to remain as specified herein.
- B. Refer to sheet metal schedule for gauge and metal type.

- C. Prior to installation of new covers, install new 3/4 inch thick plywood over the entire opening. Secure to existing metal frame with appropriate fasteners.
 - 1. Install covers with 20 gauge L brackets.
- D. Cover plywood self-adhering underlayment and secure sufficiently to hold in place until new metal cover is installed. Lap and cement ends and edges.
- E. Install new metal roof opening covers per Detail D21.

3.8 EXPANSION JOINT INSTALLATION

- A. Install new expansion joint covers at roof-to-roof locations as specified herein. Refer to SMACNA Architectural Sheet Metal Manual Figure 5-5A.
- B. Refer to sheet metal schedule for gauge and metal type.
- C. At all eaves, walls and vertical surfaces, if new or existing wood blocking and/or cants are continuous, cut blocking and/or cants completely through its thickness. Remove a section the same width as the space between the expansion joint curbs, blocking or cants.
- D. Prior to installation of expansion joint cover, fill joint with fiber glass batt insulation in polyethylene envelope.
- E. Prior to installation of the expansion joint cover, apply over the joint a strip of PVC stripping extending across the joint and terminating at the bottom edge of the joint cover flange. Use strips as long as practical, lapping the ends 6 inches and cemented with flashing cement.
- F. Join sections with 1 inch vertical single-lock standing seams and caulk with approved sealant. Refer to SMACNA Architectural Sheet Metal Manual Figure 3-3, Seam 22.
- G. Install intersections, terminal flashing, end closures, etc. neatly and in a manner to provide complete and permanent protection against water entry.
- H. Terminate the expansion joint. Refer to SMACNA Architectural Sheet Metal Manual Figure 5.3.

3.9 DRAIN FLASHING INSTALLATION

- A. Use 4 lb. lead sheet 36" x 36" or at least large enough to extend a minimum of 12 inches outside drain flashing flange.
- B. Cut hole in center of sheet with diameter 2 inches less than inside diameter of flashing flange.
- C. Center hole over center of drain, set lead sheet in solid bed of black plastic roof cement, install flashing flange over lead sheet and pull it down tightly and evenly.
- D. Trim excess lead from inside flashing flange leaving approximately 1 to 2 inches of lead extending into drain bowl. Turn lead uniformly down into bowl using rubber mallets to shape lead. Do not tear or cut lead. Where bolts must penetrate lead punch holes through lead to a slightly smaller size than bolts and pull lead snugly over bolts. Press lead sheet around drain into black plastic roof cement evenly and uniformly.

- E. Strip lead with one ply of membrane manufacturer's premium grade modified bitumen cap sheet or base flashing in accordance with membrane manufacturer's latest printed instructions. Extend cap sheet a minimum of 6 inches beyond edge of lead.

3.10 METAL WALL PANELS INSTALLATION

- A. Follow published instructions of the product manufacturer for installation of extruded or proprietary metal products, unless otherwise specified herein or on Drawings.
- B. Use nails, screws, bolts, cleats or other fasteners of the same material or, if approved by Engineer, of material chemically compatible with the contacted metal.
- C. Where aluminum is in contact with masonry or concrete, coat the contacting surface with bituminous paint.
- D. Install metal to be water- and weathertight with lines, arrises and angles sharp and true and with plane surfaces free of waves or buckles. Hem all raw edges of exposed or finish sheet metal.
- E. Install metal panels to hat channels using manufacturer approved fasteners.
- F. Install metal panels and hat channels per Detail D3.
 - 1. Install first hat channel flush with the top of metal panels.
 - 2. Install second hat channel 2 inches above roof flashing.
 - 3. Install intermediate hat channel in the middle of the top and bottom hat channel, equal distances from top to bottom.
- G. Fabricate inside corners. Refer to SMACNA Architectural Sheet Metal Manual Figure 6-33A.
- H. Fabricate panel terminations where metal panels intersect masonry walls. Refer to SMACNA Architectural Sheet Metal Manual Figure 6-33A.

END OF SECTION 07620