Roof Consultant: Shepard & Associates, LLC

3547 Dreher Shoals Road, Suite 6 Irmo, South Carolina 29063 Phone: 803/407-8284

Fax: 803/407-8206

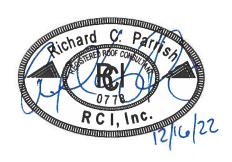
Owner:

Aiken Technical College

2276 Jefferson Davis Highway Graniteville, South Carolina 29829

A PROJECT MANUAL FOR AIKEN TECHNICAL COLLEGE 900 BUILDING ROOF REPLACEMENT

DECEMBER 2022



State Project #: H59-6198-PD PF 22006.001.004 December 2022 RCP: deg

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SE-310

INVITATION FOR DESIGN-BID-BUILD CONSTRUCTION SERVICES

AGENCY/OWNER: Aiken Technical College	
PROJECT NAME: 900 Building Roof Replacement	
PROJECT NUMBER: H59-6198-PD CONSTRUC	CTION COST RANGE: \$ 700,000 to \$ 850,000
PROJECT LOCATION: 2276 Jefferson Davis Highway, Gr	
DESCRIPTION OF PROJECT/SERVICES: Roof Replace	
	IME: 2:00PM NUMBER OF COPIES: 1
PROJECT DELIVERY METHOD: Design-Bid-Build	TOMBER OF COLLES. 1
AGENCY PROJECT COORDINATOR: Dora Robson	
EMAIL: robinsond6@atc.edu	TELEPHONE: 803-508-7269
DOCUMENTS MAY BE OBTAINED FROM: Shepard &	Associates, LLC or https://www.atc.edu/Offices/Procurement
Services	- 13300 acception in the state of the state
BID SECURITY IS REQUIRED IN AN AMOUNT NOT L	ESS THAN 5% OF THE BASE BID.
	T BONDS: The successful Contactor will be required to provide
Performance and Labor and Material Payment Bonds, each in t	he amount of 100% of the Contract Price.
DOCUMENT DEPOSIT AMOUNT: \$_75.00	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. Bidders that rely on copies obtained from
any other source do so at their own risk. All written communications with office Agency WILL NOT accept Bids sent via email.	cial plan holders & bidders will be via email or website posting.
Agency WILL NOT accept blus sent via email.	
All questions & correspondence concerning this Invitation shall be addressed t	to the A/E.
A/E NAME: Shepard & Associates, LLC	A/E CONTACT: Becki Anderson
EMAIL: becki@shepardandassociates.us	TELEPHONE: 803-407-8284
PRE-BID CONFERENCE: Yes No	MANDATORY ATTENDANCE: Yes ☐ No ☒
PRE-BID DATE: 3/14/2023	TIME: 10:00AM
PRE-BID PLACE: 2276 Jefferson Davis Highway,	
BID OPENING PLACE: 100/200 Building (Suite 152) - 227	
BID DELIVERY ADDRESSES:	January, Stantovino, SC 27027
HAND-DELIVERY:	MAIL SERVICE:
Attn: Dora Robson (BID INCLOSED - H59-N6198-PD)	Attn: Dora Robson (BID INCLOSED - H59-N6198-PD)
2276 Jefferson Davis Highway	PO Drawer 696
Graniteville, SC 29829	Aiken, SC 29802
IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFIC.	ATION? (Agency MUST check one) Yes No No
	Tes [140 🖂
$M \cap M \cap M$	
APPROVED BY:	DATE: 2, 23, 22
(OSE Project Manager)	

South Carolina Division of Procurement Services, Office of State Engineer Version of $^{\circ}AIA^{\circ}$ Document A701 $^{\circ}M$ – 2018

Instructions to Bidders

This version of AIA Document A701[™]–2018 is modified by the South Carolina Division of Procurement Services, Office of State Engineer ("SCOSE"). Publication of this version of AIA Document A701–2018 does not imply the American Institute of Architects' endorsement of any modification by SCOSE. A comparative version of AIA Document A701–2018 showing additions and deletions by SCOSE is available for review on the SCOSE Web site.

Cite this document as "AIA Document A701™ – 2018, Instructions to Bidders — SCOSE Version," or "AIA Document A701™ –2018 — SCOSE Version."

South Carolina Division of Procurement Services, Office of State Engineer Version of $\mathbb{A}IA$ Document A701 $^{\text{TM}}$ – 2018

Instructions to Bidders

for the following Project:
(Name, State Project Number, location, and detailed description)
900 Building Roof Replacement
H59-6198-PD
2276 Jefferson Davis Highway, Graniteville, SC 29829

THE OWNER:

(Name, legal status, address, and other information)
Aiken Technical College
2276 Jefferson Davis Highway
Graniteville, SC 29829

The Owner is a Governmental Body of the State of South Carolina as defined by S.C. Code Ann. § 11-35-310.

THE ARCHITECT:

(Name, legal status, address, and other information) Shepard & Associates, LLC 3547 Dreher Shoals Road, Suite 6 Irmo, SC 29063 This version of AIA Document A701-2018 is modified by the South Carolina Division of Procurement Services, Office of State Engineer. Publication of this version of AIA Document A701 does not imply the American Institute of Architects' endorsement of any modification by South Carolina Division of Procurement Services, Office of State Engineer. A comparative version of AIA Document A701-2018 showing additions and deletions by the South Carolina Division of Procurement Services, Office of State Engineer is available for review on South Carolina state Web site.

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

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- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
- 5 CONSIDERATION OF BIDS
- 6 POST-BID INFORMATION
- 7 PERFORMANCE BOND AND PAYMENT BOND

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8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

ARTICLE 1 DEFINITIONS

- § 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.
- § 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 Document A101-2017 Standard Form of Agreement Between Owner and Contractor, SCOSE Version. 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 Document A201-2017 General Conditions of the Contract for Construction, SCOSE Version.
- § 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.
- § 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.
- § 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- § 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.
- § 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- § 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.
- § 1.8 A Bidder is a person or entity who submits a Bid.
- § 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

- § 2.1 By submitting a Bid, the Bidder represents that:
 - .1 the Bidder has read and understands the Bidding Documents;
 - .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
 - .3 the Bid complies with the Bidding Documents;
 - .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, has correlated the Bidder's observations with the requirements of the Proposed Contract Documents, 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 S.C. Code Ann. Reg. 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;
 - .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception;
 - .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor; and
 - .7 the Bidder understands that it may be required to accept payment by electronic funds transfer (EFT).

§ 2.2 Certification of Independent Price Determination

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

§ 2.2.2 By submitting a 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:
 - .1 those prices;
 - .2 the intention to submit a Bid; or
 - .3 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.
- § 2.2.3 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 Section 2.2.2 of this certification; or
 - .2 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 Section 2.2.2 of this certification [As used in this subdivision, the term "principals" means the person(s) in the Bidder's organization responsible for determining the prices offered in this Bid];
 - 3 As an authorized agent, does certify that the principals referenced in Section 2.2.3.2 of this certification have not participated, and will not participate, in any action contrary to Section 2.2.2 of this certification; and
 - 4 As an agent, has not personally participated, and will not participate, in any action contrary to Section 2.2.2 of this certification.
- § 2.2.4 If the Bidder deletes or modifies Section 2.2.2.2 of this certification, the Bidder must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

§ 2.2.5 Drug Free Workplace Certification

By submitting a Bid, the Bidder certifies that, if awarded a contract, Bidder will comply with all applicable provisions of The Drug-free Workplace Act, S.C. Code Ann. 44-107-10, et seq.

§ 2.2.6 Certification Regarding Debarment and Other Responsibility Matters

- § 2.2.6.1 By submitting a Bid, Bidder certifies, to the best of its knowledge and belief, that:
 - .1 Bidder and/or any of its Principals-
 - .1 Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
 - .2 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
 - .3 Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in Section 2.2.6.1.1.2 of this provision.
 - .2 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.
 - 3 "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).

§ 2.2.6.2 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.

- § 2.2.6.3 If Bidder is unable to certify the representations stated in Section 2.2.6.1, 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 non-responsible.
- § 2.2.6.4 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 Section 2.2.6.1 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.
- § 2.2.6.5 The certification in Section 2.2.6.1 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.

§ 2.2.7 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 SC Code of Laws, as amended (Ethics Act). The following statutes require special attention: S.C. Code Ann. §8-13-700, regarding use of official position for financial gain; S.C. Code Ann. §8-13-705, regarding gifts to influence action of public official; S.C. Code Ann. §8-13-720, regarding offering money for advice or assistance of public official; S.C. Code Ann. §8-13-755 and §8-13-760, regarding restrictions on employment by former public official; S.C. Code Ann. §8-13-775, prohibiting public official with economic interests from acting on contracts; S.C. Code Ann. §8-13-790, regarding recovery of kickbacks; S.C. Code Ann. §8-13-1150, regarding statements to be filed by consultants; and S.C. Code Ann. §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 the 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, the contractor shall, if required by law to file such a statement, provide the statement required by S.C. Code Ann. §8-13-1150 to the Procurement Officer at the same time the law requires the statement to be filed.

§ 2.2.8 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.

- § 2.2.8.1 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.
- § 2.2.8.2 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.
- § 2.2.8.3 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. SC Regulation 19-445.2165(C) broadly defines the term donor.

§ 2.2.9 Open Trade Representation

By submitting a Bid, the Bidder represents that Bidder is not currently engaged in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in S.C. Code Ann. §11-35-5300.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

§ 3.1.2 Any required deposit shall be refunded to all plan holders who return the paper Bidding Documents in good condition within ten (10) days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Reserved

- § 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.
- § 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.
- § 3.1.6 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.

§ 3.2 Modification or Interpretation of Bidding Documents

- § 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2. 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 Architect's attention prior to Bid Opening.
- § 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least ten (10) days prior to the date for receipt of Bids.
- § 3.2.3 Modifications, corrections, changes, and interpretations of the Bidding Documents shall be made by Addendum. Modifications, corrections, changes, and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.
- § 3.2.4 As provided in S.C. Code Ann. Reg. 19-445.2042(B), nothing stated at the Pre-bid conference shall change the Bidding Documents unless a change is made by Addendum.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution. Where "brand name or equal" is used in the Bidding Documents, the listing description is not intended to limit or restrict competition.

§ 3.3.2 Substitution Process

- § 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten (10) days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.
- § 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.
- § 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.
- § 3.3.2.4 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 (10) days prior to the date for receipt of Bids established in the invitation to bid.

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. 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.

- § 3.3.3 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.
- § 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.
- § 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

- § 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.
- § 3.4.2 Addenda will be available where Bidding Documents are on file.
- § 3.4.3 Addenda will be issued at least five (5) business days before the day of the Bid Opening, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids. A business day runs from midnight to midnight and excludes weekends and state and federal holidays.
- § 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.
- § 3.4.5 When the date for receipt of Bids is to be postponed and there is insufficient time to issue an Addendum prior to the original Bid Date, the Owner will notify prospective Bidders by telephone or other appropriate means with immediate follow up with an 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) business 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 in the county in which Bids are to be received at the time a pre-bid or pre-proposal conference is scheduled, an Addendum will be issued to reschedule the conference. Bidders shall visit https://www.scemd.org/closings/ for information concerning closings.

ARTICLE 4 BIDDING PROCEDURES

- § 4.1 Preparation of Bids
- § 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.
- § 4.1.2 All blanks on the Bid Form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.
- § 4.1.3 Sums shall be expressed in numbers.
- § 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid. 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.
- § 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".

- § 4.1.6 Pursuant to S.C. Code Ann. § 11-35-3020(b)(i), as amended, Section 7 of the Bid Form sets forth a list of proposed subcontractors for which the Bidder is required to identify those subcontractors the Bidder will use to perform the work listed. 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.
- § 4.1.7 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 as required by law at the time of bidding.
- § 4.1.8 Each copy of the Bid shall state the legal name and legal status of the Bidder. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract.
- § 4.1.9 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

- § 4.2.1 If required by the invitation to bid, 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.
- § 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, 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.
- § 4.2.3 If a surety bond is required as bid security, 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 an acceptable 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.
- § 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; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected.
- § 4.2.5 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.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

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- § 4.3.2 All paper copies of the Bid, the bid security, 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 to bid. 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 sealed envelope shall be labelled "SEALED BID ENCLOSED" on the face thereof. Bidders hand delivering their Bids shall deliver Bids to the place of the Bid Opening as shown in the invitation for bids. Whether or not Bidders attend the Bid Opening, they shall give their Bids to the Owner's Procurement Officer or his/her designee as shown in the invitation to bid prior to the time of the Bid Opening.
- § 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

- § 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- § 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted. Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.
- § 4.3.6 The official time for receipt of Bids will be determined by reference to the clock designated by the Owner's Procurement Officer or his/her designee. The Procurement Officer conducting the Bid Opening will determine and announce that the deadline has arrived and no further Bids or bid modifications will be accepted. All Bids and bid modifications in the possession of the Procurement Officer at the time the announcement is completed will be timely, whether or not the bid envelope has been date/time stamped or otherwise marked by the Procurement Officer.

§ 4.4 Modification or Withdrawal of Bid

- § 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.
- § 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

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

- § 5.1.1 At Bid Opening, the Owner will announce the date and location of the posting of the Notice of Intend to Award. If the Owner determines to award the Project, the Owner will, after posting a Notice of Intend to Award, send a copy of the Notice to all Bidders.
- § 5.1.2 The Owner will send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the Bid Opening.
- § 5.1.3 If only one Bid is received, the Owner will open and consider the Bid.

§ 5.2 Rejection of Bids

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

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- .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 Owner's 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

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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.

§ 5.3 Acceptance of Bid (Award)

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

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

ARTICLE 6 POST-BID INFORMATION

§ 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.

§ 6.2 Reserved

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.4 Posting of Intent To Award

The Notice of Intent to Award will be posted at the following location:

Room or Area of Posting:

Building Where Posted:

Address of Building:

WEB site address (if applicable):

Posting date will be announced at Bid Opening. In addition to posting the Notice, the Owner will promptly send all responsive Bidders a copy of the Notice of Intent to Award and the final bid tabulation

§ 6.5 Protest of Solicitation or Award

§ 6.5.1 If you are aggrieved in connection with the solicitation or award of a contract, you may be entitled to protest, but only as provided in S.C. Code Ann. § 11-35-4210. To protest a solicitation, you must submit a protest within fifteen (15) days of the date the applicable solicitation document is issued. To protest an award, you must (i) submit notice if your intent to protest within seven (7) business days of the date the award notice is posted, and (ii) submit your actual protest within fifteen (15) days of the date the award notice is posted. Days are calculated as provided in Section 11-35-310(13). Both protests and notices of intent to protest must be in writing and must be received by the State Engineer within the time provided. The grounds of the protest and the relief requested must be set forth with enough particularity to give notice of the issues to be decided.

- § 6.5.2 Any protest must be addressed to the CPO, Office of State Engineer, and submitted in writing:
 - .1 by email to protest-ose@mmo.sc.gov,

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- .2 by facsimile at 803-737-0639, or
- .3 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.

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ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

- § 7.1 Bond Requirements
- § 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.
- § 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid.
- § 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the state of South Carolina.
- § 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of 100% of the Contract Sum.
- § 7.2 Time of Delivery of Contract, Certificates of Insurance, and Form of Bonds
- § 7.2.1 Following expiration of the protest period, the Owner will forward the Contract for Construction to the Bidder for signature. The Bidder shall return the fully executed Contract for Construction to the Owner within seven (7) days. The Bidder shall deliver the required bonds and certificate of insurance to the Owner not later than three (3) 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.
- § 7.2.2 Unless otherwise provided, the bonds shall be written on the Performance Bond and Payment Bond forms included in the Bid Documents.
- § 7.2.3 The bonds shall be dated on or after the date of the Contract.

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§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

- § 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:
 - AIA Document A101TM–2017, Standard Form of Agreement Between Owner and Contractor, SCOSE .1 Version.
 - .2 AIA Document A101TM–2017, Exhibit A, Insurance and Bonds, SCOSE Version.
 - AIA Document A201TM—2017, General Conditions of the Contract for Construction, SCOSE Version.
 - **Drawings**

	Number	Title	Date	
_				
5	Specifications			
	Section	Title	Date	Pages

.6	Adder	nda:		
	Numbe	er	Date	Pages
-	0.1	D 1915		
.7		Exhibits: k all boxes that apply and inclu	de appropriate information	identifying the exhibit where required.)
		AIA Document E203 TM _2013 indicated below:	3, Building Information Mod	deling and Digital Data Exhibit, dated as
		AIA Document E204 TM _201′	7, Sustainable Projects Exhil	pit, dated as indicated below:
		The Sustainability Plan:		
		Supplementary and other Con	nditions of the Contract:	
.8		documents listed below: ere any additional documents to	hat are intended to form par	t of the Proposed Contract Documents.)

ARTICLE 9 Miscellaneous

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§ 9.1 Nonresident Taxpayer Registration Affidavit Income Tax Withholding Important Tax Notice - Nonresidents Only § 9.1.1 Withholding Requirements for Payments to Nonresidents: SC Code of Laws §12-8-550 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.

§ 9.1.2 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

§ 9.1.3 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).

§ 9.2 Submitting Confidential Information

- § 9.2.1 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that the 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 SC Code of Laws §11-35-410.
- § 9.2.2 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that the Bidder contends contains a trade secret as that term is defined by SC Code of Laws §39-8-20.
- § 9.2.3 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that the Bidder contends is protected by SC Code of Laws §11-35-1810.
- § 9.2.4 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.
- § 9.2.5 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.
- § 9.2.6 In determining whether to release documents, the State will detrimentally rely on the Bidders' marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED".
- § 9.2.7 By submitting a response, the 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".

§ 9.3 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.

§ 9.4 Builder's Risk Insurance

Bidders are directed to Exhibit A of the AIA Document A101, 2017 SCOSE Version, which, unless provided otherwise in the Bid Documents, requires the contractor to provide builder's risk insurance on the project.

§ 9.5 Tax Credit For Subcontracting With Minority Firms

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§ 9.5.1 Pursuant to S.C. Code Ann. §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.

- § 9.5.2 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.
- § 9.5.3 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: S.C. Code Ann. §11-35-5010 Definition for Minority Subcontractor & S.C. Code Ann. §11-35-5230 (B) Regulations for Negotiating with State Minority Firms.
- § 9.6 Other Special Conditions Of The Work

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Bid Bond

CONTRACTOR:

(Name, legal status and address)

TBD

SURETY:

(Name, legal status and principal place of business)

TBD

OWNER:

(Name, legal status and address) Aiken Technical College 2276 Jefferson Davis Highway Graniteville, SC 29829

BOND AMOUNT: \$

PROJECT:

(Name, location or address, and Project number, if any) 900 Building Roof Replacement 2276 Jefferson Davis Highway, Graniteville, SC 29829 H59-6198-PD

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

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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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.

	(Contractor as Principal)	(Seal
(Witness)	(Title)	
	(Surety)	(Seal
(Witness)	(Title)	

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

BID	SUBMITTED BY: (Bidder's Name)
DID	
RID	SUBMITTED TO: Aiken Technical College
E 0.	(Agency's Name)
FOR	
	PROJECT NUMBER: H59-6198-PD
<u>OFF</u>	<u>ER</u>
§ 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 Agency 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 SC Code § 11-35-3030(1), Bidder has submitted Bid Security in the amount and form required by the Bidding Documents.
§ 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 Agency.
§ 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): RAs 1, 2, 3, 5, 6, and 7
	(Approximately 40,646 SF): The work generally consists of the complete removal and disposal of the existing aggregate ballast, filter cloth, EPDM roof membrane, associated EPDM and metal flashings down to the surface of the existing rigid insulation; removal and disposal of existing metal coping and overflow scupper liners; removal and disposal of abandoned equipment curbs;
prepa	rations include, but are not limited to, inspection of existing insulation, substrate decking, and parapet walls making repairs
	or replacement as necessary; infilling metal decking where abandoned equipment curb was removed, raising expansion
	joints and sanitary vents, as necessary; disconnecting, raising and reconnecting existing curb mounted rooftop equipment, as necessary; wire brush, prime and paint existing roof hatch on RA 6;
and tl	ne new installation of a mechanically attached high density polyisocyanurate cover board, single ply polyvinyl chloride
	(PVC) membrane roof assembly, metal, PVC, and liquid applied flashings, metal coping, overflow scupper liners and expansion joint flashings, walk pads, condensate drain piping and supports, and miscellaneous work, as specified.

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

- RA 4 (Approximately 780 SF): The work general consists of the complete removal and disposal of the existing aggregate surfaced roof assembly and rigid insulation down to the existing metal roof deck, the complete removal and disposal of bituminous and metal flashings, metal coping cap and overflow scupper liners;
- preparations include, but are not limited to, inspection of existing substrate decking, making repairs or replacement as necessary; wire brushing and priming existing oxidized metal decking; raising sanitary vents, as necessary; disconnecting, raising and reconnecting existing curb mounted rooftop equipment, as necessary;
- and the new installation of mechanically attached flat and tapered polyisocyanurate insulation, high density polyisocyanurate cover board, single ply polyvinyl chloride (PVC) membrane roof assembly, metal and PVC flashings, metal coping, overflow scupper liners, and associated miscellaneous work as specified.

\$, which sum is hereafter called the Base Bid.
(Bidder to insert Base Bid Amount on line above)	

BF – 1 SE-330

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

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

ALTERNATE # 1 (Brief Description): N/A	
☐ 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 prior to including in the Contract.

No.	ITEM	UNIT OF MEASURE	ADD	DEDUCT
<u>1.</u>	Wood Blocking	BF	\$	\$
2.	Wire Brush and Prime Metal Deck	SF	\$	\$
3.	Replace Wet or Damaged Insulation	SF	\$	\$
4.			\$	\$
5.			\$	\$
6.			\$	\$

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§ 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:

(A) SUBCONTRACTOR LICENSE CLASSIFICATION or SUBCLASSIFICATION NAME (Completed by Agency)	(B) LICENSE CLASSIFICATION or SUBCLASSIFICATION ABBREVIATION (Completed by Agency)	(C) SUBCONTRACTOR and/or PRIME CONTRACTOR (Required - must be completed by Bidder)	(D) SUBCONTRACTOR'S and/or PRIME CONTRACTOR'S SC LICENSE NUMBER (Requested, but not Required)		
		ASE BID			
Not Required					
	ALTI	ERNATE #1			
N/A					
	ALTI	ERNATE #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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INSTRUCTIONS FOR SUBCONTRACTOR LISTING

- 1. Section 7 of the Bid Form sets forth an Agency-developed list of subcontractor license classifications or subclassifications for which Bidder is required to identify the entity (subcontractor(s) and/or himself) Bidder will use to perform this work.
 - **a.** Columns A & B: The Agency fills out these columns to identify the subcontractor license classification / subclassification and related license abbreviation for which the Bidder must list either a subcontractor or himself as the entity that will perform this work. In Column A, the subcontractor license classification/subclassification is identified by name and in Column B, the related contractor license abbreviation (per Title 40 of the SC Code of Laws) is listed. Abbreviations of licenses can be found at:
 - https://llr.sc.gov/clb/PDFFiles/CLBClassificationAbbreviations.pdf. If the Agnecy has not identified a subcontractor license classification/subclassification, the Bidder does not list a subcontractor.
 - b. Columns C and D: In these columns, the Bidder identifies the subcontractors it will use for the work of each license listed by the Agency in Columns A & B. Bidder must identify only the subcontractor(s) who will perform the work and no others. Bidders must 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 additional information 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 that includes the license classification and/or subclassification identified by the Agency in Columns A & B. The subcontractor license must also be within the appropriate license group for the work. If Bidder lists a subcontractor who is not qualified to perform the work, the Bidder will be rejected as non-responsible.
- **4. Use of Own forces:** If, under the terms of the Bidding Documents and SC Contractor Licensing laws, Bidder is qualified to perform the work of a listed subcontractor classification or subclassification and Bidder does not intend to subcontract such work but to use Bidder's own employees to perform such work, the Bidder must insert itself in the space provided.
- 5. Use of Multiple Subcontractors:
 - a. If Bidder intends to use multiple subcontractors to perform the work of a single license classification/subclassification, 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 license classification/subclassification and to use one or more subcontractors to perform the remaining work, Bidder must insert itself and each subcontractor, preferably separating them with the word "and". Bidder must use each entity listed for the work of a single license classification/subclassification in the performance of that work.
 - b. Optional Listing Prohibited: Bidder may not list multiple subcontractors for a license classification/subclassification in a form that provides the Bidder the option, after bid opening or award, to choose 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 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. 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 listed in Columns A & B will render the Bid non-responsive.

BF – 2A SE-330

§ 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 Agency upon the Agency'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

§ 9.

	of S	SC Code § 11-35-3020(b)(i).
§ 9.	TI	ME 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 Agency. Bidder agrees to substantially complete the Work within85 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 Agency shall retain as Liquidated Damages the amount of \$ \
§ 10.	AC	GREEMENTS
	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.	EL	ECTRONIC BID BOND
	and Bio	signing below, the Principal is affirming that the identified electronic bid bond has been executed and that the Principal Surety are firmly bound unto the State of South Carolina under the terms and conditions of the AIA Document A310, I Bond, referenced in the Bidding Documents.
		ECTRONIC BID BOND NUMBER:

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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 SCOSE Version of the AIA Document A701, Instructions to Bidders, is expressly incorporated by reference. BIDDER'S LEGAL NAME: ADDRESS:_____ TELEPHONE: EMAIL: SIGNATURE: DATE: PRINT NAME:

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South Carolina Division of Procurement Services, Office of State Engineer Version of Parallel A A Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

This version of AIA Document A101®–2017 is modified by the South Carolina Division of Procurement Services, Office of State Engineer ("SCOSE"). Publication of this version of AIA Document A101–2017 does not imply the American Institute of Architects' endorsement of any modification by SCOSE. A comparative version of AIA Document A101–2017 showing additions and deletions by SCOSE is available for review on the SCOSE Web site.

Cite this document as "AIA Document A101®–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum — SCOSE Version," or "AIA Document A101®–2017 — SCOSE Version."

South Carolina Division of Procurement Services, Office of State Engineer Version of AIA Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the day of in the year (In words, indicate day, month and year.)

BETWEEN the Owner:

(Name, legal status, address and other information)

Aiken Technical College 2276 Jefferson Davis Highway Graniteville, SC 29829

The Owner is a Governmental Body of the State of South Carolina as defined in S.C. Code Ann. § 11-35-310.

and the Contractor:

(Name, legal status, address and other information)

for the following Project:
(Name, State Project Number, location and detailed description)
900 Building Roof Replacement
H59-6198-PD
2276 Jefferson Davis Highway, Graniteville, SC 29829

The Architect: (Name, legal status, address and other information)
Shepard & Associates, LLC
3547 Dreher Shoals Road, Suite 6
Irmo, SC 29063

This version of AIA Document A101-2017 is modified by the South Carolina Division of Procurement Services. Office of State Engineer. Publication of this version of AIA Document A101 does not imply the American Institute of Architects' endorsement of any modification by South Carolina Division of Procurement Services, Office of State Engineer. A comparative version of AIA Document A101-2017 showing additions and deletions by the South Carolina Division of Procurement Services, Office of State Engineer is available for review on South Carolina state Web site.

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

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

§ 1.1 The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

§ 1.2 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 A101-2017 Standard Form of Agreement Between Owner and Contractor, SCOSE Version. 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 A201-2017 General Conditions of the Contract for Construction, SCOSE Version.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 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 (7) 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.

§ 3.2 The Contract Time as provided in the Notice to Proceed for this project shall be measured from the Date of Commencement of the Work to Substantial Completion.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work within the Contract Time indicated in the Notice to Proceed.

§ 3.3.2 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum, including all accepted alternates indicated in the bid documents, in current funds for the Contractor's performance of the Contract. The Contract Sum shall be

(\$), subject to additions and deduct	ions as provided in the Contract Doc	cuments.
§ 4.2 Alternates § 4.2.1 Alternates (Insert the accept	s that are accepted, if any, included ted Alternates.)	in the Contract Sum:	
Item		Price	
\$ 4.2 Alloweness	, if any, included in the Contract Su	ım.	
(Identify each al		ші.	
Item		Price	
item		THEC	
\$ 4 4 TIU'4 UU'	· C		
§ 4.4 Unit prices, (<i>Identify the iten</i>		ity limitations, if any, to which the u	nit price will be applicable.)
Item		Units and Limitations	Price per Unit (\$0.00)
item		Offits and Elimitations	Trice per offit (40.00)
§ 4.5 Liquidated	damanes		
§ 4.5.1 Contracto	or agrees that from the compensation	n to be paid, the Owner shall retain a	
amount indicated	l in Section 9(b) of the Bid Form for	or each calendar day the actual constr	ruction time required to achieve

§ 4.6 Other:

for actual damages, not as a penalty.

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

Substantial Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents. The liquidated damages amount is intended by the parties as the predetermined measure of compensation

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

- § 5.1.1 Based upon Applications for Payment submitted to the Architect and Owner by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.
- § 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:
- § 5.1.3 The Owner shall make payment of the certified amount to the Contractor not later than twenty-one (21) days after receipt of the Application for Payment.
- § 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.
- § 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.
- § 5.1.6 Subject to S.C. Code Ann. § 12-8-550 (Withholding Requirements for Payments to Non-Residents), in accordance with AIA Document A201®–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
- § 5.1.6.1 The amount of each progress payment shall first include:
 - .1 That portion of the Contract Sum properly allocable to completed Work;
 - .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
 - .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.
- § 5.1.6.2 The amount of each progress payment shall then be reduced by:
 - .1 The aggregate of any amounts previously paid by the Owner;
 - .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
 - .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
 - .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
 - .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

- § 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold three and one-half percent (3.5%), as retainage, from the payment otherwise due.
- § 5.1.7.2 When a portion, or division, of Work as listed in the Schedule of Values is 100% complete, that portion of the retained funds which is allocable to the completed division must be released to the Contractor. No later than ten (10) days after receipt of retained funds from the Owner, the Contractor shall pay to the subcontractor responsible for such completed work the full amount of retainage allocable to the subcontractor's work.
- § 5.1.7.3 Upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7.

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than twenty-one (21) days after the issuance of the Architect's final Certificate for Payment.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Claims and disputes shall be resolved in accordance with Article 15 of AIA Document A201–2017.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

§ 8.2.1 The 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: Title: Address: Telephone: Email:

§ 8.2.2 The 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:
Title:
Address:
Telephone:
Email:

§ 8.3 The Contractor's representative:

§ 8.3.1 The 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:	
Email:	

§ 8.3.2 The 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: Email:

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 The Architect's representative:

Name: Title:

Address:

Telephone:

Email:

§ 8.6 Insurance and Bonds

§ 8.6.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101®—2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.6.2 The Contractor shall provide bonds as set forth in AIA Document A101®–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.7 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.8 Other Provisions:

§ 8.8.1 Additional requirements, if any, for the Contractor's Construction 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 primaveratype 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 milestone dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents.

1 Upon review by the Owner and the Architect for conformance with milestone dates and Construction Time given in the Bidding Documents, with associated Substantial Completion date, the Construction Schedule shall be deemed part of the Contract Documents and attached to the Agreement as an Exhibit. If returned for non-conformance, the Construction Schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and the Architect and resubmitted.

Init.

- .2 The Contactor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the Owner of any delays or potential delays. Whenever the 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 Construction Schedule to reflect such conditions.
- .3 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.
- .4 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.

§ 8.8.2 The Owner's review of the Contractor's schedule is not conducted for the purpose of either determining its accuracy, completeness, or approving the construction means, methods, techniques, sequences or procedures. The Owner's review shall not relieve the Contractor of any obligations.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

Drawings

.7

Addenda, if any:

Number

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101®–2017, SCOSE Version Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101®–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201®–2017, SCOSE Version General Conditions of the Contract for Construction
- .4 Form SE-390, Notice to Proceed Construction Contract

	Number	Title	Date	
.6	Specifications			
	Section	Title	Date	Pages
	Section	Title	Date	Pages
	Section	Title	Date	Pages
	Section	Title	Date	Pages
	Section	Title	Date	Pages
	Section	Title	Date	Pages

Date

Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

Other Exhibits: (Check all boxes that apply a	nd include appropriate inform	nation identifying the ex	hibit where required.)
	4 TM –2017, Sustainable Projec ne E204-2017 incorporated in		cated below:
The Sustainability F		_	
Title	Date	Pages	
Supplementary and	other Conditions of the Contr	act:	
Document	Title	Date	Pages
Document A201®–2017 prov sample forms, the Contractor requirements, and other info proposals, are not part of the	ed below: uments that are intended to for ides that the advertisement or r's bid or proposal, portions of rmation furnished by the Own to Contract Documents unless of ere only if intended to be part	invitation to bid, Instru of Addenda relating to bi er in anticipation of rec enumerated in this Agre	ctions to Bidders, dding or proposal eiving bids or ement. Any such
Form SE-310, Invitation for			
Instructions to Bidders (AL Form SE-330, Contractor's	A Document A701-2018 OSI Bid (Completed Bid Form)	E Version)	
Form SE-370, Notice of Inte	=		

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8.

.9

Certificate of Procurement Authority issued by the State Fiscal Accountability Authority

This Agreement entered into as of the day and	i year iirst written above.
OWNER (Signature)	CONTRACTOR (Signature)
(Printed name and title)	(Printed name and title)

South Carolina Division of Procurement Services, Office of State Engineer Version of MAIA Document A101® – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the day of in the year

(In words, indicate day, month and year.)

for the following PROJECT: (Name, State Project Number, and location or address)

900 Building Roof Replacement H59-6198-PD 2276 Jefferson Davis Highway, Graniteville, SC 29829

THE OWNER:

(Name, legal status and address)

Aiken Technical College 2276 Jefferson Davis Highway Graniteville, SC 29829 This version of AIA Document A101–2017 Exhibit A is modified by the South Carolina Division of Procurement, Office of State Engineer. Publication of this version of AIA Document A101 Exhibit A does not imply the American Institute of Architects' endorsement of any modification by the South Carolina Division of Procurement, Office of State Engineer.

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

The Owner is a Governmental Body of the State of South Carolina as defined by Title 11, Chapter 35 of the South Carolina Code of Laws, as amended.

THE CONTRACTOR:

(Name, legal status and address)

TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201®–2017, General Conditions of the Contract for Construction, SCOSE Version.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Reserved
§ A.2.3.1 Reserved
§ A.2.3.1.1 Reserved
§ A.2.3.1.2 Reserved
§ A.2.3.1.3 Reserved
§ A.2.3.1.4 Reserved
§ A.2.3.2 Reserved
§ A.2.3.2 Reserved
§ A.2.3.1 Reserved
§ A.2.3.1 Reserved
§ A.2.3.1 Reserved
§ A.2.3.2 Reserved
§ A.2.3.3 Reserved
§ A.2.4 Optional Insurance.
The Owner shall purchase and maintain any insurance selected below.

\$ A.2.4.1 Other Insurance
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

Demand - End User License Agreement. To report copyright violations, e-mail copyright@aia.org.

§ A.3.1 General

Coverage

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies. 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.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the

Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.1.4 A failure by the Owner to either (i) demand a certificate of insurance or written endorsement required by Section A.3, or (ii) reject a certificate or endorsement on the grounds that it fails to comply with Section A.3, shall not be considered a waiver of Contractor's obligations to obtain the required insurance.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, for such other period for maintenance of completed operations coverage as specified in the Contract Documents, or unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than \$1,000,000 each occurrence, \$1,000,000 general aggregate, \$1,000,000 aggregate for products-completed operations hazard, \$1,000,000 personal and advertising injury, \$50,000 fire damage (any one fire), and \$5,000 medical expense (any one person) providing coverage for claims including

- damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

- § A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than \$1,000,000 per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.
- § A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability, Employers Liability, and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers. The umbrella policy limits shall not be less than \$3,000,000.
- § A.3.2.5 Workers' Compensation at statutory limits.
- § A.3.2.6 Employers' Liability with policy limits not less than \$100,000 each accident, \$100,000 each employee, and \$500,000 policy limit for claims, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed.
- § A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks.
- § A.3.2.8 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than

 (\$) per claim and

 (\$) in the aggregate.
- § A.3.2.9 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ A.3.3 Required Property Insurance

- § A.3.3.1 The Contractor shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Contractor's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.3.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds.
- § A.3.3.1.1 Causes of Loss. The insurance required by this Section A.3.3.1 shall provide coverage for direct physical loss or damage and shall include the risks of fire (with extended coverage), explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, workmanship, or materials. (*Indicate below the cause of loss and any applicable sub-limit.*)

Causes of Loss Sub-Limit

§ A.3.3.1.2 Specific Required Coverages. The insurance required by this Section A.3.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. (Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss Sub-Limit

- § A.3.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall replace the insurance policy required under Section A.3.3.1 with property insurance written for the total value of the Project.
- § A.3.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.3.3 is subject to deductibles or self-insured retentions, the Contractor shall be responsible for all loss not covered because of such deductibles or retentions.
- § A.3.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.3.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.
- § A.3.3.3 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.
- § A.3.3.4 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 A.3.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project.

§ A.3.4 Contractor's Other Insurance Coverage

§ A.3.4.1 Insurance selected and described in this Section A.3.4 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.4.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.4.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

§ A.3.4.2.1 Reserved
§ A.3.4.2.2 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.
§ A.3.4.2.3 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.
§ A.3.4.2.4 Boiler and Machinery Insurance The Contractor shall purchase and maintain boiler and machinery insurance as required, which shall specifically cover such insured objects during installation and until final acceptance by the Owner: this

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insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ A.3.5 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows: (Specify type and penal sum of bonds.)

Type Penal Sum (\$0.00)
Payment Bond
Performance Bond

§ A.3.5.1 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.

§ A.3.5.2 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.

§ A.3.5.3 Any bonds required by this Contract shall meet the requirements of the South Carolina Code of Laws and Regulations, as amended.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

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South Carolina Division of Procurement Services, Office of State Engineer Version of Parallel A Document A201® – 2017

General Conditions of the Contract for Construction

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South Carolina Division of Procurement Services, Office of State Engineer Version of Procument A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name, State Project Number, and location or address)900 Building Roof ReplacementH59-6198-PD2276 Jefferson Davis Highway, Graniteville, SC 29829

THE OWNER:

(Name, legal status, and address)

Aiken Technical College 2276 Jefferson Davis Highway Graniteville, SC 29829

The Owner is a Governmental Body of the State of South Carolina as defined in S.C. Code Ann.§ 11-35-310.

THE ARCHITECT:

(Name, legal status, and address)

Shepard & Associates, LLC 3547 Dreher Shoals Road, Suite 6 Irmo, SC 29063

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- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
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- 8 TIME
- 9 PAYMENTS AND COMPLETION

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

- The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract.
- .2 A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect
- .3 Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.
- .4 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 A101-2017, Standard Form of Agreement Between Owner and Contractor, SCOSE Version.
- 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 A201-2017, General Conditions of the Contract for Construction, SCOSE Version.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Reserved

§ 1.1.9 Notice to Proceed

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The Notice to Proceed is a document issued by the Owner to the Contractor 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 and establish the initial date of the Substantial Completion.

§ 1.1.10 State Engineer

"State Engineer" means the person holding the position as head of the State Engineer's Office. The State Engineer's Office is created by S.C. Code Ann. § 11-35-830, and is sometimes referred to in the Contract Documents as "Office of State Engineer" or "OSE." The State Engineer is also the Chief Procurement Officer for Construction, sometimes referred to in the Contract Documents as "CPOC".

§ 1.2 Correlation and Intent of the Contract Documents

- § 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. 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.
- § 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, 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.
- § 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.
- § 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

- § 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and 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 the Project is not to be construed as a violation of the Architect's or Architect's consultants' reserved rights.
- § 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 16 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to

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whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

- § 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.
- § 1.6.3 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 Section 1.6.1.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation, including in digital form. The parties will use AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202TM–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

- § 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 7.1.7. 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 noted in the Agreement.
- § 2.1.2 The Owner shall furnish to the Contractor, within fifteen (15) days after receipt of a written request, information necessary and relevant for the Contractor to post Notice of Project Commencement pursuant to S.C. Code Ann. § 29-5-23.

§ 2.2 Reserved

§ 2.3 Information and Services Required of the Owner

- § 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- § 2.3.2 The Owner shall retain a design professional lawfully licensed to practice, or an entity lawfully practicing, in the jurisdiction where the Project is located. The person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- § 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.
- § 2.3.4 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.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services. 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 provided in the Contract Documents.

§ 2.3.6 The Owner shall furnish the Contract Documents to the Contractor in digital format.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

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 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 default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for 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 current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor 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 Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's Representative noted in the Agreement.

- § 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.
- § 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

- § 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.
 - .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 (a) conditions bearing upon transportation, disposal, handling, and storage of materials; (b) the availability of labor, water, electric power, and roads; (c) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (d) the conformation and conditions of the ground; and (e) the character of equipment and facilities needed preliminary to and during work performance.
 - .2 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 Section 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.
- § 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.
- § 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.
- § 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3. the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from latent errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.
- § 3.2.5 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.3 Supervision and Construction Procedures

- § 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction and provide its findings to the Owner. Unless the Owner objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.
- § 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- § 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

- § 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- § 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.
- § 3.4.2.1 After the Contract has been executed, the Owner and Architect may consider requests for the substitution of products in place of those specified. The Owner and Architect may, but are not obligated to, consider only those substitution requests that are in full compliance with the conditions set forth in the General Requirements (Division 1 of the Specifications). By making requests for substitutions, the Contractor:
 - .1 represents that it has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to the product specified;
 - .2 represents that it will provide the same warranty for the substitution as it would have provided for the product specified;
 - .3 certifies that the cost data presented is complete and includes all related costs for the substituted product and for Work that must be performed or changes as a result of the substitution, except for the Architect's re-design costs, and waives all claims for additional costs related to the substitution that subsequently become apparent;
 - .4 agrees that it shall, if the substitution is approved, coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects; and
 - .5 represents that the request includes a written representation identifying any potential effect the substitution may have on Project's achievement of a Sustainable Measure or the Sustainable Objective.
- § 3.4.2.2 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for reviewing the Contractor's proposed substitutions and making agreed-upon changes in the Drawings and Specifications resulting from such substitutions.
- § 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

- § 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. 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. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
- § 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The Contractor shall comply with the requirements of S.C Code Ann. Title 12, Chapter 8, regarding withholding tax for nonresidents, employees, contractors and subcontractors.

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§ 3.7 Permits, Fees, Notices and Compliance with Laws

- § 3.7.1 Pursuant to S.C. Code Ann. § 10-1-180, no local general or specialty building permits are required for state buildings. Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for all other permits, fees, and licenses by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.
- § 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
- § 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

- § 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.
- § 3.8.2 Unless otherwise provided in the Contract Documents,
 - 1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
 - .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
 - whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. 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.
- § 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent, acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

- § 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Owner may notify the Contractor, stating whether the Owner has reasonable objection to the proposed superintendent. Failure of the Owner to provide notice within the 14-day period shall constitute notice of no reasonable objection.
- § 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner has made reasonable and timely objection. The Contractor shall notify the Owner of any proposed change in the superintendent, including the reason therefore, prior to making such change. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

- § 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. Subject to any additional requirements in the Contract Documents, the schedule shall contain detail appropriate for the Project, including at a minimum (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.
- § 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.
- § 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

- § 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.
- § 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- § 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.
- § 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

- § 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.
 - .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.
 - .2 The fire sprinkler shop drawings shall be reviewed and approved by the Architect's engineer of record (EOR) prior to submittal to the State Fire Marshal. The EOR will complete the Office of State Fire Marshal (OSFM) form "Request for Fire Sprinkler System Shop Review for State Construction Projects" and submit it to OSE for signature.
 - OSE will sign the form and return it to the Architect's EOR. The EOR will submit a copy of the signed form with the approved shop drawings to OSFM for review and approval; and, forward a copy of each
 - .4 Upon receipt of the OSFM approval letter, the EOR will forward a copy of the letter to the Owner, Contractor, Architect, and OSE.
 - .5 Unless authorized in writing by OSE, neither the Contractor nor subcontractor at any tier shall submit the fire sprinkler shop drawings directly to OSFM.
- § 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- § 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.
- § 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.
- § 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.
- § 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.
- § 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, who shall comply with reasonable requirements of the Owner regarding qualifications and insurance and whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to

the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 Use of Site

- § 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.
- § 3.13.2 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.

§ 3.14 Cutting and Patching

- § 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.
- § 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

- § 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.
- § 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but

only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

- § 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.
- § 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

- § 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. 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 ten (10) days, unless otherwise specified in the Contract Documents or otherwise agreed to by the parties.
- § 4.2.2 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 portion of the Work completed, and to determine in general 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. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.
- § 4.2.3 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 promptly report to the Owner (1) deviations from the Contract Documents, (2) deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Work completed and correlated with the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

- § 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.
- § 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- § 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.
- § 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.
- § 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.
- § 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 other party with a copy of the request. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.
- § 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, and will not show partiality to either. Except in the case of interpretations resulting in omissions, defects, or errors in the Instruments of Service or perpetuating omissions, defects or errors in the Instruments of Service, the Architect will not be liable for results of interpretations or decisions rendered in good faith. If either party disputes the Architect's 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.
- § 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- § 4.2.14 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.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

- § 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.
- § 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

- § 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, within fourteen (14) days after posting of the Notice of Intent to Award the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Owner may notify the Contractor whether the Owner has reasonable objection to any such proposed person or entity. Failure of the Owner to provide notice within the 14-day period shall constitute notice of no reasonable objection.
- § 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 service.
- § 5.2.3 If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.
- § 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner makes reasonable objection to such substitution. The Contractor's request for substitution must be made to the Owner in writing, accompanied by supporting information.
- § 5.2.5 A Subcontractor identified in the Contractor's Bid pursuant to the subcontractor listing requirements of Section 7 of the Bid Form may only be substituted in accordance with and as permitted by the provisions of S.C. Code Ann. § 11-35-3021. A proposed substitute for a listed subcontractor shall also be subject to the Owner's approval as set forth in Section 5.2.3.
- § 5.2.6 A Contractor may substitute one prospective subcontractor for another, with the approval of the Owner as follows:
 - .1 If the Contractor requests the substitution, the Contractor is responsible for all costs associated with the substitution.
 - .2 If the Owner requests the substitution, the Owner is responsible for any resulting increased costs to the Contractor.

§ 5.3 Subcontractual Relations

§ 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 that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not

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

- § 5.3.2 Without limitation on the generality of Section 5.3.1, each Subcontract agreement and each Sub-subcontract agreement shall include, and shall be deemed to include, the following Sections of these General Conditions: 3.2, 3.5, 3.18, 5.3, 5.4, 6.2.2, 7.1.6, 7.3.3, 7.5, 13.1, 13.9, 14.3, 14.4, and 15.1.7.
- § 5.3.3 Each Subcontract Agreement and each Sub-subcontract agreement shall exclude, and shall be deemed to exclude, Sections 13.2 and 13.5 and all of Article 15, except Section 15.1.7, 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 and 13.5 and all of Article 15, except Section 15.1.7, 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 Section 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.

§ 5.4 Contingent Assignment of Subcontracts

- § 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
 - 1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.
- § 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.
- § 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.
- § 5.4.4 Each subcontract shall specifically provide that the Owner shall only be responsible to the subcontractor for those obligations of the Contractor that accrue subsequent to the Owner's exercise of any rights under this conditional assignment.
- § 5.4.5 Each subcontract shall specifically provide that the Subcontractor agrees to perform portions of the Work assigned to the Owner in accordance with the Contract Documents.
- § 5.4.6 Nothing in this Section 5.4 shall act to reduce or discharge the Contractor's payment bond surety's obligations to claims arising prior to the Owner's exercise of any rights under this conditional assignment.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to

those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

- § 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- § 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Reserved

§ 6.2 Mutual Responsibility

- § 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.
- § 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.
- § 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.
- § 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.
- § 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

- § 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.
- § 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

- § 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.
- § 7.1.4 If a change in the Work provides for an adjustment to the Contract Sum, the amount of such adjustment must be computed and documented in writing. In order to facilitate evaluation of proposals or claims for increases and decreases to the Contract Sum, all proposals or claims, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized. Where major cost items are subcontracts, they shall be itemized also. The amount of the adjustment must approximate the actual cost to the Contractor and all costs incurred by the Contractor must be justifiably compared with prevailing industry standards. Except as provided in Section 7.1.5, all adjustments to the Contract Sum shall be limited to job specific costs and shall not include indirect costs, home office overhead or profit.
- § 7.1.5 The combined overhead and profit included in the total cost to the Owner for a change in the Work shall be based on the following schedule:
 - 1 For the Contractor, for Work performed by the Contractor's own forces, not to exceed seventeen (17%) percent of the Contractor's actual costs.
 - .2 For the Contractor, for Work performed by the Contractor's Subcontractors, not to exceed ten (10%) percent of each Subcontractor's actual costs (not including the Subcontractor's overhead and profit).
 - .3 For each Subcontractor involved, for Work performed by that Subcontractor's own forces, not to exceed seventeen (17%) percent of the Subcontractor's actual costs.
 - .4 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.4.

The percentages cited above 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.

- § 7.1.6 The procedures described in Sections 7.1.4 and 7.1.5 shall be used to calculate any adjustment in the Contract Sum, including without limitation an adjustment permitted under Articles 7, 9, 14, or 15.
- § 7.1.7 If a change in the Work requires an adjustment to the Contract Sum that exceeds the limits of the Owner's Construction Change Order Certification (reference Section 9.1.9 of the Agreement), then the Owner's agreement is not effective, and Work may not proceed until approved in writing by the OSE.
- § 7.1.8 Any change in the Work initiated after the declaration of Substantial Completion must be approved in writing by the OSE regardless of the amount of the change or the Owner's Construction Change Order Certification.

§ 7.2 Change Orders

- § 7.2.1 A Change Order is a written instrument, using the OSE Construction Change Order form, prepared by the Architect 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.

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.

- § 7.2.2 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 7.1.4 and 7.1.5. The Owner's request shall include any revisions to the Drawings or Specifications necessary to define any changes in the Work. Within fourteen (14) days of receiving the request, the Contractor shall submit the proposal to the Owner and Architect along with all documentation required by Section 7.5.
- § 7.2.3 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 7.2.2. If the Contractor requests a change to the Work that involves a revision

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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.

§ 7.3 Construction Change Directives

- § 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.
- § 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.
- § 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
 - Mutual acceptance of a lump sum if properly itemized and substantiating data is not available to permit evaluation;
 - .2 Unit prices specified in the Contract Documents or subsequently agreed upon, subject to adjustment if any, as provided in Section 9.1.2;
 - .3 Cost and a percentage fee, calculated as described in Sections 7.1.4 and 7.1.5;
 - .4 in another manner as the parties may agree; or
 - .5 As provided in Section 7.3.4.
- § 7.3.4 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 7.1.5. In such case, and also under Section 7.3.3.3, 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 7.3.4 shall be limited to the following:
 - .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect:
 - .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, directly related to the change.
- § 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.
- § 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- § 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
- § 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual cost including overhead and profit as confirmed by the Architect from the Schedule of Values.
- § 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. 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.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

§ 7.5 Pricing Data and Audit

§ 7.5.1 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 [Reference S.C. Code Ann. §§ 11-35-1830 and 11-35-2220, and SC Code Ann. Reg 19-445.2120]. 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.

§ 7.5.2 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.

§ 7.5.3 Records Retention

As used in Section 7.5, the term "Records" means any books or records that relate to cost or pricing data of a Change Order that Contractor is required to submit pursuant to Section 7.5.1. 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.

ARTICLE 8 TIME

§ 8.1 Definitions

- § 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- § 8.1.2 The date of commencement of the Work is the date established in the Agreement.
- § 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.
- § 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

- § 8.2.2 The Contractor shall not knowingly commence the Work prior to the effective date of surety bonds and insurance required to be furnished by the Contractor and Owner.
- § 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

- § 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then to the extent such delay will prevent the Contractor from achieving Substantial Completion within the Contract Time, the Contract Time shall be extended for such reasonable time as the Architect may determine, 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.
- § 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.
- § 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

- § 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.
- § 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

- § 9.2.1 The Contractor shall submit a schedule of values to the Architect within ten (10) days of full execution of the Agreement, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.
- § 9.2.2 As requested by the Architect, the Contractor and each Subcontractor shall prepare a trade payment breakdown for the Work for which each is responsible. The breakdown, being submitted on a uniform standardized format approved by the Architect and Owner, shall be divided in detail, using convenient units, sufficient to accurately determine the value of completed Work during the course of the Project. The Contractor shall update the schedule of values as required by either the Architect or Owner as necessary to reflect:
 - .1 the description of Work (listing labor and material separately);
 - .2 the total value of the Work;
 - .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.

§ 9.2.3 Any schedule of values or trade breakdown that fails to provide 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.

§ 9.3 Applications for Payment

- § 9.3.1 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. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require (such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers), and shall reflect retainage as provided for in the Contract Documents.
- § 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.
- § 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.
- § 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing, provided such materials or equipment will be subsequently incorporated in the Work. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site. 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.
- § 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

- § 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.
- § 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated in both the Application for Payment and, if required to be submitted, the accompanying current construction schedule, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means,

methods, techniques, sequences, or procedures; or (3) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect shall withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. 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. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.
- § 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.
- § 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.
- § 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

- § 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.
- § 9.6.2 Pursuant to S.C. Ann. §§ 29-6-10 through 29-6-60, the Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.
- § 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.
- § 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 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 final dispute resolution order, then the Contractor may, upon seven additional days' 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 by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive written list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect, the Owner, and any other party the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable 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.

- .1 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.
- .2 If more than one Substantial Completion inspection is required, the Contractor shall reimburse the Owner for all costs of re-inspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor.
- .3 Representatives of the State Fire Marshal's Office and other authorities having jurisdiction may be present at the Substantial Completion inspection or otherwise inspect the completed Work and advise the Owner whether the Work meets their respective requirements for the Project.

- § 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.
- § 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner for its written acceptance of responsibilities assigned in the Certificate and a copy of the signed Certificate shall be delivered to the Contractor. Upon such acceptance, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.
- § 9.8.6 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.
- § 9.8.7 The Owner may not occupy the Work until all required occupancy permits, if any, have been issued and delivered to the Owner.

§ 9.9 Partial Occupancy or Use

- § 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.
- § 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.
- § 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

- § 9.10.1 Unless the parties agree otherwise in the Certificate of Substantial Completion, the Contractor shall achieve Final Completion within thirty days after Substantial Completion. Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect, the Owner, and any other party the Architect or the Owner choose will make an inspection on a date and at a time mutually agreeable. 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 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.
 - .1 If more than one Final Completion inspection is required, the Contractor shall reimburse the Owner for all costs of re-inspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor.
 - .2 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 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.

§ 9.10.2 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,
- a written statement that the Contractor knows of no 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 documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties.
- .6 if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and 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,
- .7 required Training Manuals,
- 8 equipment Operations and Maintenance Manuals,
- .9 any certificates of testing, inspection or approval required by the Contract Documents and not previously provided, and
- 10. one copy of the Documents required by Section 3.11.

§ 9.10.3 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, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

- § 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from
 - .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
 - .2 failure of the Work to comply with the requirements of the Contract Documents;
 - .3 terms of special warranties required by the Contract Documents; or
 - .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a 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.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and

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- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- § 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.
- § 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.
- § 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- § 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.
- § 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.
- § 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

- § 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance which was not discoverable as provided in Section 3.2.1 and not addressed in 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 a 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 notify the Owner and Architect of the condition. 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.
- § 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

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promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up. 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 rights of either party to disagree and assert a Claim in accordance with Article 15.

- § 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.
- § 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.
- § 10.3.5 In addition to its obligations under Section 3.18, the Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 Reserved

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. The Contractor shall immediately give the Owner and Architect notice of the emergency. This initial notice may be oral followed within five (5) days by a written notice setting forth the nature and scope of the emergency. Within fourteen (14) 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.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

- § 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.
- § 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.
- § 11.1.3 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.
- § 11.1.4 Failure to Purchase Required Property Insurance. If the Contractor fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the

Contract Documents, the Contractor shall inform the Owner in writing prior to commencement of the Work. Upon receipt of notice from the Contractor, the Owner may delay commencement of the Work and may obtain insurance that will protect the interests of the Owner in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall not be equitably adjusted. In the event the Contractor fails to procure coverage, the Contractor waives all rights against the Owner to the extent the loss to the Contractor (including Subcontractors and Sub-subcontractors) would have been covered by the insurance to have been procured by the Contractor. The cost of the insurance shall be charged to the Contractor by a Change Order. If the Contractor does not provide written notice, and the Owner is damaged by the failure or neglect of the Contractor to purchase or maintain the required insurance, the Contractor shall reimburse the Owner for all reasonable costs and damages attributable thereto.

§ 11.1.5 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner and all additional insureds of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Owner: (1) the Owner, upon receipt of notice from the Contractor, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall not be equitably adjusted; and (3) the Contractor waives all rights against the Owner to the extent any loss to the Contractor, Subcontractors, and Sub-subcontractors would have been covered by the insurance had it not expired or been cancelled. If the Owner purchases replacement coverage, the cost of the insurance shall be charged to the Contractor by an appropriate Change Order. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Reserved

§ 11.2.3 Reserved

§ 11.3 Waivers of Subrogation

§ 11.3.1 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; (2) the Architect and Architect's consultants; and (3) Separate Contractors, 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 those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.3.3 Limitation on the Owner's Waiver of Subrogation

South Carolina law prohibits the State from indemnifying a private party. Accordingly, and notwithstanding anything in the Agreement to the contrary, including but not limited to Sections 11.3.1, 11.3.2. and 11.4, the Owner cannot and

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does not waive subrogation to the extent any losses are covered by insurance provided by the South Carolina Insurance Reserve Fund.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

- § 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Contractors 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 11.5.2. The Contractor shall pay the Architect and Owner their just shares of insurance proceeds received by the Contractor, and by appropriate agreements the Architect and Owner shall make payments to their consultants and separate contractors in similar manner.
- § 11.5.2 Prior to settlement of an insured loss, the Contractor shall notify the Owner of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Owner shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Owner does not object, the Contractor shall settle the loss and the Owner shall be bound by the settlement and allocation. Upon receipt, the Contractor shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Owner timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Contractor may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.
- § 11.5.3 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.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

- § 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/inspection and be replaced at the Contractor's expense without change in the Contract Time.
- § 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense unless the condition was caused by the Owner or a Separate Contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

.1 If 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.

§ 12.2.2 After Substantial Completion

- § 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.
- § 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.
- § 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2 unless otherwise provided in the Contract Documents.
- § 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- § 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.
- § 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

- § 13.1.1 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.
- § 13.1.2 This Contract is formed pursuant to and governed by the South Carolina Consolidated Procurement Code and is deemed to incorporate all applicable provisions thereof and the ensuing regulations.

§ 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 an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.3 Rights and Remedies

- § 13.3.1 Unless expressly provided otherwise, duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.
- § 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.
- § 13.3.3 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
 - 7.5 Pricing Data and Audit
 - A.3.2.2 Contractor's Liability Insurance (A101, Exhibit A)
 - A.3.5 Performance and Payment Bond (A101, Exhibit A)
 - 15.1.7 Claims for Listed Damages
 - 15.1.8 Waiver of Claims Against the Architect
 - 15.6 Dispute Resolution
 - 15.6.5 Service of Process

§ 13.4 Tests and Inspections

- § 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Owner and Architect timely notice of when and where tests and inspections are to be made so that they may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.
 - Inspection, Special Inspections, and testing requirements, if any, as required by the ICC series of Building Codes shall be purchased by the Owner.
 - .2 Contractor shall schedule and request inspections in an orderly and efficient manner and shall notify the Owner whenever the Contractor schedules an inspection. 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.
- § 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner and Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.
- § 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense and shall be deducted from future Applications of Payment.

- § 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.
- § 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.
- § 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due to the Contractor and unpaid under the Contract Documents shall bear interest only if and to the extent allowed by S.C. Code Ann. §§ 29-6-10 through 29-6-60. 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.

§ 13.6 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.

§ 13.7 Interpretation of Building Codes

As required by S.C. Code Ann. § 10-1-180, OSE shall determine the enforcement and interpretation of all building codes and referenced standards on state buildings. The Contractor shall refer any questions, comments, or directives from local officials to the Owner and OSE for resolution.

§ 13.8 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.

§ 13.9 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 subcontractor's 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-subcontractor's 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)

§ 13.10 Drug-Free Workplace

The Contractor must comply with the Drug-Free Workplace Act, S.C. Code Ann. §§ 44-107-10, et seq. The Contractor certifies to the Owner that Contractor will provide a Drug-Free Workplace, as defined by S.C. Code Ann. § 44-107-20(1).

§ 13.11 False Claims

According to S.C. Code Ann. § 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.

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§ 13.12 Prohibited Acts

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)

§ 13.13 Open Trade (Jun 2015)

During the contract term, including any renewals or extensions, Contractor will not engage in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in S.C. Code Ann. § 11-35-5300.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

- § 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, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, 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 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.
- § 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.
- § 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit, and costs incurred by reason of such termination.
- § 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

- § 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 or suppliers in accordance with the Contract Documents and the respective agreements between the Contractor and the Subcontractors or suppliers;
 - .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.
- § 14.2.2 When any of the reasons described in Section 14.2.1 exist, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.
- § 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.
- § 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.
- § 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, or that the termination for cause was affected by any other error, then Owner and Contractor agree that the termination shall be conclusively deemed to be one for the convenience of the Owner, and the rights and obligations of the parties shall be the same as if the termination had been issued for in Section 14.4.

§ 14.3 Suspension by the Owner for Convenience

- § 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.
- § 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. No adjustment shall be made to the extent
 - .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
 - .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

- § 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 notice of the termination to the Contractor specifying the part of the Contract terminated and when termination becomes effective.
- § 14.4.2 Upon receipt of 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.
- § 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and any other adjustments otherwise set forth in the Agreement.
- § 14.4.4 Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not (i) affect the Owner's right to require the termination of a subcontract, or (ii) increase the obligation of the Owner beyond what it would have been if the subcontract had contained an appropriate clause.
- § 14.4.5 Upon written consent of the Contractor, the Owner may reinstate the terminated portion of this Contract in whole or in part by amending the notice of termination if it has been determined that:
 - the termination was due to withdrawal of funding by the General Assembly, Governor, or State Fiscal Accountability Authority 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.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. 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. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Reserved

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by 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 under this Section 15.1.3.1 shall 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 15.1.6.2. By failing to give written notice of a Claim within the time required by this Section, a party expressly waives its Claim.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Architect is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 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.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Architect's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. 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.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

.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.
- 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.
- § 15.1.6.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the work, and the number of days increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.
- § 15.1.6.4 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

§ 15.1.7 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.

- § 15.1.7.1 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 13.5 (Interest), (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency.
- § 15.1.7.2 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 13.5 (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.
- § 15.1.7.3 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).

§ 15.1.8 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).

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

§ 15.6 Dispute Resolution

- § 15.6.1 If a Claim is not resolved pursuant to Section 15.5 to the satisfaction of either party, both parties shall attempt to resolve the dispute at the field level through discussions between Contractor's Representative and Owner's Representative. If a dispute cannot be resolved through Contractor's Representative and Owner's Representative, then the Contractor's Senior Representative and the Owner's Senior Representative, upon the request of either party, shall meet as soon as conveniently possible, but in no case later than twenty-one (21) 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, 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 States Constitution.

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

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

§ 15.6.5 Service of Process

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

ARTICLE 16 PROJECT-SPECIFIC REQUIREMENTS AND INFORMATION

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

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

SE-355

PERFORMANCE BOND

Name:		t full name or legal title and address of Contractor	r)		
Address:					
hereinafter referred to as "Contr	actor", and (Insert full name c	and address of principal place of business of Sure	ty)		
Name:					
Address:					
hereinafter called the "surety", a	are jointly and severally he	eld and firmly bound unto (Insert full name	and address of Agency)		
Name: <u>Aiken Technica</u>	ıl College				
Address: <u>2276 Jefferson</u>	Davis Highway				
Graniteville, SC					
hereinafter referred to as "Agen of the Bond to which payment administrators, successors and a	to be well and truly made	ssigns, the sum ofe, the Contractor and Surety bind them ly, firmly by these presents.	(\$), being the sum nselves, their heirs, executors,		
WHEREAS, Contractor has by	written agreement dated	entered into a contract	with Agency to construct		
State Project Name: 900 B	uilding Roof Replacement	t			
State Project Number: H59)-6198-PD				
Brief Description of Award	ed Work: Roof Replacem	nent			
in accordance with Drawings an	d Specifications prepared	by (Insert full name and address of A/E)			
Name: Shepard & Associates, LLC					
Address: 3547 Dreher Shoals Road, Suite 6					
<u>Irmo, SC 29063</u>	}				
which agreement is by reference	e made a part hereof, and is	s hereinafter referred to as the Contract.			
		ding to be legally bound hereby, subjectits behalf by its authorized officer, ager			
DATED this day of shall be no earlier than	Date of Contract), 2	BOND NUMBER			
CONTRACTOR		SURETY			
By:		By:			
	(Seal)		(Seal)		
Print Name:		Print Name:			
Print Title:		Print Title:			
		(Attach Power of Attorney)			
Witness:		Witness:			

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

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 si 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 ref	erred to as "Contractor", and (Insert full name and a	ddress of principal place of business of Surety)			
Name:					
Address:					
hereinafter cal	led the "surety", are jointly and severally held a	and firmly bound unto (Insert full name and address of Agency)			
Name:	Aiken Technical College				
Address:	2276 Jefferson Davis Highway				
	Graniteville, SC 29829				
of the Bond to	erred to as "Agency", or its successors or assign to which payment to be well and truly made, the successors and assigns, jointly and severally, f	is, the sum of(\$), being the sum ne Contractor and Surety bind themselves, their heirs, executors, firmly by these presents.			
WHEREAS,	Contractor has by written agreement dated	entered into a contract with Agency to construct			
State Proj	ect Name: 900 Building Roof Replacement				
Brief Des	cription of Awarded Work: Roof Replacement				
in accordance	with Drawings and Specifications prepared by (Insert full name and address of A/E)			
Name:	Shepard & Associates, LLC				
Address: 3547 Dreher Shoals Road, Suite 6					
	Irmo, SC 29063				
which agreeme	ent is by reference made a part hereof, and is he	reinafter referred to as the Contract.			
each cause this		g to be legally bound hereby, subject to the terms stated herein, do cuted on its behalf by its authorized officer, agent or representative. BOND NUMBER			
CONTRAC	TOR	SURETY			
Bv:		Ву:			
·	(Seal)	(Seal)			
Print Name:		Print Name:			
Print Title:		Print Title:			
-		(Attach Power of Attorney)			
Witness:		Witness:			

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

LABOR & MATERIAL PAYMENT BOND

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

- 1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency to pay for all labor, materials and equipment required for use in the performance of the Contract, which is incorporated herein by reference.
- 2. With respect to the Agency, this obligation shall be null and void if the Contractor:
- 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
- 2.2 Defends, indemnifies and holds harmless the Agency from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract.
- 3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
- **4.** With respect to Claimants, and subject to the provisions of Title 29, Chapter 5 and the provisions of §11-35-3030(2)(c) of the SC Code of Laws, as amended, the Surety's obligation under this Bond shall arise as follows:
- 4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him
- **4.2** A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.
- 4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of o ne year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.
- **5.** When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
- 5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- **5.2** Pay or arrange for payment of any undisputed amounts.
- 5.3 The Surety's failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.

- **6.** Amounts owed by the Agency to the Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the Contractor furnishing and the Agency accepting this Bond, they agree that all funds earned by the contractor in the performance of the Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Agency's prior right to use the funds for the completion of the Work.
- 7. The Surety shall not be liable to the Agency, Claimants or others for obligations of the Contractor that are unrelated to the Contract. The Agency shall not be liable for payment of any costs or expenses of any claimant under this bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
- **8.** The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
- 9. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the Agency or the contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
- 10. By the Contractor furnishing and the Agency accepting this Bond, they agree that this Bond has been furnished to comply with the statutory requirements of the South Carolina Code of Laws, as amended, and further, that any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
- **11.** Upon request of any person or entity appearing to be a potential beneficiary of this bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
- 12. Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the laws of the State of South Carolina.

13. DEFINITIONS

- 13.1 Claimant: An individual or entity having a direct contract with the Contractor or with a Subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the Contractor and the Contractor's Subcontractors, and all other items for which a mechanic's lien might otherwise be asserted.
- 13.2 Remote Claimant: A person having a direct contractual relationship with a subcontractor of the Contractor or subcontractor, but no contractual relationship expressed or implied with the Contractor.
- 13.3 Contract: The agreement between the Agency and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

2023 Edition **SE-380** CHANGE ORDER NO.:___ CHANGE ORDER TO DESIGN-BID-BUILD CONTRACT **AGENCY:** Aiken Technical College **PROJECT NAME:** 900 Building Roof Replacement PROJECT NUMBER: H59-6198-PD CONTRACTOR: **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: \$ 0.00 3. **Contract Sum prior to this Change Order:** 4. **Amount of this Change Order:** 0.00 5. New Contract Sum, including this Change Order: \$ **ADJUSTMENTS IN THE CONTRACT TIME: Initial Date for Substantial Completion:** 2. Sum of previously approved increases and decreases in Days: Days 3. Change in Days for this Change Order: Days 0 Days 4. Total Number of Days added to this Contract including this Change Order: 5. **New Date for Substantial Completion:** AGENCY ACCEPTANCE AND CERTIFICATION: I certify that the Agency has authorized, unencumbered funds available for obligation to this contract. BY:_ _____ Date: (Signature of Representative)

Print Name of Representative: Dora R. Robson

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

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

SUBMIT THE FOLLOWING TO OSE

- SE-380, completed and signed by the Agency.
- SE-380, Page 2, completed and signed by the Contractor, A/E and Agency, with back-up information to support request.

CHANGE ORDER REQUEST SUMMARY – DESIGN-BID-BUILD AGENCY: Aiken Technical College PROJECT NAME: 900 Building Roof Replacement PROJECT NUMBER: H59-6198-PD

CONTRACTOR:

This Contract is requested to be changed as follows: (Insert description of change in space provided below.)

ADJUSTMENTS IN THE CONTRACT TIME: Requested Change in Days for this Change Order: ______Days

			(1) Contractor	(2) Subcontractor	(3) TOTAL
Direct Costs (Provide back-up, including hourly rates, invoices, manhours, etc.)	1.	Labor			
	2.	Materials (including Sales Tax)			
	3.	Rental Charges			
	4.	Subtotal Direct Costs (sum lines 1 – 3)	\$ 0.00	\$ 0.00	\$ 0.00
Contractor Markup (per AIA A201, Section 7.1.5)	5.	Contractor OH&P (not to exceed 17% of line 4, col 1)			
	6.	Subcontractor's OH&P (not to exceed 17% of line 4, col 2)			
	7.	Contractor markup on Subcontractor (not to exceed 10% of line 4, col 2)			
	8.	Total Contractor Markup (sum lines 5 – 7)	\$ 0.00	\$ 0.00	\$ 0.00
Additional Danding	9.	Bonds			
Additional Bonding, Insurance and Permit Costs Associated with	10.	Insurance			
	11.	Permits, Licenses or Fees			
Change Order	12.	Subtotal (sum lines 9 – 11)	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL	13.	Change Order Cost (sum lines 4, 8, 12, col 3)			\$ 0.00

	(sum lines 4, 8, 12	2, col 3)			Ψ 0.00
A	ADJUSTMENTS IN THE CONTRACT SUM:	Amount of this Char	nge Order Request:	\$	
C	CONTRACTOR ACCEPTANCE:				
	BY:(Signature of Representat			Date:	
	(Signature of Representat	ive)			
	Print Name of Representative:				
A	A/E RECOMMENDATION FOR ACCEPTANCE: BY:			Date:	
	(Signature of Representative: Doug Graul, RRO	,			
A	AGENCY ACCEPTANCE:				
	BY:			Date:	
	(Signature of Representative))			
	Print Name of Representative: <u>Dora R. Robson</u>				

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Work covered by this contract includes furnishing all labor, materials, tools, devices, appliances, and equipment necessary to perform all the work described in the Contract Documents.
- 1.1.2 All work is located at the 900 Building on the Aiken Technical College Campus at 2276 Jefferson Davis Highway, Graniteville, SC 29829. Refer to drawing K1.
- 1.2 BASE BID WORK Aiken Technical College 900 Building:

RAs 1, 2, 3, 5, 6, and 7 (Approximately 40,646 SF): The work generally consists of the complete removal and disposal of the existing aggregate ballast, filter cloth, EPDM roof membrane, associated EPDM and metal flashings down to the surface of the existing rigid insulation; removal and disposal of existing metal coping and overflow scupper liners; removal and disposal of abandoned equipment curbs;

preparations include, but are not limited to, inspection of existing insulation, substrate decking, and parapet walls making repairs or replacement as necessary; infilling metal decking where abandoned equipment curb was removed, raising expansion joints and sanitary vents, as necessary; disconnecting, raising and reconnecting existing curb mounted rooftop equipment, as necessary; wire brush, prime and paint existing roof hatch on RA 6;

and the new installation of a mechanically attached high density polyisocyanurate cover board, single ply polyvinyl chloride (PVC) membrane roof assembly, metal, PVC, and liquid applied flashings, metal coping, overflow scupper liners and expansion joint flashings, walk pads, condensate drain piping and supports, and miscellaneous work, as specified herein.

RA 4 (Approximately 780 SF): The work general consists of the complete removal and disposal of the existing aggregate surfaced roof assembly and rigid insulation down to the existing metal roof deck, the complete removal and disposal of bituminous and metal flashings, metal coping cap and overflow scupper liners;

preparations include, but are not limited to, inspection of existing substrate decking, making repairs or replacement as necessary; wire brushing and priming existing oxidized metal decking; raising sanitary vents, as necessary; disconnecting, raising and reconnecting existing curb mounted rooftop equipment, as necessary;

and the new installation of mechanically attached flat and tapered polyisocyanurate insulation, high density polyisocyanurate cover board, single ply polyvinyl chloride (PVC) membrane roof assembly, metal and PVC flashings, metal coping, overflow scupper liners, and associated miscellaneous work as specified herein.

1.3 UNIT PRICES

- 1.3.1 Do include in BASE BID the following quantities of unit price materials:
 - 1.3.1.1 <u>Unit Price 1</u> Removal and replacement of any damaged or deteriorated wood blocking.
 1,000 BF
 - 1.3.1.2 <u>Unit Price 2</u> Rust and scale removal and application of rustpreventive primer to corroded steel roof decking 110 SF
 - 1.3.1.3 <u>Unit Price 3</u> Removal and replacement of damaged or deteriorated tapered or flat polyisocyanurate insulation. 1,600 SF

1.4 CONTRACT METHOD

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

1.5 REFERENCE STANDARDS

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

1.6 EXISTING SITE CONDITIONS

- 1.6.1 Information in this section is provided only to establish a general description and is not necessarily accurate. The Contractor is responsible for visiting the site and satisfying himself as to the existing conditions, size of existing roof areas, metal components, etc. before submitting his bid.
- 1.6.2 <u>Aiken Technical College 900 Building:</u>
 - 1.6.2.1 Square Footage by Roof Area (Actual Area):

```
Roof Area 1
               - approximately 14,470 SF
Roof Area 2
               - approximately 2,537 SF
Roof Area 3

    approximately

                                 837 SF
Roof Area 4
               - approximately
                                 780 SF
               - approximately 13,632 SF
Roof Area 5
               - approximately 5,827 SF
Roof Area 6
              - approximately 3,343 SF
Roof Area 7
Total Roof Area - approximately 41,426 SF
```

1.6.2.2 Roof Area 1:

- 1.6.2.2.1. Existing roof assembly consists of a ballasted EPDM roof membrane installed over a filter cloth, installed over 3" polyisocyanurate insulation, loose laid over a 5/8" gypsum board, loose laid over a metal "N" deck, supported by metal bar joists.
- 1.6.2.2.2. Water drains to internal main roof drains. Secondary drainage is provided by through wall overflow scuppers.
- 1.6.2.2.3. Roof height is approximately 33' above finished grade.
- 1.6.2.2.4. Slope in the structure is approximately ¼" per foot.
- 1.6.2.2.5. Roof area is generally rectangular in shape.
- 1.6.2.2.6. Equipment Roof Area 1:
 - a. (10) Main Roof Drain(s)
 - b. (8) Overflow Scupper(s)
 - c. (4) Fresh Air Intake(s)
 - d. (1) Hot Vent Stack(s)
- 1.6.2.3 Roof Areas 2, 3, 5, 6 and 7:
 - 1.6.2.3.1. Existing roof assembly consists of a ballasted EPDM roof membrane installed over a filter cloth, installed over ½" tapered polyisocyanurate insulation with a 2" polyisocyanurate base insulation, loose laid over a 5/8" gypsum board, loose laid over a metal "B" deck, supported by metal bar joists.
 - 1.6.2.3.2. Roof height above finished grade is approximately 17' at RAs 2, 3, 5, 6 & 7.
 - 1.6.2.3.3. Water drains to internal main roof drains. Secondary drainage is provided by through wall overflow scuppers.
 - 1.6.2.3.4. Slope in the insulation is approximately 1/4" per foot.
 - 1.6.2.3.5. Roof areas are generally polyangular in shape.
 - 1.6.2.3.6. Equipment Roof Area 2:

1.6.2.3.6.1	(2) Main Roof Drain(s)
1.6.2.3.6.2	(4) Overflow Scupper(s)
1.6.2.3.6.3	(4) Power Ventilator(s)
1.6.2.3.6.4	(4) Exhaust Fan(s)
1.6.2.3.6.5	(8) Sanitary Vent(s)

1.6.2.3.7. Equipment Roof Area 3:

- a. (1) Main Roof Drain(s)
- b. (2) Overflow Scupper(s)
- c. (1) Curb Mounted HVAC Unit(s)

1.6.2.3.8. Equipment Roof Area 5:

- a. (12) Main Roof Drain(s)
- b. (5) Overflow Scupper(s)
- c. (1) Kitchen Package Unit(s)
- d. (1) Fresh Air Intake(s)
- e. (4) Power Ventilator(s)
- f. (1) Hot Vent Stack(s)
- g. (13) Sanitary Vent(s)
- h. (1) Electrical Penetration(s)
- i. (1) Abandoned Equipment Curb(s)

1.6.2.3.9. Equipment Roof Area 6:

- a. (4) Main Roof Drain(s)
- b. (3) Overflow Scupper(s)
- c. (1) Roof Hatch(es)
- d. (1) Exhaust Fan(s)
- e. (4) Power Ventilator(s)
- f. (2) Hot Vent Stack(s)
- g. (4) Sanitary Vent(s)
- h. (8) Canopy Support Penetration(s)

1.6.2.3.10. Equipment Roof Area 7:

- a. (2) Main Roof Drain(s)
- b. (2) Overflow Scupper(s)
- c. (8) Canopy Support Penetration(s)

1.6.2.4 Roof Area 4:

- 1.6.2.4.1. Existing roof system assembly consists of an aggregate surfaced Built-Up Roofing (BUR) assembly, adhered in hot asphalt to a 1" perlite cover board, adhered in hot asphalt to 1.5" of polyisocyanurate insulation, mechanically attached to a metal "F" deck, supported by metal bar joists.
- 1.6.2.4.2. Water drains to internal main roof drains. Secondary drainage is provided by through wall overflow scuppers.
- 1.6.2.4.3. Roof height is approximately 14' above finished grade.
- 1.6.2.4.4. Slope in the structure is approximately 1/4" per foot.

- 1.6.2.4.5. Roof area is generally rectangular in shape.
- 1.6.2.4.6. Equipment Roof Area 4:
 - a. (2) Main Roof Drain(s)
 - b. (2) Overflow Scupper(s)
 - c. (1) Exhaust Fan(s)
 - d. (1) Sanitary Vent(s)

1.7 WORK SEQUENCE

- 1.7.1 Work shall proceed in an orderly sequence. Phased construction is unacceptable.
- 1.7.2 The Contractor shall strive to cause a minimum of disruption to the building operations and occupancy during construction activities.

1.8 COMPLETION DATE

1.8.1 Scheduling and speed of construction are of prime importance in the completion of the Work. Demolition, Preparation and New Construction shall commence as established in the Notice to Proceed. BIDDER agrees that the BASE BID WORK will be substantially complete and ready for final payment in accordance with the General Conditions within 85 calendar days after Notice to Proceed. BIDDER acknowledges that in case of inclement weather during normal workdays, weekend work may be required to complete the Work within the allotted time.

1.9 LIQUIDATED DAMAGES

1.9.1 Liquidated damages will be assessed in the amount of \$250.00 for each calendar day the actual Contract Time for Substantial Completion exceeds the specified Contract Time.

1.10 CONTRACTOR USE OF PREMISES

- 1.10.1 Limit use of premises for construction operations to allow for Owner occupancy.
- 1.10.2 Coordinate use of premises under the direction of the Owner.
- 1.10.3 The Contractor shall be held liable for any damages to the building, the building contents, or its occupants resulting from work under this contract. The Contractor shall take all precautions necessary to protect the occupants and the building during the construction period.
- 1.10.4 The Contractor is to maintain the existing building in a safe, weather tight, and secure condition throughout the construction period. The Contractor is to repair any damage caused by him or any of his subcontractors. Should damage be to finishes or construction that is not defined in these Contract Documents, then repairs shall be made to the specifications approved by and at the sole discretion of the Owner.

- 1.10.5 The Contractor is to confine their operations to the site of the building. The site beyond this building is not to be disturbed. The Owner will identify parking for the Contractor and his employees.
- 1.10.6 The Contractor is to keep existing driveways and entrances serving the premises clear and available at all times. Do not use for parking or storage of materials or equipment. The stockpiling of materials must be confined to the area identified by the Owner.
- 1.10.7 The Contractor and his personnel are to lock their vehicles and other mechanical or motorized construction equipment when parked and unattended. Do not leave vehicles or equipment unattended with motor running or ignition key in place.
- 1.10.8 Open fires will not be permitted on the premises.
- 1.10.9 Utilities and Services: The Contractor will be provided water to the extent of the existing sources. The Contractor shall be responsible for any taps or connections that may be needed or desired by them. They are also responsible for getting the service to any location where needed or desired. The Contractor will be provided without charge reasonable quantities of available utilities; however, if the services are abused, they will be withdrawn. The Contractor shall provide temporary portable electric generators for electricity required during construction.

1.11 ASBESTOS PRODUCTS:

- 1.11.1 No products containing asbestos fibers are present in the work covered in the Base Bid.
- 1.11.2 No asbestos bearing materials are to be incorporated into the work as a part of this contract. No existing asbestos containing material is to be left or incorporated into the work of this contract.
- 1.11.3 In the event the Contractor finds asbestos containing materials not previously identified, then Contractor shall stop all work in the affected area and notify the Owner and Roofing Consultant. Contractor shall provide all materials necessary to temporarily dry-in the affected area in the Base Bid. Additional work caused by the discovery, if authorized by the Owner, will be handled as a Change Order to this contract.
- 1.12 CONTRACTOR'S CONDUCT: The following requirements are expressed to the Contractor, and he is asked to ensure that all employees, subcontractors, and suppliers are aware of these warnings.
 - 1.12.1 No drugs, alcohol, or firearms will be permitted on the grounds of the facility.
 - 1.12.2 There will be no favors or fraternizing with students, faculty and staff, or employees of the facility.
 - 1.12.3 Contractors, subcontractors and their employees are required to wear appropriate work wear, hard hats and safety footwear, as the case may be, while

on campus. Articles of clothing must be neat and tidy in appearance, and cannot display offensive or inappropriate language, symbols or graphics. The Owner has the right to decide if such clothing is inappropriate.

- 1.12.4 Contractor and sub-contractors are to take necessary precautions to protect all occupants and employees of the facility, Contractor personnel, and personal property from any damage from their operations.
- 1.12.5 The Contractor, subcontractors, and material suppliers are to be careful during placement of materials and equipment. The Owner will in no way be responsible for equipment and materials lost as the result of being left unattended or misplaced.
- 1.12.6 The use of foul, obscene, or abusive language by the Contractor's or subcontractor's employees is prohibited on the grounds of the facility. Violations of this policy may result in the dismissal of the Contractor.
- 1.12.7 Smoking or use of any tobacco products by the Contractor's or subcontractor's employees is prohibited on the grounds of the facility. Violations of this policy may result in the dismissal of the Contractor.

1.13 OWNER OCCUPANCY REQUIREMENTS

1.13.1 Owner will occupy premises during entire period of construction for conducting normal operations. Contractor is to cooperate with the Owner's operations. The Contractor shall not block any building exits or hinder any path of egress.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUMMARY

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

1.2 APPLICATION FOR PAYMENT

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

completion to the Owner, and specified warranties are provided in accordance with Section 01740.

1.3 UNIT PRICES

- 1.3.1 A Unit Price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
- 1.3.2 Before proceeding with work, Contractor shall survey the work to be covered under Unit Prices in the presence of the Roofing Consultant for verification of quantities for the Project.
- 1.3.3 Unit Price Schedule: Unit Prices shall include costs of materials, delivery, labor (to remove and replace), insurance, rental of tools and equipment, overhead and margin of profit.
 - 1.3.3.1 Include 1,000 board feet in the Base Bid costs for replacement of any damaged or deteriorated wood blocking members. Quote a separate unit price (per board foot) for such work. The final contract amount will be adjusted by change order increasing or decreasing the final contract price based on the actual replacement made during the course of the work using the quoted unit price.
 - 1.3.3.2 Include 110 square feet in the Base Bid costs for rust and scale removal and application of rust-preventive primer to corroded steel roof decking. Quote a separate unit price (per square foot) for such work. The final contract amount will be adjusted by change order increasing or decreasing the final contract price based on the actual replacement made during the course of the work using the quoted unit price.
 - 1.3.3.3 Include 1,600 square feet in the Base Bid costs for removal, disposal and replacement of any damaged or deteriorated polyisocyanurate insulation. Quote a separate unit price (per square foot) for such work. The final contract amount will be adjusted by change order increasing or decreasing the final contract price based on the actual replacement made during the course of the work using the quoted unit price.
- 1.3.4 Contractor shall maintain a daily log showing dates, location, and exact quantities of unit price work. Copies of log and appropriate change order forms shall be submitted with each request for payment from the contractor unless no unit price work is accomplished during the payment period. If appropriate, Payment Applications containing unit price work will not be processed unless unit price logs are attached.
- PART 2 PRODUCTS Not Used.
- PART 3 EXECUTION Not Used.

SUBMITTALS

PART 1 GENERAL

1.1 PROCEDURES

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

1.2 BID SUBMITTALS

- 1.2.1 Refer to "AIA Document A701™ 2018 SCOSE Version".
- 1.2.2 Drug-Free Workplace Statement (a part of bid form agreements as stated in "AIA Document A701™ 2018 SCOSE Version" Section 2.2.5 Drug Free Workplace Certification).

1.3 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

1.4 CONTRACTOR INFORMATION

- 1.4.1 Submit to Roofing Consultant on or before Pre-Construction Conference the following documents:
 - 1.4.1.1 A letter from the Contractor identifying the brand name, manufacturer and material proposed for use and include a statement that all proposed materials meet the specification requirements. Obtain Owner's approval before placing orders.
 - 1.4.1.2 Emergency contact information including phone numbers of principals, superintendent, foreman, and project manager.

RCP: deg

- 1.4.1.3 A Manufacturer's Certificate clearly stating that the specified roof covering meets the requirements for an Underwriter's Laboratories, Inc. Class A roof covering.
- 1.4.1.4 Foreman's Statement (copy attached).
- 1.4.1.5 Material Safety Data Sheets (3 copies).
- 1.4.2 Submit to Roofing Consultant within 2 weeks of project startup and must be approved prior to Contractor's First Application for Payment:
 - 1.4.2.1 A copy of AIA Document G703 listing each phase of the work and its scheduled value for approval.
 - 1.4.2.2 Furnish Manufacturer's Certificates of Compliance with materials' specifications for materials to be incorporated into the work. Certificates are to be signed by a responsible officer of the manufacturing firm and notarized.
- 1.4.3 Submit with each Monthly Payment Application a fully executed Contractor's Affidavit of Payment of Debts and Claims, AIA G706, and Contractor's Affidavit of Waiver of Release of Liens, AIA G706A.
- 1.4.4 Submit to Roofing Consultant upon completion of the work and prior to Contractor's Final Application for Payment:
 - 1.4.4.1 Certificate of Final Completion, SE-560, with executed Roofing Consultant's final punch list completed by Contractor attached.
 - 1.4.4.2 List of Subcontractors by specialty, including address and telephone number.
 - 1.4.4.3 Consent of Surety to Final Payment, AIA G707.
 - 1.4.4.4 Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
 - 1.4.4.5 Contractor's Affidavit of Release of Liens, AIA G706A.
 - 1.4.4.6 "No Asbestos" Certification (Statement on Contractor's letterhead that no asbestos containing materials were used in the completion of the Work.)
 - 1.4.4.7 Contractor's 2-year Watertight warranty to Owner.
 - 1.4.4.8 Manufacturer's 20-year NDL Labor & Material Warranty to Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3 1 TIMING

3.1.1 Make all submittals in accordance with schedules specified herein.

3.1.2 A minimum of 10 calendar days shall be allowed for review by the Roofing

Consultant following his receipt of the submittal.

3.1.3 If a submittal contains more than 10 shop drawings, Contractor shall indicate which drawings must be returned within 10 calendar days. Roofing Consultant shall have

an additional 10 days to return the balance of submittals.

3.1.4 Delays caused by tardiness in receipt of submittals shall not be an acceptable

basis for extension of the Contract completion date.

3.2 **REVIEW**

Review by the Roofing Consultant shall be directed to the general method of

construction and shall not be construed as a complete check, nor shall the review relieve the Contractor from responsibility for errors and/or omissions which may

exist.

3.2.2 The notations "Reviewed" or "Make Corrections as Noted" shall authorize the

Contractor to proceed with fabrication, purchase, or both subject to the revisions, if any, required by the Roofing Consultant's review comments.

3.2.3 The Contractor shall make all revisions as required. If the Contractor considers any required revisions to constitute a change, he shall notify the Roofing Consultant

under the provisions of the General Conditions.

3.2.4 Only those revisions directed or approved by the Roofing Consultant shall be

shown on the resubmittal.

3.2.5 After a submittal has been approved by the Roofing Consultant, substitution of materials, equipment, and/or procedures shall not be considered unless

accompanied by an acceptable explanation for the substitution.

END OF SECTION 01300

ENCLOSURE: Foreman's Statement Form

FOREMAN'S STATEMENT

A PROJECT MANUAL FOR

AIKEN TECHNICAL COLLEGE

ROOF RECOVER - 900 BUILDING

STATE PROJECT NUMBER: H59-6198-PD

DECEMBER 2022

l,	(Print Name), an employee of
	(Print Contractor Name) hereby
state that I have my own personal cop drawings, have thoroughly read them, and	by of the above referenced project specifications and have visited the work sites.
	Ву
	Date

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.1 SHOP DRAWINGS

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

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- 1.1.8 Submit shop drawings for the following details:
 - 1.1.8.1 Wood blocking attachment at equipment curbs, expansion joints and perimeter parapet walls.
 - 1.1.8.2 Metal coping cap, overflow scupper liner, counterflashing, expansion joint flashing and sanitary vent boots. Provide complete with flashings and attachment method.
 - 1.1.8.2.1 Minimum required components include wood blocking, fasteners, insulation, cover board, cants, tapered edge strips, adhesives, cements, flexible sheet membrane, metal, FSM and resin flashings, and sealant.
 - 1.1.8.3 Tapered insulation layout.
 - 1.1.8.4 Membrane seam layout.

1.2 PRODUCT DATA

- 1.2.1 On Contractor's letterhead, in a list form, submit a complete description of the materials to be used on the project including roofing system and all its components, the respective manufacturer, and a statement that all the listed items meet the requirements of the project specifications.
- 1.2.2 Submit each manufacturer's technical specifications and installation procedures for each major roofing component required.

1.3 SAMPLES

1.3.1 Submit two 6-inch-long samples of each metal shape to be used on this Project to Roofing Consultant for approval. Metal shapes are to be constructed in accordance with approved shop drawings and will be used for establishment of quality standards during installation.

1.4 RELATED SECTIONS

1.4.1 Section 01300 "Submittals."

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

QUALITY CONTROL

PART 1 GENERAL

1.1 QUALITY CONTROL – CONTRACTOR

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

1.2 QUALITY CONTROL – OWNER

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

1.3 QUALITY ASSURANCE

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

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

1.4 QUALITY CONTROL

- 1.4.1 Owner Responsibilities: Owner will provide inspections during the work. Such inspections may be daily or periodic.
- 1.4.2 Contractor Responsibilities: Unless otherwise indicated, provide quality-control inspections with Contractor's own work force. Repair or replace nonconforming work.
- 1.4.3 Associated Services: Cooperate with agencies performing inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Provide the following:
 - 1.4.3.1 Access to the Work.
 - 1.4.3.2 Incidental labor and materials necessary to facilitate inspections.
- 1.4.4 Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate inspections.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 REPAIR AND PROTECTION

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

END OF SECTION 01400

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TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION

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

1.2 PRODUCT HANDLING

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

PART 2 PRODUCTS

2.1 TEMPORARY UTILITIES

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

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the Owner 72 hours in advance to provide sufficient advance time to minimize disruption of service. Contractor shall not disconnect or connect services unless authorized in writing by Owner.

2.2 TEMPORARY FACILITIES

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

2.3 CONSTRUCTION AIDS

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

PART 3 EXECUTION

Not Used.

CONSTRUCTION CLEANING

PART 1 GENERAL

1.1 SECTION INCLUDES

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

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

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

PART 3 EXECUTION

3.1 PROGRESS CLEANING

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

3.2 STORED MATERIALS

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

STORAGE AND PROTECTION

PART 1 GENERAL

1.1 FACILITY PROTECTION

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

1.2 MATERIAL PROTECTION

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

1.3 STORAGE

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

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 FINAL CLEANING

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

1.2 FINAL INSPECTION

- 1.2.1 Roofing Consultant's representative will conduct a final inspection with Owner's representative and the Contractor's representative.
- 1.2.2 Any scheduled inspection reports by the roof system manufacturer's representative or Local Jurisdiction Inspectors, if required, shall be furnished prior to Final Inspection and Contract Closeout.

1.3 WARRANTIES AND BONDS

1.3.1 Refer to Section 01740 "Warranties and Bonds" for requirements.

1.4 CLOSE-OUT

- 1.4.1 Final payment will be made to the Contractor only after the following have been submitted. Please provide (3) copies of the following documents:
 - 1.4.1.1 Certificate of Final Completion, SE-560, with executed Roofing Consultant's final punch list completed by Contractor attached.
 - 1.4.1.2 List of Subcontractors by specialty, including address and telephone number.
 - 1.4.1.3 Consent of Surety to Final Payment, AIA G707.
 - 1.4.1.4 Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
 - 1.4.1.5 Contractor's Affidavit of Release of Liens, AIA G706A.
 - 1.4.1.6 "No Asbestos" Certification (Statement on Contractor's letterhead that no asbestos containing materials were used in the completion of the Work.)
 - 1.4.1.7 Contractor's 2-year Watertight warranty to Owner.
 - 1.4.1.8 Manufacturer's 20-year NDL Labor & Material Warranty to Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

WARRANTIES, INSURANCE, AND BONDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Upon completion of the work and prior to the final payment, the Contractor shall submit the following items to the Roofing Consultant.
 - 1.1.1.1 Copies of all manufacturers' punch lists and documentation of completion.
 - 1.1.1.2 Copies of all punch lists prepared by the Roofing Consultant and documentation of completion.
 - 1.1.1.3 Contractor's 2-year Watertight warranty to Owner.
 - 1.1.1.4 Roof Manufacturer's 20-year NDL Weathertight Warranty to Owner.
 - 1.1.1.5 Asbestos Free Warranty

1.2 RELATED SECTION

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

1.3 WARRANTIES

- 1.3.1 Contractor's Warranty: Comply with the General Conditions of the Contract concerning warranties and bonds. The Contractor shall agree that the work covered under this Contract shall remain free from any water penetration and physical defects caused by defective workmanship or materials for a period of 2 years from the date of final acceptance by Owner. Warranty shall be in the form enclosed at the end of this section.
 - 1.3.1.1 Emergency repairs to defects and leaks shall be performed within two working days of receiving notice from Owner. As soon as weather permits, permanent repairs and restoration of affected areas shall be accomplished in a manner in conformance with the original Contract requirements. This work shall be done without additional cost to the Owner, except if it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hailstorm, or other unusual phenomena.
 - 1.3.1.2 In addition, the Contractor and Owner's representative shall conduct an inspection approximately 30 days prior to the end of the Contractor's warranty to determine the present physical condition of the roofing system. The Owner's representative shall then submit a written report as to the findings of this inspection. The Roofing Contractor, at his own expense, shall repair any defects covered under the scope of this

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contract.

- 1.3.1.3 The warranties shall also state that the Owner has the right, at any time during the 2-year Contractor's warranty period and the Manufacturer's warranty period, to make emergency repairs to protect the contents of the building or the building itself from damage due to leaking. The cost of emergency repairs made during the first two years of the warranty period shall be borne by the Contractor and action by the Owner shall not invalidate the warranty.
- 1.3.2 Roof Manufacturer's Warranty: Contractor shall furnish Owner the Roof Manufacturer's No Dollar Limit Unlimited Roofing System Guarantee with flashing endorsement covering all workmanship and materials issued by the roofing materials manufacturer for a period of 20 years from the date of substantial completion.
- 1.3.3 Asbestos Free Warranty: Contractor shall obtain and submit an ASBESTOS FREE WARRANTY from each subcontractor, material supplier, and equipment manufacturer upon completion of the work and prior to final payment. Each shall be in the form of that found at the end of this section and shall be properly executed and printed on the Contractors' or material and/or equipment suppliers' standard letterhead.

1.4 INSURANCE AND BONDS

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

PART 2 PRODUCTS Not Used.

PART 3 EXECUTION

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

END OF SECTION 01740

ENCLOSURES: Contractor's Two-Year Warranty

Asbestos Free Warranty

(CONTRACTOR'S LETTERHEAD) TWO YEAR WARRANTY

Known all men by these presents, that we, (<u>Insert Contractor Name</u>), having installed flat and tapered insulation, coverboard, flexible sheet membrane (FSM) assembly, FSM, metal and fluid applied flashings, coping caps, metal through wall overflow scuppers, expansion joint flashings, sheet metal work and having accomplished certain other work on the **900 Building Roof Replacement** under contract between **Aiken Technical College** and (<u>Insert Contractor Name</u>), warrant to **Aiken Technical College** with respect to said work that for a period of two years from date of final acceptance of said work, the roofing systems including insulation, coverboard, FSM roofing assembly, FSM, metal and liquid applied flashings, coping caps, metal through wall overflow scuppers, expansion joint flashings and sheet metal work shall be absolutely watertight and free from all leaks, provided however that the following are excluded from this warranty:

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

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

We, (Insert Contractor Name), further agree that for a period of two years from date of final acceptance referred to above, we will make repairs at no expense to the Owner to any defects which may develop in the work including, but not limited to failures of sealants, metal joinery, metal flashings, sanitary vent boots and wall panel assembly, in a manner compatible to the system and acceptable under industry standards and general practice.

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

IN WITNESS WHEREOF, we have a day of, 20		to be duly executed, this
CONTRACTOR:	WITNESS:	
by President (Owner)		Notary Public

Asbestos Free Warranty

Owner:	Aiken Technical College				
Subject Building Location:	bject Building Location: 2279 Jefferson Davis Highway, Graniteville, SC 29829				
ubject Building Name: 900 Building Roof Replacement					
Date of Substantial Comple	etion:				
Know all men by these p	resents that we,	tractor, Subcontractor, Material Supplier or Equipment Manufacturer)			
at the subject building i roof system component	ncluding removals of s; and installation of	nd/or supplies: accomplished roofing construction existing roofing, flashings, and/or miscellaneous new flexible sheet membrane roof assembly, mponents as under contract between:			
		nical College			
	,	and			
	(Contractor and/or Subcontractor, N	Material Supplier or Equipment Supplies)			
	ork, and that to our	nat no materials containing asbestos fibers were knowledge and belief, no materials containing			
Exceptions:	15.11	-			
	If there are no exce	ptions, state "No Exceptions" here.			
	F, we have caused this	WARRANTY PLAN WARRANTY PLAN WARRANTY PLAN WITNESS: WITNESS:			
Company					
Ву		Notary Public			

ROUGH CARPENTRY

PART 1 GENERAL

RELATED DOCUMENTS

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

1.2 SUMMARY

- 1.2.1 This Section includes but is not limited to the following:
 - 1.2.1.1 Wood blocking.
 - 1.2.1.2 Plywood sheathing.
- 1.2.2 Related Sections include the following:
 - 1.2.2.1 Division 7 Section 07540 "Thermoplastic Membrane Roofing".
 - 1.2.2.2 Division 7 Section 07591 "Removals & Preparation".

1.3 DEFINITIONS

- 1.3.1 Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1.3.1.1 NLGA National Lumber Grades Authority.
 - 1.3.1.2 SPIB Southern Pine Inspection Bureau.
 - 1.3.1.3 ALSCBR American Lumber Standards Committee Board of Review

1.4 SUBMITTALS

- 1.4.1 Material Certificates: Prior to start of work, submit manufacturer's Certificate of Compliance with the material specifications of this section, signed by a responsible officer of the manufacturing firm and notarized.
 - 1.4.1.1 Certify as to Treatment Process; Treatment Chemical; and Chemical Retention.

1.5 QUALITY ASSURANCE

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

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PART 2 PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 2.1.1.1 Lumber:
 - 2.1.1.1.1 Boise Cascade Corporation.
 - 2.1.1.1.2 Georgia-Pacific Corporation.
 - 2.1.1.1.3 Louisiana-Pacific Corporation.
 - 2.1.1.1.4 International Paper Corp.

2.2 WOOD PRODUCTS, GENERAL

- 2.2.1 Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 2.2.1.1 Factory mark each piece of lumber with grade stamp of grading agency.
 - 2.2.1.2 Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified.
 - 2.2.1.3 Provide dressed lumber, S4S, unless otherwise indicated.
 - 2.2.1.4 Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

2.3 MISCELLANEOUS LUMBER

- 2.3.1 For concealed boards, provide lumber with 19 percent maximum moisture content and of the following species and grades:
 - 2.3.1.1 Mixed southern pine, No. 2 grade; SPIB.
- 2.3.2 Do not use material that is warped or does not comply with requirements for untreated material.
- 2.3.3 Application: Treat all rough carpentry for use "above grade" to include, but not limited to, the following:
 - 2.3.3.1 Nailers, curbs, blocking, stripping, and similar members in connection with roofing, flashing, and waterproofing.

- 2.4 WOOD-PRESERVATIVE-TREATED MATERIALS (In Contact with Concrete or Masonry)
 - 2.4.1 Preservative Treatment by Pressure Process: AWPA C-2 (Ground Contact lumber) and AWPA C9 (plywood).
 - 2.4.2 Preservative Chemicals: Acceptable to authorities having jurisdiction the following or approved equal:
 - 2.4.2.1 Alkaline Copper Quaternaries (ACQ-C or D).
 - 2.4.2.2 Copper Azole (CA-B)
 - 2.4.3 Kiln-dry material after treatment to maximum moisture content of 19 percent for lumber and for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
 - 2.4.4 Retention of preservative shall be 0.40 pcf for ACQ Treatment or 0.21 pcf for CA Treatment.
 - 2.4.5 Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
 - 2.4.6 Application: Treat all rough carpentry for use "in ground contact" to include, but not limited to, the following:
 - 2.4.6.1 Wood nailers, parapet furring, blocking, furring, stripping, and similar concealed members in direct contact with masonry or concrete.

2.5 PLYWOOD BACKING PANELS AND SHEATHING

- 2.5.1 Miscellaneous Backing Panels: CDX, DOC PS 1, Exterior Exposure 1, C-D Plugged, 3/4-inch thickness indicated or, if not indicated, not less than 1/2 inch (12.7 mm) thick.
- 2.5.2 Sheathing: CDX, DOC PS 1, Exterior Exposure 1, C-D Plugged, thickness indicated or, if not indicated, not less than 3/4 inch (12.7 mm) thick.
- 2.5.3 Do not store sheathing outdoors or expose to moisture.

2.6 FASTENERS

- 2.6.1 Reference Division 7 Section 07591 "Roof Removal & Preparation".
- 2.6.2 All fasteners, connections, clips or strap anchors for wood and plywood shall be either hot-dipped zinc coated galvanized steel or stainless steel (Type 304 or 316 SS).

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PART 3 EXECUTION

3.1 INSTALLATION, GENERAL

- 3.1.1 Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate blocking and similar supports to comply with requirements for attaching other construction.
- 3.1.2 Separate any aluminum metal component from preservative treated lumber with minimum divorcing layer of 15 lb asphalt saturated building paper. Use appropriate ring-shank, stainless steel fasteners.
- 3.1.3 Never use aluminum fasteners with preservative treated wood. Only use hot-dipped galvanized or stainless-steel fasteners with treated wood.
- 3.1.4 All wood nailers shall be of sufficient thickness so as to finish flush with the adjacent insulation. Securely anchor wood blocking with appropriate fasteners a minimum of two (2) for every 16". Perimeter wood blocking and blocking at openings shall be a minimum nominal width of 6".
- 3.1.5 Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- 3.1.6 Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 3.1.6.1 Published requirements of metal framing anchor manufacturer.
 - 3.1.6.2 Table 2304.10.1, "Fastening Schedule," in the International Building Code.
- 3.1.7 For wood-to-wood connections use ring shanked, hot dipped galvanized nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

SECTION 07540

THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- 1.2.1 This Section includes the following:
 - 1.2.1.1 Roof insulation.
 - 1.2.1.2 Mechanically fastened membrane roofing system.
 - 1.2.1.3 Base Flashing Installation
 - 1.2.1.4 Catalyzed Acrylic Resin Flashing System
- 1.2.2 Related Sections include the following:
 - 1.2.2.1 Division 6 Section 06100 "Rough Carpentry".
 - 1.2.2.2 Division 7 Section 07591 "Removals and Preparation".
 - 1.2.2.3 Division 7 Section 07620 "Flashing and Sheet Metal".
 - 1.2.2.4 Division 7 Section 07920 "Sealants and Caulking."
- 1.2.3 Unit Prices: Refer to Division 1 Section 01010 "Summary of Work" for description of Work in this Section affected by unit prices.

1.3 DEFINITIONS

- 1.3.1 Roofing Terminology: Refer to ASTM D1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- 1.3.2 Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," before multiplication by a safety factor.
- 1.3.3 Factored Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," after multiplication by a safety factor.

1.4 PERFORMANCE REQUIREMENTS

- 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.
- 1.4.2 Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- Roofing System Design: Provide a membrane roofing system that is identical to 1.4.3 systems that have been successfully tested by a qualified testing and inspecting agency to resist the factored design uplift pressures calculated according to SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems."
 - 1.4.3.1 Roofing system design shall meet or exceed a FM 1-90 rated system for field of roof conditions.

1.5 SUPERVISION

- Contractor shall assign a full-time, English speaking, qualified Roofing Superintendant to the project to coordinate the various aspects of the work; to provide Quality Control Services for the project; and to serve as liaison with the Owner's representative.
- 1.5.2 The roofing crew shall be supervised at all times by Contractor's full-time, English-speaking Foreman.

1.6 **SUBMITTALS**

- 1.6.1 Product Data: For each type of product indicated.
- 1.6.2 Shop Drawings: For roofing system. Include plans, sections, and details of attachments to other Work.
 - 1.6.2.1 Base flashings and membrane terminations.
 - 1.6.2.2 Tapered insulation, including slopes.
 - 1.6.2.3 Insulation fastening patterns.
 - 1.6.2.4 TPO Seam layout.
- 1.6.3 Samples for Verification: For the following products:
 - 12-by-12-inch (300-by-300-mm) square of sheet roofing of color 1.6.3.1 specified, including T-shaped side and end lap seam.
 - 1.6.3.2 12-by-12-inch (300-by-300-mm) square of insulation overlayment board.

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- 1.6.3.3 12-by-12-inch (300-by-300-mm) square of walkway pads or rolls.
- 1.6.3.4 12-inch (300-mm) length of metal termination bars.
- 1.6.3.5 12-inch (300-mm) length of battens.
- 1.6.3.6 Four insulation and recover board fasteners of each type, length, and finish.
- 1.6.3.7 Four roof membrane cover fasteners of each type, length, and finish.
- 1.6.4 Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- 1.6.5 Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - 1.6.5.1 Submit evidence of meeting performance requirements.
- 1.6.6 Qualification Data: For Installer and manufacturer.
- 1.6.7 Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- 1.6.8 Research/Evaluation Reports: For components of membrane roofing system.
- 1.6.9 Maintenance Data: For roofing system to include in maintenance manuals.
- 1.6.10 Warranties: Special warranties specified in this Section.
- 1.6.11 Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.7 QUALITY ASSURANCE

- 1.7.1 Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- 1.7.2 Manufacturer Qualifications: A qualified manufacturer that has UL listing and FMG approval for membrane roofing system identical to that used for this Project.
- 1.7.3 Source Limitations: Obtain components for membrane roofing system approved by roofing membrane manufacturer.
- 1.7.4 Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting

agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.

- 1.7.4.1 Exterior Fire-Test Exposure: Class A; ASTM E108, for application and roof slopes indicated.
- 1.7.5 Preinstallation Roofing Conference: Before starting removals and roof recover construction, conduct conference at Project site. Review methods and procedures related to reroof construction and roofing system including, but not limited to, the following:
 - 1.7.5.1 Meet with Owner, Roofing Consultant, and roofing system manufacturer's representative.
 - 1.7.5.2 Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 1.7.5.3 Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 1.7.5.4 Examine existing substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 1.7.5.5 Review structural loading limitations of roof deck during and after roofing.
 - 1.7.5.6 Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 1.7.5.7 Review governing regulations and requirements for insurance and certificates if applicable.
 - 1.7.5.8 Review temporary protection requirements for roofing system during and after installation.
 - 1.7.5.9 Review roof observation and repair procedures after roofing installation.

1.8 DELIVERY, STORAGE, AND HANDLING

- 1.8.1 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 storing and mixing with other components.
- 1.8.2 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.
 - 1.8.2.1 Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

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- 1.8.3 Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation. Storage exposed to weather in manufacturer's original packaging alone is not sufficient. Provide tarps and store above ground on pallets at a minimum.
- 1.8.4 Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck. Do Not Stockpile equipment or materials on the roof.

1.9 PROJECT CONDITIONS

- 1.9.1 Requirements Prior to Job Start
 - 1.9.1.1 Pre-Roofing Conference: Roofing Contractor shall schedule a preroofing construction conference to be conducted by the Project Roof Consultant or his Representative, and attended by the installing roofing contractor, the roofing system manufacturer, the Owner's representative and sub-contractors engaged in the work of this project.
 - 1.9.1.2 Notification: Give a minimum of 5 days notice to the Owner, Roofing Consultant, and Manufacturer prior to commencing any work and notify all parties on a daily basis of any change in work schedule.
 - 1.9.1.3 Permits: Obtain all permits required by local agencies and pay all fees which may be required for the performance of the work.
 - 1.9.1.4 Safety: Familiarize every member of the application crew with all fire and safety regulations recommended by OSHA, NRCA and other industry or local governmental groups.

1.9.2 Asbestos Products

- 1.9.2.1 No Asbestos Containing Materials are to be incorporated into the work as a part of this contract. No existing asbestos containing material is to be left or incorporated into the work of this contract.
- 1.9.2.2 In the event the Contractor finds asbestos containing materials not previously identified, then Contractor shall stop all work in the affected area and notify the Owner and Roof Consultant. Contractor shall provide all materials necessary to temporarily dry-in the affected area in the Base Bid. Additional work caused by the discovery, if authorized by the Owner, will be handled as a Change Order to this Contract.
- 1.9.3 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.

1.9.4 Protection Requirements

- 1.9.4.1 Membrane Protection: Provide protection against staining and mechanical damage to newly applied roofing and adjacent surfaces throughout this project.
- 1.9.4.2 Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.
- 1.9.4.3 Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.
- 1.9.4.4 Site Condition: Complete, to the Owner's satisfaction, all job site cleanup including building interior, exterior and landscaping where affected by the construction.

1.9.4.5 Facility Protection:

- 1.9.4.5.1 Limit size of work sections to safeguard adjacent materials, structures, etc., and to minimize dust and noise.
- 1.9.4.5.2 Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload new or existing construction with demolition debris, equipment, new materials etc.
- 1.9.4.5.3 Protect existing facilities from fire. Contractor shall provide suitable and adequate fire extinguishers conveniently located on the premises at staging areas, storage areas and at areas of equipment. Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire protection.
- 1.9.4.5.4 Plywood, minimum 3/4-inch-thick, or other suitable materials shall be used to protect roof areas from damage that may be caused by concentrated equipment loads and foot traffic.
- 1.9.4.5.5 Site and roof traffic shall be confined to work areas. Contractor shall be responsible for leaks that develop in traffic areas during and after Project completion.
- 1.9.4.5.6 Contractor shall protect interior operations from adverse weather during roofing operations. This requirement extends beyond the immediate project scope of work to adjacent contiguous roof areas.
- 1.9.4.5.7 The Contractor is responsible and shall be held liable for any damages to the adjacent roof assemblies, building, building contents, its occupancy, grounds or landscaping resulting from work under the Contract. In the event of damage, Contractor will restore property to a condition equivalent to that

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at the time the Project started. Restoration may be necessary to construction assemblies not specified in this project manual. In such cases, repair methods and materials are subject to approval by Owner.

1.9.4.6 The Contractor shall keep existing drainage facilities clear of debris during construction.

1.10 WARRANTY

- 1.10.1 Manufacturer's Warranty: Manufacturer's standard form with wind rider, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks. Reference WARRANTIES Section 01740.
 - 1.10.1.1 Manufacturer's warranty includes roofing membrane, base flashings, roofing membrane accessories, fasteners, insulation, cover boards, walkway products and other components of membrane recover roofing system.
 - 1.10.1.2 Provide 90 MPH wind rider with the Manufacturer's roofing assembly warranty.
 - 1.10.1.3 Warranty Period: 20 years from date of Substantial Completion.
- 1.10.2 Contractor's 2 Year Watertight Warranty: Submit roofing Installer's watertight warranty, on warranty form provided in WARRANTIES Section 01740, signed by Installer, covering Work of this Section, including all components of membrane roofing system such as roofing membrane, base flashing, flexible sheet and metal flashings, roof recover board, fasteners, sheet metal components, metal siding and walkway products for the following warranty period:
 - 1.10.2.1 Warranty Period: Two years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
 - 2.1.1.1 Products: Subject to compliance with requirements, provide one of the products specified.
 - 2.1.1.2 Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 THERMOPLASTIC POLYOLEFIN ROOFING MEMBRANE

- Fabric-Reinforced Thermoplastic Polyolefin Sheet: Uniform, flexible sheet formed from a thermoplastic polyolefin, internally fabric or scrim reinforced, and as follows:
 - 2.2.1.1 Manufacturers:
 - 2.2.1.1.1 Johns Manville International, Inc.
 - 2.2.1.1.2 Carlisle SynTec Incorporated.
 - 2.2.1.1.3 GAF.
 - 2.2.1.2 Thickness: 60 mils, minimum.
 - 2.2.1.3 Field Sheet Width: 10' max.
 - 2.2.1.4 Perimeter Half Sheet Width: 5' max.; or use russet plates at perimeter for half sheet requirements.
 - 2.2.1.5 Exposed Face Color: White
 - 2.2.1.6 Physical Properties:
 - Breaking Strength: 225 lbf (1 kN); ASTM D751, grab method.
 - 2.2.1.6.2 Elongation Ultimate: 500% ASTM D412.
 - 2.2.1.6.3 Tearing Strength: 55 lbf (245 N) minimum; ASTM D751, Procedure B.
 - 2.2.1.6.4 Brittleness Point: Pass at Minus 22 deg F (30 deg C).
 - 2.2.1.6.5 Ozone Resistance: Pass ASTM D1149.
 - 2.2.1.6.6 Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 166 hours at 240 deg F (116 deg C); ASTM D573.
 - 2.2.1.6.7 Water Absorption: Less than 4 percent mass change after 166 hours' immersion at 158 deg F (70 deg C); ASTM D471.
 - 2.2.1.6.8 Linear Dimension Change: Plus or minus 2 percent; ASTM D1204.

2.1 **AUXILIARY MATERIALS**

General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

- 2.1.1.1 Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- 2.1.2 Sheet Flashing: Manufacturer's standard unreinforced thermoplastic polyolefin sheet flashing, 55 mils thick, minimum, of same color as sheet membrane.
- 2.1.3 Bonding Adhesive: Manufacturer's standard solvent-based bonding adhesive for base flashings.
- 2.1.4 Cut-Edge Sealant: A clear colored sealant used to seal cut edges of reinforced TPO membrane.
- 2.1.5 Water Cut-Off Mastic: Used as a mastic to prevent moisture migration at drains, compression terminations and beneath conventional metal edging.
- 2.1.6 TPO Pipe Boots: Johns Manville or equivalent: (Flexible, smooth, non-reinforced TPO (Thermoplastic polyolefin) cone-shaped boot with preformed flange) Provide stainless steel draw-band and sealant.
- 2.1.7 T-Joint Covers: A 60-mil thick injection molded TPO flashing formed into a 4.5" diameter thermoplastics circle used to seal step-offs at splice intersections.
- 2.1.8 Metal Battens: Manufacturer's standard aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch (25 mm) wide by 0.05 inch (1.3 mm) thick, prepunched.
- 2.1.9 Fasteners: Factory-coated white steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
- 2.1.10 Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories.

2.2 ROOF INSULATION

- 2.2.1 General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- 2.2.2 Gypsum Thermal Barrier
 - 2.2.2.1 5/8" thick, Type X, gypsum sheathing with a moisture resistant, non-combustible core and moisture resistant paper facer on both sides, such as ToughRock® Fireguard X® sheathing, as manufactured by Georgia Pacific.
- 2.2.3 Polyisocyanurate Board Insulation: ASTM C1289, Type II, felt facer on both major surfaces, 1.5" maximum thickness, a minimum of 1.5 lb/ft³ density. Maximum board size is 4ft. x 8ft. for mechanical attachment.

- 2.2.3.1 Manufacturers:
 - 2.2.3.1.1 Johns Manville International, Inc.
 - 2.2.3.1.2 Carlisle SynTec Incorporated.
 - 2.2.3.1.3 GAF.
- 2.2.4 Tapered Polyisocyanurate Insulation: Provide factory-tapered polyisocyanurate roof insulation boards fabricated to 1/4" per foot slope, with 1/2" starting thickness, as indicated in Project Drawings. Provide factory-tapered polyisocyanurate insulation boards fabricated to slope of ½ inch per 12 inches at all saddles and crickets. Use monolithic board only, factory laminated board is not acceptable.
- 2.2.5 Insulation Overlayment: A 1/2" thick high density polyiso insulation panel specifically designed for use as a cover board. ASTM C 1289, Type II, Class 4. Maximum board size for mechanical attachment: 4'x8'x ½"
 - 2.2.5.1 Manufacturers:
 - 2.2.5.1.1 Johns Manville International, Inc.
 - 2.2.5.1.2 Carlisle Syntec Incorporated
 - 2.2.5.1.3 GAF.
- 2.2.6 Tapered Edge Strips: Wood fiber in full range as provided by Manufacturer from $\frac{1}{2}$ inch to 2 inch at thick edge. Provide $0'' - \frac{1}{2}$ " x 6" tapered edge strip at leading edge of tapered insulation saddles.
- 2.2.7 Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping around fixed equipment and to sumps and drains. At cricket conditions, fabricate to slopes double the normal slope of the roof.

2.3 **INSULATION ACCESSORIES**

- 2.3.1 General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- 2.3.2 Mechanical Fasteners:
 - 2.3.2.1 Drill•Tec™ XHD Screws: Heavy gauge alloy steel fastener with CR-10 coating with a .275" diameter thread. Factory Mutual Standard 4470 Approved, #3 Phillips truss head for use on heavy steel decks.
 - 2.3.2.2 Drill•Tec™ RhinoBond® Insulation Plates: Galvalume, 3" diameter, specially coated for use in RhinoBond® attachment systems.
- 2.4 INDUCTION WELDING EQUIPMENT
 - 2.4.1 RhinoBond® Portable Bonding Machine

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- 2.4.2 Minimum 5,000-watt, continuous generator per two RhinoBond® Portable Bonding Machines.
- 2.4.3 100' max length, #12 minimum gauge electrical cords.
- 2.4.4 6 cooling clamps (stand-up magnets that put pressure on the newly welded plate).
- 2.4.5 Pliers
- 2.4.6 Heavy Duty Plunger
- 2.4.7 Lumber Crayon
- 2.4.8 Rags for cleaning cooling clamps

2.5 HOT AIR WELDING EQUIPMENT

- 2.5.1 Hot air welder
- 2.5.2 Minimum 10,000-watt, continuous generator
- 2.5.3 100' max length, 10-gauge, 3 conductor electrical cords.
- 2.5.4 Hand welders
- 2.5.5 Roofing probe
- 2.5.6 Knife or scissors to cut test welded membrane into 1" strips.

2.6 FLUID APPLIED FLASHING SYSTEM

2.6.1 LIQUISEAL CST-8844 PMMA Liquid Flashing Resin by Carlisle Syntec Systems with primer, 2-Part Resin Mixture, Polyester Flashing Fleece reinforcing, and accessories recommended by system manufacturer (JM: PMMA Flashing; GAF: Liquid Flashing System).

2.7 WALKWAYS

2.7.1 Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch (5 mm) thick, and acceptable to membrane roofing system manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- 3.1.1 Examine substrates, areas, and conditions for compliance with the following requirements and other conditions affecting performance of roofing system:
 - 3.1.1.1 Verify that roof openings and penetrations are in place and set and braced.

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- 3.1.1.2 Verify that abandoned roof openings have been appropriately covered and attached to existing or new structural members.
- 3.1.1.3 Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
- 3.1.1.4 Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION 3.2

- Reference Section 07591 Removals and Preparation for work required prior to installation of new insulation and TPO membrane.
- 3.2.2 Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- 3.2.3 Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- 3.2.4 Remove existing abandoned curbs and discard. Replace steel decking and stitch to adjacent steel deck with fasteners at 6" O.C.

3.3 **INSULATION INSTALLATION**

- 3.3.1 Install roof system insulation material as follows:
 - 3.3.1.1 Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
 - 3.3.1.2 Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
 - 3.3.1.3 Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - 3.3.1.4 Apply insulation with end joints staggered approximately one-half the length of the units.
 - 3.3.1.5 Where two or more insulation layers occur, install layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
 - 3.3.1.6 Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

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- 3.3.1.7 RA 4 Insulation Installation:
 - 3.3.1.7.1 Loose lay one layer of gypsum thermal barrier directly to metal deck.
 - 3.3.1.7.2 Loose lay two base layers of 4'x8'x1.5" polyisocyanurate insulation, offsetting joints of adjacent insulation boards, between rows and layers a minimum of 24".
 - 3.3.1.7.3 Create 4'x4' drain sumps using ½" per foot tapered insulation and wood fiber tapered edge strips.
 - 3.3.1.7.4 Loose lay ¼" tapered polyisocyanurate insulation over the base insulation starting at the perimeter parapet and working upslope towards the ridge.
 - 3.3.1.7.5 Install tapered insulation saddles between drains and crickets on the upslope side of any roof penetration exceeding 18" in width.
 - 3.3.1.7.6 Use tapered edge strip to provide a smooth transition between tapered insulation crickets and base insulation layer.
- 3.3.1.8 On all roof areas, install an insulation overlayment board of 1/2" High Density polyisocyanurate insulation over the base & tapered insulation, offsetting joints of adjacent insulation boards, between rows and layers, a minimum of 24".
- 3.3.1.9 Through fasten all layers of insulation to the deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
- 3.3.1.10 In the field, fasten each full insulation board with 12 fasteners per 4' x 8' board in a pattern as described in FM Loss Prevention Data Sheet 1-29. In no case less than 2 fasteners per single board segment.
- 3.3.1.11 Increase fastener spacing to 16 fasteners per 4' x 8' board in the perimeter and 24 fasteners per 4' x 8' board in the corners.

3.3.1.11.1 Perimeter: RA 1 - 20'

RAs 2, 3, 4, 5, 6 & 7 – 10'

3.3.1.11.2 Corner: RA 1 – 8'x20'

RAs 2, 3, 4, 5, 6 & 7 - 4'x10'

- 3.3.1.12 Partial insulation units less than 2 square feet in area must be fastened with a minimum of two fasteners.
- 3.3.1.13 When the membrane is attached by induction welding, fasten insulation to the substrate in an appropriate grid pattern as established by the

RhinoBond® Attachment Table. Using chalk lines to make the grids on the substrate is the easiest way to make sure the grid is consistent, and plates are easy to find.

- 3.3.1.14 Fasteners must be tight enough that the RhinoBond® Plate does not turn or rock.
- 3.3.1.15 Over-driven fasteners that distort the face or top of the plate must be removed and discarded. A new RhinoBond® Plate and Fastener must be reinstalled next to the original, but not into the same space and hole.
- 3.3.1.16 Under driven or "high fasteners" must be re-driven to proper depth.
- 3.3.1.17 When installation of RhinoBond® Plates and Fasteners are complete, the area should be blown or broomed clean to remove any dirt or debris from the substrate surface or contaminates from the plate's bonding surface. This is critical so as not to puncture the membrane from beneath or to impair the welding of the membrane to the RhinoBond® Plate.

3.4 MECHANICALLY FASTENED ROOFING MEMBRANE INSTALLATION

- Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
- 3.4.2 Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- 3.4.3 Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer to meet the design pressures specified in this section. Stagger end laps at a minimum by the width of the membrane roll.
- 3.4.4 Picture frame perimeter in manufacturer's perimeter half sheets in accordance with the manufacturer's written recommendations. Include additional fastening at corners as called for by manufacturer.
 - 3.4.4.1 Alternatively, at roof perimeter and corner conditions in between factory seams, secure roofing membrane using fastening plates or metal battens and mechanically fasten roofing membrane to corrugated metal roof deck. Cover battens and fasteners with a continuous cover strip as recommended by manufacturer.
- 3.4.5 Fasten all sheets in compliance with a FM 1-90 rated system in a line perpendicular the decking flutes or as established by the flexible sheet membrane manufacturer. All membrane shall be mechanically attached to the top flute of the metal decking.
- 3.4.6 Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.

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- 3.4.7 Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- 3.4.8 Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
 - 3.4.8.1 Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
 - 3.4.8.2 Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 3.4.8.3 Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
- 3.4.9 In-Splice Attachment: Secure one edge of roofing membrane using fastening plates or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.
- 3.4.10 Through-Membrane Attachment: Secure roofing membrane using fastening plates or metal battens and mechanically fasten roofing membrane to roof deck. Cover battens and fasteners with a continuous cover strip as recommended by manufacturer
- 3.4.11 Install roofing membrane and auxiliary materials to tie into existing conditions.
- 3.4.12 All "T" joints in the roof membrane must be overlaid with T-joint covers, heat welded on all sides.

3.5 INDUCTION WELDING ROOFING MEMBRANE INSTALLATION

- 3.5.1 Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
- 3.5.2 Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.

3.5.3 Equipment Settings

- 3.5.3.1 As with any electrical tool, it is imperative that the tool receive the recommended amount of current for its proper operation. Damage could result from overload (surge) as well as a low voltage situation. No other electrical devices shall be run at the same time as the RhinoBond® Portable Bonding Machines.
- 3.5.3.2 The RhinoBond® tool must be adjusted to achieve the maximum bond strength with most roofing membranes between 0° and 120° F.

3.5.4 Calibration of the Machine

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- 3.5.4.1 The user must adjust the RhinoBond® tool to achieve maximum bond strength with TPO roofing membranes from 0° to 120° F ambient temperatures. The tool leaves the factory set to deliver an optimal weld with most membranes at 70°F when set to an energy level of "0". The energy level must be adjusted up (+1, +2, etc.) when temperatures are below 70°F, and down (-1, -2 etc) when temperatures are above 70°F. These adjustments can be made by using the up/down arrow keys next to the display window on the machine.
- 3.5.4.2 In an area adjacent to the day's work, lay out 5 RhinoBond® Plates 10" apart and cover them with a fresh piece of field membrane approximately 18" x 5'.
- 3.5.4.3 Locate the plates under the membrane by dragging your foot across the surface of the membrane. After locating the RhinoBond® Plate, center the machine's red location circle directly over the plate.
- 3.5.4.4 Determine an initial setting based on the ambient temperature. Remember that 70°F is a "0" energy setting on the display. On a 110°F day in Phoenix, AZ your initial energy setting may be "2" or "3".
- 3.5.4.5 Weld the first plate at your initial energy setting and immediately place the cooling clamp onto the plate and mark the setting with the lumber crayon. Increase the energy setting using the "up" arrow on the machine by a unit of 1. Weld the second plate to the right of the first plate; mark the setting in crayon and put the second cooling clamp on the plate. Increase by another unit of 1 and weld the third plate. Repeat this process for the next two plates - installing them to the left of your first weld – except reduce the energy setting by a unit of 1 from your original setting each time. From left to right, your set of plates will be marked as follows (on a 70°F day): -2, -1, 0, 1, 2.
- 3.5.4.6 Let the membrane over the plates cool to ambient temperature and fold the membrane over-exposing the RhinoBond® Plates. Standing on the membrane, use your pliers to grip the plate and pull the plate from the test material, delaminating the plate from the membrane in the process.
- 3.5.4.7 Three distinct types of bonds are probable, and are as follows: Full bond, an even and consistent weld of the membrane to the plate. The plate will also leave an impression in the membrane. This is a spec installation. Uneven/incomplete weld of the plate to the membrane. Cause of failure may be energy source set too low, machine not centered over the plate completely, or the plate may be over-driven. This would be a complete or partial hit of the plate. Remember, a full concentration of heat applied to the plate is needed to achieve a spec weld.
- 3.5.5 Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer to meet the design pressures specified in this section. Stagger end laps at a minimum by the width of the membrane roll.

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- 3.5.6 Full-width rolls shall be installed in the field and perimeter regions of the roof.
- 3.5.7 Overlap full roof membrane sheets a minimum of 3" for side and end laps.
- 3.5.8 Install membrane so that the lap runs across the roof slope and lapped toward the drainage points, if possible.
- 3.5.9 All exposed sheet corners shall be rounded a minimum of 1".
- 3.5.10 All cut edges of reinforced TPO membrane must be sealed with TPO Cut Edge Sealant.
- 3.5.11 Weld TPO to RhinoBond® Plates with RhinoBond® Portable Bonding Tool. Weighted cooling magnets are placed over the bonded membrane/plates for a minimum of 45 seconds. Wipe magnets with a rag to remove debris following each use.
- 3.5.12 Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane with 2" machine welds or 1.5" field welds, or according to manufacturer's written instructions to ensure a watertight seam installation.
 - 3.5.12.1 Conduct test weld using scrap membrane to verify that welder heat and speed produce proper weld at the given conditions. When torn apart, the destroyed weld should have exposed scrim the width of the weld. If welding is to be performed before and after lunch, make test weld before and after lunch prior to welding seams.
 - 3.5.12.2 Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
 - 3.5.12.3 Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 3.5.12.4 Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
- 3.5.13 In-Splice Attachment: Secure one edge of roofing membrane using fastening plates or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.
- 3.5.14 Install roofing membrane and auxiliary materials to tie into existing conditions.

3.6 BASE FLASHING INSTALLATION

3.6.1 Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.

- 3.6.2 Apply solvent-based bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- Flash penetrations and field-formed inside and outside corners with sheet 3.6.3 flashing.
- 3.6.4 Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- 3.6.5 Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars or piping clamps.

3.7 CATALYZED ACRYLIC RESIN FLASHING SYSTEM:

- 3.7.1 Install the liquid-applied primer and flashing system in accordance with the system manufacturer's printed installer's guidelines for an application. Observe all other applicable written recommendations as provided by the manufacturer.
- 3.7.2 Remove all bitumen, debris, rust, scale, and other foreign matter from surfaces receiving catalyzed flashing system, prior to installation. Use scrapers, wire brush and/or grinders, as necessary.
- 3.7.3 Treat cleaned areas receiving flashing with manufacturer's preparation and allow to dry.
- 3.7.4 Apply fleece to prepared surface of roof and penetrations through roof in strict accordance with manufacturer's written instructions, including pre-saturation of Fleece laps with the Catalyzed Acrylic Resin.
- 3.7.5 Apply base coat and topcoat of catalyzed resin to fleece. Allow manufacturer's instructions regarding drying and curing time between coats.

3.8 WALKWAY INSTALLATION

Flexible Walkways: Install walkway products in front of all access locations to all roof mounted equipment. Minimum 22" X 48". Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Roof Consultant.
 - 3.9.1.1 Notify Roof Consultant or Owner 48 hours in advance of date and time of inspection.

- 3.9.2 Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.
- 3.9.3 Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- 3.10.1 Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Roof Consultant and Owner
- 3.10.2 Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- 3.10.3 Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.11 ROOFING INSTALLER'S WARRANTY

3.11.1 Reference Section 01740 "Warranties" for a copy of the Contractor's Two-Year Watertight Warranty.

END OF SECTION 07540

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SECTION 07591

REMOVALS AND PREPARATION

PART 1 GENERAL

1.1 SUMMARY

- 1.1.1 This Section includes the following:
 - 1.1.1.1 Existing Roof System Assembly Removals
 - 1.1.1.2 Preparing the Existing Substrate Decking for Reroofing Construction
 - 1.1.1.3 Roof Deck Repairs at Abandoned Equipment Curbs
 - 1.1.1.4 Installation of New Wood Blocking at Expansion Joints
 - 1.1.1.5 Existing Roofing System Assemblies Disposal

1.2 RELATED WORK SPECIFIED ELSEWHERE

- 1.2.1 Wood Blocking: Refer to Division 6 Section 06100 "Rough Carpentry" for description of Work in this Section affected by wood blocking.
- 1.2.2 Thermoplastic Membrane Roofing: Refer to Division 7 Section 07540 "Thermoplastic Membrane Roofing" for description of Work in this Section affected by thermoplastic membrane roofing.
- 1.2.3 Sheet Metal Fabrications: Refer to Division 7 Section 07620 "Flashing and Sheet Metal" for description of Work in this Section affected by flashings and sheet metal.

1.3 SUBMITTALS

1.3.1 Product Data: Reference Section 01300 "Submittals."

1.4 QUALITY ASSURANCE

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

1.5 PROJECT CONDITIONS

- 1.5.1 Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
- 1.5.2 Coordinate work activities daily with Owner so Contractor can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area if desired.

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

PART 2 PRODUCTS

2.1 ROOF INSULATION

- 2.1.1 Gypsum Thermal Barrier
 - 2.1.1.1 5/8" thick, Type X, gypsum sheathing with a moisture resistant, non-combustible core and moisture resistant paper facer on both sides, such as ToughRock® Fireguard X® sheathing, as manufactured by Georgia Pacific.
- 2.1.2 Polyisocyanurate Roof Insulation 1.5" Flat: ASTM C 1289 Type II such as Siplast Paratherm (JM: E'NERG'Y 3; S: Sopra-Iso) 4' x 8' maximum size for mechanical attachment.
- 2.1.3 Tapered Polyisocyanurate Insulation:
 - 2.1.3.1 Provide factory-tapered polyisocyanurate roof insulation boards fabricated to ½" per foot slope, with 1/2" starting thickness. Use monolithic board only, factory laminated board is not acceptable.

2.2 AUXILIARY MATERIALS

- 2.2.1 General: Auxiliary roof recover preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new Thermoplastic Membrane roofing system.
- 2.2.2 Wood blocking to wood substrate: Stormguard® hot dipped galvanized ring shanked or spiral decking nails with minimum 3/8" head as manufactured by Maze Nails.
- 2.2.3 Wood to Wood Screws: Shall be ITW Buildex DEC-KING™ Climacoat™ bugle head, size for length required 6x1- 1/4" (part No. 2176500) for sheathing to sheathing application.
- 2.2.4 Wood blocking to structural steel: Corrosion resistant, self tapping, self-drilling screw with low profile head such as TRAXX™ 4.5 by ITW Buildex where length will allow; and where greater length is required countersink head and utilize TRAXX™ 5 by ITW Buildex. Acceptable equal alternates as manufactured by Construction Fasteners, Rawl, Olympic and Tru-Fast must be submitted for approval.
- 2.2.5 Wood to Metal Screws: Shall be ITW Buildex TRAXX™ Climacoat™ flat head 12-24X2 ½" (part No. 1094000).
- 2.2.6 Wood blocking to masonry wall: hot dipped, galvanized 3/8" minimum diameter threaded rod embedded a minimum of 4" into the masonry and set in fast curing epoxy.
- 2.2.7 Fast Curing Epoxy: ASTM C881-90, Type IV, Grade 3, Class A, B and C, two-part, fast curing epoxy such as C6 Fast Curing Epoxy, as manufactured by Epcon.
- 2.2.8 One-Piece, Vibration Resistant Masonry Anchor: Shall be Powers SPIKE® ¼ inch diameter manufactured from high grade carbon steel (ASTM B 633) with mushroom head at one end and a specially designed "S" shaped expansion mechanism on the working end. Perma-Seal Fluoropolymer Coating. Pre-drill hole ½-inch depth greater than SPIKE length. Johns Manville CD-10 Fastener w/ CR-10 coating approved equal.
- 2.2.9 Metal Primer: High performance, corrosion resistant and fast drying metal primer such as Interior/Exterior Flat Rusty Metal Primer Paint and Primer in One, as manufactured by Rust-Oleum, or equal.

2.3 DECKING FOR INFILL AT ABANDONED CURBS

- 2.3.1 $\frac{1}{4}$ " x 2" x 2" and $\frac{1}{4}$ " x 3" x 3" miscellaneous steel angle.
- 2.3.2 22 gage steel metal "F" deck: 1 ½" deep, intermediate rib, structural roof deck unit that provides a support surface for various types of roofing materials.
 - 2.3.2.1 Profile to match existing metal deck.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- 3.1.1 Protect existing roofing systems that are indicated not to be reroofed.
- 3.1.2 Coordinate with Owner to shut down air intake equipment in the vicinity of the Work. Cover air intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- 3.1.3 Prior to commencement of the work, check all roof drains for clear passage of storm water. Report any stopped or partially stopped roof drains or drain leaders to Owner prior to the start of reroofing work. Contractor's start of work is regarded as Contractor's acceptance of clear drainage. Contractor will be responsible for all work required to clear drainage path after work under this contract has begun.
 - 3.1.3.1 Replace any plastic, damaged or missing drain strainer baskets with new cast iron strainer baskets.
 - 3.1.3.2 Replace any damaged or broken drain clamping rings or bolt fasteners. If present, replace drain Sergeant clamps where missing or damaged.

3.1.4 Examination of Roof Drains

- 3.1.4.1 Remove all sealant accumulations from interior of all drain bowls prior to start of roof removals. Water test all prepared drain bowls to locate any existing defects in drain casting.
- 3.1.4.2 Verify integrity of anchor lugs or threaded attachment points for drain clamping rings.
- 3.1.4.3 Advise Roof Consultant of any defect found in drain assemblies prior to start of roof removal. Contractor is responsible for all drains once new roof assembly is applied.
- 3.1.5 Maintain roof drainage path in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drainage path and gutters. For internal drainage systems, use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- 3.1.6 Raise mechanical equipment, ductwork, and curbs as necessary to maintain minimum 8" base flashing height above surface of new roof membrane.
 - 3.1.6.1 Contractor is responsible for disconnection of existing roof mounted equipment and electrical wiring, as well as all reconnections and testing.
 - 3.1.6.2 Extend sanitary vents as necessary to a minimum height of 8" above the finished roof surface.

- 3.1.7 It is not anticipated that hazardous materials will be encountered in the work of this project.
 - 3.1.7.1 No asbestos bearing materials are to be incorporated into the work as a part of this contract.
 - 3.1.7.2 In the event the Contractor finds asbestos containing materials not previously identified, then Contractor shall stop all work in the affected area and notify the Owner and Roof Consultant. Contractor shall provide all materials necessary to temporarily dry-in the affected area in the Base Bid. Additional work caused by the discovery, if authorized by the Owner, will be handled as a Change Order to this contract.
- 3.1.8 Storage or sale of removed items or materials on–site will not be permitted.
- 3.1.9 Utility Service: Maintain existing utilities in service and protect them against damage during the selective demolition operations.
 - 3.1.9.1 Maintain security and fire protection facilities in service during selective demolition operations.
 - 3.1.9.2 When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit in writing a report to the Roof Consultant.
 - 3.1.9.3 Verify that rooftop utilities and service piping have been shut off before commencing work which may not be safe if service is left on.
 - 3.1.9.4 Coordinate shutdown or disconnect of rooftop utilities or service piping with Owner, no less than 72 hours before shutdown or disconnect are scheduled
- 3.1.10 Site Access and Temporary Controls: Conduct removals, preparations, and roofing installation operations to ensure minimum interference with roads, streets, walks, walkways and other adjacent occupied and used facilities.
 - 3.1.10.1 Do not close or obstruct roads, streets, walks, walkways and other adjacent occupied and used facilities without written permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 3.1.10.2 Erect temporary protection where required by authorities having jurisdiction.
- 3.1.11 Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

- 3.1.11.1 Provide Temporary toilet facilities on site in location to be determined by Owner and Roof Consultant.
- 3.1.11.2 Provide chain link fencing for work area adjacent to the building using temporary standards for support. Do not penetrate existing pavement to support fencing or temporary barricades.

3.2 EXISTING ROOF SYSTEM ASSEMBLY REMOVALS

- 3.2.1 General: Notify Owner each day of extent of removals or roof tear-off proposed and obtain authorization to proceed from Owner's point of contact.
- 3.2.2 RAs 1, 2, 3, 5, 6 & 7:
 - 3.2.2.1 Remove all existing aggregate ballast, filter cloth, EPDM membrane, base flashings, metal flashings and other roof system components, down to the surface of the existing rigid insulation, and discard.
 - 3.2.2.2 Remove and discard existing metal parapet coping and through wall metal overflow scupper liner.
 - 3.2.2.3 Remove and discard existing expansion joint flashings.
 - 3.2.2.4 Remove and discard existing sanitary vent flashings.
 - 3.2.2.5 Remove and discard any abandoned roof penetrations.
 - 3.2.2.6 Remove wet or damaged insulation, thermal barrier and their fasteners (where present), and other roofing system components down to the existing roof deck and discard.
 - 3.2.2.7 Remove and discard abandoned equipment curbs, gravity vents and abandoned pipe penetrations as identified on project drawings.
 - 3.2.2.8 Remove, discard and repair remaining substrate surface at any obstruction which may interfere with the proper application of new materials.

3.2.3 RA 4:

- 3.2.3.1 Remove and discard existing aggregate surfaced roof membrane, insulation and gypsum thermal barrier, down to the metal roof deck.
- 3.2.3.2 Remove and discard existing metal and bituminous flashings.
- 3.2.3.3 Remove and discard existing metal parapet coping and through wall metal overflow scupper liner.
- 3.2.3.4 Remove and discard existing sanitary vent flashings.
- 3.2.3.5 Remove or repair any unused obstruction which may interfere with the proper application of new materials.

- 3.3 PREPARING THE EXISTING SUBSTRATE DECKING FOR REROOFING CONSTRUCTION
 - 3.3.1 Inspect exposed rigid insulation daily, during and after tear-off of FSM roofing membrane. Provide fall-thru protection over known or suspected areas of deteriorated roof deck.
 - 3.3.2 Remove any existing deteriorated roof insulation and replace with new rigid insulation to match existing material and thickness. Maintain and submit daily log of insulation replacement work.
 - 3.3.2.1 Edges of adjacent insulation boards shall be in moderate contact, without forcing.
 - 3.3.2.2 All gaps in the existing insulation joints shall be filled with insulation adhesive prior to the application of the new coverboard.
 - 3.3.2.3 Broken corners and edges of any insulation board shall be cut out and repaired with square-cut pieces of insulation no less than 8" x 8" in size.
 - 3.3.3 Metal Roof Deck Preparations:
 - 3.3.3.1 Where insulation, thermal barrier and their fasteners are wet or damaged, and other roofing system components in need of replacement down to the existing roof deck:
 - 3.3.3.1.1 Replace missing, broken, or loose side lap fasteners that secure deck panels to one another, using specified fasteners. Maximum spacing of side lap fasteners shall be 20" OC.
 - 3.3.3.1.2 At roof deck perimeter, decrease fastener spacing of the existing roof deck to structural supports by installing additional specified, self-drilling fasteners spaced such that the maximum distance between fasteners is 6"
 - 3.3.3.1.3 Use a rotary wire brush to remove scale and rust from steel roof deck. Coat prepared areas with one coat of metal primer. Maintain and submit daily log of unit price work. See Section 01010 of these specifications for Unit Price Quantities to include in Base Bid for removal of rust and scale and for treatment of rusted deck.
 - 3.3.4 Do not proceed with installation of new roof decking until Roof Consultant or Owner are notified and direction is given to proceed with the work.
 - 3.3.5 Extend wood blocking at equipment curbs, parapet walls and expansion joints as necessary to maintain minimum 8" base flashing heights. Expand wood blocking at equipment curbs as necessary to maintain a ½" overlap of equipment base vertical face.

- 3.3.6 Application of new materials constitutes approval by the installing roofing contractor that the substrate conditions are satisfactory.
- 3.3.7 Confirm that all items to be removed, have been, and that appropriate substrate has been installed and appropriately attached to structure for support of the new roofing system.
- 3.3.8 CORRECT ALL UNSATISFACTORY SUBSTRATE CONDITIONS PRIOR TO THE APPLICATION OF NEW ROOF SYSTEM MATERIALS. RENAIL EXISTING WOOD BLOCKING AND ADD NEW NAILS TO ASSURE SOLID, SECURE CONNECTIONS.

3.4 ROOF DECK REPAIRS AT ABANDONED EQUIPMENT CURBS

- 3.4.1 Remove and discard abandoned equipment curbs and caps.
- 3.4.2 Where openings in the existing roof deck are less than 18", install a 1/8" steel plate over the opening, extending a minimum of 6" beyond the opening in all directions.
 - 3.4.2.1 Fasten steel plate to the roof deck with a minimum of 3 fasteners per side.
- 3.4.3 Where openings in the roof deck are larger than 18" but less than 36", install new 3" x 3" x 5/16" miscellaneous steel angle to existing steel angle framing the opening with (2) ITW Buildex, Traxx fasteners on each end. The top flange of angle shall be flush with the bottom of the roof deck.
- 3.4.4 Where openings in the roof deck are larger than 36" x 36", install miscellaneous steel angle perpendicular to existing angles or bar joists at opening ends and 30" O.C. maximum intermediate spacing. Secure to top chord of existing bar joist angle with (2) ITW Buildex, Traxx fasteners on each end.
- Install new 22-gauge galvanized steel "F" deck to miscellaneous steel angles and 3.4.5 attach with hex-headed, self tapping fasteners at 6" O.C.

3.5 INSTALLATION OF NEW WOOD BLOCKING AT EXPANSION JOINTS

- Remove and discard existing expansion joint flashings, leaving existing blocking in place.
- Prior to fastening the new wood blocking to the existing wood blocking, verify that the existing blocking is securely attached to the structure. If necessary, secure existing blocking with additional fasteners as necessary to decrease fastener spacing to 16" O.C.
- 3.5.3 At roof-to-roof expansion joints, install two courses of new 2 x 4 wood blocking on top of the existing wood blocking at the expansion joint, as shown on Project Drawings.

- 3.5.3.1 New wood blocking should finish approximately 10" minimum above the new roof assembly.
- 3.5.3.2 Fasten new wood blocking to top of existing wood blocking with two screws at 16" O.C.
- 3.5.3.3 Cut a slight taper to the top pieces of wood blocking, providing slope toward the new roofing assembly.
- 3.5.3.4 The exterior, top, and interior face of the expansion joint are to be covered with 45 mil peel-and-stick SAWU membrane on the same day blocking is installed.
- 3.5.3.5 Create an envelope fold between the wood blocking on either side of the joint, using 20 mil PVC flashing filled with un-faced fiberglass batt insulation.

3.6 EXISTING ROOFING SYSTEM ASSEMBLY DISPOSAL:

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

END OF SECTION 07591

SECTION 07620

FLASHING AND SHEET METAL

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Fabrication and installation of coping cap and locking cleats.
- 1.1.2 Fabrication and installation of new overflow scupper liner.
- 1.1.3 Fabrication and installation of new counter flashings and receivers.
- 1.1.4 Fabrication and installation of new expansion joint flashing.
- 1.1.5 Fabrication and installation of new hot vent stack flashing.
- 1.1.6 Fabrication and installation of new equipment rail.
- 1.1.7 Fabrication and installation of new downspout extension.
- 1.1.8 Fabrication and installation of new metal splash pans.
- 1.1.9 Fabrication and installation of new miscellaneous flanged flashings.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- 1.2.1 Rough Carpentry Section 06100
- 1.2.2 Thermoplastic Membrane Roofing Section 07540
- 1.2.3 Roof Removals & Preparations Section 07591

1.3 QUALITY ASSURANCE

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

1.4 SHOP DRAWINGS

1.4.1 Submit shop drawings for all metal component shapes in accordance with specifications.

1.4.2 Indicate material profile, jointing pattern, jointing details, fastening methods, and installation details.

1.5 SUBMITTALS

1.5.1 Refer to Shop drawings, Product Data and Samples - Section 01340

1.6 STORAGE AND HANDLING

- 1.6.1 Store materials dry in accordance with Specifications.
- 1.6.2 Stack material to prevent twisting, bending, or abrasion.
- 1.6.3 During storage prevent material contact with any substance that would discolor or stain, including soil and water.

1.7 SCHEDULING

- 1.7.1 All new sheet metal work shall be closely coordinated with the installation of the new roofing membrane such that roofing membrane terminations will not be left unprotected by metal.
- 1.7.2 New sheet metal components shall be installed directly after roofing work such that roofing membrane terminations will not be left unprotected by metal.
- 1.7.3 Immediately after installation of new sheet metal work install all bituminous flashings such that moisture is not trapped under new metal components.

1.8 GUARANTEE

1.8.1 All new materials and workmanship for work provided under this section of the specifications shall be guaranteed in writing by the contractor to be maintained in a watertight condition without cost to the Owner for a period of five (5) years after date of final completion.

PART 2 PRODUCTS

2.1 SHEET METAL MATERIAL

- 2.1.1 Pre-finished Metal: Smooth 24-gauge Galvalume, primed both sides and factory finished on one side with Kynar based fluoropolymer coating. Metal to be masked with protective plastic film. Color to be selected by Owner from the manufacturer's premium color chart. Pre-finished metal shall be provided by metal roof panel manufacturer.
- 2.1.2 Stainless steel: 24 gage, Type 302/304 Mill Rolled Finish No.2D or 2B, Conforming to ASTM A167, Federal Specification QQ-S-766C.
- 2.1.3 Solder for Stainless Steel: Solder joints with stainless steel type flux, 50/50 solder, neutralize flux after soldering.

2.1.4 METAL COMPONENT WEIGHT & FINISH SUMMARY:

2.1.4.1	coping cap	24 ga. pre-finished galvalume
2.1.4.2	locking cleats	22 ga. mill finished galvalume
2.1.4.3	overflow scupper liner	24 ga. stainless steel
2.1.4.4	scupper outside closure	24 ga. pre-finished galvalume
2.1.4.5	counter flashing	24 ga. pre-finished galvalume
2.1.4.6	expansion joint cap and flange	24 ga. pre-finished galvalume
2.1.4.7	hot vent stack	24 ga. stainless steel
2.1.4.8	downspout	24 ga. pre-finished galvalume
2.1.4.9	downspout strap	1/16" x 1" aluminum flat bar
2.1.4.10	splash pan	24 ga. stainless steel
2.1.4.11	miscellaneous flanged flashing	24 ga. stainless steel

2.2 EQUIPMENT RAIL

- 2.2.1 18-gauge galvanized steel.
- 2.2.2 Wood Nailer: "B" Style Overhang.
- 2.2.3 Minimum curb height 14"; actual curb height to be field verified.
- 2.2.4 Unitized Construction
- 2.2.5 Internally Reinforced
- 2.2.6 Continuous Welded Corner Seams

2.3 ACCESSORY MATERIALS

- 2.3.1 All miscellaneous clamps, straps and supports, not otherwise designated above, to be stainless steel.
- 2.3.2 Nails: Shall be hot-dipped galvanized or stainless-steel ring shank nails, size as required by construction. Use only stainless-steel nails with aluminum fabrications.
- 2.3.3 Metal to Metal Screws: Shall be ITW Buildex SCOTS stainless steel 12-14x1" (Part No. 1165209) with bonded washer.
- 2.3.4 Wood to Metal Screws: Shall be ITW Buildex TRAXX™ Climacoat™ flat head 12-24X2 ½" (part No. 1094000).

- 2.3.5 Blind Fasteners: High-strength stainless-steel rivets.
- 2.3.6 Termination Bar: Shall be Aluminum Alloy 6061-T6, 1/8-inch x 1 1/4-inch.
- 2.3.7 Caulking: Sealant shall be Sikaflex 1a, manufactured by Sika Corporation; Chem-Calk 900, manufactured by Bostik, Inc.; or Sonolastic NP-1, manufactured by Sonneborn Building Products or approval equal. Color shall be selected by Owner.
- 2.3.8 Cleaner: For Sikaflex 1a, cleaner shall be Xylol, Toluol, Methly ethyl ketone or commercial solvent recommended by the sealant manufacturer.
- 2.3.9 Primer: Shall be as recommended by sealant manufacturer.
- 2.3.10 Flexible Vinyl Flashing: Shall be 20 mil PVC, width as required, such as that manufactured by BMCA, a division of GAF.
- 2.3.11 Metal to Masonry Fastener: 1/4" x 1 1/4" Tapcon Masonry Anchor with a hex washer head and a blue Climaseal ® finish.
 - 2.3.11.1 Drill Bit for Metal to Masonry Anchor: 3/16" x 3 1/2"
- 2.3.12 Masonry Expansion Fasteners: Shall be Powers Zamac Nailin drive anchor with Type 304 stainless steel nail 1/4" x 2" (Catalog No. 2876).
- 2.3.13 Hot Vent Stack Insulation:
 - 2.3.13.1 Cellular Glass Insulation such as FoamGlas® as manufactured by Pittsburg-Corning.

PART 3 EXECUTION

3.1 INSPECTION

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

3.2 REMOVALS

3.2.1 See Removals & Preparations – Section 07591

3.3 FABRICATION, GENERAL

- 3.3.1 Fabricate and install sheet metal sections in 10-foot lengths except where shorter lengths are required by construction.
- 3.3.2 Form sections square, true, and accurate to size, free from distortion, sharp edges, and other defects detrimental to appearance or performance.
- 3.3.3 Junctures, intersections, corners, and unions of sheet metal fabrications shall be

- formed with 18-inch legs.
- 3.3.4 Interior and exterior corners and joints of coping cap shall be formed with 1-inch standing seams.
- 3.3.5 All Sheet Metal Requirements and Details are referenced to SMACNA Architectural Sheet Metal Manual, Seventh Edition.

3.4 FABRICATION AND INSTALLATION

- 3.4.1 Dissimilar metals shall be kept separated to prevent galvanic action. Preventative measures shall include separation by suitable electrolosis breaking material.
- 3.4.2 Separate any aluminum components from preservative treated lumber with a minimum divorcing layer of 15 lb. asphalt saturated building felt. NEVER USE ALUMINUM FASTENERS IN PRESERVATIVE TREATED LUMBER.
- 3.4.3 All metal flanges shall be installed on top of membrane in accordance with membrane manufacturer's written installation instructions.
- 3.4.4 Flash in metal flanges per roofing system manufacturer's written recommendations unless in conflict with contract documents and/or detail drawings. Resolve any conflict with Roof Consultant, prior to installation of stripping plys.
- 3.4.5 Install metal to be water and weather tight with lines, arises, and angles sharp and true with plane surfaces free of waves or buckles.
- 3.4.6 Form and install new counterflashing metal as shown in detail drawings. Lap joints 3 inches.
- 3.4.7 All exposed edges of sheet metal shall be folded back, or hemmed, on concealed surfaces (minimum ½").
- 3.4.8 All hemmed edges to be engaged in locking cleats shall have 3/4" hem with a folded back return of 5/8". Hem angle maximum 30°. Reference SMACNA Architectural Sheet Metal Manual (Seventh Edition) Figure 2-1 Detail 1.
- 3.4.9 Install shop formed gravel stops, fascias, coping caps, control joints and expansion joint covers in 10-foot lengths, maximum, with a minimum number of pieces for each straight run. Adjust joint spacing so that no metal fabrication less than 5' in length is required.
- 3.4.10 All locking cleats to be one gauge heavier than metal fabrication being secured by the cleat.

3.5 FABRICATION AND INSTALLATION OF NEW COPING AND LOCKING CLEATS:

- 3.5.1 Form and install new metal coping in accordance with SMACNA Architectural Sheet Metal Manual Figure 3-4 A.
- 3.5.2 Attach new continuous metal locking cleat to wood blocking on the inside and State Project Number: H59-6198-PD

- outside face of the parapet wall with fasteners spaced 6" O.C.
- 3.5.3 Prior to the application of the metal coping, install a strip of 20 mil PVC flashing in as long a strip as practical over the wood blocking and metal locking cleats. Lap ends 6" minimum and cement with flashing cement.
- 3.5.4 Use maximum 10' sections with minimum number of sections in each straight run. Form 1" standing seam at ends of sections and seal.
- 3.5.5 Engage the coping with locking cleats on the interior and exterior face of the parapet wall.
- 3.5.6 Continuously crimp the hem of the coping to the locking cleat on the exterior and interior sides of the parapet wall.

3.6 FABRICATION AND INSTALLATION OF OVERFLOW SCUPPER LINER

- 3.6.1 Form and install new metal Through Parapet Overflow Scupper in accordance with SMACNA Figure 1-26A, 1-30A and Project Drawings. Lock and solder all joints and seams.
 - 3.6.1.1 Scupper liners are to be a minimum of 8"x 4"
- 3.6.2 Install new scupper liner over a continuous bead of water block around the scupper opening.
- 3.6.3 Secure scupper flanges to the inside face of parapets with specified fasteners at 4" O.C.
- 3.6.4 Install TPO T-Joint covers at each of the four corners of the scupper opening.
- 3.6.5 Install 5" TPO strips at the side walls of the overflow scupper flanges and then the top and bottom flanges of the overflow scupper liner.
- 3.6.6 Install 9" TPO strip at the bottom flange of the overflow scupper liner, centered on the previously installed 5" strip.
- 3.6.7 Apply TPO sealant around the perimeter of all TPO stripping plies and joint covers.
- 3.6.8 Install new metal outside closure over the opening in the masonry wall and apply sealant around the perimeter of the outside closure.
- 3.7 FABRICATION AND INSTALLATION OF NEW COUNTER FLASHINGS AND RECIEVERS:
 - 3.7.1 Form and install new counterflashing metal with lap in joints, a minimum of 3 inches and lock joint lap. Notch and lap counterflashing sections a minimum of 3 inches.
 - 3.7.2 At equipment curbs, form counter flashings with a minimum 1-1/2" flange that rests

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- on top of the curb and secure to the top of the curb with roofing nails spaced at 6" O.C.
- 3.7.3 At masonry walls, remove existing surface mounted counter flashing to receive new metal counter flashing.
- 3.7.4 Insert new counter flashing into existing fry reglet and secure with lead wedges at 16" O.C. Once new lead wedges have been installed, fill fry reglet with new sealant and tool to shed water.
- 3.7.5 Where rooftop units are not raised, slide top edge of counterflashing behind overhanging skirt of rooftop unit, and fasten counterflashing to the face of the curb using stainless steel screws, with capped, neoprene washers, spaced at 12" centers.

3.8 FABRICATION AND INSTALLATION OF NEW EXPANSION JOINT FLASHING

- 3.8.1 Form and install new metal expansion joint cover in accordance with the Project Drawings and in accordance with SMACNA Architectural Sheet Metal Manual (7th Ed.) Figure 5-5 A.
- 3.8.2 Install new fiberglass batt insulation inside polyethylene envelope fold between the wood blocking members and/or the adjacent construction.
- 3.8.3 Install new metal expansion joint flange and fasten to substrate with fasteners at 4" O.C. staggered.
- 3.8.4 Prior to the application of the expansion joint cover, install a strip of 20-mil PVC flashing in as long a strip as practical over the flange and insulation envelope. Lap ends 6" minimum and cement with flashing cement.
- 3.8.5 Use maximum 10' sections with minimum number of sections in each straight run. Form 1" standing seam at ends of sections and seal.
- 3.8.6 Secure continuous locking cleat to wood blocking with fasteners, at 6" O.C. Engage expansion joint cover with locking cleat and tong the cover to the locking cleat.
- 3.8.7 Tong the expansion joint cap over the expansion flange, leaving 1" between the flange and the cap to allow for structural movement.
- 3.8.8 Tonged end of the expansion joint cover should have a 1.5" coverage over the expansion flange and 1" between the edge of the expansion joint cover and inside face of the curb.

3.9 FABRICATION AND INSTALLATION OF NEW HOT VENT STACK FLASHING

- 3.9.1 Fabricate and install new flanged metal flashings for hot pipes penetrating the roof.
- 3.9.2 Fabricate with a $\frac{1}{2}$ " hem at the top edge.

- 3.9.3 Fabricate in 2 pieces, if necessary. Seam and solder all metal joints.
- 3.9.4 Seal all openings in deck around roof penetration to prevent leakage of fill materials into building. Hold new wood blocking installed beneath roof flange a minimum of 6" away from double wall stacks and fill void between blocking and pipe sleeve with non-combustible filler.
- 3.9.5 Set flange on TPO roof membrane in a continuous bead of water block. Secure to wood blocking with fasteners at 4" O.C.
- 3.9.6 Cover flange with one stripping ply of TPO membrane. Extend the ply at least 12" beyond the end of the flange.
- 3.9.7 Install bonnet flashing extending outside and below the perimeter edge of the pan.
- 3.9.8 Secure bonnet flashing to the outer wall of the hot vent stack with a draw band. Install sealant at the top of the bonnet flashing.

3.10 FABRICATION AND INSTALLATION OF NEW EQUIPMENT RAIL

- 3.10.1 Install new equipment rail where wood blocking supports existing kitchen package unit.
- 3.10.2 Field measure and verify the height of the new equipment rail from the top of the existing metal deck to provide a minimum 8" flashing height after the new roof assembly is installed.
- 3.10.3 Set equipment rail on metal deck and secure with fasteners spaced 6" O.C. Rail may need to be shimmed to provide a flat, plane surface to secure the existing kitchen package unit.
- 3.10.4 After new TPO membrane and base flashings have been installed, install new equipment rail cap and secure to wood nailer with long life fasteners at 12" o.c.

3.11 FABRICATION AND INSTALLATION OF NEW DOWNSPOUT EXTENSION

- 3.11.1 Fabricate downspout extensions to match the size and profile of the existing downspouts in accordance with SMACNA Figure 1-32B with flat lock or s-lock seams. Flair ends of downspout extension tube to receive higher lengths of downspout.
- 3.11.2 Secure new downspout extension to existing downspout using a minimum of two (2) blind fasteners per downspout extension.
- 3.11.3 Downspout straps shall be fabricated in accordance with SMACNA Figure 1-35C. Form downspout straps from 1/16" x 1" aluminum flat bar, spaced at +/- 5 feet.
 - 3.11.3.1 Wrap aluminum downspout straps on the three exposed sides with prefinished galvalume, color to match the gutter. Powder coated downspout straps may be used with prior approval by the Consultant.

- 3.11.4 Apply sealant between flat surface of downspout straps and coping cap or walls prior to securing.
- 3.11.5 Provide new metal splash pans and sacrificial membrane below downspout outlets that drain onto adjacent low sloped roof areas.
- 3.12 FABRICATION AND INSTALLATION OF NEW METAL SPLASH PANS:
 - 3.12.1 Refer to SMACNA Architectural Sheet Metal Manual (Seventh Edition) Figures 1-36, and project drawings.
 - 3.12.2 Set splash pan in a bed of contact cement on a TPO walkpad, which extends a minimum of 4" beyond the splash pan base in all directions. TPO walkpad shall be adhered to the TPO membrane.
- 3.13 FABRICATION AND INSTALLATION OF NEW MISCELLANEOUS FLANGED FLASHINGS.
 - 3.13.1 Set flange on TPO roof membrane in a continuous bead of water block. Secure to wood blocking with fasteners at 4" O.C.
 - 3.13.2 Cover flange with one stripping ply of TPO membrane. Extend the ply at least 12" beyond the end of the flange.
 - 3.13.3 Extend flashings a minimum height of 8" up the vertical surface.

END OF SECTION 07620

SECTION 07920

SEALANTS AND CAULKING

Part 1 GENERAL

1.1. WORK INCLUDED

1.1.1. Caulk and seal all joints where shown on the drawings and elsewhere as required to provide a positive barrier against passage of air and passage of moisture.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- 1.2.1. Thermoplastic Membrane Roofing Section 07540
- 1.2.2. Sheet Metal Flashing and Trim Section 07620

1.3. QUALITY ASSURANCE

1.3.1. Qualifications of Manufacturer: Products used in the work shall be produced by Manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Roof Consultant and Membrane Manufacturer.

1.4. PRODUCT HANDLING

- 1.4.1. Deliver materials to the job site in original, unopened containers.
- 1.4.2. Do not retain on the job site any material which has exceeded the shelf life recommended by its manufacturer.
- 1.4.3. Protect all surfaces from staining or damage. All damaged work shall be repaired or replaced as directed by the Roof Consultant and at no additional cost to the Owner.

1.5. JOB CONDITIONS

1.5.1. Do not apply caulking or sealants when the surface temperature is below 40 degrees Fahrenheit or above 125 degrees Fahrenheit. Do not apply materials when surface is damp or during cold, rainy, or frosty weather.

Part 2 PRODUCTS

2.1. SEALANTS

- 2.1.1. General: Except as specifically otherwise directed by the Designer, use only the type of sealants described in the section.
- 2.1.2. Sealant shall be Sikaflex 1a, manufactured by Sika Corporation; Chem-Calk 900, manufactured by Bostik, Inc.; Sonolastic NP 1, manufactured by Sonneborn; or equal. Color shall be selected by Owner.

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2.2. CLEANER

2.2.1. For Sikaflex 1a, cleaner shall be Xylol, Toluol, Methly ethyl ketone or commercial solvent recommended by the sealant manufacturer.

2.3. PRIMER

2.3.1. Shall be as recommended by sealant manufacturer.

2.4. OTHER MATERIALS

2.4.1. All other materials not specifically described but required for complete and proper caulking and installation of sealants shall be first quality of their respective kinds, new, and as selected by the Contractor subject to the approval of the Membrane Manufacturer and Roof Consultant.

Part 3 EXECUTION

3.1. GENERAL

3.1.1. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2. PREPARATION

3.2.1. Metal Surface

- 3.2.1.1. Metal surface in contact with sealant shall be cleaned of temporary protective coatings, dirt, oil, and grease.
- 3.2.1.2. When masking tape is used for a protective cover, remove the tape just prior to applying the sealant.
- 3.2.1.3. Use only such solvents to remove protective coatings as are recommended for that purpose by the manufacturer of the aluminum work and which are non-staining.

3.3. INSTALLATION OF SEALANTS

- 3.3.1. General: Prior to the start of installation of each joint, verify the joint type according to the details in the drawings and verify that the required proportion of width of joint to depth of joint has been secured.
 - 3.3.1.1. Caulking width to depth ratio is width = A and depth = A/2.
 - 3.3.1.2. For all joints over 1/4" width, provide bond breaker tape or backer rod.
- 3.3.2. Equipment: Apply sealant under pressure with hand or power-actuated gun or other appropriate means. Guns shall have nozzle of proper size and shall provide sufficient pressure to completely fill joints as designed.

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- 3.3.3. Masking: Thoroughly and completely mask all joints where the appearance of sealant on adjacent surface would be objectionable.
- 3.3.4. Installation of sealant: Install the sealant in strict accordance with the manufacturer's recommendations as approved by the Owner, thoroughly filling all joints to the recommended depth.
- 3.3.5. Tooling: Tool all joints to the profile shown on the details in the drawings. Tooling to be done immediately after sealant application.

3.4. CLEANING UP

- 3.4.1. Remove masking tape immediately after joints have been tooled.
- 3.4.2. Keep adjacent surfaces clean and free from sealant as the installation progresses. Use solvent or cleaning agent as recommended by the sealant manufacturer.

END OF SECTION 07920

SECTION 15882

CONDENSATE DRAIN PIPING FOR HVAC

PART 1 GENERAL

1.1 SUMMARY

1.1.1 This Section includes condensate drain piping for HVAC units.

1.2 SUBMITTALS

1.2.1 Product Data: For each product indicated include a material and manufacturers list on Contractor's letterhead with appropriate minimum standards referenced.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Schedule 40 PVC piping, sized to match existing, and appropriate, reducers, enlargers, 90° elbows, and pre-manufactured P-traps, as required; as manufactured by NIBCO, Elkhart, IN, 800-234-0227 or equal.
- 2.1.2 Pipe Supports: MIRO Model 3-R-2 "roller-bearing" pipe support, for a 3" ID and smaller pipes, as manufactured by MIRO Industries, Sandy, Utah, 800-768-6978.
- 2.1.3 Pipe Guide Material: 0.040 aluminum 5052 alloy temper H32 ASTM B-209-01, provided by Pipe Support Manufacturer.

PART 3 EXECUTION

3.1 ASSEMBLY

- 3.1.1 At the condensate pan drain, install a 90° elbow, outlet down. Connect to premanufactured "P" trap and utilize reducers immediately before and after "P" trap. Provide cold connection to PVC drain piping collection system. Terminate PVC drain piping at internal roof drains with 90° elbows, outlet down. Secure pipe to drain strainer basket with stainless steel wire.
- 3.1.2 Support PVC drain piping collection system using pipe supports spaced at 5' O.C.
- 3.1.3 Set condensate drain support stand in a bed of contact cement on a TPO walkpad, which extends a minimum of 4" beyond the condensate drain pipe support base in all directions. TPO walkpad shall be fully adhered to the TPO membrane.
- 3.1.4 Secure PVC drain piping to pipe supports using pipe guide material, attached to both sides of the pipe support with stainless steel screws into pre-punched holes.

END OF SECTION15882