



BID PHASE

**INDEFINITE DELIVERY CONTRACT
ROOFING CONSTRUCTION SERVICES
IDC PROJECT # H18-D090-PD
RE-BID**

**FRANCIS MARION UNIVERSITY
ERVIN DINING HALL RE-ROOF PROJECT
REPRESENTATIVE
IDC PROJECT #: H18-N069-PD
RE-BID**

NOV 2017

TABLE OF CONTENTS – INDEFINITE DELIVERY CONTRACT

PROJECT NAME: Indefinite Delivery Contract for Roofing Construction Services Re-Bid

PROJECT NUMBER: H18-N069-PD

<u>SECTION</u>	<u>NUMBER OF PAGES</u>
Table of Contents	2
Invitation for Construction Services Indefinite Delivery Contract (SE-655)	1
Instructions to Bidders for Construction Services Indefinite Delivery Contract (SE-656).....	9
Bid Bond (AIA A310)	1
Construction Services Indefinite Delivery Contract Bid Form (SE-659).....	4
Construction Services Indefinite Delivery Services Contract (SE-680)	2
General Conditions to Construction Services Indefinite Delivery Contract (SE-685).....	13
Construction Services IDC Delivery Order (SE-690)	1
Construction Services IDC Delivery Order Modification (SE-695)	1

TECHNICAL SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

01 1000 - SUMMARY 5
Attachment: Sketch 1 "Laydown Area" 1
01 2300 - ALTERNATES 2

DIVISION 02 - EXISTING CONDITIONS

02 4119 - SELECTIVE DEMOLITION 3

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

06 1000 - ROUGH CARPENTRY 5

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 5419 – POLYVINYL-CHLORIDE (PVC) ROOFING 10
07 6200 – SHEET METAL FLASHING AND TRIM 9
07 7100 - ROOFING SPECIALTIES 6

END OF TABLE OF CONTENTS

SE-655

INVITATION FOR CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT

IDC PROJECT NAME: Indefinite Delivery Contract for Roofing Construction Services Re-Bid

REPRESENTATIVE PROJECT NAME (if applicable): Ervin Dining Hall Re-Roof Project Re-Bid

IDC PROJECT NUMBER: H18-D090PD

REPRESENTATIVE PROJECT NUMBER (if applicable): H18-N069-PD

PROJECT LOCATION: FMU Main Campus, Florence, SC

BID SECURITY REQUIRED? Yes No

DESCRIPTION OF CONSTRUCTION SERVICES (Include Contractor License category/subcategory): SR (Group 3 minimum)

CONTRACT INFORMATION

1. The contract period of the awarded Indefinite Delivery Contract (IDC): 2 years
2. Maximum expenditures over the period of the awarded IDC: \$ 1,000,000
3. Maximum single project expenditure that will be allowed under the awarded IDC: \$ 250,000
4. Maximum number of IDC's Agency may award under this solicitation: 5
5. Method Agency will use to award Delivery Orders under the awarded IDC: Low Bid
6. Minimum dollar value of services Agency will procure under each awarded IDC (Check box if Applicable): \$

BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: http://www.fmarion.edu/facilitiesmanagement/

PLAN DEPOSIT AMOUNT: \$ _____ **IS DEPOSIT REFUNDABLE** Yes No N/A

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

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

AGENCY: Francis Marion University

AGENCY PROJECT COORDINATOR: Joe Bace

ADDRESS: Street/PO Box: 4822 E Palmetto Street

City: Florence State: SC ZIP: 29506-

EMAIL: jbace@fmarion.edu

TELEPHONE: 843-661-1488 **FAX:** 843-661-1565

PRE-BID CONFERENCE: Yes No

MANDATORY ATTENDANCE: Yes No

PRE-BID DATE: 12/5/17

TIME: 3pm

PLACE: Facilities Conference Room

BID CLOSING DATE: 12/19/17

TIME: 3pm

PLACE: Facilities Conference Room

BID DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Joe Bace

4822 E Palmetto Street, Physical Plant Bldg.

Florence, SC 29506

MAIL SERVICE:

Attn: Joe Bace

4822 E Palmetto Street, Physical Plant Bldg.

Florence, SC 29506

APPROVED BY: _____

(OSE Project Manager)

DATE: _____

INSTRUCTIONS TO THE AGENCY:

1. Submit a copy of the completed SE-655 to the OSE Project Manager in Word format.
2. If the IDC is using Low Bid of a Representative Project as the method of award, submit Page 2 of the SE-655 to OSE.
3. OSE Project Manager will review and send approved copy to SCBO and the Agency

SE-656

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT

AGENCY: Francis Marion University

PROJECT NUMBER: H18-D090PD

PROJECT NAME: IDC Contract for Roofing Construction Services Re-Bid

PROJECT LOCATION: FMU Main Campus, Florence, SC

DESCRIPTION OF CONSTRUCTION SERVICES *(Include Contractor License category/subcategory):* SR (Group 3 minimum)

The above named Agency hereby solicits bids for the Construction Services Indefinite Delivery Contract shown above. The Invitation for Bids includes the advertisement (SE-655), bid form, Notice of Intent to Award Indefinite Delivery Contract (SE-670), Construction Services Indefinite Delivery Contract (SE-680), General Conditions to Construction Services Indefinite Delivery Contract (SE-685), drawings and specifications (if applicable), and all addenda issued prior to bid opening, all of which are collectively referred to herein as the Solicitation Documents.

The Invitation for Bids is issued pursuant to South Carolina Code § 11-35-3310 and the Manual for Planning and Execution of State Permanent Improvements, Part II (Manual).

1. GENERAL INFORMATION

- 1.1 Agency may award up to 5 Indefinite Delivery Contract(s) (IDC) under this solicitation provided the Agency receives an adequate number of responsive and responsible bids. In no event, will the Agency award more contracts than the number set forth in the previous sentence.
- 1.2 Work is to be performed at the following location(s): *(Insert location of work, e.g. a particular campus or campuses)*
Francis Marion University Campuses
- 1.3 The awarded IDC will be for a period not to exceed 2 years *(may not exceed 2 years)*.
- 1.4 The awarded IDC allows the Agency to award a total amount of work not to exceed \$ 1,000,000
- 1.5 Work awarded under the IDC will be awarded using form SE-690, Construction Services IDC Delivery Order. Agency will provide IDC awardees the opportunity to bid on all Delivery Orders for the services set forth in this Invitation.
- 1.6 The Agency may only award one Delivery Order per project to the contractor. However, a Delivery Order may be amended. A Delivery Order may only be amended in writing signed by both parties using form SE-695, Construction Services Delivery Order Modification.
- 1.7 Work awarded under the IDC for a single project may not exceed \$ 250,000.
- 1.8 Projects and Delivery Orders may not be divided to avoid the limits set forth in 1.6 and 1.7 above.
- 1.9 *(Check the block for the provision applicable to this solicitation)*
- The minimum amount of work to be awarded under the IDC is \$ _____.
- Agency does not guarantee a minimum amount of work, nor does it guarantee the size or quantity of any work that is awarded under the IDC.
- 1.10 Bidders will agree to perform work for the advertised discipline in the following manner: *(Check one)*
- The cost of the work to the Agency will be determined using unit prices listed by the Bidder on its Bid Form. No other additions to the cost of the work will be permitted except the cost of Performance and Payment Bonds if required for specific Delivery Orders; or
- The cost of the work to the Agency will be determined by competitive bidding of each Delivery Order among all contractors having an active contract that the Agency awarded pursuant to this Invitation for Bids.

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

1.11 Bidders must be properly licensed in the discipline and the Group Classification to permit an award up to the maximum individual project award set forth in 1.7. Successful bidder(s) must maintain this license for the term of the contract.

2. SOLICITATION DOCUMENTS

- 2.1 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. Agency will send all addenda modifying the Solicitation Documents to all plan holders of record.
- 2.2 By submitting a bid, Bidder represents that it has read and understands the Solicitation Documents. Bidders are expected to examine the Solicitation Documents thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements. Failure to do so will be at the Bidder's risk. Bidder assumes responsibility for any patent ambiguity that Bidder does not bring to the Agency's attention prior to bid opening. Bidder shall make any requests for substitution, questions, clarifications, or interpretations of the bid documents in writing to the Agency at least 10 days before the Bid Date. The Agency will not give oral instruction prior to bidding nor will any oral instructions to bidders be binding on the Agency.
- 2.3 The Agency will make corrections, interpretations, or changes that modify the Solicitation Documents by written addendum. As provided in Regulation 19-445.2042(B), if this solicitation provides for a pre-bid conference, nothing stated at the pre-bid conference shall change the Solicitation Documents unless a change is made by written addendum.
- 2.4 The Agency will not issue addenda later than 120 hours before the date and time specified in the advertisement for receipt of Bids except to withdraw the Invitation for Bids or to extend the date for receipt of bids.
- 2.5 When the date for receipt of Bids is postponed and there is insufficient time to issue a written Addendum prior to the original Bid Date, Agency will notify prospective Bidders by telephone or other appropriate means with immediate follow up with a written Addendum. This Addendum will verify the postponement of the original Bid Date and establish a new Bid Date. The new Bid Date will be no earlier than the fifth (5th) calendar day after the date of issuance of the Addendum postponing the original Bid Date.

3. BID PREPARATION

- 3.1 Bidder shall submit its bid using the bid form included in the Solicitation Documents. Bidder shall fill in any blanks on the bid form legibly using an indelible medium. Bidder shall sign its bid in ink or other indelible media. Sums shall be expressed in figures.
- 3.2 Bidder shall not make stipulations or qualify its 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.
- 3.3 Pursuant to Title 11, Chapter 35, Section 3020(b)(i) of the South Carolina Code of Laws, as amended, the bid form may set forth a list of subcontractor specialties for which Bidder is required to list only the subcontractors Bidder will use to perform the work of each listed specialty. Bidder must follow the Instructions in the Bid Form for filling out this section of the Bid Form. Failure to properly fill out this Section may result in rejection of Bidder's bid as non-responsive.
- 3.4 Bid Security: *(Agency, check the block for the provision applicable to this solicitation)*
- Bidder is not required to submit Bid Security with its bid.
- Bid shall be accompanied by a Bid Security in an amount of not less than 5% of the bid amount. The Bid Security shall be a bid bond or a certified cashier's check made payable to the Agency.
- 3.4.1 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Failure of the Bidder to enter into a contract with the Agency, furnish such bonds if required, or to correct any Bid deficiencies allowed by law, shall cause bid security to be forfeited to the Agency as liquidated damages, not as a penalty.

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

-
- 3.4.2 If Bidder submits a bid bond as its bid security, the bond shall be written on AIA Document A310, Bid Bond. The bid bond must be accompanied by a certified and current Power of Attorney for the attorney-in-fact who executes the bond on behalf of the surety company. The Bid Bond shall:
- a. Be issued by a Surety Company licensed to do business in South Carolina;
 - b. 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.
 - c. 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.
- 3.4.3 By submitting a Bid Bond via an electronic bid bond authorization number on the Bid Form and signing the Bid Form, the Bidder certifies that an electronic bid bond has been executed by a Surety meeting the standards required by the Bidding Documents and the Bidder and Surety are firmly bound unto the State of South Carolina under the conditions provided in this Section 3.4.
- 3.4.4 The Agency will retain the Bid Security of those Bidders being considered for award until an IDC has been executed, all bids are rejected, or the time specified in the Solicitation Documents for holding bids open has elapsed, whichever is earlier.
- 3.5 Submission of Bids: The Bidders shall submit their Bid, Bid Security, if any, and any other documents required by the Solicitation Documents to be submitted with the Bid, in a sealed opaque envelope. Unless hand delivered by the Bidder, the sealed envelope must be addressed to the Agency’s designated purchasing office as shown in the advertisement. The envelope shall be identified on the outside with the Project Name and Number, and the Bidder’s name and address. If the Bidder sends its bid to the Agency by mail or special delivery service (UPS, Federal Express, etc.), the envelope should be labeled “BID ENCLOSED” on the face thereof. Bidders hand delivering their bids shall deliver bids to the place of the bid opening as shown in the advertisement. Whether or not Bidders attend the bid opening, they shall give their bids to the Agency’s procurement officer or his/her designee as shown in the Advertisement prior to the time of the bid opening.
- 3.5.1 Each copy of the Bid submitted to the Agency shall be signed by the person(s) legally authorized to bind the Bidder to a contract. If the Bid is submitted by an agent of the Bidder, a current Power of Attorney certifying the agent’s authority to bind the Bidder shall be attached to the bid.
- 3.5.2 The Agency must receive Bids at the designated location before the time and date specified in the Solicitation Documents for receipt of Bids. The Agency will return bids received after the time and date for receipt of Bids unopened.
- 3.5.3 The official time for receipt of Bids will be determined by reference to the clock designated by the Agency’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.
- 3.5.4 If an emergency or unanticipated event interrupts normal government processes so that Bids cannot be received at the government office designated for receipt of Bids by the exact time specified in the solicitation, the time specified for receipt of Bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal government processes resume. In lieu of an automatic extension, an Addendum may be issued to reschedule bid opening. If state offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an Addendum will be issued to reschedule the conference.

4. CONDUCT OF BID OPENING AND CONSIDERATION OF BIDS

- 4.1 Bid Opening:
- 4.1.1 Agency will publicly open and read aloud Bids received on time.

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

- 4.1.2 At Bid Opening, Agency will announce the date and location of the posting of the Notice of Intent to Award IDC.
- 4.1.3 Agency will send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the bid opening.
- 4.1.4 If Agency determines to make an award, Agency will, after posting a Notice of Intent to Award IDC, send a copy of the Notice to all Bidders.
- 4.1.5 If only one Bid is received, Agency will open and consider the Bid.
- 4.2 Agency intends to award contracts in the number set forth in the Solicitation Documents to the lowest responsive and responsible bidders.
- 4.3 Bid Rejection: The Agency reserves the right to reject any and all bids.
- 4.3.1 Responsiveness:
- 4.3.1.1 The reasons for which the Agency will reject Bids include, but are not limited to:
- a. Failure by a Bidder to be represented at a Mandatory Pre-Bid Conference or site visit;
 - b. Failure to deliver the Bid on time;
 - c. Failure to comply with Bid Security requirements, except as expressly allowed by law;
 - d. Listing an invalid electronic Bid Bond authorization number on the bid form;
 - e. Failure to bid an alternate, except as expressly allowed by law;
 - f. Failure to list qualified Subcontractors as required by law;
 - g. Showing any material modification(s) or exception(s) qualifying the Bid;
 - h. Faxing a Bid directly to the Agency or their representative; or
 - j. Failure to include a properly executed Power-of-Attorney with the Bid Bond.
- 4.3.1.2 The Agency may reject a Bid as nonresponsive if the prices bid are materially unbalanced between line items or sub line items. A Bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Agency, even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.
- 4.3.2 Bidder Responsibility: Agency will make a determination of Bidder's responsibility before awarding a contract. Bidder shall provide all information and documentation requested by the Agency to support the Agency's evaluation of responsibility. Failure of Bidder to provide requested information is cause for the Agency, at its option, to determine the Bidder to be non-responsible.
- 4.4 Clarification: Pursuant to Section 11-35-1520(8), the Procurement Officer may elect to communicate with a Bidder after opening for the purpose of clarifying either the Bid or the requirements of the Invitation for Bids. Such communications may be conducted only with Bidders who have submitted a Bid which obviously conforms in all material aspects to the Invitation for Bids and only in accordance with Appendix D (Paragraph A(6)) to the Manual for Planning and Execution of State Permanent Improvement, Part II. Clarification of a Bid must be documented in writing and included with the Bid. Clarifications may not be used to revise a Bid or the Invitation for Bids. [Section 11-35-1520(8); R.19-445.2080]
- 5. TENDERING CONTRACT, CERTIFICATES OF INSURANCE, AND PERFORMANCE AND PAYMENT BONDS**
- 5.1 After expiration of the protest period, the Agency will tender a signed IDC to the successful Bidder(s). The Bidder(s) shall return the fully executed IDC to the Agency within seven (7) days thereafter. The Bidder(s) shall deliver the required proof of insurance and bonding capacity to the Agency not later than three (3) days following the date of execution of the IDC. Failure to deliver these documents as required shall entitle the Agency 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.
- 5.2 The IDC will be written on OSE form SE-680, Construction Services Indefinite Delivery Contract.
- 5.3 After the IDC is fully executed, the Agency may award work to the successful Bidder(s) by issuing a Delivery Order in the manner described in the SE-680 and SE-685, General Conditions to the SE-680.

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT****6. BIDDER CERTIFICATIONS**

6.1 Certification of Independent Price Determination

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

(a) By submitting 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—
 - (i) Those prices;
 - (ii) The intention to submit a bid; or
 - (iii) The methods or factors used to calculate the prices offered.
- (2) The prices in this Bid have not been and will not be knowingly disclosed by the Bidder, directly or indirectly, to any other Bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
- (3) No attempt has been made or will be made by the Bidder to induce any other concern to submit or not to submit a Bid for the purpose of restricting competition.

(b) Each signature on the Bid is considered to be a certification by the Signatory that the Signatory—

- (1) Is the person in the Bidder's organization responsible for determining the prices being offered in this Bid, and that the Signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or
- (2)
 - (i) Has been authorized, in writing, to act as agent for the Bidder's principals in certifying that those principals have authorized the prices offered in this Bid];
 - (ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.

(c) If the Bidder deletes or modifies paragraph (a)(2) of this certification, the Bidder must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

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

6.3 Certification Regarding Debarment and Other Responsibility Matters:

(a) (1) By submitting an Bid, Bidder certifies, to the best of its knowledge and belief, that-

(i) Bidder and/or any of its Principals-

- (A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
- (B) Have not, within a three-year period preceding this Bid, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of bids; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

SE-656

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT

- (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
- (ii) Bidder has not, within a three-year period preceding this bid, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
- (2) “Principals,” for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (b) Bidder shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (c) If Bidder is unable to certify the representations stated in paragraphs (a)(1), Bid must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Bidder’s responsibility. Failure of the Bidder to furnish additional information as requested by the Procurement Officer may render the Bidder nonresponsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of a Bidder is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Bidder knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the State, the Procurement Officer may terminate the contract resulting from this solicitation for default.
- 6.4 Ethics Certification: By submitting a bid, the Bidder certifies that the Bidder has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision. If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-1150 to the procurement officer at the same time the law requires the statement to be filed.
- 6.5 Restrictions Applicable to Bidders and Gifts: Violation of these restrictions may result in disqualification of your bid, suspension or debarment, and may constitute a violation of the state Ethics Act. (a) After issuance of the solicitation, **bidder agrees not to discuss this procurement activity in any way with the Owner or its employees, agents or officials.** All communications must be solely with the Procurement Officer. This restriction may be lifted by express written permission from the Procurement Officer. This restriction expires once a contract has been formed. (b) Unless otherwise approved in writing by the Procurement Officer, **bidder agrees not to give anything to the Owner, any affiliated organizations, or the employees, agents or officials of either, prior to award.** (c) Bidder acknowledges that the policy of the State is that a governmental body should not accept or solicit a gift, directly or indirectly, from a donor if the governmental body has reason to believe the donor has or is seeking to obtain contractual or other business or financial relationships with the governmental body. Regulation 19-445.2165(C) broadly defines the term donor.

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

- 6.6 Iran Divestment Act Certification: (a) The Iran Divestment Act List is a list published by the State Fiscal Accountability Authority pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. The list is available at the following URL: <http://procurement.sc.gov/PS/PS-iran-divestment.phtm>(.) Section 11-57-310 requires the government to provide a person ninety days written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material inducement for the State to award a contract to you. (b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List.
- 6.7 Open Trade Representation (Jun 2015): By submitting an Offer, Offeror represents that Offeror 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 SC Code Section 11-35-5300. [02-2A083-1]

7. MISCELLANEOUS PROVISIONS

- 7.1 Non-Resident Taxpayer Registration Affidavit - Income Tax Withholding:

IMPORTANT TAX NOTICE - NONRESIDENTS ONLY

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

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

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

PLEASE SEE THE "NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING" FORM (FORM NUMBER I-312) LOCATED AT:

<http://www.sctax.org/Forms+and+Instructions/withholding/default.htm>

- 7.2 Contractor Licensing: Contractors and Subcontractors listed on the Bid Form who are required by the South Carolina Code of Laws to be licensed, must be licensed at the time of bidding.
- 7.3 Submitting Confidential Information: For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Bidder contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged and confidential, as that phrase is used in Section 11-35-410. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Bidder contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that Bidder contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire bid as confidential, trade secret, or protected! If your bid, or any part thereof, is improperly marked as confidential or trade secret or protected, the State may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation, Bidder (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a

SE-656**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

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, and (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on Bidder’s marking of documents, as required by these bidding instructions, as being either “CONFIDENTIAL” or “TRADE SECRET” or “PROTECTED”. By submitting a response, Bidder agrees to defend, indemnify & hold harmless the State of South Carolina, its officers & employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney’s fees, arising out of or resulting from the State withholding information that Bidder marked as “CONFIDENTIAL” or “TRADE SECRET” or “PROTECTED”.

7.4 Posting of Notice of Intent to Award IDC:

Notice of Intent to Award, SE-670, will be posted at the following location:

Room or Area of Posting: Main Corridor, FMU Physical Plant Building

Building Where Posted: FMU Physical Plant Building

Address of Building: 4822 E Palmetto Street, Florence, SC 29506

WEB site address (if applicable): <http://www.fmarion.edu/facilitiesmanagement/>

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

- 7.5 Protest of Solicitation or Award: Any prospective bidder, offeror, contractor or subcontractor who is aggrieved in connection with the solicitation of a contract shall protest within fifteen days of the date of issuance of the applicable solicitation document at issue. Any actual bidder, offeror, contractor or subcontractor who is aggrieved in connection with the intended award or award of a contract shall protest within ten (10) days of the date notification of intent to award is posted in accordance with Title 11, Chapter 35, Section 4210 of the South Carolina Code of Laws, as amended. A protest shall be in writing, shall set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided, and must be received by the State Engineer within the time provided. Any protest must be addressed to the CPO, Office of State Engineer, and submitted in writing (a) by email to protest-ose@mso.sc.gov, (b) by facsimile at 803-737-0639, or (c) by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201. By submitting a protest to the foregoing email address, you (and any person acting on your behalf) consent to receive communications regarding your protest (and any related protests) at the e-mail address from which you sent your protest.
- 7.6 Solicitation Information From Sources Other Than Official Source: South Carolina Business Opportunities (SCBO) is the official state government publication for State of South Carolina solicitations. Any information on State agency solicitations obtained from any other source is unofficial and any reliance placed on such information is at the bidder’s sole risk and is without recourse under the South Carolina Consolidated Procurement Code.
- 7.7 Installation Floater/Builder’s Risk Insurance: Agency insures its property through the South Carolina Insurance Reserve Fund. The Insurance Reserve Fund will not name a third party as an additional insured nor will it allow the Agency to waive subrogation. Pursuant to Section H of the SE-680, Agency may require Bidder to provide an installation floater or builder’s risk insurance when issuing a Delivery Order under the IDC.
- 7.8 Tax Credit for Subcontracting with Disadvantaged Small Businesses: Pursuant to Section 12-6-3350, a taxpayer having a contract with this State who subcontracts with a socially and economically disadvantaged small business is eligible for an income tax credit equal to four percent of the payments to that subcontractor for work pursuant to the contract. The subcontractor must be certified as a socially and economically disadvantaged small business as defined in Section 11-35-5010 and regulations pursuant to it. The credit is limited to a maximum of fifty thousand dollars annually. A taxpayer is eligible to claim the credit for ten 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. A taxpayer claiming the credit shall maintain evidence of work performed for the contract by the subcontractor. 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. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803)

SE-656

**INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION SERVICES
INDEFINITE DELIVERY CONTRACT**

898-5786, Fax: (803) 898-5888. 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.

7.9 Performance & Payment Bonds; Pursuant to SC Code Ann § 11-35-3030, when the Agency awards a Delivery Order to the Indefinite Delivery Contractor in excess of \$50,000, the Contractor shall provide Performance and Payment Bonds each in the amount of 100% of the delivery order price. See Section H of the SE-680 for more details.

7.10 Other Special Conditions:

7.11 Special documents required to be submitted with the bid for this project include:

AIA[®] Document A310[™] – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

BOND AMOUNT:

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

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.

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.

Signed and sealed this _____ day of _____

(Witness)

(Contractor as Principal)

(Seal)

(Title)

(Witness)

(Surety)

(Seal)

(Title)

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

Init.

AIA Document A310[™] – 2010 (rev. 10/2010). Copyright © 1963, 1970 and 2010 by The American Institute of Architects. All rights reserved. **WARNING: This AIA[®] Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA[®] Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.** Purchasers are permitted to reproduce ten (10) copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@ala.org.

ACD43070610

**SE-659
CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT
REPRESENTATIVE PROJECT BID FORM**

Bidders shall submit bids on only Bid Form SE-659.

BID SUBMITTED BY: _____
(Bidder's Name)

BID SUBMITTED TO: Francis Marion University
(Owner's Name)

FOR: PROJECT NAME: IDC Contract for Roofing Construction Services Re-Bid-
Ervin Dining Hall Re-Roof Project Re-Bid

PROJECT NUMBER: H18-N069-PD

OFFER

§ 1. In response to the Invitation for Indefinite Delivery of Construction Services and in compliance with the Instructions to Bidders for the above-named Project, the undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with the Owner on the terms included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

§ 2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, Bidder has submitted Bid Security as follows in the amount and form required by the Bidding Documents:

- Bid Bond with Power of Attorney** **Electronic Bid Bond** **Cashier's Check**
(Bidder check one)

§ 3. Bidder acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into this Bid:

(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 may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of **60** Days following the Bid Date, or for such longer period of time that Bidder may agree to in writing upon request of the Owner.

§ 5. Bidder herewith offers to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following items of construction work:

§ 6.1 **REPRESENTATIVE PROJECT WORK DESCRIPTION** *(as indicated in the Bidding Documents and generally described as follows):* _____

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

(Bidder - insert Bid Amount for Representative Project on line above)

This bid price will be used to determine which bidders will receive award of an Indefinite Delivery Contract. The lowest responsive and responsible bidder will also receive a Delivery Order to perform the above described work at the price bid. Award and pricing of subsequent Delivery Orders shall be determined by competitive bidding between Indefinite Delivery Contractors receiving an award of an Indefinite Delivery Contract pursuant to this solicitation.

SE-659**CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT
REPRESENTATIVE PROJECT BID FORM**

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

ALTERNATE # 1 (Brief Description): _____

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

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

ALTERNATE # 2 (Brief Description): _____

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

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

ALTERNATE # 3 (Brief Description): _____

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

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

§ 7. **LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED:** (Owner check box that applies.)

Bidder shall list on Appendix A to this bid form those subcontractors which bidder intends to use to perform the work requiring the license classification and/or subclassification listed therein. Bidder shall only use the listed subcontractors in performance of such licensed work.

Bidder is not required to list subcontractors.

§ 8. **TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES – INDEFINITE DELIVERY CONTRACT**

Bidder agrees that the Date of Commencement of any contract awarded pursuant to the Invitation for Bids shall be established in the Agreement for Indefinite Delivery of Construction Services to be executed by the Owner and the successful Bidder. Bidder also agrees that individual Delivery Orders, if any, shall establish the Date of Commencement, the time to complete the Work included in the Delivery Order (or the completion date), and the amount, if any, the Owner shall retain from the compensation to be paid as Liquidated Damages for each calendar day the actual construction time required to complete the Work exceeds the specified or adjusted time for completion as provided in the Contract Documents.

§ 8.1 **TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES - REPRESENTATIVE PROJECT**

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

b) **LIQUIDATED DAMAGES:** Bidder further agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the amount of \$ _____ for each Calendar Day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents. This amount is intended by the parties as the predetermined measure of compensation for actual damages, not as a penalty for nonperformance.

SE-659 CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT REPRESENTATIVE PROJECT BID FORM

§ 9. AGREEMENTS

- a) Bidder agrees that this bid is subject to the requirements of the laws of the State of South Carolina.
- b) Bidder agrees that at any time prior to execution of the Construction Services Indefinite Delivery Contract 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 execution of the Construction Services Indefinite Delivery Contract.

§ 10. ELECTRONIC BID BOND

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

ELECTRONIC BID BOND NUMBER: _____

SIGNATURE AND TITLE: _____

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION

SC CONTRACTOR'S LICENSE NUMBER(S): _____

CLASSIFICATION(S) & LIMITS: _____

SUBCLASSIFICATION(S) & LIMITS: _____

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

BIDDER'S LEGAL NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____

TITLE: _____

SE-659 – APPENDIX A CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT REPRESENTATIVE PROJECT BID FORM

LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED.

Bidder shall use the below-listed Subcontractors in the performance of the Subcontractor Classification work listed: SUBCONTRACTOR CLASSIFICATION By License Classification and/or Subclassification <i>(Completed by Owner)</i>	SUBCONTRACTOR'S PRIME CONTRACTOR'S NAME <i>(Must be completed by Bidder)</i>	SUBCONTRACTOR'S PRIME CONTRACTOR'S SC LICENSE NUMBER <i>(Requested, but not Required)</i>
BASE BID		

INSTRUCTIONS FOR SUBCONTRACTOR LISTING

1. Completing the form above:
 - a. **First Column:** The Owner fills out this column which identifies the contractor/subcontractor specialties for which the bidder must list either a subcontractor or himself as the entity that will perform this work. Subcontractor specialties are identified by contractor license classifications or subclassifications listed in Title 40 of the South Carolina Code of laws. If the owner has not identified a specialty, the bidder does not list a subcontractor.
 - b. **Second and Third Columns:** In these columns the Bidder identifies the subcontractors it will use for the work of each specialty listed by the Agency in the First Column. Bidder must identify only the subcontractor(s) who will perform the work and no others. Bidders should make sure that their identification of each subcontractor is clear and unambiguous. A listing that could be any number of different entities may be cause for rejection of the bid as non-responsive. For example, a listing of M&M without more may be problematic if there are multiple different licensed contractors in South Carolina whose names start with M&M.
2. **Subcontractor Defined:** For purposes of subcontractor listing, a Subcontractor is an entity who will perform work or render service to the prime contractor to or about the construction site. Material suppliers, manufacturers, and fabricators that will not perform physical work at the site of the project but will only supply materials or equipment to the bidder or proposed subcontractor(s) are not subcontractors and Bidder should not insert their names in the spaces provided on the Bid Form. Likewise, Bidder should not insert the names of sub-subcontractors in the spaces provided on the Bid Form but only the names of those entities with which Bidder will contract directly.
3. **Subcontractor Qualifications:** Bidder must only list subcontractors who are qualified to perform the work of the listed specialties as specified in the Bidding Documents and who possess a South Carolina Contractor's license with the license classification and/or subclassification identified by the Owner in the first column on the left. If Bidder lists a subcontractor who is not qualified to perform the work, the Bidder will be rejected as non-responsive.
4. **Use of Own forces:** If under the terms of the Bidding Documents, Bidder is qualified to perform the work of a classification listed and Bidder does not intend to subcontract such work, but to use Bidder's own employees to perform such work, the Bidder must insert its own name in the space provided for that classification
5. **Use of Multiple Subcontractors:**
 - a. If Bidder intends to use multiple subcontractors to perform the work of a single classification listing, Bidder must insert the name of each subcontractor Bidder will use, preferably separating the names 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 classification listing and to use one or more subcontractors to perform the remaining work for that classification listing, Bidder must insert his own name and the name of each subcontractor, preferably separating the name of each with the word "and".
 - b. **Optional Listing Prohibited:** Bidder may not list multiple subcontractors for a classification listing, in a form that provides the Bidder the option, after bid opening or award, to choose to use one or more but not all the listed subcontractors to perform the work for which they are listed. A listing, which on its face requires subsequent explanation to determine whether it is an optional listing, is non-responsive. If Bidder intends to use multiple entities to perform the work for a single classification listing, Bidder must clearly set forth on the bid form such intent. Bidder may accomplish this by simply inserting the word "and" between the names of each entity listed for that specialty. Owner will reject as non-responsive a listing that contains the names of multiple subcontractors separated by a blank space, the word "or", a virgule (that is a /), or any separator that the Owner may reasonably interpret as an optional listing.
6. If Bidder is awarded the contract, Bidder must use the listed entities to perform the work for which they are listed. Bidder will not be allowed to substitute another entity as subcontractor in place of a subcontractor listed in Appendix A of the Bid Form except for one or more of the reasons allowed by the SC Code of Laws.
7. Bidder's failure to identify an entity (subcontractor or himself) to perform the work of a subcontractor specialty listed in the first column on the left will render the Bid non-responsive.

SE-680**CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT****AGENCY:** Francis Marion University**PROJECT NAME:** Indefinite Delivery Contract for Roofing Construction Services**PROJECT NUMBER:** H18-D090-PD**AGENCY PROCUREMENT OFFICER:** Ralph Davis

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

NAME: _____**ADDRESS:** _____

hereinafter called the "Agency", and

NAME: _____**ADDRESS:** _____

hereinafter called the "Contractor."

WHEREAS, the Agency solicited bids for construction services, for the work description below, for projects to be determined, on an as-needed basis:

WORK DESCRIPTION: _____

WHEREAS, Contractor submitted a successful bid to provide the services described above on an as-needed basis.

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

A. Contract Term:

1. The effective date of this agreement shall commence as of the date at the top of this page and the term shall extend until ____, 20__ (not to exceed two (2) years). The parties may not renew this agreement for an additional term nor may they extend the duration of this agreement by amendment or waiver.
2. Contractor proposals accepted by the Agency within the time limits of the contract may be completed by the Contractor even though the completion date may extend beyond the term of the contract.

B. Contract Documents:

1. Documents forming a part of the contract are:
 - a. This Agreement for Indefinite Delivery of Construction Services;
 - b. Invitation for Construction Services Indefinite Delivery Contract dated ____;
 - c. General Conditions to Construction Services Indefinite Delivery Contract, SE-685 (General Conditions);
 - d. Contractors completed IDC Bid Form SE-6____;
 - e. Agency requests for proposals for construction services made pursuant to this contract;
 - f. Proposals issued by the contractor in response to the Agency's request for proposals;
 - g. Delivery Orders (SE-690) and Modifications (SE-695) issued by the Agency pursuant to this contract;
 - h. Project Manual issued with the Invitation for Construction Services Indefinite Delivery Contract, if any;
 - i. Addenda to the Invitation for Construction Services Indefinite Delivery Contract issued prior to the date of bid opening;
 - j. The following other documents:

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

C. The Work:

1. The Agency will request proposals for construction services on an as-needed basis. The scope of services will be within the general description of work set forth above and within the expenditure limits set forth in the Invitation for Construction Services Indefinite Delivery Contract. The Agency will award work by issuing the contractor a Delivery Order using form SE-690, Construction Services IDC Delivery Order. The method for requesting proposals and awarding Delivery Orders shall be in accordance with the procedures set forth in Part 4 of the General Conditions.
2. The Contractor shall not incur any expense chargeable to the Agency on or about the work of any Delivery Order assigned to this contract until the Delivery Order has been awarded and fully executed by both the Agency and the Contractor.

D. Payment:

Contractor shall make application for payment for work performed under Delivery Orders and the Agency shall make payment in the form and manner set forth in Part 4.3 of the General Conditions.

E. Termination:

The parties may terminate the contract only in the manner provided in Part 9 of the General Conditions.

F. Dispute Resolution:

The parties shall resolve all disputes in the manner provided in Part 5 of the General Conditions.

G. Representatives:

1. Agency's Representative:

Agency designates the individual listed below as its Representative, which individual has the authority and responsibility set forth in Part 2.2 of the General Conditions:

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL: _____

2. Contractor's representative:

Contractor designates the individual listed below as its Contractor's Representative, which individual has the authority and responsibility set forth in Part 3.2 of the General Conditions:

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL: _____

3. Neither the Agency nor the Contractor shall change their representatives without ten days written notice to the other party.

H. Insurance and Performance & Payment Bonds:

The Contractor shall purchase and maintain insurance and provide Performance and Payment Bonds as set forth in Parts 3.18 and 3.19 of the General Conditions.

AGENCY:

BY: _____
(Signature of Representative)

PRINT NAME: _____

PRINT TITLE: _____

DATE: _____

CONTRACTOR:

BY: _____
(Signature of Representative)

PRINT NAME: _____

PRINT TITLE: _____

DATE: _____

SE-685**GENERAL CONDITIONS TO CONSTRUCTION SERVICES INDEFINITE DELIVERY CONTRACT****AGENCY:** Francis Marion University**PROJECT NAME:** Indefinite Delivery Contract for Roofing Construction Services**PROJECT NUMBER:** H18-D090-PD**CONTRACTOR:** _____**1. GENERAL INFORMATION**

- 1.1 Contract Documents: The Contract Documents are identified in the Construction Services Indefinite Delivery Contract (the "Contract"). The Contract can only be modified by written agreement signed by both the Agency and the Contractor. The Contract Documents do not create a contractual relationship between the Contractor and any separate Contractor having a contract with the Agency; between the Agency and any subcontractor to the Contractor of any tier; or between any persons or entities other than the Agency and the Contractor.
- 1.2 Delivery Order: A Delivery Order is a written order issued by the Agency to the Contractor under the terms and conditions of the Contract, directing the Contractor to perform the work described therein. The Agency shall issue the Delivery Order on the SE-690, Construction Services IDC Delivery Order.
- 1.3 Contractor shall not incur any expense chargeable to the Agency on or about the work of any Delivery Order assigned to this contract until the Delivery Order has been awarded and fully executed by both the Agency and the Contractor.
- 1.4 The Contract is subject to strict expenditure and term limits set forth in State Law at S.C. Code Ann. § 11-35-3310 and further explained in the Manual for Planning and Execution of State Permanent Improvements, Part II (the "Manual"). Any modification to the Contract purporting to exceed these strict limits are null and void. The limits applicable to this Contract are set forth in Part I of the Invitation for Indefinite Delivery of Construction Services.
- 1.5 The Work: As used herein, the "Work" means any work required of or performed by the Contractor pursuant to each and every Delivery Order issued by the Agency under this Contract.

2. AGENCY

- 2.1 The term "Agency" means the Agency or the Agency's Representative.
- 2.2 Representative: The Agency's representative designated in Part G(1) of the agreement shall have the authority to bind the Agency with respect to all matters regarding the Contract and requiring the Agency's approval or authorization.
- 2.3 Information to the Contractor: The Agency shall furnish, with reasonable promptness, information requested by the Contractor that is necessary for the performance of the Contract Services and under the Agency's control. Any information or documentation provided by the Agency to the Contractor relating to the Project or Site is provided only for the convenience of the Contractor. The Agency makes no representation or warranty to as to the sufficiency, completeness, or accuracy of such information.
- 2.4 Utility Access and Use:
 If this box is checked, the Agency shall allow the Contractor to use reasonable quantities of water and electricity for construction purposes without charge, as long as these utilities are available and in close proximity to the Work area. Contractor shall be conscientious in controlling excessive or frivolous use of the utilities or the Agency may charge the Contractor for wasteful usage.
- 2.5 Sanitary Facilities: *(Agency, check box that applies to this contract)*
 The Contractor may use those sanitary facilities designated by the Agency in each Delivery Order as available for use.
 The Contractor may not use the Agency's sanitary facilities. The Contractor shall provide sanitary facilities at the job site and maintain same in a clean and sanitary condition for the use of its employees and employees of its subcontractors for the duration of construction. The sanitary facilities shall conform to the requirements of the South Carolina Department of Health and Environmental Control.

- 2.6 Permits, Assessments, and Easements: The Agency shall secure and pay for all building permits, zoning permits, assessments, and easements except as required by any Delivery Order issued under the terms of the contract
- 2.7 Agency's Architect-Engineer (A/E): The Agency may retain an independent A/E to prepare design documents for the work of a specific Delivery Order. In such event, the A/E will be a representative of the Agency during the performance of such work through final completion of such work. In the absence of an independent A/E, the Agency will assign one of its employees to act as A/E for the work of a particular Delivery Order. The Contractor shall cooperate with the A/E in the performance of its duties. The A/E will perform the following duties:
- a. The A/E will make periodic visits to the site during contract administration to become familiar with the progress of the work and to determine if the work is generally progressing in accordance with the contract documents.
 - b. The A/E will make recommendations to the Agency as to acceptance or rejection of the work and, upon the Agency's concurrence, communicate the acceptance or rejection of the work to the Contractor.
 - c. The A/E will review and approve or reject shop drawings and samples submitted by the Contractor showing details/finishes of the work proposed to be installed.
 - d. The decision of the A/E in all matters relating to design and interpretation of contract documents shall, subject to the provisions of Part 5 (Dispute Resolution) be final.
 - e. The A/E will not be responsible for construction means, methods, techniques, procedures and safety measures in the performance of the work nor acts or omissions of the Contractor, subcontractors or any other entity performing work on the site.
 - f. The A/E will review requests for payment, and make recommendations to the Agency for approval or rejection of all or part of the request.
 - g. The A/E will prepare change orders or change directives for review and approval by the Agency.
- 2.8 Construction by Agency: The Agency may do work with its own forces or award separate contracts for work on the same project as may be awarded by Delivery Order under this contract. The Contractor shall allow access to the site by the Agency's work force or separate Contractor(s), and shall cooperate in coordinating the progress of the work with the Agency. The Agency shall have the responsibility to coordinate the activities of the various Contractors working at the project location.

3. CONTRACTOR

- 3.1 The term "Contractor" means the Contractor or the Contractor's Representative.
- 3.2 Representative: The Contractor's representative designated in Part G(2) of the Agreement shall have the authority to bind the Contractor with respect to all matters regarding the Contract and requiring the Contractor's approval or authorization.
- 3.3 Supervision and Performance of the Work: The Contractor shall supervise, perform, and direct the Work, using the professional skill, care, and attention reasonably required for similar projects. The Contractor shall be solely responsible for and have control over means, methods, techniques, sequences, and procedures and for coordinating the Work, unless the Contract Documents give other specific instructions concerning these matters. The Contractor agrees to faithfully and fully perform the terms of this Contract, and any Delivery Order issued under this Contract and shall complete the Work in accordance with the Contract Documents and deliver the Work to the Agency free and clear of all liens and claims. The Contractor shall, at all times during the progress the Work, employ enough skilled workers and have on hand and maintain an adequate supply of materials and equipment to complete the Work in accordance with the construction schedules agreed to in applicable Delivery Orders.
- 3.4 Employee Discipline: The Contractor shall enforce discipline and good order among the Contractor's and subcontractors' employees, and other persons carrying out the Work. Contractor shall be responsible to the Agency for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- 3.5 Safety: The Contractor shall comply with all federal and state work site safety requirements and shall be responsible for initiating, maintaining, and supervising reasonable safety precautions and programs in connection with the performance of the Contract Services. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable and appropriate protection to prevent damage, injury or loss to (1) employees on the Work and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein; and (3) other property at the site of the Work or adjacent thereto.

- 3.6 Waste Materials and Rubbish: The Contractor shall keep the premises and surrounding areas free from accumulation of waste materials or rubbish caused by the Work. Upon Final Acceptance of the Work, the Contractor shall, to the Agency's satisfaction, remove from and about the site, all waste materials, rubbish, surplus material, and Contractor's tools, equipment, machinery.
- 3.7 Recycling: The Contractor shall give preference to the use of products containing recycled content in the performance of the Work. The Contractor shall cooperate with any recycling program established for the site of the work of any Delivery Order or available through the state or a political subdivision of the state.
- 3.8 Access to the Work: The Contractor shall provide the Agency with unrestricted access to the Work in preparation and progress wherever located.
- 3.9 Use of Site: The Contractor shall confine its operations to the portions of the site identified in each Delivery Order or otherwise approved by the Agency, and shall not unreasonably encumber the portions of the site used for the Work with materials, equipment, or similar items. The Contractor and all subcontractors shall use only such entrances to the Site as are designated by the Agency. During occupied hours, Contractor shall limit construction operations to methods and procedures that do not adversely affect the environment of occupied spaces within the Site, including but not limited to creating noise, odors, air pollution, ambient discomfort, or poor lighting.
- 3.10 Correction of the Work:
- 3.10.1 The Agency shall have the right and authority to reject Work that does not conform to the Contract Documents. The Contractor shall promptly correct Work rejected by the Agency for failing to conform to the requirements of the Contract Documents, whether or not fabricated, installed or completed. The provisions of this Section 3.10 apply to Work done by subcontractors as well as to Work done by direct employees of the Contractor.
- 3.10.2 If the Contractor fails to correct the Work, or any portion thereof, that is not in accordance with the requirements of the Contract Documents or fails to carry out Work or provide information in accordance with the Contract Documents, the Agency may make written demand upon the Contractor to cure its defaults within seven days. Within seven days after receipt of the Agency's demand, the Contractor shall cure its defaults unless the default is such that it is not capable of cure within seven days. If the default is such that it is not capable of cure within seven days, the Contractor shall reach an agreement with the Agency on a plan to cure its defaults within five days after receipt of the Agency's demand. The Contractor shall commence and diligently and continuously pursue the cure of such defaults in accordance with the agreed plan. If the Contractor fails to cure its defaults as heretofore provided, the Agency may order the Contractor, in writing, to stop the Work, or any portion thereof, until the Contractor has eliminated the cause for such order or has provided the Agency with a plan for corrective action acceptable to the Agency. The right of the Agency to stop the Work shall not give rise to a duty on the part of the Agency to exercise this right for the benefit of the Contractor or any other person or entity.
- 3.10.3 Correction after Substantial Completion: If, within one year after the date of Substantial Completion of the Work, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Agency to do so. The Contractor's obligation set forth in this Part 3.10.3 is in addition to the Contractor's obligations under Part 3.12.
- 3.10.4 Nothing contained in this Part 3.10 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of such time period as described in this Section 3.10 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.
- 3.11 Manufacturers' Warranties: At Final Acceptance of the Work, the Contractor shall furnish the Agency two original complete sets of all manufacturers' warranties, guarantees, parts lists, and literature applicable to equipment, systems, fittings, and furnishings included in the Work (collectively referred to as "*Manufacturers' Warranties*"), completed in favor of the Agency. These Manufacturers' Warranties are in addition to and not in lieu of the Contractor's warranty set forth in Part 3.12, and the Agency is entitled to look to the Contractor for remedy in all cases where the Contractor's warranty applies regardless of whether a Manufacturer's Warranty also applies. The Agency shall acknowledge receipt of the sets of Manufacturers' Warranties on the set itself, and the Contractor shall cause six (6) copies of an acknowledged set to be made and furnished to the Agency. All Manufacturers' Warranties will be for applicable periods and contain terms not less favorable to the Agency than those terms that are standard for the applicable industries, and will either be issued in the first instance in the name of and for benefit of the Agency, or be in a freely assignable form and be assigned to the Agency without limitations.

- 3.12 Contractor Warranty: The Contractor warrants to the Agency that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from faults and defects not inherent in the quality required or permitted, that the materials, equipment and Work will conform with the requirements of the Contract Documents, and that the Work will be free from any encumbrances, liens, security interests, or other defects in title upon conveyance of title to the Agency. The Contractor's warranty excludes remedy for damage or defect to the extent caused by (i) abuse by anyone other than the Contractor or those for whose acts the Contractor is responsible, (ii) modifications not approved or executed by the Contractor or subcontractors, (iii) improper or insufficient maintenance or operation not the fault of the Contractor or those for whose acts the Contractor is responsible, or (iv) normal wear and tear under normal usage. If required by the Agency, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment and the recommended maintenance thereto to meet the requirements of this Part.
- 3.13 After completion of the Work but no later than the date of Substantial Completion, the Contractor shall submit operation and maintenance manuals, recommended spare parts lists, and copies of all warranties to the Agency. As-Built drawings shall be submitted no later than the Final Completion Date.
- 3.14 Compliance with Law:
- 3.14.1 The Contractor shall comply with and give all notices required by federal, state, county, and municipal laws, ordinances, regulations, and orders bearing on the performance by the Contractor of the duties or responsibilities under this Contract.
- 3.14.2 The Contractor shall promptly remedy any violation of any such law, ordinance, rule, regulation, or order that comes to its attention to the extent that the same results from its performance of the Work. The Contractor shall promptly, and in no event later than the close of the next business day following receipt, give notice to the Agency by telephone, with confirmation in writing, of receipt by the Contractor of any information relating to violations of laws, ordinances, rules, regulations, and orders.
- 3.15 Subcontractors:
- 3.15.1 The Contractor shall furnish in writing to the Agency for its approval the names of the subcontractors to whom the Contractor plans to award any portion of the Contract Services.
- 3.15.2 Contracts between the Contractor and subcontractors shall require each subcontractor, to the extent of the Contract Services to be performed by the subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the Agency.
- 3.15.3 The Contractor shall be responsible to the Agency for acts and omissions of the subcontractors, their agents and employees, and any other persons performing portions of the Contract Services, to the same extent as the acts or omissions of the Contractor hereunder.
- 3.15.4 The Iran Divestment Act List is a list published by the State Fiscal Accountability Authority pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. The list is available at the following URL: <http://procurement.sc.gov/PS/PS-iran-divestment.phtm>(.) Consistent with Section 11-57-330(B), the Contractor shall not contract with any person to perform a part of the Work, if, at the time you enter into the subcontract, that person is on the then-current version of the Iran Divestment Act List.
- 3.16 Publicity: Contractor shall not publish any comments or quotes by State employees, or include the State in either news releases or a published list of agencies, without the prior written approval of the Agency.
- 3.17 Indemnification
- 3.17.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Agency and the Agency's agents and employees from and against claims, damages, losses and expenses, including, but not limited to, reasonable attorney's fees, arising out of or resulting from performance of the work of a Delivery Order, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, but only to the extent caused by negligent acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.
- 3.17.2 In claims against any person or entity indemnified under Part 3.17.1 by an employee of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Part 3.17 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for Contractor or a subcontractor under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts.

3.18 Insurance

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

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

3.18.1.1 The insurance required by Part 3.18.1 shall be written for not less than the limits of liability specified below or required by law, whichever is greater. Coverage shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment and, with respect to the Contractor’s completed operations coverage, until the expiration of the period for correction of Work set forth in Part 3.10 or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

- (a) COMMERCIAL GENERAL LIABILITY:
 - (1) General Aggregate (per project)..... \$1,000,000
 - (2) Products/Completed Operations..... \$1,000,000
 - (3) Personal and Advertising Injury..... \$1,000,000
 - (4) Each Occurrence..... \$1,000,000
 - (5) Fire Damage (Any one fire)..... \$50,000
 - (6) Medical Expense (Any one person)..... \$5,000
- (b) BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):
 - (1) Combined Single Limit\$1,000,000 OR
 - (2) Bodily Injury & Property Damage (each) \$750,000
- (c) WORKER’S COMPENSATION:
 - (1) State Statutory
 - (2) Employers Liability..... \$100,000 Per Acc.
 \$500,000 Disease, Policy Limit
 \$100,000 Disease, Each Employee

In lieu of separate insurance policies for Commercial General Liability, Business Auto Liability, and Employers Liability, the Contractor may provide an umbrella policy meeting or exceeding all coverage requirements set forth in this Part 3.18.1. The umbrella policy limits shall not be less than \$5,000,000.

- 3.18.1.2 Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, Contractor shall provide to the Agency a written endorsement to the Contractor's general liability insurance policy that:
- (i) names the Agency as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations;
 - (ii) provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless all additional insured have been given at least ten (10) days prior written notice of cancellation for non-payment of premiums and thirty (30) days prior written notice of cancellation for any other reason; and
 - (iii) provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the Agency as secondary and noncontributory.
- 3.18.1.3 Before commencement of the Work, and thereafter upon renewal or replacement of each required policy of insurance, Contractor shall provide to the Agency a signed, original certificate of liability insurance (ACORD 25). Consistent with this Part 3.18.1, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Agency as Certificate Holder, provide that the general aggregate limit applies per project, and provide that coverage is written on an occurrence basis. Both the certificates and the endorsements must be received directly from either the Contractor's insurance agent or the insurance company. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, naming the Agency as an additional insured for claims made under the Contractor's completed operations, and otherwise meeting the above requirements, shall be submitted with the Contractor's final request for payment for the Work and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Part 3.18.1. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.
- 3.18.1.4 A failure by the Agency either (i) to demand a certificate of insurance or written endorsement required by Part 3.18.1, or (ii) to reject a certificate or endorsement on the grounds that it fails to comply with Part 3.18.1, shall not be considered a waiver of Contractor's obligations to obtain the required insurance.

3.18.2 Property Insurance:

- 3.18.2.1 Builder's Risk Insurance: Unless otherwise specified in the Delivery Order, at the time of execution of a Delivery Order and before commencing work under that Delivery Order, Contractor shall purchase property insurance written on a builder's risk "all risk" or equivalent policy form on a replacement cost basis. Contractor shall maintain such property insurance until the Agency has made final payment for the work of the Delivery Order or until no person or entity other than the Agency has an insurable interest in the property required by this Paragraph 3.18.2 to be covered, whichever is later. This insurance shall include and be in an amount sufficient to cover at all times during the performance of the work of the Delivery Order, the interests of the Contractor, Subcontractors and Sub-subcontractors in the Delivery Order Project. The property insurance shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, false work, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.
- 3.18.2.2 Equipment Breakdown Insurance: In the event the Contractor installs and runs and/or operates (whether for testing or other purposes) heating, air conditioning, and electrical machinery and equipment, the Contractor shall purchase and maintain equipment breakdown (boiler and machinery) insurance, which shall specifically cover such objects during installation and until final acceptance by the Agency. This insurance shall include interests of the Agency, Contractor, and subcontractors at any tier in the Work, and the Agency and Contractor shall both be named insured.
- 3.18.2.3 Before an exposure to loss may occur, the Contractor shall file with the Agency a copy of each policy that includes insurance coverage required by this Part 3.18.2. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project.

3.18.2.4 Waiver of Subrogation: The Agency and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, for damages caused by fire or other causes of loss to the extent the property insurance provided by the Contractor pursuant to this Section 3.18.2 covers and pays for the damage, except such rights as they have to proceeds of such insurance held by the Contractor. The Agency or Contractor, as appropriate, shall require of the subcontractors, sub-subcontractors, agents and employees, each of the other, by appropriate written agreements, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

3.19 Performance and Payment Bonds: Prior to beginning work on a Delivery Order, the Contractor shall deliver to the Agency a Performance Bond and a Labor & Material Payment Bond if the Contractor's agreed upon compensation for the Work of the Delivery Order exceeds \$50,000 or the Agency requests such bonds. Each bond shall be in the amount of 100% of the amount of the Delivery Order. The Contractor's Performance Bond shall be in the form of the SE-355, Performance Bond, and the Labor & Material Payment Bond shall be in the form of the SE-357, Labor & Material Payment Bond. The surety company providing the Bonds shall have, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property - Casualty." Contractor's failure to provide bonds as herein required shall be an event of default justifying the Agency, in its sole discretion, in terminating this Contract for cause.

3.20 Shop Drawings and Samples:

3.20.1 Contractor shall prepare or cause to be prepared shop drawings for fabricated items. Shop drawings shall consist of drawings, diagrams, illustrations, schedules, brochures, and other data which are prepared by the Contractor, sub-Contractor, manufacturer, supplier, or distributor and depict that portion of the work. Shop drawings shall be submitted, reviewed, and approved by the Contractor prior to submitting to the Agency and A/E. Shop drawings approved by the Contractor shall bear a stamp denoting that they have been review and are "approved" or "approved as noted" or similar designation. Contractor shall submit the number of sets as specified in the Delivery Order plans or specifications or in the absence of a specification submit enough copies for the Agency to retain two copies plus the number desired to be returned to the Contractor. The Agency and A/E will review the shop drawings with reasonable promptness but only for conformity with the design.

3.20.2 Contractor shall submit samples as required by the Delivery Order. Samples are physical examples furnished by the Contractor of sufficient size and quantity to provide a good representation of the material proposed to be installed. Samples submitted will not be returned unless requested by Contractor and agreed to by the A/E. The Contractor shall pay shipping costs. The final installed product shall match the approved sample.

3.21 Inspection and Testing of Materials:

3.21.1 The Contractor shall leave uncovered all areas of work that will be covered that are called out in the construction documents to be left uncovered, or the Agency or A/E requests to be left uncovered prior to being inspected. The Contractor shall give adequate notice to the Agency and A/E of the time requested for an inspection of areas to be covered.

3.21.2 If the Contractor covers areas that were to be left uncovered, the Contractor shall cause the area to be uncovered for inspection. After being inspected, the Contractor shall repair the area with craftsmen skilled in the appropriate trades needed for the repair at no additional cost to the Agency.

3.22 Substitutions:

3.22.1 The Contractor shall submit proposed substitutions to the Agency for the Agency's approval prior to execution of each Delivery Order.

3.22.2 Reference in the Contract Documents to a designated material, product, thing, or service by specific brand or trade name followed by the words "or equal" and "or approved equal" shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may use the products of other another manufacturer's provided it is an 'approved equal' that meets or exceeds the specification for the specified product. The Contractor must submit adequate information about the product to show that the submitted product meets the level of quality as the product specified.

3.22.3 The Contractor shall not substitute any product, article, appliance, equipment, or material that is specified without prior written approval of the Agency.

- 3.23 Receiving and Storing Materials and Equipment: The Contractor shall have an authorized person or persons to receive all items delivered to the site of the Work and shall properly unload, check for completeness of shipment, and in-transit damage. The Contractor shall properly handle and store materials, supplies, equipment etc. in accordance with the contract documents or manufacturer's printed instructions for each product.
- 3.24 Schedule and Reports: Promptly after the Agency issues a Delivery Order, the Contractor shall present a construction schedule in a form satisfactory to the Agency. At intervals agreed upon in the Delivery Order, the Contractor shall update the schedule showing the actual progress of the work and adjustment in completion dates. If the work falls behind schedule, the Contractor shall present a plan for completion of the work by the scheduled date for completion.
- 3.25 Time for Completion:
- 3.25.1 Each Delivery Order signed by the Agency and Contractor shall set forth the time for completion of the Work specified therein. Contractor shall make a request for extension of time within seven days of the event giving rise to the request. The Contractor shall adequately document delays of the work that are due to circumstances beyond the control of the Contractor and shall submit the documentation to the Agency with any request for an extension. In the event of ongoing delay, the Contractor shall notify the Agency in its request for an extension of time that the cause of delay is ongoing. In such case, the Contractor shall supplement its request the cause of delay ends or the project is completed, whichever is sooner.
- 3.25.2 The Agency will review each request for time extension and equitably adjust the time for completion where (1) the event of delay actually impacted the critical path of the project and was beyond the control of the Contractor, and (2) completion of the Work was actually delayed.

4. CONTRACT ADMINISTRATION

- 4.1 Delivery Order - Cost Proposal: From time to time, the Agency will request a cost proposal for specific work and provide the Contractor adequate project information necessary to prepare a cost proposal. The Contractor shall prepare a cost proposal to complete the Work as requested. Unless specified by the Agency in its request, the cost proposal shall include the time frame for completion of the work. The Contractor shall submit the cost proposal to the Agency within one week of the request or as otherwise agreed upon by the Agency. The cost proposal shall be prepared according to the following method: (*Agency, check box that applies to this contract*)

Multiplier – Unless the Contractor proposes to provide work at a lower price, the Contractor shall use the multiplier, as bid, times the unit prices contained in the cost data guide specified in the contract documents, times the number of units of Work. The unit prices in the cost data guide include all labor, supervision, material, equipment, taxes, overhead (including but not limited to insurance, performance bond, and payment bond premiums), delivery, setup, installation, and profit. The Contractor may not add any additional mark-up to its price. If the Contractor chooses to subcontract some or all of the Work, the Contractor must still use its multiplier with the cost data guide for pricing the subcontracted work. However, if the work of the proposed Delivery Order is such that the Contractor may legally act as the sole prime Contractor under the licensing laws of this State and the subcontracted work (1) is outside the Contractor's license; (2) is outside the license of any subcontractor listed in Section 7 of the bid; (3) is outside the scope of services covered by the Contract; and (4) does not exceed 20% of the total value of the work of the proposed Delivery Order, the Contractor may include a markup not to exceed 13% on the price of such subcontracted work. If the Contractor proposes not to use its multiplier and the cost data guide as the basis for the price of its work or subcontracted work, it must document that the proposed price is lower than the price would be if the Contractor used the multiplier and cost data guide.

Unit Prices – Unless the Contractor proposes to provide work at a lower price, the Contractor shall use the unit prices, as bid, times the number of units required for the Work to arrive at an extended price for that item of Work. The total of all extended prices becomes the Contractors price for the cost proposal. The unit prices include all labor, supervision, material, equipment, taxes, overhead (including but not limited to insurance), delivery, setup, installation, and profit. The Contractor may not add any additional mark-up to its price. If the Contractor chooses to subcontract some or all of the Work, the Contractor must still use the unit prices bid for pricing the subcontracted work. If the Contractor proposes not to use the unit prices bid as the basis for the price of its work or subcontracted work, it must document that the proposed price is lower than the price would be if the Contractor used the multiplier and cost data guide.

Low Bid – The Agency shall competitively bid the Work against all eligible Indefinite Delivery Contractors. The Delivery Order bid price shall include all labor, supervision, material, equipment, taxes, overhead (including but not limited to insurance), delivery, setup, installation, and profit. Under this pricing method, the Agency will award the Delivery Order to the lowest bidder.

4.2 Changes in the Work of a Delivery Order:

- 4.2.1 Any changes in the work must be approved by the Agency and executed by using the SE-695, Construction Services IDC Delivery Order Modification. The SE-695 must be signed by the Contractor and Agency. Except when the Delivery Order was awarded on the basis of competitive bids, the cost of any change order shall be calculated using the same method as pricing the Delivery Order.
- 4.2.2 In the absence of a total agreement concerning the item(s) for a change order, a Construction Change Directive shall be used.
- 4.2.3 Agreed Overhead and Profit Rates:
For any adjustment to the Delivery Order for which overhead and profit may be recovered, other than those made pursuant to Unit Prices stated in the Contract Documents, the Contractor agrees to charge and accept, as full payment for overhead and profit, the following percentages of costs attributable to the change in the Work. The percentages cited below shall be considered to include all indirect costs including, but not limited to: field and office managers, supervisors and assistants, incidental job burdens, small tools, and general overhead allocations. The allowable percentages for overhead and profit are as follows:
- .1 To the Contractor for work performed by the Contractor's own forces, 17% of the Contractor's actual costs.
 - .2 To each Subcontractor for work performed by the Subcontractor's own forces, 17% of the subcontractor's actual costs.
 - .3 To the Contractor for work performed by a subcontractor, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).

4.3 Payments:

- 4.3.1 Contractor may submit monthly applications for payment for the Work of Delivery Orders scheduled to last two months or more in duration. Contractor shall submit only one application for payment for the Work of Delivery Orders scheduled to last less than two months in duration.
- 4.3.2 Delivery Orders Awarded by low bid: If the Contractor intends to submit more than one application for payment, the Contractor shall submit to the A/E, within ten days of Delivery Order award, a schedule of values allocating the entire Delivery Order Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the A/E may require. This schedule, unless objected to by the A/E, shall be used as a basis for reviewing the Contractor's Applications for Payment. Contractor shall base its monthly applications for payment on work completed up to the date of the application using the approved schedule of values. The sum of all payments to the Contractor shall not exceed the agreed upon cost of the work set forth in the Delivery Order as adjusted by subsequent modifications to the Delivery Order, if any.
- 4.3.2 Contractor shall base its applications for payment on work completed up to the date of the application using the units of measure and prices contained in the *(Agency, check box that applies to this Contract)*
- Unit price schedules in the cost data guide incorporated by the Contract Documents
 - Unit price schedule in Contractors bid.
- 4.3.3 Contractor's applications for payment may include materials suitably stored on site for use in the Work provided the Contractor submits:
- a. Proof of purchase & delivery;
 - b. Documentation showing the location of the material;
 - c. Certificate of insurance for the material with adequate coverage showing the Agency as the certificate holder.
- 4.3.4 The Agency will make payments to the Contractor for completed work based on the actual units or quantity of work completed. The Agency will make payments on the undisputed amounts of an application for payment within 21 days of receipt of the application.
- 4.3.5 Subcontractor Payments (Chapter 6 of Title 29 of the South Carolina Code of Laws, as amended): The Contractor shall pay each subcontractor no later than seven (7) days after receipt of payment from the Agency the amount to which the subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the subcontractor's portion of the Work. By appropriate agreement with its subcontractors, the Contractor shall require each subcontractor to make payments to Sub-subcontractors in a similar manner.
- 4.3.6 If the Agency does not pay the Contractor within seven (7) days after the time established in Part 4.3.2 the undisputed amount of a payment request, then upon seven (7) additional days written notice to the Agency, the Contractor may stop the Work until the Contractor has received payment of the undisputed amount owing. The Contract Time and the Contract Sum shall be equitably adjusted by the amount of the Contractor's reasonable costs of shut down, delay and start-up, plus interest as provided for in the Contract Documents.

- 4.3.7 Retainage: The Agency, at its option, may withhold retainage as provided in S.C. Code Ann. § 11-35-3030(4).
- 4.3.8 Final Payment: Upon final payment by the Agency to the Contractor for the Work of a Delivery Order, all rights, title, and interest in and to all improvements and equipment constructed or installed on the premises shall vest in the Agency at no additional cost, free and clear of all any liens and encumbrances created or caused by the Contractor.
- 4.3.9 Withholding of Payments: Payments may be withheld to the extent of, and on account of (1) defective Work not remedied, or Work not performed in accordance with the Contract Documents; (2) claims filed by third parties; (3) failure of the Contractor to make payments promptly to the subcontractors for labor, materials, or equipment; (4) persistent failure to carry perform the Work in accordance with the Contract Documents; (5) failure by the Contractor to perform its obligations under the Contract Documents; or (6) a default by the Contractor under the Contract Documents. The Agency shall promptly notify the Contractor of any reason for withholding payment.
- 4.4 Delivery Order Completion and Closeout: Upon completion of all Work, the Contractor shall notify the Agency of its completion. The Agency shall schedule a Final Inspection and allow the Contractor to demonstrate that all equipment and systems operate as designed. The Agency may elect to have other persons, firms or agencies participate in the inspections. Projects exceeding the Agency's construction procurement certification level shall require an inspection by the Office of State Engineer (OSE) and the State Engineer's issuance of a Certificate of Occupancy. (The Contractor may find Agency construction certification limits on Procurement Services website at <http://procurement.sc.gov/PS/agency/PS-agency-audits.phtm>.) Final payment will not be due nor retained funds released until (1) the Agency agrees that the project is complete, (2) OSE or the Agency, which ever has authority, issues a Certificate of Occupancy, and (3) the Agency receives from the Contractor the following:
- Affidavit of payment of debts and claims;
 - Consent of Surety, if any, to final payment.

5. DISPUTES

- 5.1 Both parties shall attempt to resolve disputes through good faith negotiations.
- 5.2 All disputes, claims, or controversies relating to the Contract, that cannot be resolved through good faith negotiations between the parties shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Richland County, State of South Carolina. Contractor agrees that any act by the State regarding the Contract is not a waiver of either the State's sovereign immunity or the State's immunity under the Eleventh Amendment of the United States Constitution. As used herein, "the State" includes the Agency and the State Fiscal Accountability Authority.
- 5.3 Interest: Payments due to the Contractor and unpaid under the Contract Documents shall bear interest only if and to the extent allowed by Title 29, Chapter 6, Article 1 of the South Carolina Code of Laws. Amounts due to the Agency shall bear interest at the rate of one percent a month or a pro rata fraction thereof on the unpaid balance as may be due.
- 5.4 Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any claims or controversies relating to the Contract; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided for the Contractor's Representative or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail.
- 5.5 Continuation of Work: Pending final resolution of any dispute under this Contract, the Contractor will proceed diligently with the performance of its duties and obligations under the Contract Documents, and the Agency will continue to make payments of undisputed amounts in accordance with the Contract Documents.

6. LIMITATION OF LIABILITY

- 6.1 Notwithstanding any other provision of the Contract Documents, but subject to a duty of good faith and fair dealing, the Contractor and Agency waive Claims against each other for listed damages arising out of or relating to this Contract. This mutual waiver includes

- 6.1.1 For the Agency, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) costs suffered by a third party unable to commence work, (vi) reasonable attorney's fees, (vii) any interest, except to the extent allowed by Part 5.3 (Interest), (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency, and (x) damages incurred by the Agency for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- 6.1.2 For the Contractor, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) reasonable attorney's fees, (vi) any interest, except to the extent allowed by Part 5.3 (Interest); (vii) unamortized equipment costs; and (viii) losses incurred by subcontractors for the types of damages the Contractor has waived as against the Agency.
- 6.2 This mutual waiver is applicable, without limitation, to all listed damages due to either party's termination in accordance with Part 9. Nothing contained in this Part 6 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 Part 3.17 (Indemnification).

7. Hazardous Materials

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

8. MISCELLANEOUS PROVISIONS

- 8.1 Governing Law: This Contract shall be governed by the laws of South Carolina, except its choice of law rules.
- 8.2 Severability: If any provision of this Contract shall be held to be invalid, illegal, or unenforceable, the validity, legality and enforceability of the remaining provisions shall not be affected or impaired thereby.
- 8.3 No Waiver: No course of dealing or failure of the Agency and/or the Contractor to enforce strictly any term, right or condition of this Contract shall be construed as a waiver of such term, right or condition. No express waiver of any term, right, or condition of this Contract shall operate as a waiver of any other term, right, or condition.
- 8.4 Rights Cumulative: Except as otherwise provided in this Contract, (i) rights and remedies available to the Agency and/or the Contractor as set forth in this Contract shall be cumulative with and in addition to, and not in limitation of, any other rights or remedies available to the Parties at law and/or in equity, and (ii) any specific right or remedy conferred upon or reserved to the Agency and/or the Contractor in any provision of this Contract shall not preclude the concurrent or consecutive exercise of a right or remedy provided for in any other provision hereof.

- 8.5 Notices: Any notices required to be given under this Contract shall be in writing and shall be delivered either by (i) certified mail, return receipt requested, in which case notice shall be deemed delivered three (3) business days after deposit, postage prepaid, in the U.S. mail; (ii) a reputable messenger service or a nationally recognized overnight courier, in which case notice shall be deemed delivered one (1) business day after deposit with such messenger or courier; or (iii) personal delivery with receipt acknowledged in writing, in which case notice shall be deemed delivered when received. All notices shall be sent to the representatives identified in the Part G of the Agreement at the addresses provided therein. The foregoing addresses may be changed from time to time by notice to the other Party in the manner herein provided for.
- 8.6 Economic Conflict of Interest: A Contractor shall not have or exercise any official responsibility regarding a public contract in which the Contractor, or a business with which he is associated, has an economic interest. A person working for Contractor shall not have or exercise any official responsibility regarding a public contract in which the person, an individual with whom he is associated, or his family members have an economic interest. If Contractor is asked by any person to violate, or does violate, either of these restrictions, Contractor shall immediately communicate such information to the Agency Representative. The State may rescind, and recover any amount expended as a result of, any action taken or contract entered in violation of this provision. The terms “business with which he is associated,” “economic interest,” “family member,” “immediate family,” “individual with whom he is associated,” “official responsibility” and “person” have the meanings provided in S.C. Code Ann. § 8-13-100.
- 8.7 Illegal Immigration: Contractor certifies and agrees that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable both to Contractor and its subcontractors or sub-subcontractors; or (b) that Contractor and its subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, “A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both.” Contractor agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. (An overview is available at www.procurement.sc.gov)
- 8.8 Drug-Free Workplace: The Contractor certifies to the Agency that Contractor will provide a Drug-Free Workplace, as required by Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.
- 8.9 False Claims: According to the 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.
- 8.10 Non-Indemnification: Any term or condition is void to the extent it requires the State to indemnify anyone. It is unlawful for a person charged with disbursements of state funds appropriated by the General Assembly to exceed the amounts and purposes stated in the appropriations (§ 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)
- 8.11 Enforcement and Interpretation of Building Codes: As required by Title 10, Chapter 1, Section 180 of the South Carolina Code of Laws, as amended, OSE shall determine the enforcement and interpretation of all building codes and referenced standards on state buildings. The Contractor shall refer any questions, comments, or directives from local officials to the Agency and OSE for resolution. When the amount of a Delivery Order exceeds the construction procurement certification of the Agency, the Contractor shall not commence the Work of the Delivery Order before receiving a copy of the Building permit issued by OSE. (The Contractor may find Agency construction certification limits on Procurement Services website at <http://procurement.sc.gov/PS/agency/PS-agency-audits.phtm>.)
- 8.12 Assignment: The Agency and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements and obligations contained in this Contract. Neither party to the Contract shall assign the Contract as a whole, or in part, without written consent of the other and then only in accordance with and as permitted by Regulation 19-445.2180 of the South Carolina Code of Regulations, as amended. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.
- 8.13 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 SC Code Section 11-35-5300. [07-7A053-1]

9. SUSPENSION OR TERMINATION

9.1 Agency Right of Suspension: The Agency may, at any time, suspend the work, in whole or in part, with or without cause for such period of time as determined by the Agency. Except in the event of suspension due to a default of the Contractor, the contract sum will be equitably adjusted to reflect reasonable costs actually incurred by the Contractor due to delay or interruption resulting from such suspension.

9.2 Agency Right of Termination:

9.2.1 Termination for Cause: If the Contractor defaults, persistently fails or neglects to perform the Work in accordance with the Contract Documents, or fails to perform a provision of the Contract, the Agency shall provide written notice of such default, failure, or neglect to the Contractor. If the Contractor fails to cure such default, failure, or neglect within fifteen days from receipt of the Agency's notice, the Agency may, without prejudice to any other right or remedy the Agency may have, terminate the Contract and take possession of the area at the Site affected by the Work.

9.2.2 Termination for Convenience: The Agency may, for its convenience, terminate all or any portion of the Work under an individual Delivery Order, or terminate this entire Contract, by ten (10) days written notice stating the effective date of the termination. Thereafter, the Agency shall pay the Contractor for Work actually performed before the date of termination. No payments shall be made for Work not actually performed, and no payment shall be made or due for lost profits on account of Work not performed.

9.3 Contractor Right of Termination:

9.3.1 The Contractor may terminate the contract, or Delivery Order, if work is stopped through no fault of the Contractor, or other persons performing work either directly or indirectly for the Contractor, for a period of time exceeding 60 consecutive calendar days due to a court order or other public authority having jurisdiction; or a Declared National emergency which requires the work to be stopped.

9.3.2 Agency Failure to Make Payment: Subject to the Agency's right to withhold payments pursuant to Part 3.4.7, if the Agency fails to make payments to the Contractor as set forth in Part 10 and any other applicable provisions of the Contract Documents, the Contractor may, upon thirty (30) days' prior written notice to the Agency, terminate the Contract and recover from the Agency payment for all Work performed and for proven loss with respect to materials, equipment, tools, and machinery, including reasonable overhead, profit and damages applicable to the Work for the Contract Services performed through the date thereof.

SE-690

CONSTRUCTION SERVICES IDC DELIVERY ORDER

AGENCY: _____

DELIVERY ORDER PROJECT NAME: _____

DELIVERY ORDER PROJECT NUMBER: _____

STATE IDC PROJECT NUMBER: _____

CONTRACTOR: _____

<u>COST INFORMATION:</u>	<u>DELIVERY ORDER</u>	<u>CONTRACT</u>
1. Maximum Total Amount of this IDC:		\$
2. Maximum Total Amount Allowed for Delivery Order:	\$	
3. Amount of this Delivery Order:	\$	
4. Total Amount of Previous Delivery Orders (including Modifications):		\$
5. IDC Total, Including this Delivery Order:		\$ 0.00
6. Balance Remaining for this IDC:		\$ 0.00

SCHEDULE:

1. Date of Commencement:	
2. Days Allowed	
3. Date of Substantial Completion:	

DESCRIPTION OF DELIVERY ORDER SCOPE OF WORK: *(attach Contractor's Proposal)* _____

LIST OF DELIVERY ORDER DOCUMENTS: *(refer to attachments as necessary)* _____

The Agency and the Contractor hereby agree, as indicated by the signatures below, to the scope of work identified in the Contract Documents listed above, the Contractor's Cost Proposal dated the ____ day of ____, 20 ____, and this Delivery Order which shall be assigned to the Indefinite Delivery Contract identified above.

NOTICE TO PROCEED is hereby given on this the ____ day of ____, 20 ____. The Dates of Commencement and Substantial Completion are as noted above and shall be used for determining completion and the applicability of Liquidated Damages. Liquidated Damages in the amount of \$ ____ per day will be assessed for failure to complete the Work by the agreed upon date of completion. Failure to commence actual work on this Delivery Order within seven (7) days from the Date of Commencement will entitle the Agency to consider the Contractor non-responsible, and may withdraw this Delivery Order and terminate the Contract in accordance with the Contract Documents.

AGENCY:

BY: _____
(Signature of Representative)

Print Name: _____

Print Title: _____

Date: _____

CONTRACTOR

BY: _____
(Signature of Representative)

Print Name: _____

Print Title: _____

Date: _____

COMPLETION CONFIRMATION BY AGENCY:

ACTUAL COMPLETION DATE: _____ **LIQUIDATED DAMAGES ASSESSED:** _____

CONFIRMED BY: _____ **DATE:** _____
(Signature of Agency Representative)

TITLE: _____

SE-695

MODIFICATION NO.: _____

CONSTRUCTION SERVICES IDC DELIVERY ORDER MODIFICATION

AGENCY: _____

DELIVERY ORDER PROJECT NAME: _____

DELIVERY ORDER PROJECT NUMBER: _____

STATE IDC PROJECT NUMBER: _____

CONTRACTOR: _____

COST INFORMATION:

1. Maximum Total Amount of this IDC:
2. Maximum Total Amount Allowed for Delivery Order:
3. Current Amount of this Delivery Order:
4. Amount of this Modification:
5. Adjusted Amount of this Delivery Order
6. IDC Total (Sum of all Delivery Orders, including this DO) Prior to this Modification:
7. IDC Total (Sum of all Delivery Orders) Including this Modification:
8. Balance Remaining for this IDC:

<u>DELIVERY ORDER</u>	<u>CONTRACT</u>
	\$
\$ 0.00	
	\$
	\$ 0.00
	\$ 0.00

SCHEDULE:

1. Date of Commencement:
2. Previous Days Allowed
3. Additional Days Allowed with this Modification
4. Revised Date of Completion:

DESCRIPTION OF DELIVERY ORDER SCOPE MODIFICATION: *(attach Contractor's Proposal)* _____

LIST OF MODIFICATION DOCUMENTS: *(refer to attachments as necessary)* _____

The Agency and the Contractor hereby agree, as indicated by the signatures below, to the revised scope of work identified in the Modification Documents listed above, the Contractor's Cost Proposal dated the ____ day of ____, 20____, and this Delivery Order Modification, which shall be assigned to the Indefinite Delivery Contract identified above.

AGENCY:

BY: _____
(Signature of Representative)

PRINT NAME: _____

PRINT TITLE: _____

DATE: _____

CONTRACTOR

BY: _____
(Signature of Representative)

PRINT NAME: _____

PRINT TITLE: _____

DATE: _____

SECTION 01 1000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Work covered by the Contract Documents.
 2. Use of premises.
 3. Specification formats and conventions.
 4. Schedule of Values
 5. Contractor's Construction Schedule
 6. Project management and coordination
 7. Temporary facilities
 8. Security Requirements

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: ERVIN DINING HALL RE-ROOF
1. Project Location: Wallace Woods Road
Francis Marion University Campus
Florence, SC 29501
- B. Owner: Francis Marion University
1. Owner's Representative: Joseph M. Bace; AIA, LEED AP BD+C / Director of Facilities Support.
- C. Architect: Watson Tate Savory, Inc.; Columbia, SC
1. Architect's Representative: Regina R. Floyd, AIA, LEED AP BD+C.
- D. The Work includes:
1. Removal of existing insulation and built-up roofing and Replacement with new insulation and PVC Membrane Roofing.
 2. Removal and replacement of Sheet Metal Parapet and Scuppers.
 3. Refer to Section 012300 - Alternates.

1.3 USE OF PREMISES

- A. General: Contractor shall limit use of premises to areas defined by the Construction Documents.
1. Dining Hall will be operational during this project.
 2. Access to building by pedestrians to be maintained at all times.

3. Any blocking of building entrances or exits must be approved in writing by Owner with 5 Days advance notice.
 - B. Vehicle Parking/Lay Down: Owner will provide space in parking lot adjacent to building for lay-down and parking as shown at Sketch 1 "Laydown Area", attached at the end of this section.
 - C. Building Loading Dock will be in use by the Owner during the project, and must be kept accessible at all times.
 - D. Access to all roofs (center sunken roof and wing roofs) to be from the building exterior. Contractor will not have access to the roof from the interior of the building.
 - E. Debris is to be collected removed from site daily or stored in Contractor provided dumpster at location directed by Owner.
 1. No burning of debris on site is permitted.
 - F. Clean adjacent structures and improvements of dust, dirt, and debris caused by removal of existing roofing; including removal of all nails from surrounding grade and paved surfaces.
- 1.4 CONTRACT DOCUMENTS INCONSISTENCIES:
- A. In the event of inconsistencies within or between part of the Contract Documents or between the Contract Documents and applicable standards, codes and ordinances, the Contractor shall:
 1. Provide the better quality work or greater quantity of Work; or,
 2. Comply with the more stringent requirement; either or both in accordance with the Architect's interpretation.
- 1.5 SCHEDULE OF VALUES
- A. Contractor to provide a Schedule of Values following the Project Manual Table of Contents utilizing the AIA Document G703. Provide sufficient breakdown to facilitate continued evaluation of Applications for Payment. Submit draft Schedule of Values for review and approval.
- 1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE
- A. Submit a comprehensive, fully developed Contractor's Construction Schedule within 2 days of the Date of Commencement established in the Delivery Order.
 - B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.

- c. Removal of existing roofing.
- d. Installation of new underlayment and roofing.

1.7 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. Accidents.
 - 3. Stoppages, delays, shortages, and losses.

1.8 COORDINATION WITH OWNER

- A. Coordination of this work with the Owner is of utmost importance. Dining Hall will remain in operation throughout this work and the Owner must have access to the site and adjoining areas and facilities to be able to continue ongoing programs.
- B. Shut-down or outages of any roof-top equipment must be approved by the Owner and scheduled a minimum of 1 week in advance.
- C. The Owner reserves the right to limit construction activities, parking or access to the construction site due to special events on campus (i.e. visitor's weekends, commencement, etc.)
- D. The Contractor shall maintain the site in a clean and safe condition so that use by the Owner will not be unreasonably impeded.
- E. There will be continual vehicular and pedestrian traffic in and adjacent to the work site. The Contractor shall be responsible for any safety barricading of the work site to insure the safety of the site for these pedestrians.
- F. The Contractor shall be responsible for providing any and all traffic control devices necessary for the prosecution of this work. The Contractor shall accomplish the scope of work specified in these documents in such manner as to minimize traffic disruption.
- G. The Owner reserves the right to limit excessively loud construction activities during academic examination periods or other special occasions at the University.

1.9 PROJECT MEETINGS

- A. Pre-construction Conference:
 - 1. Prior to the start of work there shall be a conference attended by the Contractor, Subcontractor(s), the Owner's Representative, and other parties who may be designated by the Owner, to be convened at the work site for the purpose of reviewing the specifications and job condition and resolving any questions arising.

2. The date and time of this pre-construction conference shall be coordinated with both the Owner and the A/E.
- B. Contractor's Construction Meeting and Schedule Updating: At **weekly** intervals, hold a construction progress meeting to include Contractor, Owner's representative, active subcontractors, and other pertinent representatives.
 1. Review current and scheduled activities.
 2. Review project progress.
 3. Review upcoming work activities.

1.10 TOBACCO FREE CAMPUS

- A. Francis Marion University is a tobacco-free campus. All forms of tobacco and smoke related products are prohibited under this policy. Along with cigarettes, the ban includes chewing tobacco, smokeless tobacco and electronic cigarettes.

1.11 TEMPORARY BARRICADES

- A. The Contractor shall be responsible for furnishing and maintaining all necessary barricades, fencing and other required barriers to insure the safety of the site.

1.12 TEMPORARY TREE AND PLANT PROTECTION

- A. Particular care shall be taken in avoiding damage or disturbance of existing trees, grass and other landscape material within the confines of or adjacent to the project site.

1.13 TEMPORARY UTILITIES AND FACILITIES

- A. Water Service: Use of Owner's existing water service facilities will be permitted.
- B. Sanitary Facilities: Designated toilet, wash facilities, and drinking water within Ervin Dining Hall will be provided for use of construction personnel. The Contractor is responsible for maintaining these facilities and returning them after the project to the condition when they were provided.
- C. Electric Power Service: the Owner will allow the use of existing building power for this project.
- D. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

1.14 SECURITY AND PROTECTION FACILITIES INSTALLATION

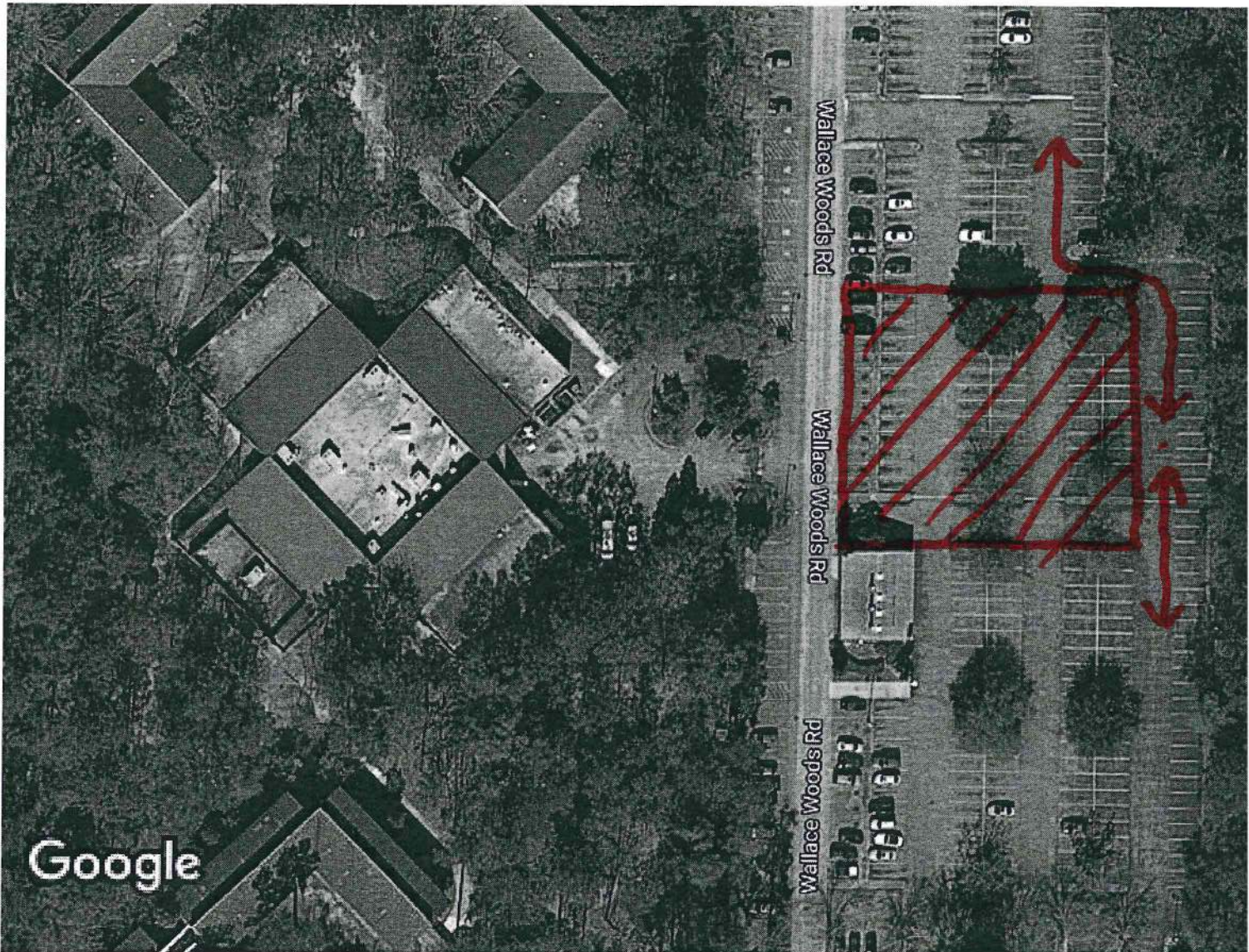
- A. Temporary Fire Protection: Install and maintain temporary fire-protection types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Prohibit smoking in all areas.
2. Supervise torch cutting operations and similar sources of fire ignition according to requirements of authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 1000



SKETCH 1 "Laydown Area"
Attachment to Section 01 1000

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. **Alternate:** An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. **Coordination:** Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 01: WEST WING ROOF
Removal of existing insulation, built-up roofing, and parapet caps at roof of approximately 3200 s.f. West Wing and replacement with new insulation, PVC membrane roofing and aluminum parapet caps and flashing.

- B. Alternate No. 02: NORTH WING ROOF
Removal of existing insulation, built-up roofing, and parapet caps at roof of approximately 3200 s.f. North Wing and replacement with new insulation, PVC membrane roofing and aluminum parapet caps and flashing.
- C. Alternate No. 03: EAST WING ROOF
Removal of existing insulation, built-up roofing, and parapet caps at roof of approximately 3200 s.f. East Wing and replacement with new insulation, PVC membrane roofing and aluminum parapet caps and flashing.

END OF SECTION 012300

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of existing roofing.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 075419 "Polyvinyl-Chloride (PVC) Roofing".
3. Section 076200 "Sheet Metal Flashing and Trim".
4. Section 077100 "Roofing Specialties"

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- C. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.4 FIELD CONDITIONS

- A. Owner will occupy the interior of the building, and other buildings building djacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Storage or sale of removed items or materials on-site is not permitted.
- C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Dispose of demolished items and materials promptly.

- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight..
 - 1. Remove existing roofing system down to substrate.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove demolished materials from Project site.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 061000 – ROUGH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Provide wood, fasteners, and other items required, and perform carpentry for the construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Reference standards: Comply with the provisions and requirements of the following specifications and standards.
 - 1. National Forest Products Association - National Design Specification for Wood Construction.
 - 2. Product Standard PS 1 - Construction and Industrial Plywood.
 - 3. Product Standard PS 20 - American Softwood Lumber Standard.
 - 4. Applicable Standards of the American Wood Preservers Bureau.
 - 5. Applicable Standards of the American Wood Preservers Association.
 - 6. International Building Code - Latest revisions.
- C. Grading and marking: Grade wood products and mark them with the visible grade stamp of the appropriate agencies or associations.
 - 1. Lumber - Agency certified by the National Forest Products Association.
 - 2. Plywood - Agency certified by the American Plywood Association.
 - 3. Wood Preservative - Bear the American Wood Preservers Bureau Quality Mark.
 - 4. Identify other materials of this section by the appropriate stamp of the agency under whose rule the product was graded.

1.3 PRODUCT HANDLING

- A. PROTECTION:

1. Deliver the materials to the job site and store, in a safe area, out of the way of traffic, and shored up off the ground surface.
2. Identify framing lumber as to grade, and store each grade separately from other grades.
3. Protect metals with adequate waterproof outer wrapping.
4. Use extreme care in off loading of lumber to prevent damage, splitting, and breaking of materials.

PART 2 - PRODUCTS

2.1 LUMBER

A. General:

1. DIMENSIONS:
 - a. Specified lumber dimensions are nominal.
 - b. Actual dimensions to conform to PS 20.
2. Surfacing: Surface four sides (S4S), unless specified otherwise.
3. All lumber in contact with concrete or masonry surfaces to have preservative treatment.

B. MOISTURE CONTENT:

1. Untreated lumber: Do not exceed maximum moisture content moisture of 19%.
2. Treated lumber: Provide dry and well seasoned at time of treatment.
 - a. Provide 19% moisture content, or maximum allowed by applicable reference treatment specification at time of treatment.
 - b. After treatment air dry or kiln dry treated lumber so that moisture content at time of shipment does not exceed 19% for lumber 3" thick and under and 23% for lumber over 3" thick.
 - c. Provide preservative treatment for all lumber in contact with concrete or masonry surfaces.

C. GRADES AND USES:

1. Dimension Lumber and Structural Light Framing - No. 2 Southern Pine.
2. Studs – No. 2 Southern Pine.

2.2 PLYWOOD

- A. Comply with APA Product Standard PS 1 for types specified. Except as otherwise specified, provide standard sheathing grade (exterior glue), thickness as indicated.

- B. Roof sheathing: C-C Grade, APA Rated Sheathing, Exposure 1.

2.3 FASTENERS AND ROUGH HARDWARE

A. NAILS, SPIKES AND STAPLES:

1. Comply with Federal Specification FF-N-105.
2. Use size and type to suit applications.
3. Use galvanized fasteners in all locations.

B. SCREWS, BOLTS, NUTS, AND WASHERS:

1. Comply with ASTM A307, ASTM A36 or Federal Specification FF-B-S61 as applicable.
2. Galvanize in accordance with ASTM A153.
3. Provide sizes as indicated or as required to suit the application.

- C. Provide other fasteners as indicated. Provide galvanized steel hardware and fasteners.

2.4 ACCESSORIES

- A. Building paper: 30# asphalt felt.

2.5 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

PART 3 - EXECUTION

3.1 WORKMANSHIP

- A. Construct all work in accordance with the best standard practice.
- B. Accurately saw cut and fit all work true to line and grade, plumb and level.

- C. Produce joints which are rigid, tight and true, and permanently secure in proper position using nails, lag screws, bolts or other fasteners as applicable.
 - 1. Do not shim or wedge joints unless otherwise indicated.
 - 2. Securely attach carpentry work to substrates using anchor bolts or other connections as indicated.
- D. Carefully select the lumber members.
 - 1. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing, and will allow making of proper connections.
 - 2. Cut out and discard defects which render a piece unable to serve its intended function.
 - 3. Do not use lumber which has excessive warp, twist, low, crook, mildew, fungus or mold.
- E. Provide wood blocking and backing as necessary to engage and receive all trim, millwork, finishes and fixtures.

3.2 INSTALLATION OF PLYWOOD SHEATHING

A. PLACEMENT:

- 1. Place plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise shown on the Drawings.
- 2. Center joints accurately over supports, unless otherwise shown on the Drawings.
- 3. Comply with the recommendations of the American Plywood Association.

3.3 FASTENING

A. NAILING:

- 1. Use common wire nails or spikes, unless otherwise indicated.
- 2. Nail without splitting wood.
- 3. Pre-bore as required.
- 4. Remove split members and replace with members complying with the specified requirements.

B. BOLTING:

- 1. Bore bolt holes true to line and of same diameter as bolts, and drive bolts into place with a tight fit.
- 2. Provide plates or washers for heads and nuts in contact with wood surfaces.
- 3. Where attached members will be covered with other materials, counter-bore bolt holes to washer diameter to seat heads and nuts flush or slightly below surface of member.

- C. Screws: For lag screws and wood screws, pre-bore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

3.4 MEASUREMENT AND PAYMENT

- A. No separate measurement or direct payment will be made for this work and all costs for same shall be included in the price bid for the work to which it pertains.

END OF SECTION 06100

SECTION 075419 - POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Mechanically fastened PVC membrane roofing system.

B. Related Sections:

1. Section 076200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
2. Section 077100 "Roofing Specialties" for metal copings and trim.

1.2 DEFINITIONS

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

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
1. Corner Uplift Pressure: **64.4** lbf/sq. ft..
 2. Perimeter Uplift Pressure: **42.8** lbf/sq. ft..
 3. Field-of-Roof Uplift Pressure: **25.5** lbf/sq. ft..
- D. FM Approvals Listing: Provide membrane roofing, base flashings, and component materials that comply with requirements in FM Approvals 4450 and FM Approvals 4470 as part of a membrane roofing system, and that are listed in FM Approvals' "RoofNav" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals markings.
1. Fire/Windstorm Classification: Class 1A-90.

2. Hail Resistance: SH.

E. Energy Performance: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low -slope roof products.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.

1. Base flashings and membrane terminations.
2. Tapered insulation, including slopes.
3. Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:

1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
2. Roof insulation.
3. Metal termination bars.
4. Six insulation fasteners of each type, length, and finish.
5. Six roof cover fasteners of each type, length, and finish.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer and manufacturer.

B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.

D. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES.

E. Warranties: Sample of special warranties.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing system to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is FM Approvals approved for membrane roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- C. Source Limitations: Obtain components including fasteners for membrane roofing system from same manufacturer as membrane roofing.
- D. Exterior Fire-Test Exposure: ASTM E 108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- F. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 7. Review governing regulations and requirements for insurance and certificates if applicable.
 - 8. Review temporary protection requirements for roofing system during and after installation.
 - 9. Review roof observation and repair procedures after roofing installation.

1.8 DELIVERY, STORAGE, AND HANDLING

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

1.9 PROJECT CONDITIONS

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

1.10 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, 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.
 - 1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, roofing accessories, and other components of membrane roofing system.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
 - 1. Warranty Period: Two] years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PVC MEMBRANE ROOFING

- A. PVC Sheet: ASTM D 4434, Type III, polyester reinforced.
 - 1. Products: Subject to compliance with requirements, provide SARNAFIL S327 or equal product by:
 - a. BondCote: PVC.
 - b. Flex Roofing
 - c. Seaman Corporation; Fibertite PVC
 - d. Versico; VersiFlex FRS PVC.
 - 2. Thickness: 60 mils, nominal.
 - 3. Exposed Face Color: White.

2.2 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved by PVC membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated and that produce FM Approvals-approved roof insulation.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches unless otherwise indicated.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.3 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- C. Cover Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 5/8 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
 - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
 - 2. 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. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.3 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. 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 with insulation.

1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
1. Fasten insulation according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.
 2. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.
- H. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck.
1. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.
- I. Install slip sheet over cover board and immediately beneath membrane roofing.

3.4 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
1. Install sheet according to ASTM D 5082.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

- G. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- H. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition.

3.5 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.7 PROTECTING AND CLEANING

- A. 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 Architect and Owner.
- B. 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.

- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.8 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: <Insert name of Owner>.
 - 2. Address: <Insert address>.
 - 3. Building Name/Type: <Insert information>.
 - 4. Address: <Insert address>.
 - 5. Area of Work: <Insert information>.
 - 6. Acceptance Date: <Insert date>.
 - 7. Warranty Period: <Insert time>.
 - 8. Expiration Date: <Insert date>.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
 - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. Lightning;
 - b. Peak gust wind speed exceeding <Insert wind speed> mph;
 - c. Fire;
 - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. Vapor condensation on bottom of roofing; and
 - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 - 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.

3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature>.
2. Name: <Insert name>.
3. Title: <Insert title>.

END OF SECTION 075419

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Formed low-slope roof sheet metal fabrications.
2. Formed equipment support flashing.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 077100 "Roof Specialties" for parapet copings.

1.2 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.3 ACTION SUBMITTALS

A. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Include identification of material, thickness, weight, and finish for each item and location in Project.
3. Include details for forming, including profiles, shapes, seams, and dimensions.
4. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
5. Include details of termination points and assemblies.
6. Include details of special conditions.
7. Include details of connections to adjoining work.
8. Detail formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches.

B. Samples for Verification: For each type of exposed finish.

1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.6 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.

1. Exposed Coil-Coated Finish:

- a. Metallic Fluoropolymer: AAMA 620. Three-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

2. Color: Match Architect's sample.

3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 mils thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.

1. Products: Subject to compliance with requirements, provide one of the following:

- a. Grace Construction Products, a unit of W. R. Grace & Co.-Conn.; Grace Ice and Water Shield HT.
- b. Henry Company; Blueskin PE200 HT.

2. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F or higher.

3. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F or lower.

- B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. minimum.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
 - 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
 - 3. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
 - 4. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329.
- C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
- D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethanepolymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- F. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 2. Obtain field measurements for accurate fit before shop fabrication.
 3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard and by FM Global Property Loss Prevention Data Sheet 1-49 for application, but not less than thickness of metal being secured.
- G. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- H. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- I. Do not use graphite pencils to mark metal surfaces.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
1. Aluminum: 0.040 inch thick.
- B. Counterflashing: [Shop fabricate interior and exterior corners.] Fabricate from the following materials:

1. Aluminum: 0.032 inch thick.

C. Roof-Penetration Flashing: Fabricate from the following materials:

1. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch thick.

2.7 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following materials:

1. Galvanized Steel: 0.028 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller. Cover underlayment within 14 days.

B. Apply slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

3.3 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 3. Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
 5. Torch cutting of sheet metal flashing and trim is not permitted.
 6. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
1. Coat concealed side of uncoated-aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints as indicated at drawings.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

3.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch centers.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless-steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints minimum of 4 inches. Secure in waterproof manner by means of anchor and washer at 36-inch centers unless otherwise indicated.
- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

3.5 MISCELLANEOUS FLASHING INSTALLATION

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

3.6 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Section 076200 "Sheet Metal Flashing and Trim" for custom- and site-fabricated sheet metal flashing and trim.

1.2 SUMMARY

- A. Section Includes:
 - 1. Copings.

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressures:
 - 1. Design Pressure: As indicated in roofing specification section .
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work. Include the following:

1. Details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
 2. Pattern of seams and layout of fasteners, cleats, clips, and other attachments.
 3. Details of termination points and assemblies, including fixed points.
 4. Details of special conditions.
- C. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.
- 1.5 INFORMATIONAL SUBMITTALS
- A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for copings and roof-edge flashings.
 - B. Warranty: Sample of special warranty.
- 1.6 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For roofing specialties to include in maintenance manuals.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.
 - B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof specialties installation.
- 1.8 WARRANTY
- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EXPOSED METALS

- A. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
 - 1. Surface: Smooth, flat finish.
 - 2. Exposed Coil-Coated Finishes: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - c. Two-Coat Fluoropolymer: AAMA 620. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
 - d. Concealed Surface: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

- B. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by manufacturer for type of use and finish indicated, finished as follows:
 - 1. Exposed High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - b. Two-Coat Fluoropolymer: AAMA 2604. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.

2.2 CONCEALED METALS

- A. Aluminum Sheet: ASTM B 209, alloy and temper recommended by manufacturer for type of use and structural performance indicated, mill finished.

- B. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by manufacturer for type of use and structural performance indicated, mill finished.

- C. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304.

2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 milsthick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
 - 1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F.
 - 2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F.

- B. Products: Subject to compliance with requirements, provide one of the following:
 - a. Grace Construction Products, a unit of W. R. Grace & Co.; Ultra.
 - b. Henry Company; Blueskin PE200 HT.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
 - 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
 - 2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
 - 3. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
- C. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.5 COPINGS

- A. Copings: Manufactured coping system consisting of formed-metal coping cap in section lengths not exceeding 12 feet, concealed anchorage; corner units, end cap units, and concealed splice plates with same finish as coping caps.
 - 1. Approved Products: Subject to compliance with requirements, provide one of the following :
 - a. Hickman Company, W. P.; Permasnap 2.
 - a. Metal Roofing Systems Inc.; MRS Rapid-Lock Coping.
 - 2. Coping-Cap Material: Formed aluminum, 0.050 inch thick.
 - a. Finish: Two-coat fluoropolymer .
 - b. Color: Custom metallic color to match adjacent metal wall panels.
 - 3. Corners: Factory mitered and continuously welded.
 - 4. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.
 - 5. Snap-on-Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches wide, with integral cleats.
 - 6. Face Leg Cleats: Concealed, continuous galvanized-steel sheet.

2.6 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Install wrinkle free. Apply primer if required by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water. Overlap edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.

3.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete roof-specialty systems.
 - 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
 - 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
 - 3. Install roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
 - 4. Torch cutting of roof specialties is not permitted.

5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of self-adhering, high-temperature sheet underlayment.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise shown on Drawings.
 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Seal joints with elastomeric sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for watertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.

3.4 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100