

PROJECT MANUAL

BRUCE DRYSDALE ELEMENTARY AND FLAT ROCK MIDDLE SCHOOLS ROOF REPLACEMENTS

HENDERSON COUNTY PUBLIC SCHOOLS HENDERSONVILLE, NORTH CAROLINA

Mark Lusk Architecture
128 Woodburn Drive
Swannanoa, North Carolina 28778

mark lusk architecture pllc

**Project No: 17001
May 17, 2017**

TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

INVITATION FOR BIDS

REF: INSTRUCTIONS TO BIDDERS (AIA DOCUMENT A701 – 1997)

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS AIA A701

STANDARD BID FORM

REF: STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR
(AIA DOCUMENT A101-2007)

MODIFICATIONS TO STANDARD FORM OF AGREEMENT (AIA A101-2007)

REF: GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
(AIA DOCUMENT A201-2007)

SUPPLEMENTARY CONDITIONS

REF: APPLICATION AND CERTIFICATE FOR PAYMENT (AIA DOCUMENT G702/703)

REF: CERTIFICATE OF SUBSTANTIAL COMPLETION (AIA DOCUMENT G704)

REF: CONTRACTORS AFFIDAVIT OF PAYMENTS AND DEBTS AND CLAIMS
(AIA DOCUMENT G706)

REF: CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS (AIA DOCUMENT G706A)

REF: CONSENT OF SURETY COMPANY TO FINAL PAYMENT (AIA DOCUMENT G707)

REF: CHANGE ORDER (AIA DOCUMENT G701)

ADDITIONAL ENCLOSURES:

- NC GUIDELINES FOR MINORITY BUSINESS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 011000 - SUMMARY

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

SECTION 012900 - PAYMENT PROCEDURES

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

SECTION 017700 - CLOSEOUT PROCEDURES

SECTION 017839 - PROJECT RECORD DOCUMENTS

DIVISION 02 - EXISTING CONDITIONS

NOT APPLICABLE

DIVISION 03 - CONCRETE

NOT APPLICABLE

DIVISION 04 - MASONRY

NOT APPLICABLE

DIVISION 05 - METALS

NOT APPLICABLE

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

NOT APPLICABLE

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 070150.19 - PREPARATION FOR RE-ROOFING
SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING
SECTION 076200 - SHEET METAL FLASHING AND TRIM

DIVISION 08 - OPENINGS

NOT APPLICABLE

DIVISION 09 - FINISHES

NOT APPLICABLE

DIVISION 10 - SPECIALTIES

NOT APPLICABLE

DIVISION 11 - EQUIPMENT

NOT APPLICABLE

DIVISION 12 - FURNISHINGS

NOT APPLICABLE

DIVISION 13 - SPECIAL CONSTRUCTION

NOT APPLICABLE

DIVISION 14 - CONVEYING EQUIPMENT

NOT APPLICABLE

DIVISION 21 - FIRE SUPPRESSION

NOT APPLICABLE

DIVISION 22 - PLUMBING

NOT APPLICABLE

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

NOT APPLICABLE

DIVISION 26 - ELECTRICAL

NOT APPLICABLE

DIVISION 27 - COMMUNICATIONS

NOT APPLICABLE

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

NOT APPLICABLE

DIVISION 31 - EARTHWORK

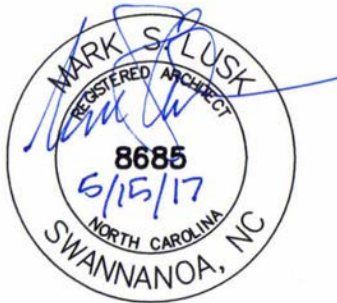
NOT APPLICABLE

DIVISION 32 - EXTERIOR IMPROVEMENTS

NOT APPLICABLE

DIVISION 33 - UTILITIES

NOT APPLICABLE



INVITATION FOR BIDS

The Henderson County Schools, North Carolina invites interested licensed Contractors to submit construction bids for the **Bruce Drysdale Elementary and Flat Rock Middle Schools Roof Replacements**, located in Hendersonville, North Carolina.

Bids will be received by the Owner, Henderson County Public Schools, in the Henderson County Central Office located in 414 Fourth Avenue, Hendersonville, NC, until 2:00 PM on June 1, 2017 at which time said bids will be publicly opened and read aloud.

The envelopes containing the bids must be sealed and addressed to Henderson County Public Schools, and designated as a Construction Bid for Bruce Drysdale Elementary and Flat Rock Middle Schools Roof Replacements.

A mandatory Pre-Bid Conference will be held at the Bruce Drysdale Elementary School on May 18, 2017 at 10:00 AM and continue to Flat Rock Middle School.

Copies of the Bidding Documents will be issued and available on the Henderson County Web Page under RFP's on May 17, 2017. No partial sets will be issued. Copyright of documents is emphasized. Documents may not be obtained or reproduced for any other purpose without written permission from Mark Lusk Architecture PLLC.

Performance and Payment Bond of 100% of Contract Sum is required.

Each Bid must be accompanied by a certified check of the Bidder, or by a Bid Bond made payable to the Owner for an amount equal to no less than 5 percent of the total bid as a guarantee that, if the bid is accepted, the required Agreement will be executed and that a 100% Performance Bond will be furnished.

No Bid may be withdrawn after the scheduled closing time for receipt of bid for a period of 60 days.

The Owner reserves the right to waive irregularities in the Bidding process and to reject any or all Bids, subject to the laws and regulations of the State of North Carolina.

Mr. Martin Ballard
Hendersonville County Public Schools

END OF DOCUMENT

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

These Supplemental Instructions To Bidders amend or supplement Instructions To Bidders (AIA Document A701-1997) and other provisions of Bidding and Contract Documents as indicated below.

Compliance with these Supplemental Instructions is required by the Henderson County Public Schools, Hendersonville, North Carolina.

All provisions of A701-1997, which are not so amended or supplemented, remain in full force and effect.

Bidders are cautioned to carefully examine the Bidding and Contract Documents for additional instructions or requirements.

RELATED DOCUMENTS

AIA Document A701-1997, hereby incorporated by reference.

Invitation For Construction Bids.

Bid Form.

Supplementary Conditions.

Other documents that may be identified in the Bidding and Contract.

MODIFICATIONS TO A701-1997

Delete Paragraph 1.1 and insert the following:

§ 1.1 BIDDING DOCUMENTS include the Bid Requirements and the proposed Contract Documents.

§ 1.1.1 Bid Requirements consist of the Invitation for Construction Bid, AIA Document A701-1997, Instructions to Bidders, this Section, Supplemental Instructions to Bidders, Bid Form and any Supplemental Instructions to Bidders included in the Bidding Documents, and all Addenda issued prior to the receipt of Bids.

§ 1.1.2 Contract Documents consist of the AIA Document A101-~~2007~~, Standard Form of Agreement Between Owner and Contractor, AIA Document A201-~~2007~~, General Conditions of the Contract for Construction, Supplementary Conditions, the Scope of Work as indicated on the Plans and the Specifications, the Contractor's Bid and Contract Modifications issued after execution of the Contract. All forms shall be referenced hereafter by the form number only. The Contract Documents shall govern the Work under all Divisions and Sections the same as if incorporated therein.

§ 1.1.3 Contract Modifications may be one of the following:

§ 1.1.3.1 A written amendment to the Contract signed by both parties;

§ 1.1.3.2 A Change Order.

§ 1.1.3.3 A Construction Change Directive;

§ 1.1.3.4 A written order for a minor change in the Work issued by the A/E.

Delete Paragraph 1.8 and insert the following:

§ 1.8 BIDDER is a person or entity who submits a Bid to the Owner.

Add the following subparagraph:

§ 1.10 ARCHITECT/ENGINEER (A/E) - A person or firm who performs professional services associated with the practice of architecture, professional engineering, land surveying, landscape architecture and interior design pertaining to construction, as defined by the Chapters 83A and 89C of the NC General Statutes, as well as incidental services that members of these professions and those in their employ may logically or justifiably perform, including studies, investigations, surveys, evaluations, consultations, planning, programming conceptual designs, plans and specifications, cost estimates, inspections, shop drawing reviews, sample recommendations, preparation of operating and maintenance manuals and other related services. In the absence of an A/E, the Owner assumes the role of the A/E.

Add the following subparagraph:

§ 1.12 Wherever the word "Architect" or "A/E" appears in the INSTRUCTIONS TO BIDDERS and herein, the intent is the design professional with whom the Owner has a contractual agreement.

§ Add the following subparagraph:

§ 1.13 Wherever the word "Owner" or "Owner" appears in the INSTRUCTIONS TO BIDDERS and herein, the intent is the Owner with whom the successful Bidder will have a contractual agreement.

Add the following subparagraph:

§ 1.14 Wherever the phrase "in the form of" or similar appears in the Contract Documents, that phrase shall be taken to permit the use of alternative forms, provided all information required by the referenced form is submitted in a format acceptable, in their sole discretion, to the Owner. Where the Bidder or Contractor is directed to use a specific form, that form shall be used without exception.

Delete Subparagraph 2.1.3 and insert the following:

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents and has accepted full responsibility for any pre-bid existing conditions that would affect the Bid that were obvious and could have been ascertained by a site visit.

Add the following subparagraph:

§ 2.1.5 The workplace will be maintained drug-free in accordance with Article 5 of Chapter 90 of the NC General Statutes, as amended.

Add the following paragraph:

§ 2.2 Mandatory Pre-Bid Conference is required:

§ 2.2.1 Prospective Bidders are required to be represented at a Mandatory Pre-Bid Conference, at the specified time, date and place;

§ 2.2.2 Only those prospective Bidders that are represented and are listed on the sign-in sheet will be allowed to submit Bids on the Work;

§ 2.2.3 When it is in the best interest of the Owner, the Owner shall have the right to schedule more than one Mandatory Pre-Bid Conference. All prospective Bidders shall be represented and listed on the sign-in sheet of at least one Mandatory Pre-Bid Conference to be eligible to bid the Work.

Add the following paragraph:

§ 2.4 The A/E will publish, prior to the Bid opening, an Addendum to the Contract Documents listing, the prospective Bidders that were represented and signed-in at the Mandatory Pre-Bid Conference(s).

Delete paragraph 3.1 and substitute the following:

§ 3.1 COPIES OF BIDDING DOCUMENTS

§ 3.1.1 Bidders and Sub-bidders may obtain complete sets of the Bidding Documents from the office designated in the Invitation for Construction Bids for the sum stated therein.

§ 3.1.2 If the deposit is listed as refundable on the Invitation for Construction Bids, then:

§ 3.1.2.1 The deposit will be refunded to all plan holders that return the Bidding Documents in good condition within ten (10) days; or

§ 3.1.2.2 The cost of replacement of missing or damaged documents will be deducted from the deposit; and,

§ 3.1.2.3 A Bidder receiving a Contract Award may retain the Bidding Documents and the Bidder's deposit will be refunded.

§ 3.1.3 Bidders and sub-bidders shall use complete sets of Bidding Documents in preparing Bids or sub-Bids; neither the Owner nor A/E assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Partial sets of Bidding Documents will not be issued.

§ 3.1.4 The Owner and A/E have made copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

Delete subparagraph 3.2.1 and substitute the following:

§ 3.2.1 The Bidder and each sub-Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid or sub-Bid is submitted. The Bidder and each sub-Bidder shall examine the site and local conditions, such as, but not limited to, location, accessibility, general character of the site or building and the extent of existing work within or adjacent to the site, and shall incorporate the impact, if any, of such conditions into the Bid submitted.

Delete subparagraph 3.2.2 and substitute the following:

§ 3.2.2 Bidders and sub-Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the A/E at least ten (10) days prior to the date for receipt of Bids. No oral interpretations in regard to the meaning of Plans and Specifications will be made and no oral instructions will be given prior to the award of the Contract.

Delete subparagraph 3.3.1 and substitute the following:

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. Reference in the Bidding Documents to 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.

Delete subparagraph 3.3.4 and substitute the following:

§ 3.3.4 No substitutions during construction for specified items shall be allowed unless they are recommended by the A/E and approved by the Owner.

Delete subparagraph 3.4.3 and substitute the following:

§ 3.4.3 No Addenda will be issued later than the fifth (5th) calendar day prior to the date set for receipt of Bids, except to:

§ 3.4.3.1 withdraw the request for Bids; or,

§ 3.4.3.2 postpone the date for receipt of Bids.

Add the following subparagraph:

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

Add the following subparagraph:

§ 3.4.6 Bid Forms wherein the Bidder fails to acknowledge all issued Addenda by number shall be rejected as non-responsive, except for the following:

§ 3.4.6.1 The Addendum only gives clarifications or lists attendees at a Mandatory Pre-Bid Conference; or,

§ 3.4.6.2 The Bid received clearly indicates that the Bidder received the Addendum, such as where the Addendum added another item to the Invitation for Construction Bids and the Bidder submitted a Bid thereon; or,

§ 3.4.6.3 The Addendum clearly would have had no effect or merely a trivial or negligible effect on price, quality, quantity, or delivery, and does not affect the relative standing of the Bidders. Under no circumstances can the Bid Amount be changed or modified.

(1) Trivial Or Negligible Effect shall be defined as an increase in the Base Bid amount of the apparent low bidder, not to exceed one percent (1%) of the Base Bid amount. There shall be no percentage limitation if the Addendum decreases the cost of the Work. The cost of the Addendum shall be determined by the A/E or by the Owner's procurement officer.

(2) Relative Standing Of The Bidders shall mean that the order of the Bidders would be the same regardless of the Addendum. If the estimated cost of the Addendum (regardless of the percent of increase) exceeds the difference between the Bids of the apparent low bidder and the second-low bidder, then the Bid of the apparent low bidder shall be rejected as non-responsive.

Delete subparagraph 4.1.1 and substitute the following:

§ 4.1.1 Bids shall be submitted on the Bid Form included in the Bidding Documents, or on true copies thereof, and signed in ink or other indelible media. The Bidder shall make no stipulations or qualify its Bid in any manner not permitted on the Bid Form.

Delete subparagraph 4.1.4.

Delete subparagraph 4.1.5 and substitute the following:

§ 4.1.5 All requested Alternates must be bid.

§ 4.1.5.1 Indicate either a dollar amount or the words "zero" or "No Change"

§ 4.1.5.2 Indicate "ADD TO" or "DEDUCT FROM" for each Alternate,

Delete subparagraph 4.1.6.

Delete subparagraph 4.1.7.

Add the following subparagraph:

§ 4.1.8 Unsigned Bids shall be rejected; provided however, that an unsigned Bid shall not be rejected when it is accompanied by a properly prepared Bid Security or by other material indicating the Bidder's intention to be bound by the unsigned document, such as the submission of a Bid Guarantee with the Bid or a letter with the Bid signed by the Bidder, referring to and identifying the Bid itself.

Add the following subparagraph:

§ 4.1.9 Subcontractor(s) listed on the Bid Form to perform Alternate Work may be used for both the Alternate and Base Bid Work, if the Alternate is accepted.

Delete paragraph 4.2 and substitute the following:

§ 4.2 BID SECURITY

§ 4.2.1 If required as stated in the Invitation for Bid form, each Bid shall be accompanied by Bid Security in the dollar amount, if any, listed on the Bid Form, or in an amount of not less than five percent (5%) of the Base Bid. The Bid Security shall be:

§ 4.2.1.1 Written on a Surety's Bid Bond form that has been executed by a Surety, made payable to the Owner; meeting the standards required by the Bidding Documents and the Bidder and Surety are firmly bound unto the Henderson County School District under the conditions of the Bid Bond provided in the Bidding Documents; or,

§ 4.2.1.2 An electronic Bid Bond authorization number issued by a firm or organization authorized by the surety to receive, authenticate and issue binding electronic Bid Bonds on behalf the surety; or,

§ 4.2.1.3 In the form of a certified cashier's check.

§ 4.2.2 By providing an electronic bid bond authorization code and signing the Bid Form, the Bidder is certifying 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 Henderson County School District under the conditions of the Bid Bond provided in the Bidding Documents.

§ 4.2.3 To be acceptable, a Bid Bond shall:

§ 4.2.3.1 Be issued by a surety company licensed to do business in North Carolina;

§ 4.2.3.2 Be issued by a surety company having, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property-Casualty". In addition, the surety shall have a minimum "Best Financial Strength Category" of "Class V, and in no case less than five (5) times the contract amount.

§ 4.2.3.3 Be accompanied by a certified and current power of attorney by the attorney-in-fact who executes the bond on the behalf of the surety company; and,

§ 4.2.3.4 Be enclosed in the bid envelope at the time of Bid Opening, either in paper copy or as a Bid Bond authorization number provided on the Bid Form.

§ 4.2.4 By providing Bid Security, the Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bidding Documents and will, if required, furnish bonds covering the faithful

performance of the Contract and payment of all obligations arising thereunder. The Bidder shall forfeit to the Owner as liquidated damages the amount of the Bid Security if the Bidder fails to:

- § 4.2.4.1 Correct any Bid deficiency as required by the Bidding Documents and the Manual; or,
- § 4.2.4.2 Enter into such Contract; and,
- § 4.2.4.3 Furnish such bonds, if required.
- § 4.2.5 The Owner shall have the right to retain the Bid Security of any or all Bidders until such time as one of the three conditions listed below has been met.
 - § 4.2.5.1 The Contract for Construction has been executed and both Labor and Material Payment and Performance Bonds, if required, have been furnished; or,
 - § 4.2.5.2 The specified time has elapsed so that Bids may be withdrawn; or,
 - § 4.2.5.3 The Owner has rejected all Bids.
- § 4.2.6 Bidders submitting a Bid Security not meeting the required amount, surety rating or financial strength rating shall have one working day from the Bid Opening to cure the deficiency or the Bid shall be considered non-responsive. The Bid Security amount submitted with the Bid must be at least 80% of the required amount to be eligible for correction.

Delete Subparagraph 4.3.1 and substitute the following:

- § 4.3.1 All copies of the Bid, the Bid Security, if any, and all other documents required to be submitted with the Bid should be enclosed in a sealed opaque envelope. The Bid Envelope should be addressed to the party receiving the Bids and shall be identified with the Project Name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted.

Delete subparagraph 4.3.3 and substitute the following:

- § 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
 - § 4.3.3.1 Bidders attending the Bid Opening should bring Bids to the place of the Bid Opening as shown in the Invitation for Construction Bids. The Bids should be given to the procurement officer of the Owner or his designee (includes the A/E) prior to the time of the Bid Opening.
 - § 4.3.3.2 Bids sent by mail or special delivery service (UPS, Federal Express, etc.) should be labeled "SEALED BID ENCLOSED", and shall be addressed to the Owner designated purchasing office as shown in the Invitation for Construction Bids. Delivery of Bids to the above location shall be prior to the time of Bid Opening. Bids not received at the above location or Owner's mail room, prior to the time of Bid Opening, will be rejected.

Add the following subparagraph:

- § 4.3.5 Any other or special documents requested of the Bidder in these Bidding Documents shall be included in the Bid Envelope. If they are not included with the Bid Envelope, the Bidder shall have twenty four (24) hours from the time of the Bid Opening to provide these documents or its Bid shall be considered non-responsive.

Add the following subparagraph:

- § 4.3.6 The official time for receipt of Bids shall be determined by reference to the clock designated by the Owner procurement officer or his designee. The procurement officer conducting the Bid Opening shall 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 shall be considered timely, whether or not the bid envelope has been date/time stamped or otherwise marked by the procurement officer.

Delete subparagraph 4.4.2 and insert the following:

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such modification shall be in writing on the Bid Form contained in the Bidding Documents or a true copy thereof, and over the signature of the Bidder.

Delete Article 5 in its entirety and substitute the following:

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 COMPLIANCE WITH REQUIREMENTS. To be considered, Bids shall be made in accordance with these Instructions to Bidders. Failure to comply with these bidding requirements may cause a bid to be rejected.

§ 5.2 OPENING OF BIDS

§ 5.2.1 Bids received on time will be opened publicly and read aloud. Bids that are determined, at the time of opening, to be non-responsive shall not be read. If all Bids are to be rejected, the Owner shall announce the reason(s) therefore.

§ 5.2.2 The date and location of the posting of the Notice of Intent to Award will be announced.

§ 5.2.3 The Owner shall send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the Bid Opening.

§ 5.2.4 If the Project is to be awarded, the Owner shall send a copy of the Notice of Intent to Award to all Bidders after posting.

§ 5.2.5 If only one Bid is received, the Bid shall be opened and considered.

§ 5.3 REJECTION OF BIDS

§ 5.3.1 The Owner shall have the right to reject any or all Bids, reject a Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or reject a Bid which is in any way incomplete or irregular.

§ 5.3.2 Bids shall be rejected for any of the following reasons, which include, but are not limited to:

§ 5.3.2.1 Failure by a Bidder to be represented at a Mandatory Pre-Bid Conference or site visit; or,

§ 5.3.2.2 Failure to deliver the Bid on time; or,

§ 5.3.2.3 Failure to comply with Bid Security requirements, except as allowed herein; or,

§ 5.3.2.4 Listing an invalid electronic Bid Bond authorization number on the bid form; or,

§ 5.3.2.5 Failure to Bid an Alternate; or,

§ 5.3.2.6 Failure to list qualified Subcontractors as required by law, or,

§ 5.3.2.7 Showing any modification(s) or exception(s) qualifying the Bid; or,

- § 5.3.2.8 Faxing a Bid directly to the Owner or their representative; or,
- § 5.3.2.9 Failure to include in the Bid Envelope all items required by the Bidding Documents; or,
- § 5.3.2.10 Failure to include a properly executed Power-of-Attorney with the bid bond.
- § 5.3.3 Bids shall not be rejected for the following reasons, which include, but are not limited to:
- § 5.3.3.1 Failure to write "Sealed Bid Enclosed" on the outside of the mailing envelope; or,
- § 5.3.3.2 Failure to seal the Bid envelope; or,
- § 5.3.3.3 Listing a modification to the Bid on the outside of the Bid envelope, provided however that such modifications will not be considered; or,
- § 5.3.3.4 Failure to list any information on the envelope other than that which may be required by law; or,
- § 5.3.3.5 Providing a fax copy or other reproduction of any or all Bidding Documents in the Bid envelope: or,
- § 5.3.3.6 Failure to indicate "ADD TO" or "DEDUCT FROM" on an Alternate, but only when the adjustment is obvious; or,
- § 5.3.3.7 Failure to provide an Incremental Price or a Unit Price when requested on the Bid Form; or,
- § 5.3.3.8 Providing additional listings of "Subcontractor Specialty" beyond those listed on the Bid Form; or,
- § 5.3.3.9 Failure of the Bidder to sign the Bid, provided it is accompanied by a properly prepared Bid Security, or other information, as required by this Section; or,
- § 5.3.3.10 Providing a reproduction of a signature on any or all Bidding Documents; or,
- § 5.3.3.11 Failure of the corporation to include its seal on the Bid; or,
- § 5.3.3.12 Bid Bond not signed by the bidder but only if the bond has been properly executed and signed by the bonding company or agent.
- § 5.3.3.13 Immaterial variation from the exact requirements of the Bidding Documents.
- § 5.3.4 Bidders shall have one (1) working day from the time of Bid opening to correct the following deficiencies:
- § 5.3.4.1 Failure to provide five percent (5%) Bid Security when required, provided that the Bidder did furnish Bid Security in the proper form equal to at least eighty (80) percent of that required in the Invitation for Construction Bids; and,
- § 5.3.4.2 Failure to provide a Bid Bond with the proper surety rating and financial strength, provided that the Bidder did furnish Bid Security in the proper form equal to at least eighty (80) percent of that required in the Invitation for Construction Bids.
- § 5.4 ACCEPTANCE OF BID (AWARD)
- § 5.4.1 INTENT TO AWARD. It is the intent of the Owner to award a Contract to the lowest evaluated responsive bid submitted by a responsible Bidder. The lowest evaluated responsive bid will be determined by the sum of the base bid plus all alternates. However, the Owner reserves

the right to accept that bid received which in the Owner's judgment is in the Owner's own best interest (Refer to 5.4.3 below). The Owner reserves the right to conduct discussions with apparent responsive bidders for the purpose of clarification to assure full understanding of the requirements of the Invitation for Bid.

§ 5.4.2 NOT USED.

§ 5.4.3 REJECTION OF BIDS. The Owner shall have the right to reject all Bids; to reject Unit Prices proposed in a Bid without invalidating other portions of the Bid; to waive informalities or irregularities in a Bid received and to accept that Bid which, in the Owner's judgment, is in the Owner's own best interests. Failure by the Bidder to correct any deficiency as requested may cause the Bid to be rejected as non-responsive.

§ 5.4.4 NOT USED

Delete Article 6 in its entirety and substitute the following:

ARTICLE 6 CONTRACTOR'S QUALIFICATIONS

§ 6.1 STANDARDS OF RESPONSIBILITY. A prospective Contractor shall be considered as meeting the State's standards of responsibility when the firm has:

§ 6.1.1 Appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain them, necessary to indicate its capability to meet all contractual requirements; and,

§ 6.1.2 A satisfactory record of performance; and,

§ 6.1.3 A satisfactory record of integrity; and,

§ 6.1.4 Is qualified legally licensed to contract in the State of North Carolina, and

§ 6.1.5 Has supplied all necessary information in connection with the inquiry concerning responsibility.

§ 6.2 ADDITIONAL INFORMATION. Each Bidder submitting a Bid shall, upon request, submit an AIA Questionnaire for Contractors, and all additional information as required by the Owner to support the Owner's evaluation of the responsibility of the Bidder.

§ 6.2.1 Each Bidder, by submitting a Bid, agrees to waive any claim it has or may have against the Owner, the A/E and their respective employees arising out of or in connection with the administration, evaluation or recommendation of any bid.

Delete Article 7 in its entirety and substitute the following:

ARTICLE 7 PERFORMANCE AND PAYMENT BONDS

§ 7.1 BOND REQUIREMENTS

§ 7.1.1 When required by the Invitation for Construction Bids, the Contractor shall provide and pay the cost of Performance and Labor and Material Payment Bonds as described and defined in Paragraph 11.5 of Supplementary Conditions.

§ 7.2 TIME OF DELIVERY

§ 7.2.1 When bonds are required by the Invitation for Construction Bids, the Contractor shall have a maximum of twenty-one (21) days from the date of posting of the Notice of Intent to Award, to deliver the Performance and Labor and Material Payment Bonds, Certificate of Insurance and the Contract (signed by Contractor only). Failure to deliver these documents as required shall entitle the Owner to consider the Bidder non-responsible and to declare the Bid Security forfeited.

Insert Article 9 as follows:

ARTICLE 9 PROJECT INFORMATION

§ 9.1 PROJECT NAME: Bruce Drysdale Elementary and Flat Rock Middle Schools Roof Replacements
PROJECT NUMBER: 17001
PROJECT LOCATION: Hendersonville, North Carolina

§ 9.2 Bids sent by mail or special delivery service (UPS, FedEx, etc) should be labeled "SEALED BID ENCLOSED", and shall be addressed to the Owner's designated purchasing office as follows:

Name of Owner: Henderson County Public Schools
Designated Purchasing Office: Henderson County Public Schools
Office Address: 414 Fourth Avenue West
Hendersonville, NC 28739
Owner Representative: Mr. Martin Ballard
Contact Information: 828.697.4992
Fax: 828.698.6186

§ 9.3 Notice of Intent to Award, will be posted at the following location: TBD

BID FORM

BID OF: _____
(Contractor)

BID TO: HENDERSON COUNTY PUBLIC SCHOOLS
(Owner)

PROJECT NAME: _____

PROJECT NUMBER: 17001 BID DATE: _____

BASE BID AGREEMENT

The undersigned, having examined all the Bidding Documents and acknowledging all Addendum(a) as follows:

Addendum(a)#

Shall execute the entire Work in the Bidding Documents as described, for a LUMP SUM amount of:

_____ Dollars

(\$ _____) which sum is hereafter called the BASE BID.

DATE FOR COMMENCEMENT AND SUBSTANTIAL COMPLETION

The Date for Commencement shall be established in the Notice to Proceed. The Contractor shall not incur any expense until the contract has been awarded. An award requires that either the Contract be signed by both the awarding authority and the contractor or a Notice to Proceed is executed.

All work shall be substantially completed (as evidenced by the date on the CERTIFICATE OF SUBSTANTIAL COMPLETION) as follows:

- Flat Rock Middle Building G---August 22, 2017
- Bruce Drysdale Elementary All Roofs---To Be Determined

The undersigned further agrees that from the compensation to be paid, the owner may retain as Step One liquidated damages the sum of One Hundred Fifty Dollars (\$150) for each calendar day the actual contract time for Substantial Completion exceeds the specified or adjusted contract time for Substantial Completion as provided in the Contract Documents.

BID SECURITY

The undersigned enclosed bid security in the amount of not less than five (5) percent of the BASE BID. The Contractor shall have twenty-one (21) days maximum from the date of the Notice of Intent to Award to deliver Performance and Payment Bond, Certificate of Insurance, and the Contract (signed by Contractor only). Failure to deliver these documents, as required, shall entitle the agency to consider the Contractor non-responsible and declare the bid security forfeited.

ALTERNATE(S) TO THE BASE BID:

Add Alternate No. 1- Work as described in the documents at Drysdale Roof B:

(Add) _____ Dollars(\$)

Add Alternate No. 2- Work as described in the documents at Drysdale Roof C:

(Add) _____ Dollars(\$)

Add Alternate No. 3- Work as described in the documents at Drysdale Roof D:

(Add) _____ Dollars(\$)

UNIT PRICES:

Unit Price #1 _____ per board foot
Remove and provide treated 2 x 6 wood board roof deck

Unit Price #2 _____ per 1" x 4' x 4' board
Remove and provide polyisocyanurate rigid insulation

Unit Price #3 _____ per ventilator
Provide Gravity ventilator Type A

Unit Price #4 _____ per ventilator
Provide Gravity ventilator Type B

ADDENDA

The undersigned acknowledges the receipt of the addenda (as noted on page one of this Bid Form) and confirms that the BID as submitted reflects appropriate price responses.

LISTING OF SUBCONTRACTORS (where applicable)

NCGS (43-128 (d) provides: Single-prime contracts – All bidders in a single-prime project shall identify on their bid the contractors they have selected for the subdivisions or branches of work.

BID HOLDING TIME AND ACCEPTANCE

The undersigned agrees that this Base Bid may not be revoked or withdrawn after the time set for the opening of bids, but shall remain open for acceptance for a period of sixty (60) days following the bid date.

CERTIFICATION REGARDING DRUG-FREE WORKPLACE

The undersigned certifies that the contractor listed below will provide a "drug-free workplace" as that term is defined in Article 5 of Chapter 90 of the NC General Statutes.

PROGRESS PAYMENTS

Contractor's Application for Payment shall be submitted to the Architect on AIA Document G702 and G703 - 1983 Edition. The period covered by each application for Payment shall be not less than one calendar month. The Owner shall make progress payments to the Contractor on undisputed amounts certified by the Architect within thirty (30) days from receipt of the Application for Payment by the Owner.

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATIONS

(Classification) (Subclassification) (Limitations)

(NC Contractor's License Number)

AUTHORIZATION

(Type or Print Name of Contractor)

(Type or Print Address)

(Type or Print Phone Number)

(Type or Print Fax Number)

(Type or Print Name)

(Title)

(Signature)

(Date)

END OF BID DOCUMENT

STANDARD MODIFICATIONS TO AIA A101-2007

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

Compliance with these Standard Modifications is required by Henderson County, North Carolina.

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

RELATED DOCUMENTS

AIA Document A101-2007 hereby incorporated by reference and referred to hereafter as A101.

AIA Document A201-2007 hereby incorporated by reference and referred to hereafter as A201.

Document Supplementary Conditions.

Other documents that may be identified in the Bidding and Contract Documents.

MODIFICATIONS TO A101

ARTICLE 2 THE WORK OF THIS CONTRACT

Delete Section 2 and insert the following:

The Contractor shall fully execute the Work as described in the Contract Documents, or reasonable inferable by the Contractor as necessary to produce the results indicated by the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

Add the following new Paragraphs 3.4 and 3.5 to the end of Section 3:

§3.4 The Contractor acknowledges and recognizes that the Owner is entitled to full and beneficial occupancy and use of the complete Work following expiration of the Contract Time and that the Owner has entered into, or will enter into, binding agreements demising all or part of the premises where Work is to be completed based upon the Contractor's achieving Final Completion of the work within the Contract Time. It is hereby mutually agreed by and between the parties that time shall be an essential part of the Agreement and the Contractor further acknowledges and agrees that if the Contractor fails to complete substantially or cause the Final Completion of any portion of the Work within the Contract Time, the Owner will sustain damages and loss as a result of such failure. The exact amount of such damages will be difficult to ascertain. Therefore, the Owner and the Contractor agree as set forth below in this Paragraph 3.4.

§3.4.1 If the Contractor fails to achieve Substantial Completion of the Work within the Time for Completion allowed in the Agreement, the Owner shall be entitled to retain or recover from the Contractor and its Surety, as liquidated damages and not as a penalty, the following per diem amounts commencing upon the first day following expiration of the specified or adjusted time of performance and continuing until the actual Date of Substantial Completion. Such liquidated damages are hereby agreed to be a reasonable estimate of damages the Owner will incur as a result of delayed completion of the Work: \$150 per day.

§3.4.3 The Owner may deduct liquidated damages described in Subparagraphs 3.4.1 and 3.4.2 from any unpaid amounts then or thereafter due the Contractor under this Agreement. Any liquidated damages not so deducted from any unpaid amounts due the Contractor shall be payable to the Owner by the Contractor or its Surety at the demand of the Owner

ARTICLE 4 CONTRACT SUM

Add the following subparagraph to Paragraph 4.2:

§4.2.1 At the time the Notice of Intent to Award was posted the Contract Sum did not include the following Bid Alternates, which are described in the Contract Documents and which the Contractor hereby agrees may be accepted by the Owner, in writing, on or before the date specified for each below-listed Bid Alternate. The Contractor hereby affirms to the Owner that the date(s) listed below represent the final date(s) by which any of the Bid Alternates set forth in this Subparagraph may be accepted by the Owner in order for the Contractor to perform the Work covered by such Bid Alternates for the price set forth in this Subparagraph and without any adjustment in the Contract Time.

<u>BID ALTERNATE NUMBER</u>	<u>BID PRICE</u>	<u>ACCEPTANCE DATE</u>
_____ N/A _____	_____	_____

Add the following to Paragraph 4.3:

§4.3.1 Unit prices are set forth in the "Schedule of Unit Prices" attached hereto and made a part hereof as Exhibit (A). Such unit prices are considered complete and include: (1) all materials, equipment, labor, delivery, installation, overhead, and profit; and, (2) any other costs or expenses in connection with, or incidental to, the performance of that portion of the Work to which such unit prices apply.

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

Delete Subparagraph 5.1.1 and substitute the following:

§5.1.1 Based on Applications for Payment, including all supporting documentation, submitted to the Owner and the A/E by the Contractor and Certifications for Payment issued by the A/E., the Owner shall make progress payment on Account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

Delete Subparagraph 5.1.3 and insert the following:

§5.1.3 An Application for Payment, including all supporting documentation, for the period of time established in Subparagraph 5.1.2 shall be received by the A/E and the Owner not later than ten (10) days after the end of the period for which the Contractor is making application for payment. Payment on approved amounts shall be made by the Owner not later than thirty (30) days after the A/E and the Owner receive the Application for Payment.

Add the following sentence to Subparagraph 5.1.5: Each Application for Payment shall include such other information, documentation, and materials as the Owner or the A/E may require to substantiate the Contractor's entitlement to payment.

Delete Clause 5.1.7.1 and substitute the following: Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less any amounts the A/E shall determine for incomplete and unacceptable Work, retainage applicable to such work, unsettled claims, Step One liquidated damages then due, and anticipated Step Two liquidated damages, if any.

Add the following Clause to Subparagraph 5.1.8:

§5.1.8.1 Refer to Subparagraphs 9.6.2 and 9.8.5 of the General Conditions. Any reduction or release of retainage, or portion thereof, however, shall not be a waiver of: (1) any of the Owner's rights to retainage in connection with other payments to the Contractor; or, (2) any other right or remedy that the Owner has under the Contract Documents, at law or in equity.

§ 5.2 FINAL PAYMENT

Delete Subparagraph 5.2.2 and insert the following:

§ 5.2.2 Final payment shall be made within thirty (30) days from the date the Owner (or A/E) receives the final undisputed Application for payment, including all supporting documentation, from the Contractor. All conditions stipulated in the General Conditions shall have been met before final payment is made.

ARTICLE 7 TERMINATION OR SUSPENSION

Insert the words "...as amended" after "...2007..." in paragraph 7.1.

Insert the words "...as amended" after "...2007..." in paragraph 7.2.

ARTICLE 8 MISCELLANEOUS PROVISIONS

Add the following to Paragraph 7.2: Refer to Subparagraph 9.6.2 of the General Conditions.

Add the following Subparagraphs:

§8.6.1 Contractor shall not incur any expense chargeable to the Owner on or about the Work of this Agreement until the Notice to Proceed is issued.

§8.6.2 The Contractor represents and warrants the following to the Owner (in addition to any other representations and warranties contained in the Contract Documents), as an inducement to the Owner to execute this Agreement, which representations and warranties shall survive the execution and delivery of this Agreement, any termination of this Agreement, and the final completion of the Work.

§8.6.2.1 That it and its Subcontractors are financially solvent, able to pay all debts as they mature, and possessed of sufficient working capital to complete the Work and perform all obligations hereunder.

§8.6.2.2 That it is able to furnish the plant, tools, materials, supplied, equipment, and labor required to complete the Work and perform its obligations hereunder.

§8.6.2.3 That it is authorized to do business in the State of North Carolina and is properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the Project.

§8.6.2.4 That its execution of this Agreement and its performance thereof is within its duly authorized powers.

§8.6.2.5 That its duly authorized representative has visited the site of the Project, familiarized himself with the local and special conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents, and;

§8.6.2.6 That it possesses a high level of experience and expertise in the business administration, construction, construction management, and superintendence of projects of the size, complexity, and nature of this particular Project, and it will perform the Work with the care, skill, and diligence of such a contractor.

The foregoing warranties are in addition to, and not in lieu of, any and all other liability imposed upon the Contractor by law with respect to the Contractor's duties, obligations, and performance hereunder. The Contractor acknowledges that the Owner is relying upon the Contractor's skill and experience in connection with the Work called for hereunder.

§8.6.3 The Owner reserves the right, pursuant to Section 7 of the General Conditions, to modify the Work of the Contractor.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

Insert the words "...as amended by those modifications to AIA A101-2007 and as otherwise stated herein" after "...2007..." in Subparagraph 9.1.1.

Insert the words "...as amended..." after "...2007..." in Subparagraph 8.1.2.

In Subparagraph 9.1.3 insert the Project Manual issue date and list the following:

Supplemental Conditions

3.4 List the following in Subparagraph 9.1.4:

Supplemental Instructions to Bidders
Modifications to AIA A101-2007

3.5 List the following in Subparagraph 9.1.7:

Table of Contents
Invitation for Construction Bids
Instructions to Bidders (AIA Document A701-1997 Edition)
Contractor's Bid
Construction Change Order

END OF DOCUMENT

SUPPLEMENTARY CONDITIONS

The *General Conditions of the Contract for Construction*, AIA Document A201, 2007 Edition, Articles 1 through 14 inclusive, is a part of this Contract and is incorporated as fully as if herein set forth. For brevity, AIA Document A201 is also referred to in the Contract Documents collectively as the "General Conditions."

The following supplements modify, delete and/or add to the General Conditions. Where any portion of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of the General Conditions shall remain in effect.

Unless otherwise stated, the terms used in these Standard Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

ARTICLE 1: GENERAL PROVISIONS

§ 1.1.1 THE CONTRACT DOCUMENTS:

Add the following sentence to the end of Section 1.1.1: The Contract Documents executed in accordance with Section 1.5.1 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.

§ 1.1.2: THE CONTRACT

Add the following at the end of Section 1.1.2(2) between the words "Sub-subcontractor" and "or": except as set forth in Section 5.4.

Add the following Section 1.1.9:

§ 1.1.9 THE NOTICE TO PROCEED:

A document issued by the Owner to the Contractor (with a copy to the Architect) fixing the date on which the Contract time will commence for the Contractor to begin prosecution of the Work in accordance with the requirements of the Contract Documents.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS:

Add the following to Subparagraph 1.2.1:

§ 1.2.1.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:

1. The Agreement.
2. Addenda, with those of later date having precedence over those of earlier date.
3. The Supplementary Conditions.
4. The General Conditions of the Contract for Construction.
5. Division 1 of the Specifications.
6. Drawings and Divisions 2 through 33 of the Specifications.

In case of conflicts or discrepancies or inconsistencies among the Drawings and Divisions 2 through 33 of the Specifications or within either Document not clarified by Addendum, the Architect will determine which takes precedence in accordance with Section 4.2.11. The Contractor shall provide the better quality or greater quantity of Work; or, comply with the more stringent requirements unless a lesser requirement is determined to be acceptable by the Architect prior to bidding.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Add the following Section 1.5.3 to Section 1.5:

§ 1.5.3 Contractor's Use of Instruments of Service in Electronic Form.

§ 1.5.3.1 The Architect may for a fee established in the specifications, and with concurrence of the

Owner, furnish to the Contractor versions of instruments of Service in electronic form. The Contract Documents executed or identified in accordance with Section 1.5.2 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic means involving computers.

§ 1.5.3.2 The Contractor shall not transfer or reuse Instruments of Service in electronic form or machine readable form without the prior written consent of the Architect.

Add the following Section 1.7:

§ 1.7 EXECUTION OF CONTRACT DOCUMENTS

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

ARTICLE 2: OWNER

§ 2.1 GENERAL

Delete the first sentence of Subparagraph 2.1.2 and substitute the following:

§ 2.1.2 The Owner, upon reasonable written request, shall furnish to the Contractor in writing such information which is in the Owner's possession and which is necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

Delete the second sentence of Subparagraph 2.2.3 and substitute the following:

§ 2.2.3 Subject to the Contractor's obligations, including those in Subparagraphs 1.8.2 and 3.2.1, the Contractor shall be entitled to rely on the accuracy of information furnished by the Owner pursuant to this Subparagraph, but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 Delete the word "...under..." in the last sentence of Subparagraph 2.2.4 and substitute "...which is within...". Add the following sentence at the end of Subparagraph 2.2.4:

Neither the Owner nor the A/E shall be required to conduct investigations or to furnish the Contractor with any information concerning subsurface characteristics or other conditions of the areas where the Work is to be performed beyond that which is provided in the Contract Documents. The Contractor shall not be entitled to rely on the accuracy of any information or services provided pursuant to this Subparagraph.

Add Section 2.2.6 to Section 2.2:

§ 2.2.6 The Owner will procure and bear costs of structural tests and special inspections as required by the applicable building code, and as specified in the Project Manual.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

Delete Subparagraph 2.4.1 and substitute the following:

§ 2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails, within a seven-day period after receipt of written notice from the Owner, to provide the resources needed to achieve correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, proceed to correct such deficiencies. In such case an appropriate Change Directive shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the A/E's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor or its Surety shall pay the difference to the Owner.

Add the following Subparagraph 2.4.2:

§ 2.4.2 If, after achieving Substantial Completion, the Contractor then defaults, or neglects to complete or fails to provide resources adequate to complete the Project within the adjusted Contract Time for Final Completion as defined in Subparagraph 8.2.5, the Owner may carry out the work after giving the Contractor a single seven-day written notice of the Contractor's default or neglect. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the A/E's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor or its Surety shall pay the difference to the Owner.

ARTICLE 3: CONTRACTOR

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Add the following Section 3.2.5 to Section 3.2:

§ 3.2.5 The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for the Architect to evaluate and respond to the Contractor's requests for information, where such information was available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Change the last sentence of Subparagraph 3.3.1 to read as follows:

§ 3.3.1 If the Contractor is then instructed by the Owner in writing to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage.

§ 3.4 LABOR AND MATERIALS

Add the following clauses to Subparagraph 3.4.1:

§ 3.4.1.1 The Contractor shall not allow the use of asbestos containing products, whether temporary or permanent and whether or not incorporated or to be incorporated in the work, even if the products are nonfriable and/or contain minimal amounts of asbestos, and even though such products may still be legally installed.

§ 3.4.1.2 The Contractor shall not allow the use of lead materials in public water applications. Lead free solder, flux and pipe must be used in all public drinking water and waste water applications. Lead free solder and flux are defined as containing less than 0.2% lead, while valves, pipes and appurtenances must contain less than 8.0% lead.

Delete Section 3.4.2 and substitute the following:

§ 3.4.2 After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications). By making requests for substitutions, the Contractor:

1. represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified.
2. represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified.
3. certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
4. will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

Add the following Section 3.4.4 to Section 3.4:

§ 3.4.4 The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect to evaluate the Contractor's proposed substitutions and to make agreed-upon changes in the Drawings and Specifications made necessary by the Owner's acceptance of such substitutions.

§ 3.5 WARRANTY

Delete Subparagraph 3.5.1 and substitute the following:

§ 3.5.1 The Contractor warrants to the Owner and the A/E that all materials and equipment furnished under the Contract shall be in first class condition, and new unless otherwise required or permitted by the Contract Documents; that the Work will be free from defects not inherent in the quality required or permitted; and that the Work will conform to the requirements of the Contract Documents. If required by the Owner or the A/E, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents, and shall be performed by persons well-qualified at their respective trades.

Unless caused by the Contractor, the Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not performed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner or the A/E, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment provided.

§ 3.6 TAXES

Add the following Subparagraph 3.6.2:

§ 3.6.2 The Contractor's attention is directed to NCGS 105-164.13, as amended, concerning withholding tax for nonresidents, employees, contractors and subcontractors.

§ 3.6.3 Upon completion of the project and before final payment is made, Contractor shall furnish the Owner a notarized statement of the amount of sales tax paid and certifying that said items were incorporated into this project.

§ 3.8 ALLOWANCES

Delete the last sentence of Clause 3.8.2.3 and substitute the following:

§ 3.8.2.3 The amount of the Change Order shall reflect the difference between actual costs under Clause 3.8.2.1, as documented by invoices, and the allowance amounts.

§ 3.8.3 Insert the word "...unreasonable ..." between "...avoid..." and "...delay..." in Subparagraph 3.8.3.

§ 3.9 SUPERINTENDENT

Add the following Section 3.9.4 to 3.9:

§ 3.9.4 The Contractor shall employ a superintendent or an assistant to the superintendent who will perform as a coordinator for mechanical and electrical Work. The coordinator shall be knowledgeable in mechanical and electrical systems and capable of reading, interpreting and coordinating Drawings, Specifications, and shop drawings pertaining to such systems. The coordinator shall assist the Subcontractors in arranging space conditions to eliminate interference between the mechanical and electrical systems and other Work and shall supervise the preparation of coordination drawings documenting the spatial arrangements for such systems within restricted spaces. The coordinator shall assist in planning and expediting the proper sequence of delivery of mechanical and electrical equipment to the site.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

Add the following Clauses to Subparagraph 3.10.1:

This schedule shall:

- § 3.10.1.1 indicate the dates for the start and completion of the various elements of the Work, and shall be affirmed or revised monthly as required by the conditions of the Work and upon execution of a Change Order that affects time.
- § 3.10.1.2 provide a graphic representation of activities and events that will occur during performance of the Work in sufficient detail, and as acceptable to the Owner, to show the sequencing of the various trades for each floor level, wing or work area;
- § 3.10.1.3 identify each phase of construction and occupancy; and,
- § 3.10.1.4 set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates").

Delete Subparagraphs 3.10.3 and insert the following:

- § 3.10.3 The Contractor shall perform the Work in accordance with the most recent schedules submitted to and approved by the Owner.
- § 3.10.3.1 If the Contractor submits a schedule or schedule progress report indicating, or otherwise expresses an intention to achieve Substantial or Final Completion of the Work or any portion thereof, prior to any completion date required by the Contract Documents or to the expiration of the Contract Time, no liability to the Owner for any failure of the Contractor to do so complete the Work shall be created or implied. The Contractor shall not be entitled to an adjustment in the Contract Sum or the Contract Time for failure to achieve such early completion dates.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following sentence to Subparagraph 3.11.1:

Prompt delivery to the A/E of the materials and items specified above, in good order, shall be a condition precedent to the Contractor receiving a Certificate of Substantial Completion.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.2: After the word "...instruction..." insert "...installation, training and operations manuals..." in Subparagraph 3.12.2.

Add the following Clauses to Subparagraph 3.12.5:

§ 3.12.5.1 If the project requires automatic fire protection sprinklers systems, sprinkler shop drawings shall be prepared by the licensed sprinkler Contractor. The sprinkler shop drawings shall be reviewed and approved by the A/E's engineer of record before submittal to the State Fire Marshal or other authorities having jurisdiction.

§ 3.12.6.2 The Contractor shall submit a copy of the State Fire Marshal's approval letter to the A/E and the Owner.

Add Section 3.12.11 to Section 3.12:

§ 3.12.11 The Architect's review of Contractor's submittals will be limited to examination of an initial submittal and two (2) resubmittals. The Architect's review of additional submittals will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional resubmittals.

§ 3.18 INDEMNIFICATION

§ 3.18.1: In the first sentence of Subparagraph 3.18.1 after the word "...itself)..." delete the phrase "...but only to the extent caused..." and insert "...including loss of use resulting therefrom, but only to the extent caused in whole or in part by...".

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

§ 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

Insert the following before the last sentence of Subparagraph 4.2.1: Notwithstanding these responsibilities, no act or omission by the A/E shall be considered a waiver of any of the Owner's rights or interests.

Add the following Clause to Subparagraph 4.2.1:

§ 4.2.1.1 Any reference in the Contract Documents to the A/E's taking action or rendering a decision within a "reasonable time" is understood to mean no more than fourteen (14) days, unless otherwise specified in the Contract Documents or otherwise agreed to by the parties.

Add Section 4.2.2.1 to Section 4.2.1.

§ 4.2.2.1 The Contractor shall reimburse the Owner for compensation paid to the Architect for additional site visits made necessary by the fault, neglect or request of the Contractor.

§ 4.2.5: After the word "...of..." insert the words "...the Work completed and correlated with the...".

Add the following Subparagraph 4.2.15:

§ 4.2.15 In the Contract Documents, where the words "as directed," "as required," "as approved," "as permitted" or words of like effect are used, it is to be understood that direction, requirement, approval or permission of the A/E is intended. Similar words, such as "approved," "acceptable," "satisfactory," or words of like import mean approved by, acceptable to, or satisfactory to the A/E.

ARTICLE 5: SUBCONTRACTORS

§ 5.3 SUBCONTRACTUAL RELATIONS

Delete all words after "...prejudice such rights ..." in the second sentence of Subparagraph 5.3.1.

Add the following Subparagraph 5.3.2:

§ 5.3.2 Without limitation on the generality of the foregoing, each Subcontract agreement and each Sub-subcontract agreement shall include, and shall be deemed to include, the following:

§ 5.3.2.1 An agreement that the Owner is a third-party beneficiary of the Subcontract (or Sub-subcontract), entitled to enforce any rights thereunder for its benefit, and that the Owner shall have the same rights and remedies against the Subcontractor (or Sub-subcontractor) as the Contractor (or Subcontractor) has, including but not limited to the right to be compensated for any loss, expense, or damage of any nature whatsoever incurred by the Owner resulting from any breach of representations and warranties, expressed or implied, if any, arising out of the agreement and any error, omission, or negligence of the Subcontractor (or Sub-subcontractor) in the performance of any of its obligations under the agreement; and,

§ 5.3.2.2 A requirement that the Subcontractor (or Sub-subcontractor) promptly disclose to the Contractor (or Subcontractor) any defect, omission, error, or deficiency in the Contract Documents or in the Work of which it has, or should have had, knowledge; and,

Insert the following Subparagraph 5.3.3:

§ 5.3.3 The Contractor shall assure the Owner, by affidavit or in such other manner as the Owner may approve, that all agreements between the Contractor and its Subcontractor incorporate the provisions of Subparagraph 5.3.1 as necessary to preserve and protect the rights of the Owner and the A/E under the Contract Documents with respect to the work to be performed by Subcontractors so that the subcontracting thereof will not prejudice such rights.

Insert the following Subparagraph 5.3.4:

§ 5.3.4 Upon request, the Contractor shall provide to the Owner copies of all executed or issued subcontracts, purchase orders and other documents related to the Work.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Insert the following new Clause to Subparagraph 5.4.1:

§ 5.4.1.3 Subcontractors assigned to the Owner agree to perform assigned portions of the Work in accordance with the Contract Documents.

Add the following sentence to the end of Subparagraph 5.4.2: The equitable adjustment shall be limited to direct costs.

Insert the following new Subparagraph 5.4.4:

§ 5.4.4 Each subcontract shall specifically provide that the Owner shall only be responsible to the Subcontractor for those obligations of the Contractor that accrue subsequent to the Owner's exercise of any rights under this conditional assignment.

ARTICLE 7: CHANGES IN THE WORK

§ 7.2 CHANGE ORDERS

Add the following Clauses to Subparagraph 7.2.1:

§ 7.2.1.4 The Contractor shall not proceed with the Work of the Change Order until the Change Order is approved the Owner.

Add the following Subparagraph 7.2.3:

§ 7.2.3 Agreement on any Change Order shall constitute a release by the Contractor of the Owner for any and all liability under this Contract attributable to such facts or circumstances giving rise to the Change Order.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

Delete Subparagraph 7.3.7 and substitute the following:

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the A/E as provided in Clause 7.5.1.5, on the basis of reasonable expenditures and savings to those performing the Work attributable to the change, including allowances for reasonable overhead and profit.

Insert the following Subparagraph 7.3.11:

§ 7.3.11 If the Contractor defaults or neglects to execute a Change Directive, the Owner may carry out the Work in accordance with Paragraph 2.4 and Article 6.

Insert the following Paragraph 7.5:

§ 7.5 PRICE ADJUSTMENTS

§ 7.5.1 METHODS OF ADJUSTMENT. Any adjustment in the Contract Sum made pursuant to this Paragraph 7.5 shall be consistent with this Contract and shall be arrived at through whichever one of the following ways is the most valid approximation of the actual cost to the Contractor:

§ 7.5.1.1 by agreement on a fixed price adjustment;

§ 7.5.1.2 by unit prices specified in the Contract or subsequently agreed upon;

§ 7.5.1.3 by the costs attributable to the event or situation covered by the relevant clause, including profit if otherwise allowed, all as specified in the Contract; or subsequently agreed upon;

§ 7.5.1.4 in such other manner as the parties may mutually agree; or,

§ 7.5.1.5 in the absence of agreement by the parties, through a unilateral initial determination by the A/E of the costs attributable to the event or situation covered by the clause, including profit if otherwise allowed, all as computed by the A/E in accordance with Clause 7.5.3.2, and subject to review under the provisions of Paragraph 4.5 of this Contract.

§ 7.5.2 Final Agreement. When any adjustment in the Contract Sum made pursuant to clauses in this Contract becomes final (e.g., by agreement or dispute resolution), the adjustment shall be computed and documented on a "Construction Change Order."

§ 7.5.3 DOCUMENTATION OF COST REASONABLENESS

§ 7.5.3.1 CONTRACTOR'S CHANGE ORDER PROPOSAL. The Contractor shall submit a written proposal for review by the A/E and the Owner. The proposal shall be submitted to the Owner's representative within the time limits specified in Subparagraph 4.3.2. All costs claimed by the Contractor shall be justifiable compared with prevailing industry standards, as adjusted for local cost conditions. Costs shall be properly itemized and

supported by substantiating data sufficient to permit evaluation before commencement of the pertinent performance or as soon thereafter as practicable.

§ 7.5.3.2 CONSTRUCTION CHANGE DIRECTIVES. For a Construction Change Directive wherein the proposed method of compensation is actual costs, and pending the collection and evaluation of actual costs as required by Clause 7.5.1.3, the Contractor shall estimate the value of the changed work. The Contractor shall itemize the estimated cost into building components and shall use the labor, material and equipment unit direct costs as listed in the most current issue of the Construction Cost Data Book most applicable to the nature of the changed work, as published by R.S. Means, with a cost index adjusted for the project locale. The Contractor shall also be permitted to add overhead and profit as shown in Subparagraph 7.5.4. Where the Contractor does not properly itemize the proposed costs as requested, the A/E shall provide the Owner with the itemization and this amount shall be the initial basis for compensation under Subparagraph 7.3.8. Upon conversion of the Construction Change Directive to a Change Order, the A/E's cost for providing this itemization shall be deducted from the final adjustment in the Contract Sum as described in Clause 7.3.9.

§ 7.5.4 AGREED OVERHEAD AND PROFIT RATES

§ 7.5.4.1 For any adjustment to the Contract Sum for which overhead and profit may be recovered, other than those made pursuant to Subparagraph 4.3.9, 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. "Commission" is defined as profit on work performed by others. The allowable percentages for overhead, profit, and commission are as follows:

- (1) To the Contractor or subcontractors on work performed by their own forces:
Overhead (10%) Profit (7%) Commission (10%)
- (2) To the Contractor on work performed by its subcontractors:
Overhead (10%) Profit (0%) Commission (3%)
- (3) To a first tier subcontractor on work performed by its subcontractors:
Overhead (10%) Profit (0%) Commission (3%)

§ 7.5.4.2 Not more than three levels of overhead, profit, and commission shall be allowed regardless of the number of subcontractor tiers.

§ 7.5.4.3 The Contractor or subcontractor shall not be allowed overhead or commission on the overhead, profit, and/or commission received by its subcontractors.

§ 7.5.4.4 Using the percentages stated in Clause 7.5.4.1, any adjustment to the Contract Sum for deleted work shall include any overhead, profit and/or commission attributable to the cost for the deleted Work.

§ 7.5.4.5 If the Contractor initiates a Change Order proposal and the Owner is not obligated to pay for all or any part of the proposal, then the Contractor shall be responsible for any A/E's fees to evaluate and process that Change Order proposal. Compensation shall be based on the Owner's contract with the A/E and the rates for Additional Services contained therein, and shall be withheld from the final payment to the Contractor.

§ 7.5.5 COST OR PRICING DATA

§ 7.5.5.1 The Contractor shall submit cost or pricing data for any element of changed work (other than Unit Price Work), and shall certify that, to the best of its knowledge and belief, the cost or pricing data submitted is accurate, complete, and current as of a mutually determined specified date prior to the date of the pricing. This data shall be itemized and

supported by substantiating data sufficient to permit evaluation before commencement of the pertinent Work, or as soon thereafter as practicable, and shall be justifiably compared with prevailing industry standards. As requested by the A/E or the Owner, the Contractor's submittal shall provide an itemized breakdown of all increases and decreases in the Contract for the Contractor and each subcontractor (at any tier) in at least the following detail: material, equipment and supply quantities and costs; direct labor hours and rates for each trade; the associated FICA, FUTA, SUTA, and Worker's Compensation Insurance; equipment hours and rates, and costs of premiums for bonds and insurance, permit fees and sales, use or similar taxes related to the Work.

§ 7.5.5.2 Any Change Order or Change Directive for which certification is required shall contain a provision that the price to the Owner, including profit or fee, shall be adjusted to exclude any significant sums by which the Owner finds that such price was increased because the cost or pricing data furnished by the Contractor was inaccurate, incomplete or not current as of the date agreed upon between parties. Notwithstanding Subparagraph 9.10.4, such adjustments may be made after final payment to the Contractor.

ARTICLE 8: TIME

§ 8.2 PROGRESS AND COMPLETION

Add the following Subparagraph 8.2.4:

§ 8.2.4 Failure by the Contractor to commence actual physical work on the project within seven (7) days from the Date of Commencement, as established in the Notice to Proceed, will entitle the Owner to consider the Contractor in substantial breach of its obligations under this Contract. In this event, the Owner may withdraw the Notice to Proceed and terminate the Contract in accordance with the Contract Documents.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

Insert the following new Subparagraph 8.3.4:

§ 8.3.4 The Contractor shall be permitted an adjustment in the Contract Sum, determined in accordance with Paragraph 7.5, only if the Delays, either individually or taken in the aggregate, cause the Contract Time to be increased by more than seven (7) days.

ARTICLE 9: PAYMENTS AND COMPLETION

§ 9.2 SCHEDULE OF VALUES

Insert the following new subparagraph 9.2.2:

§ 9.2.2 The Contractor and each Subcontractor shall prepare a trade payment breakdown for the Work for which each is responsible, such breakdown being submitted on a uniform standardized format approved by the A/E and Owner. The minimum breakdown detail shall be by each specification section title. The breakdown shall be divided in detail sufficient to exhibit areas, floors, and/or sections of the Work, and/or by convenient units and shall be updated as required by either the Owner or the A/E as necessary to reflect:

§ 9.2.2.1 the description of Work (listing labor and material separately);

§ 9.2.2.2 the total value;

- § 9.2.2.3 the percent and value of the Work completed to date;
 - § 9.2.2.4 the percent and value of previous amounts billed; the current percent completed and amount billed; and,
 - 9.2.2.5 the current percent completed and amount billed.
- Any schedule of values or trade breakdown that fails to include sufficient detail, is unbalanced, or exhibits "front-loading" of the value of the Work, shall be rejected. If either the schedule of values or trade breakdown had been initially approved and subsequently used, but later was found improper for any reason, then sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Work.

§ 9.3 APPLICATIONS FOR PAYMENT

In the first sentence of Subparagraph 9.3.1 change "... ten days..." to "...twenty-one (21) days...".

Add the following sentence to Section 9.3.1: Model Language: The form of Application for Payment, duly notarized, shall be a current authorized edition of AIA Document G702, Application and Certificate for Payment, supported by a current authorized edition of AIA Document G703, Continuation Sheet.

Add the following Section 9.3.1.3 to Section 9.3.1:

§ 9.3.1.3 Until Substantial Completion, the Owner shall pay ninety-percent (95%) of the amount due the Contractor on account of progress payments.

Add the following to Subparagraph 9.3.4: Rental equipment such as, but not limited to, mobile equipment, pans, forms, scaffolding, compressors, etc., shall not be considered material stored.

§ 9.6 PROGRESS PAYMENTS

Add the following Clauses to Subparagraph 9.6.1:

- § 9.6.2.1 Contractor's attention is directed to NCGS 22C, as amended, concerning laborers' liens.
- § 9.6.2.2 Contractor shall properly disburse money received from all payments to all laborers, subcontractors or material-men in accordance with NCGS 22C, as amended.

Delete Subparagraph 9.6.7 in its entirety.

§ 9.7 FAILURE OF PAYMENT

Delete Subparagraph 9.7.1 and substitute the following:

- § 9.7.1 If (a) the A/E does not issue a Certificate for Payment to the Owner, through no fault of the Contractor, within seven (7) days after receipt of the Contractor's Application for Payment, or (b) the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents, the amount of the Contractor's Application for Payment certified by the A/E, or (c) the Owner does not pay the Contractor the amount awarded by a dispute resolution order within the time limit established by such order, or within seven (7) days if no time limit is stated in such order, then the Contractor may, upon seven (7) additional days' written notice to the Owner and A/E, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and startup, which shall be

accomplished as provided in Paragraph 7.5. As used in this Subparagraph, the phrase "dispute resolution order" includes any decision rendered pursuant to Paragraph 4.4.

§ 9.8 SUBSTANTIAL COMPLETION

Add the following Clause to Subparagraph 9.8.2:

§ 9.8.2.1 The Contractor's list shall be in writing and attached to the "Contractor's Request for Certificate of Full or Partial Substantial Completion". The Contractor's Request for "Certificate of Full or Partial Substantial Completion" shall be submitted at least ten (10) days in advance of the proposed date of inspection and shall be forwarded through the A/E, who will attach its written endorsement as to whether or not it concurs with the Contractor's statement that the Work will be ready for inspection and testing on the date given. The A/E's endorsement is a convenience to the Owner only and shall not relieve the Contractor of its responsibility in the matter, nor shall the A/E's endorsement be deemed to be evidence that the Work was substantially complete and ready for inspection and testing. In the event that the A/E does not concur with the Contractor's statement, the A/E shall inform the Contractor of the basis for the A/E's non-concurrence. The Contractor may then, at its sole option, (1) defer the inspection; or, (2) request the inspection be performed in accordance with Subparagraph 9.8.3.

Add the following Clauses to Subparagraph 9.8.3:

§ 9.8.3.1 Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor, Owner and the A/E.

§ 9.8.3.2 The inspection shall include a demonstration by the Contractor that all equipment, systems and operable components of the Work function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in this Contract. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in the A/E's issuance of a written list of Unfinished Work and Defective Work, commonly referred to as a "punch list", each item of which must be finished and corrected prior to Final Completion.

§ 9.8.3.3 The A/E and its Consultants shall conduct all Substantial Completion inspections. The Owner may elect to have other persons of its choosing also participate in the inspections. Representatives of the State Fire Marshal's Office and other authorities having jurisdiction may be present, at their sole discretion, at the Substantial Completion inspection or otherwise inspect the completed Work and advise the Owner whether the Work meets their respective requirements.

§ 9.8.3.4 If the inspection discloses any item which is not in accordance with the requirements of the Contract Documents and will prevent the Owner from occupying or utilizing the Work for its intended use, the Contractor shall complete or correct such item upon notification by the A/E. The Contractor shall then submit a request for a follow-up inspection by the A/E to determine Substantial Completion.

§ 9.8.3.5 The Contractor shall proceed promptly and diligently to complete and correct items on the list of Unfinished or Defective Work. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

9.8.3.6 If more than one Substantial Completion inspection is required, the Contractor shall reimburse the Owner for all costs of reinspection or, at the Owner's option, the costs may be deducted from payments due to the Contractor.

Delete the last sentence of Subparagraph 9.8.5 and add the following Clauses:

§ 9.8.5.1 Upon such acceptance of Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the A/E, the Owner shall make payment for such Work or portion thereof as provided in the Contract Documents. The balance payable shall include the retainage of five percent (5%) of the Contract Sum, less any retainage released under conditions of Subparagraph 9.6.2, plus an amount equal to the cost to complete or to correct, as determined by the A/E of the Uncompleted or Defective Work, plus the full amount of Liquidated Damages, if any. Retainage shall continue until Final Completion and Final Payment.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

Add the following Clauses to Subparagraph 9.10.1:

§ 9.10.1.1 Final Completion shall be achieved no later than thirty (30) days after Substantial Completion unless otherwise stated in the Contract Documents or modified by a Change Order. Failure of the Contractor to achieve Final Completion within the time allowed under this Subparagraph shall entitle to Owner to consider the Contractor in substantial breach of its obligations under this Contract.

§ 9.10.1.2 The Contractor shall notify the Owner, in writing on the Contractor' section of this "Certificate of Final Completion", of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least ten (10) days in advance of said date and shall be forwarded through the A/E, who will attach its endorsement as to whether or not it concurs in the Contractor's statement that the Work will be ready for inspection and testing on the date stated. The A/E's endorsement is a convenience to the Owner only and shall not relieve the Contractor of its responsibility in the matter, nor shall the A/E's endorsement be deemed to be evidence that the Work was finally complete and ready for inspection and testing. In the event that the A/E does not concur with the Contractor's statement, the A/E shall inform the Contractor of the basis for the A/E's non-concurrence. The Contractor may then, at its sole option, (1) defer the inspection; or, (2) request the inspection be performed in accordance with this Subparagraph. The final inspection and testing shall be conducted in the same manner as the inspection for Substantial Completion, including, but not limited to, the requirements of Clauses 9.8.3.3, 9.8.3.4, 9.8.3.5 and 9.8.3.6 of this Contract.

§ 9.10.1.3 Representatives of the State Fire Marshal's Office and other authorities having jurisdiction may be present at the Final Completion inspection or otherwise inspect the completed Work and advise the Owner whether the Work meets their respective requirements for the Project.

§ 9.10.1.4 The Contractor shall then submit a request for a follow-up inspection to determine Final Completion. If more than one Final Completion inspection is required, the Contractor shall reimburse the Owner for all costs of re-inspection or, at the Owner's option, the costs may be deducted from payments otherwise due to the Contractor.

§ 9.10.1.5 Approval of Work at or as a result of any inspection required herein shall not release the Contractor or its surety from responsibility for complying with the Contract.

Add the following Clause to Subparagraph 9.10.4:

§ 9.10.4.4 faulty or defective Work appearing after the date of Substantial Completion.

In Subparagraph 9.10.5, after the word "...those..." insert the phrase "...specific claims in stated amounts that have been...".

Add the following Section 9.11 to Article 9:

§9.11 The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner the sums hereinafter stipulated as liquidated damages for each calendar day of delay after the date established for Substantial Completion in the Contract Documents until the Work is substantially complete: Five Hundred Dollars (\$250.00).

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

§ 10.3 HAZARDOUS MATERIALS

In Subparagraph 10.3.1 after the word "...persons ...", insert the words "...or serious losses to real or personal property...".

Add the following Clause to Subparagraph 10.3. 1:

§ 10.3.1.1 The Owner and Contractor hereby agree that this Paragraph shall apply only to hazardous, toxic or radioactive materials or substances subject to the regulations of agencies having jurisdiction, such as, but not limited to, the NC Department of Environmental and Natural Resources (NCDENR), the U.S. Environmental Protection Owner (USEPA) and the U.S. Nuclear Regulatory Commission (USNRC).

Add the following Clauses to Subparagraph 10.3.2:

§ 10.3.2.1 Any adjustment in the Contract Sum, including reasonable overhead and profit, made pursuant to this Subparagraph shall be determined in accordance with Paragraph 7.5 of this Contract.

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

§ 10.3.2.3 For the purposes of this Contract, the term "rendered harmless" shall be interpreted to mean that measured levels of verified hazardous, toxic or radioactive materials or substances are less than the applicable standards established by authorities having jurisdiction. In no event, however, shall the Owner have any responsibility for any substance or material that is brought to the Project site by the Contractor, any Subcontractor, any material supplier, or any entity for whom any of them is responsible, unless such materials or substances were expressly required by the Contract Documents. The Contractor agrees not to use any fill or other materials to be incorporated into the Work that are hazardous, toxic, or radioactive, or made up of any items that are hazardous, toxic, or radioactive.

§ 10.4 EMERGENCIES

Add the following to Subparagraph 10.4.1: Written notice of the emergency, including an estimate of cost and probable effect of delay on the progress of the Work, must be given by the Contractor to the A/E as

soon as possible, but in no case more than ten (10) days after the start of the emergency.

ARTICLE 11: INSURANCE AND BONDS-Refer to Henderson County Website for Change Requirements

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK-Refer to Henderson County Website for Change Requirements

ARTICLE 13: MISCELLANEOUS PROVISIONS-Refer to Henderson County Website for Change Requirements

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

In Subparagraph 14.1, change "...30..." to "...sixty (60)".

Delete Clauses 14.1.1.3 and 14.1.1.4.

In Subparagraph 14.1.3, delete all words after "...Work executed..." and add "...Any adjustment to the Contract Sum made pursuant to this Subparagraph shall be made in accordance with the requirements of Paragraph 7.5."

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

Delete Subparagraph 14.2.1 and substitute the following:

- § 14.2.1 The Owner may terminate the Contract, or any separable part of it, if the Contractor:
 - § 14.2.1.1 fails to complete the Work within the time specified in the Contract Documents, including any authorized adjustments; or,
 - § 14.2.1.2 fails to prosecute the Work, or any separable part of the Work, with the diligence, resources and skill that will ensure its completion within the time specified in the Contract Documents, including any authorized adjustments; or,
 - § 14.2.1.3 fails to make payment to Subcontractors for materials or labor in accordance with NCGS 22C, as amended, and the respective agreements between the Contractor and the Subcontractors; or,
 - § 14.2.1.4 persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or,
 - § 14.2.1.5 fails to proceed as required by Subparagraph 4.3.3 pending final resolution of a Claim; or,
 - § 14.2.1.6 fails to comply with any of the other material provisions of this Contract.

Delete Subparagraph 14.2.2, but not the subordinate Clauses and substitute the following:

- § 14.2.2 The Owner's right to terminate this Contract under Subparagraph 14.2.1 may be

exercised if the Contractor does not cure such failure within seven (7) days (or more if authorized in writing by the Owner) after receipt of the notice from the Owner specifying the general nature of the failure. The Owner shall notify the Contractor's surety within a reasonable time. When terminating pursuant to Paragraph 14.2, the Owner may, without prejudice to any other rights or remedies of the Owner, and subject to any prior rights of the surety:

Insert "...including Liquidated Damages, if any,..." after the phrase "...other damages..." in the first sentence of Subparagraph 14.2.4.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

Insert the following to Subparagraph 14.3.2 after the second sentence: Any adjustment to the Contract Sum made pursuant to this Subparagraph shall be made in accordance with the requirements of Paragraph 7.5.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Delete Subparagraph 14.4.1 and substitute the following:

§ 14.4.1 The Owner may, at any time, terminate the Contract, or the Contract Work, in whole or in part, for the Owner's convenience and without cause.

§ 14.4.1.1 Upon written consent of the Contractor, the Owner may reinstate the terminated portion of this Contract or Contract Work in whole or in part by amending the notice of termination if it has been determined that

§ 14.4.1.2 circumstances clearly indicate a requirement for the terminated work; and,

§ 14.4.1.3 reinstatement of the terminated work is advantageous to the Owner.

Add the following Clause to Subparagraph 14.4.2:

§ 14.4.2.4 complete the performance of the Work not terminated, if any.

In Subparagraph 14.4.3 delete the phrase "...along with reasonable overhead and profit on the Work not executed.", and substitute "Any adjustment to the Contract Sum made pursuant to this Subparagraph shall be made in accordance with the requirements of Paragraph 7.5.

END OF DOCUMENT

BRUCE DRYSDALE ELEMENTARY AND FLAT ROCK MIDDLE SCHOOLS ROOF REPLACEMENTS

PROJECT NO: 17001

**REFERENCE IS MADE TO AIA DOCUMENTS AND ARE HEREBY MADE A PART OF THE
CONTRACT DOCUMENTS:**

INSTRUCTIONS TO BIDDERS	(AIA DOCUMENT A701)
STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR	(AIA DOCUMENT A101)
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION	(AIA DOCUMENT A201)
APPLICATION AND CERTIFICATE FOR PAYMENT	(AIA DOCUMENT G702/703)
CERTIFICATE OF SUBSTANTIAL COMPLETION	(AIA DOCUMENT G704)
CONTRACTORS AFFIDAVIT OF PAYMENTS AND DEBTS AND CLAIMS	(AIA DOCUMENT G706)
CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS	(AIA DOCUMENT G706A)
CONSENT OF SURETY COMPANY TO FINAL PAYMENT	(AIA DOCUMENT G707)
CHANGE ORDER	(AIA DOCUMENT G701)

DOCUMENTS MAY BE VIEWED AT:

MARK LUSK ARCHITECTURE PLLC
128 WOODBURN DRIVE
SWANNANOVA, NC 28778

Minority Business Program Requirements – Building Construction Only

Effective January 1, 2002, Senate Bill 914 went into effect for *building construction projects*. Our office is modeling the forms provided from the Office of State Construction in order to make usage easier in our area. We additionally have a 72-hour delay for minimum compliance, which means that some forms are not due until after the opening of the bid documents. The Bidder must provide, with the bid, the ‘Listing of Good Faith Efforts’ (Form A) and either the ‘Intent to Perform Contract with Own Workforce’ (Form B) or the ‘Identification of Minority Business Participation’ (Form C). The following is a description of the Minority Business Forms and what a bidder must do to submit a responsible bid:

- **Form A (Listing of Good Faith Efforts):**
This affidavit provides ways in which the general contractor can actively work to increase participation by minority and women owned firms. For building construction projects subject to GS143-128.2, the bidder must earn at least 50 points for their bid to be considered responsive. *Must be included with the Bid.*
- **Form B (Intent to Perform Contract with Own Workforce):**
This affidavit certifies that the bidder can perform the work without the use of subcontracting. *No additional forms are needed beyond this form after bids are opened.*
- **Form C (Identification of Minority Business Participation):**
This form is due at bid opening if you will be subcontracting work. Within 72-hours of the bid opening, the bidder must submit the ‘Portion of the Work to be Performed by Minority Firms’ (Form D) or the ‘Good Faith Efforts Documentation’ (Form E) depending on the utilization of certified minority firms. *Please read forms carefully.*
- **Form D (Portion of the Work to be Performed by Minority Firms):**
This affidavit is to be provided 72-hours after bid opening by the lowest bidder if the portion of work is equal or greater than the percentages set forth in the Minority Business Plan.
- **Form E (Good Faith Efforts):**
This affidavit is to be provided 72-hours after bid opening by the lowest bidder if the portion of work is less than the percentages set forth in the Minority Business Plan.
- **MB Form 5 (Minority Business Documentation for Contract Payments) – For Office Use Only:**
The Purchasing Division will send this form quarterly to contractors for payment information on subcontracts with certified minority firms on Buncombe County projects. If you have questions, please contact our office at (828) 250-4800 or Fax (828) 250-6079.

CONSTRUCTION:	12% Overall for all minorities
PROCUREMENT:	10% Overall for all minorities
PROFESSIONAL	10% Overall for all minorities
OTHER SERVICES	10% Overall for all minorities

- **HUB (Historically Underutilized Businesses) Website Search for Minority Vendors :**
<http://www.ips.state.nc.us/ips/vendor/srchven.asp>

Listing of Good Faith Efforts (Form A) Building Construction Only

Affidavit of _____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

(Bidders on Construction Projects Only must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive.)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended pre-bid meetings scheduled by the public owner.
- 6 – (20 pts)** Providing assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

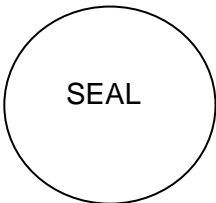
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the **Identification of Minority Business Participation** schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Intent to Perform Contract with Own Workforce (Form B) **Building Construction Only**

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

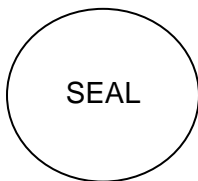
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Identification of Minority Business Participation (Form C) Building Construction Only

I, _____
(Name of Bidder)

do hereby certify that on this project, we will use the following minority business enterprises as construction subcontractors, vendors, suppliers or providers of professional services for Buncombe County on _____
(Project Name)

Firm Name, Address and Phone #	Work type	*Minority Category

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**), American Indian (**I**), and Women (**W**)

The total value of minority business contracting will be \$ _____ or _____% of our firm’s total bid price of \$ _____.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

Portion of the Work to be Performed by Minority Firms (Form D) Building Construction Only

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by minority businesses as defined in GS143-128.2(g) is **equal to or greater than the percentage set forth by the Minority Business Plan (see below)** of the bidders total contract price, then the bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Buncombe County – 12% overall

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

_____ (Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required.

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**)
American Indian (**I**) and Women (**W**)

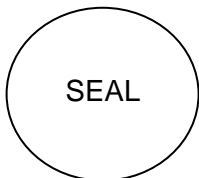
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Good Faith Efforts (Form E)

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goals set forth by the Minority Business Plan for participation by minority businesses **are not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts 72-hours following the date of bid:

Affidavit of: _____
 (Name of Bidder)

I do certify the attached documentation as true and accurate representation of my good faith efforts.
 (Attach additional sheets if required)

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**)
 American Indian (**I**), and Women (**W**)

Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions. Examples of documentation include, but are not limited to, the following evidence:

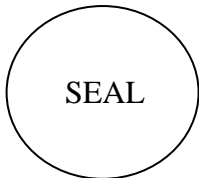
- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes:

Project information.
Work covered by Contract Documents.
Work by Owner.
Purchase contracts.
Access to site.
Work restrictions.
Specification and drawing conventions.

1.3 PROJECT INFORMATION

Project Identification: Bruce Drysdale Elementary and Flat Rock Middle Schools Roof Replacements

Project Location: Hendersonville, North Carolina.

Owner: Henderson County School District, 414 Fourth Avenue West, Hendersonville NC 28739.

Owner's Representative: Martin Ballard, Facilities Director.

Architect: Mark Lusk Architecture, PLLC; 128 Woodburn Drive, Swannanoa, NC 28778.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

The Work of the Project is defined by the Contract Documents and consists of the following:

Provide TPO membrane roofing system on:

- Bruce Drysdale Elementary – 34,405 square feet of roof
- Mills River Academy – 14,943 square feet of roof

Type of Contract

Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract.

1.6 ACCESS TO SITE

General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

Schedule deliveries to minimize use of driveways and entrances by construction operations.

Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weather-tight condition throughout construction period. Repair damage caused by construction operations.

1.7 COORDINATION WITH OCCUPANTS

Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.8 WORK RESTRICTIONS

Work Restrictions, General: Comply with restrictions on construction operations.

Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.

Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on the Project site is not permitted.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:

Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION **011000**

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

Related Requirements:

1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- | | | |
|----|----------------------------------------------------------------|-------------------------------|
| A. | UNIT PRICE #1: Remove and replace wood nailer: | Unit Price per Lineal Foot |
| B. | UNIT PRICE #2: Remove and provide polyisocyanurate insulation: | Unit Price per 1"x4'x4' Board |
| C. | UNIT PRICE #3: Provide Gravity Ventilator Type A: | Unit Price per Ventilator |
| D. | UNIT PRICE #4: Provide Turbine Ventilator Type B: | Unit Price per Ventilator |

END OF SECTION **012200**

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 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.

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.

1.4 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.

Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

Base Bid:

- Work as described in the documents at Drysdale Roof A
 - Should Alternate 2 be declined, the parapet wall flashing shall terminate and tie in with the existing single ply membrane on Roof C-1 and C-2
- Work as described in the documents at Flat Rock Building G

Add Alternate No. 1: Work as described in the documents at Drysdale Roof B

- Should Alternate 3 be declined, the metal fascia along Roofs D-3, D-4 at the expansion joint, shall be remove and the membrane on Roof B shall tie in with the existing single ply membrane on Roofs D-3, D-4

Add Alternate No. 2: Work as described in the documents at Drysdale Roof C

Add Alternate No. 3: Work as described in the documents at Drysdale Roof D

END OF SECTION 012300

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.

Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

Include costs of labor and supervision directly attributable to the change.

Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

Quotation Form: Use forms acceptable to Architect.

Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

Include a statement outlining reasons for the change and the effect of the change on the Work.

Provide a complete description of the proposed change. Indicate the effect of the

proposed change on the Contract Sum and the Contract Time.
Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts. Include costs of labor and supervision directly attributable to the change.
Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
Proposal Request Form: Use form acceptable to Architect.

1.5 CHANGE ORDER PROCEDURES

On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

Change Directive: Architect may issue a Change Directive on AIA Document G714. Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

Documentation: Maintain detailed records on a time and material basis of work required by the Change Directive.

After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION **012600**

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

DEFINITIONS

Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.3 SCHEDULE OF VALUES

Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:

Application for Payment forms with continuation sheets.

Submittal schedule.

Items required to be indicated as separate activities in Contractor's construction schedule.

Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

Arrange schedule of values consistent with format of AIA Document G703.

Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum.

Include separate line items under Contractor and principal subcontracts for project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

Round amounts to nearest whole dollar; total shall equal the Contract Sum.

Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.

Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

Entries shall match data on the schedule of values and Contractor's construction schedule.

Use updated schedules if revisions were made.

Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.

Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

Indicate separate amounts for work being carried out under Owner-requested project acceleration.

Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.

Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.

Provide summary documentation for stored materials indicating the following:

Materials previously stored and included in previous Applications for Payment.

Work completed for this Application utilizing previously stored materials.
Additional materials stored with this Application.
Total materials remaining stored, including materials with this Application.

Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION **012900**

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 USE CHARGES

Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 PROJECT CONDITIONS

Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

EQUIPMENT

Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

EXECUTION

2.1 TEMPORARY UTILITY INSTALLATION

Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

2.2 SUPPORT FACILITIES INSTALLATION

Parking: Use designated areas of Owner's existing parking areas for construction personnel.

Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

2.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

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

Prohibit smoking in construction areas.

Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.

Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

2.4 MOISTURE AND MOLD CONTROL

Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

Protect porous materials from water damage.

Protect stored and installed material from flowing or standing water.

Keep porous and organic materials from coming into prolonged contact with concrete.

Remove standing water from decks.

Keep deck openings covered or dammed.

END OF SECTION **015000**

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes administrative and procedural requirements for the following:
Disposing of nonhazardous waste.

1.3 DEFINITIONS

Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

1.4 PERFORMANCE REQUIREMENTS

General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling of materials, including the following:

Demolition Waste:
Roofing.

Construction Waste:
Roofing and waste material.

1.5 QUALITY ASSURANCE

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.

Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

3.2 DISPOSAL OF WASTE

General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.

Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

Burning: Do not burn waste materials.

Disposal: Transport waste materials and dispose of at designated spoil areas on Owner's property.

Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION **017419**

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

- Substantial Completion procedures.
- Final completion procedures.
- Warranties.
- Final cleaning.

Related Sections:

Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.

Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION

Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

Reinspection: Request reinspection when the Work identified in previous inspections as

incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1.6 WARRANTIES

Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.

Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.

Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide table of contents at beginning of document.

Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each

surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls." and Division 01 Section "Construction Waste Management and Disposal."

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERALRELATED DOCUMENTS

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

1.1 SUMMARY

Section includes administrative and procedural requirements for project record documents, including the following:

- Record Drawings.
- Record Specifications.
- Record Product Data.
- Miscellaneous record submittals.

Related Sections:

Divisions 02 through 49 Sections for specific requirements for project record documents of the Work in those Sections.

1.2 CLOSEOUT SUBMITTALS

Record Drawings: Comply with the following:

Number of Copies: Submit one set(s) of marked-up record prints.

Record Specifications: Submit one paper copy or annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

Record Product Data: Submit one paper copy or annotated PDF electronic files and directories of each submittal.

Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings.

Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
Accurately record information in an acceptable drawing technique.
Record data as soon as possible after obtaining it.
Record and check the markup before enclosing concealed installations.
Cross-reference record prints to corresponding archive photographic documentation.

Mark the Contract Drawings and Shop Drawings completely and accurately. Utilize personnel proficient at recording graphic information in production of marked-up record prints.
Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
Mark important additional information that was either shown schematically or omitted from original Drawings.
Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

Format: Annotated PDF electronic file with comment function enabled.

Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

Format: Annotated PDF electronic file with comment function enabled.
Identification: As follows:

Project name.
Date.
Designation "PROJECT RECORD DRAWINGS."
Name of Architect.
Name of Contractor.

2.2 RECORD SPECIFICATIONS

Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

Format: Submit record Specifications as scanned PDF electronic file(s) of marked up paper copy of Specifications.

2.3 RECORD PRODUCT DATA

Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

Note related Change Orders, record Specifications, and record Drawings where applicable.

Format: Submit record Product Data as scanned PDF electronic file(s) of marked up paper copy of Product Data.

PART 3 - EXECUTION

2.4 RECORDING AND MAINTENANCE

Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and modifications to project record documents as they occur; do not wait until the end of Project.

END OF SECTION **017839**

SECTION 070150.19 - PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Roof tear-off.

Related Work:

HVAC equipment removal and reinstallation.
Electrical equipment disconnection and reconnection.

1.3 MATERIALS OWNERSHIP

Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 DEFINITIONS

Roofing Terminology: Refer to 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.

Existing Membrane Roofing System: Roofing membrane with flashing and metal terminations such as coping and gravel stops.

Existing to Remain: Existing items of construction that are not indicated to be removed.

1.5 INFORMATIONAL SUBMITTALS

1.6 QUALITY ASSURANCE

Installer Qualifications: Installer of new membrane roofing system approved by warrantor of the adjacent existing and new roofing system to work on existing roofing.

Regulatory Requirements: Comply with governing EPA notification regulations before beginning membrane roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction.

Pre-Construction Conference: Conduct conference at Project site.

Meet with Owner; Architect; roofing system manufacturer's representative.
Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:

Reroofing preparation, including membrane roofing system manufacturer's written instructions.
Temporary protection requirements for existing roofing system that is to remain during and after installation.
Existing roof drains and roof drainage during each stage of reroofing, and roof drain plugging and plug removal requirements.
Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
Condition and acceptance of existing roof deck and base flashing substrate for reuse.
Structural loading limitations of deck during reroofing.
Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
HVAC shutdown and sealing of air intakes.
Existing conditions that may require notification of Architect before proceeding.

1.7 PROJECT CONDITIONS

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

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

Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.

Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.

Limit construction loads on roof by uniformly distributed loads.

Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

1.8 WARRANTY

Existing Warranties: Remove, replace, patch, and repair adjacent materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty. Notify warrantor before proceeding.

Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 INFILL MATERIALS

Use infill materials matching existing membrane roofing system materials unless otherwise indicated.

General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of existing and new membrane roofing system.

Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approval's "Approval Guide."

Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."

PART 3 - EXECUTION

3.1 PREPARATION

Protect existing membrane roofing system that is indicated not to be reroofed.

Loosely lay protective boards of installed membrane.

Limit traffic and material storage to areas of existing roofing membrane that have been protected.

Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.

Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.

Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

Verify that rooftop utilities and service piping have been shut off before beginning the Work.

If broken or loose fasteners that secure deck panels to one another or to structure are observed or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect.

If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.

Provide additional deck securement as required by the manufacturer to meet warranty and code requirements.

3.2 INFILL MATERIALS INSTALLATION

3.3 FASTENER PULL-OUT TESTING

Perform fastener pull-out tests according to SPRI FX-1, and submit test report to Architect and roofing membrane manufacturer before installing new membrane roofing system.

Obtain roofing membrane manufacturer's approval to proceed with specified fastening pattern.

3.4 RECOVER BOARD INSTALLATION

Install recover boards over roof insulation with long joints in continuous straight lines and end joints staggered between rows. Loosely butt recover boards together and fasten to deck.

Tape joints of recover boards if required by roofing membrane manufacturer.

Fasten recover boards to resist wind-uplift pressure at corners, perimeter, and field of roof.

Install additional fasteners near board corners and edges as necessary to conform boards to substrate and to adjacent boards.

3.5 DISPOSAL

Collect demolished materials and place in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

Storage or sale of demolished items or materials on-site is not permitted.

Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION **070150.19**

SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section Includes:

Adhered TPO membrane roofing system.
Roof insulation.

1. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.

1.3 DEFINITIONS

TPO: Thermoplastic polyolefin.

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

1.4 PERFORMANCE REQUIREMENTS

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.

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.

Roofing Performance Requirements: Roofing materials and installation shall meet or exceed manufacturer's requirements for warranty period.

ANSI-SPRI: Provide membrane roofing, base flashings, component materials and material fastening patterns that comply with the following requirements:

- ANSI-SPRI ES-1

Qualification Data: For qualified Installer and manufacturer.

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

Submit evidence of compliance with performance requirements.

CLOSEOUT SUBMITTALS

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

1.5 QUALITY ASSURANCE

Manufacturer Qualifications: A qualified manufacturer that is FM Approvals approved for membrane roofing system identical to that used for this Project.

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.

Source Limitations: Obtain components including roof insulation fasteners products for membrane roofing system approved by membrane roofing manufacturer.

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.

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.

Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

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.

Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.6 PROJECT CONDITIONS

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.

WARRANTY

Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, roofing accessories, roof pavers, and other components of membrane roofing system.

1. Warranty Period: 20 years from date of Substantial Completion.
2. Repair leaks in the roofing system caused by:
 - a. Ordinary wear and tear of the elements
 - b. Manufactured defect in materials
 - c. Defective workmanship used to install these materials

d. Damage due to winds up to **55 mph**

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:

Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 TPO MEMBRANE ROOFING

Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, flexible TPO sheet.

Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Carlisle SynTec Incorporated
2. Firestone Building Products Company
3. GenFlex Roofing Systems
4. Johns Manville

Thickness: 60 mils, nominal.
Exposed Face Color: White.

2.2 AUXILIARY MEMBRANE ROOFING MATERIALS

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

Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.3 SUBSTRATE BOARDS

Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

2.4 ROOF INSULATION

General: Preformed roof insulation boards manufactured or approved by TPO membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated and that produce FM Approvals-approved roof insulation.

1. Polyisocyanurate Board Insulation: ASTM C 1289, with factory-applied facing board on

one major surface, as indicated below by type, and felt or glass-fiber mat facer on the other.

2. Compressive strengths per ASTM C1289-11, Type II, Class 1, Grade 2 (20 psi)

Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.5 INSULATION ACCESSORIES

General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.

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.

Cover Board: Fiberglass Mat Faced Gypsum Roof Board:

1. Thickness: 1/4 inch.
2. Surfacing: Fiberglass mat.
3. Flexural Strength, Parallel (ASTM C473): 40 lbf, minimum
4. Compressive Strength (Applicable Sections of ASTM C472): 900 pounds per square inch.

Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. DensDeck, Georgia-Pacific Gypsum.

2.6 WALKWAY (If shown on drawings)

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

PART 3 - EXECUTION

3.1 EXAMINATION

Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:

- 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.
- Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
- Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Division 05 Section "Steel Decking."
- Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
- Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
- Verify that concrete curing compounds that will impair adhesion of roofing components to roof

deck have been removed.

Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

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.

Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

Install acoustical roof deck rib insulation strips, specified in Division 05 Section "Steel Decking," according to acoustical roof deck manufacturer's written instructions, immediately before installation of overlying construction and to remain dry.

3.3 SUBSTRATE BOARD

Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

Fasten substrate board to top flanges of steel deck according to recommendations in FM Approvals' "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.

Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

3.4 INSULATION INSTALLATION

Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.

Install tapered insulation under area of roofing to conform to slopes indicated.

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.

Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.

Trim surface of insulation where necessary at roof drains so completed surface is flush and does not

restrict flow of water.

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.

Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

Fasten cover boards according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.

Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.

ADHERED MEMBRANE ROOFING INSTALLATION

Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.

1. 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.

3.5 BASE FLASHING INSTALLATION

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

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.

Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

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.

Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

WALKWAY INSTALLATION

Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions or.

1. Roof-Paver Walkways: Install walkway roof pavers according to manufacturer's written instructions in locations indicated, to form walkways. Leave 3 inches of space between adjacent roof pavers.

END OF SECTION **075423**

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Roof-edge flashings.
 - 2. Reglets and counterflashings.

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 on Structural Drawings.
- 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 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: For roof specialties. 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.
- D. Samples for Verification: For copings roof-edge flashings made from 12-inch lengths of full-size components including fasteners, cover joints, accessories, and attachments.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for copings and roof-edge flashings.
- F. Maintenance Data: For roofing specialties to include in maintenance manuals.
- G. Warranty: Sample of special warranty.

1.5 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.

1.6 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.
 - a. Two-Coat Fluoropolymer: AAMA 620. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
 - b. 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.
 - a. Two-Coat Fluoropolymer: AAMA 2605. 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.

2.3 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. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
 - 2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.

- C. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.4 ROOF-EDGE FLASHINGS

- A. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet and a continuous formed- or extruded-aluminum anchor bar with integral drip-edge cleat to engage fascia cover. Provide matching corner units.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hickman Company, W. P.
 - b. Johns Manville.
 - c. Metal-Era, Inc.
 - 2. Fascia Cover: Fabricated from the following exposed metal:
 - a. Formed Aluminum: Thickness as required to meet performance requirements.
 - 3. Corners: Factory mitered and continuously welded.
 - 4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.

2.5 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 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 uncoated aluminum 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.
 - 3. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
- 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.
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches except reduce pre-tinning where pre-tinned surface would show in completed Work. Tin edges of uncoated copper sheets using solder for copper. Do not use torches for soldering.

Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

3.3 ROOF-EDGE FLASHING INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

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 **076200**