

PROJECT MANUAL

T.C. ROBERSON HIGH SCHOOL CAFETERIA, PEP, AND POOL ROOF REPLACEMENT

BUNCOMBE COUNTY SCHOOLS ASHEVILLE, NORTH CAROLINA

Mark Lusk Architecture
120 Wedgewood Drive
Morganton, North Carolina 28655

mark lusk architecture pllc

**Project No: 16001
March 29, 2016**

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STATE OF NORTH CAROLINA/BUNCOMBE COUNTY SCHOOLS REQUEST FOR PROPOSAL

PROJECT: **T.C. ROBERSON HIGH SCHOOL
CAFETERIA, PEP, AND POOL ROOF REPLACEMENT
RFP# 12-16**

PROJECT DESIGNER: **Mary Beth Kingston, AIA, Assistant Director of Facilities**

USING AGENCY: **Buncombe County Schools**

ISSUE DATE: **April 14, 2016**

Sealed proposals from bidders subject to the conditions made a part hereof will be received until **4:00 PM on May 4, 2016** for furnishing all labor, materials, equipment, and services incidental and implied, for completion of the project described herein.

PREBID CONFERENCE: A pre-bid conference is scheduled for **1:00pm. on April 20, 2016** at TC Roberson High School, 205 Overlook Rd., Asheville, NC 28803.

SEND ALL PROPOSALS DIRECTLY TO THE ADDRESS AS SHOWN BELOW:

Buncombe County Schools, Purchasing Division
175 Bingham Road
Asheville, NC 28806

NOTE: Indicate firm name and RFP number on the front of each sealed proposal envelope or package, along with the date for receipt of proposals specified above.

Direct inquiries concerning this RFP to: Mary Beth Kingston, Asst. Director Phone: 828-255-5916
Ron Venturella, Purchasing Officer Phone: 828-255-5891

THE PROCUREMENT PROCESS

The following is a general description of the process by which a firm will be selected to provide services.

1. Request for Proposals (RFP) is issued to prospective contractors.
2. A preproposal conference and/or deadline for written questions is five days prior to due date.
3. Proposals in one original will be received from each offeror in a sealed envelope or package. Each original shall be signed and dated by an official authorized to bind the firm. Unsigned proposals will not be considered. Bid bond should be included in a separate sealed envelope.
4. All proposals must be received by the issuing agency not later than the date and time specified on the cover sheet of this RFP.
5. At that date and time the proposals from each responding firm will be opened. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of an offeror's pricing position. Informal proposals (less than \$ 300,000) are confidential until such time that award has been made. Thereafter, the purchasing division will furnish bid tabs upon request.
6. At their option, the evaluators may request oral presentations or discussion with any or all offerors for the purpose of clarification or to amplify the materials presented in any part of the proposal. However, offerors are cautioned that the evaluators are not required to request clarification; therefore, all proposals should be complete and reflect the most favorable terms available from the offeror.
7. Proposals will be evaluated according to completeness, content, experience with similar projects, ability of the offeror and its staff, and cost. Award of a contract to one offeror does not mean that the other proposals lacked merit, but that, all factors considered, the selected proposal was deemed most advantageous to the State.
8. Offerors are cautioned that this is a request for offers, not a request to contract, and the State/Buncombe County Schools reserves the unqualified right to reject any and all offers when such rejection is deemed to be in the best interest of the State.

(NOTE: THIS FORM MUST BE FULLY EXECUTED AND RETURNED FOR CONSIDERATION OF PROPOSAL)

PROPOSAL FORM
T.C. ROBERSON HIGH SCHOOL
CAFETERIA, PEP, AND POOL ROOF REPLACEMENT
RFP# 12-16

DUE DATE: MAY 4, 2016 by 4:00 PM

By submitting this proposal, the potential contractor certifies the following:

- ** This proposal is signed by an authorized representative of the firm.
- ** It can obtain and submit to the Owner insurance certificates as required within 5 calendar days after notice of award.
- ** The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed cost.
- ** All labor costs, direct and indirect, have been determined and included in the proposed cost.
- ** All taxes have been determined and included in the proposed cost.
- ** The offeror has attended the conference (*if applicable*) or conducted a site visit and is aware of prevailing conditions associated with performing these services.
- ** The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 45 days (normally less) from the date of the opening, to furnish the subject services for a cost not to exceed:

BASE BID: Remove existing roofing systems at the Cafeteria and PEP areas then install TPO membrane system, and remove existing roofing systems at the Pool area and install EPDM membrane system. Include allowances 1 and 2.

\$ _____ dollars and _____ /100 \$ _____

ALTERNATES

Alternate #1: Provide work as described on Roofs 15 & 16 including gutters and downspouts/ splash blocks.

\$ _____ dollars and _____ /100 \$ _____

Alternate #2: Remove and provide gutters and downspouts/ splash blocks for Roofs 15 & 16.

\$ _____ dollars and _____ /100 \$ _____

Alternate #3: Provide work as described on Roof 17.

\$ _____ dollars and _____ /100 \$ _____

Alternate #4: Provide 60 mil TPO membrane in lieu of 80 mil TPO membrane.

\$ _____ dollars and _____ /100 \$ _____

UNIT PRICING

UNIT PRICE #1: Remove and replacement of parapet wall flashing: Unit Price per lineal foot

\$ _____ dollars and _____ /100 \$ _____

UNIT PRICE #2: Remove and replacement of wood nailer: Unit Price per lineal foot

\$ _____ dollars and _____ /100 \$ _____

Attended Pre-Bid Mtg: YES/NO _____

Addendums received and used in computing bid: YES/NO _____ Number of Addendums received: _____

OFFEROR: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NUMBER: _____ FAX: _____

FED ID No: _____ Type & License #: _____

E-MAIL: _____ MBE Status: _____

Principal Place of Business if different from above (See General Information on Submitting Proposals, Item 18.): _____

BY: (Signature) _____ TITLE: _____

DATE: _____ (Typed or printed name) _____

End of Proposal Form

If the winning bid is \$150,000 or greater, the bidder will be required to provide a performance and payment bond before the contract is awarded. Bond forms are included with the RFP. A bid bond is not required for this proposal.

GENERAL INFORMATION ON SUBMITTING PROPOSALS

1. **EXCEPTIONS:** All proposals are subject to the terms and conditions outlined herein. All responses shall be controlled by such terms and conditions and the submission of other terms and conditions, price lists, catalogs, and/or other documents as part of an offeror's response will be waived and have no effect either on this Request for Proposals or on any contract that may be awarded resulting from this solicitation. Offeror specifically agrees to the conditions set forth in the above paragraph by signature to the proposal.
2. **CERTIFICATION:** By executing the proposal, the signer certifies that this proposal is submitted competitively and without collusion (G.S. 143-54), that none of our officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and that we are not an ineligible vendor as set forth in G.S. 143-59.1. False certification is a Class I felony.
3. **ORAL EXPLANATIONS:** The State/Buncombe County Schools shall not be bound by oral explanations or instructions given at any time during the competitive process or after award.
4. **REFERENCE TO OTHER DATA:** Only information which is received in response to this RFP will be evaluated; reference to information previously submitted shall not be evaluated.
5. **ELABORATE PROPOSALS:** Elaborate proposals in the form of brochures or other presentations beyond that necessary to present a complete and effective proposal are not desired.

In an effort to support the sustainability efforts of the State of North Carolina we solicit your cooperation in this effort.

It is desirable that all responses meet the following requirements:

- All copies are printed **double sided**.
 - All submittals and copies are printed on **recycled paper with a minimum post-consumer content of 30%** and indicate this information accordingly on the response.
 - Unless absolutely necessary, all proposals and copies should **minimize or eliminate use of non-recyclable or non re-usable materials** such as plastic report covers, plastic dividers, vinyl sleeves, and GBC binding. Three-ringed binders, glued materials, paper clips, and staples are acceptable.
 - Materials should be submitted in a format which allows for **easy removal and recycling** of paper materials.
6. **COST FOR PROPOSAL PREPARATION:** Any costs incurred by offerors in preparing or submitting offers are the offerors' sole responsibility; the State of North Carolina/Buncombe County Schools will not reimburse any offeror for any costs incurred.
 7. **TIME FOR ACCEPTANCE:** Each proposal shall state that it is a firm offer which may be accepted within a period of 45 days. Although the contract is expected to be awarded prior to that time, the 45 day period is requested to allow for unforeseen delays.
 8. **TITLES:** Titles and headings in this RFP and any subsequent contract are for convenience only and shall have no binding force or effect.
 9. **CONFIDENTIALITY OF PROPOSALS:** In submitting its proposal the offeror agrees not to discuss or otherwise reveal the contents of the proposal to any source outside of the using or issuing agency, government or private, until after the award of the contract. Offerors not in compliance with this provision may be disqualified, at the option of the State/Buncombe County Schools, from contract award. Only discussions authorized by the issuing agency are exempt from this provision.
 10. **RIGHT TO SUBMITTED MATERIAL:** All responses, inquiries, or correspondence relating to or in reference to the RFP, and all other reports, charts, displays, schedules, exhibits, and other documentation submitted by the offerors shall become the property of the State/Buncombe County Schools when received.
 11. **OFFEROR'S REPRESENTATIVE:** Each offeror shall submit with its proposal the name, address, and telephone number of the person(s) with authority to bind the firm and answer questions or provide clarification concerning the firm's proposal.
 12. **SUBCONTRACTING:** Offerors may propose to subcontract portions of the work provided that their proposals clearly indicate what work they plan to subcontract and to whom and that all information required about the prime contractor is also included for each proposed subcontractor.
 13. **PROPRIETARY INFORMATION:** Trade secrets or similar proprietary data which the offeror does not wish disclosed to other than personnel involved in the evaluation or contract administration will be kept confidential to the extent permitted by NCAC T01:05B.1501 and G.S. 132-1.3 if identified as follows: Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL". Any section of the proposal which is to remain confidential shall also be so marked in boldface on the title page of that section. Cost information may not be deemed confidential. In spite of what is labeled as confidential, the determination as to whether or not it shall be determined by North Carolina law.

14. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150, Buncombe County Schools invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.

The Contractor agrees in particular to maintain open hiring and employment practices and to receive applications for employment in compliance with all requirements of applicable federal, state and local laws and regulations issued pursuant thereto relating to nondiscriminatory hiring and employment practices. Each Prime Contractor shall undertake an affirmative action program to ensure that no person shall be excluded from participation in any employment activities because of age, sex, race, religion, color, national origin or handicap.

15. **PROTEST PROCEDURES:** If an offeror wants to protest a contract awarded pursuant to this solicitation, they must submit a written request to the Purchasing Officer, Buncombe County Schools, 175 Bingham Road, or PO Box 16771, Asheville, NC 28806. This request must be received by the Purchasing Division within thirty (30) consecutive calendar days from the date of the contract award, and must contain specific sound reasons and any supporting documentation for the protest. NOTE: Contract award notices are sent only to those actually awarded contracts, and not to every person or firm responding to this solicitation. Contract status and award notices are available through the purchasing division or the project designer with contact information as shown on the first page of this solicitation. Offeror's may call to obtain a verbal status of contract award. All protests will be handled pursuant to the North Carolina Administrative Code, Title 1, Department of Administration, Chapter 5, Purchase and Contract, Section 5B.1519.

16. **TABULATIONS:** Offeror's may call the purchasing division to obtain a verbal status of contract award.

17. **VENDOR REGISTRATION AND SOLICITATION NOTIFICATION SYSTEM:** Vendor Link NC allows vendors to electronically register free with the State to receive electronic notification of current procurement opportunities for goods and services available on the Interactive Purchasing System. Online registration and other purchasing information are available on the Internet web site: <http://www.state.nc.us/pandc/>.

18. **RECIPROCAL PREFERENCE:** G.S. 143-59 establishes a reciprocal preference law to discourage other states from applying in-state preferences against North Carolina's resident offerors. The "Principal Place of Business" is defined as the principal place from which the trade or business of the offeror is directed or managed.

NORTH CAROLINA GENERAL CONTRACT TERMS AND CONDITIONS (Contractual and Consultant Services)

1. **GOVERNING LAW:** This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina.
2. **SITUS:** The place of this contract, its situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to its validity, construction, interpretation and enforcement shall be determined.
3. **INDEPENDENT CONTRACTOR:** The Contractor shall be considered to be an independent contractor and as such shall be wholly responsible for the work to be performed and for the supervision of its employees. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this agreement. Such employees shall not be employees of, or have any individual contractual relationship with the Agency.
4. **KEY PERSONNEL:** The Contractor shall not substitute key personnel assigned to the performance of this contract without prior written approval by the Agency's Contract Administrator. The individuals designated as key personnel for purposes of this contract are those specified in the Contractor's proposal.
5. **SUBCONTRACTING:** Work proposed to be performed under this contract by the Contractor or its employees shall not be subcontracted without prior written approval of the Agency's Contract Administrator/Project Designer. Acceptance of an offeror's proposal shall include any subcontractor(s) specified therein.
6. **PERFORMANCE AND DEFAULT:** If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this agreement, the Agency shall thereupon have the right to terminate this contract by giving written notice to the Contractor and specifying the effective date thereof. In that event, all finished or unfinished deliverable items under this contract prepared by the Contractor shall, at the option of the Agency, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such materials. Notwithstanding, the Contractor shall not be relieved of liability to the Agency for damages sustained by the Agency by virtue of any breach of this agreement, and the Agency may withhold any payment due the Contractor for the purpose of setoff until such time as the exact amount of damages due the Agency from such breach can be determined. In case of default by the Contractor, the State may procure the services from other sources and hold the Contractor responsible for any excess cost occasioned thereby. The State reserves the right to require performance bond or other acceptable alternative guarantees from successful offeror without expense to the State.

Upon the entering of a judgment of bankruptcy or insolvency by or against the Contractor, the Agency may terminate this contract for cause.

Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations by any act of war, hostile foreign action, nuclear explosion, riot, strikes, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.

7. **TERMINATION:** The Agency may terminate this agreement at any time by 15 days notice in writing from the Agency to the Contractor. In that event, all finished or unfinished deliverable items prepared by the Contractor under this contract shall, at the option of the Agency, become its property. If the contract is terminated by the Agency as provided herein, the Contractor shall be paid for services satisfactorily completed, less payment or compensation previously made.
8. **AVAILABILITY OF FUNDS:** Any and all payments to the Contractor are dependent upon and subject to the availability of funds to the Agency for the purpose set forth in this agreement.
9. **CONFIDENTIALITY:** Any information, data, instruments, documents, studies or reports given to or prepared or assembled by the Contractor under this agreement shall be kept as confidential and not divulged or made available to any individual or organization without the prior written approval of the Agency.
10. **CARE OF PROPERTY:** The Contractor agrees that it shall be responsible for the proper custody and care of any property furnished it for use in connection with the performance of this contract or purchased by it for this contract and will reimburse the State for loss or damage of such property.
11. **COPYRIGHT:** No deliverable items produced in whole or in part under this agreement shall be the subject of an application for copyright by or on behalf of the Contractor.
12. **ACCESS TO PERSONS AND RECORDS:** The State Auditor shall have access to persons and records as a result of all contracts or grants entered into by State agencies or political subdivisions in accordance with General Statute 147-64.7. The Contractor shall retain all records for a period of three years following completion of the contract.
13. **ASSIGNMENT:** No assignment of the Contractor's obligations nor the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority, the State may:
 - a. Forward the contractor's payment check(s) directly to any person or entity designated by the Contractor, or

b. Include any person or entity designated by Contractor as a joint payee on the Contractor's payment check(s). In no event shall such approval and action obligate the State to anyone other than the Contractor and the Contractor shall remain responsible for fulfillment of all contract obligations.

14. **COMPLIANCE WITH LAWS:** The Contractor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements (permits) that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority.
15. **AFFIRMATIVE ACTION:** The Contractor shall take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.
16. **INSURANCE:** During the term of the contract, the contractor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. As a minimum, the contractor shall provide and maintain the following coverage and limits:
 - a. Worker's Compensation - The contractor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$150,000.00, covering all of Contractor's employees who are engaged in any work under the contract. If any work is subcontracted, the contractor shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.
 - b. Commercial General Liability - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$2,000,000.00 Combined Single Limit. (Defense cost shall be in excess of the limit of liability).
 - c. Automobile - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the contract. The minimum combined single limit shall be \$500,000.00 bodily injury and property damage; \$500,000.00 uninsured/under insured motorist; and \$100,000.00 medical payment.

Providing and maintaining adequate insurance coverage is a material obligation of the contractor and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The contractor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the contractor shall not be interpreted as limiting the contractor's liability and obligations under the contract.

The Contractor shall furnish a Certificate of Insurance as proof of the above coverages. Certificate will contain provision that the insurance coverages cannot be canceled, reduced in amount or coverage eliminated without 30 days written notice to the Buncombe County Board of Education. Owner's Protective insurance must list the Buncombe County Board of Education as a "Named Insured" as it's interest may appear. Owner's approval of Certificate of Insurance does not decrease or relieve the contractor's responsibility for maintaining insurance coverage as required in this Request for Proposal.

17. **ADVERTISING:** Contractor agrees not to use the existence of this contract, the name of the agency, or the name of the State of North Carolina as part of any commercial advertising.
18. **ENTIRE AGREEMENT:** This contract and any documents incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This Request for Proposals, any addenda thereto, and the offeror's proposal are incorporated herein by reference as though set forth verbatim.

All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.
19. **AMENDMENTS:** This contract may be amended only by written amendments duly executed by the Agency and the Contractor.
20. **TAXES:** G.S. 143-59.1 bars the Secretary of Administration from entering into contracts with vendors if the vendor or its affiliates meet one of the conditions of G. S. 105-164.8(b) and refuse to collect use tax on sales of tangible personal property to purchasers in North Carolina. Conditions under G. S. 105-164.8(b) include: (1) Maintenance of a retail establishment or office, (2) Presence of representatives in the State that solicit sales or transact business on behalf of the vendor and (3) Systematic exploitation of the market by media-assisted, media-facilitated, or media-solicited means. By execution of the bid document the vendor certifies that it and all of its affiliates, (if it has affiliates), collect(s) the appropriate taxes.

21. **GENERAL INDEMNITY:** The contractor shall hold and save the State/Buncombe County Schools, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses, with the exception of consequential damages, accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the contractor in the performance of this contract and that are attributable to the negligence or intentionally tortious acts of the contractor provided that the contractor is notified in writing within 30 days that the State/Buncombe County Schools has knowledge of such claims. The contractor represents and warrants that it shall make no claim of any kind or nature against the State's agents who are involved in the delivery or processing of contractor goods to the State. The representation and warranty in the preceding sentence shall survive the termination or expiration of this contract.

CONTRACTOR'S SALES TAX REPORT
NC State and Local Sales Taxes Paid

Buncombe County Schools

CONTRACTOR: _____

PO#/RFP# _____

Address: _____ For Period: _____

Invoice Date	Invoice #	Type of Property	NC Tax 4.75%	County Tax 2.25%	Name of County
		TOTAL	\$	\$	

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of
_____, 20____

Signed

Notary Public

My Commission
Expires: _____

Print or Type Name of Above & Title

Seal

NOTE:
This certified statement may be subject to audit.

The North Carolina General Assembly has amended the Statute to provide refunds of sales and use tax to local school units in accordance with the provisions of G.S. 105-164. 14(c) effective with tax paid on or after July 1, 1998.

These refunds are to include the "sales and use taxes paid by contractors on building materials, supplies, fixtures and equipment that become a part of or annexed to a building or structure that is owned or leased by the governmental entity and is being erected, altered or repaired for use by the governmental entity (G.S. 105-164.14)."

Sales and Use Tax Technical Bulletin Section 18-2F specifies: "To substantiate a refund claim for sales or use taxes paid on purchases of building materials, supplies, fixtures and equipment by its contractor, the claimant must secure from such contractor certified statements setting forth all of the following information:

- a. the date the property was purchased;
- b. the type of property purchased ;
- c. the project for which the property was used;
- d. if the property was purchased in this State, the county in which it was purchased;
- e. if the property was not purchased in this State, the county in which the property was used; and
- f. the amount of sales and use taxes paid.

In the event the contractor makes several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices and the State and local sales and use taxes paid thereon. Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of sales and use tax paid thereon by the contractor. Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant. Any local sales or use taxes must be shown separately from the State sales or use taxes. The contractor's statements must not contain sales or use taxes paid on purchases of tangible personal property purchased by such contractors for use in performing the contract which does not annex to, affix to or in some manner become a part of the building or structure that is owned or leased by a governmental agency and is being erected, altered or repaired for use by a governmental entity as defined by G.S. 105-164.14(c). Examples of property on which sales or use tax has been paid by the contractor and which shall not be included in the contractor's statement are scaffolding, forms for concrete, fuel for the operation of machinery and equipment, tools, repair parts and equipment rentals.

Please read entire specification package. You will be held accountable for all information. NO payment shall be made if specifications are not followed.

Scope: Work shall consist of furnishing all labor, materials, equipment and services, incidental for the completion of work as described herein. All items not specifically mentioned in the specifications, but which obviously are required to make the job complete, shall be included automatically.

Qualifications: All bidders must furnish a list of North Carolina Contractor Licenses, which they hold.

Contractor's Responsibility: The Contractor shall be responsible for the construction site during the performance of the work. The Contractor shall be responsible for any and all damages to persons and property during the performance of the work and shall further provide all necessary safety measures and shall fully comply with all federal state and local laws, building rules, rules and regulations to prevent accidents or injury to persons or property on or about the location of the work site. This is to include OSHA 1910, General Construction, or those regulations mandated by these specifications. Special attention will be made to proper barricading of the work areas due to the work progressing within an actively operating office atmosphere.

Safety Regulations: The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974 Federal Register) which is hereby incorporated in these specifications.

Codes: All work shall be done in accordance with the specifications and shall comply with North Carolina Building Code, Underwriters' Rules and Regulations and Federal, State and Local Regulations covering work of this nature. Whenever drawings or specifications are in excess of such laws, codes and regulations, the specifications shall hold. All equipment shall have U. L. labels attached.

Permits: The Contractor must secure all permits required for the job completion, obtain and deliver to Owner, all certification of inspection issued by the authorities having jurisdiction, with Contractor paying cost of same. Permitting is through the Permitting Division of Buncombe County. **All final certificates must be delivered to owner prior to request for final payment.**

Workers on Job: All employees of the Contractor shall, while on Buncombe County Board of Education property, act in a professional and courteous manner. All workers shall be expected to wear long pants and shirts while on Board property. Also, all employees of the Contractor must "sign in" in the main office upon entering the facility and must "sign out" upon leaving the property. Any employee of the Contractor may be told to leave the property by either the Principal or the Assistant Director, if they do not follow the above procedure. The employee shall be replaced with another at no additional cost to the Buncombe County Board of Education.

In accordance with G.S. 14-208.18, all persons who (1) are required to register under the Sex Offender and Public Protection Program AND (2) have been convicted of certain sexually violent offenses or any offense where the victim was under the age of 16 years at the time of the offense are expressly forbidden to knowingly be present on any property owned or operated by the school system, including school buildings, athletic fields, playgrounds, parking lots, school buses, activity buses or other property of any kind for any reason, including attendance at sporting events or other school related functions, whether before, during or after school hours. It is the responsibility of the contractor or vendor that their employees and sub-contractors are in accordance with G.S. 14-208.18.

E-Verify: Contractor shall comply with E-Verify, the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law and as in accordance with N.C.G.S. §64-25 et seq. In addition, to the best of Contractor's knowledge, any subcontractor employed by Contractor as a part of this contract shall be in compliance with the requirements of E-Verify and N.C.G.S. §64-25 et seq.

Iran Divestment Act: North Carolina Local Government Units may not enter into contracts with any entity or individual found on the State Treasurer's Iran Final Divestment List N.C.G.S. 143C-6A. By bidding on this project the bidder certifies it is not listed on the Final Divestment List created by the State Treasurer.

Equipment and Tools: The Contractor shall use no equipment or tools that are owned by the Buncombe County Board of Education. Also, no employees of the Buncombe County Board of Education shall be utilized by the Contractor except for opening locked doors and giving directions.

Materials: No materials shall be stored on site and the Buncombe County Board of Education is not responsible for any materials, equipment or tools lost or stolen from the site.

Clean Up: The area of work shall be cleaned daily so that the Buncombe County Board of Education shall not incur any additional costs to make the area suitable for the work process. Also, the Contractor shall utilize no trash receptacles or dumpsters owned by the Buncombe County Board of Education. All trash and removed materials shall be properly disposed of off the property.

Performance of Work: All work shall be performed at the highest level of quality. The Owner shall be responsible for determining the quality of work, and may notify the Contractor of same. **ANY WORK COMPLETED THAT IS NOT SUITABLE TO THE OWNER SHALL BE REPEATED BY THE CONTRACTOR AT NO COST TO THE OWNER.** Any damage to existing area or utilities will be the responsibility of the Contractor. **NO EXCEPTIONS.**

Bonds: A bid bond is not required. If the winning bid is \$150,000 or greater, the bidder will be required to provide a performance and payment bond before the contract is awarded. Bond forms are included with the RFP.

Drawings: Sealed drawings will be available the day of the pre-bid conference.

The Buncombe County Board of Education reserves the right to reject any or all bids for any or no reason, and to waive informalities.

PERFORMANCE BOND

Date of Execution
of this Bond:

Name and Address of
Principal (Contractor):

Name and Address
of Surety:

Name and Address of
Contracting Body:

THE BUNCOMBE COUNTY BOARD OF EDUCATION, a
body corporate of the State of North Carolina, 175 Bingham Road,
Asheville, NC 28806.

Amount of Bond:

Contract:

That certain contract by and between the Principal and the
Contracting Body above named, dated _____
for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, as identified and shown above and hereto attached.

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

THIS PERFORMANCE BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

PFB 1

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal (Name of individual, individual and
trade name, partnership, corporation or joint
venture)

WITNESS:

(Proprietorship of Partnership)

BY: _____(SEAL)

TITLE: _____
(Owner, partner, office held in corporation,
joint venture)

(Corporate Seal)

ATTEST: (Corporation)

BY: _____

TITLE: _____
(Corporate Secretary of Assistant Secretary only)

WITNESS:

Surety (Name of Surety Company)

BY: _____

TITLE: Attorney-in-Fact

(Corporate Seal of Surety)

COUNTERSIGNED:

(Address of Attorney-in-Fact)

N.C. Licensed Resident Agent

PAYMENT BOND:

Date of Execution
of this Bond:

Name and Address of
Principal (Contractor):

Name and Address
of Surety:

Name and Address of
Contracting Body:

THE BUNCOMBE COUNTY BOARD OF EDUCATION, a
body corporate of the State of North Carolina, 175 Bingham Road,
Asheville, NC 28806.

Amount of Bond:

Contract:

That certain contract by and between the Principal and the
Contracting Body above named, dated _____
for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, as identified and shown above and hereto attached.

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications and extensions of time of said contract that may hereafter be made, notice of which modifications and extensions of time to the Surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

THIS PAYMENT BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

PYB 1

Section 000103

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal (Name of individual, individual
and trade name, partnership, corporation or
joint venture)

WITNESS:

(Proprietorship of Partnership) BY: _____ (SEAL)
TITLE: _____
(Owner, partner, office held in corporation,
joint venture)

(Corporate Seal)

ATTEST: (Corporation)

BY: _____

TITLE: _____
(Corporate Secretary of Assistant Secretary only)

WITNESS:

Surety (Name of Surety Company)

BY: _____

TITLE: Attorney-in-Fact

(Corporate Seal of Surety)

COUNTERSIGNED:

(Address of Attorney-in-Fact)

N.C. Licensed Resident Agent

PYB 2



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

A. Project Identification: T.C. Roberson High Roof Cafeteria, PEP, and Pool Roof Replacement

1. Project Location: Arden, NC.

B. Owner: Buncombe County Schools

1. Owner's Representative: Mary Beth Kingston, Assistant Director of Facilities and Planning, Buncombe County Schools, 175 Bingham Road, Asheville, NC : email: Marybeth.kingston@bcsemail.org

C. Architect: Mark Lusk Architecture, PLLC 120 Wedgewood Drive, Morganton, NC 28655

1.4 WORK COVERED BY CONTRACT DOCUMENTS

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

Remove existing roofing systems at the Cafeteria and PEP areas and install TPO membrane system

Remove existing roofing systems at the Pool area and install EPDM membrane system

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.

On-Site Work Hours: As coordinated at the pre-construction meeting and with the School Principal.

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 012100 - ALLOWANCES

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. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - Unit-cost allowances.
 - .
- C. Related Sections include the following:
 - Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
 - Division 01 Section "Unit Prices" for procedures for using unit prices.
 - Divisions 02 through 49 Sections for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

Purchase products and systems selected by Architect from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 LUMP-SUM, UNIT-COST and QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.7 UNUSED MATERIALS

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

Allowance No 1: Repair parapet wall flashing: 500 lineal feet

Allowance No 2: Replacement of treated wood nailers: 80 lineal feet

END OF SECTION **012100**

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

UNIT PRICE #1: Remove and replacement of parapet wall flashing:	Unit Price per lineal foot
-----------------------------------------------------------------	----------------------------

UNIT PRICE #1: Remove and replacement of wood nailer:	Unit Price per lineal foot
-------------------------------------------------------	----------------------------

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.

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

Alternate No.1: Provide work as described on Roofs 15 & 16 including gutters and downspouts/ splash blocks.

Alternate No.2: Remove and provide gutters and downspouts/ splash blocks for Roofs 15 & 16.

Alternate No.3: Provide work as described on Roof 17.

Alternate No.4: Provide 60 mil TPO membrane in lieu of 80 mil TPO membrane.

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.

1.3 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.

1.4 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.

1.5 APPLICATIONS FOR PAYMENT

Buncombe County Schools will need a copy of the permit before any payments can be made and a Certificate of Completion before final payment can be made.

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.

Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather-tight enclosure for building exterior.

Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

2.4 MOISTURE AND MOLD CONTROL

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 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 COUNTY PERMITS

A. Submit Buncombe County Permits Certificate of Completion and any other required permits.

1.7 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.

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**

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SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wood blocking and nailers.
Framing and board lumber.

1.3 DEFINITIONS

Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.

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

- 1. NeLMA: Northeastern Lumber Manufacturers' Association.
SPIB: The Southern Pine Inspection Bureau.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Wood Nailers: All wood to be KDAT pressure treated:
1. Wood pressure treatment: Copper Azole Type B pressure-treatment conforming to AWPA Standard UC-2, Interior, subject to dampness.
 2. PS 1, APA Exterior Grade plywood; pressure preservative treated.
 3. Width: 5-1/2" (90mm), nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it.
 4. Thickness: Same as thickness of roof insulation to provide a flush condition.
- B. 18-8 stainless steel fasteners only in pressure treated wood. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
- C. Application: Treat items indicated on Drawings, and the following:
1. Wood nailers, curbs, equipment support bases, blocking, and similar members in connection with roofing.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
Nailers.
Framing.

For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent

maximum moisture content and any of the following species:
Mixed southern yellow -pine; SPIB.
Eastern softwoods; NeLMA.

- B. For exposed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 - 1. Eastern white pine, Idaho white, lodgepole, ponderosa, or sugar pine; Premium or 2 Common (Sterling) grade; NeLMA, NLGA, WCLIB, or WWPA.
Mixed southern yellow pine, No. 2 grade; SPIB.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 - 1. Mixed southern yellow pine, No. 2 grade; SPIB.
Eastern softwoods, No. 2 Common grade; NeLMA.
- D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel. Fasteners in contact with preservative treated wood shall be as approved by the wood preservative manufacturer.

B. Nails, Brads, and Staples: ASTM F 1667.

Power-Driven Fasteners: NES NER-272.

Wood Screws: ASME B18.6.1.

Lag Bolts: ASME B18.2.1.

Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

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

construction.

Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- B. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

Comply with AWP A M4 for applying field treatment to cut surfaces of preservative-treated lumber.

1. Use inorganic boron for items that are continuously protected from liquid water. Use copper naphthenate for items not continuously protected from liquid water.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.

3.2 FRAMING, WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION **061000**

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 075323 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) 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:

- Loosely laid and ballasted EPDM roofing system
- Roof Drains

1.3 DEFINITIONS

EPDM : Ethylene-Propylene-Diene-Monomer

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.

SPRI: Single Ply Roofing Industry

1.4 SUBMITTALS

Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.

Provide Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used.

Provide:

- Sample Warranty: 20 year full system, NDL.
- Sample Membrane Warranty.
- Base securement details for all individual conditions keyed to a roof plan.
- ANSI-SPRI ES-1 pre-manufactured edge metal products, and installation details.
- Base flashings and membrane terminations.
- Tapered insulation, including slopes.
- Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacing and patterns for mechanically fastened membrane roofing.
- Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- Qualification Data: For qualified Installer and manufacturer.
- Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing

- system complies with requirements specified in "Performance Requirements" Article.
- Submit evidence of compliance with performance requirement

1.5 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.

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

- FM I-75
- ANSI-SPRI ES-1
- Roof design pressures based on ASCE-7:
 - Exposure: C
 - Wind speed: 90mph
 - Importance factor: 3
 - Building height: 12 feet approx
 - Roof slope: 1/8"-1/4" per foot
 - Safety factor: 2

Contractor shall follow manufacturer's requirements for cold weather storage and installation of membrane and adhesives. Submit manufacturer's cold weather storage and installation requirements

1.5 CLOSEOUT SUBMITTALS

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

Refer to Buncombe County Schools Roofing Close Out Form in Division 1.

1.6 QUALITY ASSURANCE

Manufacturer Qualifications: A qualified manufacturer that is 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.

1.7 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.

1.8 WARRANTY

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

- Warranty Period: 20 years from date of Substantial Completion or manufacturer acceptance whichever is later. Warranty shall be non-prorated for water-tightness and extended coverage. This warranty shall be fully paid for by the roofing contractor.
- This warranty shall cover both labor and materials necessary to affect water-tightness, including standing water on the roof membrane. Warranty shall cover entire installation including rigid roof insulation, flashing, edge metal, etc. Flashing material must be compatible with the respective system.
- Warrantee must allow disputes to be settled in the courts of Buncombe County, NC.
- Limit of liability: No dollar limitation
- Repair leaks in the roofing system caused by:
 - Ordinary wear and tear of the elements
 - Manufactured defect in materials
 - Defective workmanship used to install these materials
 - Damage due to winds up to 72 mph

Membrane warranty: Provide a separate membrane warranty from the membrane manufacturer which shall further warrant that the membrane will not prematurely deteriorate to the point of failure because of weathering, whether or not leaks are apparent, for a period of twenty (20) years from the date of acceptance by the Owner or the membrane manufacturer's representative (whichever is later). This warrantee is to include labor and materials to replace the defective membrane.

Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Contractor, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing,

cover boards, for the following warranty period:

Warranty Period: Two years from date of Substantial Completion.

Repair-only Project Warranty: For projects or portions of projects where only limited repairs or seam stripping are made, the Contractor's Special Project Warranty as described above shall serve as the project warranty or for that portion of the project.

2 PRODUCTS

2.1 EPDM ROOFING

EPDM: ASTM D 4637, Type I, non-reinforced, uniform, flexible EPDM sheet.

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

- Carlisle SynTec Incorporated
- Firestone Building Products
- Johns Manville
- Versico Incorporated

Thickness: 90 mils, nominal

Exposed Face Color: Black

AUXILIARY ROOFING MATERIALS

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

Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

Sheet Flashing: 60-mil- thick EPDM, partially cured or cured, according to application.

Bonding Adhesive: Manufacturer's standard, water based.

Seaming Material: Manufacturer's standard, synthetic-rubber polymer primer and 4-inch- wide minimum, butyl splice tape with release film.

Miscellaneous Accessories: Provide lap sealant, water cutoff mastic, metal termination bars, metal battens, pourable sealers, preformed cone and vent sheet flashings, molded pipe boot flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

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 COVERBOARD

Cover Board: Provide ASTM C 208, High density insulation board, 1/2 inch thick minimum. Provide one as follows:

- Roof board provided by the manufacturer
- DensDeck roof board manufactured by Georgia Pacific
- Securerock high performance roof board manufactured by USG

2.4 ROOF DRAINS

Cast-Iron, General-Purpose Roof Drains and Overflow Drains: Medium Sump

Basis-of-Design Product: Subject to compliance with requirements, provide Zurn Plumbing Products Group; Specification Drainage Operation; Z100 or comparable product by one of the following:

Josam Company.
MIFAB, Inc.
Smith, Jay R. Mfg. Co.
Tyler Pipe, Wade Div.
Watts Water Technologies, Inc.

Standard: ASME A112.6.4, for general-purpose roof drains.

Body Material: Cast iron.

Outlet: Bottom.

Underdeck Clamp: Required.

Sump Receiver Plate: Required.

Dome Material: Cast Iron.

Drain Clamps: Stainless Steel

3 EXECUTION

3.1 SPECIALTY FIELD SERVICE REQUIREMENTS FOR JOHNS MANVILLE

Manufacturer's Field Services for Johns Manville: During construction and until substantial completion, manufacturer's representative shall perform monthly quality assurance site visits to ensure materials are being properly installed and as required to obtain the specified warranty.

a. The first site visit shall be performed within the first three (3) days of operations.

b. Coordinate all site visits with Owner. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.

c. Inspections to be performed by an employee of Johns Manville that is assigned full time to their technical services department. Sales personnel will not be acceptable for this function and may result in rejection of the work installed that does not fulfill this requirement.

d. Manufacturer's final inspections shall be performed only with the Owner in attendance. A minimum of seven days' written notice is required. Any manufacturer's final inspection conducted without Owner personnel in attendance will be repeated at no additional cost to the Owner.

e. Any violation of this requirement will result in the removal of that manufacturer for a period of not less than one year from the Owner's accepted materials list.

3.2 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.

3.3 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.

3.4 LOOSELY LAID AND BALLASTED MEMBRANE ROOFING INSTALLATION

Loosely lay roofing over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing and allow to relax before installing.

Accurately align roofing, without stretching, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

Tape Seam Installation: Clean and prime both faces of splice areas, apply splice tape, and firmly roll side and end laps of overlapping roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of roofing terminations.

Leave seams uncovered until inspected by roofing system manufacturer.

Repair tears, voids, and lapped seams in roofing that do not comply with requirements.

Spread sealant or mastic bed over deck-drain flange at roof drains, and securely seal roofing in place with clamping ring.

Aggregate Ballast (Existing Re-installed): Apply uniformly over roofing at the rate required by roofing system manufacturer, but not less than the following, spreading with care to minimize possibility of damage to roofing system. Lay ballast as roofing is installed, leaving roofing ballasted at the end of the workday.

Ballast Weight: 10 lb/sq. ft.

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.

END OF SECTION 075323

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 Drains

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.

SPRI: Single Ply Roofing Industry

1.4 SUBMITTALS

Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.

Provide Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used.

Provide:

- Sample Warranty: 20 year full system, NDL.
- Sample Membrane Warranty.
- Base securement details for all individual conditions keyed to a roof plan.
- ANSI-SPRI ES-1 pre-manufactured edge metal products, and installation details.
- Base flashings and membrane terminations.
- Tapered insulation, including slopes.
- Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacing and patterns for mechanically fastened membrane roofing.
- Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- Qualification Data: For qualified Installer and manufacturer.

- 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.

1.5 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.

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

- FM I-75
- ANSI-SPRI ES-1
- Roof design pressures based on ASCE-7:
 - Exposure: **C**
 - Wind speed: 90mph
 - Importance factor: 3
 - Building height: 12 feet approx
 - Roof slope: 1/4" per foot
 - Safety factor: 2

Contractor shall follow manufacturer's requirements for cold weather storage and installation of membrane and adhesives. Submit manufacturer's cold weather storage and installation requirements

CLOSEOUT SUBMITTALS

- Maintenance Data: For roofing system to include in maintenance manuals.
- Refer to Buncombe County Roofing Close Out Form in Division 1

QUALITY ASSURANCE

Manufacturer Qualifications: A qualified manufacturer that is 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.

1.7 WARRANTY

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

- Warranty Period: 20 years from date of Substantial Completion or manufacturer acceptance whichever is later. Warranty shall be non-prorated for water-tightness and extended coverage. This warranty shall be fully paid for by the roofing contractor.
- This warranty shall cover both labor and materials necessary to effect water-tightness, including standing water on the roof membrane. Warranty shall cover entire installation including rigid roof insulation, flashing, edge metal, etc. Flashing material must be compatible with the respective system.
- Warrantee must allow disputes to be settled in the courts of Buncombe County, NC.
- Limit of liability: No dollar limitation
- Repair leaks in the roofing system caused by:
 - Ordinary wear and tear of the elements
 - Manufactured defect in materials
 - Defective workmanship used to install these materials
 - Damage due to winds up to 72 mph

Membrane warranty: Provide a separate membrane warranty from the membrane manufacturer which shall further warrant that the membrane will not prematurely deteriorate to the point of failure because of weathering, whether or not leaks are apparent, for a period of twenty (20) years from the date of acceptance by the Owner or the membrane manufacturer's representative (whichever is later). This warrantee is to include labor and materials to replace the defective membrane.

Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Contractor, 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.

Repair-only Project Warranty: For projects or portions of projects where only limited repairs or seam stripping are made, the Contractor's Special Project Warranty as described above shall serve as the project warranty or for that portion of the project.

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:

- Firestone Building Products Company.
- John Mansville
- Carlisle SynTec Incorporated
- Versico

Thickness: 80 mils, nominal.
Exposed Face Color: White.
Flashing Thickness: 60 mils

Alternate Bid:
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 COVER BOARD

Cover Board: Provide ASTM C 208, High density insulation board, 1/2 inch thick minimum. Provide one as follows:

- Roof board provided by the manufacturer
- DensDeck roof board manufactured by Georgia Pacific
- Securerock high performance roof board manufactured by USG

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.

Composite 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.

1. Type VII, glass mat faced gypsum board facer, 1/4 inch thick.
2. 25 psi compressive strength

Composite insulation board may be provided as separate components, properly secured in the roof system, subject to availability manufacturer.

Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope as indicated.

INSULATION ACCESSORIES

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

Base Sheet: Glass-reinforced, asphalt-coated base sheet meeting ASTM D 4601, ASTM D 4897 or ASTM D 3672, Type II. Provide sheets for application over cementitious wood fiber substrates as required by the membrane manufacturer.

- a. Firestone MB Base M
- b. JM Permaply 28
- c. Manufacturer accepted equivalent

Fasteners: Equal to Plymer Tec Tec fasteners by OMG Roofing Products.

2.5 ROOF DRAINS

Cast-Iron, General-Purpose Roof Drains and Overflow Drains: Medium Sump

Basis-of-Design Product: Subject to compliance with requirements, provide Zurn Plumbing Products Group; Specification Drainage Operation; Z100 or comparable product by one of the following:

Josam Company.
MIFAB, Inc.
Smith, Jay R. Mfg. Co.
Tyler Pipe, Wade Div.
Watts Water Technologies, Inc.

Standard: ASME A112.6.4, for general-purpose roof drains.

Body Material: Cast iron].

Outlet: Bottom.

Underdeck Clamp: Required.

Sump Receiver Plate: Required.

Dome Material: Cast Iron.

Drain Clamps: Stainless Steel

3 EXECUTION

3.1 SPECIALTY FIELD SERVICE REQUIREMENTS FOR JOHNS MANVILLE

Manufacturer's Field Services for Johns Manville: During construction and until substantial completion, manufacturer's representative shall perform monthly quality assurance site visits to ensure materials are being properly installed and as required to obtain the specified warranty.

- a. The first site visit shall be performed within the first three (3) days of operations.
- b. Coordinate all site visits with Owner. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.
- c. Inspections to be performed by an employee of Johns Manville that is assigned full time to their technical services department. Sales personnel will not be acceptable for this function and may result in rejection of the work installed that does not fulfill this requirement.
- d. Manufacturer's final inspections shall be performed only with the Owner in attendance. A minimum of seven days' written notice is required. Any manufacturer's final inspection conducted without Owner personnel in attendance will be repeated at no additional cost to the Owner.
- e. Any violation of this requirement will result in the removal of that manufacturer for a period of not less than one year from the Owner's accepted materials list.

3.2 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.

3.3 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.

3.4 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 .

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.

3.5 ADHERED MEMBRANE ROOFING INSTALLATION

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

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.

3.6 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.

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 counter-flashings.

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. ANSI/SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1:
 - 1. Provide certificate of compliance.
 - 2. Third party compliant by Miami Dade, FL UL Classified
 - 3. Include in roof manufacturers full system warranty
 - 4. Safety factor = 2.0
- 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 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects roof specialties including installers of roofing materials and accessories.
 - 2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 - 3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.
- B. Technical Representative Inspection.
 - 1. The manufacturer shall provide a technical representative inspection upon completion of the installation.

1.6 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.

1.7 WARRANTY

- A. **Refer to Roofing Membrane Sections for 20 full system warranty. Edge metal systems shall be included in the membrane system warranty.**
- B. 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. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

1. **Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 ; structural quality.**
2. **Surface: Smooth,.**
3. **Exposed Coil-Coated Finish:**
 - a. **Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.**
4. **Color: As selected by Architect from manufacturer's full range.**
5. **Concealed Finish: 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 .**

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 0.6 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. TerminEdge Roof Edging: A two-part assembly with a rigid terminator base plate, and a decorative snap-on fascia cover for single-ply roofs with raised perimeter edges. The system shall have all concealed fasteners with no penetration on horizontal roof surface.
 - 1. **Manufacturers: Subject to compliance with requirements, provide products by one of the following:**
 - a. **TerminEdge by Hickman Company, W. P.**
 - 2. Retainer base plate: Shall be 20 gauge galvanized steel with 9/32" (7 mm) pre-punched holes for fasteners @ 12" (152 mm) on center in 10'-0" (3048 mm) standard lengths.
 - 3. Corners: Factory mitered and continuously welded.
 - 4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
- B. Fascia Accessories: Fascia extenders with continuous hold-down cleats,
- C. Galvalume Finish: Two-coat fluoropolymer.
 - 1. Color: As selected by Architect from manufacturer's full range.

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**