

**STATE OF DELAWARE
INDIAN RIVER SCHOOL DISTRICT
CONTRACT # IRD19002-SDSAROOF**

**SPECIFICATIONS
FOR**

**INDIAN RIVER SCHOOL DISTRICT – SOUTHERN
DELAWARE SCHOOL OF THE ARTS ROOF REPAIR**

IN

**27 HOSIER STREET
SELBYVILLE, DE 19975**

**PREPARED
BY**

**Joseph Booth
Supervisor of Buildings and Grounds**

ISSUED FOR April 5, 2019

TABLE OF CONTENTS

A. Specifications for this project are arranged in accordance with the Construction Specification Institute numbering system and format. Section numbering is discontinuous and all numbers not appearing in the Table of Contents are not used for this Project.

B. DOCUMENTS BOUND HEREWITH

DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS

INTRODUCTORY INFORMATION

00 01 01 – PROJECT TITLE PAGE	1 page
00 01 10 – TABLE OF CONTENTS	1 page
00 01 15 – LIST OF DRAWING SHEETS	1 page

PROCUREMENT REQUIREMENTS

00 11 16 – INVITATION TO BID	1 page
00 21 13 – INSTRUCTIONS TO BIDDERS	12 pages
00 41 13 – BID FORM	5 pages
00 43 13 – BID BOND	1 page

CONTRACTING REQUIREMENTS

00 52 13 – STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR	1 page
00 54 13 – SUPPLEMENT TO AGREEMENT BETWEEN OWNER & CONTRACTOR A101-2017	1 page
00 54 14 – SUPPLEMENT TO A101-2017 – EXHIBIT A – INSURANCE & BONDS	1 page
00 61 13.13 – PERFORMANCE BOND	2 pages
00 61 13.16 – PAYMENT BOND	2 pages
00 62 76 – APPLICATION AND CERTIFICATE FOR PAYMENT FORMS	1 page
00 72 13 – GENERAL CONDITIONS TO THE CONTRACT	1 page
00 73 13 – SUPPLEMENTARY GENERAL CONDITIONS	10 pages
00 73 46 – WAGE RATE REQUIREMENTS	1 page
00 81 13 – GENERAL REQUIREMENTS	14 pages
00 81 14 – DRUG TESTING FORMS	2 pages
JOB SPECIFICATION MANUAL	40 pages
JOB DRAWINGS	13 pages

END OF SECTION

LIST OF DRAWING SHEETS

Sheet # Final 13 pages of RFP

INVITATION TO BID

Sealed bids for Contract No. IRD19002-SDSAROOF-Indian River School District – Southern Delaware School of the Arts Roof Repair will be received by the Indian River School District, Facilities Management, 31 Hosier Street, Selbyville, DE 19975 until 12:00p.m. local time on May 10, 2019, at which time they will be publicly opened and read aloud in the Conference Room. Bidder bears the risk of late delivery. Any bids received after the stated time will be returned unopened.

Project involves the following at Indian River School District – SDSA Roof Repair – Renovation of upper and lower low slope roofs.

A **MANDATORY** Pre-Bid Meeting will be held on April 17, 2019, at 10:00a.m. at 31 Hosier Street, Selbyville, DE 19975 for the purpose of establishing the listing of subcontractors and to answer questions. Representatives of each party to any Joint Venture must attend this meeting. **ATTENDANCE OF THIS MEETING IS A PREREQUISITE FOR BIDDING ON THIS CONTRACT.**

Sealed bids shall be addressed to the Indian River School District – Facilities Management, 31 Hosier Street, Selbyville, DE 19975. The outer envelope should clearly indicate: **"CONTRACT NO. IRD19002-SDSAROOF – Indian River School District – Southern Delaware School of the Arts Roof Repair - SEALED BID - DO NOT OPEN."**

Contract documents may be obtained at the office of Joseph Booth, Supervisor of Building and Grounds, 31 Hosier Street, Selbyville, DE 19975 – 302-436-1000.

Bidders will not be subject to discrimination on the basis of race, creed, color, sex, sexual orientation, gender identity or national origin in consideration of this award, and Minority Business Enterprises, Disadvantaged Business Enterprises, Women-Owned Business Enterprises and Veteran-Owned Business Enterprises will be afforded full opportunity to submit bids on this contract. Each bid must be accompanied by a bid security equivalent to ten percent of the bid amount and all additive alternates. The successful bidder must post a performance bond and payment bond in a sum equal to 100 percent of the contract price upon execution of the contract. The Owner reserves the right to reject any or all bids and to waive any informalities therein. The Owner may extend the time and place for the opening of the bids from that described in the advertisement, with not less than two calendar days notice by certified delivery, facsimile machine or other electronic means to those bidders receiving plans.

INSTRUCTIONS TO BIDDERS

TABLE OF ARTICLES

1. DEFINITIONS
2. BIDDER'S REPRESENTATION
3. BIDDING DOCUMENTS
4. BIDDING PROCEDURES
5. CONSIDERATION OF BIDS
6. POST-BID INFORMATION
7. PERFORMANCE BOND AND PAYMENT BOND
8. FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE 1: GENERAL

1.1 DEFINITIONS

1.1.1 Whenever the following terms are used, their intent and meaning shall be interpreted as follows:

1.2 STATE: The State of Delaware.

1.3 AGENCY: Contracting State Agency as noted on cover sheet.

1.4 DESIGNATED OFFICIAL: The agent authorized to act for the Agency.

1.5 BIDDING DOCUMENTS: Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bid, Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the Bid Form (including the Non-collusion Statement), and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, as well as the Drawings, Specifications (Project Manual) and all Addenda issued prior to execution of the Contract.

1.6 CONTRACT DOCUMENTS: The Contract Documents consist of the, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the form of agreement between the Owner and the Contractor, Drawings (if any), Specifications (Project Manual), and all addenda.

1.7 AGREEMENT: The form of the Agreement shall be AIA Document A101, Standard Form of Agreement between Owner and Contractor where the basis of payment is a STIPULATED SUM. In the case of conflict between the instructions contained therein and the General Requirements herein, these General Requirements shall prevail.

1.8 GENERAL REQUIREMENTS (or CONDITIONS): General Requirements (or conditions) are instructions pertaining to the Bidding Documents and to contracts in general. They contain, in summary, requirements of laws of the State; policies of the Agency and instructions to bidders.

1.9 SPECIAL PROVISIONS: Special Provisions are specific conditions or requirements peculiar to the bidding documents and to the contract under consideration and are supplemental to the General Requirements. Should the Special Provisions conflict with the General Requirements, the Special Provisions shall prevail.

1.10 ADDENDA: Written or graphic instruments issued by the Owner/Architect prior to the execution of the contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.11 BIDDER OR VENDOR: A person or entity who formally submits a Bid for the material or Work contemplated, acting directly or through a duly authorized representative who meets the requirements set forth in the Bidding Documents.

1.12 SUB-BIDDER: A person or entity who submits a Bid to a Bidder for materials or labor, or both for a portion of the Work.

1.13 BID: A complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

Indian River School District – IRD19002-SDSAROOF

- 1.14 **BASE BID:** The sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids (if any are required to be stated in the bid).
- 1.15 **ALTERNATE BID (or ALTERNATE):** An amount stated in the Bid, where applicable, to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents is accepted.
- 1.16 **UNIT PRICE:** An amount stated in the Bid, where applicable, as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- 1.17 **SURETY:** The corporate body which is bound with and for the Contract, or which is liable, and which engages to be responsible for the Contractor's payments of all debts pertaining to and for his acceptable performance of the Work for which he has contracted.
- 1.18 **BIDDER'S DEPOSIT:** The security designated in the Bid to be furnished by the Bidder as a guaranty of good faith to enter into a contract with the Agency if the Work to be performed or the material or equipment to be furnished is awarded to him.
- 1.19 **CONTRACT:** The written agreement covering the furnishing and delivery of material or work to be performed.
- 1.20 **CONTRACTOR:** Any individual, firm or corporation with whom a contract is made by the Agency.
- 1.21 **SUBCONTRACTOR:** An individual, partnership or corporation which has a direct contract with a contractor to furnish labor and materials at the job site, or to perform construction labor and furnish material in connection with such labor at the job site.
- 1.22 **CONTRACT BOND:** The approved form of security furnished by the contractor and his surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.

ARTICLE 2: BIDDER'S REPRESENTATIONS

- 2.1 **PRE-BID MEETING**
 - 2.1.1 A pre-bid meeting for this project will be held at the time and place designated. Attendance at this meeting is a pre-requisite for submitting a Bid, unless this requirement is specifically waived elsewhere in the Bid Documents.
- 2.2 By submitting a Bid, the Bidder represents that:
 - 2.2.1 The Bidder has read and understands the Bidding Documents and that the Bid is made in accordance therewith.
 - 2.2.2 The Bidder has visited the site, become familiar with existing conditions under which the Work is to be performed, and has correlated the Bidder's his personal observations with the requirements of the proposed Contract Documents.
 - 2.2.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.

2.3 JOINT VENTURE REQUIREMENTS

- 2.3.1 For Public Works Contracts, each Joint Venturer shall be qualified and capable to complete the Work with their own forces.
- 2.3.2 Included with the Bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Venturers involved.
- 2.3.3 All required Bid Bonds, Performance Bonds, Material and Labor Payment Bonds must be executed by both Joint Venturers and be placed in both of their names.
- 2.3.4 All required insurance certificates shall name both Joint Venturers.
- 2.3.5 Both Joint Venturers shall sign the Bid Form and shall submit a copy of a valid Delaware Business License with their Bid.
- 2.3.6 Both Joint Venturers shall include their Federal E.I. Number with the Bid.
- 2.3.7 In the event of a mandatory Pre-bid Meeting, each Joint Venturer shall have a representative in attendance.
- 2.3.8 Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the State.

2.4 ASSIGNMENT OF ANTITRUST CLAIMS

- 2.4.1 As consideration for the award and execution by the Owner of this contract, the Contractor hereby grants, conveys, sells, assigns and transfers to the State of Delaware all of its right, title and interests in and to all known or unknown causes of action it presently has or may now or hereafter acquire under the antitrust laws of the United States and the State of Delaware, relating to the particular goods or services purchased or acquired by the Owner pursuant to this contract.

ARTICLE 3: BIDDING DOCUMENTS

3.1 COPIES OF BID DOCUMENTS

- 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the Architectural/Engineering firm designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.
- 3.1.2 Bidders shall use complete sets of Bidding Documents for preparation of Bids. The issuing Agency nor the Architect assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 3.1.3 Any errors, inconsistencies or omissions discovered shall be reported to the Architect immediately.
- 3.1.4 The Agency and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall report any errors, inconsistencies, or ambiguities discovered to the Architect.
- 3.2.2 Bidders or Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least seven days prior to the date for receipt of Bids. Interpretations, corrections and changes to the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes to the Bidding Documents made in any other manner shall not be binding.
- 3.2.3 The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specification compliance will be the responsibility of the Bidder.
- 3.2.4 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all permits, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.
- 3.2.5 The Owner will bear the costs for all impact and user fees associated with the project.

3.3 SUBSTITUTIONS

- 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of quality, required function, dimension, and appearance to be met by any proposed substitution. The specification of a particular manufacturer or model number is not intended to be proprietary in any way. Substitutions of products for those named will be considered, providing that the Vendor certifies that the function, quality, and performance characteristics of the material offered is equal or superior to that specified. It shall be the Bidder's responsibility to assure that the proposed substitution will not affect the intent of the design, and to make any installation modifications required to accommodate the substitution.
- 3.3.2 Requests for substitutions shall be made in writing to the Architect at least ten days prior to the date of the Bid Opening. Such requests shall include a complete description of the proposed substitution, drawings, performance and test data, explanation of required installation modifications due the substitution, and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval shall be final. The Architect is to notify Owner prior to any approvals.
- 3.3.3 If the Architect approves a substitution prior to the receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding.
- 3.3.4 The Architect shall have no obligation to consider any substitutions after the Contract award.

3.4 ADDENDA

- 3.4.1 Addenda will be mailed or delivered to all who are known by the Architect to have received a complete set of the Bidding Documents.

Indian River School District – IRD19002-SDSAROOF

- 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- 3.4.3 No Addenda will be issued later than 4 days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of bids.
- 3.4.4 Each bidder shall ascertain prior to submitting his Bid that they have received all Addenda issued, and shall acknowledge their receipt in their Bid in the appropriate space. Not acknowledging an issued Addenda could be grounds for determining a bid to be non-responsive.

ARTICLE 4: BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- 4.1.1 Submit the bids on the Bid Forms included with the Bidding Documents.
- 4.1.2 Submit the original Bid Form for each bid. Bid Forms may be removed from the project manual for this purpose.
- 4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (typewriter or manually in ink).
- 4.1.4 Where so indicated by the makeup on the Bid Form, express sums in both words and figures, in case of discrepancy between the two, the written amount shall govern.
- 4.1.5 Interlineations, alterations or erasures must be initialed by the signer of the Bid.
- 4.1.6 **BID ALL REQUESTED ALTERNATES AND UNIT PRICES, IF ANY.** If there is no change in the Base Bid for an Alternate, enter "No Change". The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Work required by Addenda shall automatically become part of the Contract.
- 4.1.7 Make no additional stipulations on the Bid Form and do not qualify the Bid in any other manner.
- 4.1.8 Each copy of the Bid shall include the legal name of the Bidder and a statement whether the Bidder is a sole proprietor, a partnership, a corporation, or any legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current Power of Attorney attached, certifying agent's authority to bind the Bidder.
- 4.1.9 Bidder shall complete the Non-Collusion Statement form included with the Bid Forms and include it with their Bid.
- 4.1.10 In the construction of all Public Works projects for the State of Delaware or any agency thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State.
- 4.1.11 Each bidder shall include in their bid a copy of a valid Delaware Business License.'
- 4.1.12 Each bidder shall include a signed Affidavit for the Bidder certifying compliance with OMB Regulation 4104 - "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects." "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.

4.2 BID SECURITY

4.2.1 All bids shall be accompanied by a deposit of either a good and sufficient bond to the agency for the benefit of the agency, with corporate surety authorized to do business in this State, the form of the bond and the surety to be approved by the agency, or a security of the bidder assigned to the agency, for a sum equal to at least 10% of the bid plus all add alternates, or in lieu of the bid bond a security deposit in the form of a certified check, bank treasurer's check, cashier's check, money order, or other prior approved secured deposit assigned to the State. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. The Bid Bond form used shall be the standard OMB form (attached).

4.2.2 The Agency has the right to retain the bid security of Bidders to whom an award is being considered until either a formal contract has been executed and bonds have been furnished or the specified time has elapsed so the Bids may be withdrawn or all Bids have been rejected.

4.2.3 In the event of any successful Bidder refusing or neglecting to execute a formal contract and bond within 20 days of the awarding of the contract, the bid bond or security deposited by the successful bidder shall be forfeited.

4.3 SUBCONTRACTOR LIST

4.3.1 As required by Delaware Code, Title 29, section 6962(d)(10)b, each Bidder shall submit with their Bid a completed List of Sub-Contractors included with the Bid Form. NAME ONLY ONE SUBCONTRACTOR FOR EACH TRADE. A Bid will be considered non-responsive unless the completed list is included.

4.3.2 Provide the Name and Address for each listed subcontractor. Addresses by City, Town or Locality, plus State, will be acceptable.

4.3.3 It is the responsibility of the Contractor to ensure that their Subcontractors are in compliance with the provisions of this law. Also, if a Contractor elects to list themselves as a Subcontractor for any category, they must specifically name themselves on the Bid Form and be able to document their capability to act as Subcontractor in that category in accordance with this law.

4.4 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

4.4.1 During the performance of this contract, the contractor agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.

B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

4.5 PREVAILING WAGE REQUIREMENT

- 4.5.1 Wage Provisions: For renovation and new construction projects whose costs exceed the thresholds contained in Delaware Code, Title 29, Section 6960, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.
- 4.5.2 The employer shall pay all mechanics and labors employed directly upon the site of work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.
- 4.5.3 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.
- 4.5.4 Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.

4.6 SUBMISSION OF BIDS

- 4.6.1 Enclose the Bid, the Bid Security, and any other documents required to be submitted with the Bid in a sealed opaque envelope. Address the envelope to the party receiving the Bids. Identify with the project name, project number, and the Bidder's name and address. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. The State is not responsible for the opening of bids prior to bid opening date and time that are not properly marked.
- 4.6.2 Deposit Bids at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids. Bids received after the time and date for receipt of bids will be marked "LATE BID" and returned.
- 4.6.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.
- 4.6.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.
- 4.6.5 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids, provided that they are then fully in compliance with these Instructions to Bidders.

4.7 MODIFICATION OR WITHDRAW OF BIDS

- 4.7.1 Prior to the closing date for receipt of Bids, a Bidder may withdraw a Bid by personal request and by showing proper identification to the Architect. A request for withdraw by letter or fax, if the Architect is notified in writing prior to receipt of fax, is acceptable. A fax directing a modification in the bid price will render the Bid informal, causing it to be ineligible for consideration of award. Telephone directives for modification of the bid price shall not be permitted and will have no bearing on the submitted proposal in any manner.
- 4.7.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.

- 4.7.3 A Bid may not be modified, withdrawn or canceled by the Bidder during a thirty (30) day period following the time and date designated for the receipt and opening of Bids, and Bidder so agrees in submitting their Bid. Bids shall be binding for 30 days after the date of the Bid opening.

ARTICLE 5: CONSIDERATION OF BIDS

5.1 OPENING/REJECTION OF BIDS

- 5.1.1 Unless otherwise stated, Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids will be made available to Bidders.

- 5.1.2 The Agency shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

- 5.1.3 If the Bids are rejected, it will be done within thirty (30) calendar day of the Bid opening.

5.2 COMPARISON OF BIDS

- 5.2.1 After the Bids have been opened and read, the bid prices will be compared and the result of such comparisons will be made available to the public. Comparisons of the Bids may be based on the Base Bid plus desired Alternates. The Agency shall have the right to accept Alternates in any order or combination.

- 5.2.2 The Agency reserves the right to waive technicalities, to reject any or all Bids, or any portion thereof, to advertise for new Bids, to proceed to do the Work otherwise, or to abandon the Work, if in the judgment of the Agency or its agent(s), it is in the best interest of the State.

- 5.2.3 An increase or decrease in the quantity for any item is not sufficient grounds for an increase or decrease in the Unit Price.

- 5.2.4 The prices quoted are to be those for which the material will be furnished F.O.B. Job Site and include all charges that may be imposed during the period of the Contract.

- 5.2.5 No qualifying letter or statements in or attached to the Bid, or separate discounts will be considered in determining the low Bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into Unit Bid Price(s).

5.3 DISQUALIFICATION OF BIDDERS

- 5.3.1 An agency shall determine that each Bidder on any Public Works Contract is responsible before awarding the Contract. Factors to be considered in determining the responsibility of a Bidder include:

- A. The Bidder's financial, physical, personnel or other resources including Subcontracts;
- B. The Bidder's record of performance on past public or private construction projects, including, but not limited to, defaults and/or final adjudication or admission of violations of the Prevailing Wage Laws in Delaware or any other state;
- C. The Bidder's written safety plan;
- D. Whether the Bidder is qualified legally to contract with the State;

Indian River School District – IRD19002-SDSAROOF

- E. Whether the Bidder supplied all necessary information concerning its responsibility; and,
 - F. Any other specific criteria for a particular procurement, which an agency may establish; provided however, that, the criteria be set forth in the Invitation to Bid and is otherwise in conformity with State and/or Federal law.
- 5.3.2 If an agency determines that a Bidder is nonresponsive and/or nonresponsible, the determination shall be in writing and set forth the basis for the determination. A copy of the determination shall be sent to the affected Bidder within five (5) working days of said determination.
- 5.3.3 In addition, any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and the rejection of their Bid or Bids.
- 5.3.3.1 More than one Bid for the same Contract from an individual, firm or corporation under the same or different names.
 - 5.3.3.2 Evidence of collusion among Bidders.
 - 5.3.3.3 Unsatisfactory performance record as evidenced by past experience.
 - 5.3.3.4 If the Unit Prices are obviously unbalanced either in excess or below reasonable cost analysis values.
 - 5.3.3.5 If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning.
 - 5.3.3.6 If the Bid is not accompanied by the required Bid Security and other data required by the Bidding Documents.
 - 5.3.3.7 If any exceptions or qualifications of the Bid are noted on the Bid Form.
- 5.4 ACCEPTANCE OF BID AND AWARD OF CONTRACT
- 5.4.1 A formal Contract shall be executed with the successful Bidder within twenty (20) calendar days after the award of the Contract.
 - 5.4.2 Per Section 6962(d)(13) a., Title 29, Delaware Code, "The contracting agency shall award any public works contract within thirty (30) days of the bid opening to the lowest responsive and responsible Bidder, unless the Agency elects to award on the basis of best value, in which case the election to award on the basis of best value shall be stated in the Invitation To Bid."
 - 5.4.3 Each Bid on any Public Works Contract must be deemed responsive by the Agency to be considered for award. A responsive Bid shall conform in all material respects to the requirements and criteria set forth in the Contract Documents and specifications.
 - 5.4.4 The Agency shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid, plus accepted Alternates.

- 5.4.5 The successful Bidder shall execute a formal contract, submit the required Insurance Certificate, and furnish good and sufficient bonds, unless specifically waived in the General Requirements, in accordance with the General Requirement, within twenty (20) days of official notice of contract award. The successful Bidder shall provide, at least two business days prior to contract execution, copies of the Employee Drug Testing Program for the Bidder and all listed Subcontractors. Bonds shall be for the benefit of the Agency with surety in the amount of 100% of the total contract award. Said Bonds shall be conditioned upon the faithful performance of the contract. Bonds shall remain in affect for period of one year after the date of substantial completion.
- 5.4.6 If the successful Bidder fails to execute the required Contract, Bond and all required information, as aforesaid, within twenty (20) calendar days after the date of official Notice of the Award of the Contract, their Bid guaranty shall immediately be taken and become the property of the State for the benefit of the Agency as liquidated damages, and not as a forfeiture or as a penalty. Award will then be made to the next lowest qualified Bidder of the Work or readvertised, as the Agency may decide.
- 5.4.7 Each bidder shall supply with its bid its taxpayer identification number (i.e., federal employer identification number or social security number) and a copy of its Delaware business license, and should the vendor be awarded a contract, such vendor shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.
- 5.4.8 The Bid Security shall be returned to the successful Bidder upon the execution of the formal contract. The Bid Securities of unsuccessful bidders shall be returned within thirty (30) calendar days after the opening of the Bids.

ARTICLE 6: POST-BID INFORMATION

- 6.1 **CONTRACTOR'S QUALIFICATION STATEMENT**
- 6.1.1 Bidders to whom award of a Contract is under consideration shall, if requested by the Agency, submit a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a statement has been previously required and submitted.
- 6.2 **BUSINESS DESIGNATION FORM**
- 6.2.1 Successful bidder shall be required to accurately complete an Office of Management and Budget Business Designation Form for Subcontractors.

ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND

- 7.1 **BOND REQUIREMENTS**
- 7.1.1 The cost of furnishing the required Bonds, that are stipulated in the Bidding Documents, shall be included in the Bid.
- 7.1.2 If the Bidder is required by the Agency to secure a bond from other than the Bidder's usual sources, changes in cost will be adjusted as provide in the Contract Documents.

Indian River School District – IRD19002-SDSAROOF

7.1.3 The Performance and Payment Bond forms used shall be the standard OMB forms (attached).

7.2 TIME OF DELIVERY AND FORM OF BONDS

7.2.1 The bonds shall be dated on or after the date of the Contract.

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

ARTICLE 8: FORM OF AGREEMENT BETWEEN AGENCY AND CONTRACTOR

8.1 Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum.

END OF INSTRUCTIONS TO BIDDERS

**INDIAN RIVER SCHOOL DISTRICT – SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR
27 HOSIER STREET, SELBYVILLE, DE 19975
IRD19002-SDSAROOF**

BID FORM

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within _____ calendar days of the Notice to Proceed.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)
Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Affidavit of Employee Drug Testing Program
- Bid Security
- (Others as Required by Project Manuals)

**INDIAN RIVER SCHOOL DISTRICT – SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR
27 HOSIER STREET, SELBYVILLE, DE 19975
IRD19002-SDSAROOF**

BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, it is **required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work**. This form must be filled out completely with no additions or deletions.

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____

INDIAN RIVER SCHOOL DISTRICT – SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR
27 HOSIER STREET, SELBYVILLE, DE 19975
IRD19002-SDSAROOF

BID FORM
NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date *(to the Office of Management and Budget, Division of Facilities Management)*.

All the terms and conditions of *(Project or Contract Number)* have been thoroughly examined and are understood.

NAME OF BIDDER:

**AUTHORIZED REPRESENTATIVE
(TYPED):**

**AUTHORIZED REPRESENTATIVE
(SIGNATURE):**

TITLE:

ADDRESS OF BIDDER:

E-MAIL:

PHONE NUMBER:

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____ . NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**AFFIDAVIT
OF
EMPLOYEE DRUG TESTING PROGRAM**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors, that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____ NOTARY PUBLIC _____

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

INDIAN RIVER SCHOOL DISTRICT – SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR
27 HOSIER STREET, SELBYVILLE, DE 19975
IRD19002-SDSAROOF

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____
_____ of _____ in the County of _____
_____ and State of _____ as **Principal**, and _____
_____ of _____ in the County of _____
and State of _____ as **Surety**, legally authorized to do business in the State of Delaware
("State"), are held and firmly unto the State in the sum of _____
_____ Dollars (\$ _____), or _____ percent not to exceed _____
_____ Dollars (\$ _____)
of amount of bid on Contract No. _____, to be paid to the State for the use and
benefit of Indian River School District for which payment well and truly to be made, we do bind ourselves,
our and each of our heirs, executors, administrators, and successors, jointly and severally for and in the
whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bonded **Principal**
who has submitted to the Indian River School District a certain proposal to enter into this contract for the
furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said
Principal shall well and truly enter into and execute this Contract as may be required by the terms of this
Contract and approved by the Indian River School District this Contract to be entered into within twenty days
after the date of official notice of the award thereof in accordance with the terms of said proposal, then this
obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____ seal and dated this _____ day of _____ in the year of our Lord two
thousand and _____ (20____).

SEALED, AND DELIVERED IN THE
Presence of

_____ Name of Bidder (Organization)
Corporate Seal By: _____ Authorized Signature
Attest _____ Title
_____ Name of Surety
Witness: _____ By: _____
_____ Title

**INDIAN RIVER SCHOOL DISTRICT – SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF
REPAIR
27 HOSIER STREET, SELBYVILLE, DE 19975
IRD19002-SDSAROOF**

**STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR A101-
2017**

The contract to be utilized on this project shall be the "Standard Form of Agreement Between Owner and Contractor" AIA Document A101-2017, including AIA Document A101 – 2017 Exhibit A, as well as Supplements to A101-2017 and Exhibit A and the State of Delaware's General Requirements.

SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR A101-2017

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2017. Where a portion of the Standard Form of Agreement is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement shall remain in effect.

ARTICLE 3: DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

3.1 Delete paragraph 3.1 in its entirety and replace with the following:

"The date of Commencement of the Work shall be a date set forth in a notice to proceed issued by the Owner."

ARTICLE 5: PAYMENTS

5.1 PROGRESS PAYMENTS

5.1.3 Delete paragraph 5.1.3 in its entirety and replace with the following:

"Provided that a valid Application for Payment is received by the Architect that meets all requirements of the Contract, payment shall be made by the Owner not later than 30 days after the Owner receives the valid Application for Payment."

5.3 Insert the interest rate of "1% per month not to exceed 12% per annum."

ARTICLE 6: DISPUTE RESOLUTION

6.2 BINDING DISPUTE RESOLUTION

Check Other – and add the following sentence:

"Any remedies available in law or in equity."

ARTICLE 7: TERMINATION or SUSPENSION

7.1.1 Delete paragraph 7.1.1 in its entirety.

ARTICLE 8: MISCELLANEOUS PROVISIONS

8.4 Delete paragraph 8.4 in its entirety and replace with the following:

"The Contractor's representative shall not be changed without ten days written notice to the Owner."

END OF SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

SUPPLEMENT TO A101-2017 – EXHIBIT A INSURANCE AND BONDS

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2017 Exhibit A Insurance and Bonds. Where a portion of the Standard Form of Agreement is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement shall remain in effect.

ARTICLE A.2 OWNER'S INSURANCE

A.2.1 General

Delete paragraph A.2.1 in its entirety.

A.2.2 Liability Insurance

Delete paragraph A.2.2 in its entirety, except in the case of school projects this paragraph shall remain.

A.2.3 Required Property Insurance

Delete paragraph A.2.3 in its entirety.

A.2.4 Optional Extended Property Insurance

Delete paragraph A.2.4 in its entirety.

A.2.5 Other Optional Insurance

Delete paragraph A.2.5 in its entirety.

ARTICLE A.3 CONTRACTORS INSURANCE AND BONDS

A.3.1.3 Additional Insured Obligations

In the first sentence after "coverage to include (1)" delete "(1) the Owner,".

Strike the remainder of the first sentence beginning at the semicolon "; and (2) the Owner" through the end of the sentence.

Delete the second sentence in its entirety.

A.3.3.2.1 Delete paragraph 3.3.2.1 in its entirety and replace with the following:

Property Insurance of the same type and scope satisfying the requirements identified in Section A.2.3, The Contractor shall comply with all obligations of the Owner under A.2.3 except to the extent provided below. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required.

**INDIAN RIVER SCHOOL DISTRICT
SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR**

PERFORMANCE BOND

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal (“**Principal**”), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the Indian River School District (“**Owner**”), in the amount of _____ (\$_____), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole, firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20__.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. _____ dated the _____ day of _____, 20__ (the “**Contract**”), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse **Owner** sufficient funds to pay the costs of completing the Contract that **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, hereby stipulates and agrees, if requested to do so by **Owner**, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause **Principal** fails or neglects to so fully perform and complete such work.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Address: _____

By: _____ (SEAL)

Name:

Title:

Witness or Attest:

Name:

(Corporate Seal)

SURETY

Name: _____

Address: _____

By: _____ (SEAL)

Name:

Title:

Witness or Attest:

Name:

(Corporate Seal)

**INDIAN RIVER SCHOOL DISTRICT
SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR**

PAYMENT BOND

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal (“**Principal**”), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the Indian River School District (“**Owner**”), in the amount of _____ (\$ _____), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20__.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. _____ dated the _____ day of _____, 20__ (the “**Contract**”), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him, her, them or any of them, for all such materials, labor and service for which **Principal** is liable, shall make good and reimburse **Owner** sufficient funds to pay such costs in the completion of the Contract as **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

Surety hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Address: _____

Witness or Attest:

Name:

(Corporate Seal)

By: _____ (SEAL)

Name:

Title:

SURETY

Name: _____

Address: _____

Witness or Attest:

Name:

(Corporate Seal)

By: _____ (SEAL)

Name:

Title:

Indian River School District – IRD19002-SDSAROOF

APPLICATION AND CERTIFICATE FOR PAYMENT FORMS G702-1992 & G703-1992

The application and certificate for payment forms to be utilized on the project shall be the “Application and Certificate for Payment forms” AIA G702-1992 and AIA G703-1992.

**INDIAN RIVER SCHOOL DISTRICT
SOUTHERN DELAWARE SCHOOL OF THE ARTS ROOF REPAIR
IRD19002-SDSAROOF**

GENERAL CONDITIONS

TO THE

CONTRACT

The General Conditions of this Contract are as stated in the American Institute of Architects Document AIA A201 (2017 Edition) entitled General Conditions of the Contract for Construction as revised by the Supplementary General Conditions and is part of this project manual as if herein written in full.

SUPPLEMENTARY GENERAL CONDITIONS A201-2017

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201-2017. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

ARTICLE 1: GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Strike the last sentence of Section 1.1.1 in its entirety and replace with the following:

“The Contract Documents also include Advertisement for Bid, Instructions to Bidder, sample forms, the Bid Form, the Contractor’s completed Bid and the Award Letter.”

Add the following Section:

“1.1.1.1 In the event of conflict or discrepancies among the Contract Documents, the Documents prepared by the State of Delaware, Division of Facilities Management shall take precedence over all other documents.”

1.1.8 INITIAL DECISION MAKER

Strike the last sentence of Section 1.1.8 in its entirety and add the following to the end of the remaining sentence:

“ and certify termination of the Agreement under Section14.2.2.”

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

1.2.1.1 Insert “if possible” at the end of the second sentence.

Add the following Sections:

“1.2.4 In the case of an inconsistency between the Drawings and the Specifications, or within either document not clarified by addendum, the better quality or greater quantity of work shall be provided in accordance with the Architect’s interpretation.”

“1.2.5 The word “PROVIDE” as used in the Contract Documents shall mean “FURNISH AND INSTALL” and shall include, without limitation, all labor, materials, equipment, transportation, services and other items required to complete the Work.”

“1.2.6 The word “PRODUCT” as used in the Contract Documents means all materials, systems and equipment.”

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

Strike Section 1.5.1 in its entirety and replace with the following:

“All pre-design studies, drawings, specifications and other documents, including those in electronic form, prepared by the Architect under this Agreement are, and shall remain, the property of the Owner whether the Project for which they are made is executed or not. Such documents may be used by the Owner to construct one or more like Projects without the approval of, or additional compensation to, the Architect. The Contractor, Subcontractors, Sub-subcontractors, and Material or Equipment Suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect’s consultants appropriate to and

Indian River School District – IRD19002-SDSAROOF

for use in the execution of their Work under the Contract Documents. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or Material and Equipment Supplier on other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and Architect's consultants.

The Architect shall not be liable for injury or damage resulting from the re-use of drawings and specifications if the Architect is not involved in the re-use Project. Prior to re-use of construction documents for a Project in which the Architect is not also involved, the Owner will remove from such documents all identification of the original Architect, including name, address and professional seal or stamp."

Strike Section 1.5.2 in its entirety.

1.7 DIGITAL DATA USE AND TRANSMISSION

Strike Section 1.7 in its entirety and replace with the following:

"The parties shall agree upon protocols governing transmission and use of Instruments of Service or any other information or documentation in digital form."

1.8 BUILDING INFORMATION MODELS USE AND RELIANCE

Strike Section 1.8 in its entirety.

ARTICLE 2: OWNER

2.2 EVIDENCE OF THE OWNERS FINANCIAL ARRANGEMENTS

Strike Section 2.2 in its entirety.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.3.3 Strike 2.3.3 in its entirety.

2.3.4 Add the following sentence at the end of the paragraph:

"The Contractor, at their expense shall bear the costs to accurately identify the location of all underground utilities in the area of their excavation and shall bear all cost for any repairs required, out of failure to accurately identify said utilities."

Strike Section 2.3.6 in its entirety and replace with the following:

"2.3.6 The Contractor shall be furnished free of charge (1) electronic set of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling."

2.5 OWNER'S RIGHT TO CARRY OUT THE WORK

Add ", except as outlined in Section 3.15" after the reference to "Article 15" at the end of the last sentence of the Section.

ARTICLE 3: CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.2 Add “and Owner” after “report to the Architect” in the second sentence.

3.2.4 Strike “subject to Section 15.1.7” in the second sentence.

3.2.4 Strike the third sentence.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Sections:

“3.3.2.1 The Contractor shall immediately remove from the Work, whenever requested to do so by the Owner, any person who is considered by the Owner or Architect to be incompetent or disposed to be so disorderly, or who for any reason is not satisfactory to the Owner, and that person shall not again be employed on the Work without the consent of the Owner or the Architect.”

“3.3.4 The Contractor must provide suitable storage facilities at the Site for the proper protection and safe storage of their materials, or as otherwise identified by the specifications. Consult the Owner and the Architect before storing any materials.”

“3.3.5 When any room is used as a shop, storeroom, office, etc., by the Contractor or Subcontractor(s) during the construction of the Work, the Contractor making use of these areas will be held responsible for any repairs, patching or cleaning arising from such use.”

3.4 LABOR AND MATERIALS

Add the Following Sections:

“3.4.4 Before starting the Work, each Contractor shall carefully examine all preparatory Work that has been executed to receive their Work. Check carefully, by whatever means are required, to insure that its Work and adjacent, related Work, will finish to proper contours, planes and levels. Promptly notify the Architect & Owner of any defects or imperfections in preparatory Work which will in any way affect satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects will not be recognized.”

“3.4.5 Under no circumstances shall the Contractor’s Work proceed prior to preparatory Work having been completely cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with the Contractor responsible for that Work, who shall maintain coordination at all times.”

3.5 WARRANTY

Add the following Sections:

“3.5.3 The Contractor will guarantee all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of warranty.”

Indian River School District – IRD19002-SDSAROOF

"3.5.4 Defects appearing during the period of warranty will be made good by the Contractor at his expense upon demand of the Owner, it being required that all work will be in perfect condition when the period of warranty will have elapsed."

"3.5.5 Upon notification by the Owner of a defect covered by the Contractor's warranty, the Contractor shall respond within 4 hours of the notification."

"3.5.6 In addition to the General Warranty there are other warranties required for certain items for different periods of time than the two years as above, and are particularly so stated in that part of the specifications referring to same. The said warranties will commence at the same time as the General Warranty."

"3.5.7 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor's expense."

3.8 ALLOWANCES

Add the following Section:

"3.8.1.1 For costs to be covered under a project allowance, (included in the schedule of values) the Contractor shall submit a summary of those costs anticipated and an Allowance Access Authorization Form to the Architect and Owner, reflecting the projected costs. The Allowance Access Authorization Form must be signed by the Owner prior to initiating any work associated with the allowance."

3.10 CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

3.10.1 Add "estimated" after "and the" and before "date of" in the second sentence.

3.10.2 Strike "and thereafter as necessary to maintain a current submittal schedule" in the first sentence.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Sections:

"3.11.1 During the course of the Work, the Contractor shall maintain a record set of drawings on which the Contractor shall mark the actual physical location of all piping, valves, equipment, conduit, outlets, access panels, controls, actuators, including all appurtenances that will be concealed once construction is complete, etc., including all invert elevations."

"3.11.2 At the completion of the project, the Contractor shall obtain a set of the conformed contract drawings from the Architect, and neatly transfer all information outlined in 3.11.1 to provide a complete record of the as-built conditions."

"3.11.3 Upon completion of the work noted in 3.11.2 the contractor shall schedule a meeting with the Architect/Engineer and Owner to review the final record drawings and closeout documents prior to submission. After this meeting the Contractor shall make adjustments per the review, and submit one (1) original markup and (2) copies of the red line drawings (as-built conditions, to the Owner and one (1) print to the Architect. In addition, attach one complete set of the as-built documents to each of the Operating and Maintenance Instructions/Manuals. The Contractor will include (2) USB drives, each

Indian River School District – IRD19002-SDSAROOF

containing all “red line drawings (as-built) and Closeout Documents properly tabbed in accordance with closeout requirements as defined elsewhere in the contract documents.”

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.10.2 Strike “If the Contract Documents require” from the beginning of the sentence.

3.12.10.2 Strike “to” between “professional” and certify” and replace with “shall”.

3.17 Insert “indemnify and” between “shall” and “hold” in the second sentence.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 ADMINISTRATION OF THE CONTRACT

4.2.7 Strike the first sentence and replace with the following:

“The Architect will review and approve or take other appropriate action upon the Contractor’s submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.”

4.2.7 Strike the second sentence and replace with the following:

“The Architect’s action will be taken with such reasonable promptness as to cause no delay in the Work in the activities of the Owner, Contractor or separate Contractors, while allowing sufficient time in the Owner’s professional judgment to permit adequate review.”

Add the following Section:

“4.2.10.1 There will be no full-time Project Representative provided by the Owner or Architect on this project.”

“4.2.13 Add “and in compliance with all local requirements.” to the end of the sentence.”

ARTICLE 5: SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.3 Strike Section 5.2.3 in its entirety and replace with the following:

“If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection, subject to the statutory requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4.”

5.2.4 Strike Section 5.2.4 in its entirety and replace with the following:

“The Contractor may not substitute any Subcontractor listed in its Bid unless the Contractor complies with the requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4. Failure to comply with this requirement shall subject the Contractor to a penalty as outlined in Section 5.2 of the Owner’s General Requirements.”

Indian River School District – IRD19002-SDSAROOF

Add the following Section:

“5.2.5 The Contractor shall comply and shall ensure all Subcontractors comply with all requirements for drug testing as set forth in TITLE 19 LABOR DELAWARE ADMINISTRATIVE CODE 4000 Office of Management and Budget 4100 Division of Facilities Management 4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects.”

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Strike “and waiver of subrogation” from the end of the second sentence.

6.1.4 Strike Section 6.1.4 in its entirety.

6.2 MUTUAL RESPONSIBILITY

6.2.3 Strike “shall” and replace with “may” in the second sentence.

ARTICLE 7: CHANGES IN THE WORK

(SEE ARTICLE 7: CHANGES IN WORK IN THE STATE OF DELAWARE DIVISION OF FACILITIES MANAGEMENT GENERAL REQUIREMENTS)

7.3.4.1 Strike “and other employee costs approved by the Architect” after “worker's compensation insurance,”

7.3.4.4 Add “work attributable to the” before “change” at the end of the sentence.

7.4 MINOR CHANGES IN WORK

Add “unless such changes are approved” at the end of the third sentence.

ARTICLE 8: TIME

8.2 PROGRESS AND COMPLETION

8.2.1 Add the following Section:

“8.2.1.1 Refer to Project Specifications Section SUMMARY OF WORK for Contract time requirements.”

8.2.2 After “by the Contractor” strike “and” and insert “to”.

8.2.4 Add the following Section:

“8.2.4 If the Work falls behind the Progress Schedule as submitted by the Contractor, the Contractor shall employ additional labor and/or equipment necessary to bring the Work into compliance with the Progress Schedule at no additional cost to the Owner.”

Indian River School District – IRD19002-SDSAROOF

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 Strike “binding dispute resolution” and insert “any and all remedies at law or in equity”.

Add the following Section:

“8.3.2.1 The Contractor shall update the status of the suspension, delay, or interruption of the Work with each Application for Payment. (The Contractor shall report the termination of such cause immediately upon the termination thereof.) Failure to comply with this procedure shall constitute a waiver for any claim for adjustment of time or price based upon said cause.”

Strike Section 8.3.3 in its entirety and replace with the following:

8.3.3 “Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Section 8.3.1 shall be the Contractor's sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.”

Add the following Section:

“8.3.4 By permitting the Contractor to work after the expired time for completion of the project, the Owner does not waive their rights under the Contract.”

ARTICLE 9: PAYMENTS AND COMPLETION

9.2 SCHEDULE OF VALUES

Add the following Sections:

“9.2.1 The Schedule of Values shall be submitted using AIA Document G703, Continuation Sheet to G702.”

“9.2.2 The Schedule of Values is to include a line item for Project Closeout Document Submittal. The value of this item is to be no less than 1.5% of the initial contract amount.”

9.3 APPLICATIONS FOR PAYMENT

9.3.1 Strike Section 9.3.1 in its entirety and replace with the following:

“At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values for completed portions of the Work. The application shall be notarized, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage.”

Add the following Sections:

“9.3.1.3 Application for Payment shall be submitted on AIA Document G702 “Application and Certificate for Payment”, supported by AIA Document G703 “Continuation Sheet”. Said Applications shall be fully executed and notarized.”

Indian River School District – IRD19002-SDSAROOF

“9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.”

“9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.”

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following Subsections to 9.5.1:

- .8 failure to provide a current Progress Schedule;
- .9 a lien or attachment is filed;
- .10 failure to comply with mandatory requirements for maintaining Record Documents.

9.6 PROGRESS PAYMENTS

9.6.1 Strike Section 9.6.1 in its entirety and replace with the following:

“9.6.1 After the Architect has approved and issued a Certificate for Payment, payment shall be made by the Owner within 30 days after Owner’s receipt of the Certificate for Payment.”

9.6.8 Strike “Provided the Owner has fulfilled its payment obligations under the Contract Documents,” in the first sentence.

9.7 FAILURE OF PAYMENT

Strike Section 9.7 in its entirety and replace with the following:

“If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within fourteen days after receipt of the Contractor’s Application for Payment, or if the Owner does not pay the Contractor within thirty days after the date established in the Contract Documents, the amount certified by the Architect, then the Contractor may, upon thirty additional days’ notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor’s reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.”

9.8 SUBSTANTIAL COMPLETION

9.8.3 At the end of Section 9.8.3, add the following sentence:

“If the Architect is required to make more than 2 inspections of the same portion of work, the Contractor shall be responsible for all costs associated with subsequent inspections including but not limited to any Architect’s fees.”

9.8.5 Strike “shall” and insert “may” in the second sentence.

9.8.5 Insert “1/2 of the” after “make payment of” in the second sentence.

Indian River School District – IRD19002-SDSAROOF

9.9 PARTIAL OCCUPANCY OR USE

- 9.9.1 Strike the the first sentence and replace with the following (the remainder of the Section remains as written):
"The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use authorized by public authorities having jurisdiction over the Project."
- 9.10.2 Strike "to remain in force after final payment is currently in effect" after "required by the Contract Documents" and replace with "shall remain in force until final payment is completed" in the first sentence.
- 9.10.4.4 Strike "if permitted by the Contract Documents,"

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Sections:

- 10.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner and Architect prior to the commencement of that Contractor's Work.
- 10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full time basis. If deemed necessary by the Owner or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Section:

- 10.2.4.1 As required in the Hazardous Chemical Act of June 1984, all vendors supplying any material that may be defined as hazardous must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a caution warning on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in foreseeable emergency situations. Material Safety Data Sheets shall be provided directly to the Owner, along with the shipping slips that include those products.
- 10.2.5 Strike the second sentence in its entirety.
- ### 10.3 HAZARDOUS MATERIALS AND SUBSTANCES
- 10.3.3 Strike Section 10.3.3 in its entirety.
- 10.3.4 Insert "hazardous" in the last sentence after "handling of such" .
- 10.3.6 Strike Section 10.3.6 in its entirety.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S INSURANCE AND BONDS

11.1.1 Strike "Owner" from the the third sentence .

11.2 OWNER'S LIABILITY INSURANCE

Strike 11.2 in its entirety, except that in the case of school projects in which case Section 11.2 shall remain.

11.3 WAIVERS OF SUBROGATION

Delete Section 11.3 in its entirety

11.4 LOSS OF USE, BUSINESS INTERRUPTION, AND DELAY IN COMPLETION INSURANCE

Delete Section 11.4 in its entirety

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.2.2 AFTER SUBSTANTIAL COMPLETION

Add the following Section:

"12.2.2.1.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as it considers justified to adjust the difference in value between the non-conforming work and that required under contract including any damage to the structure."

12.2.2.1 Strike all references to "one year" or "one-year" and replace with "two years".

12.2.2.2 Strike "one-year" and replace with "two years".

12.2.2.3 Strike "one-year" and replace with "two years".

12.2.5 Strike "one-year" and replaced with "two years".

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Strike the last sentence.

13.4 TESTS AND INSPECTIONS

13.4.1 Strike the last sentence and replace with the following:

"The Owner shall pay for tests, inspections, or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor."

Indian River School District – IRD19002-SDSAROOF

13.5 INTEREST

Strike "the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located" and replace with "30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month."

Insert the following Section:

"13.6 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

13.6.1 If any provision, specifications or requirement of the Contract Documents conflict or is inconsistent with any statute, law or regulation of the government of the United State of America, the Contractor shall notify the Architect and Owner immediately upon discovery."

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1.4 Insert ", upon the Contractors' request," after "'furnish to the Contractor" .

14.1.3 Strike "and profit on Work not executed, and" after "as well as reasonable overhead" and replace with ", profit, and reasonable"

14.3 SUSPENSION BY OWNER FOR CONVENIENCE

14.3.2 Strike "Adjustment of the Contract Sum shall include profit".

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

14.4.3 Strike Section 14.4.3 in its entirety and replace with the following:

"In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and reasonable costs incurred by reason of such termination along with reasonable overhead."

ARTICLE 15: CLAIMS AND DISPUTES

15.1 CLAIMS

15.1.2 TIME LIMITS ON CLAIMS

Strike the last sentence.

15.1.3 NOTICE OF CLAIM

Strike all references to "21" and replace with "45".

15.1.5 CLAIMS FOR ADDITIONAL COSTS

Strike the first sentence and replace with the following:

Indian River School District – IRD19002-SDSAROOF

“Contractor shall not proceed to execute any portion of the Work that is subject to the Claim without prior approval of the costs or method of payment for the costs associated with the Claim as determined by the Architect and approved by the Owner.”

15.1.7 WAIVER OF CLAIMS FOR CONSEQUENTIAL DAMAGES

Strike Section 15.1.7 in its entirety.

15.2 INITIAL DECISION

15.2.1 Strike “and binding dispute resolution” in the fourth sentence and replace with “or any and all remedies at law or in equity”.

15.2.5 Strike Section 15.2.5 in its entirety and replace with the following:

“The Architect will approve or reject Claims by written decision, which shall state the reasons therefore and shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be subject to mediation and any or all remedies at law or in equity.”

15.2.6 Strike Section 15.2.6 and its subSections in their entirety.

15.3 MEDIATION

15.3.1 Strike “binding dispute resolution” and replace with “any or all remedies at law or in equity”.

15.3.2 Strike “, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement,” in the first sentence.

15.3.2 Strike all references to “binding dispute resolution” and replace with “any or all remedies at law and in equity”.

15.3.3 Strike Section 15.3.3 in its entirety.

15.4 ARBITRATION

Strike Section 15.4 and its Subsections in their entirety.

END OF SUPPLEMENTARY GENERAL CONDITIONS

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 761-8200

Mailing Address:
4425 North Market Street
3rd Floor
Wilmington, DE 19802

Located at:
4425 North Market Street
3rd Floor
Wilmington, DE 19802

PREVAILING WAGES FOR BUILDING CONSTRUCTION EFFECTIVE MARCH 15, 2019

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	23.92	29.46	42.87
BOILERMAKERS	71.61	36.33	53.41
BRICKLAYERS	55.89	55.89	55.89
CARPENTERS	55.63	55.63	44.22
CEMENT FINISHERS	75.54	52.62	23.19
ELECTRICAL LINE WORKERS	47.57	40.79	31.10
ELECTRICIANS	70.49	70.49	70.49
ELEVATOR CONSTRUCTORS	96.27	67.47	33.42
GLAZIERS	75.65	75.65	59.28
INSULATORS	57.88	57.88	57.88
IRON WORKERS	65.57	65.57	65.57
LABORERS	47.70	47.70	47.70
MILLWRIGHTS	74.23	74.23	59.84
PAINTERS	52.47	52.47	52.47
PILEDRIVERS	78.02	41.17	33.30
PLASTERERS	31.22	31.22	23.14
PLUMBERS/PIPEFITTERS/STEAMFITTERS	70.05	55.29	60.31
POWER EQUIPMENT OPERATORS	71.29	71.29	71.29
ROOFERS-COMPOSITION	25.12	24.79	22.64
ROOFERS-SHINGLE/SLATE/TILE	19.24	22.88	17.99
SHEET METAL WORKERS	72.53	72.53	72.53
SOFT FLOOR LAYERS	53.39	53.39	53.39
SPRINKLER FITTERS	60.04	60.04	60.04
TERRAZZO/MARBLE/TILE FNRS	64.45	64.45	64.45
TERRAZZO/MARBLE/TILE STRS	71.27	71.27	71.27
TRUCK DRIVERS	32.19	28.70	21.91

CERTIFIED: 03/15/2019

BY: *Lucas Ryan* on behalf of Julie Petroff
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 761-8200

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

THESE RATES ARE BEING PROVIDED IN ACCORDANCE WITH DELAWARE'S FREEDOM OF INFORMATION ACT.

THEY ARE NOT INTENDED TO APPLY TO ANY SPECIFIC PROJECT.

GENERAL REQUIREMENTS

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

ARTICLE 1: GENERAL

1.1 CONTRACT DOCUMENTS

1.1.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to an extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.1.2 Work including material purchases shall not begin until the Contractor is in receipt of a bonafide State of Delaware Purchase Order. Any work performed or material purchases prior to the issuance of the Purchase Order is done at the Contractor's own risk and cost.

1.2 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

1.2.1 For Public Works Projects financed in whole or in part by state appropriation the Contractor agrees that during the performance of this contract:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

ARTICLE 2: OWNER

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

ARTICLE 3: CONTRACTOR

3.1 Schedule of Values: The successful Bidder shall within twenty (20) days after receiving notice to proceed with the work, furnish to the Owner a complete schedule of values on the various items comprising the work.

3.2 Subcontracts: Upon approval of Subcontractors, the Contractor shall award their Subcontracts as soon as possible after the signing of their own contract and see that all material, their own and those of their Subcontractors, are promptly ordered so that the work will not be delayed by failure of materials to arrive on time.

3.3 Before commencing any work or construction, the General Contractor is to consult with the Owner as to matters in connection with access to the site and the allocation of Ground Areas for the various features of hauling, storage, etc.

Indian River School District – IRD19002-SDSAROOF

- 3.4 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions.
- 3.5 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 3.6 The Contractor warrants to the Owner that materials and equipment furnished will be new and of good quality, unless otherwise permitted, and that the work will be free from defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved, may be considered defective. If required by the Owner, the Contractor shall furnish evidence as to the kind and quality of materials and equipment provided.
- 3.7 Unless otherwise provided, the Contractor shall pay all sales, consumer, use and other similar taxes, and shall secure and pay for required permits, fees, licenses, and inspections necessary for proper execution of the Work.
- 3.8 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the Owner if the Drawings and Specifications are observed to be at variance therewith.
- 3.9 The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under contract with the Contractor.
- 3.10 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged areas to their original conditions.
- 3.11 STATE LICENSE AND TAX REQUIREMENTS
- 3.11.1 Each Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay all fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the Delaware Department of Finance within ten (10) days after entering into any contract with a contractor or subcontractor not a resident of this State, a statement of total value of such contract or contracts together with the names and addresses of the contracting parties."
- 3.12 The Contractor shall comply with all requirements set forth in Section 6962, Chapter 69, Title 29 of the Delaware Code.

Indian River School District – IRD19002-SDSAROOF

- 3.13 During the contract Work, the Contractor and each Subcontractor, shall implement an Employee Drug Testing Program in accordance with OMB Regulation 4104 - "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects". "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.1 CONTRACT SURETY

4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

- 4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.

- 4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the proposal, plans, specifications, and bid documents thereof. Each term and condition shall be met at the time and in the manner prescribed by the Contract, Bid documents and the specifications, including the payment in full to every person furnishing material or performing labor in the performance of the Contract, of all sums of money due the person for such labor and material. (The bond shall also contain the successful bidder's guarantee to indemnify and save harmless the State and the agency from all costs, damages and expenses growing out of or by reason of the Contract in accordance with the Contract.)

- 4.1.4 Invoking a Performance Bond – The agency may, when it considers that the interest of the State so requires, cause judgement to be confessed upon the bond.

- 4.1.5 Within twenty (20) days after the date of notice of award of contract, the Bidder to whom the award is made shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the full amount of the Contract price to guarantee the faithful performance of all terms, covenants and conditions of the same. The bonds are to be issued by an acceptable Bonding Company licensed to do business in the State of Delaware and shall be issued in duplicate.

- 4.1.6 Performance and Payment Bonds shall be maintained in full force (warranty bond) for a period of two (2) years after the date of the Certificate for Final Payment. The Performance Bond shall guarantee the satisfactory completion of the Project and that the Contractor will make good any faults or defects in his work which may develop during the period of said guarantees as a result of improper or defective workmanship, material or apparatus, whether furnished by themselves or their Sub-Contractors. The Payment Bond shall guarantee that the Contractor shall pay in full all persons, firms or corporations who furnish labor or material or both labor and material for, or on account of, the work included herein. The bonds shall be paid for by this Contractor. The Owner shall have the right to demand that the proof parties signing the bonds are duly authorized to do so.

Indian River School District – IRD19002-SDSAROOF

4.2 FAILURE TO COMPLY WITH CONTRACT

4.2.1 If any firm entering into a contract with the State, or Agency that neglects or refuses to perform or fails to comply with the terms thereof, the Agency which signed the Contract may terminate the Contract and proceed to award a new contract in accordance with this Chapter 69, Title 29 of the Delaware Code or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond. Nothing herein shall preclude the Agency from pursuing additional remedies as otherwise provided by law.

4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY

4.3.1 In addition to the bond requirements stated in the Bid Documents, each successful Bidder shall purchase adequate insurance for the performance of the Contract and, by submission of a Bid, agrees to indemnify and save harmless and to defend all legal or equitable actions brought against the State, any Agency, officer and/or employee of the State, for and from all claims of liability which is or may be the result of the successful Bidder's actions during the performance of the Contract.

4.3.2 The purchase or nonpurchase of such insurance or the involvement of the successful Bidder in any legal or equitable defense of any action brought against the successful Bidder based upon work performed pursuant to the Contract will not waive any defense which the State, its agencies and their respective officers, employees and agents might otherwise have against such claims, specifically including the defense of sovereign immunity, where applicable, and by the terms of this section, the State and all agencies, officers and employees thereof shall not be financially responsible for the consequences of work performed, pursuant to said contract.

4.4 RIGHT TO AUDIT RECORDS

4.4.1 The Owner shall have the right to audit the books and records of a Contractor or any Subcontractor under any Contract or Subcontract to the extent that the books and records relate to the performance of the Contract or Subcontract.

4.4.2 Said books and records shall be maintained by the Contractor for a period of seven (7) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of seven (7) years from the date of final payment under the Subcontract.

ARTICLE 5: SUBCONTRACTORS

5.1 SUBCONTRACTING REQUIREMENTS

5.1.1 All contracts for the construction, reconstruction, alteration or repair of any public building (not a road, street or highway) shall be subject to the following provisions:

1. A contract shall be awarded only to a Bidder whose Bid is accompanied by a statement containing, for each Subcontractor category, the name and address (city or town and State only – street number and P.O. Box addresses not required) of the subcontractor whose services the Bidder intends to use in performing the Work and providing the material for such Subcontractor category.

Indian River School District – IRD19002-SDSAROOF

2. A Bid will not be accepted nor will an award of any Contract be made to any Bidder which, as the Prime Contractor, has listed itself as the Subcontractor for any Subcontractor unless:
 - A. It has been established to the satisfaction of the awarding Agency that the Bidder has customarily performed the specialty work of such Subcontractor category by artisans regularly employed by the Bidder's firm;
 - B. That the Bidder is duly licensed by the State to engage in such specialty work, if the State requires licenses; and
 - C. That the Bidder is recognized in the industry as a bona fide Subcontractor or Contractor in such specialty work and Subcontractor category.

5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.

5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.

5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:

- A. Is unqualified to perform the work required;
- B. Has failed to execute a timely reasonable Subcontract;
- C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
- D. Is no longer engaged in such business.

5.1.5 Should a Bidder be awarded a contract, such successful Bidder shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

5.1.6 The Contractor may employ additional Subcontractors on the jobsite only after submitting a copy of the Subcontractor's Employee Drug Testing Program to the Owner for approval. A Contractor or Subcontractor shall not commence work until the Owner has concluded its review and determined that the submitted Employee Drug Testing Program complies with OMB Regulation 4104.

Indian River School District – IRD19002-SDSAROOF

5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS

5.2.1 Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount*). The Agency may determine to deduct payments of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the contractor shall be reverted to the State.

*one (1) percent of contract amount not to exceed \$10,000

5.3 ASBESTOS ABATEMENT

5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.

5.4 STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED

5.4.1 All Contracts shall conform with the standard established by the Delaware Architectural Accessibility Board unless otherwise exempted by the Board.

5.5 CONTRACT PERFORMANCE

5.5.1 Any firm entering into a Public Works Contract that neglects or refuses to perform or fails to comply with its terms, the Agency may terminate the Contract and proceed to award a new Contract or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond.

ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS

6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.

6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

ARTICLE 7: CHANGES IN THE WORK

7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.

Indian River School District – IRD19002-SDSAROOF

- 7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.
- 7.3 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.
- 7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes prevailing wage rates plus a maximum multiplier of 1.35 times DPE. For example, if the prevailing wage rate is \$50/hour, the DPE would be \$67.50/hour (50 x 1.35).
- 7.3.2 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.
- 7.3.3 In addition to the above, the General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the General Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-ups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

ARTICLE 8: TIME

- 8.1 Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame.
- 8.2 If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.
- 8.3 Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.

Indian River School District – IRD19002-SDSAROOF

8.4 SUSPENSION AND DEBARMENT

8.4.1 Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project."

8.4.2 "Upon such failure for any of the above stated reasons, the Agency that contracted for the public works project may petition the Director of the Office of Management and Budget for Suspension or Debarment of the Contractor. The Agency shall send a copy of the petition to the Contractor within three (3) working days of filing with the Director. If the Director concludes that the petition has merit, the Director shall schedule and hold a hearing to determine whether to suspend the Contractor, debar the Contractor or deny the petition. The Agency shall have the burden of proving, by a preponderance of the evidence, that the Contractor failed to perform or complete the public works project within the time schedule established by the Agency and failed to do so for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the project. Upon a finding in favor of the Agency, the Director may suspend a Contractor from Bidding on any project funded, in whole or in part, with public funds for up to 1 year for a first offense, up to 3 years for a second offense and permanently debar the Contractor for a third offense. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. Such decision may be appealed to the Superior Court within thirty (30) days for a review on the record."

8.5 RETAINAGE

8.5.1 Per Section 6962(d)(5) a.3, Title 29, Delaware Code: The Agency may at the beginning of each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion date due to the Contractor's failure to meet their responsibilities, the Agency may forfeit, at its discretion, all or part of the Contractor's retainage.

8.5.2 This forfeiture of retainage also applies to the timely completion of the punchlist. A punchlist will only be prepared upon the mutual agreement of the Owner, Architect and Contractor. Once the punchlist is prepared, all three parties will by mutual agreement, establish a schedule for its completion. Should completion of the punchlist be delayed beyond the established date due to the Contractor's failure to meet their responsibilities, the Agency may hold permanently, at its discretion, all or part of the Contractor's retainage.

ARTICLE 9: PAYMENTS AND COMPLETION

9.1 APPLICATION FOR PAYMENT

9.1.1 Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.

9.1.2 A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.

GENERAL REQUIREMENTS

00 81 13-9

Indian River School District – IRD19002-SDSAROOF

- 9.1.3 Section 6516, Title 29 of the Delaware Code annualized interest is not to exceed 12% per annum beginning thirty (30) days after the "presentment" (as opposed to the date) of the invoice.
- 9.2 PARTIAL PAYMENTS
- 9.2.1 Any public works Contract executed by any Agency may provide for partial payments at the option of the Owner with respect to materials placed along or upon the sites or stored at secured locations, which are suitable for use in the performance of the contract.
- 9.2.2 When approved by the agency, partial payment may include the values of tested and acceptable materials of a nonperishable or noncontaminative nature which have been produced or furnished for incorporation as a permanent part of the work yet to be completed, provided acceptable provisions have been made for storage.
- 9.2.2.1 Any allowance made for materials on hand will not exceed the delivered cost of the materials as verified by invoices furnished by the Contractor, nor will it exceed the contract bid price for the material complete in place.
- 9.2.3 If requested by the Agency, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.
- 9.3 SUBSTANTIAL COMPLETION
- 9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.
- 9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.
- 9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.
- 9.4 FINAL PAYMENT
- 9.4.1 Final payment, including the five percent (5%) retainage if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):
- 9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid,
- 9.4.1.2 An acceptable RELEASE OF LIENS,
- 9.4.1.3 Copies of all applicable warranties,
- 9.4.1.4 As-built drawings,

Indian River School District – IRD19002-SDSAROOF

- 9.4.1.5 Operations and Maintenance Manuals,
- 9.4.1.6 Instruction Manuals,
- 9.4.1.7 Consent of Surety to final payment.
- 9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

- 10.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take all reasonable precautions to prevent damage, injury or loss to: workers, persons nearby who may be affected, the Work, materials and equipment to be incorporated, and existing property at the site or adjacent thereto. The Contractor shall give notices and comply with applicable laws ordinances, rules regulations, and lawful orders of public authorities bearing on the safety of persons and property and their protection from injury, damage, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.
- 10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.
- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

ARTICLE 11: INSURANCE AND BONDS

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance coverage as they desire on their own property such as a field office, storage sheds or other structures erected upon the project site that belong to them and for their own use. The Subcontractors involved with this project shall carry whatever insurance protection they consider necessary to cover the loss of any of their personal property, etc.

Indian River School District – IRD19002-SDSAROOF

- 11.2 Upon being awarded the Contract, the Contractor shall obtain a minimum of two (2) copies of all required insurance certificates called for herein, and submit one (1) copy of each certificate, to the Owner, within 20 days of contract award.
- 11.3 Bodily Injury Liability and Property Damage Liability Insurance shall, in addition to the coverage included herein, include coverage for injury to or destruction of any property arising out of the collapse of or structural injury to any building or structure due to demolition work and evidence of these coverages shall be filed with and approved by the Owner.
- 11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.
- 11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, may be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.
- 11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.
- 11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000 \$1,000,000 \$1,000,000	for each person for each occurrence aggregate
Property Damage	\$500,000 \$1,000,000	for each occurrence aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000 \$1,000,000 \$1,000,000	for each person for each occurrence aggregate
Property Damage	\$500,000 \$500,000	for each occurrence aggregate

Indian River School District – IRD19002-SDSAROOF

11.7.3 Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each person
	\$1,000,000	for each occurrence
Property Damage	\$500,000	per accident

11.7.4 Prime Contractor's and Subcontractors' policies shall include contingent and contractual liability coverage in the same minimum amounts as 11.7.1 above.

11.7.5 Workmen's Compensation (including Employer's Liability):

11.7.5.1 Minimum Limit on employer's liability to be as required by law.

11.7.5.2 Minimum Limit for all employees working at one site.

11.7.6 Certificates of Insurance must be filed with the Owner guaranteeing fifteen (15) days prior notice of cancellation, non-renewal, or any change in coverages and limits of liability shown as included on certificates.

11.7.7 Social Security Liability

11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.

11.7.7.2 Upon request, the Contractor shall furnish Owner such information on payrolls or employment records as may be necessary to enable it to fully comply with the law imposing the aforesaid contributions or taxes.

11.7.7.3 If the Owner is required by law to and does pay any and/or all of the aforesaid contributions or taxes, the Contractor shall forthwith reimburse the Owner for the entire amount so paid by the Owner.

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.

12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option, shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 CUTTING AND PATCHING

13.1.1 The Contractor shall be responsible for all cutting and patching. The Contractor shall coordinate the work of the various trades involved.

13.2 DIMENSIONS

13.2.1 All dimensions shown shall be verified by the Contractor by actual measurements at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for adjustment before any work affected thereby has been performed.

13.3 LABORATORY TESTS

13.3.1 Any specified laboratory tests of material and finished articles to be incorporated in the work shall be made by bureaus, laboratories or agencies approved by the Owner and reports of such tests shall be submitted to the Owner. The cost of the testing shall be paid for by the Contractor.

13.3.2 The Contractor shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by the Owner.

13.4 ARCHAEOLOGICAL EVIDENCE

13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the State Historic Preservation Office and suspend work in the immediate area for a reasonable time to permit those authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation by the Division of Historical and Cultural Affairs.

13.5 GLASS REPLACEMENT AND CLEANING

13.5.1 The General Contractor shall replace without expense to the Owner all glass broken during the construction of the project. If job conditions warrant, at completion of the job the General Contractor shall have all glass cleaned and polished.

13.6 WARRANTY

13.6.1 For a period of two (2) years from the date of substantial completion, as evidenced by the date of final acceptance of the work, the contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or workmanship performed by the contractor or any of his subcontractors or suppliers. However, manufacturer's warranties and guarantees, if for a period longer than two (2) years, shall take precedence over the above warranties. The contractor shall remedy, at his own expense, any such failure to conform or any such defect. The protection of this warranty shall be included in the Contractor's Performance Bond.

ARTICLE 14: TERMINATION OF CONTRACT

- 14.1 If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.
- 14.2 "If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement."

END OF GENERAL REQUIREMENTS

EMPLOYEE DRUG TESTING REPORT FORM

Period Ending: _____

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds maintain testing data that includes but is not limited to the data elements below.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Number of employees who worked on the jobsite during the report period: _____

Number of employees subject to random testing during the report period: _____

Number of Negative Results _____ Number of Positive Results _____

Action taken on employee(s) in response to a failed or positive random test:

Date: _____

This form is not required to be submitted to the Owner. Included as a reference to show information required to be maintained by the Contractor. The Owner shall have the right to periodically audit all Contractor and Subcontractor test results at the Contractor's or Subcontractor's offices (or by other means to make the data available for inspection by the Owner).

**EMPLOYEE DRUG TESTING
REPORT OF POSITIVE RESULTS**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds to notify the Owner in writing of a positive random drug test.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Name of employee with positive test result: _____

Last 4 digits of employee SSN: _____

Date test results received: _____

Action taken on employee in response to a positive test result:

Authorized Representative of Contractor/Subcontractor: _____
(typed or printed)

Authorized Representative of Contractor/Subcontractor: _____
(signature)

Date: _____

This form shall be sent by mail to the Owner within 24 hours of receipt of test results.

Enclose this test results form in a sealed envelope with the notation "Drug Testing Form – DO NOT OPEN" on the face thereof and place in a separate mailing envelope.

ROOF REPLACEMENT SPECIFICATION MANUAL

For

Indian River School District –
Southern Delaware School of the Arts –
Roof Repair
Contract #IRD19002-SDSAROOF

District Contact:
Joseph Booth
Supervisor of Building and Grounds
Indian River School District
31 Hosier Street
Selbyville, DE 19975

April 5, 2019

BID PROPOSAL FORM

PROJECT: Partial Roof Replacement @ Indian River School District – Southern Delaware School of the Arts – Cafeteria / Theater – Roof Section N – Upper & Lower - Complete Replacement Specification

BID DUE DATE: May 10, 2019 @ 12:00 PM

TO: Joseph Booth
Supervisor of Building and Grounds
Indian River School District
31 Hosier Street
Selbyville, DE 19975
Joseph.booth@irsd.k12.de.us
(Please e-mail and send hard copy of all bids)

Contractor: _____

In compliance with the scope of work dated April 5, 2019 relating to the above referenced project, this bid shall include necessary mechanical work to perform project, the undersigned, hereby proposes and agrees to fully perform the work in a professional manner within the time stated and in strict accordance with the scope of work for the following sum of money:

Base Bid #1 – Cold Applied (Low Odor)- Cafeteria / Theater Roof (Upper Roof Section) – Entire Roof Replacement: All labor, materials, services, and equipment necessary for the completion of the work described in the specifications to completely tear out and replace the existing roof system as per the written specifications and roof section seen during the pre-bid meeting. Replacing the tectum as necessary throughout the building. (30 Yr. Warranty)

_____ DOLLARS(_____)

Base Bid #2 – Cold Applied (Low Odor) - Cafeteria / Theater Roof (Lower Roof Section) – Entire Roof Replacement: All labor, materials, services, and equipment necessary for the completion of the work described in the specifications to completely tear out and replace the existing roof system as per the written specifications and roof section seen during the pre-bid meeting. Replacing the tectum as necessary throughout the building. (30 Yr. Warranty)

_____ DOLLARS(_____)

Base Bid Alternate #1 – Cold Applied (Zero Odor / Zero VOC)- Cafeteria / Theater Roof (Upper Roof Section) – Entire Roof Replacement: All labor, materials, services, and equipment necessary for the completion of the work described in the specifications to completely tear out and replace the existing roof system as per the written specifications and roof section seen during the pre-bid meeting. Replacing the tectum as necessary throughout the building. (30 Yr. Warranty)

_____ DOLLARS(_____)

Base Bid Alternate #2 – Cold Applied (Zero Odor / Zero VOC) - Cafeteria / Theater Roof (Lower Roof Section) – Entire Roof Replacement: All labor, materials, services, and equipment necessary for the completion of the work described in the specifications to completely tear out and replace the existing roof system as per the written specifications and roof section seen during the pre-bid meeting. Replacing the tectum as necessary throughout the building. (30 Yr. Warranty)

_____ DOLLARS(_____)

UNIT PRICES: The undersigned agrees, in case of variation of quantities from those shown or specified, the following unit prices will be used in adjusting the Contract Price. If quantities are authorized by the Owner, the following amount will be added to the Contract as required.

- 1) Cost per square foot to repair existing Tectum Deck.

\$ _____ / Square foot

INSURANCE REQUIREMENTS: The undersigned has \$2,000,000.00 umbrella insurance.

- 1) Undersigned has coverage as specified. YES _____ NO _____
- 2) Number of days to complete base bid #1 _____.
- 3) Number of days to complete base bid #2 _____.

If awarded a contract the undersigned will execute a satisfactory Construction Contract and proof of insurance coverage with the Owner for the entire work as per specifications within 10 days after notice of award. It is agreed that this proposal is subject to the Owners acceptance for a period of 30 (Thirty days) from the above date.

The undersigned agrees to the following:

- A. To furnish all labor and materials as specified.

By: _____

Signature

Printed Name

Title

Company

e-mail

Phone Number

Notes:

PART 1 – GENERAL

1.01 Work Scope and General Description

- A. All labor, equipment, materials, and supervision of work are to be provided by the Contractor to perform all project work included in this specification, on buildings on the roof drawings. Listed below is a general scope of work to be performed under this contract. A more detailed description of the work required of the Contractor for this project is included in this specification, in the project drawings and the other contract documents. Generally, the work will include:
1. Provide all labor, equipment, and materials to install the modified bitumen roof system over the properly prepared substrate.
 2. Completely removing all existing roof coverings, including all membrane, membrane flashings, existing wood framing / sheathing, insulation, etc., down to the existing substrates from all the roof areas being replaced.
 3. Removing all existing metal flashings, including counter flashings, vent stacks, flashings, gutters, drip edge flashings scuppers, metal coping etc.;
 4. Completely replacing all deteriorated wood nailer's, (as necessary) as indicated by the roof system manufacturer cants and metal around the entire perimeter of the buildings including the metal edge, metal coping cap on the roof drawings and / or using standard typical NRCA recommended details recommended by the roof system manufacture.
 5. Properly cleaning, drying and repairing any damaged areas of the existing roof decks; all of these damaged areas will be inspected by the roof system prior to the installation of the insulation and the modified roof system.
6. Tear off the existing roof system down to the existing substrates. Examine the existing substrate and perform repairs as necessary and directed by the Engineer. Once the substrate has been approved by the Roof System Manufacture, the contractor may proceed with the installation of the new roof system. The approved decking Tectum and /or metal deck shall be approved prior to the start of the roof replacement project.
7. All new Tectum will be cleaned properly prior to the installation of the insulation and new roof system.
 8. Placing all new wood nailers mechanically fastened to the roof deck, along all perimeter parapets and penetrations. (Only as necessary)

9. Placing all new ice and water shield under all metal components; coping cap, metal metal fascia etc..
10. Install Base Sheet directly to the existing Tectum deck per Factory Mutual listings. All Deteriorated Tectum deck will be removed and replaced with Tectum and /or new Metal as chosen by the owner.
11. Install base layer of Polyisocyanurate insulation will be fully adhered and / or secured to the substrate Per Factory Mutual I-90 minimum standards and frequency. Install ¼:12 tapered insulation system to meet the R-value requirements and meeting the cold applied roof system. ½ inch tapered crickets will be installed at high point of all penetrations. R- Value equals R-25 or greater. (See Specifications)
11. Once the insulation is in place: Install the two (2) ply's of specified modified cap sheets fully adhered with the rubberized adhesive and two (2) ply modified flashing system as per the written specification and details. (See specifications and drawings for installation of the roof system)
12. The entire copingstone will be encapsulated with new wood nailers ice & water shield and a new coping system installed around the entire parapet wall as per the specifications and details. This system will have no exposed fasteners thru the outside and /or inside of the metal system. All new surface-mounted counter flashing will be installed around the perimeter parapet and any penetrations as per the details provided and standard SMACNA detail. All new gutters, down spouts will be installed around the perimeter of the building.
13. Placing two full coats, separate coats of new white pyramic (protective and energy star rated) coating over the entire field and flashing system, this includes all exposed roof areas. All existing internal drains will be replaced with new drain bowl, drain ring and all new hardware, using new cast iron standard roof assembly. All exhaust fans, ventilators and any other penetration will be raised in accordance to NRCA and roof system manufacture standards in accordance to the flashing height minimum requirements. All necessary units will be marked by the owner and roof system manufacture to the pre-construction meeting.
14. B. The roofing/flashing membrane Manufacturer's most recent specifications are wholly included as a part of this specification. The Manufacturer's specifications must be complied with, except as exceeded by this specification. In no event may any work be installed contrary to the Manufacturer's requirements.

1.02 Quality Assurance

15. A. The new roof covering systems are to be installed by a qualified contracting firm that has a minimum of five years' successful experience in the installation of the roof covering system specified for this project. The Contractor must provide written certification from the roof membrane

Manufacturer, certifying that the Contractor is approved and licensed by the Manufacturer to install the roof membrane system specified herein.

16. B. The Contractor, roof system manufacture (and all Subcontractors) are to meet with the Owner representative at the job site a minimum of one week before any commencement of work or delivery of materials, to discuss job coordination, such as staging areas, storage areas for materials, daily procedure of construction personnel, job site safety and security, and other project logistics. The Contractor's (and all Subcontractors') superintendent and project foreman are (both) required to attend this meeting as well. Failure of the Contractor's superintendent and foreman to (both) attend the pre-construction meeting will result in the Owner rescheduling the pre-construction meeting, and the Contractor will be back-charged for all time/expenses incurred by Owner personnel for attending the meeting that the Contractor's superintendent and/or foreman fail to attend.
17. C. The Contractor is to repair and/or replace all work installed by the Contractor that is, in the opinion of the Owner and roof system manufacture, deficient, including any conditions that may diminish the life expectancy or performance of the roof covering system, including all flashings. Such repair and/or replacement work must be performed immediately upon the request of the roof system manufacture at no additional cost to Building Owner.
18. D. The roof system manufacture and Building Owner hereby reserve the right to have test cut samples of the new roof covering made for examination. All test cuts are to be made by the Contractor, where and when as directed by the roof system manufacture and Building Owner. All sampled areas are to be repaired by the Contractor in such a way as to preserve all warranties and/or guarantees required in this specification, and at no additional cost to Indian River School District.
19. E. The Contractor must perform all work in accordance with the best industry practices. All new roof covering systems are to meet the requirements for:
 20. 1. Underwriter's Laboratories, Inc. and / or Wernock Hersey Class A Fire Hazard Classification. All major components of the roof covering system, including membrane, mechanical fasteners, adhesives, and surfacing/coating materials must be approved by Factory Mutual in the "Factory Mutual Approval Guide."
 21. 2. Factory Mutual Engineering corporation (FM) Class I Construction, as published in the most recent edition of the "Factory Mutual Approval Guide" and the "Factory Mutual Loss Prevention Data Bulletin 1-28" and / or approved by an accepted third party consulting firm meeting or exceeding all of the minimum standards set forth by Factory Mutual minimum testing criteria for the specified materials and meeting the minimum performance criteria set by the performance of the roofing materials.

1.03 Submittals

- A. The Contractor is to submit a list of all products to be utilized on this project, three copies of the manufacturers' product specifications with performance and test data for each product, and material samples of any products that are specifically requested by Indian River School District. All performance test data must be submitted and notarized by an accredited third party testing facility, manufacture test and data sheets will not be accepted. All of these copies must be submitted in triplicate (3) and notarized by the accredited third party testing facility The Contractor is to also submit certification from each product manufacturer that their product complies with the requirements of this specification and are compatible with the intended end use. **NOTE:** The Contractor's utilization of any roof covering system Manufacturer and/or material is subject to approval by Building Owner. Any materials not meeting the minimum standards set forth in the written specifications, the Contractor will be back-charged for all time/expenses incurred by Owner personnel to evaluate the roof systems.

- B. The Contractor must submit their proposed Manufacturer for the new roof covering system to Indian River School District prior to ordering/delivering any materials to the job site, or commencement of any work at the site. The Contractor must also submit a complete sample copy of the proposed Manufacturer's guarantee to the owner for approval, prior to the approval of the proposed roof covering system Manufacturer.
- B. The Contractor is to submit a copy of all required permits for any portion of this project, including (but not limited to) building permits, crane permits, public access permits, road closure permits, torch/open flame permits, welding permits, Fire Marshal's permits, plumbing permits (for roof drain/plumbing work), mechanical permits, material disposal permits, bitumen hauling permits, transport/dump manifests, etc. The Contractor must also have full copies of all applicable permits at the job site, on the roof, at all times while Contractor personnel are present at the project site.
- C. The Contractor is to submit full copies of all Material Safety Data Sheets (MSDS), for all roofing materials, bitumen, other bituminous materials, solvents, thinners, primers, sealants, and other chemical products utilized on this project. MSDS must also be submitted for any materials that may release fumes, odors, or vapors when exposed to the atmosphere and/or heated. The Contractor must also have full copies of all applicable MSDS at the job site, on the roof, at all times while Contractor personnel are present at the project site.
- D. The Contractor must submit fully-executed copies of payment and performance bonds (if required in the Contract Documents), to the owner in a written form acceptable to the county. AIA Document A-312 (1983 or later version) Payment and Performance Bonds are acceptable forms. The bonds must be fully executed, and submitted to the Building Engineer prior to the Contractor's delivery of materials to the job site or commencement of work at the site.
- E. The Contractor is to submit a copy of their current license certification and/or applicator's agreement with the roof covering system Manufacturer.
- F. The Contractor is to submit shop drawings of any construction detail (including work on known conditions and work on field conditions that may be uncovered or revealed during the project), if requested by Owner.
- G. The Contractor and all Subcontractors must submit a bona fide Certificate of Liability Insurance coverage to Building Owner. The Insurance Certificate must guarantee insurance coverage for the minimum dollar amounts as indicated in the bid/contract documents.
1. Indian River School District must receive written notice (via the Engineer) of any modification or cancellation of the Contractor's (or Subcontractor's) insurance policy(ies), at least 30 days prior to the effective date of any such modification or cancellation.
 2. The Contractor must endeavor to obtain additional insurance for this project if requested in writing from Owner, prior to commencement of work.
- H. The Contractor is to submit a proposed project schedule showing approximate dates of start and completion times for each segment of the Contractor's (and all Subcontractors') operations on the project. The Contractor must also submit any other items requested by the Engineer to help clarify or document certain conditions, if requested. The Contractor may be required to submit a revised project schedule, at the discretion of the Owner or roof system manufacture, if the Contractor's work operations vary from the submitted schedule.

1.04 Material Delivery, Handling, and Storage

- A. All products and materials used must be newly manufactured, and of the best quality.
- B. Deliver all materials to the job site undamaged, in the manufacturers' original packaging. All materials must be clearly marked with the manufacturer's information, including the manufacturer's name, product name, ASTM codes where applicable, UL/FM labels, and date of manufacture.
- C. Present a copy of all delivery tickets and certificates for bulk bitumen deliveries to the Owner, at the time of delivery. All bitumen in cartons or barrels must be fully labeled by the manufacturer, showing the type and EVT range.
- D. Upon arrival, all materials are to be inspected for physical damage, freezing, or overheating. Questionable materials will not be allowed for use.
- E. All materials must be stored in dry areas, completely above the ground or roof surface (a minimum of 4"), on wood pallets or other acceptable means. Comply with all manufacturer's instructions regarding storage temperatures and exposure to sunlight. Protect all materials (including wood) from moisture contamination, including condensation (particularly membrane and felts), by completely covering materials to the base of the pallet with tarpaulins made of polyethylene, polypropylene, canvas, etc., drawn tightly and securely fastened. Factory wrappers alone are neither suitable nor acceptable protection for materials. Store all roll goods on end. Stack lumber and plywood in a way so as to prevent warping and twisting, and keep all wood properly covered. Protect all materials and equipment on the roof from wind damage/blow-off.
- F. Remove all damaged or moisture-contaminated products from the job site immediately.
- G. Do not load or store materials on the roof in amounts that can cause stress or damage to the existing roof covering or structure.
- H. Do not deliver or store materials on the ground in amounts that can cause damage to the existing pavement or underground structures, storm sewers, piping, etc.

1.05 Work Conditions

- A. The Contractor must investigate all stages of work to be performed, for all project areas. The Contractor is responsible for investigating and inspecting the project, and for determining all quantities, measurements, dimensions, roof areas, and all other job site conditions. The Contractor is to immediately inform the Engineer, in writing, of any unacceptable conditions, and is not to proceed with work until such conditions are made acceptable to the Indian River School District, Contractor, and Roof System Manufacture.
- B. Roofing work may proceed only in dry weather, when conditions comply with the manufacturer's recommendations and limitations. Roofing work may not proceed when the outside temperature is less than 40 degrees Fahrenheit, and materials may not be installed onto damp or frozen surfaces.
- C. The Contractor must not expose the roof deck or newly-installed materials to possible water or wind damage in greater amounts than can be properly completed and watertight in the same day.
- D. Phased construction will not be allowed on this project. Work must proceed fully and continuously from commencement through completion, except on weekends, designated holidays, and during inclement weather.

1.06 Safety and Protection

- A. The Contractor must be entirely and totally responsible for all safety on the job site and project premises, and must comply with all applicable OSHA, IBC Code Requirements and MOSHA requirements, and good safety practices.
- B. The Contractor and all Subcontractors must provide all necessary safety equipment including (but not limited to) barricades, flags, signs, traffic cones, safety rails, fire hoses, fire extinguishers, and all other equipment needed to conduct safe operations on the roof, ground, and premises.
- C. The Contractor is to keep all areas of the project in a clean, neat, and orderly condition at all times. Trash and debris must be cleaned up and removed on a daily basis, particularly from all areas or levels lower than the roof (sidewalks, grounds, etc.).
- D. The Contractor is to install, maintain, and be responsible for the safe use of all scaffolding, platforms, ladders, etc. The Contractor is to provide all necessary scaffolding, work platforms, ladders, safety lines/harnesses, etc. for safe access to all work areas by all of the Contractor's (and Subcontractors') personnel on the project. The Contractor is to make certain that all ladders are properly secured (tied-off) at all times during roof construction.
- E. Protect all exterior and interior building surfaces against damage from the work operation and potential leakage. Foot traffic by the Contractor's personnel are not allowed inside the building, except during an emergency, and all roof access for Contractor personnel will be via the Contractor's ladder. All ladders must be removed from the building at the end of each day's work, and either secured at the job site or removed from the job site. The Contractor must install and maintain floor protection at all times, over all interior roof access pathways, if any interior access is required. Protect pavement, sidewalks, stairways, walls, floors, carpets, doors, windows, etc. from damage. If any work is required inside the building, Contractor personnel must wear clean shoes at all times while inside the building.
- F. Water cut-offs are to be installed at the end of each day's work and whenever precipitation is imminent, as necessary to protect all exposed edges of the system from moisture intrusion. Water cut-offs must be maintained in a watertight condition throughout all times of precipitation and surface moisture.
- G. The Contractor must respond immediately to all reports of leakage at the project and make emergency repairs as necessary to stop such leakage. Emergency telephone numbers for Contractor, Building Engineers and Roof System Manufacture personnel will be distributed immediately following the pre-construction meeting.
- H. Prevent bitumen drippage and debris from entering joints, openings, scuppers, downspouts, roof drains, and over roof edges.
- I. Furnish two fully charged and operable CO₂ fire extinguishers for each torch used on the project, and a charged water hose on the roof, close to the roofing operation at all times. Kettles may not be used on this project. Fire extinguishers must be readily visible within 50' of all torch and kettle operations at all times. **THIS WILL BE STRICTLY ENFORCED. (Only as necessary)**
- J. All necessary precautions and care must be used to prevent accidental fire, particularly with torches, and soldering equipment. Store all flammable liquids, oils, solvents, and thinners in one central location, at least 75' away from all torches, kettles, and equipment operation. All areas of newly-placed roof covering must be closely inspected for fire/smoke/smoldering at the end of each day before the Contractor's personnel leave the job site, and the job foreman is responsible for inspecting the area for fire for no less than 45 minutes after the last torch is extinguished for the day. Special precautions must be taken when torch-applying membrane to and/or near wood and other flammable substrates.
- K. Protect all newly-placed roof and flashing membrane as necessary from foot and equipment traffic, dirt, debris, materials, etc. with a full layer of protection course, such as asphaltic board, plywood, or other material approved by the Engineer. Under no circumstances may materials or work be staged on

newly-placed roofing. The work is to be logistically coordinated so that work and foot traffic over new roofing is avoided. This requirement will be strictly enforced. Materials, tools, and particularly gravel and debris must be kept off of the new roof membrane on a daily basis.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 - GENERAL

1.01 Related Documents

The provisions of the Contract, the General conditions, the Supplementary Conditions and other Division 7 Specification Sections, apply to the work in this section.

1.02 Related Sections:

- A. Section 07220 - Roof and Deck Insulation
- B. Section 07536 - Modified Bitumen Roof Membrane
- C. Section 07620 - Flashing and Sheet Metal

1.03 Delivery, Storage and Handling

- A. Time delivery and installation of the carpentry work to avoid delaying other trades whose work is dependent on or affected by the carpentry work. Keep materials dry during delivery.
- B. Store lumber and plywood in stacks with provisions for air circulation within stacks. Protect bottom of stacks against contact with damp or wet surfaces.
- C. Protect exposed materials against water and wind. Remove damaged, or unsuitable material from the job site.

1.04 Quality Assurance

- A. Comply with governing codes and regulations. Use experienced installers.
- B. Lumber Standards: American Softwood Lumber Standard PS 20-70 by the U.S. Department of Commerce.
- C. Plywood Standards: U.S. product Standard PSI-74/ANSI A 199.1 or latest APA Performance Standards for American Plywood Association.
- D. Factory Marking: Mark each piece of lumber or plywood to indicate type, grade, agency providing inspection service.
- E. Size and Shape: Dress lumber 4 sides (S4S) and work to shapes and patterns shown. Nominal sizes shown and specified refer to undressed lumber dimensions. Detailed dimensions show actual lumber size required.

PART 11 - PRODUCTS

2.01 Dimensional Lumber and Plywood

- A. Construction Lumber: Standard Grade Douglas Fir, Western Larch, western Hemlock (WWPA or WCLB) or No. 2 dimension Southern Pine (SPIB).
- B. Exterior Type Plywood: APA Rated Sheathing, EXT.
- C. Bucks, Nailers, Blocking, ETC.: No. @ common grade of any WWPA or WCLA species or No. 2 Southern Pine (SPIB).
- D. Anchorage and Fastenings: Proper type, size, material and finish for each applications.
- E. Quality: Sound, seasoned, well manufactured materials of longest practical lengths and sizes to minimize joints. Free from warp which cannot be easily corrected by anchoring and attachment. Discard material with defects which would impair quality of work.

PART III - EXECUTION

3.01 Examination

- A. Verify measurements and dimensions shown before proceeding with carpentry work.
- B. Examine supporting structure and conditions under which carpentry work is to be installed. Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Correlate location of nailers, blocking and similar supports for attached work.
- D. Scribe and cope as required for accurate fit of carpentry work to other work.

3.02 Protection

- A. Protect installed work from damage by other trades until acceptance work.

3.03 Installation

- A. Provide nailers, blocking and sleepers where shown on the drawings or required for attachment of other work. Coordinate with location with other work involved; refer to shop drawings of such work.
- B. Attach to substrate securely as required to support applied loading. Countersink bolts and nuts flush with surfaces.
- C. Securely attach wood nailers to substrates in accordance with Factory Mutual Loss Prevention Data Sheet 1-49 and as required by recognized standards.
- D. Provide washers under bolt heads and nuts in contact with wood.
- E. Do not wax or lubricate fasteners that depend on friction for holding power.
- F. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finished material.

- G. Make tight connections between members. Install fasteners without splitting of wood; predrill as required. Do not drive threaded friction type fasteners; turn into place. Tighten bolts and lag screws at installation and retighten as required for tight connections prior to closing in or at completion of work.
- H. Install torchable cant strips at vertical intersections and at all penetrations.

END OF SECTION

SECTION 07220

ROOF DECK AND INSULATION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide all labor, equipment, and materials to install roof insulation over the properly prepared base sheet secured to the substrate and / secured to the new metal substrate.
- B. First course of insulation will be a minimum 1.5 inch of Polyisocyanurate insulation adhered to the metal or base sheet secured to the Tectum substrate per Factory Mutual I-90 Manufactures Listing minimum frequency and pattern. Install ¼:12 tapered system meeting the minimum guidelines and recommended by the manufactures listings. Securerock will be installed as the recovery board throughout the entire roof replacement project.
- C. The tapered insualtion system shall be a minimum 1/4 :12 ISO insulation meeting the manufactures requirements and listings aorund high points of all penetrations.

1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General Supplementary Conditions and Division 1 Specification Sections apply to this section.
- B. Related work specified elsewhere:
 - 1. Division 7 Section "Modified Bitumen Roofing."
 - 2. Division 7 Section "Flashing and Sheet Metal."

1.3 REFERENCES

ASTM A-167-94a	Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate, Sheet and Strip
ASTM A-653	Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process
ASTM B-29	Pig Lead
ASTM B-32	Solder Metal
ASTM C-165-95	Test Method for Measuring Compressive Properties of Thermal Insulation
ASTM C-208-95	Specifications for Cellulosic Fiber Insulating Board
ASTM C-209-92	Test Method for Cellulosic Fiber Insulating Board
ASTM C-272-91	Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions

ASTM C-36	Specification for Gypsum Wallboard
ASTM C-518-91	Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
ASTM C-578-92	Specification for Rigid, Cellular, Polystyrene Thermal Insulation
ASTM C-728-91	Specification for Perlite Thermal Insulation Board
ASTM D-5	Test Method for Penetration of Bituminous Materials
ASTM D-36	Test Method for Softening Point of Bitumen (Ring and Ball Apparatus)
ASTM D-312	Specification for Asphalt Used in Roofing
ASTM D-412-92	Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
ASTM D-1621-94	Test Method for Compressive Properties of Rigid Cellular Plastics
ASTM D-1622	Test Method for Apparent Density of Rigid Cellular Plastics
ASTM D-1863	Specification for Mineral Aggregate Used on Built-Up Roofs
ASTM D-2126-94	Test Method for Response of Rigid Cellular Plastics to Thermal Humid Aging
ASTM D-2178	Standard Specification for Asphalt Glass Felts used in Roofing and Waterproofing
ASTM D-4601-94	Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing
ASTM D-5147	Sampling and Testing Modified Bituminous Sheet Material
CISPI	Cast Iron Soil Pipe Institute, Washington, D.C.
FM	Factory Mutual System, Norwood, Massachusetts
NRCA	National Roofing Contractors Association, Chicago, IL
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SDI	Steel Deck Institute, St. Louis, Missouri
SPIB	Southern Pine Inspection Bureau, Pensacola, Florida
UL	Underwriter's Laboratories, Inc., Northbrook, Illinois
FS HH-I-1972	Insulation Board, Polyisocyanurate
FS LLL-1-535B	Insulation Board, Thermal (Fiberboard)
WH	Warnock Hersey International, Inc., Middletown, Wisconsin

1.4 SUBMITTALS

- A. Submit under provisions of Section 07550 - Submittals.
- B. Product Data: Provide manufacturer's specification data sheets for each product in accordance with Section 01300.
- C. Provide approval letters from insulation manufacturer for use of their insulation within this particular roofing system type.
- D. Provide a sample of each insulation type.
- E. Shop Drawings
 - 1. Submit manufacturer's shop drawings indicating complete installation details of tapered insulation system, including identification of each insulation block, sequence of installation, layout, drain locations, roof slopes, thicknesses, crickets and saddles.
 - 2. Shop drawing shall include: Outline of roof, location of drains, complete board layout of tapered insulation components, thickness and the average "R" value for the completed insulation system.
- F. Certification

Submit roof manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.

2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.
3. Submit certification that insulation and fastening system furnished is Tested and Approved by Factory Mutual for 1-90 Wind Up-Lift Requirements.

1.5 QUALITY ASSURANCE

- A. Fire Classification, ASTM E-108
- B. Submit certification that the roof system furnished is approved by Factory Mutual, Underwriters Laboratories or Warnock Hersey for external Fire E-108 Class 1A and that the roof system is adhered properly to meet or exceed 1-90.
- B. Submit certification that the roof system furnished meets local or nationally recognized building codes for fire Class A and/or wind resistance.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Store all insulation materials in a manner to protect them from the wind, sun and moisture damage prior to and during installation. Any insulation that has been exposed to any moisture shall be removed from the project site.
- C. Keep materials enclosed in a watertight, ventilated enclosure (i.e. tarpaulins).
- D. Store materials off the ground. Any warped, broken or wet insulation boards shall be removed from the site.

PART 2 - PRODUCTS

2.1 APPROVED EQUIVALENT

- A. Contractor must submit any product not specified a minimum five days before the bid date to Architect in order for product to be considered for approval. The Architect will notify Contractor in writing of decision to accept or reject request.

2.2 INSULATION MATERIALS

- A. Provide thicknesses of insulation as indicated, provide combination of types and thicknesses to provide a complete system. The average R-25 should be prevalent throughout the entire facility.

1. RIGID POLYISOCYANURATE ROOF INSULATION

- a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.

1. Thickness: Base minimum 1.5 inches: ¼:12 Tapered Insulation over base layer of insulation.

- b. Source
 - 1. Hunter
 - 2. Garland
 - 3. GAF
 - 4. Atlas

- c. Insulation board shall meet the following requirements
 - 1. FM listed under Roofing Systems
 - 2. Federal Specification HH-I-1972, Class 1

- d. Physical Properties

Dimensional Stability	ASTM D-2126	2% max.
Compressive Strength	ASTM D-1621	25 psi min.
Vapor Permeability	ASTM E-96	1 perm max.
Foam Core Density	ASTM D-1622	2.0 pcf min.
Water Absorption	ASTM C-209	<1%
R-Factor HR per inch	LTTR - 6	

2. SECOND COURSE OF RIGID INSUALTION - RIGID POLYISOCYANURATE ROOF INSULATION / RIGID FIBERBOARD INSULATION

- a. Qualities: Rigid, Polyisocyanurate roof insulation. Rigid Asphalt coated fiber board insualtion
 - 1. Board Size: 4 x 8
 - 2. Thickness: ¼:12 minimum tapered insulation

- b. Source
 - 1. Garland
 - 2. Firstone
 - 3. GAF
 - 4. Approved Equivalent

- c. Insulation board shall meet the following requirements
 - 1. UL, WH, FM listed under Roofing Systems
 - 2. Federal Specification HH-I-529-B

- d. Physical Properties

Dimensional Stability	ASTM D-2126	2% max.
Compressive Strength	ASTM D-1621	25 psi min.
Vapor Permeability	ASTM E-96	1 perm max.
Foam Core Density	ASTM D-1622	2.0 pcf min.
Water Absorption	ASTM C-209	<1%
R-Factor HR per inch	LTTR - 6	

2.3 RELATED MATERIALS

- A. Fiber Cant, Tapered Edge Strips and Tapered Crickets: Performed rigid insulation units of sizes/shapes indicated, matching insulation board or of perlite or organic fiberboard, as per the approved manufacturer.

- B. Protection Board: Premolded semi-rigid asphalt composition board ½ in.

PART 3 - EXECUTION

- A. Adhere $\frac{1}{4}$ tapered insulation system and rigid board insulation system the $\frac{1}{4}$:12 tapered insulation system requirement per Factory Mutual I-90 Listing requirement by the roof system manufacture.

3.1 INSPECTION OF SURFACES

- A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.
1. Verify that work which penetrates roof deck has been completed.
 2. Verify that wood nailers are properly and securely installed.
 3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.
 4. Do not proceed until defects are corrected.
 5. Do not apply insulation until substrate is sufficiently dry.
 6. Broom clean substrate immediately prior to application.
 7. Use additional insulation to fill depressions and low spots that would otherwise cause ponding water.
 8. Verify that temporary roof has been completed.

3.2 INSTALLATION

- A. Insulation Foam Adhesive
1. Over the first course of insulation approved by the manufacturer install insulation boards adhered to the deck in ribbons of adhesive applied in ribbons to the deck at the rate to obtain a UL 1897 requirements.
 2. Mixing, dispensing, application of approved adhesive shall be according to manufacturer's specifications. When applying adhesive place the insulation boards onto the adhesive beads within 3 minutes and walk on the boards immediately to spread the beads for maximum contact. Continue to walk on the insulation boards every 5-7 minutes until the insulation is firmly attached (usually 20-45 minutes).
 3. All boards shall be cut and fitted where the roof deck intersects a vertical surface. The boards shall be cut to fit a minimum of $\frac{1}{4}$ " away from the vertical surface. All joints shall be tapped prior to the insulation of the waterproofing membrane.

3.3 CLEANING

- A. Remove debris and cartons from roof deck. Leave insulation clean and dry, ready to receive roofing membrane.

END OF SECTION

SECTION 07550

MODIFIED BITUMEN ROOFING

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide all labor, equipment, and materials to install the roof system over the properly prepared substrate.

1.2 RELATED SECTIONS

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

- B. Related work specified elsewhere:

1. Division 7 Section "Preparation for Roofing."
2. Division 7 Section "Roof and Deck Insulation."
3. Division 7 Section "Flashing and Sheet Metal."
1. Division 7 Section "Rough Carpentry."
2. Division 7 Section "General Conditions / Scope of Work"

1.3 REFERENCES

ASTM D-41	Specification for Asphalt Primer Used in Roofing, Dampproofing and Waterproofing
ASTM D-312	Specification for Asphalt Used in Roofing
ASTM D-451	Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products
ASTM D-1079	Terminology Relating to Roofing, Waterproofing and Bituminous Materials
ASTM D-1227	Specification for Emulsified Asphalt Used as a Protective Coating for Roofing

ASTM D-1863	Specification for Mineral Aggregate Used on Built-Up Roofs
ASTM D-2178	Specification for Asphalt Glass Felt Used in Roofing and Waterproofing
ASTM D-2822	Specification for Asphalt Roof Cement
ASTM D-2824	Specification for Aluminum-Pigmented Asphalt Roof Coating
ASTM D-3019	Specification for Lap Cement used with Asphalt Roll Roofing
ASTM D-4601	Specification for Asphalt Coated Glass Fiber Base Sheet Used in Roofing
ASTM D-5147	1991 Test Method for Sampling and Testing Modified Bituminous Sheet Materials
ASTM D-6162	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements
ASTM D-6163	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements
ASTM E-108	Test Methods for Fire Test of Roof Coverings
FM	Factory Mutual
NRCA	National Roofing Contractors Association
UL	Underwriters Laboratories
WH	Warnock Hersey

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300-Submittals.
- B. Submit certification that the roof system furnished is approved by Factory Mutual, or Warnock Hersey for external fire E-108 Class 1A and that the roof system is adhered properly to meet or exceed 1-90.
- C. Product Data for each type of product specified including manufacturer's technical product data, installation instructions and recommendations for each type of roofing product required. Include data substantiating that materials comply with specified requirements.
- D. For all modified bituminous sheet roofing, include independent test data according to ASTM designation D-5147-91 "Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material", substantiating that materials comply with specified requirements.
- E. Any material submitted as an equal to specified material must also submit a list of three jobs where the proposed material has been used in a similar roofing system as that which is specified and within 25 mile radius from the location of the specified job and a minimum of 400,000 sq. Ft. Of exact system specified. In addition, the three jobs must be at least six years old and be available for the owner, or Owner's Representative to inspect.
- F. Show evidence that the products and materials are manufactured in the United States and that materials provided conform to all requirements specified herein, and are chemically and physically compatible with each other and are suitable for inclusion within the total roof system specified herein.
- G. Show evidence that the Installer specializes in modified bituminous roof application with a minimum 5 years experience and who is certified by the roofing system manufacturer as qualified to install manufacturers' roofing materials.
- H. Provide a sample of each product.
- I. Manufacturer's warranty.

- J. Certified copy of ISO 9001 compliance.
- K. Sample of roofing aggregate.
- L. Any deficiencies in performance, warranty terms or improper submittal procedure will constitute grounds for immediate rejection of alternate.

1.5 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Roofing system manufacturer shall have a minimum of 25 years experience in manufacturing modified bitumen roofing products in the United States and be ISO 9001 certified.
- B. **Installer Qualifications:** Installer (Roofer) shall be specializing in modified bituminous roof application with minimum 5 years experience and who is certified by the roofing system manufacturer as qualified to install manufacturer's roofing materials.
- C. It is the intent of this specification to provide a roof system with an external fire rating. The descriptions given below are general descriptions. The insulation, recovery board, and other components shall be required by the membrane manufacturer to provide a Class A fire resistance rating.
- D. **Installer's Field Supervision:** Require Installer to maintain a full-time Supervisor/Foreman on job site during all phases of modified bituminous sheet roofing work and at any time roofing work is in progress, proper supervision of workmen shall be maintained. A copy of the specification shall be in the possession of the Supervisor/Foremen and on the roof at all times.
- E. It shall be the Contractors responsibility to respond immediately to correction of roof leakage during construction. If the contractor does not respond within 24 hours, the Owner has the right to hire a qualified contractor and backcharge the original contractor.
- F. **Disqualification of Bidders:** A bidder can be disqualified by the Owner for any of the following reasons, but not limited to:
 - 1. The failure to attend the Pre-Bid conference at the time and place so described under Bidding Dates. Primary manufacture and contractors must attend pre-bid meeting.
 - 2. Incorrect use of the "Proposal" as provided by the Owner. Any changes in said format shall be accepted by the Owner only when requested and approved in writing prior to the bid opening. Changes in the Proposal after the opening of the bids will not be accepted.
 - 3. Lack of proficiency as shown by past work or incomplete work under other contracts which, in the judgement of the Owner might hinder or prevent the prompt completion of additional work if so awarded or any involvement in any legal actions which relate to past or present performance. This includes, but is not limited to lawsuits, court appointed actions, and/or ongoing litigation.

- G. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.
- H. Pre-application Roofing Conference: Approximately 2 weeks before scheduled commencement of modified bitumen sheet roof system installation, and associated work, meet at project site with installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in the around roofing must precede or follow roofing work (including mechanical work if any), Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of the Work, including (where applicable) Owner's insurers, test agencies and governing authorities.

Objectives to include:

1. Review foreseeable methods and procedures related to roofing work.
2. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work performed by other trades.
3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
4. Review roofing system requirements (drawings, specifications and other contract documents).
5. Review required submittals both completed and yet to be completed.
6. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment and facilities needed to make progress and avoid delays.
7. Review required inspection, testing, certifying and material usage accounting procedures.
8. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing (if not mandatory requirement).
9. Record (contractor) discussion of conference including decisions and agreements (or disagreements) reached and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
10. Review notification procedures for weather or non-working days.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Store and handle roofing sheets in a dry, well-ventilated, weather-tight place to ensure no possibility of significant moisture exposure. Store rolls of felt and other sheet materials on pallets or other raised surface. Stand all roll materials on end. Cover roll goods with a canvas tarpaulin or other breathable material (not polyethylene).
- C. Do not leave unused materials on the roof overnight or when roofing work is not in progress unless protected from weather and other moisture sources.
- D. It is the responsibility of the contractor to secure all material and equipment on the job site. If any material or equipment is stored on the roof, the contractor must make sure that the integrity of the deck is not compromised at any time. Damage to the deck caused by the contractor will be the sole responsibility of the contractor and will be repaired or replaced at his expense.

1.7 MANUFACTURER'S INSPECTIONS

- A. When the project is in progress, the Roofing System Manufacturer will provide the following:
1. Keep the Owner informed as to the progress and quality of the work as observed.
 2. Provide job site inspections a minimum of 5 days a week.(One (1) time daily)
 3. Report to the Owner in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor's attention.
 4. Confirm after completion of the project and based on manufacturer's observation and tests that manufacturer has observed no applications procedures in conflict with the specifications other than those that may have been previously reported and corrected.

1.8 PROJECT CONDITIONS

- A. Weather Condition Limitations: Do not apply roofing membrane during inclement weather or when a 40% chance of precipitation is expected.
- B. Do not apply roofing insulation or membrane to damp deck surface.
- C. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.
- D. Proceed with roofing work only when existing and forecasted weather conditions will permit unit of work to be installed in accordance with manufacturer's recommendations and warranty requirements.
- E. All slopes of greater than 1-1/2:12 require back-nailing to help prevent slippage of the ply sheets. Ring or spiral shank 1" cap nails, or screws and plates should be utilized at a rate of one fastener per ply at each insulation stop. Insulation stops should be placed 16' o.c. for slopes less than 3:12 and 4' o.c. for slopes greater than 3:12. On non-insulated systems, nail each ply directly into the deck at the rate specified above. When slope exceeds 1:12, strapping the plies is recommended to help prevent slippage. Four additional fasteners should be installed at the upper edge of modified bitumen sheet when strapping the plies. (If Applicable)

1.9 SEQUENCING AND SCHEDULING

- A. Sequence installation of modified bituminous sheet roofing with related units of work specified in other sections to ensure that roof assemblies including roof accessories, flashing, trim and joint sealers are protected against damage from effects of weather, corrosion and adjacent construction activity.
- B. All work must be fully completed on each day. Phased construction will not be accepted.

1.10 WARRANTY

- A. Upon completion of installation, and acceptance by the Owner and Manufacturer, the manufacturer will supply to the Owner the appropriate 30 year warranty.
- B. Modified Roof System and all metal components must be covered under one (1) warranty issued by one (1) roof system manufacture. This includes the modified low sloped roof system and all metal components. Multiple manufactures will not be accepted.
- C. Contractor will submit a minimum of a five-year warranty to the membrane manufacturer with a copy directly to Owner.

- D. Membrane manufacturer will provide an annual inspection for the life of the warranty.

PART 2 - PRODUCTS

2.1 GENERAL

- A. When a particular trade name or performance standard is specified it shall be indicative of a minimum standard required. The minimum standard specified is the High Performance Two Ply – Cold Applied Modified Roof System manufactured by The Garland Company, Inc., Cleveland , Ohio.
- B. Provide products as manufactured to the minimum standards for the Indian River School District. Bidders proposing substitutes shall submit all required technical performance data information under 07550 to owner at least 7 days prior to bid due date.
- C. Any item or materials submitted as an alternate to the Indian River School District minimum standard specified must comply in all respects as to the quality and performance of the minimum standard performance criteria. All testing information must be submitted and notarized by a third party accredited testing facility. Manufactures Data sheets will not be accepted. All materials submitted shall be submitted in triplicate and The Owner / Architect shall be the sole judge as to whether or not an item submitted as an equal is truly equal. Should the contractor choose to submit on the equal basis, he shall assume all risk involved, monetary or otherwise should the Owner find it unacceptable.

2.2 DESCRIPTION

- A. Modified bituminous sheet roofing work including but not limited to:
 - a. Base Ply - One ply of approved ASTM D-6162 Type III – Test Method ASTM D 5147, recycled SBS fiberglass / polyester scrim modified membrane.
 - b. Top Ply - One ply of approved ASTM D-6162 Type III – Test Method ASTM D 5147, recycled SBS / SIS including Kevlar fibers / fiberglass / polyester scrim. White starburst mineral modified cap sheet.
- B. The standard bitumen will consist of no V.O.C., solvent free and Odor free, non-asbestos containing cold applied adhesive for roof slopes up to ½:12.
- C. All field and flashings will be set in bitumen and will be one ply of SBS base flashing ply covered by an additional layer of modified bitumen mineral membrane:
 - I. The Recycled Modified Membranes will be:
 - a. Base Ply - Modified Membrane – Finished Membrane
105 SBS - Recycled modified cap sheet
Styrene-Butadiene Styrene) rubber modified roofing membrane
reinforced with a dual fiberglass scrim and polyester mat.
 - b. Top Ply - Modified Mineral Cap Sheet - Finished Membrane

155 mil SIS and SBS - Recycled Modified Membrane w/ White Starburst Minerals - Reflectivity utilizing starburst minerals = 50%-60% (Styrene-Isoprene-Styrene and Styrene-Butadiene-Styrene) rubber modified roofing membrane reinforced with a dual fiberglass scrim and polyester mat.

2. The surfacing will be energy star flashing System. This coating will be applied once all trades are completed. This coating system is one base coat and one coat of the white Energy Star coating throughout the entire roof system or the rubber adhesive flood coat and gravel using Texas White #7 gravel.

2.3 BITUMINOUS MATERIALS

1. Cold Applied Solvent Free Flashing Adhesive: zero V.O.C. – NO Odor
 - a. Non-Volatile Content ASTM D4586 100%
 - b. Density ASTM D1475 11.8 lbs./gal. (1.17 g/m³)
 - c. Viscosity Stormer ASTM D562 16-20 sec.
 - d. Flash Point ASTM D93 400°F min. (232°C)
2. Cold Applied Solvent Free Membrane Adhesive: zero V.O.C. compliant Performance, No Odor Requirements:
 - a. Non-Volatile Content ASTM D4586 100%
 - b. Density ASTM D1475 11.2 lbs./gal. (1.11 g/m³)
 - c. Viscosity Stormer ASTM D562 16-20 sec.
 - d. Flash Point ASTM D93 400°F min. (232°C)
 - e. Slope: up to 3:12
3. Cold Applied Adhesive Performance Requirements: No Odor
 - a. Non-Volatile Content ASTM D4479 75%
 - b. Density ASTM D1475 9.1 lbs./gal. (1 kg/l)
 - c. Viscosity Stormer ASTM D4449 20-25 sec.

- d. Flash Point ASTM D93 100°F (37°C)
- 4. Cold Applied Adhesive Performance Requirements: No Odor
 - a. Non-Volatile Content ASTM D2939 63%
 - b. Density ASTM D2939 8.2-8.5 lbs./gal. (.98-1.02 kg/l)
 - c. Viscosity Stormer ASTM D562 85-95 KU
 - d. Flash Point ASTM D93 440°F (227°C)
- 5. Cold Applied Adhesive Performance Requirements:
 - a. Density ASTM D2939 9.0 lbs./gal. (1 kg/l)
 - b. Viscosity Stormer ASTM D4449 100-200 sec.
 - c. Flash Point ASTM D93 105°F (40°C)

2.4 SHEET MATERIALS

A. Base Ply – Recycled Modified Membrane – Base Ply field flashing membrane

PROPERTIES: Base Ply - Finished Membranes

- 1. **Modified Membrane SBS - Recycled Modified Cap Sheet**
ASTM D-6162 Type III Grade S, ASTM D 5147

Tensile Strength (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 310 lbf/in	CMD 310 lbf/in
Tear Strength (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 500 lbf/in	CMD 500 lbf/in
Elongation at Maximum Tensile (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 3.5%	CMD 3.5%
Low Temperature Flexibility (ASTM D-5147)	Passes -30°F (-40°C)	
Recycled Content	Post Industrial	22.89%

B. Top Ply - Recycled Modified Mineral Membrane - Field membrane

PROPERTIES: Finished Mineral Membrane

- 1. **Modified Mineral Membrane SBS and SIS - Recycled Modified Cap Sheet - ASTM D-6162 Type III Grade S - White Starburst Minerals**

Tensile Strength (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 350 lbf/in	CMD 350 lbf/in
Tear Strength (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 550lbf	CMD 550 lbf
Elongation at Maximum Tensile (ASTM D-5147) 2 in/min. @ 73.4 ± 3.6°F	MD 6.0%	CMD 6.0%
Low Temperature Flexibility (ASTM D-5147)	Passes -30°F (-40°C)	
Reflectivity utilizing white starburst minerals =	50 %	
Recycled Content	Post Industrial	22%

Manufacturer Qualifications: SBS modified cap sheet must meet factory mutual test 4470 and all of criteria set forth in the factory mutual test 4470. This test must have approvals dating back at least two (2) years. This test cannot have new approvals as it is a continuing monitor of manufacturing quality and field performance. This test must be performed using the exact insulation, decking, and modified built up roofing system as specified. Similar applications which are not exact will not be considered.

Primary roofing system manufacturer SBS (Styrene Butadiene Styrene) must meet the following criteria:

1. Must have been manufacturing the exact specified modified cap sheet for a period not less than five (5) years. In the same configuration specified.
 - A) Invoices proving polymer purchases may be requested by the owner verification.
2. Primary manufacturer must submit documentation and verification that this exact configuration including decking, insulation and modified built up roofing system (SBS and SIS modified cap sheet and number of ply's of the specified fiberglass base sheet, adhered with the specified asphalt) has been installed and performing satisfactory for a period of not less than six (6) years and a minimum of 400,000 square feet. As well as a letter from Factory Mutual verifying approval. In order to obtain a true comparison under the same weather conditions, these applications must be within a 50 mile radius of the specified project location.
3. Primary manufacturer must be currently certified by the International Organization for Standardization as meeting the minimum quality assurance standards outlined in the I.S.O. 9001 Program, and shall be registered in the current listing of I.S.O. certified manufacturers.
4. Primary manufacturer must make annual follow up inspections on the finished roofing areas annually. Provide to the owner/any maintenance recommendations.
5. Primary manufacturer must inspect the job on a daily basis and submit weekly reports to the owner/architect to insure proper installation procedures are being followed in accordance with the written specification.
6. Primary manufacture must provide ,Customer, a 30 year warranty including the system materials and workmanship for the life of the warranty period. Manufacture is required to provide the owner annual inspections of the roof for the life of the warranty period at "No Additional Cost" to the owner.

In order to be considered as an approved equal for this project all of the above verified testing information must be submitted by the responsive bidder in triplicate not later than seven (7) days prior to the bid date. In addition all verified testing must be notarized.

2.5 SURFACINGS

- A. Exposed Field & Flashings White Coating
Reflectivity Typical 90%
Emittance 85
SRI for LEED 113
Tensile Strength 250 psi minimum, ASTM D 2370
Elongation 250% Minimum, ASTM D 2370
Weathering ASTM D 4798 No deterioration over 1000
Hrs. per ASTM G 26 test requirements

1. Entire flashing and field system will be coated with the white coating. This system will be one prime coat and top ply of coating throughout the entire flashing membrane. (two coats required)

2.6 RELATED MATERIALS

- A. Roof Insulation: Reference Section 07220 - Roof and Deck Insulation for requirements.
- B. Roof Insulation Fasteners: Reference Section 07220 - Roof and Deck Insulation for requirements.
- C. Base and Top Ply Modified Cap sheets: Both shall use recycled materials and shall meet the requirements of ASTM D-6162 Type III and meet all the minimum performance criteria and test method of ASTM D 5147.
- D. Nails and Fasteners: Non-ferrous metal or galvanized steel, except that hard copper nails shall be used with copper; aluminum or stainless steel nails shall be used with aluminum; and stainless steel nails shall be used with stainless steel. Fasteners shall be self-clinching type of penetrating type as recommended by the manufacturer of the deck material. Nails and fasteners shall be flush-driven through flat metal discs of not less than 1-inch diameter. Metal discs may be omitted when one-piece composite nails or fasteners with heads not less than 1-inch diameter are used.
- E. Metal Discs: Flat discs or caps of zinc-coated sheet metal not lighter than 28 gauge and not less than 1-inch in diameter. Discs shall be formed to prevent dishing. Bell or cup shaped caps are not acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate surfaces to receive modified bitumen sheet roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Roof System Manufacturer.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing the modified bitumen sheet system.
- B. Insurance/Code Compliance: Where required, install and test the bituminous roofing system to comply with governing regulation and specified insurance requirements.

- C. Protect other work from spillage of roofing materials and prevent materials from entering or clogging drains and conductors. Replace or restore other work damaged by installation of the bituminous roofing system work.
- D. Coordinate installing roofing system components so that insulation and roofing plies are not exposed to precipitation or left exposed overnight. Provide cut-offs at end of each day's work to cover exposed ply sheets and insulation with two (2) plies of #15 organic roofing felt with joints and edges sealed with roofing cement. Remove cut-offs immediately before resuming work.
- E. Cold applied membrane adhesive coverage rates for interply application (2 to 2-1/2) two to two and a half gallons per 100 square feet (plus or minus 25% on total job average basis.)
- F. Substrate Joint Penetrations: Prevent bitumen from penetrating substrate joints, entering building or damaging roofing system components or adjacent building construction.
- G. Apply roofing materials as specified herein unless recommended otherwise by manufacturer's instructions. Keep roofing materials dry before and during application. Do not permit phased construction. Complete application of roofing plies, modified sheet and flashing in a continuous operation. Begin and apply only as much roofing in one day as can be completed that same day.
- H. Cut-Offs: At end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and insulation. Provide temporary covering of two (2) plies of #15 organic roofing felt set in full moppings of bitumen with joints and edges sealed.

3.4 BASE PLY – MODIFIED CAP SHEET APPLICATION

- A. Base Sheets Plies: Install (1) ply base ply modified cap sheet in 2 to 2-1/2 gallons per ply per square of bitumen shingled uniformly to achieve one ply throughout over the prepared substrate. Shingle in proper direction to shed water on each large area of roofing. Prior to installation, cut sheets into 18' lengths and allow to relax.
- B. Lap ply sheet ends four inches. Stagger end laps twelve inches minimum.
- C. Extend plies two inches beyond top edges of cants at wall and projection bases.
- D. Install base flashing ply to all perimeter and projection details.
- E. Allow the two plies of base sheet to cure at least thirty minutes before installing the modified membrane. However, the modified membrane must be installed the same day as the base plies.

3.5 TOP PLY FINISHED - MODIFIED MEMBRANE APPLICATION

- A. The Top Ply modified membrane shall then be solidly bonded to the base ply with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.
- B. The roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Care should be taken to eliminate air entrapment under the membrane.
- C. Subsequent rolls of modified shall be installed across the roof as above with a minimum of 4" side laps and 8" end laps. The end laps shall be staggered. The modified membrane shall be laid in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
- D. For best results, allow the cold adhesive to set for five to ten minutes before installing the top layer of modified membrane.

- E. Extend membrane 2" beyond top edge of all cants in full coatings of the cold adhesive as shown on the drawings.

3.6 FLASHING MEMBRANE INSTALLATION (GENERAL): Heat Fused two ply flashing system will be accepted as approved by the roof system prime manufacture. ALL HEAT FUSED SYSTEMS MUST BE RECYCLED SYSTEMS.

- A. All curb, wall and parapet flashings shall be sealed with an application of mastic and mesh on a daily basis. No condition should exist that will permit moisture entering behind, around or under the roof or flashing membrane.
- B. Prepare all walls, penetrations and expansion joints to be flashed and where shown on the drawings with asphalt primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
- C. All plies will be adhered with Flashing Adhesive, unless otherwise specified. The modified membrane will be used as the flashing and nailed off 8" O.C. at all vertical surfaces.
- D. The entire sheet of flashing membrane must be solidly adhered to the substrate.
- E. Seal all vertical laps of flashing membrane with a three-course application of Flashing mastic or Flashing Adhesive and fiberglass mesh.
- F. Counter flashing, cap flashings, expansion joints, and similar work to be coordinated with roofing work are specified in other sections.
- G. Roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices to be coordinated with modified bituminous roofing system work are in other sections.

3.7 APPLICATION OF SURFACING – ENERGY STAR COATING SYSTEM – ENTIRE FIELD AND FLASHING SYSTEM:

- A. Prior to installation of surface, obtain approval from manufacturer as to work completed.
- B. White Coating all exposed Field & Flashing System:
 - 1. Allow all cold applied modified roof system to properly dry and cure before installing the white coating.
 - 2. Paint all exposed membrane with manufacturer's white base coat at a rate of one gallon / sq. and install the top Kynar coating installed at a rate of 1/2 gallon per square.
 - 3. Paint all exposed membrane with manufacturer's white base coat installed at a rate of one gallon per square. The final top Kynar coating shall be installed for the final coat at 1/2 gallon / sq..

3.9 CLEANING

- A. Remove drippage of bitumen from all walls, windows, floors, ladders and finished surfaces.
- B. In areas where finished surfaces are soiled by bitumen or any other sources of soiling caused by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.

3.10 FINAL INSPECTION

- A. At completion of roofing installation and associated work, meet with Installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.
- B. Walk roof surface areas of the building, inspect perimeter building edges as well as flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party attending.
- C. The Roofing System Manufacturer reserves the right to request a thermographic scan of the roof during final inspection to determine if any damp or wet materials have been installed. The thermographic scan shall be provided by the Roofing Contractor at a negotiated price.
- D. If core cuts verify the presence of damp or wet materials, the Roofing Contractor shall be required to replace the damaged areas at his own expense.
- E. Repair or replace (as required) deteriorated or defective work found at time above inspection to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- F. The Contractor is to notify the Owner upon completion of corrections.
- G. Following the final inspection, acceptance will be made in writing by the material manufacturer.

END OF SECTION

SECTION 07600

FLASHING AND SHEET METAL

PART 1 - GENERAL

1.1 SCOPE OF WORK:

A. Provide all labor, equipment, and materials fabricate and install the following.

1. Fascia, scuppers, and trim.
2. Counterflashings over bituminous base flashing.
3. Counterflashings for roof accessories.
4. Counterflashings at roof mounted equipment and vent stacks.
5. Base flashing coverings.
6. Coping cap at parapets.
7. Gutters, scuppers and down spouts.
8. Counterflashings at walls and penetrations.
9. Lead flashing for bituminous membranes.
10. Other components.

1.2 RELATED SECTIONS

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

B. RELATED SECTIONS

1. Section 06100 - Rough Carpentry
2. Section 07550 - Modified Bitumen Roofing
3. Section 07720 - Roof Accessories
4. Section 07900 - Joint Sealants

1.3 REFERENCES

ASTM A-446	Specification for steel sheet
ASTM B-209	Specification for aluminum sheet
ASTM B-221	Specification for aluminum extruded shape
FS QQ-L-201	Specification for Lead Sheet
ASTM A792	Steel Sheet, Aluminum-Zinc Alloy-Coated, by the Hot-Dip Process
ASTM B32	Solder Metal
ASTM B209	Aluminum and Alloy Sheet and Plate
ASTM B486	Paste Solder
ASTM D226	Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
ASTM D486	Asphalt Roof Cement, Asbestos-free
FS O-F-506	Flux, Soldering, Paste and Liquid
WH	Warnock Hersey International, Inc. Middleton, WI.
FM	Loss Prevention Data Sheet
NRCA	National Roofing Contractors Association - Roofing Manual
SMACNA	Architectural Sheet Metal Manual

1.4 SUBMITTALS

- A. Submit under provisions of all technical performance criteria set forth in the specifications.
- B. Product Data: Provide manufacturer's specification data sheets for each product in accordance with Section 07600.
- C. Provide approval letters from metal manufacturer for use of their metal within this particular roofing system type.
- D. Submit two samples, 12 x 12 inch in size illustrating typical external corner, internal corner, valley, junction to vertical dissimilar surface, material and finish.
- E. Shop Drawings
1. For manufactured and shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
 2. Shop drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashing, termination's, and installation details.
 3. Indicate type, gauge and finish of metal.
- F. Certification

1. Submit roof manufacturer's certification that metal fasteners furnished are acceptable to roof manufacturer.
2. Submit roof manufacturer's certification that metal furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.
3. Submit certification that metal and fastening system furnished is Tested and Approved by Factory Mutual for I-90 Wind Up-Lift Requirements.

B. Manufacturer's Product Data

1. Metal material characteristics and installation recommendations.
2. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.

1.5 QUALITY CONTROL

A. Reference Standards

1. Comply with details and recommendations of SMACNA Manual for workmanship, methods of joining, anchorage, provisions for expansion, etc.
2. Factory Mutual Loss Prevention Data Sheet 1-49 windstorm resistance 1-90.

B. Manufacturer's Warranty

1. Pre-finished metal material shall require a written 30-year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D-2244 or chalking excess of 8 units per ASTM D-659. If either occurs material shall be replaced per warranty, at no cost to the Owner. The metal manufacture must be the same manufacture as the low slope modified roof system. Multiple manufactures will not be accepted.

C. Contractor's Warranty

1. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

1.6 QUALIFICATIONS

- A. Fabricator and Installer:** Company specializing in sheet metal flashing work with 5 years experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.**

- B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials which may cause discoloration or staining.

PART 2 - PRODUCTS

2.1 APPROVED EQUIVALENT

- A. Contractor must submit any product not specified a minimum five days before the bid date to Architect in order for product to be considered for approval. The Architect will notify Contractor, in writing, of decision to accept or reject request.

2.2 MATERIALS

- A. Metal system is to be comprised of minimum Aluminum or Galvalume steel, coated on both sides with an epoxy primer and on the weathering surface with a polyvinylidene fluoride or siliconized polyester baked organic coated finish.

1. Materials

a. Aluminum-Zinc alloy Coated Steel

Aluminum-zinc alloy (galvalume) coated steel, ASTM A792, coating designation AZ-50, in thickness of .0217 nom. /24 gauge or .040 Aluminum; 36" to 48" by coil length, chemically treated, commercial or lock-forming quality.

*Subject to minimum quantity requirements

*Standard Kynar 500 finish coating is only accepted.

b. Colors shall be as specified and chosen by the Owner/Architect.

B. Miscellaneous Metals and Flashings:

1. Zinc-Coated Steel Sheet: ASTM A526, 0.20% copper, 26 gage (0.0179"); designation G90 hot-dip galvanized, mill phosphatized.
2. Stainless Steel Sheet: Type 302/304, ASTM A167, 28 gage, (0.015"), annealed except dead soft where fully concealed by other work, 2D (dull) finish.
3. Copper Sheet: ASTM B370, 16 oz. (0.0216), temper H00 (cold-rolled).
4. Lead-Coated Copper Sheet: ASTM B101. Type I, Class A (12-15 1 lb. of lead coating per 100 sq. ft.), 17.1 oz. (0.022").
5. Zinc Alloy Sheet: Zinc with 0.6% copper and 0.14% titanium; 0.27" thick (21 gauge); standard (soft) temper, mil finish.

2.3 RELATED MATERIALS

- A. Metal Primer: Zinc chromate type.

- B. Plastic Cement: ASTM D 4586
- C. Sealant: Specified in Section 07900 or on drawings.
- D. Lead: Meets Federal Specification QQ-L-201, Grade B, four pounds per square foot.
- E. Solder: ANSI/ASTM B32; 95/05 type.
- F. Flux: FS O-F-506.
- G. Underlayment: ASTM D2178, No15 asphalt saturated roofing felt.
- H. Slip Sheet: Rosin sized building paper.
- I. Fasteners:
 - 1. Corrosion resistant screw fastener as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.
 - 2. Fastening shall conform to Factory Mutual I-90 requirements or as stated on section details, whichever is more stringent.
- J. Termination Bars:
 - 1. Shall be aluminum unless otherwise recommended by membrane manufacturers.
 - 2. Material shall be .125" x 1" (minimum) aluminum conforming to ASTM B-221, mill finish. Bar shall have caulk cup as required.
- K. Gutter and Downspout Anchorage Devices: Type recommended by fabricator.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect contact areas of dissimilar metals with heavy asphalt or other approved coating, specifically made to stop electrolytic action.

3.2 GENERAL

- A. Install work watertight, without waves, warps, buckles, fastening stress, or distortion, allowing for expansion and contraction.
- B. Fastening of metal to walls and wood blocking shall comply with SMACNA Architectural Sheet Metal Manual, Factory Mutual I-90 wind uplift specifications and/or manufacturer's recommendations whichever is of the highest standard.
- C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

- D. Metal fascia and copings shall be secured to wood nailers at the bottom edge with a continuous cleat. Cleats shall be at least one gauge heavier than the metal it secures.

3.3 INSPECTION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets are in place, and nailing strips located.
- B. Verify membrane termination and base flashings are in place, sealed, and secure.
- C. Beginning of installation means acceptance of existing conditions.
- D. Field measure site conditions prior to fabricating work.

3.4 MANUFACTURED SHEET METAL SYSTEMS

- A. Installing Contractor shall be responsible for determining if the sheet metal systems are in general conformance with roof manufacturer's recommendations.
- B. Furnish and install manufactured sheet metal systems in strict accordance with manufacturer's printed instructions.
- C. Provide all factory-fabricated accessories including, but not limited to, fascia extenders, miters, scuppers, joint covers, etc.

3.5 SHOP FABRICATED SHEET METAL

- A. Installing Contractor shall be responsible for determining if the sheet metal systems are in general conformance with roof manufacturer's recommendations.
- B. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.
- C. Hem exposed edges.
- D. Angle bottom edges of exposed vertical surfaces to form drip.
- E. All corners for sheet metal shall be lapped with adjoining pieces fastened and set in sealant.
- F. Joints for gravel stop fascia system, cap flashing, and surface-mount counterflashing shall be formed with a 1/4" opening between sections. The opening shall be covered by a cover plate or backed by an internal drainage plate formed to the profile of fascia piece. The cover plate shall be embedded in mastic, fastened through the opening between the sections and loose locked to the drip edges.
- G. Install sheet metal to comply with Architectural Sheet Metal manual, Sheet Metal and Air Conditioning Contractor's National Associations, Inc.

3.6 FLASHING MEMBRANE INSTALLATION

A. COPING CAP

1. Copings shall be provided with factory fabricated welded watertight coping accessories such as miters, transitions, end caps, etc. and finished to match coping system. No exposed fasteners will be accepted throughout the entire project.
2. Accessories: Joint covers, corners, supports, strip flashing at joinings, fastening, and other accessories shall be included.
3. Install continuous cleat fasten 6" O.C.
4. Install new coping cap hooked to continuous cleat.

B. SURFACE MOUNTED COUNTERFLASHING/COPING CAP

1. Copings shall be provided with factory fabricated welded watertight coping accessories such as miters, transitions, end caps, etc. and finished to match coping system. No exposed fasteners will be accepted throughout the entire project.
2. Accessories: Joint covers, corners, supports, strip flashing at joinings, fastening, and other accessories shall be included.
3. Install continuous cleat fasten 6" O.C.
4. Install new coping cap hooked to continuous cleat.

C. SURFACE MOUNTED COUNTERFLASHING

1. Counterflashing shall be provided with watertight accessories such as miters, transitions, end caps, etc. and finished to match counterflashing.
2. Accessories: Joint covers, corners, fasteners, strip flashing at joinings, fastening, and other accessories shall be included.
3. Apply butyl tape to wall behind flashing. Secure termination bar through flashing butyl tape and into wall.
4. Secure new counterflashing set on a butyl tape above flashing 8" O.C., caulk top of counterflashing.

D. REGLET MOUNTED COUNTERFLASHING

1. Reglet shall be provided with watertight accessories such as miters, transitions, end caps, etc. and finished to match.
2. Accessories: Joint covers, corners, fasteners, strip flashing at joinings, fastening, and other accessories shall be included.
3. Cut reglet in masonry one joint above flashing.
4. Apply butyl tape to wall behind flashing. Secure termination bar through flashing butyl tape and into wall.
5. Secure reglet counterflashing with expansion fasteners and caulk reglet opening.

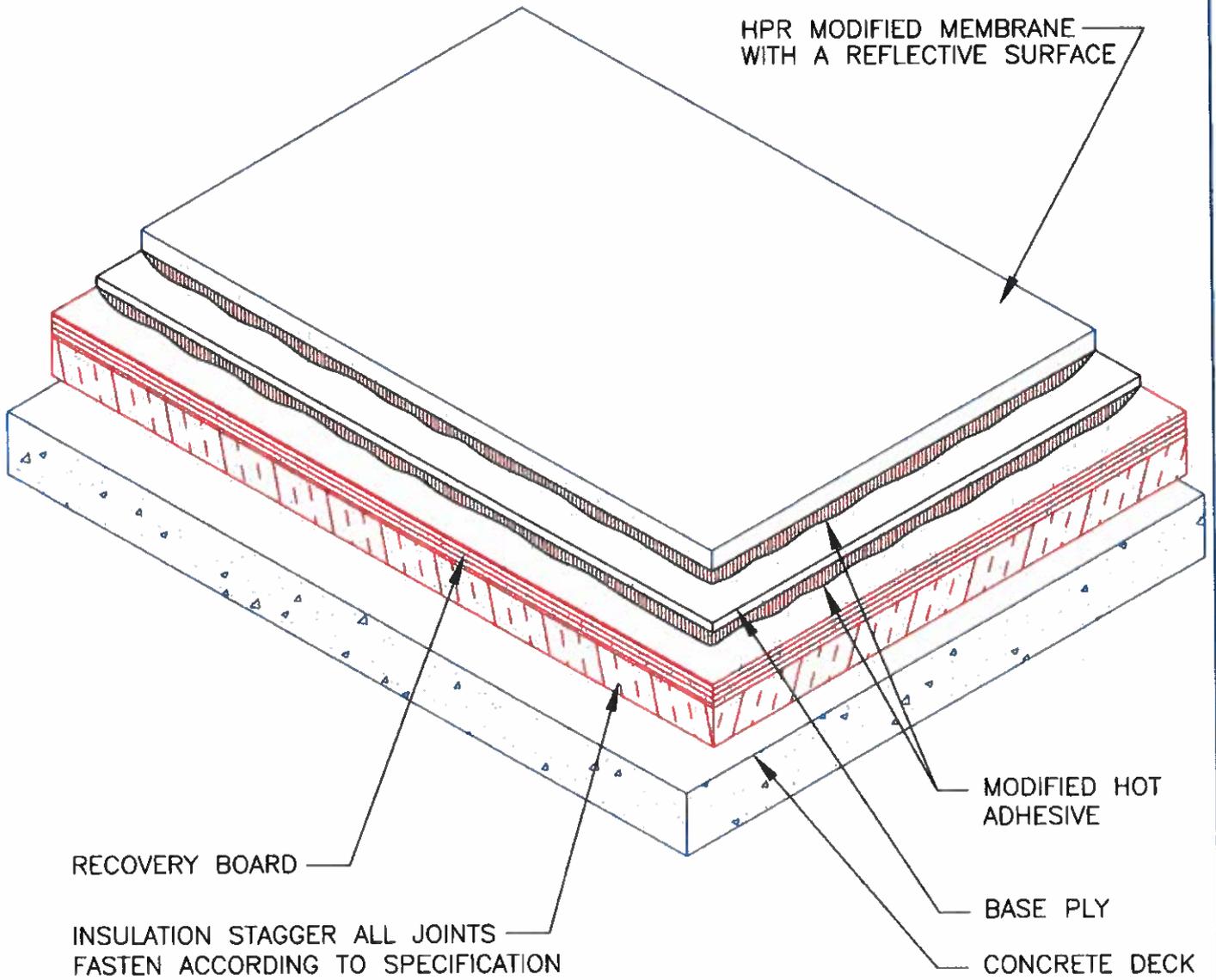
E. ROOF DRAIN

1. Prime lead/copper at a rate of 100 square feet per gallon and allow to dry.
2. Set lead/copper flashing (30" square minimum) in a 1/4" bed of mastic.
3. Install clamping ring and strainer assure all plies are under the clamping ring.

F. PLUMBING STACK

1. Prime flange and sleeve at a rate of 100 square feet per gallon and allow to dry.
2. Install properly sized sleeves in a 1/4" bed of elastomeric sealant.
3. Turn sleeve a minimum of 1" down inside of stack.
4. Caulk intersection of the membrane and flange with elastomeric sealant.

END OF SECTION

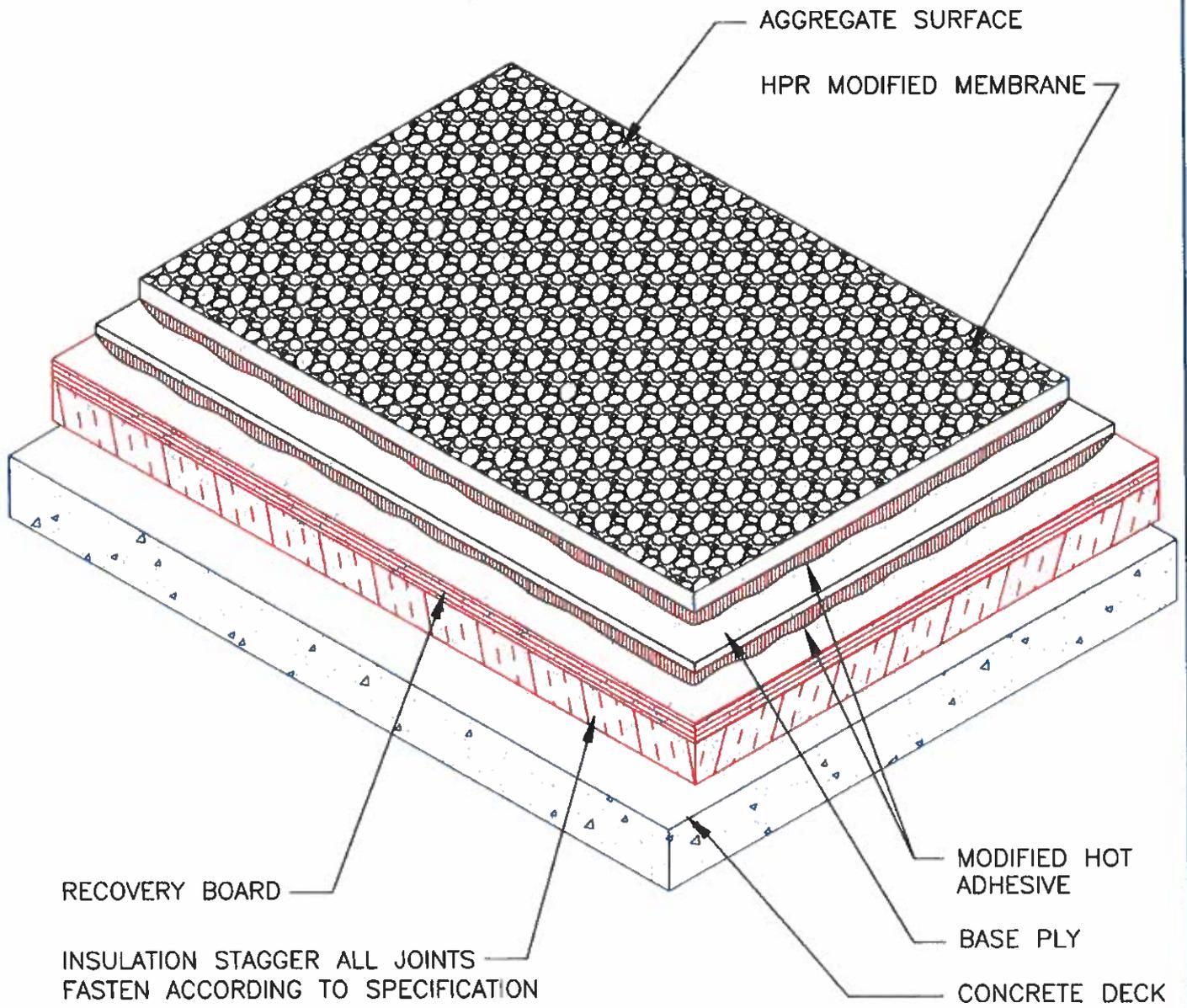


ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



COATED FINISH

2 PLY-HOT APPLIED

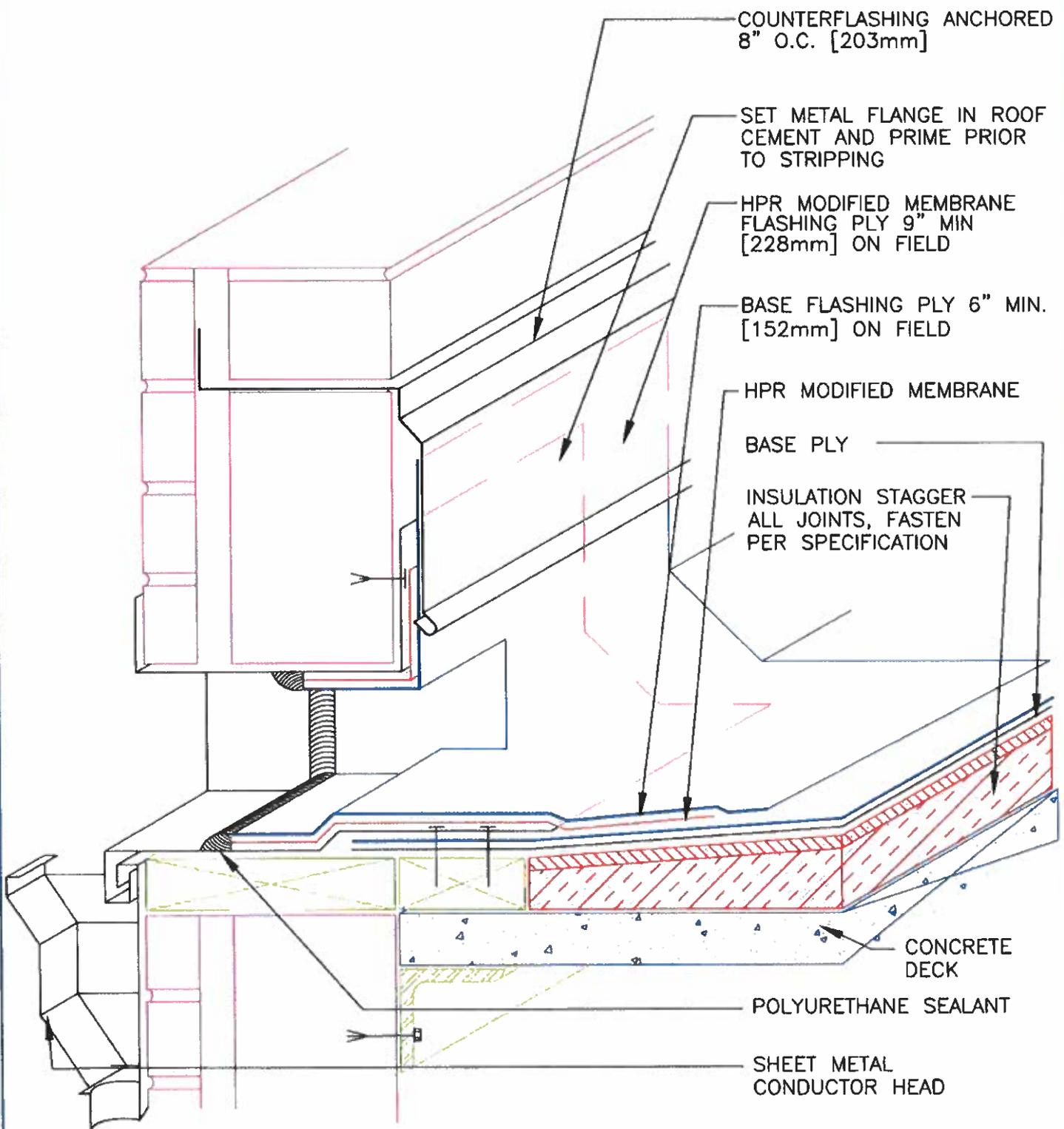


ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



GRAVEL FINISH

2 PLY-HOT APPLIED

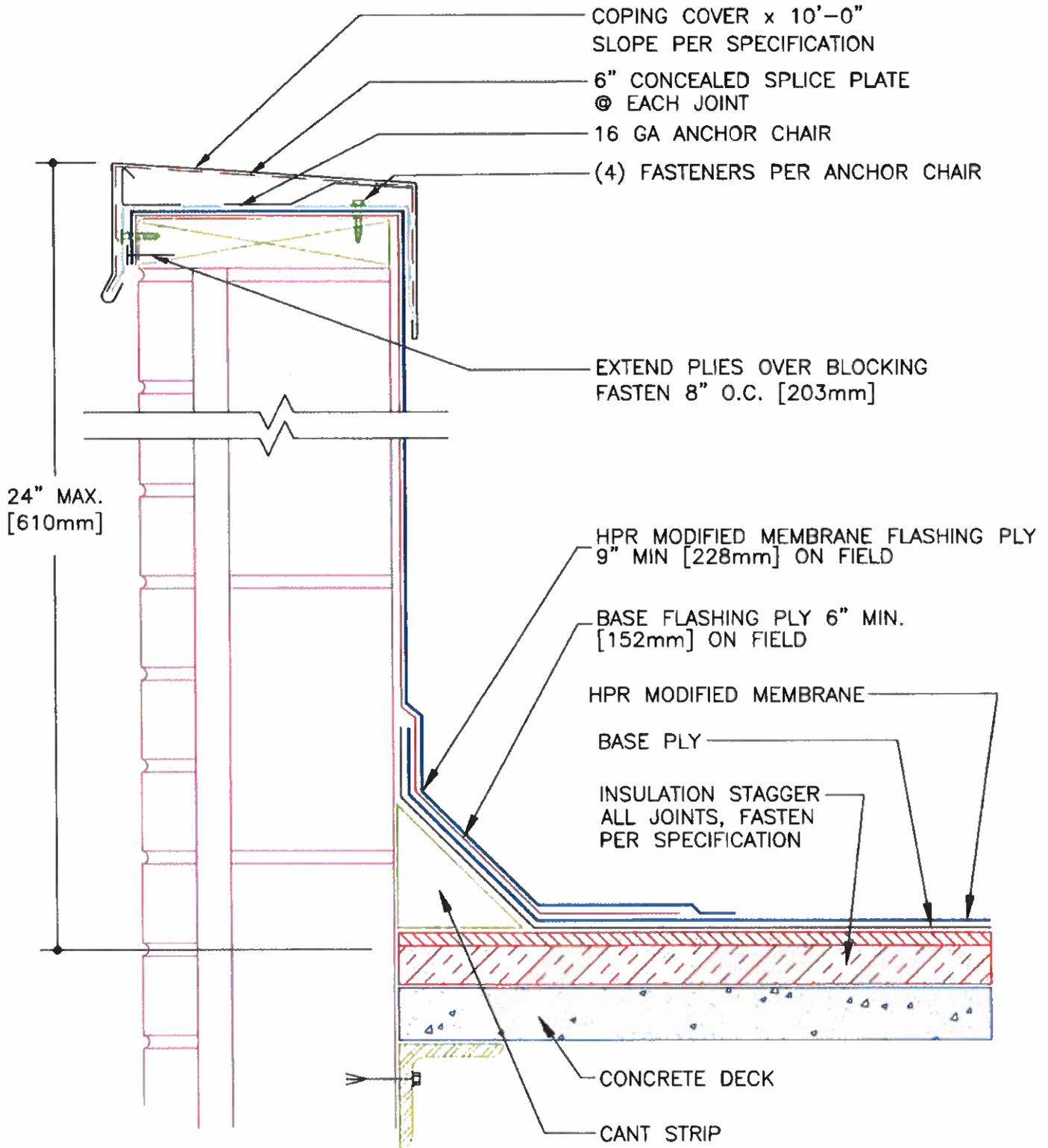


ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



SCUPPER (THROUGH WALL)

2 PLY-HOT APPLIED

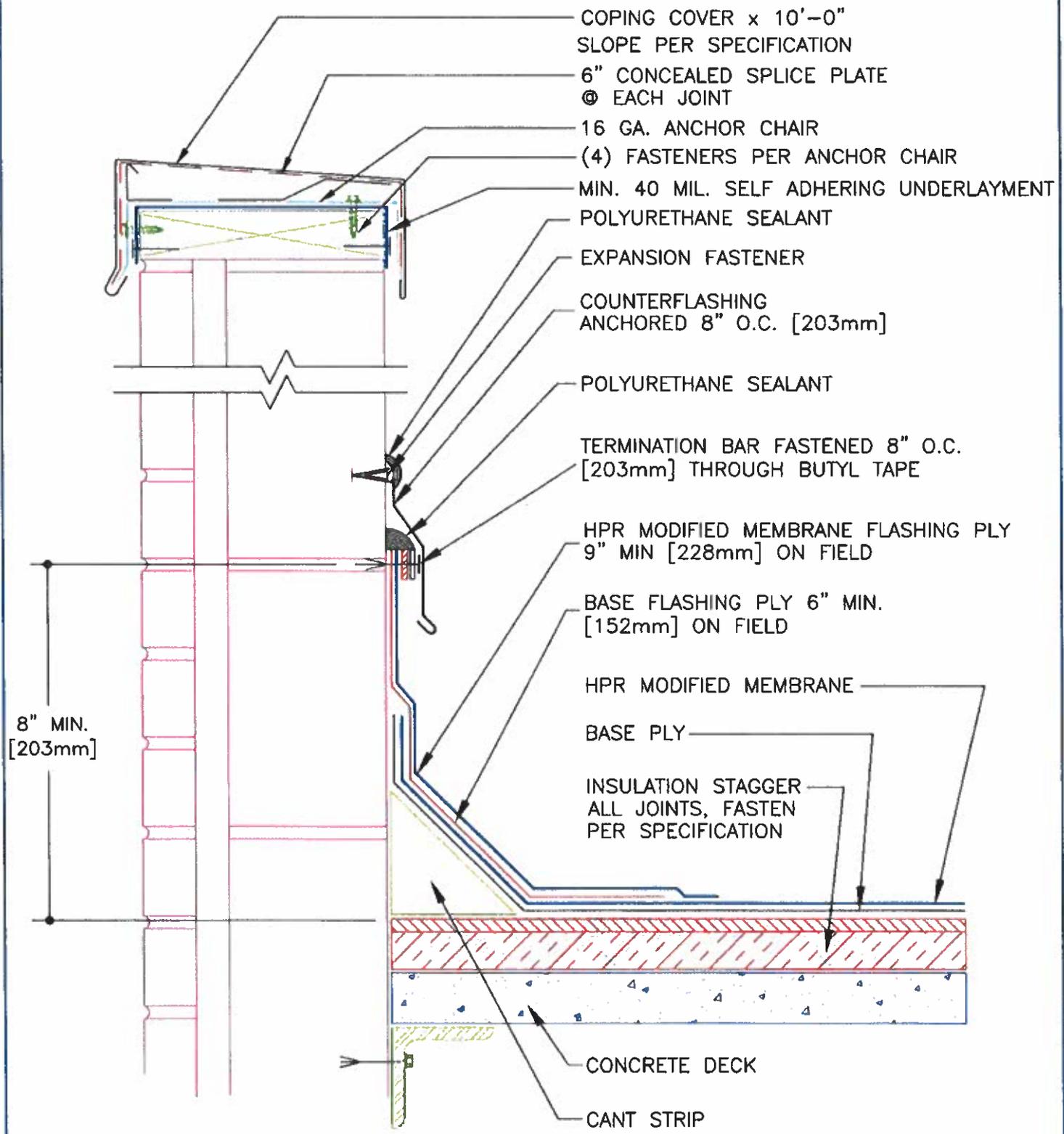


ALL PLIES SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



COPING CAP

2 PLY-HOT APPLIED

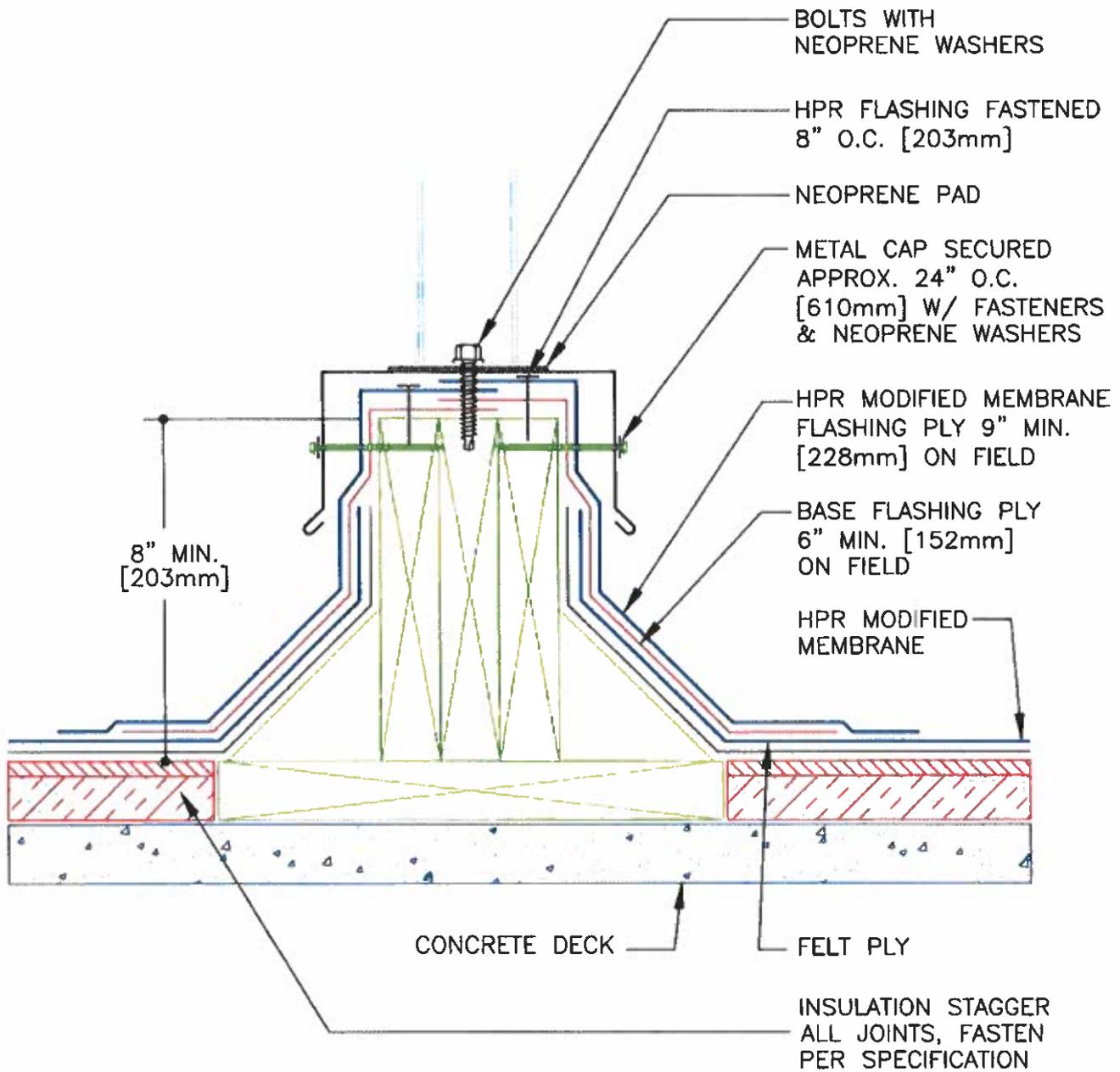


ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



REGLET MOUNTED COUNTERFLASHING

2 PLY-HOT APPLIED

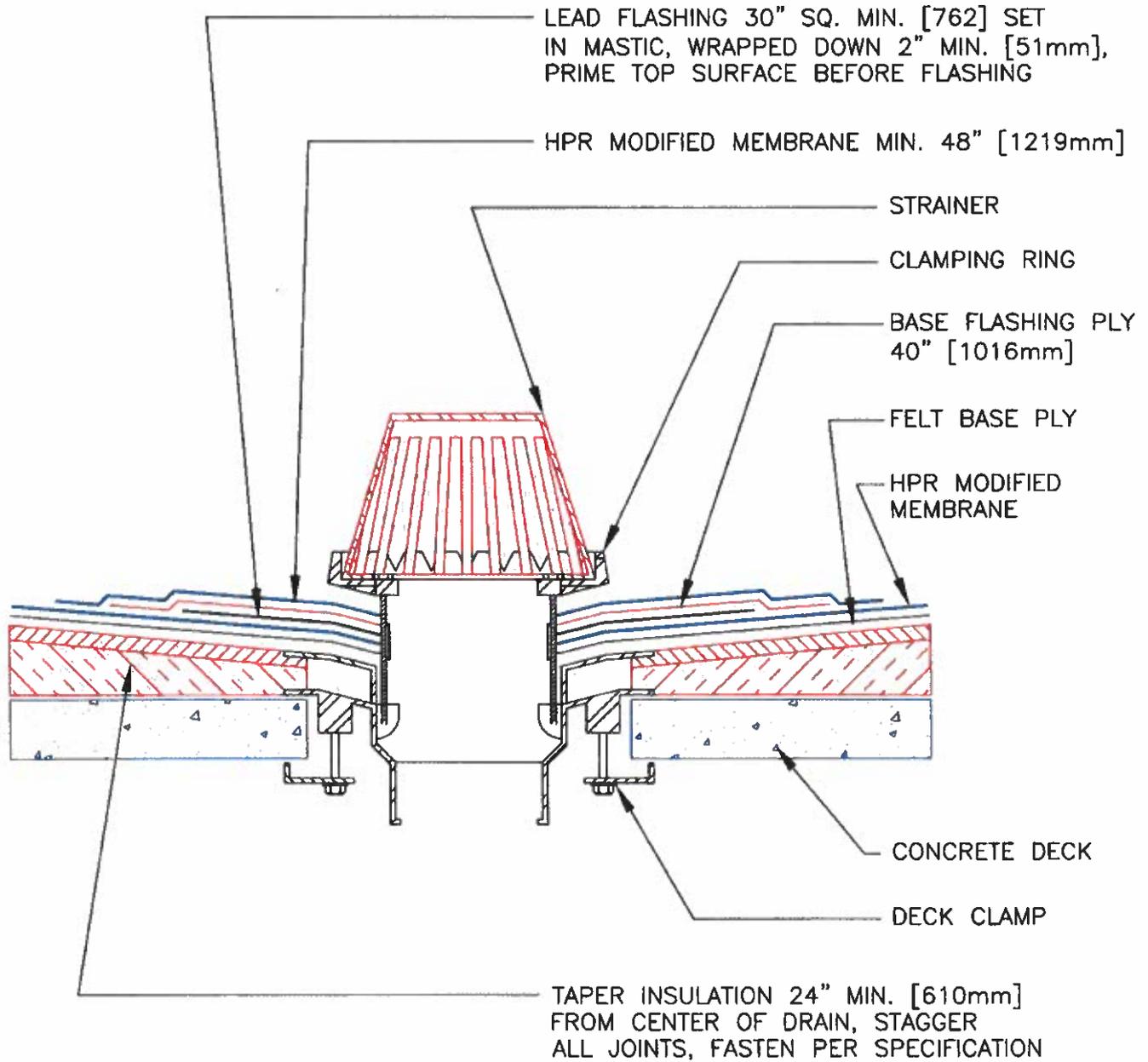


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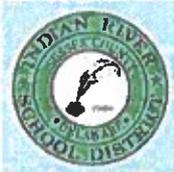


EQUIPMENT SUPPORT

2 PLY-HOT APPLIED

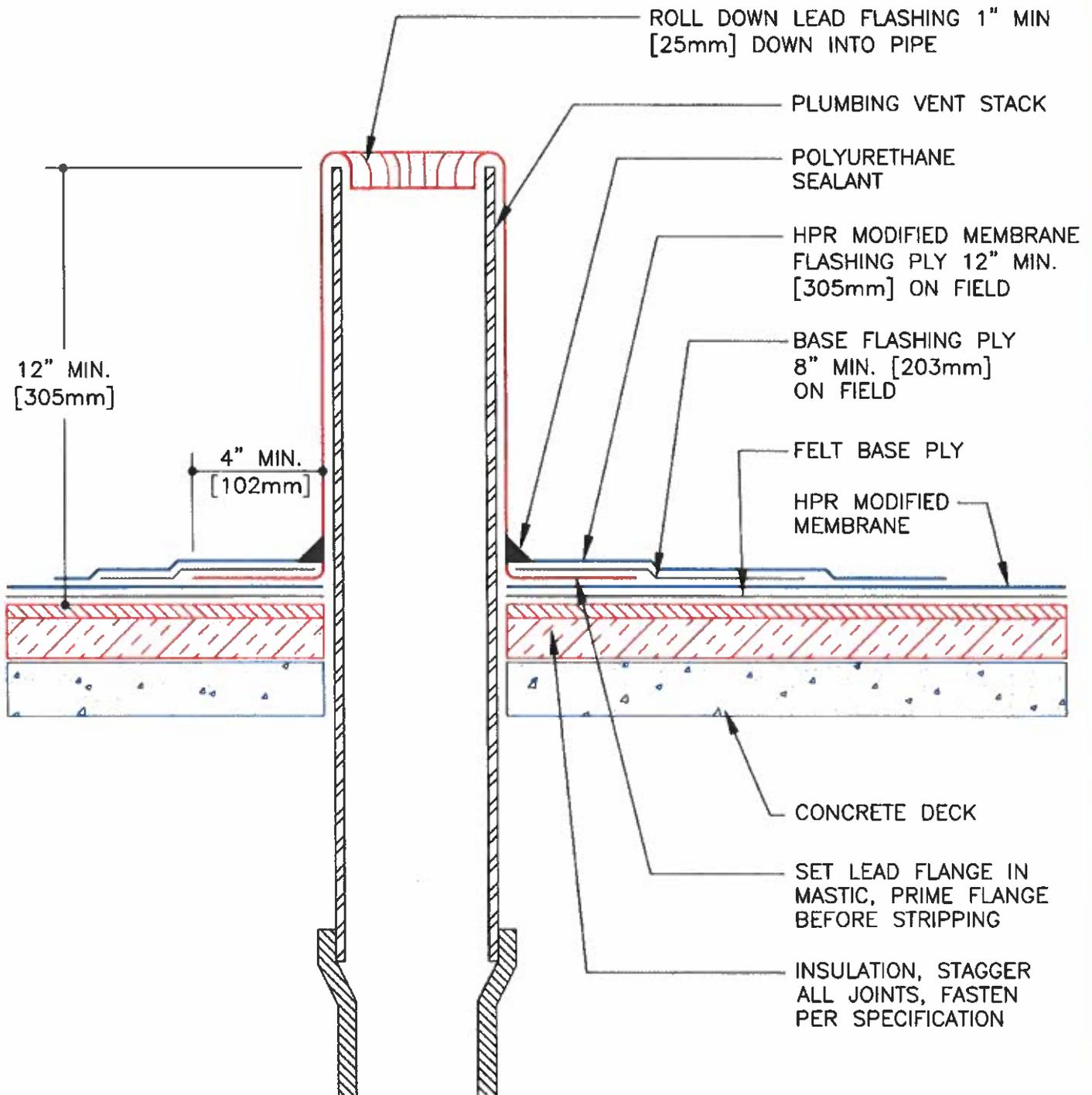


ALL PLIES SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



ROOF DRAIN

2 PLY-HOT APPLIED

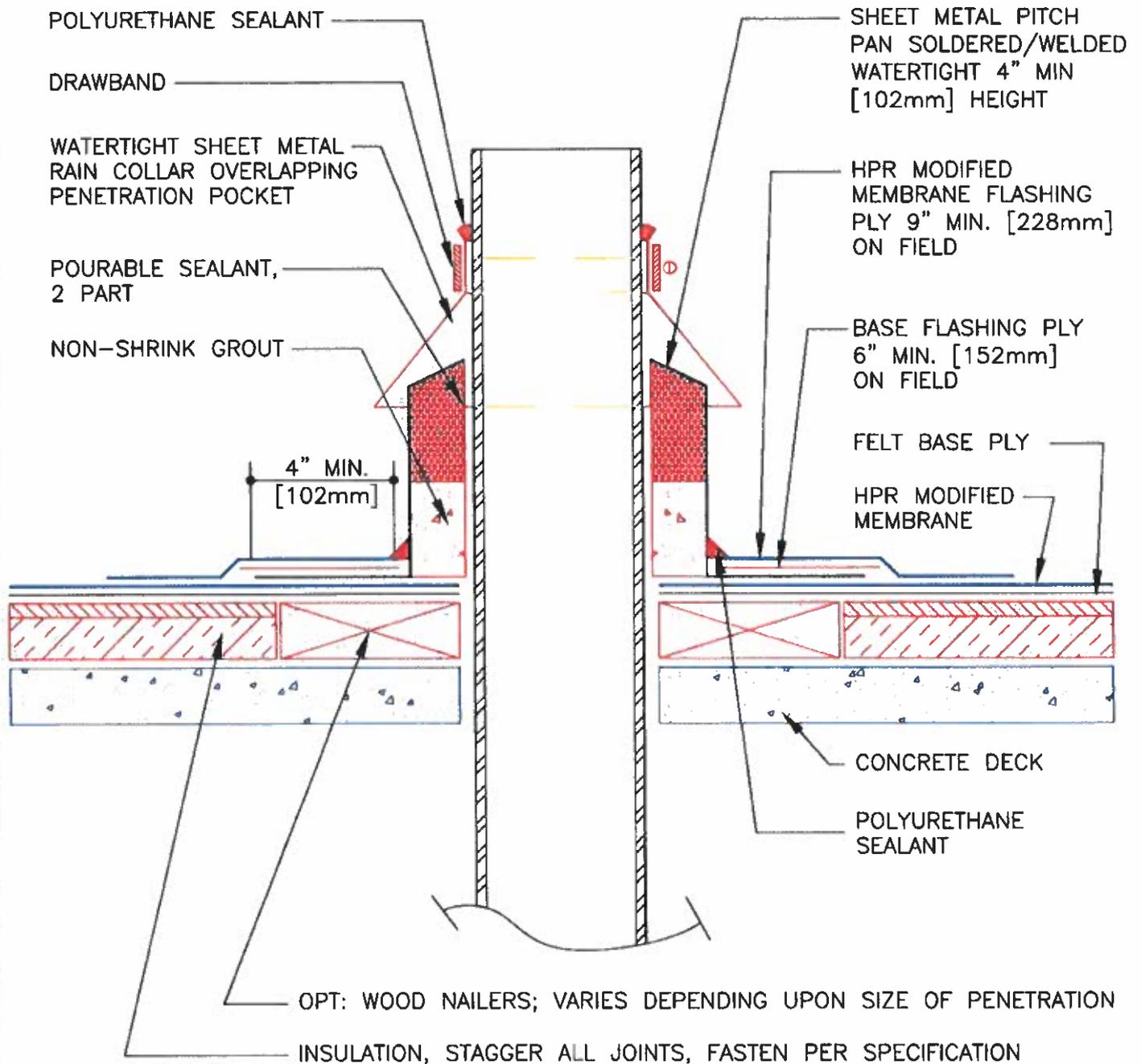


ALL PLIES SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



PLUMBING STACK

2 PLY-HOT APPLIED

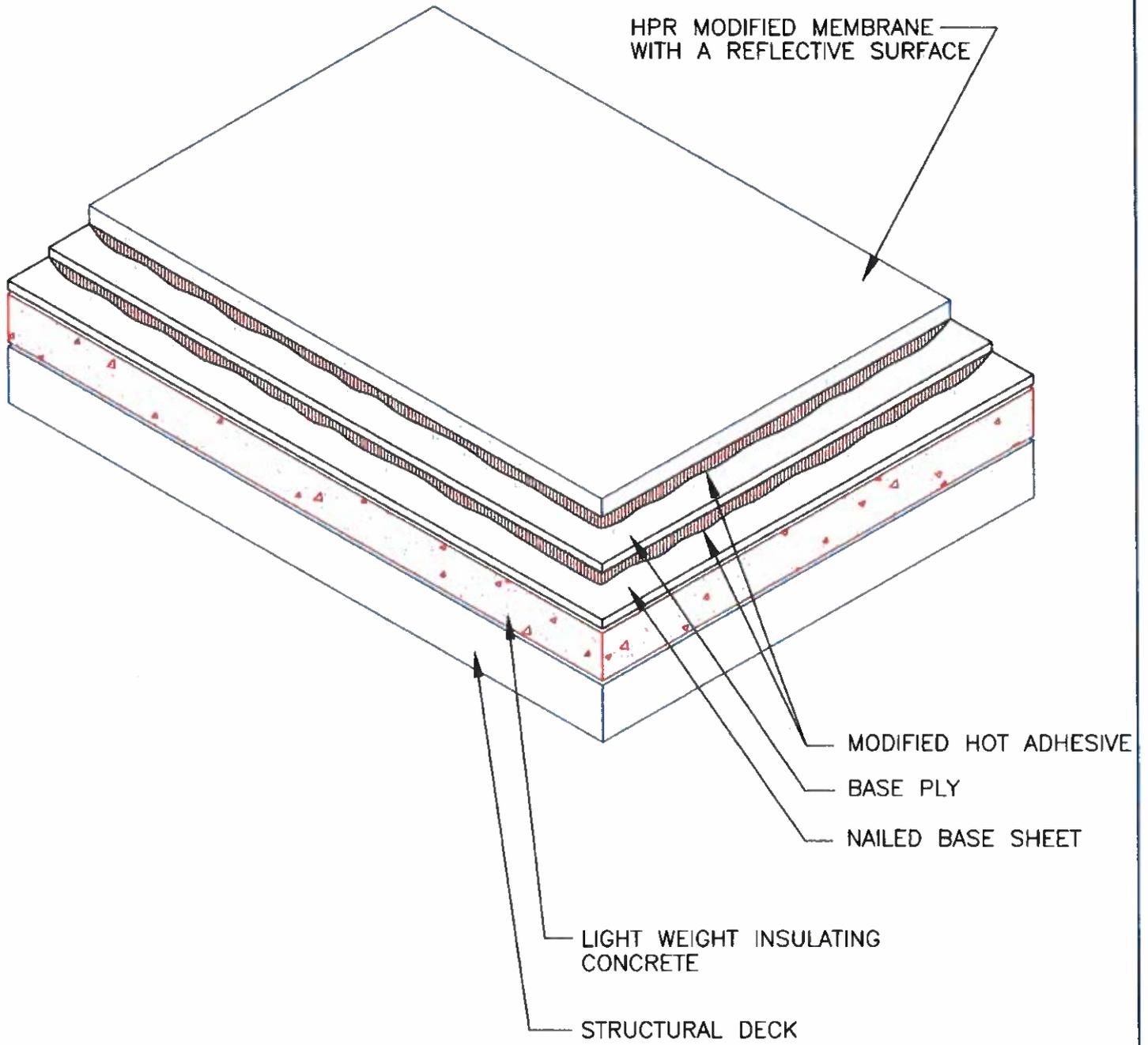


ALL PLIES SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



PITCH POCKET W/UMBRELLA

2 PLY-HOT APPLIED

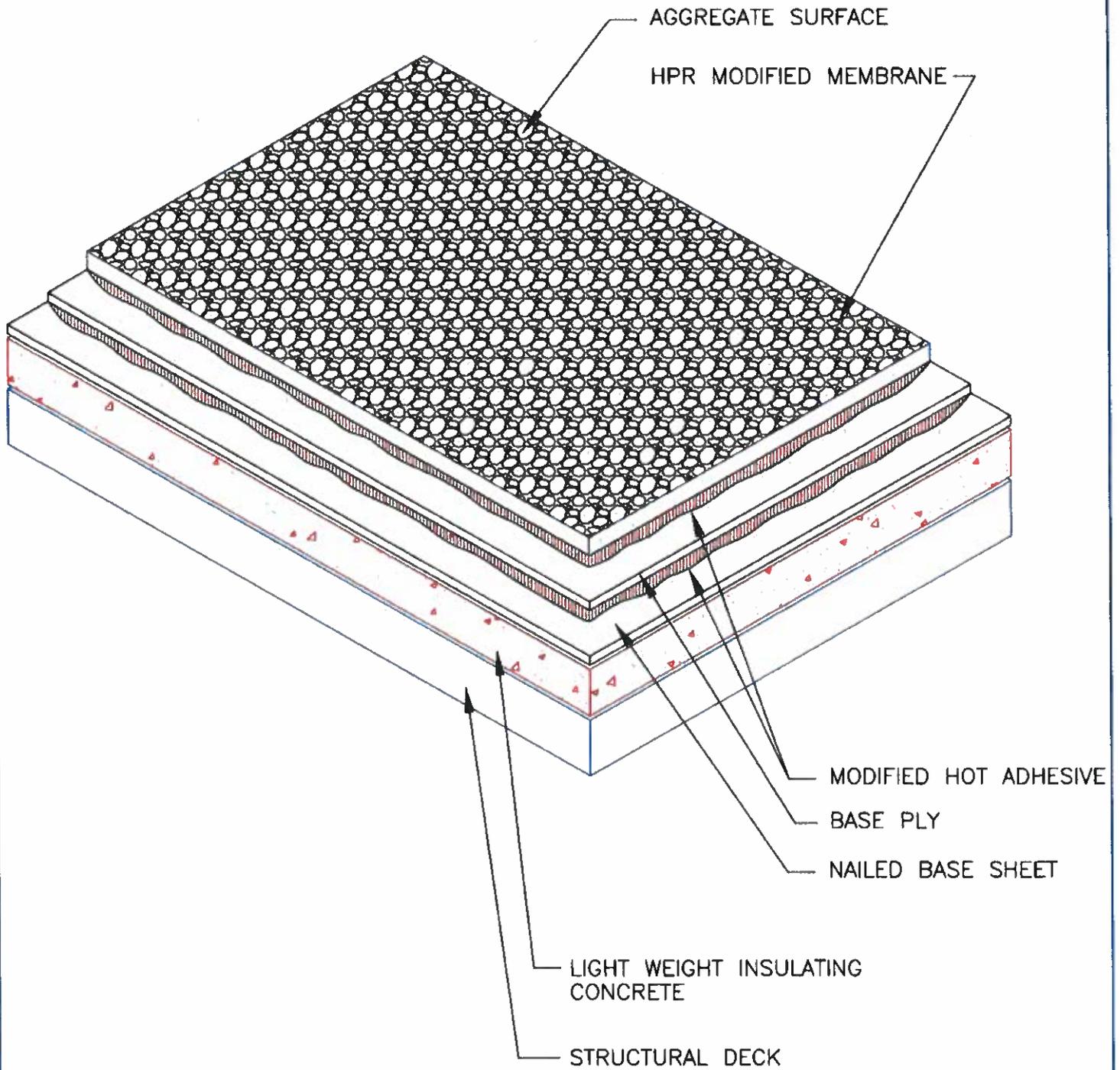


ALL PLYS SET IN BITUMEN SEE SPECIFICATION FOR SURFACING



COATED FINISH

2 PLY-HOT APPLIED

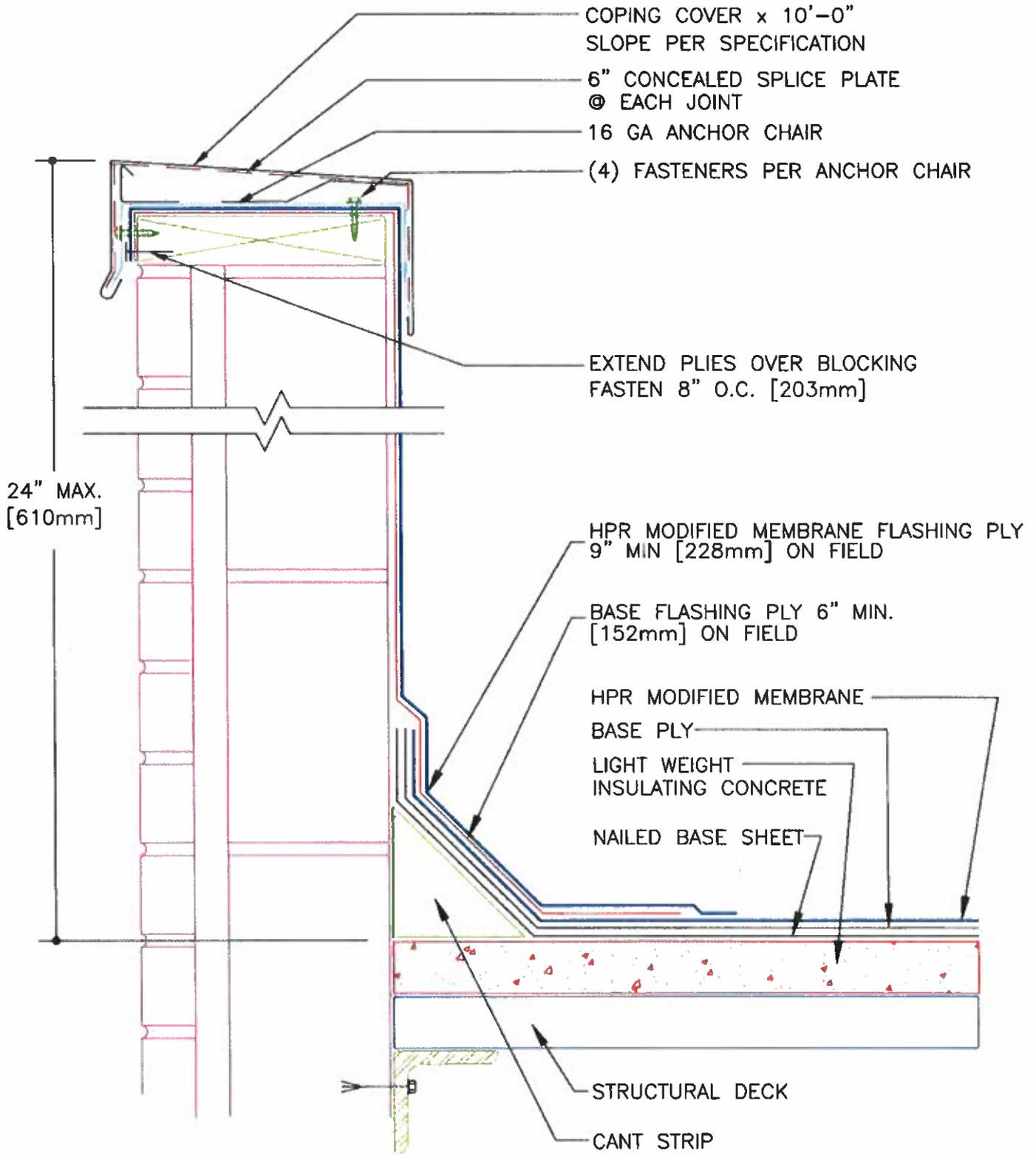


ALL PLIES SET IN BITUMEN SEE SPECIFICATION FOR SURFACING



GRAVEL FINISH

2 PLY-HOT APPLIED

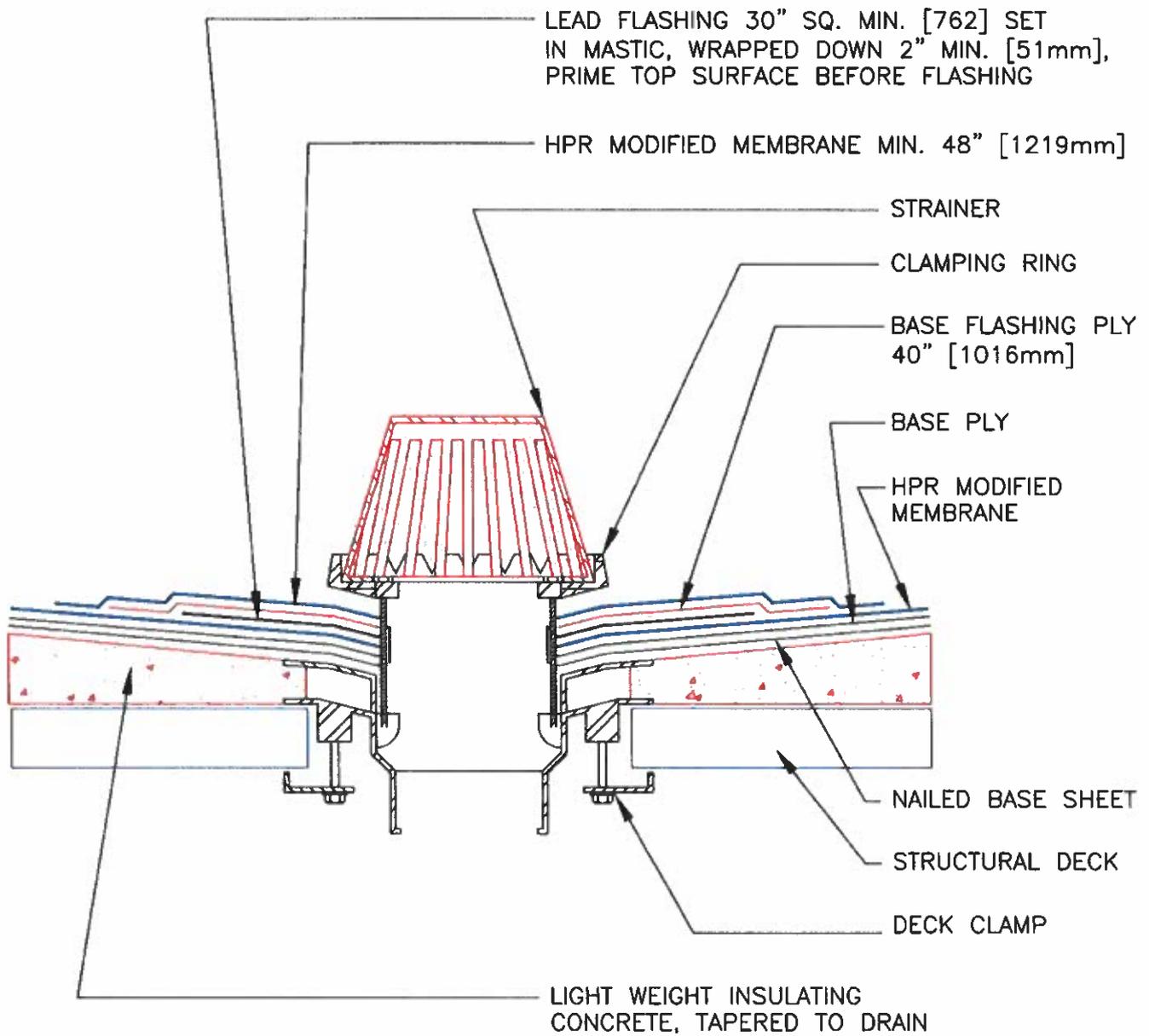


ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



COPING CAP

2 PLY-HOT APPLIED



ALL PLYS SET IN BITUMEN SEE SPECIFICATIONS FOR SURFACING



ROOF DRAIN

2 PLY-HOT APPLIED