INVITATION FOR BID (IFB)
Topeka Public Schools - USD #501

Special Project: MM15-16:190223

Project: ROOF REPLACEMENT

Locations: CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

"CONTRACTOR WILL BID ALL OR NONE"

Purchasing Services
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This document is written with the sole purpose of soliciting bids for the Roof Replacement at the Capitol Federal Natatorium – Main Pool Roof, Hummer Sports Park, 500 SW Tuffy Kellogg Drive, Topeka, KS. For purposes of definition: "Board" in this document refers to The Board of Education, Unified School District No. 501, and Topeka Public Schools. This INVITATION FOR BID is comprised of 76 pages of specifications including the cover page. **Offers must be submitted on the enclosed Signature and Bid sheet(s).**

READ THIS REQUEST CAREFULLY

This document is an Invitation For Bid and differs from a Request For Proposal (RFP). Offers will be evaluated based primarily upon price, although quality, capability, availability, and past performance will also be considered and may be overriding factors. Refer to Section 4.2 of the IFB.

Failure to abide by all of the conditions of this INVITATION FOR BID (IFB) may result in the rejection of your offer. Inquiries about this IFB should be in writing, and directed solely to the Purchasing Services Office, attention Deana Merryman. Your interest in this solicitation is greatly appreciated.

INVITATION FOR BID (IFB)
Topeka Public Schools - USD #501

IMPORTANT DATES

REQUIRED SITE VISIT / PRE-BID MEETING: Monday, July 20, 2015 – 9:00 A.M, meet at the Capitol Federal Natatorium's main entrance. A representative of the Operation and Maintenance Department will be available at the pre-bid meeting to answer questions regarding intent of specifications. **Refer to Section 4.19 of the IFB.**

BID BOND: Required – 5% of total bid if bid is $100,000 or more. Personal or Company Checks, Certified or Cashier's checks **not accepted. Refer to Section 4.4 of the RFP.**

PERFORMANCE & PAYMENT BONDS: Will be required if project cost is $100,000 or higher

RESPONSE DUE BY: Monday, July 27, 2015 at 3:00 P.M.

SUBMIT OFFERS TO: Topeka Public Schools, Burnett Administration Center, Purchasing Services / Pod F, 624 SW 24th Street, Topeka, KS 66611-1294

FINAL AWARD BY: Friday, August 7, 2015

PURCHASE ORDER OR CONTRACTS ISSUED BY: Monday, August 10, 2015

START DATE: Monday, August 10, 2015

COMPLETION BY: Friday, October 2, 2015

Should the Contractor fail to complete all work by the date substantial completion, the District may retain the amount of $250.00 for each day thereafter that the work is not complete and not accepted by the Owner.

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1.0 TERMS AND CONDITIONS

1.1) REQUIRED REVIEW: Review this solicitation carefully. All Terms and Conditions, Standard Contractual Provisions, and General Provisions / Specifications as detailed in this INVITATION FOR BID (IFB), as well as any Addendum(s) to the RFP, are understood to be, and considered part of any contractual agreement resulting from this proposal between Unified District No. 501 (dba Topeka Public Schools and also referred to as U.S.D. #501, "the District," or "Owner") and the successful Contractor.

1.2) RESERVATIONS: The Board of Education reserves the right to cancel this INVITATION FOR BID at any time and for any reason. The Board also reserves the right to reject any or all offers, to accept any item or items in an offer, and to waive any informality or immaterial defect in offers.

1.3) QUANTITIES: The Board reserves the right to increase or decrease the quantity of any item. Every effort has been made to provide an accurate estimate of desired quantities or usage, but it is understood quantities are indefinite until time of order.

1.4) PRICING: Prices quoted must remain firm for period of (45) days from Response Due date. Prices shall remain firm for the contract period. Prices quoted are to be the full purchase price to the District including charges of every kind and nature.

1.5) TAXES: Unified School District No. 501 is exempt from all federal and local taxes unless otherwise imposed by a governmental body and applicable to the items on the proposal. Reference K.S.A. 79-3606 (c) governing items purchased directly by a public or private elementary or secondary school or educational institution.

1.6) EQUIVALENT ITEMS: Whenever a material, article or piece of equipment is identified in the specifications by reference to a manufacturer's or vendor's name, trade name, catalogs or model number, etc., it is intended to establish a standard, unless otherwise specifically stated. Any material, article or equipment of other manufacturers or vendors shall perform to the standard of the item specified. Equivalent items must be accompanied by sufficient descriptive literature and specifications to provide for detailed comparison**. Samples or demonstrations, if required, will be furnished at no expense to the District.**

1.7) ALTERNATES: Alternate offers comparable to the design, plans, drawings, methods, material, article or pieces of equipment listed in this INVITATION FOR BID are invited. **Alternate bids must be submitted by contractor and approved by District staff.** Providers should indicate clearly any deviation from the specifications of this solicitation. The District is under no obligation to consider or accept such offers.

1.8) DISCOUNTS: Cash discounts will **not** be considered in awarding a contract. Where cash discounts for prompt payment are offered, the discount period shall begin with the date of receipt of a correct invoice, or acceptance of final receipt of goods, whichever is later.

1.9) AWARD: Proposals will be analyzed and the award made to the lowest **responsive and responsible** provider whose offer conforms to the solicitation, and is considered the most advantageous to Unified School District No. 501. The District will issue a letter of intent to contract, and signed contract(s), as its notification of award to the successful bidder. Award shall be All or None.

1.10) NEW GOODS: Unless otherwise specified, all materials, supplies, articles or equipment offered by contractor must be **new**, and be the best of their respective kinds, free from defects in material or workmanship. Items will be subject to our inspection and approval. If a substitution is made at the time of delivery, it will be the decision of a Board of Education representative to determine if it is acceptable.

1.11) DELIVERY: Delivery of goods or materials to be F.O.B. stated location. All items must be properly packed and crated to insure delivery in good condition, and in accordance with any special instructions included in the INVITATION FOR BID or purchase order.

1.0 TERMS AND CONDITIONS CONTINUED

1.12) REJECTED ITEMS: Rejected items will be held at the seller's risk and expense. Seller shall not provide replacement unless agreed to by a Board of Education representative.

1.13) PAYMENT: The Board of Education normally approves payment of invoice(s) on the first and third Thursdays of each month. Claims for payment received fourteen days prior to meeting dates, and having proper authorization for payment, will be paid immediately following Board approval. Payment of the seller's invoice is subject to adjustment for any shortage, or rejected items. Individual invoices must be issued for each shipment applied against a purchase order.

1.14) PATENT INFRINGEMENT: The supplier shall provide the standard patent infringement indemnity clause which shall hold and save the Board of Education and its officers, agents, servants, and employees, harmless from liability for use of any patented, or unpatented invention, process, article, or appliance manufactured, or used in the performance of the contract, including its use by the Board of Education.

1.15) INDUSTRY STANDARDS: Items must be furnished and performed in accordance with the best-established practices and standards recognized by the contracted industry and comply with all codes, regulations and governmental directives.

1.16) COMPETITION: The purpose of this solicitation is to seek competition. The contractor shall advise the Director of Purchasing Services if any specification, language or other requirement inadvertently restricts or limits bidding to a single source. Notification shall be in writing and must be received no later than five business days prior to the bid closing date. The Board reserves the right to waive minor deviations in the specifications if they do not hinder the intent of the solicitation.

1.17) CONTRACTS: Contracts entered into on the basis of submitted bids are revocable if contrary to law. All contractual agreements shall be subject to, governed by, and construed according to the laws of the **State of Kansas**. All of the documents included in this INVITATION FOR BID will be considered as part of any agreement entered into between Unified School District No. 501 and the successful vendor.

1.18) TERMINATION OF AGREEMENT: District may, without prejudice to any other right or remedy, and without penalty, serve 30 days written notice to Contractor of intention to terminate any agreement for any of the following reasons: Contractor refuses or fails to perform services as required; Contractor fails to furnish adequate (quantity or quality) equipment; Contractor fails to furnish adequate and properly trained service personnel. Contractor shall, within the 30-day notice period, have the right to correct any noticed violation to the satisfaction of the District. If the contract is cancelled due to Contractor's failure to perform, the District shall pay contractor only for services delivered and work performed up to the cancellation. In the event of cancellation, the District reserves the right to retain other qualified contractor(s) to fulfill requirements of contract.

1.19) TERMINATION DUE TO LACK OF FUNDING: If sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, Unified School District No. 501, Shawnee County, Kansas (USD # 501, Topeka Public Schools) may terminate this agreement at the end of its current fiscal year. USD # 501, agrees to give written notice of termination to contractor at least 30 days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to 90 days before the end of such fiscal year. USD # 501 will pay to the contractor all regular contractual payments incurred through the end of such fiscal year.

1.20) SUBMITTALS: Offers may be mailed or delivered to Unified School District No. 501, Purchasing Services, 624 SW 24th Street, Topeka, KS 66611. **Envelopes containing offers must be sealed and clearly marked on the lower left hand corner with the firm name and address, quote name, and response due date and time. Offers must be submitted on the enclosed Signature and Bid Sheet(s).**

2.0 STANDARD CONTRACTUAL PROVISIONS

Important: This page contains mandatory contract provisions and must be incorporated in all copies of any contractual agreement. If it is attached to the vendor/contractor's standard contract form, then that form must be altered to contain the following provision:

"The Provisions found in Contractual Provisions page, which is attached hereto, are hereby incorporated in this contract and made a part thereof."

The parties agree that the following provisions are hereby incorporated into the contract to which it is attached and made a part thereof, said contract being the _____ day of _____, 20____.

2.1) **Terms Herein Controlling Provisions**: It is expressly agreed that the terms of each and every provision in this attachment shall prevail and control over the terms of any other conflicting provision in any other document relating to and a part of the contract in which this attachment is incorporated.

2.2) **Agreement With Kansas Law**: All contractual agreements shall be subject to, governed by, and construed according to the laws of the State of Kansas.

2.3) **Termination Due To Lack Of Funding Appropriation**: If sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, Unified School District No. 501, Shawnee County, Kansas (USD # 501, Topeka Public Schools) may terminate this agreement at the end of its current fiscal year. USD # 501, agrees to give written notice of termination to contractor at least 30 days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to 90 days before the end of such fiscal year. Contractor shall have the right, at the end of such fiscal year; to take possession of any equipment provided USD # 501 under the contract. USD # 501 will pay to the contractor all regular contractual payments incurred through the end of such fiscal year. Upon termination of the agreement by USD # 501, title to any such equipment shall revert to contractor at the end of the USD # 501 current fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to USD # 501 or the contractor.

2.4) **Disclaimer of Liability**: Neither USD # 501, Topeka Public Schools nor any agency thereof shall hold harmless or indemnify any contractor beyond that liability incurred under the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.).

2.5) **Acceptance of Contract**: This contract shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been given.

2.6) **Responsibility for Taxes**: USD # 501 is exempt from all federal, state and local taxes unless otherwise imposed by a governing body and applicable to the items on the proposal. USD #501 will not be responsible for, nor indemnify a contractor for taxes levied upon the subject matter of this contract.

2.0 STANDARD CONTRACTUAL PROVISIONS

2.7) **Anti-Discrimination Clause**: The contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) (ADA) and to not discriminate against any person because of race, religion, color, sex, disability, national origin or ancestry, or age in the admission or access to, or treatment or employment in, its programs or activities; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out at K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by USD # 501; (f) if it is determined that the contractor has violated applicable provisions of ADA, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by USD # 501. Parties to this contract understand that the provisions of this paragraph number 5 (with the exception of those provisions relating to the ADA) are not applicable to a contractor who employs fewer than four employees during the term of such contract or whose contracts with the contracting state agency cumulatively total $5,000 or less during the fiscal year of such agency.

2.8) **Arbitration, Damages, Warranties**: Notwithstanding any language to the contrary, no interpretation shall be allowed to find USD # 501 has agreed to binding arbitration, or the payment of damages or penalties upon the occurrence of a contingency. Further, USD # 501 shall not agree to pay attorney fees and late payment charges beyond those available under the Kansas Prompt Payment Act (K.S.A. 75-6403), and no provision will be given effect which attempts to exclude, modify, disclaim or otherwise attempt to limit implied warranties of merchantability and fitness for a particular purpose.

2.9) **Insurance**: USD # 501 shall not be required to purchase, any insurance against loss or damage to any personal property to which this contract relates, nor shall this contract require USD # 501 to establish a "self-insurance" fund to protect against any such loss or damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.), the contractor or lessor shall bear the risk of any loss or damage to any personal property in which contractor or lessor holds title.

2.10) **Representative's Authority To Contract**: By signing this contract, the representative of the contractor thereby represents that such person is duly authorized by the contractor to execute this contract on behalf of the contractor and that the contractor agrees to be bound by the provisions thereof.

2.11) **Information:** No provision of this contract shall be construed as limiting the Legislative Division of Post audit from having access to information pursuant to K.S.A 46-1101 et seq.

2.12) **The Eleventh Amendment**: "The Eleventh Amendment is an inherent and incumbent protection with the State of Kansas and need not be reserved, but prudence requires the State to reiterate that nothing related to this contract shall be deemed a waiver of the Eleventh Amendment."

3.0 BIDDING INSTRUCTIONS

3.1) **Preparation of Bid:** Each bid must be legible and signed. Prices are to be entered in spaces provided on the Bid Sheet(s). Computations and totals shall be indicated where required. In case of error in computations or totals, the unit price shall govern. Responsive offers must include a completed Signature Sheet, completed Bid Sheet(s), and an acceptable form of Bid Bond.

3.2) **Signature of Bids**: Each bid shall include the complete mailing address of the contractor and be signed by an authorized representative by original signature with his or her name and legal title typed or printed below the signature line. Each bid shall include the contractor's Social Security Number or Federal Employer Identification Number.

3.3) **Bid Bond**: Each bid of $100,000 or more is to be accompanied by a Bid Bond in an amount equal to **5%** of the total bid. **Personal or Company checks, Cashiers or Certified checks are not acceptable.**

3.4) **Addenda:** All contractors shall acknowledge receipt of any addenda to a Bid Request. Failure to acknowledge receipt of any addenda may render the bid non-responsive. Changes to a Request for Bid shall be made solely by a written addendum issued by the District Purchasing Services Department. Suppliers are asked to promptly notify Purchasing Services of any ambiguity, inconsistency, or error that they may discover after examining the Bid Documents.

3.5) **Closing Date for Bids**: All bids shall be received promptly by **3:00 P.M**. Central Standard or Daylight Savings Time, whichever is in effect, on **Monday, July 20, 2015.**

Bids received prior to the closing date shall be secured and remain sealed until the closing date. Bids received after the closing date will not receive consideration and will remain sealed in the Purchasing Services Office.

3.6) **Marking and Delivery of Bids**: Bids shall be sealed securely in an envelope or other container and addressed as follows:

Unified School District No. 501
Purchasing Services / Pod F
624 SW 24th Street
Topeka, Ks 66611-1294

Return Signature and Bid Sheet(s) with Offer

Please indicate in the lower left hand corner of the envelope your Firm's Name, Bid Name, Bid Number, and the Closing Date and Time.

The District shall not be responsible for the premature opening of a bid or for the rejection of a bid that was not received prior to the closing date because it was not **properly identified** on the outside of the envelope or container.

3.7) **Modifications of Bids:** A contractor may modify a submitted bid any time prior to the deadline for receipt of bids. Modifications must be received in a sealed envelope or container with the Firm's Name, Bid Name, Bid Number, and the Closing Date and Time clearly marked.

3.8) **Withdrawal of Bids:** A bid may be withdrawn upon written request from the contractor to the **Director of Purchasing Services** prior to the closing date.

3.9) **Bid Disclosure:** At the time of closing, bid prices shall be made public information. Bid results may be obtained by attending the public bid opening or by obtaining the bid tabulation from Purchasing Services. The low bidder shall not be construed as meeting all specifications set out in the Request at the bid disclosure.

4.0 GENERAL PROVISIONS

INVITATION FOR BID
ROOF REPLACEMENT
CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

4.1) **INVITATION TO BID**

You are invited to submit a sealed proposal for the Roof Replacement at the Capitol Federal Natatorium – Main Pool Roof, Hummer Sports Park, 500 SW Tuffy Kellogg Drive, Topeka, KS. **These bids will be accepted in the office of the Director of Purchasing, 624 SW 24th St., Topeka, KS 66611** until 3:00 P.M., Monday, June 27, 2015. The proposals will be publicly opened at that time. If you are unable to submit a bid on this project and would like to remain on our bid list, please return a proposal stating this. If there are any questions or comments regarding the bid specifications or project details, contact John Nesbitt, Facilities Manager, at (785) 295-3917 or Gerald Carter, Facilities Planner, at (785) 295-3927. Because we are expending local tax dollars, Topeka Public Schools intends to utilize all resources available to complete this project the best way possible at the lowest possible price.

4.2) **AWARD: All or None**

Bids will be analyzed and the award made to the lowest responsive, responsible bidder whose offer conforms to the solicitation, and is considered the most advantageous to Unified School District No. 501. "Responsive" means that a bid or proposal complies with all material aspects of the invitation or request. "Responsible" means that the vendor or bidder demonstrates the intent and ability to perform an awarded contract as required by law, District Policy 2575 and applicable Board policies and regulations. The District reserves the right to accept any bid, which is deemed most favorable to its interest, and to reject any or all bids which are not in the best interest of the District. The District will issue a purchase order, contract, or both as its notification of award to the successful bidder. **Price, quality of materials offered, and contractors' (and subcontractors) ability and experience in providing the requested materials and or service will be evaluated during the award process.**

4.3) **ASSIGNMENT**

The Contractor shall not assign this contract or any part thereof, or any monies due or to become due there under, without the approval of the Owner, nor without the consent of the surety, unless the surety has waived its right to Notice of Assignment.

4.4) **SPECIFICATIONS FORM & DEFINITION**

a) "Contractor", wherever used in these specifications, shall mean the Company that enters into a contract with the "Owner" to perform this section of work.

b) "Provide" means to furnish and install in a satisfactory working condition

c) "Mandatory" in this contract document means mandated – required to attend

4.5) **CONTRACT DOCUMENTS**

The term "Contract Documents" refers to the invitation, specifications, addenda, alternates, plans or drawings, and proposal form enclosed or referred to herein, as well as the contract, and all are considered as a part of the contract documents.

4.6) **CONTRACT CHANGES**

Changes or deviations from the contract documents; including those for extra or additional work must be submitted in writing for review by Topeka Public Schools. No verbal Change Orders will be recognized.

4.7) **BONDS**

A. BID BOND

Each bid of $100,000 or more is to be accompanied by a Bid Bond in an amount **equal to 5% of the total bid**. The bid bond may only be submitted in the form of a bid bond issued by a surety company.

Any bid bond accompanying a proposal, except that of the awarded bidder, will be promptly returned upon request.

B. **A Payment Bond is REQUIRED for all projects costing $100,000 or more**. Upon acceptance of a proposal and execution of the contract, the successful Contractor shall file a Statutory or Labor and Materials Payment Bond to the owner (complying with K.S.A. 60-1111 - required for construction, reconstruction, and remodeling projects which **exceed $100,000**) in the amount of 100% of the contract price as security for the faithful performance of the contract and for the payment of all persons performing labor and furnishing materials, equipment, and supplies in connection with this contract. The payment bond shall be filed by the Contractor with the Clerk of the District Court of Shawnee County, Kansas, and the Contractor shall furnish the Owner with a copy of the payment bond bearing the written approval and filing stamp of the Clerk of the District Court. Furthermore, a copy of the receipt for filing for payment bond shall be supplied to the owner. Bond shall be with a surety company licensed to do business in the State of Kansas.

C. **A Performance Bond is REQUIRED for all projects costing $100,000 or more**. Upon acceptance of a proposal and execution of the contract, the successful Contractor shall file a Performance Bond to the owner in the amount of 100% of the contract price as security for the faithful performance of the contract. The performance bond shall be filed by the Contractor with the Clerk of the District Court of Shawnee County, Kansas, and the Contractor shall furnish the Owner with a copy of the performance bond bearing the written approval and filing stamp of the Clerk of the District Court. Furthermore, a copy of the receipt for filing for the performance bond shall be supplied to the owner. Bond shall be with a surety company licensed to do business in the State of Kansas.

4.8) **INSURANCE**

A. The Contractor shall furnish the Owner with a certificate of insurance as proof that the insurance herein described has been obtained. All insurance cost are to be paid by Contractor.

B. Workmen's Compensation Insurance as required by law shall be obtained and maintained by the Contractor for all his employees at the project site for the duration of this contract.

C. Public Liability and Property Damage Insurance shall be obtained and maintained by the Contractor for the duration of this contract. Public Liability Insurance in an amount of not less than $500,000.00 for injuries, including accidental death, to any one person and subject to the same limit for each person, in an amount of not less than $500,000.00 on account of one accident and Property Damage Insurance in an amount of not less than $100,000.00 shall be obtained and so maintained.

D. Builder's Risk Insurance and Theft Insurance shall be maintained by the Contractor.

4.9) **TOPEKA PUBLIC SCHOOLS POLICY (2575-PART III) FOR CONSTRUCTION, REMODELING & MAINTENANCE PROJECTS.**

A. Contractors are encouraged to utilize disadvantaged business enterprises, also known as minority-owned and women-owned business enterprises, as subcontractors and suppliers. When assessing bid responses for construction, alteration, or repairs under $20,000 the Board of Education will view inclusion of disadvantaged business enterprises, also known as minority-owned and women-owned business enterprises, as subcontractors and suppliers as a positive factor in awarding the contract.

B. Every contractor who is the successful bidder on a contract for construction, reconstruction, remodeling, operations or maintenance of a Topeka Public Schools' building or other facility, and all subcontractors hired or otherwise used by said contractor shall abide by all applicable Federal and Kansas laws and labor laws. A contract may be terminated or suspended at any time that Topeka Public Schools is presented with credible evidence that a contractor or subcontractor has violated the requirements of this policy.

C. Contractors and subcontractors shall pay their employees not less than the minimum wage established by the Federal Fair Labor Standards Act.

D. Contractors and subcontractors shall at all times maintain a safe and healthy working condition and abide by all applicable wage and hour regulations and prohibitions against child labor. Contractors' and subcontractors' working conditions shall conform to the standards set by the Federal OSHA or a similar state agency, whichever standards are more rigorous.

E. Contractors and subcontractors are encouraged, but not required, to be registered with the Kansas Department of Commerce's Division of Workforce Services and to have a registered training program for Topeka Public Schools students and graduates.

F. All contractors shall abide by the I.R.S. guidelines for subcontracting along with K.S.A. 44-766. If a contractor or subcontractor is found in violation of misclassifying workers as independent contractors, the contract shall be subject to immediate termination.

G. The superintendent or his/her designees are hereby charged with the responsibility and authority to investigate all credible complaints relating to the substantial failure of a contractor or subcontractor to comply with the terms of this policy.

H. A copy of this policy, or a reiteration of the terms and conditions thereof, shall be made a part of the construction specifications and standards of each and every contract and each and every subcontract let by a contractor.

4.10) **IMMIGRATION REFORM & CONTROL**

All Contractors are expected to comply with the Immigration and Reform Control Act of 1986 (IRCA), as may be amended from time to time. This Act, with certain limitations, requires the verification of the employment status of all individuals who were hired on or after November 6, 1986, by the Contractor as well as any subcontractor or sub-subcontractor. The usual method of verification is through the Employment Verification (I-9) Form. With the submission of this bid, the Contractor hereby certifies without exception that Contractor has complied with all federal and state laws relating to immigration and reform. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and, at the State's option, may subject the contract to termination and any applicable damages.

Contractor certifies that, should it be awarded a contract by the State, Contractor will comply with all applicable federal and state laws, standards, orders and regulations affecting a person's participation and eligibility in any program or activity undertaken by the Contractor pursuant to this contract. Contractor further certifies that it will remain in compliance throughout the term of the contract.

At the State's request, the Contractor is expected to produce to the State any documentation or other such evidence to verify Contractor's compliance with any provision, duty, certification, or the like under the contract.

Contractor agrees to include this Certification in contracts between itself and any subcontractors in connection with the services performed under this contract.

4.11) **DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION**

The Board of Education of USD 501 has publicly expressed its intent that DBE contractors are encouraged to participate in Topeka Public schools' construction and remodeling projects. If applicable, proposers on these projects should verify their status as a minority-owned business. Proposers should document the DBE contractors, if any, contacted in preparation of their proposals on these projects or intended to be used on these projects, if it is awarded. The successful bidder is required by law to observe the requirements of the Kansas Act Against Discrimination. Because we are expending local tax dollars, the Topeka Public Schools intends to utilize all resources available to complete these projects the best way possible at the lowest possible price.

4.12) **QUALIFICATIONS**

The contractor responsible for work under this section shall have completed a job of similar and magnitude within the last 3 years. The contractor shall employ an experienced, competent and adequate work force licensed in their specific trade and properly supervised at all times. Unlicensed workers and general laborers shall be adequately supervised to insure competent and quality work and workmanship required by this contract and all other regulations, codes and practices. At all times the contractors shall comply with all applicable local, state and federal guidelines, practices and regulations. Contractor may be required to submit a statement of qualifications upon request before any final approval and selection. Failure to be able to comply with these requirements is suitable reason for rejection of a bid.

4.13) **DEBARMENT**

By submission of its response, the Contractor certifies that neither it nor its principals is presently debarred or suspended by any Federal Department or agency, including listing in the U.S. General Services Administration's List of Parties Excluded from Federal Procurement or Non-Procurement programs; of it the amount of this response is equal to in excess of $100,000, that neither it nor its principals nor its subcontractors receiving sub-awards equal to or in excess of $100,000 is presently debarred, suspended, proposed for debarment, declared in eligible or voluntarily excluded from participation in this transaction by any Federal department, agency or provision of law. Contractors responding to this IFB shall sign and submit the Debarment Certification form included in this document. If the Contractor is unable to certify any of the statements in this certification, the responder must attach an explanation to its response.

4.14) **NON-COLLUSION**

Contractors responding to this IFB shall sign and submit the Non-Collusion Affidavit included in this document. The District may reject any submittal that does not include the required certification.

4.15) CONTRACTOR'S RESPONSIBILITY

a) The Contractor shall be wholly responsible under this contract for its faithful execution.

b) The work shall be under the supervision of a competent person skilled in this work. Supervisors shall be at the project site at all times when work is in progress to receive instructions and give instructions to the individuals employed at work site.

c) The Contractor shall be responsible for care and protection of the work and for all materials and apparatus on the project premises until the work is completed and accepted by the owner.

d) Each bidder shall visit the project site to establish and verify all of the necessary labor, material(s) and equipment needs required to complete specified project.

e) The Contractor shall clean up and remove all trash which has accumulated from and during the execution of the work and leave the premises ready for acceptance.

f) Final acceptance of work shall be subject to the condition(s) that all systems, equipment, and apparatus operate satisfactorily.

g) The Contractor shall ensure the District's Information Technology Department has notification a minimum of twenty-four (24) hours prior to any work being conducted that may disrupt a facilities network communications, telephone system, or electrical service.

4.16) PERMITS, CODES AND REGULATIONS

A. Contractor shall provide work in accordance with applicable codes, rules, and regulations of Local, State, and Federal Government and other authorities having lawful jurisdiction.

B. Contractor shall secure and pay for necessary permits and certifications of inspection required by governmental ordinances, laws, rules or regulations and keep a written record of all permits and inspection certificates and submit to Topeka Public Schools Operation Management with a request for final inspection.

C. The Contractor shall give all notices and comply with all laws, codes, ordinances, rules, and regulations bearing on the conduct of the work specified. If the Contractor observes that the contract documents are at variance with any rules and regulations, they shall promptly notify the Owner in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances and regulations, and without such notice to the Owner, they shall bear all costs arising from violation.

4.17) SALES TAX EXEMPTION

A. Materials and equipment incorporated into this project are exempt from payment of Kansas sales tax, and such sales tax shall be excluded from bidder's proposal.

B. Owner will furnish Contractor with proper exemption certificate number within ten (10) days of contract date. Should Owner fail to furnish such exemption certificate number within a ten (10) day period, Owner shall reimburse Contractor monthly for all sales tax amounts for which he becomes liable until certificate number is furnished

C. Upon receipt of a proper exemption certificate number, Contractor shall assume full responsibility for his proper use of certificate number and shall pay all costs of any legally assessed penalties for his improper use of exemption certificate number.

D. Contractor will furnish exemption certificate number to all suppliers from whom purchases are made and require suppliers to execute invoices covering purchases bearing the number of such certificate.

E. Contractor will furnish copies of all such invoices to the Owner prior to final settlement under the contract.

4.18) **PROJECT COMPLETION CERTIFICATION**

Upon completion of the project, the Contractor must furnish a State of Kansas Project Completion Certification (form PR-77 from https://www.kdor.org/taxcenter/) to the Owner. The Owner will retain this document in their files and record the actual date the project was completed online. All invoices must be retained by the Contractor for a period of five (5) years and are subject to audit by the Kansas Department of Revenue.

4.19) **INSPECTION OF PREMISES PRIOR TO BIDDING**

REQUIRED SITE VISIT / PRE-BID MEETING: Monday, July 20, 2015 – 9:00 A.M, meet at the Capitol Federal Natatorium's main entrance. Attendance of the Pre-Bid Meeting is considered part of the requirements for submitting a responsive offer. Contractors submitting offers shall make adequate site visits to verify all project requirements are covered in their response.

4.20) **TIME OF COMPLETION**

The work shall **begin on or before Monday, August 10, 2015.** The work shall be substantially **complete by Friday, October 2, 2015.**

Should the Contractor fail to complete all work on or before the date of substantial completion, the District may retain the amount of $250.00 for each day thereafter (except Sundays and holidays) that the Contract remains uncompleted.

4.21) **CLAIMS FOR ADDITIONAL TIME**

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

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

c. Should the Contractor feel that Work was delayed by abnormal weather conditions, the Contractor may request a time extension to the Contract. Such claim shall be requested in writing to the Architect. Such Claim shall include full details and substantiating data to permit evaluation by the Architect and Owner, including, but not limited to, copies of the onsite logs, during the period in question.

d. To be eligible for a time extension to the Contract for abnormal weather, the Contractor must have been prevented from working 50% or more of the Contractor's scheduled work effort for that day, and the work delayed must be critical to the timely completion of the Work. Should abnormal weather occur on a weekend or holiday day, when the Contractor was not scheduled in advance to work, no extension of time will be allowed for those days, since the Contractor experienced no actual delay to his Work on those days. Unless the Contractor gives prior notification to the Architect

and Owner in writing of their intent to work on a weekend or holiday, no time extension will be allowed due to adverse weather on those days.

e. Data from the National Climate Data Center of the National Oceanic and Atmospheric Administration shall be used to analyze the historic weather date and information of the NE Kansas area to determine, if the weather conditions in Topeka, Kansas could be considered abnormal, during the progress of the work of this Contract.

f. Claims for additional time due to adverse weather conditions shall be documented and calculated as follows:

    a. Bad weather day means any calendar day in a month that a Contractor is unable to proceed with the stage or states of the Work that is scheduled for that day due to weather claims.

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

    c. The average number of bad weather calendar days reasonably anticipated for each month are as follows: January – 10; February – 5; March – 4; April – 5; May – 8; June 8; July – 6; August – 5; September – 6; October – 5; November – 3; and December - 8.

    d. The Contractor will provide the Architect with a written monthly bad weather day report within five (5) days of the end of a month. If the Contractor fails to report bad weather days by five days from the end of a month, then it will be assumed that there were no bad weather days for that month.

4.22) **COMPLETION INSPECTION**

On receipt of a request for inspection, the contractor must accompany School and District Representatives on a walk-through of project site to acknowledge job completion and satisfaction.

4.23) **PERFORMANCE**

Final acceptance of work shall be subject to the condition that all systems, equipment, apparatus and appliances operate satisfactorily as designed and intended. Work shall include required adjustments of systems and control equipment installed under this specification division.

The contractor warrants to the owner the quality of material, equipment, and workmanship under the specification division for a period of one year from and after completion of building project and acceptance by Owner Topeka Public Schools.

4.24) **MATERIALS AND WORKMANSHIP**

The Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities, and means necessary to complete all the work required by this Contract, within the time specified, in accordance with the provisions as specified.

The Contractor shall be responsible for all work put in under these specifications and shall make good, repair and/or replace, at the Contractor's own expense, as may be necessary, any defective work, materials, etc., if in the opinion of the Owner said issue is due to imperfection in material, design, workmanship or Contractor fault.

4.25) **IMPLIED REQUIREMENTS**

All products and services not specifically mentioned in this Invitation For Bid, but which are necessary to provide the functional capabilities described by the specifications, shall be included.

4.26) **WARRANTY**

The Contractor warrants to the Owner that upon notice from them within a one year warranty period following date of acceptance, that all defects that have appeared in materials and/or workmanship, will be promptly corrected to original condition required by contract documents at Contractor's expense. The above warranty shall not supersede any separately stated warranty or other requirements by law or by these specifications.

4.27) **PAYMENT**

Contractors must file a claim for payment two weeks prior to any Board of Education meeting for the Board's approval. Following approval of the Board, payment will be made.

4.28) **SAFETY**

Precautions shall be exercised at all times for the protection of all persons (including employees and visitors to job site) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and hazards shall be safe guarded.

4.29) **REFERENCES**

Contractor shall provide references for recently completed (similar in scope) projects upon request from District.

BIDS MUST BE SUBMITTED ON THE ENCLOSED FORM (S). PLEASE RETURN COMPLETED SIGNATURE AND BID SHEETS IN SEALED ENVELOPE.

BIDS NOT PURSUANT TO THE CONDITIONS SET OUT IN THIS REQUEST MAY BE REJECTED.

5.0 SPECIFICATIONS

5.1) SCOPE OF WORK

A. SUMMARY OF WORK

1. CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

a. Base Bid:

1.) This is to be a partial tear-off of the existing roof membrane above the main pool of the natatorium and the reinstallation of a new cover board and a mechanically fastened roof to this entire roofed area of the building. This work includes **only** the main pool sloped roof – 25,356 sqft. The other adjacent roof areas are not included in this project.

a) Prepare job site and surrounding area for installation of new TPO Roofing System.
b) Remove and dispose of the current roof membrane, off site, down to the existing 1/2" fiber board.
c) Install new 1/2" Dens Deck Roof Board.
d) Install new 60 mil mechanically fastened TPO Roofing System per Manufacturers Specifications over the entire main pool area roofing area - including the parapet walls.
e) Install new walkway pads at all ladders and extend the walkways to and around all HVAC service locations.
f) Install new parapet wall coping caps throughout.
g) Install new edge metal on North and South roof edges.

B. COMMON REQUIREMENTS FOR ALL ROOFING PROJECTS

1. PROTECTION OF THE SITE: It is the Contractor's responsibility to protect the existing grounds of the each school's, or support buildings, campus, adjacent roofs to the project area and interior/exterior elements of each of the building(s) during the demolition and construction of this project. All damages to the roofs or interior/exterior elements of any school, or support, building are to be repaired at the Contractor's expense.

2. ADA ACCESSIBILITY ISSUES: All entry doors affected in this project are considered to be part of the ADA required accessible route serving the building(s) of each school or support facility. The Contractor is to ensure that this work allows continuous ADA access to all buildings at all times. Additionally each building(s) entry doors are to be considered to be part of the primary emergency egress route for students, faculty and staff exiting the building(s). Contractor is to work with Owner's facilities and local school staff to ensure that safe emergency egress routes are maintained during construction. The responsibility to maintain a fire watch or adjust the preplanned evacuation programs during construction remains the Owners' responsibility. The use of open flame equipment for installation or demolition is strictly limited to exterior applications and subject to the Owner's hot work permits in all cases and instances.

3. SCHEDULING THE WORK: The Natatorium is a 12 month operation and will be in full use during the summer and fall term. The movement of visitors, students, faculty and staff through the Natatorium will be required at all times while the project is in construction. Certain days during year are pre-scheduled for swimming meets in the pools. In July there is a swim meet scheduled for every day from 28 July through 2 August. All work is to be suspended during the days when there are swim meets under the roof areas scheduled for

reroofing. The Contractor is to include a maximum of 5 working days in their schedule for this purpose. Throughout the remainder of the month of August the pool will be drained, dried, repaired and repainted prior to its' being refilled. The Owner will provide the Contractor with a list of the dates of swim meets or other similar scheduled activities at the pre-bid conference of this project.

4. WALK MATS AT RTU'S: Walk Mats are to be fastened to the roof membrane and installed from any, and all, roof access roof hatches, ladders or doors to, and around, each and every RTU on a roof. The installation of walk mats around RTU's on these roofs will remain unchanged.
5. COVER BOARDS: if any of the roofs associated with this project has an existing tapered insulation system, with a good water drainage slope to the adjacent roof drains/gutters, then a new cover board can be installed on top of the existing tapered roof insulation/membrane. The remainder of the roof installation is to proceed per the specifications.
6. SUBSTRATE BOARD: ASTM C 36, Type X gypsum wall board, 5/8 inch thick to provide a UL fire resistive roof assembly – every USD 501 roof will have a loose laid substrate board.
   - The Owner agrees that poured-in-place structural concrete decks do not need a fire rated board. All other roof decks do need the fire rated board.
   - The specifications for future projects will be modified to reflect the previous statement.
7. WIND SPEED REQUIREMENTS: The required wind speed/uplift calculations are to use the I-90 standard.
8. WRAPPING OF EXPOSED DUCTWORK: The Owner will accept the use of the roof membrane material being installed on a roof as being acceptable for use in wrapping exposed duct work in lieu of mixing a rubber membrane with other types of membrane materials on the same roof.
9. RAIN DELAYS: The Contractor is responsible for proving to the TPS Director of Purchasing, Campus Architect, and Facilities Manager that, any and all, rain delays are appropriate to be included as part of their monthly application for payment process.
10. COPPER FLASHING: Topeka Public Schools doesn't require any copper flashing, or copper gutters any references in the specifications or general conversations regarding these materials is herewith deleted. The TPS does require metal flashing and seamless gutters as noted in the revised specifications. Anything else will need prior written approval.
11. CRICKETS are to be provided at, and around, any obstruction to the flow of storm water runoff on both the new tapered tile insulated and the asphalt shingled roofs.
12. BALLAST ROCK: Any ballast rock found on the project roofs will be removed and delivered to the Service Center for storage in the North storage yard.
13. DAY STAR SKYLIGHTS (or equal) are to be provided on all the Owner's roofing projects ONLY when skylights are noted in the architectural contract documents. The Contractor isn't allowed to build skylights to match the existing skylight openings. Prior approval from the Architect, or Facilities Manager, is required for any substitutions to the Day Star Skylight. The Owner has the first right of refusal on any of the skylights removed from this school.
14. CORE DRILL TESTING: Contractors are responsible to core drill to the roof membrane and make any required repairs afterwards prior to bidding.

- The condition and integrity of the roof deck cannot be determined beneath the existing roofing materials. The Owner will allow the Bidders to make destructive test borings through the existing roofing to inspect suspect areas of the roof deck that are a concern to any Bidder. Suspect roof decks discovered during the Bid process will be added to the Base Bid Scope of Work by Addendum.
- If the Contractor discovers any deteriorated decking during the actual reroofing process then the Owner is to be notified in accordance with the specifications. A suitable repair process and cost will be discussed at that time in accordance with the specifications. The Owner's position on additive Change Orders to Construction Contracts is well known and strictly enforced.

15. MISCELLANEOUS:

- Building Permits are the sole responsibility of the Contractor to procure from the City of Topeka.
- The Contractor is solely responsible for the placement and use of fall protection devices, barriers and other related safety measures required by Federal, State or City agencies regulations and codes.
- Fiberboard can only be used ONLY as a temporary cover board or recover board for use when making temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Refer to Specification Section 075423.2 (rev.1.5) – 2.7 Roof Insulation – "E. Recovery Board.

TOPEKA PUBLIC SCHOOLS - USD#501
BID SHEET: REQUEST FOR PROPOSAL
MM15-16:190223 ROOF REPLACEMENT
CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

NAME OF FIRM _____

SIGNATURE _____

DATE: _____

Base Bid Capitol Federal Natatorium	Roof Replacement and repair work as outlined in individual Summary of Work section(s) of 5.1 Specifications /Scope of Project, Special Conditions and accompanying drawings. 15 Year Warranty **Capitol Federal Natatorium, 500 SW Tuffy Kellogg Drive**	**Quantity/Units Lump Sum**	**$**_____ **Base Bid #1 – Capitol Federal Natatorium**

AWARD WILL BE ALL OR NONE

SIGNATURE SHEET

INVITATION FOR BID MM15-16:190223
ROOF REPLACEMENT
CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

Execution of Proposal

In compliance with the foregoing Invitation For Bid and subject to all Terms and Conditions, Provisions, and Specifications thereof, the undersigned agrees, if this proposal is accepted, to furnish the service(s) and material(s) as requested. **The signature below constitutes certification that:**

- Required Bid Bond of 5% (if bid is $100,000 or more) is included - Bid Bond(s) ONLY
- The proposal was signed by an authorized representative of the firm
- The potential Contractor has determined the cost and availability of all materials and supplies associated with performing the services outlined
- All labor costs associated with this project have been determined, including direct and indirect costs
- The potential Contractor has inspected the location where work is to be performed, and is aware of the prevailing conditions associated with the requested services
- The potential Contractor is aware of and is able to satisfy requested project completion date
- The Contractor has no substantial conflict of interest sufficient to influence the bidding process
- The Contractor understands the District intends to award this contract **All or None**

Addenda: The undersigned acknowledges receipt of the following addenda:

#1(___) #2(___) #3(___) #4(___) None (___)

Legal Name of Firm or Corporation: _____

Address: _____

City, State & zip code: _____

Federal ID #: _____

Women or Minority Owned Business (Y/N) _____

Telephone (800) Local Fax _____

E-Mail _____

Authorized Signature Date _____

Printed Signature Title _____

Please Indicate Taxes Currently Registered for in Kansas: Corporate Income Tax (__)

Sales Tax (__) Withholding Tax (__) Compensating Use Tax (__) None (__)

CERTIFICATION REGARDING
IMMIGRATION REFORM & CONTROL

INVITATION FOR BID MM15-16:190223
ROOF REPLACEMENT
CAPITOL FEDERAL NATATORIUM – MAIN POOL ROOF

All Contractors are expected to comply with the Immigration and Reform Control Act of 1986 (IRCA), as may be amended from time to time. This Act, with certain limitations, requires the verification of the employment status of all individuals who were hired on or after November 6, 1986, by the Contractor as well as any subcontractor or sub-subcontractor. The usual method of verification is through the Employment Verification (I-9) Form. With the submission of this bid, the Contractor hereby certifies without exception that Contractor has complied with all federal and state laws relating to immigration and reform. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and, at the State's option, may subject the contract to termination and any applicable damages.

Contractor certifies that, should it be awarded a contract by the State, Contractor will comply with all applicable federal and state laws, standards, orders and regulations affecting a person's participation and eligibility in any program or activity undertaken by the Contractor pursuant to this contract. Contractor further certifies that it will remain in compliance throughout the term of the contract.

At the State's request, Contractor is expected to produce to the State any documentation or other such evidence to verify Contractor's compliance with any provision, duty, certification, or the like under the contract.

Contractor agrees to include this Certification in contracts between itself and any subcontractors in connection with the services performed under this contract.

_____ _____

Signature, Title of Contractor Date

ATTACHMENT G
DEBARMENT CERTIFICATION

Conditions for certification:

1. The bidder shall provide immediate written notice to the Purchasing Department of Topeka Public Schools if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation, or has become erroneous because of changed circumstances.

2. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal,* and *voluntarily excluded,* as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from: https://www.acquisition.gov/far/html/Subpart%209_4.html.

3. The bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in contracts with Topeka Public Schools, unless specifically authorized by the Purchasing Department.

4. The bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of any subcontractors.

5. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

6. Except as authorized in paragraph 5 herein, Topeka Public Schools may terminate any contract without notice if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

DEBARMENT CERTIFICATION

The Federal Government prevents recipients of federal grants and other funding from entering into business with an excluded party. An excluded party is a person or company that has been debarred, suspended, or otherwise excluded from receiving federal contracts, federally-approved subcontracts, or certain types of federal financial and non-financial assistance and benefits. Executive Order 12689 states that entity debarments or suspensions from procurement with one agency have government-wide effect.

Therefore, Topeka Public Schools is required to validate that the companies with which they do business are NOT excluded parties. To that end, please sign and date your affirmation that your company is NOT excluded below, and return this form with your submittal.

If the bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a debarment certification will result in the bidder's bid being considered non-responsive.

Legal Name of Firm or Corporation:_____

Address:_____

City, State & ZIP Code:

Telephone (800) Local Fax

E-Mail

Authorized Signature Date

Printed Signature Title

❑ Check here if an explanation is attached to this certification.

NON-COLLUSION AFFIDAVIT

STATE OF KANSAS)
) **ss.:**
COUNTY OF SHAWNEE)

_____being first duly sworn, deposes and says:
(Type or print name)
that he or she is the _____of
(Type or print title)
_____, who submits herewith
(Type or print name of company/firm)

to Topeka Public Schools, Unified School District No. 501, the attached bid/proposal; that he or she is the person whose name is signed to the attached bid/proposal; that said bid/proposal is genuine; that the same is not sham or collusive; that all statements of fact therein are true; and that such bid/proposal was not made in the interest or behalf of any person, partnership, company, association, organization, or corporation not herein named or disclosed.

Affiant further deposes and says: that the bidder/proposer has not directly or indirectly by agreement, communication or conference with anyone, attempted to induce action prejudicial to the interests of the public body which is to award the contract, or of any other bidder/proposer, or anyone else interested in the proposed contract; and that the bidder/proposer has not in any manner sought by collusion to secure for himself/herself/itself/themselves, an advantage over any other bidder/proposer.

Affiant further deposes and says that prior to the public opening and reading of bids/proposals, said bidder/proposer:

(a) did not, directly or indirectly, induce or solicit anyone else to submit a false or sham bid/proposal;

(b) did not, directly or indirectly, collude, conspire, connive or agree with anyone else that said bidder/proposer or anyone else would submit a false or sham bid, or that anyone should refrain from bidding or withdraw their bid/proposal;

(c) did not, in any manner, directly or indirectly, seek by agreement, communication or conference with anyone to raise or fix the bid price of said bidder/proposer or of anyone else, or to raise or fix any overhead, profit or cost element of their price or of that of anyone else;

(d) did not, directly or indirectly, submit their bid/proposal price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association organization, bid depository, or to any member or agent, thereof, or to any individual or group of individuals, except to the awarding authority or to any person or person who have a partnership or other financial interest with said bidder/proposer in their business.

Signed:_____

Name:_____

Title:_____

Subscribed and sworn to (or affirmed) before me on this _____ day of , 20__ , by _____, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

_____
Notary Public (Notarial Seal)

WARNING: Bids will not be considered unless the affidavit hereon is fully executed including the affidavit of the notary and the notarial seal.

Kansas Department of Revenue
Office of Policy and Research
915 SW Harrison St., Room 230
Topeka, KS 66612-1588

Telephone: (785) 296-3081
FAX: (785) 296-7928

STATE OF KANSAS
PROJECT COMPLETION CERTIFICATION

TO: _____
Name of Entity to whom Project Exemption Certificate was Issued

_____
Street Address City State Zip Code

This is to certify, to the best of my knowledge and belief, that all materials purchased under Exemption Certificate Number _____ , issued by the Kansas Department of Revenue, were incorporated into the building or project for which the exemption was issued and were entitled to an exemption pursuant to K.S.A. 79-3606(d), (e) or (cc), as amended.

_____
Contractor / Subcontractor

_____
P.O. Box and/or Street Number and Name

_____
Street Address City State Zip Code

_____ _____
Signature and Title of Authorized Representative Date

INSTRUCTIONS

Upon completion of a tax exempt project, the contractor must furnish this certification to the taxpayer for which the work was performed. A copy of this certification must also be forwarded to the Kansas Department of Revenue, Office of Policy and Research, 915 SW Harrison Street, Room 230, Topeka, Kansas 66612-1588. All invoices must be retained by the contractor for a period of five (5) years and are subject to audit by the Kansas Department of Revenue.

SECTION 010010 - SPECIAL CONDITIONS

PART 1 - GENERAL

1.1 RELATIONSHIP TO GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS

A. Should conflict occur between these Special Conditions and the General Conditions or Supplementary General Conditions, the requirements of the Special Conditions shall take precedence.

B. Specification Form and Definitions
   1 "Contractor", wherever used in these specifications, shall mean the Company that enters into contact with the Owner to perform this section of work.
   2. "Provide" means to furnish and install in a satisfactory working condition.
   3. "Mandatory" in this contract document means mandated - required to attend.

C. Changes or deviations from the contract documents, including those for extra or additional work, must be submitted in writing for review of the Architect and Owner. No verbal change orders will be recognized. Do not take any instruction regarding the conduct of the Work or make any changes in the Work based on conversations with any local school official. The Architect and/or the Owner's Project Manager are the only authorized representatives recognized to be able give directions to the Contractor or provide interpretation of the Contract Documents.

1.2 QUALIFICATIONS

A. The contractor responsible for work under this section shall have completed a job of similar and magnitude within the last 3 years. The contractor shall employ an experienced, competent and adequate work force licensed in their specific trade and properly supervised at all times. Unlicensed workers and general laborers shall be adequately supervised to insure competent and quality work and workmanship required by this contract and all other regulations, codes and practices. At all times the contractors shall comply with all applicable local, state and federal guidelines, practices and regulations. Contractor may be required to submit a statement of qualifications upon request before any final approval and selection. Failure to be able to comply with these requirements is suitable reason for rejection of a bid.

1.3 QUALITY OF WORKMANSHIP / PERFORMANCE / COMPLETION INSPECTION

A. The quality of workmanship shall be an important consideration in acceptance or rejection of Work. It is expected that the Contractor shall provide qualified workmen who can produce a first quality project. Work that fails to achieve a first quality standard shall be considered defective and rejected. Such Work shall be removed and replaced with new Work of first quality. Final acceptance of work shall be subject to the condition(s) that all systems, equipment, and apparatus operate satisfactorily.

B. On receipt of a request for inspection, the contractor must accompany School and District Representatives on a walk-through of project site to acknowledge job completion and satisfaction.

1.4 WARRANTY

A. The Contractor warrants to the Owner that upon notice from them within a one year warranty period following date of final acceptance, that all defects that have appeared in materials and/or workmanship, will be promptly corrected to original condition required by contract documents at Contractor's expense. The above warranty shall not supersede any separately stated warranty or other requirements by law or by these specifications.

1.5 CONSTRUCTION SUPERINTENDENT RESPONSIBILITIES

A. It is the intent of the Owner that this project be managed by a full-time Contractor's superintendent who functions primarily in a supervisory or management capacity. The superintendent shall not be a laborer who is expected to place concrete, finish concrete, operate construction equipment, install hardware, etc. Non-compliance with this provision will be cause for the Owner to immediately stop the Work until the Contractor can provide a supervisory or managing superintendent.

1.6 REMODELING INSTRUCTIONS

A. The Contractor understands that this is a remodeling project and as such certain items cannot be fully illustrated nor explained without field observation. Thus, the Contractor has visited and examined the site and existing building in detail and made allowance for conditions that will affect the Work indicated or reasonably implied by the Drawings and these Specifications. Failure to determine site conditions or nature of existing or new construction will not be considered a basis for granting additional compensation.

B. A representative of the Operation and Maintenance Department is available on request to visit the job site with prospective bidders or to answer questions regarding intent of specifications. **Contact John Nesbitt (785) 295-3914 or Jerry Carter (785) 295-3927 to arrange additional site visits.**

1.7 SUBSTITUTIONS

A. The Contractor shall reimburse the Owner for the charges of the Architect and the Architect's consultants for evaluating each proposed substitute, whether or not the Architect accepts a proposed substitute.

B. After Contract has been executed, the Owner and the Architect will consider a formal request for the substitution of products in place of those specified only under the conditions as herein specified. By making requests for substitutions, the Contractor:

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

C. Requests must be accompanied by full description and technical data, including physical dimensions, operating characteristics, and any other information necessary for comparison. Requests shall be specifically noted as substitution requests, and otherwise submitted in accordance with submittal requirements.

D. The Architect will be allowed a reasonable time within which to evaluate each proposed substitute. The Architect will be the sole judge of acceptability, and no substitute shall be ordered, installed or utilized without the Architect's prior written acceptance through approval of Shop Drawings, Change Order, or Supplementary Instruction.

1.8 ARCHITECT'S SELECTION AND REVIEW OF MATERIALS

A. Where review by the Architect of material or equipment is required, obtain such review before procurement.

B. The aesthetic values of every material and installation, such as shape, proportion, texture, finish and color, will be an important consideration to the Architect and his decisions concerning same shall be final.

C. There are two types of storefront finish colors indicated in these documents, Clear Anodized and Dark Bronze; nothing else will be allowed. Contractor is to include painting/staining in bid as necessary.

1.9 LIFE SAFETY REQUIREMENTS, PERMIMTS, INSPECTIONS, FEES

A. The Contractor shall ensure that egress ways required by building codes remain fully accessible and 100% usable during the construction of the Work.

B Contractor shall provide work in accordance with applicable codes, rules, and regulations of Local, State, and Federal Government and other authorities having lawful jurisdiction.

C. The Contractor shall secure and pay for necessary permits and certifications of inspection required by governmental ordinances, laws, rules or regulations and keep a written record of all permits and inspection certificates and submit to Topeka Public Schools Operation Management with a request for final inspection.

1.10 CERTAIN ACTS PROHIBITED

A. The Contractor shall ensure that all individuals associated with the prosecution of the Work, shall not, while on the premises at any time:
1. Consume or possess alcoholic or cereal malt beverage;
2. Use or possess illegal drugs or substances;
3. Be under the influence of alcohol or illegal substances;
4. Willfully or deliberately fail to comply with the specifications or general conditions of the construction contract;
5. Possess firearms;
6. Violate the law; or
7. Act in an unprofessional manner, including cursing, sexual harassment, etc.

B. Smoking is prohibited within the building at all times.

C. Chewing or spitting of tobacco is prohibited within the building at all times.

D. Violation of any of the above items may be cause for the offending individual(s) to be removed from further participation in the Work. The Contractor will cooperate with the Owner and Architect, and the above items, to ensure compliance and the permanent removal of individuals not in compliance.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

END OF SECTION 010010

SECTION 010450 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for cutting and patching.

1.2 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
   1. Contractor shall engage the services of a structural engineer licensed in the State of Kansas to review the Contractor's planned construction methods before cutting and patching the following structural elements:
      a. Foundation construction.
      b. Bearing and retaining walls.
      c. Structural concrete.
      d. Structural steel.
      e. Lintels.
      f. Miscellaneous structural metals.
      g. Heavy timber.

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.
   1. Engage recognized experienced and specialized firms to cut and patch the exposed Work listed below.
      a. Stonework and stone masonry.
      b. Plaster.

1.3 WARRANTY

A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
   1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
   1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
   1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
   3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
   4. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
   5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
   1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
   2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

D. Plaster Installation: Comply with manufacturer's instructions and install thickness and coats as required to match existing.
1. Unless otherwise indicated, provide 3-coat work.
2. Finish gypsum plaster to match existing adjacent surfaces. Sand lightly to remove trowel marks and arisings.
3. Cut, patch, point-up, and repair plaster to accommodate other construction.

3.4 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 010450

SECTION 013000 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
   1. Contractor's construction schedule.
   2. Submittal schedule.
   3. Shop Drawings.
   4. Product Data.
   5. Samples.
   6. Quality assurance submittals.

B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
   1. Permits.
   2. Applications for Payment.
   3. Performance and payment bonds.
   4. Insurance certificates.
   5. List of subcontractors.

1.2 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit administrative submittals sufficiently in advance to avoid delay.

B. The Contractor shall submit shop drawings, product data, and samples in one complete group of submittals are possible.
   1. Processing: The Contractor shall allow sufficient time for submittal review, including time for resubmittals.
      a. Allow 3 weeks for initial review (after receipt of all submittals required for the group). Allow additional time if the Architect must delay processing to permit coordination with resubmittals.
      b. Allow 2 weeks for processing each resubmittal.
      c. No extension of Contract Time will be authorized because of failure to transmit a complete group of submittals.

C. Submittal Preparation: Each copy of each submittal shall have a completed Submittal Cover Page attached to the top of the submittal. A sample page is included at the end of this Section.
   1. On the cover page, record relevant information and requests for data.
   2. On the cover page or separate sheet, clearly record deviations from Contract Document requirements, including variations and limitations.

D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor without prior approval.

1.3 CONTRACTOR'S CRITICAL PATH CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's critical path construction schedule.

1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
2. Within each time bar, indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
5. Coordinate the Contractor's Critical Path Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other schedules.
6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.
7. Computer scheduling programs that provide information similar in concept to requirements listed above may be used without formatting changes if approved by the Architect.

B. Phasing: On the schedule, show how requirements for project phasing of each school associated with this project and Work by the Owner, including relocation time necessary for the Owner to move operations, affects the sequence of Work.

C. Work Stages: Indicate important stages of construction for each phase of the Work.

D. Area Separations: Provide a separate time bar to identify each Phase and other major construction areas for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities, including work in other Phases.

E. Distribution: Following acceptance of the schedule by the Architect, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

F. Interim Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue information regarding the updated schedule concurrently with the report of each meeting.

G. Monthly Schedule Updating: Concurrent with each monthly payment request, provide a fully revised schedule that incorporates revisions from the previous thirty days and outlook for the remainder of the project. Failure to provide a monthly schedule update, with the monthly payment request, will result in a delay in the processing of the Contractor’s payment by the Owner.

1.4 SUBMITTAL SCHEDULE

A. Concurrent with the development and acceptance of the Contractor's Construction Schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of acceptance of the Contractor's Construction Schedule.
1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction Schedule.
2. Prepare the schedule in chronological order. Provide the following information:
   a. Scheduled date for the first submittal.
   b. Related Section number.

c. Submittal category (Shop Drawings, Product Data, or Samples).
d. Name of the subcontractor.
e. Description of the part of the Work covered.
f. Scheduled date for resubmittal.
g. Scheduled date for the Architect's final release or approval.

B. Distribution: Print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

C. Schedule Updating: Revise the submittal schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 SHOP DRAWINGS

A. Submit 4 sets of shop drawings showing newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
1. Dimensions.
2. Identification of products and materials included by sheet and detail number.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Instructions for maintenance and operation.
7. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 but no larger than 36 by 48 inches.
8. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

1.6 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
a. Manufacturer's printed recommendations.
b. Compliance with trade association standards.
c. Compliance with recognized testing agency standards.
d. Application of testing agency labels and seals.
e. Notation of dimensions verified by field measurement.
f. Notation of coordination requirements.
2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

1.7 SAMPLES

A. Submit full-sized, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
   1. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
      a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
      b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, and details of assembly, connections, operation, and similar construction characteristics.

1.8 ARCHITECT'S ACTION

A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.
   1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken.

C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 013000

SECTION 015000 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes requirements for construction security and protection.

B. Security and protection facilities include, but are not limited to, the following:
1. Temporary fire protection.
2. Temporary interior partitions.
3. Enclosure fence around construction staging areas.
4. Barricades, warning signs, and lights.
5. Interior exitway lighting and exit signage.
6. Negative air pressure.
7. Environmental protection.

1.2 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
1. Building code requirements.
2. Health and safety regulations.
3. Police and fire department considerations.
4. Environmental protection regulations.

B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.

B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
2. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch-thick exterior plywood.

C. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.

2.2 EQUIPMENT

A. Fire Extinguishers: Provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers"; NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations"; and "Kansas State Fire Marshal Fire Protection Division Fire Facts 007 and 022" (Which can be found at the KSFM website, www.kansas.gov/firemarshal.).

1. Locate temporary fire extinguishers where convenient and effective for their intended purpose, but not less than the following:
   a. One extinguisher on each floor at or near each usable stairwell.
   b. One extinguisher for each 1,000 square feet of area under construction.
   c. No separation between fire extinguishers is greater than 100 feet of travel distance
2. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Smoking is prohibited at all times within the building.
3. Store combustible materials in containers in fire-safe locations.
4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

C. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

D. Temporary Interior Partitions: Where spaces under construction are immediately adjacent Owner-occupied spaces, and such spaces are not separated by permanent wall construction, provide temporary interior partitions. Temporary partitions shall be constructed of fire-resistive materials and shall be capable of withstanding uniform horizontal loading of 50 lbs per square foot from the floor to a height of 8 feet.

E. Enclosure Fence Around Construction Staging Areas: Before construction begins, install enclosure fences with lockable entrance gates. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.

1. Provide open-mesh, chainlink fencing with posts set in a compacted mixture of gravel and earth, or provide plywood fence, 8 feet high, framed with four 2-by-4-inch rails, and preservative-treated wood posts spaced not more than 8 feet apart.

F. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

G. Interior Exitway Lighting and Exit Signage: Provide a minimum of five footcandles of lighting in exitways where permanent lighting is not available. Provide lighted exit signage at areas where permanent lighted exit signage is not available. Such signage shall indicate direction to nearest exit. Exit signage that is not functional or for exits that are not usable due to construction shall be covered so to not confuse occupants in an emergency situation.

H. Negative Air Pressure: To the greatest extent possible, provide exhaust fans to maintain areas under construction under negative air pressure with respect to Owner-occupied areas of the building. Maintain dust-protective closures to minimize construction dust and debris from entering Owner-occupied spaces.

I. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

END OF SECTION 015000

SECTION 020700.1 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following types of selective demolition:
   1. Base Bid
      a. Removal of existing roof ballast, membrane, down to the existing ½" fiber board. (hail damage repair/replacement)
      b. Removal of existing roof ballast, membrane, insulation and flashing down to existing structural decking. Existing decking may be wood, metal deck/light weight concrete or structural poured-in-place concrete, etc. as may be required.
      c. Removal of existing roof shingles, flashings, etc as may be required.
      d. Removal of existing scuppers, downspouts, soffits, fascia, and roof edges, etc, as may be required.
      e. Removal of existing skylights, flashing etc as may be required

1.2 DEFINITIONS

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.

B. Remove and Salvage: Items indicated during the pre-bid conference to be removed and salvaged under this project remain the Owner's property. Remove, clean, and pack, or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.

C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.

D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

1.3 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.

1.4 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition Work similar to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5 PROJECT CONDITIONS

A. Owner will occupy portions of the building immediately adjacent to selective demolition area. Conduct selective demolition before, or after normal school operations, so that Owner's educational operations will not be disrupted. Time for normal school operations of the affected schools will be issued at the pre-bid conference. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations during the school day.

B. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.
   1. Existing conditions, at time of pre-bid inspection, will be maintained by the Owner as far as practical.

C. Examination of Deck:
   1. Prior to installing new roofing, examine deck for areas in need of repairing or replacement.
      a. Repair or replace where minor damage is found.
      b. Notify Owner if major damage is found.
   2. Repair if wood, light weight concrete or structural concrete.
      a. Replace rotten, badly split, unsound wood members with new similar to existing.
      b. Repairs of concrete deck shall be made by the removal of the unsound areas of the concrete deck, cleaning and sealing of any exposed rusted structural steel bars or mesh, and by grouting areas, with an approved, flowable, cementious material level with the existing top surface.

C. Storage or sale of removed items or materials on-site will not be permitted.

1.6 SCHEDULING

A. Arrange selective demolition schedule to not interfere with Owner's on-site operations.

1.7 WARRANTY

A. Existing Special Warranty: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials to not void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.
   1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
   2. Use materials whose installed performance equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect and receive Architect’s instructions prior to continuing work in the area of the conflict.

E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.

F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

A. Maintain existing utilities to remain in service and protect them against damage during selective demolition operations.
   1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.
      a. Provide not less than 72 hours' notice to Owner if shutdown of service is required during changeover.

B. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
   1. Owner will arrange to shut off indicated utilities when requested by Contractor.
   2. Arrange to shut off indicated utilities with utilities companies.
   3. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
   4. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

C. Utility Requirements: Coordinate with Owner prior to shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways.

B. Conduct demolition operations to prevent injury to people and damage to adjacent facilities to remain. Ensure safe passage of people around selective demolition area.
   1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways.
   2. Protect existing site improvements, appurtenances, and landscaping to remain.
   3. Provide temporary weather protection, during interval between demolition and removal of existing construction, on exterior surfaces and new construction to ensure that no water leakage or damage occurs to structure or interior areas.
   4. Protect walls, ceilings, floors, and other existing finish work that are to remain and are exposed during selective demolition operations.
   5. Cover and protect furniture, furnishings, and equipment that have not been removed.

3.4 POLLUTION CONTROLS

A. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
   1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.

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

3.5 SELECTIVE DEMOLITION

A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4. Do not use cutting torches until work area is cleared of flammable materials if any. Maintain portable fire-suppression devices during flame-cutting operations.
   7. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.
   8. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.

B. Remove no more existing roof than can be covered in one day by new roofing. See applicable Division 7 Section for new roofing requirements.

3.6 PATCHING AND REPAIRS

A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.

B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
   1. Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material, applied according to manufacturer's printed recommendations.

C. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Burning: Do not burn demolished materials.

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

3.8 CLEANING

A. Sweep the building and adjacent site, broom clean on completion of selective demolition operation.

END OF SECTION 020700

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Wood furring, grounds, nailers, and blocking.
   2. Framing with Dimension Lumber

1.2 SUBMITTALS

A. Wood treatment data as follows, including chemical treatment manufacturer's instructions for handling, storing, installing, and finishing treated materials:
   1. For each type of preservative-treated wood product, include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
   2. For fire-retardant-treated wood products, include certification by treating plant that treated materials comply with specified standard and other requirements as well as data relative to bending strength, stiffness, and fastener-holding capacities of treated materials.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Keep materials under cover and dry. Protect from weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels. Provide for air circulation within and around stacks and under temporary coverings.
   1. For lumber and plywood pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Wood-Preservative-Treated Materials:
      a. Baxter: J. H. Baxter Co.
      b. Chemical Specialties, Inc.
      c. Continental Wood Preservers, Inc.
      d. Hickson Corp.
      e. Hoover Treated Wood Products, Inc.
      f. Osmose Wood Preserving, Inc.

2.2 LUMBER, GENERAL

A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.

B. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

C. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
   1. Provide dressed lumber, S4S, unless otherwise indicated.

2. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

2.3 WOOD-PRESERVATIVE-TREATED MATERIALS

A. General: Where lumber or plywood is indicated as preservative treated or is specified to be treated, comply with applicable requirements of AWPA C2 (lumber) and AWPA C9 (plywood). Mark each treated item with the Quality Mark Requirements of an inspection agency approved by ALSC's Board of Review

B. Pressure treat aboveground items with waterborne preservatives to a minimum retention of 0.25 lb/cu. ft. After treatment, kiln-dry lumber and plywood to a maximum moisture content of 19 and 15 percent, respectively. Treat indicated items and the following:
   1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
   2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

2.4 DIMENSION LUMBER

A. General: Provide dimension lumber of grades indicated according to the ALSC National Grading Rule (NGR) provisions of the inspection agency indicated.

B. Framing Other than Non-Load-Bearing Partitions: Provide framing of the following grade and species:
   1. Grade: Construction or No. 2.
   2. Species: Any species.

2.5 MISCELLANEOUS LUMBER

A. General: Provide lumber for support or attachment of other construction, including rooftop equipment curbs and support bases, cant strips, bucks, nailers, blocking, furring, grounds, stripping, and similar members.

B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.

C. Moisture Content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.

D. Grade: For dimension lumber sizes, provide No. 3 or Standard grade lumber per ALSC's NGR's of any species. For board-size lumber, provide No. 3 Common grade per NELMA, NLGA, or WWPA; No. 2 grade per SPIB; or Standard grade per NLGA, WCLIB or WWPA of any species.

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

B. Nails, Wire, Brads, and Staples: FS FF-N-105.

C. Power-Driven Fasteners: CABO NER-272.

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

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Discard units of material with defects that impair quality of rough carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.

B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted.

C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.

D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. CABO NER-272 for power-driven staples, P-nails, and allied fasteners.
   2. Published requirements of metal framing anchor manufacturer.
   3. "Recommended Nailing Schedule" of referenced framing standard and with AFPA's "National Design Specifications for Wood Construction."
   4. "Table 23-I-Q--Nailing Schedule" of the Uniform Building Code.

E. Use common wire nails, unless otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

3.2 WOOD GROUNDS, NAILERS, AND BLOCKING

A. Install wood grounds, nailers, and blocking where shown and where required for screeding or attaching other work. Form to shapes shown and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.

END OF SECTION 061000

SECTION 075423.2 (rev.1.7) - THERMOPLASTIC MEMBRANE ROOFING ON A METAL ROOF DECK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:
   1. Adhered membrane roofing system
   2. Mechanically fastened membrane roofing system.
   3. Roof insulation.

B. Related Sections include the following:
   1. Division 06 Section "Rough Carpentry" for wood nailers, curbs, and blocking.
   2. Division 7 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
   3. Division 7 Section "Joint Sealants" for joints around roof flashings and other joints in roof construction.

1.3 DEFINITIONS

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

B. Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," before multiplication by a safety factor.

C. Factored Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," after multiplication by a safety factor.
   1. Exposure Category: Exposure C

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
   1. Fire/Windstorm Classification: Class 1A-90.
   2. Hail Resistance: SH.
   3. Wind Speed/Uplift Calculations: I-90.

1.5 SUBMITTALS

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

B. Shop Drawings: Include layouts, plans, sections, details of connections and identification of materials of the following:
   1. Base flashings and membrane terminations;
   2. Tapered insulation, including slopes.

C. Samples for Verification: For the following products:
   1. 12-by-12-inch square of sheet roofing, of color specified, including T-shaped side and end lap seam.
   2. 12-by-12-inch square of roof insulation.

D. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system and lists foremen who have received training from the manufacturer along with the dates training was received..

E. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
   1. Submit evidence of meeting performance requirements.

F. Qualification Data: For Installer and manufacturer.

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

H. Research/Evaluation Reports: For components of membrane roofing system.

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

J. Warranties: Special warranties specified in this Section.

K. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty. Include list of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

B. Manufacturer Qualifications: A qualified manufacturer that has FMG approval for membrane roofing system identical to that used for this Project.

C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

D. Source Limitations: Obtain components for membrane roofing system from roofing membrane manufacturer.

E. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
   1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.
   2. Fire-Resistance Ratings: ASTM E 119, for fire-resistance-rated roof assemblies of which roofing system is a part.

F. Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system including, but not limited to, the following:
   1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
   2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
   3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
   5. Review structural loading limitations of roof deck during and after roofing.
   6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
   7. Review governing regulations and requirements for insurance and certificates if applicable.
   8. Review temporary protection requirements for roofing system during and after installation.
   9. Review roof observation and repair procedures after roofing installation.
   10. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.
   11. Establish which areas on the site that will be available for use as storage and work areas, and the Roofing Contractor’s responsibility of protection and restoration of said storage and work areas to pre-construction conditions.
   12. Review Owner’s parking requirements, regulations, and the procedure for the Roofing Contractor and his employees to coordinate parking with local school administration.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components. Deliver in sufficient quantity to permit work to continue without interruption.

B. Store membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. Membrane that has been exposed to the elements for approximately 7 days must be prepared with Weathered Membrane Cleaner prior to hot air welding.

C. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
   1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

D. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

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

F. **NO MATERIALS CONTAINING ASBESTOS ARE TO BE USED, *IN ANY FORM*, ON THIS PROJECT**. No products containing asbestos will be allowed to be stored on site. Any materials containing asbestos will be removed promptly.

G. The Roofing Contractor is solely responsible for receiving, deliveries, and storage of materials and equipment job site at all times. Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

1.8 PROJECT CONDITIONS

A. Weather Limitations: Proceed with roofing work only when existing and forecasted weather conditions permit roofing to be installed according to manufacturer's written instructions and warranty requirements. Do not apply roofing membrane during inclement weather or when ambient temperature is below forty (40) degrees Fahrenheit including wind chill factor. Do not apply roofing membrane to damp or frozen surface.

B. After rains or dew, no material will be applied until all moisture has dissipated from roof surface.

C. Contractor is responsible for proving to the TPS Director of Purchasing, Architect, and Facilities Manager any and all rain delays as part of the monthly application for payment process. Contractor is also responsible to make sure they stay on schedule so that the roofing projects are completed before the first day of school Friday 31 July 2015.

D. The existing metal roof deck above the Main Pool Area of the Natatorium, based on the original drawings, are assumed to be pitched at a ¼" per foot slope, for the purposes of bidding, and it is the responsibility of the Roofing Contractor to verify any variations. If a variation should be discovered, the Roofing Contractor shall notify the Architect immediately and receive instruction before any further work can proceed.

E. At the sole discretion of the Owner, Owner's Facilities personnel may disconnect minor electrical work and mechanical piping on the roof as required for the reroofing of the building(s) and may do other work as required by these plans and specifications. On completion of the work, Owner's Facilities personnel may reconnect all electrical and mechanical work disconnected by the Owner's Facilities personnel.

F. The Roofing Contractor shall verify the location of all sources of power and insure that such sources are compatible with the requirements of the tools for installation of the new roofing system. If the sources of appropriate power do not exist or are not available, the Roofing Contractor shall supply an appropriate source at the Roofing Contractor's expense.

G. Connect to existing power service location as directed. Power consumption shall not disrupt Owner's need for continuous service. Owner will pay for cost of energy used. Exercise measures to conserve energy. Owner is not responsible for damage from power surges or unsteady current. The Roofing Contractor must supply own extension cords. The Roofing Contractor shall supply ground fault protection devices at the main connection and will disconnect this connection at the end of each day.

H. Owner will not provide nor pay for telephone service.

I. Connect to existing water source for construction purposes. Owner will pay for cost of water used. Exercise measures to conserve water. Water consumption shall not disrupt Owner's need for continuous service.

J. The Roofing Contractor is not allowed access into any building unless required by this contract. The Roofing Contractor is to provide their own temporary toilet facilities in a location approved by the Owner.

1.9 WORK SEQUENCE

A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.

B. Do not disrupt activities in occupied spaces.

1.10 JOB SITE PROTECTION

A. The Roofing Contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.

B. During the Roofing Contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The Roofing Contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.

C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.

D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.

E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas **where work is in progress**. Install flags or other telltales on plugs. Remove plugs each night and screen drain.

F. Store moisture susceptible materials above ground and protect with waterproof coverings.

G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.11 JOB CONDITIONS, CAUTIONS AND WARNINGS

A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.

B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.

C. When loading materials onto the roof deck, the Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.

D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.

E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.

F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.

G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.

H. New roofing shall be complete and weather-tight at the end of the work day.

I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.12 WARRANTY

A. Standard Roofing Manufacturer's Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
   1. Warranty includes roofing membrane, base flashings, roof insulation fasteners, cover boards substrate board and other components of membrane roofing system.
   2. Warranty Period (Base Bid): 15 years from date of Substantial Completion.

B. General Warranty: The warranties specified in the Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrently with, other warranties made by the Contractor under requirements of the Contract Documents.

C. Special Project Warranty (Add Alternate): Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including membrane roofing, base flashing, roofing insulation, fasteners, and vapor retarders, if any, for the following warranty period:
   1. Warranty Period: 20 years from date of Substantial Completion.
   2. Such repair or replacement of defects shall include, but are not limited to: splits, blisters, bare spots, fishmouths, wrinkles, slippage and metal work. Repair or replacement may be required due to visual defects and not necessarily limited to defects with resulting roof leaks.
   3. Upon notice of roofing leaks or defects, the Roofing Contractor shall promptly inspect the defective areas and make all necessary repairs, including labor and materials, at no expense to Owner, no dollar limit.
   4. The Roofing Contractor is to meet and administer the minimum requirements of the roofing system manufacturer and the requirements of these specifications for inspection of the roof system.
   5. The Roofing Contractor shall maintain a copy of the drawings, specifications, and the roofing manufacturer's specifications at the job site at all times.

PART 2 - PRODUCTS

2.1 GENERAL

A. All components of the specified roofing system shall be products of or accepted by the roofing manufacturer as compatible.

B. All products (including insulation, fasteners, fastening plates, prefabricated accessories and edgings) must be **manufactured and/or supplied** by the roofing system manufacturer and covered by the warranty.

C. Furnish .060-mil thick white reinforced (TPO) or (PVC) membrane as needed to complete the roofing system. Membrane thickness over the reinforcing scrim (top-ply thickness) shall be nominal .015-mil or thicker. Membrane sheets in rolls 12', 10' or 8' wide by 100' long.

2.2 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.3 TPO/PVC ROOFING MEMBRANE

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

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Carlisle SynTec Incorporated.
   b. Custom Seal Roofing.
   c. Firestone Building Products Company.
   d. GAF Materials Corporation.
   e. GenFlex Roofing Systems.
   f. Johns Manville.
   g. Mule-Hide Products Co., Inc.
   h. Stevens Roofing Systems; Division of JPS Elastomerics.
   i. Versico Incorporated.
2. Thickness: 60 mils, nominal.
3. Exposed Face Color: White
4. Physical Properties: Provide thermoplastic sheets with the following minimum properties as determined by ASTM method indicated:
   a. Breaking Strength: 220 lbf; ASTM D 751, Procedure A.
   b. Elongation at Break: 25 percent; ASTM D751.
   c. Tearing Strength: 55 lbf minimum, of breaking strength of unseamed sample; ASTM D 751, Procedure B.
   d. Brittleness Point: Minus 40 deg F, ASTM D2137.
   e. Low-Temperature Bend: Pass at minus 40 deg F, ASTM D2136.
   f. Acclerated Weathering Test: No cracking or crazing after 5000 hours, ASTM G155.
   g. Ozone Resistance: No cracks after sample, wrapped around a 3-inch-diameter mandrel, is exposed for 166 hours to a temperature of 104 deg F and an ozone level of 100 pphm ; ASTM D 1149.
   h. Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 56 days at 176 deg F or after 28 days at 185 deg F; ASTM D3045.
   i. Water Absorption: Less than 3 percent mass change after 168 hours' immersion at 158 deg F, ASTM D 471.
   j. Linear Dimension Change: +/- 1 percent maximum after 6 hours at 158 deg F, ASTM D 1204.

B. PVC Sheet: Uniform flexible sheet formed of polyvinyl chloride with plasticizers and modifiers, complying with ASTM D 4434, Type III, fabric reinforced of the following type, grade, thickness, and exposed color:
1. Manufacturers:
   a. Bondcote Roofing Systems
   b. Carlisle-SynTec, Inc.
   c. Firestone Building Products
   d. GAF Materials Corporation
   e. GenFlex Roofing Systems.
   f. IB Roof Systems.
   g. Manville Roofing Systems
   h. Saranfil Inc.
2. Thickness: 60 mils, minimum.
3. Exposed Face Color: White.
4. Physical Properties: Provide thermoplastic sheets with the following minimum properties as determined by ASTM method indicated:
   a. Breaking Strength: 275 lbf; ASTM D 751, Procedure A.
   b. Elongation at Break: 25 percent; ASTM D751.
   c. Tearing Strength: 55 lbf minimum, of breaking strength of unseamed sample; ASTM D 751, Procedure B.

d. Brittleness Point: Minus 22 deg F.
e. Low-Temperature Bend: Pass at minus 40 deg F, ASTM D2136.
f. Acclerated Weathering Test: No cracking or crazing after 5000 hours, ASTM D1204.
g. Ozone Resistance: No cracks after sample, wrapped around a 3-inch-diameter mandrel, is exposed for 166 hours to a temperature of 104 deg F and an ozone level of 100 pphm ; ASTM D 1149.
h. Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 56 days at 176 deg F or after 28 days at 185 deg F; ASTM D3045.
i. Water Absorption: Less than 3 percent mass change after 168 hours' immersion at 158 deg F, ASTM D 570.
j. Linear Dimension Change: 0.5 percent maximum after 6 hours at 176 deg F, ASTM D 1204.

2.4 AUXILIARY MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

C. Adhesive and Cleaners: All products shall be furnished by Roofing Manufacture and specifically formulated for the intended purpose.
1. **Adhesive:** A high-strength, adhesive used for bonding membrane to various surfaces as recommended by the Roofing Manufacturer. The adhesive is applied to both the membrane and the substrate at a coverage rate of approximately 60 square feet per gallon per finished surface - minimum (includes coverage on both surfaces).
a. Solvent-based
1. EverGuardR TPO Bonding Adhesive for TPO smooth membranes and insulation.
2. EverGuardR PVC (Low VOC) Bonding Adhesive for PVC smooth membranes and FB membranes.
3. EverGuardR TPO Low VOC Bonding Adhesive for TPO smooth membranes.
b. Water-based
1. EverGuardR WB 181 Water-Based Bonding Adhesive for smooth TPO membranes, TPO FB membranes, and PVC FB membranes.
c. EverGuardR Low-Rise Foam (LRF) Adhesives:
1. LRF-M (membrane and insulation)
2. LRF-O (membrane only)
3. OlyBondR (insulation only)
4. GAF 2-Part Roofing Adhesive (membrane and insulation)
d. Hot Asphalt
1. Use ASTM D312, Type III or Type IV asphalt.
2. Apply asphalt at the rate of 25 lbs. (11.3 kilograms) per 100 sq. ft. (9.2 sq. m.) over the entire surface to which the board is to be adhered.
3. If the substrate surface is rough or porous, such as an existing flood coat and gravel surfacing, additional asphalt may be required. Ensure existing gravel and dirt is vacuumed, power-broomed or power-washed away.
4. Apply asphalt at its EVT temperature to obtain a proper bond, typically within the range of 425°F (218°C) to 475°F (246°C).
5. Walk in the boards after installation to ensure a proper bond.
6. Maximum board size is 4' x 4' (1.2 m x 1.2 m).

7. Hot asphalt application requires priming of concrete and gypsum decks and existing asphaltic roofing systems.
8. Hot asphalt may be used only to adhere EverGuardR FB membranes.

2. **Cut-Edge Sealant:** A white or clear colored sealant used to seal cut edges of reinforced membrane. A coverage rate of approximately 225 - 275 linear feet per squeeze bottle can be achieved when a 1/8" diameter bead is applied.
3. **Water Cut-Off Mastic:** Used as mastic to prevent moisture migration at drains, compression terminations and beneath conventional metal edging (at a coverage rate of approximately 10' per tube or 100' per gallon).
4. **Universal Single-Ply Sealant:** A 100% solids, solvent free, voc free, one part polyether sealant that provides a weather tight seal to a variety of building materials. It is white in color and is used for general caulking such as above termination bars and metal counter flashings and at scuppers.
5. **Thermoplastic One-Part Pourable Sealer**: A one-part, moisture curing, elastomeric polyether sealant used to fill TPO Molded Pourable Sealant Pockets. Packaged in 4, 2-liter foil pouches inside a reusable plastic bucket. 1 pouch will fill 2 TPO Molded Pourable Sealant Pockets.
6. **Weathered Membrane Cleaner:** Used to prepare membrane for heat welding that has been exposed to the elements or to remove general construction dirt at an approximate coverage rate of 400 square feet per gallon (one surface).
7. **TPO/PVC Primer:** A solvent-based primer used to prepare the surface of Membrane prior to application of Pressure-Sensitive Coverstrip and TPO/PVC Pressure-Sensitive RUSS.

D. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

E. Metal Termination Bars: Manufacturer's standard predrilled aluminum-zinc-alloy-coated or zinc-coated steel sheet bars, approximately 1 by 1/8 inch thick; with anchors. Vinyl termination bars will be considered if they are part of a manufacturer's tested, approved and fully warranted system in compliance with the previously noted requirements.

F. Fasteners and Plates: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for mechanical attachment of insulation and to provide additional membrane securement to substrate, and acceptable to membrane roofing system manufacturer.

1. **Membrane Fasteners**: A heavy duty #15 threaded fastener with a #3 phillips drive used for membrane or insulation securement into steel, wood plank or minimum 15/32 inch thick plywood when increased pullout resistance is desired.
2. **Insulation Fasteners:** A threaded #12 fastener with #3 phillips drive used for insulation attachment into steel or wood decks.
3. **Concrete Fasteners**: A non-threaded, hammer driven fastener used with structural concrete roof decks rated 3,000 psi or greater.
4. **Term Bar Nail-Ins**: A 1-1/4" long expansion anchor with a zinc plated steel drive pin used for fastening the Termination Bar or Seam Fastening Plates to concrete, brick, or block walls.
5. **Barbed Plates**: A 2-3/8" diameter metal barbed fastening plate used with membrane fasteners for membrane securement. This plate can be used for insulation securement.
6. **Insulation Fastening Plates**: a nominal 3 inch diameter plastic or metal plate used for insulation attachment.
7. **Pressure-Sensitive RUSS™** (Reinforced Universal Securement Strip): a 6" wide, nominal 45-mil thick reinforced TPO membrane with 3" wide Pressure Sensitive Tape laminated along one edge. The 6" wide Pressure-Sensitive RUSS is used horizontally at the base of walls, curbs, etc., in conjunction with 2" diameter Seam Fastening Plates below the TPO deck membrane for additional membrane securement.
   a. **6" wide Pressure-Sensitive RUSS** is used horizontally or vertically at the base of walls, curbs, etc., in conjunction with Piranha Fastening Plates below the TPO deck membrane for additional membrane securement.

b. **10" wide Pressure-Sensitive RUSS** is for perimeter membrane securement.

G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, seam caulk, termination reglets, cover strips, and other accessories recommended by Manufacturer for intended use. These accessories are to be covered by the roofing systems manufacturer's system warranty for the warranty period.

2.5 VAPOR RETARDER

A. Polyethylene Vapor Retarder: ASTM D4397, 6 mils thick, minimum, with maximum permeance rating of 0.13 perms.
   1. Vapor Retarder Tape: Pressure-sensitive tape of type recommended by vapor retarder manufacturer for sealing joints and penetrations in vapor retarder.
   2. Adhesive: Manufacturer's standard roofing adhesive, FM approved for vapor retarder application.

2.6 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 36, Type X gypsum wall board, 5/8 inch thick to provide a UL fire resistive roof assembly – every USD 501 roof, that is not either a poured-in-placed structural concrete roof deck or a gypsum plank roof deck will have a substrate board.
   1. Loose Laid

2.7 ROOF INSULATION

A. General:
   1. Provide preformed tapered roof insulation boards, of one of the types noted below, that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses required, on flat roofs, to provide minimum 1/8-inch per 12-inches slope to drains and/or roof scuppers. If there is an established roof slope of ¼ inch per foot, or greater, maintain this slope. When applicable, insulation shall be installed in multiple layers. The first and second layer of insulation shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
   2. If the roof curb, flashing/counter flashing, wood blocking, crickets or other portions of the roofing system needs to be raised in order to maintain the required roof drainage slopes, and compliance with manufacturer's warranty conditions, it is the Roofing Contractor's responsibility to do so.
   3. Every USD 501 roof that is replaced will have tapered roof insulation – unless specifically noted in the Scope of Work, or herein.
      a. Existing Metal Roof Decks: Flat roof insulation boards, of one of the types noted below, filling the spaces between the flutes of the existing metal roof decking is required to maintain the existing slope of the overall roof deck. A single layer of roof insulation is required and is to be mechanically adhered to the existing metal roof deck.

B. **EPS: Expanded Polystyrene –** A closed-cell lightweight expanded polystyrene (EPS) that meets ASTM C578, Type I. Nominal density of 1.25 lbs/cubic ft (pcf) available in 4' x 4' sizes with thickness from ¼" to 40". Custom lengths, widths and tapered boards are available. May be specified beneath Recovery Board, Dens-Deck Prime, Securshield HD or Securock.

C. **Dens Deck Cover Board** –gypsum core that incorporates glass-mat facings on the top and bottom side for use as a cover board. Available in 1/2" and 4' x 8' size boards.

D. **Securshield / Securock Gypsum-Fiber Roof Board –** A uniform composition of gypsum-fiber-reinforced with no facer for use as a cover board or a thermal barrier. Available in 1/2" thick and 4' x 8' size boards. Long uninterrupted runs (>200') may require slight gapping due to thermal expansion.

E. **Recovery Board** - A 1/2" thick high-density wood fiberboard with an asphalt coated facer for use ONLY as a temporary cover ~~board~~ or recover board for use when making temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard with temporary seals before beginning work on adjoining roofing. Available ½" thick and 4' x 8' size boards.

F. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where necessary for ensuring that storm water flows around obstructions in the slope to drain. Fabricate to slopes indicated.

2.8 WALKWAYS

A. Flexible Walkways:
1. Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured TPO walkway pads or rolls, approximately 3/16 inch thick, and acceptable to membrane roofing system manufacturer. Or;
2. Concrete pavers loose laid over an approved slip sheet. (As long as the pavers are not used on slopes greater than 2" in 12")

2.9 ROOFTOP SUPPORTS

A. Supports:
1. C-Port CXP channel support, 100% Recycled Rubber, UV resistant, providing an economical support of gas piping systems, electrical conduit, HVAC equipment and other related applications. Maximum load 500 Lbs. Material effectively accepts screw fasteners for securing one (1) or two (2) hole straps.

PART 3 - EXECUTION

3.1 GENERAL

A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.

B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.2 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and those nailers match thicknesses of insulation.
3. Verify that surface plane flatness and fastening of the existing roof deck comply with requirements of roofing system manufacturer.
4. Verify that minimum concrete or gypsum drying period recommended by roofing system manufacturer has passed.
5. Verify that concrete or gypsum substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
6. Verify that concrete or gypsum curing compounds that will impair adhesion of roofing components to roof deck have been removed.
7. Verify that any lightning protection system on the building has been set in place, securely clamped and all elements of the system connected to each other and the building.
8. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 PREPARATION

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

B. All ballast rock, if any exists on the roof, will be removed and delivered to the Owner's Service Center at 125 SE 27th Street.

C. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

D. Disconnect and lift all rooftop-mounted equipment, ventilators and other devices to allow placement of new roof membrane system and flashings. Reinstall all existing equipment, ventilators and other devices upon completion of the affected areas.

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

3.4 ROOFING INSTALLATION, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions.

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

C. Install roofing and auxiliary materials to tie in to existing roofing, if any, to maintain weathertightness of transition and to not void warranty for existing roofing system.

D. Insulation shall not be adhered to existing or new gypsum surfaces. Insulation shall be mechanically attached directly to the gypsum panels. If a vapor retarder is required, it shall be adhered to a base sheet that is mechanically attached to the gypsum panel deck. Insulation boards may be adhered to mechanically attached base sheets or vapor retarders.

3.5 VAPOR-RETARDER / SUBSTRATE INSTALLATION – Vapor Barrier Already in Place

~~A. Loosely lay polyethylene vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 inches and 6 inches respectively.~~
~~1. Seal laps with tape or,~~
~~2. Seal laps with roofing manufacturer's standard adhesive.~~

~~B. Install laminate-sheet vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum 2 inces and 6 inches respectively. Bond vapor barrier to deck as follows:~~
~~1. Apply adhesive at rate recommended by vapor retarder manufacturer. Seal laps with adhesive; or,~~
~~2. Apply ribbons of hot roofing asphalt at spacing, temperature, and rate recommended by vapor retarder manufacturer. Seal laps with hot asphalt.~~

~~C. Completely seal vapor retarder at all terminations, obstruction, and penetrations.~~

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

3.6 INSULATION INSTALLATION

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

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

C. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 3 inches, or greater, install 2 or more layers with joints of each succeeding layer staggered both horizontally and vertically from joints of previous layer a minimum of 6 inches in each direction.

D. ~~**Mechanically Fastened and**~~ **Adhered Insulation: Install each layer of insulation and secure first layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.**

1. **Fasten first layer of insulation to resist uplift pressures at corners, perimeter, and field of roof.**
2. **Set each subsequent layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.**
3. **Set each subsequent layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.**

E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

E. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/8 inch with insulation.

1. Cut and fit insulation within 1/8 inch of nailers, projections, and penetrations.

F. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Stagger joints from joints in insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck.

1. Mechanically attach cover board through insulation and substrate to the deck.

G. Crickets are to be provided at, and around, any, and all, obstructions to the flow of storm water runoff on all new tapered tile insulated and asphalt shingled roofs.

3.7 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

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

1. For in-splice attachment, install membranes roofing with long dimension perpendicular to existing steel roof deck flutes.

B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.

C. Unroll and position membrane. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing. Secure the membrane with the required Fasteners and Plates spaced a maximum of 12 inches on center depending or project conditions (centered over the pre-printed marks approximately 1-1/2 inches from the edge of the membrane sheet). Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.

E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

F. In-Seam Attachment: Secure one edge of TPO sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten TPO sheet to roof deck.

G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

A. Membrane Hot Air Welding Procedures
1. Hot air weld the membrane using an Automatic Hot Air Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's specifications. At all splice intersections, roll the seam with a silicone roller immediately after welder crossed the membrane step-off to ensure a continuous hot air welded seam.
2. When using .060-mil thick or thicker membrane, all splice intersections shall be overlaid with non-reinforced flashing or TPO T-Joint covers.
3. Probe all seams once the hot air welds have thoroughly cooled (approximately 30 minutes).
4. Repair all seam deficiencies the same day they are discovered.
5. Apply Cut Edge Sealant on all cut edges of reinforced membrane (where the scrim reinforcement is exposed) after seam probing is complete. Cut edge sealant is not required on vertical splices.

B. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

C. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weather-tightness of transition.

3.9 FLASHING INSTALLATION

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

B. Apply solvent-based bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with sheet flashing.

D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.

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

F. Metal Flashing
1. Flashing, roof edge metal, and fascia shall be new; use similar gauge metal shaped to match existing materials and appearances.
2. All sheet metal work shall adhere to all standards set forth by SMACNA.
3. Any new sheet metal shall be pre-finished and a minimum of 24 gauge.
4. All flashing and counter flashings shall be installed according to the applicable specifications necessary to obtain warranty.
5. Vent flashing and roof drains shall radial out a minimum of 12” under the roof membrane. Exhaust fan flashing shall radial 9” from their curb.
6. Flash roof and re-install new counter flashing.

3.10 WALKWAY INSTALLATION

A. Flexible Walkways:
   1. Install walkway at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations as identified on the Architect's drawing.
   2. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.11 FIELD QUALITY CONTROL

A. Testing Agency: Owner may engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports if, in the sole opinion of the Architect, the workmanship of the installation requires outside assistance.

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

C. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.

D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.12 PROTECTING AND CLEANING

A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed to temporarily close the membrane to prevent water infiltration. Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

B. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

C. Promptly correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

D. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction. Upon completion, all debris must be disposed of in a legally acceptable manner.

E. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

3.13 ROOFING INSTALLER'S WARRANTY

A. WHEREAS <**Insert name**> of <**Insert address**>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
   1. Owner: <**Insert name of Owner.**>
   2. Address: <**Insert address.**>
   3. Building Name/Type: <**Insert information.**>
   4. Address: <**Insert address.**>
   5. Area of Work: <**Insert information.**>
   6. Acceptance Date: <**Insert date.**>
   7. Warranty Period: <**Insert time.**>
   8. Expiration Date: <**Insert date.**>

B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:
   1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
      a. lightning;
      b. peak gust wind speed exceeding <**Insert wind speed**> mph;
      c. fire;
      d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
      e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
      f. vapor condensation on bottom of roofing; and
      g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
   2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
   3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.

4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

6 This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <**Insert day**> day of <**Insert month**>, <**Insert year**>.
   1. Authorized Signature: <**Insert signature.**>
   2. Name: <**Insert name.**>
   3. Title: <**Insert title.**>

END OF SECTION 075423.2 (rev.1.7)

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes sheet metal flashing and trim in the following categories:
   1. Roof-drainage systems. The roof drainage system includes all exterior gutters, downspouts, leaders, boxes or associated metal. This Contract is responsible for flashing over and around all existing or any new treated fascia boards required by the project.
   2. Exposed trim, gravel stops, and fascia.
   3. Copings
   4. Metal flashing.
   5. Roof expansion-joint covers

B. It is the intention of the Owner to match any existing sheet metal flashing materials with the same type and gauge of new sheet flashing materials. Typically the Owner has used 24 gauge galvanized sheet metal or seamless aluminum. Contractor is to verify materials used for flashings at each facility.

C. It is the intention of the Owner that every building that is scheduled to have its' roof replaced also has its' gutters and downspouts replaced at the same time. These items may be reinstalled in the same locations as they currently exist.

1.2 PERFORMANCE REQUIREMENTS

A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing.

B Fabricate and install flashings at roof edges to comply with recommendations of FM Loss Prevention Data Sheet 1-49 for the following wind zone:
   1. Wind Zone 1: Wind pressures of 10 to 20 psf.

1.3 SUBMITTALS

A. Shop Drawings of each item specified showing layout, profiles, methods of joining, and anchorage details.

B. Samples of sheet metal flashing, trim, and accessory items, in the specified finish. Where finish involves normal color and texture variations, include Sample sets composed of 2 or more units showing the full range of variations expected.
   1. 12-inch long Samples of factory-fabricated products exposed as finished Work. Provide complete with specified factory finish.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

1.5 PROJECT CONDITIONS

A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation. Ensure best possible weather resistance, durability of Work, and protection of materials and finishes.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 METALS

A. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
   1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality. Match existing flashing surface appearance.

B. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
   1. Exposed Coil Coated Finishes:
      a. Three-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
      b. Color – match existing colors, or as selected by Architect.

2.2 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
   1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
      a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
      b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
      c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
   2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Series 300 stainless steel.

C. Solder for Zinc-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.

D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape ½ inch wide and 1/8 inch thick.

E. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.

G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

H. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

I. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

J. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of Work, matching or compatible with material being installed; noncorrosive; size and thickness required for performance.

J. Underlayment Material: Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated. To be used with dissimiliar metal or corrosive substrates.

2.3 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.

B. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.

C. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.

D. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.

E. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

F. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.

G. Expansion Provisions: Space movement joints at maximum of 10 feet with no joints allowed within 24" of corner or intersection. Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.

H. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.

I. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" for application but not less than thickness of metal being secured.

J. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.

K. Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact with asphalt mastic or other permanent separation as recommended by manufacturer.

L. Do not use graphite pencils to mark metal surfaces.

2.4 SHEET METAL FABRICATIONS

A. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below for each application and metal.

B. Hanging Gutters: Fabricate to the cross section indicated below, complete work with end pieces, outlet tubes, and other accessories as required. Fabricate in minimum 96-inch-long sections. Furnish flat-stock gutter spacers and gutter brackets fabricated from same metal as gutters, of size recommended by SMACNA but not less than twice the gutter thickness. Fabricate expansion joints, expansion-joint covers, gutter bead reinforcing bars and gutter accessories from same metal as gutters.
   1. Gutter Style: 6" K-Style Gutter, .032 thickness, same color as existing gutters on adjacent roofs.
      a. Gutter styles at the three magnet schools (Meadows, Scott and Williams) are to match the existing style, thickness and color of the box gutters on these three schools.
   2. Expansion Joints: Butt type.
   3. Accessories: Continuous removable leaf screen with sheet metal frame and hardware cloth screen.
   4. Hanger Spacing 24"
   5. Saddle Brackets at the three magnet schools (Meadows, Scott and Williams): Remove and replace the existing saddle brackets under the box gutters to match the existing style, thickness and color of the saddle brackets on these three schools when box gutters are included in any scope of work.

C. Downspouts: Fabricate 3" x 4" rectangle downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
   1. Fabricate downspouts from the same material as the gutters.

2.5 LOW-SLOPE ROOF SHEET METAL FABRICATIONS.

A. Roof Edge Flashing (Gravel Stop) and Fascia Caps: Fabricate in minimum 96-inch-long, but not exceeding 10-foot- long, sections. Furnish with 6-inch-wide joint cover plates.
   1. Joint Style: Butt, with 12-inch- wide concealed backup plate.

B. Copings: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, seal, and solder or weld watertight.
   1. Joint Style: Butt, with 12-inch-wide concealed backup plate.
      a. Aluminum: 0.050 inch thick.
      b. Galvanized Steel: 0.040 inch thick

C. Roof and Roof to Wall Transition, Roof to Roof Edge Flashing (Gravel Stop) and Fascia Cap Transition and Sheet Metal Roof Edging Transition Expansion-Joint Cover: Fabricate from the following material:
   1. Aluminum: 0.050 inch thick.
   2. Galvanized Steel: 0.034 inch thick

D. Counterflashing: Fabricate from the following material:
   1. Aluminum: 0.032 inch thick.
   2. Galvanized Steel: 0.022 inch thick

E. Flashing Receivers: Fabricate from the following material:
   1. Aluminum: 0.032 inch thick.
   2. Galvanized Steel: 0.022 inch thick

F. Roof-Penetration Flashing: Fabricate from the following material:
   1. Galvanized Steel: 0.028 inch thick

G. Roof-Drain Flashing: Fabricate from the following materials:
   1. Zinc-Tin Alloy-Coated Stainless Steel: 0.015 inch thick.

2.6 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following materials:
   1. Zinc-Tin Alloy-Coated Stainless Steel: 0.018 inch thick.

B. Overhead-Piping Safety Pans: Fabricate from the following materials:
   1. Zinc-Tin Alloy-Coated Stainless Steel: 0.024 inch thick.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions under which sheet metal flashing and trim are to be installed and verify that Work may properly commence. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Anchor units of Work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install Work with laps, joints, and seams that will be permanently watertight and weatherproof.

B. Install exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.

D. Expansion Provisions: Provide for thermal expansion of exposed sheet metal Work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

E. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin the edges of sheets to be soldered to a width of 1-1/2 inches, except where the pretinned surface would show in finished Work.
   1. Do not solder the following metals:

a. Aluminum.
b. Coil-coated galvanized steel sheet.

2. Pretinning is not required for the following metals:
   a. Lead.
3. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

F. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards. Fill joint with sealant and form metal to completely conceal sealant.
1. Use joint adhesive for nonmoving joints specified not to be soldered.

G. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams, and solder.

H. Separations: Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces, at locations of contact, with asphalt mastic or other permanent separation as recommended by manufacturer.
1. Underlayment: Where installing copper directly on cementitious or wood substrates, install a slip sheet of red-rosin paper and a course of polyethylene underlayment.
2. Bed flanges of Work in a thick coat of roofing cement where required for waterproof performance.

I. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashings in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.

J. Roof-Drainage System: Install drainage items fabricated from sheet metal, with straps, adhesives, and anchors recommended by SMACNA's Manual or the item manufacturer, to drain roof in the most efficient manner. Coordinate roof-drain flashing installation with roof-drainage system installation. Coordinate flashing and sheet metal items for steep-sloped roofs with roofing installation.

K. Equipment Support Flashing: Coordinate equipment support flashing installation with roofing and equipment installation. Weld or seal flashing to equipment support member.

L. Roof Penetration Flashing: Coordinate roof-penetration flashing with roofing and installation of items penetrating roof. Install flashing as follows:
1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
2. Seal and clamp flashing to pipes penetrating roof, other than lead flashing on vent piping.

M. Splash Pans: Install where downspouts discharge on low-slope roofs, unless otherwise shown. Set in roof cement or sealant compatible with roofing membrane.

N. Install continuous gutter screens on gutters with noncorrosive fasteners, arranged as hinged units to swing open for cleaning gutters.

3.3 CLEANING AND PROTECTION

A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.

B. Provide final protection and maintain conditions that ensure sheet metal flashing and trim work during construction is without damage or deterioration other than natural weathering at the time of Substantial Completion.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes sealants for the following applications:
   1. Exterior joints in the following vertical surfaces and nontraffic horizontal surfaces:
      a. Joints around roof flashings.
      b. Other joints in roof construction required to keep roof weathertight.

1.2 PERFORMANCE REQUIREMENTS

A. Provide elastromeric joint sealants that establish and maintain watertight and airtight continous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:
   1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 deg F.
   2. When joint substrates are wet.

B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified in the sealant schedules at the end of Part 3.

2.2 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants: As indicated by referencing manufacturer's designations.

2.3 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.

B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified in the Elastomeric Joint-Sealant Schedule to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

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

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
3. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where recommended by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.

E. Install sealants by proven techniques to comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses provided for each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealants from surfaces adjacent to joint.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave or flush joint configuration as directed by Architect. Provide concave joint configuration per ASTM C 1193 Figure 5A, or flush joint configuration per ASTM C 1193 Figure 5B.

3.4 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.6 ELASTOMERIC JOINT-SEALANT SCHEDULE

A. Multicomponent Nonsag Urethane Sealant: Where joint sealants of this type are indicated provide products complying with the following::
   1. Products:
      a. Chem-Calk 2641; Bostik Inc.
      b. Vulkem 227: Mameco International.
      c. Vulkem 922; Mameco INternational.
      d. Elasto-Thane 920 Gun Grade; Pacific Polymers, Inc.
      e. Dynatred: Pecors Corporation.
      f. PSI-270; Polymeric Systems, Inc.
      g. NP 2; Sonneborn Building Products Div., ChemRex Inc.
   2. Type and Grade: M(multicomponent) and NS (nonsag).
   3. Class: 25.
   4. Use Related to Exposure: NT (nontraffic).
   5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.

B. Single-Component Nonsag Urethane Sealant: Where joint sealants of this type are indicated, provide products complying with the following:
   1. Products:
      a. Chem-Calk 900; Bostik Inc.
      b. Chem-Calk 915; Bostik Inc.
      c. Chem-Calk 945; Bostik Inc.
      d. Vulkem 921; Mameco International.
      e. PR-255; Ohio Sealants, Inc.
      f. Dynatol I; Pecora Corporation.
      g. Flexiprene 1000; Polymeric Systems, Inc.
      h. PSI-901; Polymeric Systems, Inc.
      i. SM7100 Permathane, Schnee-Morehead, Inc.
      j. DyMonic; Tremco.
      k. Duro-Caulk: Duro-Last, Inc.
   2. Type and Grade: S (single component) and NS (nonsag).
   3. Class: 25.
   4. Uses Related to Exposure: NT (nontraffic).
   5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.
   6. Applications: For general use in horizontal and vertical joints at interior and exterior applications.

END OF SECTION 079200

Roof NIC

Roof NIC

Roof NIC

RTU

Roof Scope of Work

Main Pool Roof - Scope of Work

1. Prepare job site and surrounding area for installation of new TPO Roofing System.
2. Remove and dispose of the current roof membrane, off site, down to the existing ½" fiber board.
3. Install new ½" Dens Deck Roof Board.
4. Install new 60 mil mechanically fastened TPO Roofing System per Manufacturers Specifications over the entire main pool area roofing area - including the parapet walls.
5. Install new walkway pads at all ladders and extend the walkways to and around all HVAC service locations.
6. Install new parapet wall coping caps throughout.
7. Install new edge metal on North and South roof edges.

Slope 1/4" / Ft

Capitol Federal Natatorium Main Pool Roof - 25,356 SqFt

116'-6"

198'-10"

23'-4"

98'-5"

Slope 2:12

This roof section has a different pitch than the rest og the main roof - but it is part of the main roof AND the Base Bid Scope of Work.

Slope 1/4" / FT

RTU

RTU

Roof NIC

DS

DS

DS

RTU

RTU

RTU

Slope 1/4" / Ft

Roof NIC

DS

Roof NIC

CURRENT NATATORIUM ROOF PLAN - 2015

NORTH

1' 3' 5' 20'

0 2' 4' 10'

GRAPHIC SCALE

North

Site / Roof Plan

Scale 1/16" = 1'- 0" 6 July 2015

Hummer Sports Park - Natatorium - 2015

500 SW Tuffy Kellogg Drive Topeka, Kansas 66604