TSSF

Roof Replacement for:

Bay Arenac ISD

Bay City, Michigan

PROJECT NO. 2515

May 16, 2025

TSSF ARCHITECTS, INC.

ARCHITECTS PLANNERS

122 N. WASHINGTON AVENUE SAGINAW , MICHIGAN

SECTION 000102
PROJECT INFORMATION

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

A. Project Name: Bay Arenac ISD Roof Replacement, located at: 4155 Monitor Rd Bay City, MI 48706.

B. Architect's Project Number: 2515

Project Location Address 1.

Bay City, MichiganProject Location ZIP.

C. The Owner, hereinafter referred to as Owner: Bay Arenac ISD

D. Owner's Project Manager: Ken Kerr.
   1. Department: Supervisor, Building Operations.
   2. Address: 4155 Monitor Rd..
   3. City, State, Zip: Bay City, MI 48706.
   4. Phone/Fax: 989-667-3619.
   5. E-mail: kerrk@baisd.net.

1.02 PROJECT DESCRIPTION

A. Summary Project Description: Partial Roof Replacement.

B. Contract Scope: Construction and demolition.

C. Contract Terms: Lump sum (fixed price, stipulated sum).

1.03 PROJECT CONSULTANTS

A. The Architect, hereinafter referred to as Architect: TSSF Architects Inc..
   1. Address: 122 N. Washington Ave.
   2. City, State, Zip: Saginaw, MI 48607.
   3. Phone/Fax: 989-752-7311.
   4. E-mail: chris@tssfinc.com.

1.04 PROCUREMENT TIMETABLE

A. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.

1.05 PROCUREMENT DOCUMENTS

A. Availability of Documents: Complete sets of procurement documents may be obtained:
   1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 000110
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END OF SECTION

SECTION 000115
LIST OF DRAWING SHEETS

A4.0 - PARTIAL ROOF PLAN AND DETAILS

END OF SECTION

SECTION 00610

PERFORMANCE, LABOR, AND MATERIAL BONDS

PART 1 GENERAL

1.1 BONDS REQUIRED

A. The successful Contractor, shall within fifteen (15) days after acceptance of his proposal, furnish a Performance Bond, in an amount equal to one hundred percent (100%) of the contract sum as security for the faithful performance of this contract and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the contract sum as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract.

B. Cost of said bonds shall be included as a part of the Base Bid.

C. The Contractor shall obtain such bonds in a manner consistent with Michigan law.

D. Bonds signed by Attorney-In-Fact must be accompanied by a certified and effectively dated copy of their Power of Attorney.

1.2 RELATED SECTIONS

A. Section 00500 - Agreement Between Owner and Contractor

B. Section 00700 - General Conditions of the Contract

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 001113
ADVERTISEMENT FOR BIDS

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

A. Bay Arenac ISD

B. Address:
4155 Monitor Rd
Bay City, MI, 48706

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

A. TSSF Architects Inc.

B. Address:
122 N. Washington Ave.
Saginaw, MI 48607

1.03 DATE: MAY 16, 2025

1.04 TO: POTENTIAL BIDDERS

A. Your firm is invited to submit an offer under seal to Owner for roof replacement of a facility located at the above address before 11:001 am local standard time on the 6th day of June, 2025, for:

B. Project: Bay Arenac ISD Roof Replacement

C. Architect's Project Number: 2515.

D. All bidders are required to prequalify to the requirements described in Document 002113 - Instructions to Bidders.

E. Project Description: Roof replacement at two areas..

F. Documents may be obtained only by general contract and subcontract Bidders. Others may view the Bid Documents at the office of the Architect.

G. Bidders will be required to provide Bid security in the form of a Bid Bond of a sum no less than 5 percent of the Bid Amount.

H. Refer to other bidding requirements described in Document 002113 - Instructions to Bidders and Document 003100 - Available Project Information.

I. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.

J. Your offer will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.

K. The Owner reserves the right to accept or reject any or all offers.

1.05 SIGNATURE

END OF SECTION

SECTION 002113
INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 SEE AIA A701, INSTRUCTIONS TO BIDDERS AVAILABLE AT THE OFFICE OF THE ARCHITECT.

1.02 RELATED DOCUMENTS

A. Document 001113 - Advertisement for Bids.

B. Document 004100 - Bid Form.

INVITATION

2.01 BID SUBMISSION

A. Bids signed and under seal, executed, and dated will be received at the office of the Owner at 4155 Monitor Rd. Bay City, MI 48706 at the shipping and receiving doors before 11:00 a.m. local standard time on 06/06/2025.

B. Offers submitted after the above time will be returned to the bidder unopened.

2.02 CONTRACT TIME

A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 INQUIRIES/ADDENDA

A. Direct questions to Chris Bohinski, email; chris@tssfinc.com.

B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.

C. Verbal answers are not binding on any party.

SITE ASSESSMENT

4.01 SITE EXAMINATION

A. Examine the project site before submitting a bid.

4.02 PREBID CONFERENCE

A. A mandatory bidders conference has been scheduled for 11:00 a.m. on 05/22/2025 at the location of 4155 Monitor Rd. Bay City, MI 48706.

BID ENCLOSURES/REQUIREMENTS

5.01 SECURITY DEPOSIT

A. Bids shall be accompanied by a security deposit as follows:
   1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.

B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.

C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.

D. Include the cost of bid security in the Bid Amount.

E. If no contract is awarded, all security deposits will be returned.

OFFER ACCEPTANCE/REJECTION

6.01 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the bid closing date.

6.02 ACCEPTANCE OF OFFER

A. Owner reserves the right to accept or reject any or all offers.

B. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION

SECTION 004100
BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

A. Bay Arenac ISD Career Center
Ken Kerr
4155 Monitor Rd
Bay City, Michigan 48706

1.02 FOR:

A. Project: Bay Arenac ISD Roof Replacement

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

A. Bidder's Full Name _____
1. Address _____
2. City, State, Zip_____

1.05 OFFER

A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by _____ for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

B. _____
_____ dollars
($_____), in lawful money of the United States of America.

C. We have included the required security deposit as required by the Instruction to Bidders.

D. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders.

E. All applicable federal taxes are included and State of _____ taxes are included in the Bid Sum.

F. All Cash and Contingency Allowances described in Section 012100 - Allowances are included in the Bid Sum.

1.06 ACCEPTANCE

A. This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.

B. If this bid is accepted by Owner within the time period stated above, we will:
1. Execute the Agreement within seven days of receipt of Notice of Award.

1.07 CONTRACT TIME

A. If this Bid is accepted, we will:

B. Complete the Work in _____ calendar weeks from Notice to Proceed. (Bidder to enter number of weeks.)

1.08 CHANGES TO THE WORK

A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:
1. _____ percent on the cost of work done by any Subcontractor.

B. On work deleted from the Contract, our credit to Owner shall be Architect-approved net cost plus _____ of the overhead and profit percentage noted above.

1.09 ADDENDA

A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
   1. Addendum # _____ Dated _____.
   2. Addendum # _____ Dated _____.

1.10 BID FORM SIGNATURE(S)

A. The Corporate Seal of

B. _____

C. (Bidder - print the full name of your firm)

D. was hereunto affixed in the presence of:

E. _____

F. (Authorized signing officer, Title)

G. (Seal)

H. _____

I. (Authorized signing officer, Title)

END OF SECTION

SECTION 007200
GENERAL CONDITIONS

FORM OF GENERAL CONDITIONS

1.01 THE 2017 EDITION OF THE AIA GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA DOCUMENT A-201), IS HEREBY MADE A PART OF THIS CONTRACT AND SHALL BE AS FULLY BINDING ON ALL CONTRACTORS AND SUBCONTRACTORS AS IF BOUND HEREIN.

1.02 THIS DOCUMENT MAY BE INSPECTED AT THE OFFICE OF THE ARCHITECT.

CONTRACTOR RESPONSIBILITY

2.01 PRIOR TO THE BEGINNING OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL ACQUAINT EACH CONTRACTOR, SUBCONTRACTOR, SUPERINTENDENT OF CONSTRUCTION, FOREMAN, WORKMAN, SUPPLIER, OR OTHERS WHO ARE OR WILL BE RESPONSIBLE FOR THE EXECUTION OF ANY TRADE UNDER THIS CONTRACT WITH ALL PROVISIONS OF THE CONDITIONS OF THE CONTRACT (GENERAL, AND OTHER CONDITIONS), THE DRAWINGS, THE SPECIFICATIONS, ALL ADDENDA ISSUED PRIOR TO BID, AND ALL MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT.

END OF SECTION

SECTION 012000
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

1.02 SCHEDULE OF VALUES

A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.

B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

C. Forms filled out by hand will not be accepted.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.

C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

D. Forms filled out by hand will not be accepted.

E. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   3. Scheduled Values.
   4. Previous Applications.
   5. Work in Place and Stored Materials under this Application.
   6. Authorized Change Orders.
   7. Total Completed and Stored to Date of Application.
   8. Balance to Finish.
   9. Retainage.

F. Execute certification by signature of authorized officer.

G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

I. Submit one electronic and three hard-copies of each Application for Payment.

1.04 MODIFICATION PROCEDURES

A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 5 days.

D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation.

E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

F. Substantiation of Costs: Provide full information required for evaluation.

G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 017000.

END OF SECTION

SECTION 012100
ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Contingency allowance.

1.02 CONTINGENCY ALLOWANCE

A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.

B. Funds will be drawn from the Contingency Allowance only by Change Order.

C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.03 ALLOWANCES SCHEDULE

A. Contingency Allowance: Include the stipulated sum/price of $10000 for use upon Owner's instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 017000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Cutting and patching.

C. Surveying for laying out the work.

D. Cleaning and protection.

E. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.02 RELATED REQUIREMENTS

A. Section 078400 - Firestopping.

1.03 QUALIFICATIONS

A. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

1.04 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturers required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

F. Utilize recognized engineering survey practices.

G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means.

H. Periodically verify layouts by same means.

I. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-complying work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D. Employ original installers to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.

I. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish the entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.06 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.07 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.08 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.09 FINAL CLEANING

A. Use cleaning materials that are nonhazardous.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Clean filters of operating equipment.

F. Clean debris from roofs.

G. Clean site; sweep paved areas, rake clean landscaped surfaces.

H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION

SECTION 024100
DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Selective demolition of built site elements.

1.02 RELATED REQUIREMENTS

A. Section 011000 - Summary: Limitations on Contractor's use of site and premises.

B. Section 015000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

C. Section 017000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

D. Section 312200 - Grading: Rough and fine grading.

E. Section 312323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

PART 3 EXECUTION

2.01 DEMOLITION

A. Remove other items indicated, for new roofing installation.

B. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 312200.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   3. Provide, erect, and maintain temporary barriers and security devices.
   4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   5. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
   6. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
   7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Protect existing structures and other elements to remain in place and not removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

2.03 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 061000
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Roof-mounted curbs.

B. Preservative treated wood materials.

1.02 REFERENCE STANDARDS

A. PS 20 - American Softwood Lumber Standard; 2025.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
   2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.02 ROOF-RELATED CARPENTRY

A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

B. Provide wood curb at each roof opening except where prefabricated curbs are specified and where specifically indicated otherwise; form corners by alternating lapping side members.

3.03 CLEANING

A. Waste Disposal:
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.

B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

SECTION 075419
POLYVINYL-CHLORIDE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Adhered polyvinyl-chloride (PVC) single-ply membrane roofing.

1.02 RELATED REQUIREMENTS

A. Section 053100 - Steel Decking.

1.03 REFERENCE STANDARDS

A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2023a.

D. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers; 2015 (Reapproved 2022).

E. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer; 2016 (Reapproved 2022).

F. ASTM D751 - Standard Test Methods for Coated Fabrics; 2019.

G. ASTM D4434/D4434M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing; 2021.

H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

I. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.

J. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.

K. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

L. FM DS 1-28 - Wind Design; 2015, with Editorial Revision (2024).

M. FM DS 1-29 - Roof Deck Securement and Above-Deck Roof Components; 2016, with Editorial Revision (2022).

N. NRCA (RM) - The NRCA Roofing Manual; 2025.

O. NRCA (WM) - The NRCA Waterproofing Manual; 2021.

P. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, vapor barrier, surfacing, and fasteners.

C. Shop Drawings: Submit drawings showing layout of roof slopes, drains, and roof equipment. Provide details at parapets, walls, and other roof terminations. Deviation from the roof membrane manufacturer's specifications or the approved shop drawings without the prior written approval of the manufacturer is not permitted.

D. Manufacturer's Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.

E. Installer's qualification statement.

F. Executed warranty.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of this section with at least three years of documented experience, authorized by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to project site in manufacturer's original containers, dry and undamaged, with seals and labels intact.

B. Store materials in weather-protected environment.

C. Ensure storage and staging of materials do not exceed static and dynamic load-bearing capacities of roof decking.

D. Protect foam insulation from direct exposure to sunlight.

1.07 FIELD CONDITIONS

A. Ambient Conditions: Do not install roofing membrane when temperature is below 5 degrees F (minus 15 degrees C) or above 115 degrees F (46 degrees C).

B. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

C. Apply adhesives at temperature ranges as recommended by the manufacturer.

D. Schedule applications so that no partially completed sections of roof are left exposed at end of day.

1.08 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Contractor Warranty: Provide 2-year warranty for replacement of defective materials. Complete forms in Owner's name and register with manufacturer.

C. Manufacturer Warranty: Provide 15-year No-Dollar-Limit (NDL) manufacturer's system warranty for repair or replacement of damaged roofing due to wind or other natural causes commencing on Date of Substantial Completion. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Duro-Last Roofing, Inc: www.duro-last.com/#sle.

2.02 MEMBRANE ROOFING SYSTEMS

A. Polyvinyl-Chloride (PVC) Adhered:
   1. Duro-Last Roofing, Inc; Duro-Last Membrane.

2.03 PERFORMANCE REQUIREMENTS

A. Factory Mutual Classification: Class 1, windstorm resistance of 1-60 in accordance with FM DS 1-28, and attach roof deck and above-deck components in accordance with FM DS 1-29.

B. Wind Uplift Resistance:
   1. Designed to withstand wind uplift forces calculated in accordance with ASCE 7.

C. Roof Covering External Fire Resistance Classification: Comply with UL (DIR), Class A.

D. Provide roof coverings in accordance with ASTM E108 and ASTM E119.

2.04 MEMBRANE

A. Thermoplastic Polyvinyl-Chloride (PVC) Roofing Membrane: Single-ply membrane over insulation with vapor barrier and cover board as indicated on drawings; in accordance with ASTM D4434/D4434M.

B. PVC: Comply with ASTM D4434/D4434M, Type III, internally reinforced sheet with fabric backing.

C. Solar Reflectance for EnergySmart Membranes and Color: Minimum 0.85 - white for initial and 0.67 - white for three years in accordance with ASTM C1549.

D. Thermal Emittance for EnergySmart Membranes and Color: Minimum 0.89 - white in accordance with ASTM C1371.

E. Thickness: 40 mils, 0.040 inch (1.02 mm), minimum, in accordance with ASTM D751.

F. Sheet Width: 32 inches (812 mm).

G. Color: White.

2.05 INSULATION

A. PIR Board Insulation with Facers on Both Sides: Rigid, closed-cell insulation board complying with ASTM C1289.
   1. Facers: Fiber-reinforced paper.
   2. Classifications: Type II.
      a. Class 1: Faced with glass-fiber-reinforced cellulosic felt facers on both major surfaces of core foam.
      b. Compressive Strength:
      c. Thermal Resistance: R-value (RSI-value) at 1-1/2 inches (38.1 mm) thick and 75 degrees F (24 degrees C) mean temperature, as follows:
   3. Flame Spread Index (FSI): Class A, 25 to 60, when tested in accordance with ASTM E84.
   4. Smoke Developed Index (SDI): Class A, 50 to 170, when tested in accordance with ASTM E84.
   5. Board Size: 48 by 48 inches (1219 by 1219 mm).
   6. Water Vapor Permeance: Less than 1.5 perm (85.5 ng/(Pa sec sq m)) at 1 inch (25.4 mm) thickness, and tested in accordance with ASTM E96/E96M.
   7. Products: Duro-Last Roofing, Inc; Duro-Guard ISO Foil.

2.06 ACCESSORIES

A. Attachment Plates for Adhered or Mechanically-Fastened Roofing Systems:

B. Fasteners:
   1. No.14 Screws: Duro-Coated corrosion-resistant steel fastener used for mechanical fastening of most types of roofing applications.
      a. Thread Diameter: 0.25 inch (6.35 mm), nominal. Available with drill point or spade point.
      b. Length: As indicated on drawings.
      c. Products: Duro-Last Roofing, Inc; HD Screws.
   2. No.15 Screws: Duro-Coated corrosion-resistant, extra-heavy-duty steel fastener with drill point used for mechanical fastening of most types of roofing applications.
      a. Thread Diameter: 0.265 inch (6.73 mm), nominal.
      b. Length: As indicated on drawings.
      c. Products: Duro-Last Roofing, Inc; EHD Screws.
   3. Screw Cap: Plastic cap to cover point on No.14 screws that penetrate below deck.
      a. Length: As indicated on drawings.
      b. Products: Duro-Last Roofing, Inc; Screw Point Cap.

C. Low-pressure, two-component spray polyurethane foam adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Grip CR-20.

D. Two-component, low-rise, semi-liquid polyurethane foam adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Grip OlyBond 500.

E. Polymeric waterborne adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Last WB II.

F. Low-volatile, organic compound (VOC) solvent-based adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Last SB IV.

G. Two-component, all-purpose, low-rise, polyurethane foamable adhesive without solvents.
   1. Products: Duro-Last Roofing, Inc; Duro-Grip Millenium PG-1 Pump Grade.

H. Highly elastomeric, all-purpose, low-rise, foamable adhesive without solvents.
   1. Ambient and Substrate Temperature during Application: No restrictions.
   2. Products: Duro-Last Roofing, Inc; Duro-Grip Millenium One Step.

I. Two-component, all-purpose, low-rise, construction grade polyurethane foam adhesive.
   1. Products: Duro-Last Roofing, Inc; TRUFAST Roofing Adhesive.

J. Single-component, OVC-free, moisture-cured polyurethane adhesive, free of solvents.
   1. Products: Duro-Last Roofing, Inc; Duro-Grip Insta Stik Quik Set.

K. Low-volatile, organic compound (VOC) solvent-based spray membrane adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Last Solvent-Grip Spray.

L. Low-pressure, two-component, spray polyurethane foam membrane adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Fleece CR-20.

M. Two-component membrane adhesive.
   1. Products: Duro-Last Roofing, Inc; Duro-Fleece OMG.

N. Polyether Joint Sealant: Moisture-cured, single-component, polyether, elastomeric sealant for damp and dry or cold climates.
   1. Joint Depth: 3/8 inch (9.52 mm), maximum.
   2. Comply with ASTM C920, Type S, Grade NS, Class 25, uses NT, O, M, G, T2, and A.
   3. Products: Duro-Last Roofing, Inc; Duro-Caulk Advanced.

O. Silicone Joint Sealant: Neutral-cure, single-component, nonsag, elastomeric silicone sealant formulated to bond to substrates, such as PVC, glass, aluminum, steel, plastic, ceramics, concrete, and wood.
   1. Color: White.
   2. Products: Duro-Last Roofing, Inc; Duro-Caulk Plus.

P. Self-Leveling Sealant: Easy flowing, UV- and impact-resistant, formulated for adhesion to most building materials.
   1. Products: Duro-Last Roofing, Inc; Pitch Pan Filler.

Q. Brush Grade Mastic: Heavy-bodied, flexible, elastomeric caulk and sealant for filling and patching cracks and voids on various substrates prior to application of primers and coatings.
   1. Products: Duro-Last Roofing, Inc; Duro-Shield Acrylic Brush-Grade Mastic.

R. Trowelable Mastic: Medium-weight, solvent-release mastic that utilizes synthetic rubber and resins as base that provides water-resistant properties and adhesion. Used as splicing cement, pitch pocket filler, night seal, or perimeter flashing adhesive.
   1. Products: Duro-Last Roofing, Inc; SB-240 Mastic.

S. Membrane Cleaner: Use for surfaces of roofing membranes.
   1. Products: Duro-Last Roofing, Inc; Wash Safe Roof Wash.

T. Flashings:
   1. Parapet, Wall, and Curb Flashing: Reinforced PVC membrane flashing, mechanically attached or adhered to walls with heat-welded seams.
      a. Color: As selected by Architect.
      b. Products: Duro-Last Roofing, Inc; Parapet Flashing.
   2. Miscellaneous Flashing:
      a. Stack Boot: Reinforced, prefabricated PVC with base skirt used to flash pipes, vent stacks, and cylindrical penetrations.
         1) Type: Open.
         2) Color: As selected by Architect.
         3) Height: 8 inches (203 mm).
         4) Diameter: As indicated on drawings.

5) Products: Duro-Last Roofing, Inc; Stack Flashings.

b. Curb: Reinforced, prefabricated, heat-welded PVC with base skirt used for rectangular penetrations.
   1) Type: Open.
   2) Color: As selected by Architect.
   3) Minimum available sizes:
   4) Products: Duro-Last Roofing, Inc; Curb Flashings.

c. Pitch Pan: Vinyl-coated metal and 6-inch (152 mm) PVC membrane skirt for watertight seal around rooftop protrusions.
   1) Type: One corner open.
   2) Color: As selected by Architect.
   3) Height: 4 inches (102 mm), minimum.
   4) Products: Duro-Last Roofing, Inc; Exceptional Metals, Pitch Pan.

3. Reglet and Counterflashing: Parapet terminations applicable to concrete or masonry walls.
   a. Material: As selected by Architect.
   b. System: One piece.
   c. Length: 10 feet (3.0 m).
   d. Products: Duro-Last Roofing, Inc; Exceptional Metals, Reglet & Counterflashing.

U. Aluminum Termination Bar: 6063 T6 extruded aluminum alloy bar with mill finish, 0.075 inch (1.905 mm) thick, 10 feet (3.05 m) long, and 1 inch (25.4 mm) wide with holes at 6 inches (152 mm) on center to allow fastener spacing to clamp PVC membrane to roof deck, base of walls, curbs, and transition locations.
   1. Products: Duro-Last Roofing, Inc; TB-75 and TB-50 Aluminum Termination Bar.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify that roof deck and existing roof construction are structurally sound and provide proper support for new roofing system.

C. Verify roof deck surfaces are clean and smooth; flat; free of flaws, depressions, sharp edges, loose and foreign materials, waves, and projections; sloped as shown on drawings; and suitable for installation of roof system.

D. Verify roof deck surfaces are dry and free of snow or ice, oil, grease, and other contaminants.

E. Verify that roof deck openings, curbs, and penetrations through roof decking, such as drains and scuppers, are solidly set, and cant strips, nailing strips, and reglets are installed as shown on drawings.

3.02 PREPARATION

A. Owner's representative to verify that roof deck is properly secured to structural framing in accordance with local building code and capable of resisting anticipated loads to that location.

B. Metal Deck:
   1. Install preformed acoustical glass fiber insulation strips in roof deck flutes in accordance with manufacturer's instructions; see Section 053100.

3.03 INSTALLATION

A. Perform work in accordance with manufacturer's instructions, NRCA (RM), and NRCA (WM) applicable requirements.

B. Do not install insulation products that cannot be covered by membrane and completed before end of day or before onset of inclement weather.

C. Do not apply roofing membrane during cold or wet weather conditions.

D. Do not apply roofing membrane when ambient temperature is outside temperature range recommended by manufacturer.

E. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

F. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

G. Install roofing assembly with the following components, from bottom-up:
   1. Insulation.
   2. Cover boards
   3. Roofing membrane.
   4. Edge metal.
   5. Fastener plates.

H. Insulation:
   1. Do not install more insulation than can be covered with membrane on same day.

I. Membrane:
   1. Adhered Membrane Attachment:
      a. Roll out membrane free from wrinkles or tears. Place sheet into place without stretching.
      b. Shingle joints on sloped substrate in direction of drainage.
   2. At intersections with vertical surfaces:
      a. Extend membrane over cant strips and up to minimum of 4 inches (102 mm) onto vertical surfaces.
      b. Fully adhere flexible flashing over membrane and up to nailing strips.
      c. Secure flashing to nailing strips at 4 inches (102 mm) on center.
      d. Insert flashing into reglets and secure.

3.04 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Remove bituminous markings from finished surfaces.

C. Consult manufacturer of surfaces for cleaning advice, and comply with manufacturer's documented instructions for cleaning requirements.

D. Repair or replace defaced or damaged finishes caused by work of this section.

END OF SECTION

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, exterior penetrations, and other items indicated in Schedule.

B. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

B. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.

C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2018).

E. CDA A4050 - Copper in Architecture - Handbook; current edition.

F. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

C. Samples: Submit two samples illustrating metal finish color.

1.04 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Sheet Metal Flashing and Trim:
   1. Hickman Edge Systems: www.hickmanedgesystems.com/#sle.
   2. Petersen Aluminum Corporation: www.pac-clad.com/#sle.
   3. Substitutions: Permitted.

2.02 SHEET MATERIALS

A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal.

B. Anodized Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 0.032 inch (0.81 mm) thick; anodized finish to match existing color.

2.03 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Form pieces in longest possible lengths.

C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.

D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

E. Fabricate corners from one piece with minimum 18-inch (450 mm) long legs; seam for rigidity, seal with sealant.

F. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

2.04 FLASHING

A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

2.05 ACCESSORIES

A. Fasteners: Galvanized steel, with soft neoprene washers.

B. Primer Type: Zinc chromate.

C. Concealed Sealants: Non-curing butyl sealant.

D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.

E. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION

A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.

B. Apply plastic cement compound between metal flashings and felt flashings.

C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.

END OF SECTION