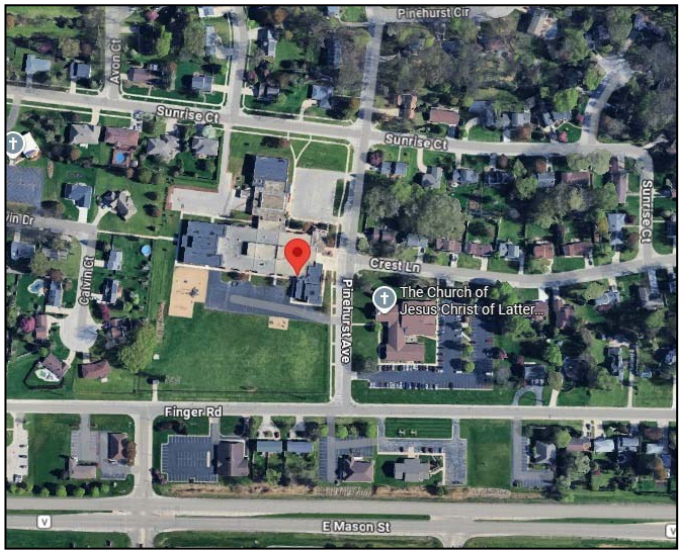
PROJECT
MANUAL

MARTIN ELEMENTARY SCHOOL
ROOF REPLACEMENT 2027

Located At:

626 Pinehurst Avenue
Green Bay, Wisconsin



STR SEG

Chicago – Milwaukee
Indianapolis – Madison

Prepared for:

Mr. Paul Mleziva
Facilities Manager of Maintenance

Green Bay Area Public School District
200 South Broadway
Green Bay, WI 54303

Prepared by:

Specialty Engineering Group, LLC
122 E. Olin Avenue, Suite 190
Madison, WI 53713
C: (920) 205-3571
www.str-seg.com

STR-SEG Project # 16006

Issued for bid/construction:

November 20, 2026

This page intentionally left blank

STR-SEG

DOCUMENT 00 01 10
TABLE OF CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

A. 00 01 10 – Table of Contents
B. 00 01 15 – List of Drawing Sheets
C. 00 11 13 – Request for Bids
D. 00 21 13 – Instructions to Bidders
    1. INSERT – Bidder's Proof of Responsibility
    2. INSERT – Bidder's Statement of Fact
    3. INSERT – Form of Non-Collusive Affidavit
E. 00 31 00 – Available Project Information
F. 00 41 00 – Bid Form
G. 00 43 36 – Proposed Subcontractors Form
H. 00 50 00 – Contracting Forms and Supplements
I. 00 60 00 – Project Forms
    1. INSERT – ANSI/SPRI FX-1 Form
J. 00 73 00 – Supplementary Conditions

SPECIFICATIONS

2.01 DIVISION 01 -- GENERAL REQUIREMENTS

A. 01 10 00 – Summary of Work
B. 01 20 00 – Price and Payment Procedures
C. 01 30 00 – Administrative Requirements
D. 01 40 00 – Quality Requirements
E. 01 42 16 – Definitions
F. 01 50 00 – Temporary Facilities and Controls
G. 01 60 00 – Product Requirements
H. 01 70 00 – Execution and Closeout Requirements

2.02 DIVISION 06 – WOODS, PLASTICS, AND COMPOSITES

A. 06 10 53 – Miscellaneous Rough Carpentry

2.03 DIVISION 07 – THERMAL AND MOISTURE PROTECTION

A. 07 01 50.19 – Preparation for Re-Roofing
B. 07 53 23 – EPDM Single-Ply Roofing
C. 07 62 00 – Sheet Metal Flashing and Trim
D. 07 90 05 – Joint Sealers

END OF DOCUMENT

This page intentionally left blank

STR-SEG

DOCUMENT 00 01 15
LIST OF DRAWINGS
BOUND HEREIN

TITLE	SHEET NUMBER
COVER SHEET	
OVERALL ROOF PLAN	**A100**
DETAIL REFERENCE PLAN	**A101**
WIND UPLIFT PLAN	**A102**
ROOF DETAILS	
DRAIN FLASHING	**A500**
AREA DIVIDER FLASHING	**A501**
PARAPET FLASHING	**A502**
WALL FLASHING	**A503**
SCUPPER FLASHING	**A504**
ROOF EDGE FLASHING	**A505**
SCUPPER FLASHING	**A506**
NW CORNER FLASHING	**A507**
WALL FLASHING	**A508**
DRAIN FLASHING	**A509**
AREA DIVIDER FLASHING	**A510**
ROOF EDGE FLASHING	**A511**
SCUPPER FLASHING	**A512**
ROOF EDGE FLASHING	**A513**
TYPICAL CURB FLASHING	**A514**
TYPICAL PITCH PAN FLASHING	**A515**
TYPICAL SUPPORT FLASHING	**A516**
INSULATED WOOD CURB FLASHING	**A517**

END OF DOCUMENT

This page intentionally left blank

STR-SEG

DOCUMENT 00 11 13
REQUEST FOR BIDS

FROM:

1.01 OWNER (HEREINAFTER REFERRED TO AS OWNER):

A. Green Bay Area Public School District
B. Attn: Mr. Paul Mleziva, Facilities Manager of Maintenance
   1. Contact email: pwmleziva@gbaps.org
C. 200 South Broadway
D. Green Bay, WI 54303

1.02 AND ROOFING CONSULTANT (HEREINAFTER REFERRED TO AS CONSULTANT):

A. STR-SEG (Specialty Engineering Group, LLC)
B. Attn: Mr. Bruce Flater - Project Manager
   1. bflater@str-seg.com
C. 122 E. Olin Avenue, Suite 190
D. Madison, WI 53713

1.03 TO: POTENTIAL BIDDERS

A. Your firm is invited to submit an offer under seal, to Owner's address, as listed above, before 2:00pm local standard time on December 18, 2026, for a Roof Replacement Project at Martin Elementary School, which is located at 626 Pinehurst Avenue, Green Bay, Wisconsin.
B. A mandatory pre-bid tour has been scheduled for 9:00 a.m. on December 3, 2026 beginning at Nicolet Elementary, main entrance, located at 1309 Elm Street, Green Bay, WI. Other project locations will be toured following Nicolet. If not bidding all projects, contact Bruce Flater (920) 205-3571 to determine time of arrival at the location of bidding interest.
C. Representatives of Owner and Consultant will be in attendance.
D. Project Description:
   1. Roof replacement on Roof Areas 12 - 15. Remove and dispose of existing roof systems down to existing steel deck (Roof Areas 12 and 13) or existing asphalt membrane (Roof Areas 14 and 15), as indicated; provide polyisocyanurate insulation, fully adhered EPDM roof membrane, sheet metal flashings and related Work.
E. Bid Documents will be provided electronically from Consultant free of charge.
F. Refer to other bidding requirements described in *Document 00 21 13 - "Instructions to Bidders"* and *Document 00 31 00 - "Available Project Information"*.
G. Submit your offer on Bid Form provided. Bidders may supplement this form as appropriate.
H. Your offer will be required to be submitted under a condition of irrevocability for a period of 60-days after submission.
I. Simultaneously with the delivery of the signed Contract, Bidder shall be required to furnish a 100-percent Performance-Payment Bond.
J. Owner reserves the right to accept or reject any or all offers.

END OF DOCUMENT

REQUEST FOR BIDS

Bids will be received by:

Green Bay Area Public School District

For the Roof Replacement at Martin Elementary School until 2:00 p.m., December 18, 2026. Bids received after this time will not be accepted.

Bids shall be upon form provided by the owner. **Bids will be submitted electronically** within Bonfire, submission instructions are included at https://gbaps.bonfirehub.com

The complete form shall be without alterations, additions, or erasures. All bids shall be on a lump sum basis. The owner reserves the right to reject any or all bids and to waive any irregularities in the bids.

Electronic copies of the Project Manuals, Drawings and other Bidding documents may be obtained by e-mailing request to bflater@str-seg.com. Requests shall be made at least two (2) days prior to the pre-bid meeting date. No documents will be issued at the pre-bid meeting. Any future amendments, revisions, etc., will be posted to Bonfire for all Bidders of Record. All addenda must be acknowledged in the area provided (Reference Bid Form). Failure to do so may result in your response being rejected.

Each bidder shall accompany the Bid Form with bid security as described in the Instruction to Bidders. All contractors are to be licensed in the State of Wisconsin at the time of bidding.

No bid shall be received unless accompanied by a certified check or a bid bond equal to five (5%) percent of the bid, payable to Green Bay Area Public Schools as a guarantee that if the bid is accepted, the bidder will execute and file the proper contract and bond within 10 days from the date the lowest responsible Bidder's bid is accepted.

Project can be started on or after June 7, 2027 and must be completed by August 13, 2027.

A mandatory pre-bid tour has been scheduled for 9:00 a.m. on December 3, 2026 beginning at Nicolet Elementary, main entrance, located at 1309 Elm Street, Green Bay, WI. Other project locations will be toured following Nicolet. If not bidding all projects, contact Bruce Flater (920) 205-3571 to determine time of arrival at the location of bidding interest.

The District reserves the right to reject any and all bids or to accept any bid deemed in the best interests of Green Bay Area Public Schools and to waive any informalities in the bidding.

This page intentionally left blank

DOCUMENT 00 21 13
INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 DOCUMENT INCLUDES

A. Invitation.
   1. Bid Submission.
   2. Intent.
   3. Work Identified in the Contract Documents.
   4. Work by Owner.
   5. Contract Time.

B. Bid Documents and Contract Documents.
   1. Definitions.
   2. Contract Documents Identification.
   3. Availability.
   4. Examination.
   5. Inquiries/Addenda.
   6. Contract Form.
   7. Product/Assembly/System Substitutions.

C. Site Assessment.
   1. Site Examination.
   2. Pre-bid Conference.

D. Qualifications.
   1. Evidence of Qualifications.
   2. Subcontractors/Suppliers/Others.

E. Bid Submission.
   1. Submission Procedure.
   2. Bid Ineligibility.
   3. Withdrawal of Bids.

F. Bid Enclosures/Requirements.
   1. Security Deposit.
   2. Performance Assurance.
   3. Insurance.
   4. Bid Form Requirements.
   5. Allowances.
   6. Sales and Use Taxes.
   7. Bid Form Signature.
   8. Additional Bid Information.

G. Offer Acceptance/Rejection.
   1. Duration of Offer.
   2. Acceptance of Offer.

1.02 RELATED DOCUMENTS

A. Document 00 11 13 - Request for Bids.

B. Document 00 31 00 - Available Project Information.
C. Document 00 41 00 - Bid Form.
D. Document 00 43 36 - Proposed Subcontractors Form.
E. Document 00 73 00 - Supplementary Conditions.

INVITATION

2.01 BID SUBMISSION

A. Bids signed and under seal, executed and dated will be received at the office of the Owner before 2:00pm, local standard time on December 18, 2026.
B. Offers will be opened privately after the time for receipt of bids.
C. Amendments to the submitted offer will be permitted if received in writing prior to bid closing and if endorsed by the same party or parties who signed and sealed the offer.

2.02 INTENT

A. The intent of this bid request is to obtain an offer to perform Work to complete a Roof Replacement and related Work Project located at 626 Pinehurst Avenue, Green Bay, Wisconsin for a Stipulated Sum contract, in accordance with the Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

A. Work of this proposed Contract comprises roof replacement and repair and related Work, including general construction.

2.04 WORK BY OWNER

A. The following Work will be accomplished by Owner or will be let under separate contracts and will not be included under this Contract:
    1. Owner will perform required electrical, mechanical and/or plumbing disconnections and reconnections.

2.05 CONTRACT TIME

A. The bids shall be based on a tentative start date of June 7, 2027, and a Contract substantial completion date of August 13, 2027.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 DEFINITIONS

A. Bid Documents: Contract Documents supplemented with Request for Bids, Instructions to Bidders, Information Available to Bidders, Bid Form, Supplements to Bid Forms and Appendices identified.
B. Contract Documents: Defined in Divisions 1, 6 and 7, and the Contract Drawings, including issued Addenda.
C. Bid, Offer, or Bidding: Act of submitting an offer under seal.
D. Bid Amount: Monetary sum identified by the Bidder in the Bid Form.

3.02 CONTRACT DOCUMENTS IDENTIFICATION

A. The Contract Documents are identified as Project Number 16006, as prepared by STR-SEG (Specialty Engineering Group, LLC), Consultant, who is located at 122 E. Olin Avenue, Suite 190, Madison, WI 53713, and contents as listed in the Table of Contents and List of Drawings.

3.03 AVAILABILITY

A. Bid documents will be provided electronically through Bonfire at https://gbaps.bonfirehub.com.
B. Bidders shall be responsible for providing copies of the Bid Documents to any subcontractors.
C. Bid Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes or projects.

3.04 EXAMINATION

A. Upon receipt of Bid Documents verify that documents are complete. Notify Consultant should documents be incomplete.

B. Immediately notify Consultant upon finding discrepancies or omissions in Bid Documents.

3.05 INQUIRIES/ADDENDA

A. Questions or requests for clarification by bidders must be submitted in writing not less than 5-days before date set for receipt of bids.

1. Direct questions to Bruce Flater, by email: bflater@str-seg.com.
2. Verbal answers are not binding on any party.

B. If a change to the specifications or Contract Drawings is deemed necessary, Consultant will issue an Addendum, a copy of which will be forwarded to Bidders of Record.

C. Addenda become part of Contract Documents. Include resultant costs in bid Amount.

3.06 CONTRACT FORM

A. A copy of the contract into which successful bidder will be required to enter is AIA A101. If Contractors are unaware of the conditions of the Contract they are requested to direct any questions to Consultant, by e-mail: support@str-seg.com.

3.07 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

A. Where Bid Documents stipulate a particular product, substitutions, if allowed by the technical sections, will be considered up to 5-days before receipt of bids.

1. The submission shall provide sufficient information to determine acceptability of such products.
2. Provide complete information on required revisions to other work to accommodate each proposed substitution.

B. When a request to substitute a product is made, Consultant may approve the substitution; if acceptable, Consultant will issue an Addendum to known bidders.

C. In submission of substitutions to products specified, bidders shall include in their bid all changes required in Work and changes to Contract Time and Contract Sum to accommodate such substitutions.

D. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in Work necessitated by use of substitutions shall not be considered.

E. The submission shall provide sufficient information to determine acceptability of such products.

F. Provide products as specified unless substitutions are submitted in this manner and accepted.

G. Provide complete information on required revisions to other Work to accommodate each proposed substitution.

H. See *Section 01 60 00 - "Product Requirements"* for additional requirements.

SITE ASSESSMENT

4.01 SITE EXAMINATION

A. Examine Project site before submitting a bid.

B. Bidders shall be responsible for examining Project site to obtain essential knowledge of existing conditions for comparison with Contract Documents provided.

C. Bidder shall be solely responsible for verification of existing field measurements and conditions; no additional cost will be approved for conditions that could reasonably be determined prior to bidding.

4.02 PREBID CONFERENCE

A. A mandatory pre-bid tour has been scheduled for 9:00 a.m. on December 3, 2026 beginning at Nicolet Elementary, main entrance, located at 1309 Elm Street, Green Bay, WI. Other project locations will be toured following Nicolet. If not bidding all projects, contact Bruce Flater (920) 205-3571 to determine time of arrival at the location of bidding interest.Representatives of Owner and Consultant will be in attendance.

B. Information relevant to Bid Documents will be recorded in an Addendum, issued to Bidders of Record.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

A. To demonstrate qualification for performing Work of this Contract, bidders may be requested to submit written evidence of financial position and license to perform work in the State of Wisconsin.

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

A. Owner reserves the right to reject a proposed subcontractor or supplier for reasonable cause.

1. If a reasonable and substantial objection exists, and Owner refuses in writing to accept such person or organization, Bidder may, at their option, withdraw their Bid without forfeiture of Bid Security, or may submit an acceptable substitute (along with any corresponding adjustment to their Bid price).

B. Bidder shall provide a list of all subcontractors intended to be utilized in the execution of the contract.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.

B. Submit bids to party listed on the Bid Form.

6.02 BID INELIGIBILITY

A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of Owner, be declared unacceptable.

B. Bid Forms, Appendices and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.

C. Bids are by invitation, only from selected bidders. Bids from unsolicited bidders may be returned.

6.03 WITHDRAWAL OF BIDS

A. Bids may be withdrawn, by written request received from Bidder or an authorized representative of Bidder, prior to the time fixed for opening of bids, without prejudice to the right of Bidder to file a new bid. Withdrawn bids will be returned unopened.

B. Negligence on the part of bidder in preparing bids confers no right for withdrawal of bid after it has been opened.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

A. A Bid Bond of 5 percent of Bid Amount.

7.02 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a 100 percent Performance and Payment bond. Include the cost of performance assurance bonds in Bid Amount and identify the cost when requested.

7.03 INSURANCE

A. Provide an executed "Undertaking of Insurance" on a standard form provided by the insurance company stating their intention to provide insurance to the bidder in accordance with the insurance requirements of the Contract Documents.

7.04 BID FORM REQUIREMENTS

A. Fully complete requested information in Bid Form and Appendices.

7.05 ALLOWANCES

A. No Allowances are included with this Project.

7.06 SALES AND USE TAXES

A. Owner, as a non-profit or local government in the State of Wisconsin, is exempt under Wis. Stats s 77.54 from payment of Wisconsin sales or use taxes. Owner's tax-exempt number will be provided to successful bidder upon Contract award.

7.07 BID FORM SIGNATURE

A. Bid Form shall be signed by bidder, as follows:

1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If bid is signed by officials other than the president and secretary of the company, the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, also must be submitted with Bid Form in bid envelope.
4. Joint Venture: Each party of the joint venture shall execute Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a partnership.

7.08 ADDITIONAL BID INFORMATION

A. Submit, concurrent with bid submission the supplements as listed on Bid Form.

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

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

8.02 ACCEPTANCE OF OFFER

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

END OF DOCUMENT

BIDDER'S PROOF OF RESPONSIBILITY

All bidders on contracts in excess of $10,000 shall provide proof of responsibility in accordance with Chapter 474 of the Laws of 1957, State of Wisconsin

Project Description _____

Due on or before _____

Green Bay Area Public Schools
Facilities & Related Services Department
200 S. Broadway, P. O. Box 23387
Green Bay, WI 54305

NOTE

The contents of this questionnaire shall be confidential for the exclusive use of the contracting agency and shall not be made public except by written approval of the prospective bidder.

BIDDERS STATEMENT OF FACT

BOARD OF EDUCATION
GREEN BAY AREA PUBLIC SCHOOL DISTRICT
GREEN BAY, WISCONSIN

_____
(Contractor's Name)

_____
(Street Address)

_____
(City and State)

Submit this Form via Bonfire in conjunction with other bidding documents. The contents of this Statement shall be confidential and shall not be disclosed except on written order of the person or persons furnishing same. The Owner's decision as to Contractor's financial ability, equipment, and experience as to properly perform the Contract shall be final.

1. Are you a (Corporation) (Partnership) (Sole Trade) ? _____

2. Current Assets and Liabilities as to latest Balance Sheet date?

   A. Date of Balance Sheet _____

   B. Assets _____

   C. Liabilities _____

   D. Will a copy of Firm's latest balance sheet be made available upon request by the awarding authority? Yes _____ No _____

3. Are any of your assets assigned? _____

4. What was the average number of personnel in your organization during the last 12 months?

   Office _____ Skilled _____ Unskilled _____

5. What was your bond limitation? _____

6. What Bonding Company usually furnishes your bond? _____

7. State type and amount of equipment owned by you which is suitable for this project.

   _____

   _____

   _____

   _____

8. If you do not own any equipment necessary to this project, state your method and means of acquiring use of same.

_____

_____

9. What comparable contracts have you been awarded in the last three years?

Name	Owner	Amount	Architect

10. Have you ever defaulted on a contract? _____

11. Additional information you feel is pertinent. _____

_____

_____

12. Have you or your organization ever been declared bankrupt? _____

13. Has your firm or any individual thereof been convicted of violating Section 133.01 of the Wisconsin State Statutes (1973)? Yes _____ No _____

14. If answer to No. 13 is yes, what was the date of conviction.

_____

I have read the above and foregoing statements made on behalf of

_____

and hereby state under oath that such statements are true and correct.

Dated at _____
(City) (State)

Subscribed and sworn to before me
this _____day _____, 20 _____

_____

Notary Public _____

County: State:
My Commission Expires _____

BIDDERS STATEMENT OF FACT

The _____

approved the above Contractor according to statutes as being eligible to bid on

_____

_____

Dated _____

This Statement shall be filed at the Office of the Owner in conjunction with other bid documents.

Revised 3/12/02

FORM OF NON-COLLUSIVE AFFIDAVIT

AFFIDAVIT

(PRIME BIDDER)

State of _____

County of _____

_____, being first duly sworn, deposes and says:

That he is: (a partner, officer of the firm of. etc) the party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or sham; that the bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Green Bay Area Public School District or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

Signature of:
Bidder, if the bidder is an
Individual:_____

Partner, if the bidder is a
Partnership:_____

Officer, if the bidder is a
Corporation:_____

Subscribed and sworn to before me

This _____ Day of _____ 2022

_____

My commission expires_____, 20____

****

This page intentionally left blank

DOCUMENT 00 31 00
AVAILABLE PROJECT INFORMATION

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

A. Certain information relating to existing surface and subsurface conditions and structures is hereby available to Bidders, but will not be part of Contract Documents, as follows:

B. Existing roof construction Roof Areas 12 and 13 (approximately 430 square feet combined):
   1. Asphalt built-up, gravel-surfaced roof membrane;
   2. 1/2-inch wood fiber cover board, mopped in asphalt;
   3. Tapered (approximately 1/8-inch per foot) polyisocyanurate insulation;
   4. Structurally flat steel deck.

C. Existing roof construction Roof Areas 14 and 15 (approximately 1,950 square feet combined):
   1. Asphalt built-up, gravel-surfaced roof membrane;
   2. 1/2-inch wood fiber cover board, mopped in asphalt;
   3. Tapered (approximately 1/4-inch per foot) polyisocyanurate insulation;
   4. Asphalt membrane;
   5. Structurally flat steel deck.

D. Verify existing roof conditions prior to submitting a bid.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF DOCUMENT

This page intentionally left blank

STR-SEG

DOCUMENT 00 41 00
BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

A. Green Bay Area Public School District
B. Attn: Mr. Paul Mleziva, Facilities Manager of Maintenance
C. 200 South Broadway
D. Green Bay, WI 54303

1.02 FOR:

A. Martin Elementary School - Roof Replacement 2027
B. STR-SEG (Specialty Engineering Group, LLC)

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: _____
3. Phone: _____
4. E-mail Address: _____

1.05 OFFERS

A. **BASE BID:** Having examined the Place of Work and matters referred to in the Instructions to Bidders and the Contract Documents prepared by STR-SEG for the above-mentioned Project, we, the undersigned, hereby offer to enter into a Contract to perform 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 in Document 00 21 13 - “Instructions to Bidders”.

D. All applicable federal taxes are included, and State of Wisconsin taxes are excluded in the Bid Sum.

1.06 ACCEPTANCE

A. These offers shall be open to acceptance and are irrevocable for 60-days from Bid closing date.

B. If this Bid is accepted by Owner within the time period stated above, we will:

1. Execute the Agreement within 7-days of receipt acceptance of this Bid.

1.07 CONTRACT TIME

A. Completion Date: Contractor to provide schedule with Bid. Assuming a start on or after June 7, 2027, we propose the following schedule, exclusive of weather.

B. If this Bid is accepted, we will substantially complete Work no later than August 13, 2027.

1.08 CHANGES TO THE WORK

A. When Owner and Consultant establish that the method of valuation for Changes in Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:

1. _____ percent overhead and profit on the net cost of our own Work;
2. _____ percent on the cost of work done by any Subcontractor.

B. When Consultant establishes that the method of valuation of changes in Work will be an hourly fee in accordance with General Conditions, our hourly fee will be:

1. _____ $ per man-hour.
2. _____ percent mark-up on materials.

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 SUPPLEMENTS

A. The following Supplements are attached to this Bid Form and are considered an integral part of this Bid Form:

1. The necessary Bid Bond, as specified in *Document 00 21 13 - "Instructions to Bidders".*
2. *Document 00 43 36 - "Proposed Subcontractors Form":* Include the names of subcontractors and the portions of Work they will perform.
3. A copy of the Bidder's current certificate of insurance.
4. Current rate sheet covering all applicable personnel and equipment, including material purchase price mark-up.
5. Proposed Project Schedule.

1.11 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. (Signature) (Corporate Seal)

G. _____

H. (Printed Name and Title)

I. _____

J. (Signature) (Printed Name and Title)

1.12 IF BID IS A JOINT VENTURE OR PARTNERSHIP, ADD ADDITIONAL FORMS OF EXECUTION FOR EACH MEMBER OF THE JOINT VENTURE IN THE APPROPRIATE FORM OR FORMS AS ABOVE.

END OF DOCUMENT

This page intentionally left blank

STR-SEG

DOCUMENT 00 43 36

PROPOSED SUBCONTRACTORS FORM

PARTICULARS

1.01 Herewith is the List of Subcontractors referenced in bid submitted by:

1.02 (BIDDER) _____

1.03 TO: (OWNER) GREEN BAY AREA PUBLIC SCHOOL DISTRICT

A. The following Work will be performed (or provided) by Subcontractors and coordinated by us:

LIST OF SUBCONTRACTORS

2.01 WORK SUBJECT _____

A. SUBCONTRACTOR NAME _____

B. ADDRESS _____

C. PHONE-FAX-EMAIL _____

2.02 WORK SUBJECT _____

A. SUBCONTRACTOR NAME _____

B. ADDRESS _____

C. PHONE-FAX-EMAIL _____

2.03 WORK SUBJECT _____

A. SUBCONTRACTOR NAME _____

B. ADDRESS _____

C. PHONE-FAX-EMAIL _____

2.04 WORK SUBJECT _____

A. SUBCONTRACTOR NAME _____

B. ADDRESS _____

C. PHONE-FAX-EMAIL _____

ACCEPTANCE OF SUBCONTRACTORS

3.01 If Owner has a reasonable and substantial objection to any Subcontractor on this list, and refuses, in writing, to accept such person or organization, bidder may, at their option, withdraw their bid, or submit an acceptable substitute, with any adjustment to their bid price occasioned by such substitution, for Owner's consideration.

END OF DOCUMENT

This page intentionally left blank

STR-SEG

DOCUMENT 00 50 00
CONTRACTING FORMS AND SUPPLEMENTS

PART 1 - GENERAL

1.01 REFERENCES

A. AIA, The American Institute of Architects.

1. In an effort to reduce the number of printable pages in the bid package, these documents are included by reference only, in their entirety.
2. If your firm or insurance company requires a copy of these documents for review, please contact Consultant via email at support@str-seg.com.

B. MRCA, Midwest Roofing Contractors Association, Inc.

1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT

A. Agreement form is AIA A101.

B. General Conditions are AIA A201.

C. Refer to *Document 00 73 00 - "Supplementary Conditions"* for amendments to General Conditions.

1.03 FORMS

A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the Contract Documents.

1. Change Order Form: AIA G701.
2. Application for Payment Form: AIA G702 and G703.

1.04 REFERENCE STANDARDS

A. AIA A101 - Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum; 2017.

B. AIA A201 - General Conditions of the Contract for Construction; 2017.

C. AIA G701 - Change Order; 2017.

D. AIA G702 - Application and Certificate for Payment; 1992.

E. AIA G703 - Continuation Sheet; 1992.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

This page intentionally left blank

STR-SEG

DOCUMENT 00 60 00
PROJECT FORMS

PART 1 - GENERAL

1.01 PROJECT DESCRIPTION

A. 16006 MARTIN ELEMENTARY SCHOOL - ROOF REPLACEMENT 2027

1.02 ATTACHED AFTER THIS SECTION

A. ANSI/SPRI FX-1 - Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners; 2021.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF DOCUMENT

ANSI/SPRI FX-1 2021

Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners

Approved November 1, 2021

Copyright by SPRI 2021

465 Waverley Oaks Road
Suite 421
Waltham, MA 02452

www.spri.org.

All Rights Reserved

Disclaimer
This standard is for use by architects, engineers, roofing contractors and owners of low slope roofing systems. SPRI, its members and employees do not warrant that this standard is proper and applicable under all conditions.

Table of Contents

Purpose 3

Definitions 3

Equipment 3

Procedure 3

Personnel 4

Cautions 4

Precision & Bias 4

Reference 4

Commentary 5

Form A Pullout Test Report 6

Form B Pullout Test Report 7

1.0 Purpose

This standard provides procedures used in the field to test the pullout resistance of all types of roofing fasteners. The data developed from these tests provide the roof system manufacturer, design professional, and other practitioners with pullout resistance values for the specific fastener installed into the load resisting material of the deck. See Commentary C1.0.

2.0 Definitions

2.1 Embedment

The length of a fastener that is within the deck after installation (applicable to structural and lightweight concretes, gypsum, cementious wood fiber, and wood plank).

2.2 Protrusion

The length of a fastener that extends beyond the underside of the deck after installation (applicable to steel, plywood, OSB, and fiberglass decks).

3.0 Equipment

3.1 Use a pullout tester with either a hydraulic or electronic load cell. The gauge shall display values in lbf (kN). Conversion formulas are provided on Form B. During testing, the values obtained shall fall within the working range of the gauge.

3.2 The load gauge shall have a dated calibration certificate showing the calibrated values for the full range of the load gauge. The gauge shall be accurate to +/- 5% of the reading. Calibration shall be performed to a standard that is traceable to a nationally recognized source. The load gauge shall be calibrated every 12 months or sooner if it is suspected that the gauge is out of calibration.

4.0 Procedure

4.1 Remove any roofing material in place above the deck (i.e., roofing membrane, existing insulation) before the test is performed. See Commentary C4.1.

4.2 The fastener shall be installed using the same method and tools as will be used during actual construction (i.e., depth of installation, pre-drilled hole diameter, installation tools).

4.3 The fastener shall be pulled out perpendicular to the deck. The load shall be applied at 2.0 ± 1.0 in/min (50 +/- 25 mm/min). See Commentary C4.3.

4.4 Record the results of all pullout tests on Form B.

4.5 Perform a minimum of 10 pullouts for up to 50,000 ft^2 (4,650 m^2), and 5 additional pullouts for each additional 50,000 ft^2 (4,650 m^2) or portion thereof on each project. Perform the pullouts in various areas of the roof, including corners, perimeter, and field, to provide a representative sampling of roof area. 50% of the tests shall be performed in the corners and perimeter areas.

When conditions, such as those identified in Commentary C4.5, exist on the roof the individual performing the pullout test shall inform the designer of record or the building owner's representative of such conditions.

4.5.1 Deviation from the prescribed minimum number of pullout tests shall be allowed when agreed upon by all involved parties. Deviations shall be recorded using Form B or comparable document. See Commentary C4.5.1.

4.6 For a single building each roof section with a different elevation, different deck type, or any variation in roof system assembly shall be considered to be a different test area and shall be tested separately as specified in Section 4.5.

4.7 Prepare a roof plan on Form B to identify the location of each pullout. The roof plan shall be marked with the corresponding test number of each pullout test as recorded on Form B. The roof plan need not be to scale. See Commentary 4.7.

4.8 Complete separate Forms A and B for each roof section. Record all pullouts.

5.0 Personnel (See Commentary 5.0)

5.1 The test shall be performed by an individual trained in the proper use of the pull test equipment. A representative of the building owner shall be present to witness the test and verify the values. A roofing professional shall be present to repair the roof in areas where the tests were performed.

6.0 Cautions (See Commentary 6.0)

6.1 It is not recommended that fastener pullout tests be performed on decks than can be affected by free water when the deck is 32° F (0° C) or below (i.e., gypsum, cementitious wood fiber, lightweight structural concrete, and lightweight insulating concrete). The pullout values may be elevated and therefore unreliable.

7.0 Precision & Bias

7.1 Precision: The precision of this test method indicates the probable error of a single determination is +/- 5% of the true value.

7.2 Since there is no accepted reference material suitable for determining bias for this test method, bias has not been determined.

8.0 Reference

W.J. Rossiter and T.J. Wallace, eds., “Roofing Research and Standards Development: 5th Volume”, ASTM STP 1451, ASTM International, West Conshohocken PA, 2003

B.A. Baskaran, M. Sexton, W. Lei, and S. Molleti, “Pullout Resistance of Roofing Fasteners Using Different Methods”, ASTM STP 1451, ASTM International, West Conshohocken PA, 2003

Commentary

This Commentary is a non-mandatory part of this standard, consisting of explanatory and supplementary material designed to assist users in complying with the requirements. It is intended to create an understanding of the requirements through brief explanations of the reasoning employed in arriving at these requirements or to provide other clarifications. It therefore has not been processed in accordance with ANSI Essential Requirements, and may contain material that has not been subjected to public review or a consensus process. Thus it does not contain requirements necessary for conformance with the standard field test procedure.

The sections of the Commentary are numbered to correspond to the sections of the standard to which they refer. Since it is not necessary to have supplementary material for every section in the standard itself, there are gaps in the numbering in the Commentary.

C1.0 The pullout resistance of any roofing fastener that the test equipment can latch onto can be evaluated using this test procedure.

C4.1 Use of a core cutter has been found to be an effective method of removing materials above the deck before performing the pull tests.

C4.3 Rates of withdrawal can be pre-set on motorized pullout testers. On testers where the load is applied via a threaded rod, an acceptable method to determine the rate of withdrawal is to calculate the number of seconds per 360° revolution.

Seconds per Revolution = 60 ÷ (number of threads per inch x desired number of inches per minute)

C4.5 On certain projects, it may be necessary to perform additional pullout tests beyond the minimum number required in Section 4.5. This includes, but is not limited to, occasions when:

- pullout tests that result in a coefficient of variation that exceeds 20%;
- tests are performed in decks that are inherently less consistent such as lightweight insulating concrete, cementitious wood fiber and gypsum;
- there exists multiple damaged or questionable areas;
- water or other chemicals may have infiltrated the roof systems;
- local building codes require additional tests; and/or
- roofs with high wind loading should have pulls taken in all corners.

Record the test results and the reasons for the additional tests in the Comment Section on Form B.

If there are anomalies in pull values, deck at the point of the anomaly should inspected to determine cause. An anomaly is defined as one or more pullout values that fall exceedingly high or low from the population.

C4.5.1 Circumstances may arise where the minimum prescribed pulls may not be possible or necessary. These may include but aren't limited to: inclement weather, equipment malfunction, or interested parties not requiring the minimum number of tests. For these circumstances, a deviation can be signed-off by said parties (Form B or comparable document).

C4.7 Additional data on the pullout form (Form A) exists for informational purposes for the roof designer. These areas have been marked "Optional Information", and are to be completed at the discretion of the personnel completing the Pullout Test Report.

C5.0 Fasteners tested should be installed by individuals trained in the proper installation techniques for the specific fasteners being tested.

As with all work performed in a rooftop environment, personnel should be familiar with all OSHA, company, and project specific safety requirements. This includes, but is not limited to, safe access, fall protection, exposure to electrical hazards and environmental hazards including weather.

C6.0 The temperature of the deck may be taken to determine if it is subject to freezing conditions.

Form A Pullout Test Report

(Refer to the **Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners** for full documentation)

Job name:

Location:

Test date: / /	**Ambient temperature:**
Roof area: sq. ft	**Tester mfg:**
Max. cap. of tester:	**Select one:** ☐ lbf ☐ kN
Date of last calibration: / /	**Number of pulls recorded on Form B:**
Fastener tested:	**Fastener manufacturer:**
Fastener tested:	**Fastener manufacturer:**
Fastener tested:	**Fastener manufacturer:**

Test performed by:

Witnessed by:	**Test cut areas repaired by:**

Project type (select one): ☐ New construction ☐ Tear off ☐ Retrofit

Deck type (select one):

☐ Steel	Gauge:	
☐ Structural concrete	Thickness:	Select one: ☐ Poured in place ☐ Precast
☐ Lightweight concrete	Thickness:	
☐ Insulating concrete	Thickness:	
☐ Cementious wood fiber	Thickness:	
☐ Gypsum	Thickness:	Select one: ☐ Poured in place ☐ Precast
☐ Wood	Thickness:	Select one: ☐ OSB ☐ Plywood ☐ Plank
☐ Fiberglass	Thickness:	
☐ Other:_____	Thickness:	

Embedment or protrusion:

Drill bit diameter, where applicable:

Optional Information

Test time:	**Building height:**	**Thickness of existing roof assembly:**

New system manufacturer:

Roof cover type (select one):

☐ Mechanically attached single-ply	☐ Modified bitumen
☐ Ballasted single-ply	☐ Built-up roofing
☐ Adhered single-ply	☐ Other: _____

New insulation:
Type: Thickness:

Form B Pullout Test Report

Report all test results and units of measure.

Conversion formulas

lbf × .00448222 = kN × 224.8089431 = lbf

1.	6.	11.	16.
2.	7.	12.	17.
3.	8.	13.	18.
4.	9.	14.	19.
5.	10.	15.	20.

Pullout Results of Additional Tests Performed (See C4.5.)

21.	26.	31.	36.
22.	27.	32.	37.
23.	28.	33.	38.
24.	29.	34.	39.
25.	30.	35.	40.

Deviation from standard procedure authorized by:

Reason for deviation:

Roof plan not to scale. Identify where the pullouts were performed with corresponding test number.

Comments

Disclaimer: Manufacturer's installation requirements shall be followed when using any of the tested fasteners. Neither the technician performing the pullout tests not his/her company is responsible for the waterproofing integrity of the repairs. This test report does not certify the structural integrity of the roof deck.

This page intentionally left blank

STR-SEG

DOCUMENT 00 73 00
SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

1.01 SUMMARY

A. These Supplementary Conditions amend and supplement the General Conditions and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

1.02 RELATED SECTIONS

A. Document 00 50 00 - Contracting Forms and Supplements.

B. Section 01 42 16 - Definitions.

1.03 MODIFICATIONS TO GENERAL CONDITIONS

A. The Supplementary General Conditions applicable to this contract (2 pages) are attached and follow this page.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF DOCUMENT

This page intentionally left blank

STR-SEG

SUPPLEMENTARY GENERAL CONDITIONS TO AIA A201-2017

The following supplements modify, change, delete from or add to "General Conditions of the Contract for Construction", AIA Document A201-2017. Where an Article, Paragraph, Subparagraph or Clause of General Conditions is modified or deleted by Supplementary Conditions, unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

Article 1 – General Provisions

1.7 Delete the second sentence in its entirety.

1.8 Delete entire paragraph.

Article 4 – Architect

4 Change the name of article to "CONSULTANT". "Architect" or "Engineer" when used in Contract Documents shall be substituted with "Consultant", regardless of modifiers or possessive use, unless specifically indicated to be employed by the Contractor.

4.1.1 Delete subparagraph and substitute as follows: "Consultant" is the Roof Consulting firm identified in the Bidding Documents and Agreement form for project, or the authorized representative thereof.

Article 9 – Payments and Completion

9.7 Delete entire paragraph.

9.8.1 Delete entire subparagraph and substitute as follows: "Substantial Completion is the stage in the progress of the Work when the Project is complete and ready for Final Review, including sheet metal work."

9.8.2 Delete entire subparagraph and substitute as follows: "Contractor shall notify the Consultant, in writing, that the Project is Substantially Complete and ready for Final Review."

9.8.3 Delete entire subparagraph.

9.8.4 Delete entire subparagraph.

9.8.5 Delete entire subparagraph.

9.9 **Delete entire paragraph and subparagraphs.**

Article 11 – Insurance and Bonds

11.1.1 Add, to the end of this paragraph, the following sentence and underlying subparagraphs:

"Specific lines of coverage and minimum limits of liability to be provided by Contractor shall include the following:

.1 Comprehensive General Liability

.a including:
Premises / Operations;
Underground, Explosion, Collapse
Products / Completed Operations
Contractual
Independent Contractors
Owner/Contractor Protective
Broad Form Property Damage
Personal Injury (Employment Exclusion deleted)

.b Combined single limits for bodily injury and property damage:
Each Occurrence: **$ 1,000,000**
General Aggregate: **$ 2,000,000**

.c Products and Completed Operations to be maintained for one year after final payment.

.2 Comprehensive Automobile Liability:

.a Including owned, hired, and non-owned vehicles; or, if there are no owned vehicles, Contractor may provide written certification of such and provide coverage limited to hired and non-owned vehicles.

.b Bodily injury and property damage combined single limits:
Each Occurrence: **$ 1,000,000**

.3 Workers Compensation and Employer's Liability, (without restriction as to whether covered by Workmen's Compensation law):

.a Workers Compensation: according to statute
.b Employer's Liability: **$ 500,000**

.4 Umbrella Excess Liability:

.a Each Occurrence: **$ 5,000,000**
.b General Aggregate: **$ 5,000,000"**

11.2.1 Delete entire paragraph and substitute as follows:" The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance."

11.2.2 Delete entire paragraph.

11.2.3 Delete entire paragraph.

11.3 Delete entire section and underlying paragraphs.

11.4 Delete entire section and underlying paragraph.

11.5 Delete entire section and underlying paragraphs.

Article 15 – Claims and Disputes

15.1.2 Delete the last phrase of the first sentence, end sentence with the words "applicable law".

- END -

STR-SEG

SECTION 01 10 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 PROJECT DESCRIPTION

A. Project Name: Martin Elementary School - Roof Replacement 2027.

B. Owner's Name: Green Bay Area Public School District.

C. Consultant's Name: STR-SEG (Specialty Engineering Group, LLC).

D. In general, the Project **Base Bid** consists of:

1. Roof Areas 12 and 13:
    a. Removal and legal disposal of existing roof systems and related sheet metal flashings down to existing structural steel deck;
    b. Providing base layer of polyisocyanurate insulation, mechanically fastened;
    c. Providing tapered polyisocyanurate insulation, adhered;
    d. Providing 60-mil fully adhered EPDM roof membrane system;
    e. Providing wood blocking and plywood, as indicated;
    f. Providing finish aluminum sheet metal flashings and related Work.
2. Roof Areas 14 and 15,
    a. Removal and legal disposal of existing roof systems and related sheet metal flashings at down to existing asphalt membrane over structural steel deck;
    b. Removal and storage of, and re-installation of sheet metal flange after roof construction.
    c. Providing base layer of polyisocyanurate insulation, mechanically fastened;
    d. Providing tapered polyisocyanurate insulation, adhered;
    e. Providing 60-mil fully adhered EPDM roof membrane system;
    f. Providing wood blocking and plywood, as indicated;
    g. Providing finish aluminum sheet metal flashings and related Work.

1.02 CONTRACT DESCRIPTION

A. Contract Type: One single prime contract based on a Stipulated Price, as described in the Contract Documents, at the discretion of Owner.

1.03 OWNER OCCUPANCY

A. Owner intends to continue to occupy the existing building during entire construction period.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

C. Schedule Work to accommodate Owner’s access and occupancy.

1.04 CONTRACTOR USE OF SITE AND PREMISES

A. Arrange use of site and premises to allow:

1. Owner occupancy.
2. Work by Others.
3. Work by Owner.
4. Use of site and premises by the public, where applicable.

B. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep exits required by code open and unobstructed during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

C. No smoking allowed on premises.

D. Provide access to project area by exterior means.

E. Provide interior spotters and barricades during any penetration removal.
   1. Provide interior protection during any penetration removal.

F. Staging of materials will be permitted only in area(s) where Work is being constructed.
   1. Any equipment or dumpsters present must be clearly protected by cones or barrels.

G. Time Restrictions and Schedule:
   1. Work is intended to commence on or after June 7, 2027, and is intended to be Substantially Complete no later than August 13, 2027, or as otherwise accepted by Owner per Contractor's submitted schedule.
   2. Work may be performed Monday through Friday from 7:00 a.m. to watertight, which shall be considered regular work hours.

H. Site drives and parking areas shall remain open at all times, providing the necessary traffic control; refer to *Section 01 50 00 - "Temporary Facilities and Controls".*

1.05 WORK BY OWNER

A. Perform any required mechanical, electrical and/or plumbing disconnect and connections.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Schedule of Values.

B. Applications for Progress Payments.

C. Modification Procedures.

D. Application for Final Payment.

1.02 SCHEDULE OF VALUES

A. Submit AIA form G703 - Continuation Sheet.

1. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Consultant for approval.
2. Forms filled out by hand will not be accepted.

B. Revise schedule to list approved Change Orders, with each Application for Payment.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

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

B. Submit AIA form G702 - Application and Certificate for Payment.

1. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Consultant for approval.
2. A retainage equaling a contractually stipulated percentage of the requested amount shall be withheld on each progress payment.
3. Forms filled out by hand will not be accepted.

C. 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. Percentage of Completion.
9. Balance to Finish.
10. Retainage.

D. Submit updated progress schedule.

E. Submit Contractor's invoice.

F. Execute certification by signature of authorized officer.

G. Submit electronic copies of each Application for Payment.

H. Consultant will certify Applications for Payments as a representation that Work has progressed to the point indicated and, that to the best of their knowledge, information and belief, the quality of Work is in accordance with the requirements of Contract Documents.

1.04 MODIFICATION PROCEDURES

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

B. For other required changes, Consultant 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 Price or Contract Time.
2. Promptly execute the change.

C. For changes for which advance pricing is desired, Consultant will issue a document that includes a detailed description of a proposed change with supplementary or revised Contract Drawings and specifications.

1. Prepare and submit a fixed price quotation within 5-days.
2. Proposed cost shall include furnishing labor, materials and equipment necessary to perform Work as described, as well as applicable costs, expenses, profit, overhead, applicable taxes and fees.
3. Indicate any 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.

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

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

1. For time and material (T&M) work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Support each claim for additional costs with additional information:
   a. Origin and date of claim.
   b. Dates and times work was performed, and by whom.
   c. Time records and wage rates paid.
   d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

F. Execution of Change Orders: Submit Changes on AIA G701 Change Order form for signatures of parties as provided in the Conditions of the Contract.

G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust Contract Price.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, except identifying total adjusted Contract Price, previous payments, inclusion of any/all Change Orders, and with zero sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:

1. Closeout procedures specified in *Section 01 70 00 - "Execution and Closeout Requirements"*.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

STR-SEG

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Project Coordination.
B. Preconstruction Meeting.
C. Progress Meetings.
D. Construction Progress Schedule.
E. Progress Photos.
F. Submittals for Review.
G. Submittals for Information.
H. Submittals for Project Close-out.
I. Submittal Procedures.

1.02 RELATED REQUIREMENTS

A. Document 00 50 00 - Contracting Forms and Supplements.
B. Document 00 73 00 - Supplementary Conditions.
C. Section 01 20 00 - Price and Payment Procedures: Submission of schedule of values.
D. Section 01 70 00 - Execution and Closeout Requirements: Project record documents.

1.03 PROJECT COORDINATION

A. Cooperate with Owner’s Representative(s) in allocation of mobilization areas of site; for access, traffic, and parking facilities.
B. During construction, coordinate use, security and access of site and facilities through Project Coordinator.
C. Comply with Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
D. Comply with instructions of Project Coordinator for use of temporary utilities and construction facilities.
E. Coordinate field engineering and layout work under instructions of Project Coordinator.
F. Make the following types of submittals to Consultant:
    1. Requests for interpretation.
    2. Requests for substitution.
    3. Shop drawings, product data, and samples.
    4. Test and inspection reports.
    5. Manufacturer's instructions and field reports.
    6. Applications for payment and change order requests.
    7. Progress schedules.
    8. Coordination drawings.
    9. Closeout submittals.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PRECONSTRUCTION MEETING

A. Consultant will schedule a meeting after execution of contract.

B. Attendance Required:
   1. Owner or Designated Representative.
   2. Consultant.
   3. Contractor.

C. Agenda:
   1. Verification of submission of Schedule of Values and progress schedule.
      a. Verification that (SDS) Safety Data Sheets for applicable products/materials are available on-site during construction.
   2. Designation of personnel representing the parties to Contract, including emergency contact information.
   3. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   4. Expectations of Owner and Consultant.
      a. Review of Project site conditions and requirements.
      b. Response to any questions relative to scope of Work.
   5. Use of premises by Owner and Contractor.
   6. Construction facilities and controls provided by Owner.
   7. Temporary utilities provided by Owner.

D. Contractor is encouraged to photograph or otherwise document existing conditions of adjacent construction and site improvements to remain, that might be construed as damage caused by Work performed under this contract.
   1. Deliver documentation of pre-existing conditions to Consultant and/or Owner prior to start of Work.

E. Consultant will record minutes and distribute copies within 10-days after meeting to participants, and other parties affected by decisions made.

3.02 PROGRESS MEETINGS

A. Consultant may conduct Progress meetings at regularly scheduled times convenient for all parties involved and will:
   1. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

B. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Consultant, as appropriate to agenda topics for each meeting.

C. Agenda:
   1. Review minutes of previous meetings.
   2. Review of Work progress.
   3. Field observations, problems, and decisions.
   4. Identification of problems that impede, or will impede, planned progress.
   5. Review of progress schedule, including corrective measures, if required to regain projected schedules.
   6. Effect of proposed changes, if any, on progress schedule and coordination.
   7. Planned progress during succeeding Work period.
   8. Maintenance of quality and Work standards.
   9. Other business relating to Work.

D. Consultant will record minutes and distribute copies within 10-days after meeting to participants, and other parties affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

A. Within 10-days after date of the Agreement, submit a proposed schedule defining planned operations for the performance of Work for review.

B. If preliminary schedule requires revision after review, submit revised schedule within 5-days.

C. Submit updated schedule with each Application for Payment.

3.04 SUBMITTALS FOR REVIEW

A. Submit the following information, and/or as specified in individual sections, for review.

1. Project contact list.
2. Product/material data.
3. Materials List and Descriptions on provided form, as appended in this section.
4. Tapered insulation layout drawings.
5. Shop drawings, as applicable.
6. Sheet metal color chart for selection.
7. Sealant color samples for selection.
8. Samples: Provide as required in individual sections or requested.
    a. Install samples on Project site; do not submit samples to Consultant.
    b. Samples will be reviewed only for aesthetic, color, and/or finish selection. Sample selections to be by Owner.

B. Submit to Consultant for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Contractor is responsible for verifying existing field measurements and conditions prior to completing submittals. Contractor's responsibility for errors and omissions is not relieved by Consultant’s review or acceptance of submittals.

3.05 SUBMITTALS FOR INFORMATION

A. Submit the following items for information:

1. Sample warranties and notifications.
2. Certificate of Insurance: Provide copy of certificate(s), with Owner as certificate holder. Consultant shall be named as an Additional Insured.
    a. Owner: ***Green Bay Area Public School District***
    b. Additional Insureds: ***Specialty Engineering Group, LLC.***
3. (SDS) Safety Data Sheets for products to be incorporated in Project.

B. Submit for Consultant's knowledge as Contract Administrator, or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

A. Refer to *Section 01 70 00 - “Execution and Closeout Requirements”.*

3.07 SUBMITTAL PROCEDURES

A. Transmit submittals electronically, to the following address:

bflater@str-seg.com.

B. Provide a sequentially-numbered transmittal form.

1. Identify Project Name and Number(s), Submittal Date, and Contractor’s information.
2. Identify pertinent drawing and detail number, and specification section number, as appropriate on each copy.
3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of Work and Contract Documents.

C. Schedule submittals to expedite the Project, and coordinate submission of related items.

D. Submit required items to Consultant prior to pre-construction meeting.

E. Clearly identify any variations from Contract Document requirements and reasons for same (acceptance of substitutions, negotiated changes with Owner, etc.). Identify any Product/Material or system limitations that may be detrimental to successful performance of completed Work.

F. Where applicable, if revised for resubmission, clearly and explicitly identify changes made since previous submission.

G. Consultant will distribute reviewed submittals as appropriate. Affected parties are instructed to promptly report any inability to comply with requirements.

H. Submittals not requested will not be recognized or processed.

END OF SECTION

STR-SEG

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Regulatory Requirements.
B. Submittals.
C. References and Standards.
D. Installers Quality Assurance.
E. Control of Installation.
F. Mock-ups.
G. Examination.
H. Tolerances.
I. Testing.
J. Manufacturer’s Field Services.
K. Defect Assessment.

1.02 RELATED REQUIREMENTS

A. Document 00 31 00 - Available Project Information: Existing roof construction.
B. Section 01 30 00 - Administrative Requirements: Submittal procedures.
C. Section 01 42 16 - Definitions.
D. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.03 REGULATORY REQUIREMENTS

A. Comply with applicable Federal, State and local codes and ordinances in force at Project site.
B. Apply, obtain and pay for required local and regional building permits and fees to legally execute Work of this Contract.

1.04 SUBMITTALS

A. Certificates: When specified in individual specification sections, submit certification by manufacturer and Contractor or installation/application subcontractor to Consultant, in quantities specified for Product Data.
    1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
B. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
C. Manufacturer's Field Reports: Submit reports for Consultant's benefit as Contract Administrator or for Owner.

1.05 REFERENCES AND STANDARDS

A. Keep a complete Project Manual, Contract Drawings (if not included in Project Manual), and any Addenda at Project site throughout the course of Project. In addition, copies of reviewed submittals and shop drawings, Change Orders and field modifications shall be kept available.
B. For products and workmanship specified by reference to a document or documents not included in Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
C. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

D. Obtain copies of standards where required by product specification sections.

E. Maintain copy at Project site during submittals, planning, and progress of specific Work, until Substantial Completion.

F. Should specified reference standards conflict with Contract Documents, request clarification from Consultant before proceeding.

G. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Consultant shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 INSTALLERS QUALITY ASSURANCE

A. Obtain complete data at the site and inspect surfaces that are to receive Work before proceeding in performing Work. Contractor shall be solely responsible for the accuracy of measurements and laying out of Work and shall make good any errors, defects due to faulty measurements taken, information obtained, layout, or failure to report discrepancies.

B. Notify Consultant in writing in case of discrepancies between existing work and Contract Drawings, and defects in such surfaces that are to receive Work. Consultant will evaluate the notice and direct what remedial action will be taken.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step, in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Consultant before proceeding.

D. Comply with specified standards as minimum quality for Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

B. Accepted mock-ups shall be a comparison standard for remaining Work.

C. Where mock-up has been accepted by Consultant and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work.

B. Verify that utility services are available, of the correct characteristics, and in the correct locations. If services are of incorrect characteristics or incorrect locations, Contractor shall provide.

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

3.04 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Consultant before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.05 TESTING

A. See individual specification sections for testing required.

B. Any specified, or requested, testing services (field or laboratory) shall be performed by an independent firm acceptable to Owner and Consultant.

C. Owner reserves the right to secure samples of materials being used and samples of Work in place at Project site.

1. Samples will be submitted to an Independent Testing Laboratory for comparison with specification requirements
2. Testing shall be performed in accordance with the requirements of public authorities and regulatory agencies to certify compliance with specified standards.
3. Copy of any test results will be provided to the Contractor, including a determination of compliance or non-compliance with the specifications.

3.06 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.07 DEFECT ASSESSMENT

A. Owner may request testing of materials and installation to determine compliance with the specification.

B. Testing shall be accomplished by a testing firm designated by Owner. Tests shall be conducted using recognized standards. Consultant shall evaluate and issue a report to Owner and Contractor regarding the results and provide recommendation for resolution.

C. If test results indicate non-compliance with the specification, pay for testing and associated reporting costs.

D. Replace Work or portions of Work not conforming to specified requirements.

E. If, in the opinion of Consultant, it is not practical to remove and replace Work, Consultant will direct an appropriate remedy or adjust payment.

END OF SECTION

This page intentionally left blank

STR-SEG

SECTION 01 42 16
DEFINITIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Definitions: Supplements to the definitions contained in the General Conditions.

1.02 RELATED REQUIREMENTS

A. Other definitions are included in individual specification sections.

1.03 DEFINITIONS

A. Demolition (or Demolish): Intentional wrecking, razing, dismantling, or removal of a building or structure—or any significant part thereof—using tools, equipment, or explosives. It encompasses the entire process of clearing a site, including legal disposal of debris.

B. Furnish: To supply, deliver, unload, and inspect for damage.

C. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.

D. Product: Material, machinery, components, equipment, fixtures, and systems forming Work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into Work result. Products may be new, never before used, or re-used materials or equipment.

E. Remove: Same as Replace, unless noted as “and salvage for Owner” or “and save for re-installation”.

F. Replace: To remove and dispose of existing products or materials, and to furnish and install new products or materials, in kind, or as otherwise specified.

G. Provide: To furnish and install.

H. Supply: Same as Furnish.

I. Substantial Completion of Work: The completion of weathertight envelope and adequate protection of building occupants from hazards posed by operation of equipment and construction activities, or other potential harmful conditions that may exist or become evident during the final Work effort by Contractor, prior to completing the punchlist items and demobilizing per Contract Documents.

1. The roof system (insulation, membrane and flashings) shall be complete;
2. Lifting activities requiring the use of a crane or other equipment shall be complete;
3. Life safety systems shall be complete and operational;
4. Sheet metal finishes/detailing Work shall be complete or well underway.

J. Final Completion of Work: Reached when Work is found to be in full compliance with Contract Documents.

1. Final Completion shall include the successful completion of any outstanding Work items, or Work requiring corrective action, as determined at the Final Review and published in punchlist reports.
2. Upon final completion, follow Closeout procedures, as indicated in *Section 01 70 00 - “Execution and Closeout Requirements”.*

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

This page intentionally left blank

STR-SEG

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Temporary Utilities.

B. Temporary Sanitary Facilities.

C. Temporary Construction and Controls.

D. Security.

E. Vehicular Access and Parking.

F. Safety Plan.

G. Cleaning and Waste Removal.

1.02 TEMPORARY UTILITIES

A. Temporary Electricity:

1. Electric power is available on-site, free of charge for project purposes only. Conveyance shall include individual circuit breakers, so as not to interrupt Owner's service in any way.
2. Provide all means of conveyance required for carrying out Work.

B. Temporary Lighting:

1. Supply any required supplemental lighting.

C. Mechanical Service:

1. Owner will provide mechanical and electrical connections and disconnections required within the scope of Project. Contractor to coordinate with Owner.

D. Water Service:

1. Water for construction purposes is available through the existing facility, free of charge. Provide conveyance from existing service to Project work area as required.
    a. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

A. Provide portable toilet facilities for use by Contractor’s employees during the course of Work. Toilets shall be placed on-site in an area designated by Owner.

B. Upon completion of Work, remove these facilities from Project site.

C. Maintain daily in clean and sanitary condition.

1.04 TEMPORARY CONSTRUCTION AND CONTROLS

A. Erect and subsequently remove temporary construction as needed to accomplish Work.

B. Stairs and Scaffolds:

1. Furnish and maintain equipment such as temporary stairs, fixed ladders, ramps, chutes, runways, sidewalk overhead scaffold protection, and the like as required for proper execution of Work by all trades. Underlay scaffolds with planking to prevent uprights from resting directly on the underlying surface.
2. Patch attachment to remaining structure in a manner acceptable to Owner.

C. Fencing:

1. At Contractor’s option, surround set-up area with a fence and provide additional fence as necessary to meet applicable safety regulations.

D. Protection:

1. Structures and equipment shall be constructed, installed and operated with guards, controls and other protective devices in place.

2. Provide, erect and maintain all required planking, barricades, guard rails, temporary walkways, etc., of sufficient size and strength necessary for protection of stored material and equipment; paved surfaces, walks, curbs, gutters and drives; streets adjacent to or within project area; adjoining property and Project Work to prevent accidents to the public and the workmen at Project site.
3. Protect Owner's furniture equipment, materials, and interior finishes from weather, wind, and precipitation, etc.
4. Provide protection against rain, snow, wind, ice, storms, or heat so as to maintain Work, materials, apparatus, and fixtures, incorporated in Work or stored on Project site, free from injury or damage. At the end of the day's Work, cover new work likely to be damaged. Remove snow and ice as necessary for safety and proper execution of Work.
5. Take necessary precautions to protect Owners property as well as adjacent property, including trees, shrubs, buildings, sanitary and storm sewers, water piping, gas piping, electric conduit or cable, etc., from any and all damage which may result due to work on this Project.
6. Repair any Work, damaged by failure to provide proper and adequate protection, to its original state to the satisfaction of Owner or remove and replace with new Work at Contractor's expense.
7. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

E. Fire Protection:
1. Provide and maintain in working order during the entire construction period, such fire protective equipment and devices as required by applicable safety standards and as deemed necessary and suitable for any possible class or type of fire. Extinguishers shall be nonfreezing type such as A-B-C rated dry chemical, of not less than 10-pound capacity each.

F. Noise Control:
1. Provide methods, means and facilities to minimize noise produced by construction operations.
2. Perform portions of Work which will generate excessive noise during hours when the building is unoccupied.

G. Dust Control:
1. Execute Work by methods to minimize raising dust from construction operations.
2. Provide positive means to prevent construction dust from entering the occupied building.
3. Protect owner's furniture equipment, materials, and interior finishes from dust.

H. Fume and Odor Control:
1. Provide methods and means to minimize fume and odor produced by construction operations.
2. Cover building intakes, in conjunction with Owner, to minimize fumes and odor produced by construction operations.

1.05 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

C. Provide protection for plants designated to remain. Replace damaged plants.

D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 SECURITY

A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with Owner's security program.

1.07 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Provide and maintain access to fire hydrants and fire lanes free of obstructions.

C. Existing parking areas designated by Owner may be used for construction parking.

D. Do not allow vehicle parking on existing pavement or planted areas without permission from Owner.

1.08 SAFETY PLAN

A. Consider the safe implementation of daily work activity paramount. Dynamics of the construction industry lend itself to daily attention to detail, quality and safety: therefore, it is imperative that Work is performed within the scope of known safety performance standards and directives with little to no deviance. At no time shall the safety of the worker be compromised to accommodate other construction constraints.

B. No Assumption of Duty: Notwithstanding any other provision of these Conditions, each Subcontractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs.

1.09 CLEANING AND WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain site in clean, orderly condition.

1. Waste materials removed from the site shall be managed by Contractor and disposed of in accordance with all applicable laws, regulations, codes, rules, and standards.
2. If materials to be recycled or re-used on the project must be stored on-site, coordinate with Owner’s Representative.
3. Combustible waste shall be removed immediately or stored in fire resistive containers until disposed of in an approved manner.

B. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

C. Remove rubbish, debris and scrap promptly upon its accumulation. Remove and place in dumpster at end of each Work day at a minimum, verify with any Owner requirements, if applicable, on frequency of dumpster being emptied and/or replaced.

D. Contractor shall be responsible for cleaning required within the technical sections of the specifications governing Work under Contractor's jurisdiction as well as for keeping Work areas, passageways, ramps, stairs and other areas of the premises free of accumulation of surplus materials, rubbish, debris and scrap which may be caused by Contractor's operations or that of Subcontractors operation.

1. In addition to the above, Contractor shall be responsible for the general "broom" cleaning of the premises governing Work under this Contract. Perform "final" cleaning of exposed surfaces to remove all foreign matter, spots, soil, construction dust, etc., so as to put Project in a complete and finished condition ready for acceptance and use intended.
2. If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, Owner reserves the right to have said Work done by others and the related cost(s) will be deducted from monies due Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

This page intentionally left blank

STR-SEG

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Product Delivery Requirements.

B. Product Storage and Handling Requirements.

C. Existing Products.

D. New Products.

E. Product Options.

F. Substitution Procedures.

G. Transportation and Handling.

H. Storage and Protection.

1.02 RELATED REQUIREMENTS

A. Document 00 21 13 - Instructions to Bidders: Product options and substitution procedures.

B. Section 01 30 00 - Administrative Requirements: Submittal Procedures.

1.03 PRODUCT DELIVERY REQUIREMENTS

A. Contractor or Contractor's authorized representative must be present to accept delivery of equipment and material shipments.

1. Owner will not knowingly accept, unload or store anything delivered to the site for Contractor's use.
2. Inadvertent acceptance of delivered items by any representative or employee of Owner shall not constitute acceptance or responsibility for any of the materials or equipment.
3. It shall be Contractor's responsibility to assume liability for equipment or material delivered to Project site.

1.04 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Confine equipment, apparatus, storage of materials and operations to limits indicated on Contract Drawings or agreed to by Owner at the pre-construction meeting. Contractor shall not bring materials onto Project site until they are needed for progress of Work.

B. Storage of materials on the grounds shall be in strict accordance with the instructions stated within the technical sections.

C. Storage of materials on the roof shall at no time exceed the design carrying capacity of the structural system. Materials shall not be stored on completed roof surfaces.

D. Hazardous materials, including motor fuels, shall be properly handled and contained to prevent spills or other releases. Develop and maintain a contingency plan to provide emergency response, containment, and cleanup of spills of hazardous materials resulting from contract activities. All spills and releases shall be reported to Owner.

PART 2 - PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not reuse materials removed from existing premises unless specifically required or permitted by the Contract Documents.

1. Existing materials indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to Owner, or otherwise indicated as to remain the property of Owner, shall become the property of Contractor; remove from Project site.

B. Specific Products to be Reused: The reuse of certain materials or products already existing on Project site is required.
   1. See *Section 01 10 00 - "Summary of Work"* for list of items required to be salvaged for reuse and relocation.
   2. If reuse of other existing materials or equipment is desired, submit substitution request.

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 - EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Product substitution requests may be made only by a bidder who is an official Bidder of Record.

B. Consultant will consider a substitute product only if it is in the same general classification of specified product.

C. A "Request for Substitution" will be considered only if written request is received by Consultant within 5-days prior to Bid Due date.
   1. Comply with requirements specified in this section.
   2. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

D. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Will provide the same warranty for the substitution as for the specified product.
   3. Will coordinate installation and make changes to other Work that may be required for Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

E. Substitution Submittal Procedure:
   1. Submit one copy of request for substitution for consideration. Limit each request to one proposed substitution.
   2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
   3. Consultant will notify Contractor in writing of decision to reject request. Consultant's decision of approval or disapproval shall be final.

3.02 TRANSPORTATION AND HANDLING

A. Coordinate schedule of product delivery to designated prepared areas in order to minimize Project site storage time and potential damage to stored materials.

B. Transport and handle products in accordance with manufacturer's instructions.

C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to Work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store materials on raised platforms; a minimum of 3-inches off of impervious surfaces (i.e. concrete); a minimum of 6-inches off of pervious surfaces (i.e. grass). Protect with coverings while providing for adequate air circulation. Coverings to extend down sides completely. Manufacturers shrink wrap is not an acceptable covering.

D. Store with seals and labels intact and legible.

E. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

F. For exterior storage of fabricated products, place on sloped supports above ground.

G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

H. Prevent contact with material that may cause corrosion, discoloration, or staining.

I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

This page intentionally left blank

STR-SEG

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Coordination.
B. Closeout Submittals.
C. Patching Materials.
D. Examination.
E. Preparation.
F. General Installation Requirements.
G. Cutting and Patching.
H. Progress Cleaning.
I. Protection of Installed Work.
J. Adjusting.
K. Final Cleaning.
L. Closeout Procedures.

1.02 RELATED REQUIREMENTS

A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
B. Section 01 60 00 - Product Requirements: Substitution procedures.

1.03 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
B. Coordinate completion and clean-up of Work of separate sections.
C. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.04 CLOSEOUT SUBMITTALS

A. Upon "Substantial Completion" of Project, Contractor shall submit electronically the below listed items to Consultant for presentation to Owner.
    1. 20-year Roof Manufacturer’s system warranty.
    2. 20-year sheet metal Manufacturer's finish warranty.
    3. Contractor’s Warranty: After project completion and acceptance, provide the installing Contractor’s 2-year limited labor and material guarantee covering Work completed.
    4. Contractor’s as-built drawings showing changes to Contract Documents, if applicable.
    5. Signed punch list, indicating completion of any outstanding items.

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 01 60 00 - “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.

1. Contractor is encouraged to photograph or otherwise document existing conditions of adjacent construction and site improvements that might be construed as damage caused by Work performed under this contract.
2. Deliver documentation of pre-existing conditions to Consultant and/or Owner prior to start of Work.

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

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

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

E. 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. Take care to install protection to prevent marring or damage to building components adjacent to Work.

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

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

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

3.03 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.

3.04 CUTTING AND PATCHING

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

B. Perform whatever cutting and patching is necessary to:

1. Complete 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-conforming 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. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

E. Restore Work with new products in accordance with requirements of Contract Documents.

F. 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 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.

3.05 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain Project 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 Project site periodically and dispose off-site; do not burn or bury.

3.06 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. Do not store materials on completed roof membrane.

E. Provide protective coverings at walls.

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

3.07 ADJUSTING

A. Restore or replace any damaged surfaces, items, and materials to Owner’s satisfaction. Replacements shall match existing in-kind.

B. When disturbed, adjust existing operating products and equipment to ensure smooth and unhindered operation.

3.08 FINAL CLEANING

A. Clean new and adjacent surfaces, including drainage systems, of debris, which could puncture roof membrane.

B. Remove adhesive, grease and other foreign material from finish surfaces of the building.

C. Repair, patch or touch-up marred surfaces, to match adjacent surfaces.

D. Use cleaning materials that are nonhazardous.

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

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

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

3.09 CLOSEOUT PROCEDURES

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

1. Provide copies to Consultant/Owner.

B. Notify Consultant when Work is considered ready for Substantial Completion.

C. Consultant, upon receipt of Contractor's "Notice of Completion", shall conduct a Final Review of Project.

1. If Work is incomplete or if items are identified in need of correction, Consultant will produce a written punch list for Contractor.
2. Take immediate action to address the punch list items, to correct items of deficient Work, and shall document and certify that the items have been completed in accordance with Contract Documents.

D. When Work has been deemed complete, to the satisfaction of Owner and Consultant, Contractor will be instructed to complete Close-out Submittals.

END OF SECTION

STR-SEG

SECTION 06 10 53
MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Roofing nailers, blocking and plywood panels.

1.02 RELATED REQUIREMENTS

A. Section 07 01 50.19 - Preparation for Re-Roofing.

B. Section 07 62 00 - Sheet Metal Flashing and Trim; Finish architectural flashings.

1.03 REFERENCE STANDARDS

A. Board of Review, American Lumber Standard Committee (ALSC); alsc.org.

B. ASTM International Standards, latest editions unless otherwise stated:

1. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware;
2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

C. National Institute of Standards and Technology, Department of Commerce, latest editions:

1. Voluntary Product Standard PS 1 - Structural Plywood.
2. Voluntary Product Standard PS 20 - American Softwood Lumber Standard.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Cover wood products to protect against moisture.

B. Support stacked products to prevent deformation and to allow air circulation.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: PS 20 and requirements of specified grading agencies.

1. Provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
2. Grading Agency: Any grading agency whose rules are approved by the ALSC, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Sizes: Nominal sizes as indicated on Contract Drawings.

B. Moisture Content: S-dry or MC19; Keep wood products dry before enclosing in construction.

C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

1. Lumber: S4S, No. 2 or Standard Grade.
2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

A. Other Applications:

1. Plywood Concealed from View but Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
2. Other Locations: PS 1, C-D Plugged or better.

2.04 FASTENERS AND ANCHORS

A. Carpentry/plywood to wood substrate:
   1. Common wire nails with hot-dipped galvanized coating.
   2. #8, coarse galvanized, sharp point, dual-torque deck screw with bugle head.
   3. Length as necessary to penetrate substrate by a minimum of 1-1/2-inches.

B. Carpentry to steel or wood roof decking:
   1. #14 steel roofing screw with corrosion-protective coating.
      a. Roofgrip screw with Climaseal coating, by Buildex Division of ITW, Inc.; itwbuildex.com.
      b. Heavy Duty Roofing Fastener with CR-10 coating, by OMG Roofing Products; omgroofing.com.
      c. #14 Dekfast with gray e-coat coating, by SFS Group USA, Inc.; us.sfs.com.
      d. Trufast #14 HD Roofing Fastener with black e-coat coating, by Altenloh, Brinck & Co. U.S., Inc.; trufast.com.
      e. Substitutions: See *Section 01 60 00 - "Product Requirements"."*.
   2. Length shall be sufficient to penetrate steel decking (top pan only) by 3/4-inch, or wood decking by 1-inch.

C. Carpentry to concrete or solid masonry substrate:
   1. 1/4-inch diameter, Phillips-head masonry screw.
      a. Tapcon, 3/16-inch diameter, Star-drive head screw, by ITW Red Head; itwredhead.com.
      b. Tapper, 1/4-inch diameter, Phillips-head screw, by DEWALT (formerly Powers Fasteners); dewalt.com.
      c. Titen, 3/16-inch diameter, Phillips-head screw, by Simpson Strong-Tie; strongtie.com.
      d. Substitutions: See Section 01 60 00 - "Product Requirements".
   2. Zinc Alloy nail-drive expansion anchor, 1/4-inch diameter, with stainless-steel pin.
   3. Length as necessary to provide a minimum of 1-inch embedment.

D. Carpentry to hollow masonry substrate:
   1. 1/4-inch diameter sleeve anchor; length as necessary to penetrate a minimum of 1-inch into interior of the hollow masonry units.
      a. Sleeve Anchor, by Hilti Fastening Systems; hilti.com.
      b. Substitutions: See *Section 01 60 00 - "Product Requirements".*
   2. 1/4-inch diameter, Phillips-head masonry screw; length as necessary to provide a minimum of 1-inch embedment.
      a. Tapcon, 1/4-inch diameter, Star-drive head screw, by ITW Red Head; itwredhead.com.
      b. Tapper, 1/4-inch diameter, Phillips-head screw, by DEWALT (formerly Powers Fasteners); dewalt.com.
      c. Titen, 1/4-inch diameter, Phillips-head screw, by Simpson Strong-Tie; strongtie.com.
      d. Substitutions: See *Section 01 60 00 - "Product Requirements".*

E. Carpentry to sheet metal substrate:
   1. Self-drilling sheet metal screws, cadmium plated.
      a. 10-24 wafer-head Plymetal TEKS/3 with wings, by Buildex Division of ITW, Inc.; itwbuildex.com.

b. Substitutions: See *Section 01 60 00 - "Product Requirements".*

2. Length shall penetrate the substrate by a minimum of 1-inch.

F. Carpentry to structural steel:

1. Self-drilling sheet metal screws, cadmium plated.

a. 12-24 flathead TEKS/4, by Buildex Division of ITW, Inc.; itwbuildex.com.

b. Substitutions: See *Section 01 60 00 - "Product Requirements".*

2. Length shall penetrate the substrate by a minimum of 1-inch.

PART 3 - EXECUTION

3.01 PREPARATION

A. Coordinate installation of rough carpentry members with Work specified in other sections.

B. Examine existing nailers and blocking which conforms to Contract Drawings at walls, edges, expansion joints, hatches, pipes or curbs:

1. Replace deteriorated sections with new dimensional lumber of same size.

2. Verify existing fastening to comply with specified requirements for new Work; enhance to secure as required.

3.02 INSTALLATION – GENERAL

A. Do not use lumber or materials which are unsound, warped, bowed, twisted, inadequately seasoned, or too small to fabricate Work with a minimum of joints.

B. Do not use lumber or materials that have not been properly stored, not properly protected from precipitation and/or sun, or which have gained moisture content from outdoor exposure.

C. Fit carpentry Work to other Work. Produce joints which are tight, true and well fastened.

D. Set carpentry accurately to required levels and lines with members plumb and true.

E. Attach carpentry to substrates in accordance with recognized standards.

F. Countersink new fastener heads flush with top of wood members. Hollow out bottom of new wood members, if necessary, to fit over existing exposed bolt heads that are not countersunk.

3.03 ROOF-RELATED CARPENTRY

A. Provide wood blocking and nailers as indicated on Contract Drawings.

B. Coordinate installation of roofing carpentry with other construction, framing of roof openings, and roofing assembly installation.

C. Provide wood curbs at all roof openings except where specifically indicated otherwise. Form corners by alternating lapping side members.

D. Provide wood curb extensions at all existing curbs, except where specifically indicated otherwise, to achieve a minimum of 8-inch flashing height above finished roof surface. Form corners with alternating, lapping side members.

E. When using multiple nailer courses, weave corners and stagger end joints a minimum of 3-feet from underlying course.

3.04 PLYWOOD PANELS

A. Provide plywood panels as indicated on Contract Drawings.

B. Space panels with 1/8-inch joints at butt joints. Provide back-splice support of lumber or sheet metal behind unsupported panel joints greater than 12-inches in length, and at corners.

C. Bevel-cut edges at 45-degree angle, where shown or required for smooth transition of roof flashings.

3.05 ATTACHMENT

A. Wood nailers and blocking are required to resist, at a minimum, applicable wind uplift loads, as shown in the Wind Uplift Plan in the Contract Drawings.

B. Fasten initial 2-by wood nailer to concrete or masonry in two staggered rows at a maximum of 24-inches on center, along the linear length of the nailer.

C. Fasten initial 2-by wood nailer to roof decking in two staggered rows at a maximum of 16-inches on center, along the linear length of the nailer.

D. Fasten subsequent wood components, to anchored wood nailer; fasten each layer separately and stagger end joints 24-inches minimum.

1. Fasten 2-by material, with 3-inch-long screws in two staggered rows, at a maximum of 16-inches on center along its length; stagger end joints.
2. Fasten 1-by material, with 1 1/2-inch-long screws, in two staggered rows, at a maximum of 12-inches on center along its length.
3. Plywood panel attachment:
    a. Fasten panels at edges; spacing shall be no greater than 12-inches on center and staggered from adjacent rows; add middle rows where panels are greater than 16-inches in width.
    b. Fasteners shall be placed no closer than 1-inch from panel edges.
    c. Where applicable (at large panels), fasten center in horizontal rows on 24-inch maximum centers. Fastener spacing shall be no greater than 12-inches on center and staggered from adjacent rows or edges.
4. Within dimensions shown (on Wind Uplift Plan in Contract Drawings) of building corners, increase fastening rate to be a maximum of 6-inches on center, staggered.

E. Provide two fasteners at butt ends of each member.

F. Provide additional fasteners to above, as required, to counteract minor warpage or variances in substrate, and to hold tight and true to lines.

3.06 TOLERANCES

A. Framing Members:1/4-inch from true position, maximum.

B. Variation from Plane:1/4-inch in 10-feet, maximum, and 1/4-inch in 30 feet, maximum.

END OF SECTION

STR-SEG

SECTION 07 01 50.19
PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Preparation of existing building components in preparation for a new roof system.

B. Repairs/adjustments to existing building components to remain, in preparation for a new roof system.

1.02 RELATED REQUIREMENTS

A. Section 06 10 53 - Miscellaneous Rough Carpentry; Replacement or addition of perimeter blocking.

B. Section 07 53 23 - EPDM Single-Ply Roofing.

C. Section 07 62 00 - Sheet Metal Flashing and Trim.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordinate affected mechanical and electrical Work required, associated with roof penetrations.

B. Coordinate affected plumbing Work required, associated with storm drainage system.

C. Schedule work to coincide with commencement of installation of new roofing system.

1.04 SUBMITTALS

A. See *Section 01 30 00 - "Administrative Requirements"*, for submittal procedures.

B. Copy of pull test results: Provide completed ANSI/SPRI FX-1 forms, indicating completed field testing.

C. Submit manufacturer's letter stating that pull tests achieved are sufficient for system requirements and warranty requirements.

1.05 FIELD CONDITIONS

A. Reroofing Work, once begun, will leave building subject to leakage and therefore must be considered in state of emergency when weather threatens.

B. Do not remove existing roofing membrane when weather conditions threaten integrity of building contents or intended continued occupancy.

C. Existing building shall be protected from water infiltration through any roof, parapet, or wall area under repair for the life of Project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that existing roof surface is clear and ready for Work of this section.

B. Verify that existing wood nailers and blocking to remain is properly anchored.

C. Contractor is responsible for confirming presence of hazardous materials with Owner per OSHA requirements prior to removal.

1. Asbestos-containing materials may be present in existing roofing system.
2. Lead paint may be present on existing building components.

3.02 PREPARATION

A. Provide exterior access to roof areas.

B. Prior to removal of existing roofing:

1. Coordinate drain replacement, and required access to building interior, with Owner.
2. Perform mechanical, electrical and plumbing Work as required.

C. Perform fastener withdrawal resistance tests per ANSI/SPRI FX-1.

3.03 MATERIAL REMOVAL

A. Verify, prior to start of decking removal, existence and location of deck-supported utilities and accessories including, but not limited to:
   1. Water or gas lines;
   2. Fire-sprinkler systems;
   3. Above- and below-deck conduit and tubing, and;
   4. Ceiling suspension systems.

B. Where applicable, back out existing fasteners during removal of roof system components.

C. Remove only as much roofing, flashings and insulation as can be made watertight each day.
   1. Make an effective watertight seal between the existing roof system and new roof system at the end of each day's Work.
   2. Tie-in shall prevent precipitation, wind driven water or condensation from penetrating either new or existing roof systems.
   3. Seal edge of existing insulation substrate, down to roof deck, including deck flutes where applicable, to keep water and condensation from infiltrating beneath new roof system, from existing roofing system, when stopping work for the day.

D. Remove sheet metal flashings from areas involved in Work, unless specifically indicated to remain on Contract Drawings.

E. Cut existing BUR roofing plies, and spud back gravel, where and as indicated on Contract Drawings.

F. Remove, and legally dispose of, existing roof membrane(s), flashings, insulation and fasteners down to:
   1. Structural steel roof deck at Roof Areas 12 and 13;
      a. Notify Consultant of damaged or deteriorated steel deck; do not proceed in affected areas until directed.
   2. Existing asphalt membrane over structural steel deck at Roof Areas 14 and 15.
      a. Existing asphalt membrane to remain.
         1) Remove existing roof system materials above asphalt membrane, including fasteners; repair damaged areas of existing asphalt membrane to provide a continuous, smooth substrate.

G. Refer to Contract Drawings for removals of existing perimeter blocking.
   1. Where scheduled to remain, remove damaged or deteriorated sections, as required.

H. Load roofing debris directly into trucks by means of approved chutes or other controlled means.
   1. Throwing or dropping will not be permitted.
   2. Pick up debris continuously to prevent straying.
   3. All such aggregate, rubbish, and debris shall be removed from the site and legally disposed of.

I. Properly dispose of materials removed, including ACRMs. Retain receipts, manifests and dump certificates for project close-out submission.

3.04 ADJUSTMENTS

A. Refer to Contract Drawings for additions and/or changes to perimeter blocking configuration.
   1. Provide wood nailers at perimeters and other locations, to height matching total thickness of insulation being used., as indicated on Contract Drawings.

B. Replace wet or deteriorated components; provide documentation for additional cost.

C. Repair or replace existing deck, as indicated on Contract Drawings, as required to provide smooth working surface for new roof system.

D. Projections and penetrations within roof area that are less than 8-inches in height shall be modified and raised to provide a flashing height of 8-inches, minimum, above finished surface of new roof system.

1. Plumbing vent piping shall be raised, using extensions, to accommodate new roof system thickness.

3.05 FIELD QUALITY CONTROL

A. Verify that:

1. Substrate is smooth, dry, and properly installed and ready to accept new roof system.
2. Items not specified to be removed and replaced, but necessary for proper installation of Work, have been properly coordinated for removal and replacement.

B. Do not proceed until unsatisfactory conditions have been corrected.

END OF SECTION

This page intentionally left blank

STR-SEG

SECTION 07 53 23
EPDM SINGLE-PLY ROOFING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. EPDM single-ply membrane fully adhered roofing system, including components specified.
   1. Insulation: flat-stock and tapered;
   2. Field-fabricated flexible flashings;
   3. Preformed components and accessories.

B. Disposal of construction waste is the responsibility of Contractor. Perform disposal in manner complying with applicable Federal, state, and local regulations.

C. Commencement of Work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under Project conditions and with necessary prerequisites for warranty acceptance by roofing membrane manufacturer.
   1. No modification of the Contract Sum will be made for failure to adequately examine Contract Documents or Project conditions.

1.02 RELATED REQUIREMENTS

A. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood nailers associated with roofing and roof insulation.

B. Section 07 01 50.19 - Preparation for Reroofing.

C. Section 07 62 00 - Sheet Metal Flashing and Trim: Formed metal flashing and trim items associated with roofing.

1.03 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D1079 for definition of terms related to roofing Work not otherwise defined in the section.

B. LTTR: Long Term Thermal Resistance, as defined by CAN-ULC S770.

1.04 REFERENCE STANDARDS

A. ASTM International Standards, latest editions unless otherwise stated:
   1. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus;
   2. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus;
   3. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board;
   4. ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing;
   5. ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics;
   6. ASTM D2126 - Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging;
   7. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free;
   8. ASTM D4637 - Standard Specification for EPDM Sheet Used In Single-Ply Roof Membrane.
   9. ASTM D4811 - Standard Specification for Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing;
   10. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. CAN-ULC-S770 - Standard Test Method Determination of L-Term Thermal Resistance of Closed-Cell Thermal Insulating Foams;

C. NRCA ML104 - The NRCA Roofing and Waterproofing Manual; National Roofing Contractors Association; Fifth Edition, with interim updates.

D. Underwriters Laboratories Inc. (UL):

1. UL (RMSD) - Roofing Materials and Systems Directory; current edition.
2. UL (FRD) - Fire Resistance Directory; current edition.

1.05 ADMINISTRATIVE REQUIREMENTS

A. Pre-Installation Conference: Before start of roofing Work, Consultant shall hold a meeting to discuss the proper installation of materials and requirements to achieve the warranty.

1. Require attendance with all parties directly influencing the quality of roofing Work or affected by the performance of roofing Work.

1.06 SUBMITTALS

A. See *Section 01 30 00 - "Administrative Requirements",* for submittal procedures.

B. Submit copy of ANSI/SPRI FX-1 form with results of fastener withdrawal test.

C. Product Data:

1. Provide membrane manufacturer's printed data sufficient to show that components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified.
2. Where UL or FM requirements are specified, provide documentation that shows that the roofing system to be installed is UL-Classified or FM-approved, as applicable; include data itemizing the components of the classified or approved system.
3. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how components will be installed; where instructions allow installation options, clearly indicate which option will be used.

D. Shop Drawings:

1. Provide manufacturer's insulation adhesive pattern/spacing for requirements specified or required.
2. Provide manufacturer's insulation fastening pattern for requirements specified or required.
3. For tapered insulation, provide Project-specific layout and dimensions for each board.

E. Specimen Warranty: Submit prior to starting Work.

F. Installer Qualifications: Letter from manufacturer attesting that the roofing installer meets the specified qualifications.

G. Pre-Installation Notice: Copy to show that manufacturer's required Pre-Installation Notice (PIN) has been accepted and approved by the manufacturer.

H. Executed Warranty at Project Closeout.

1.07 QUALITY ASSURANCE

A. Installer Qualifications: Roofing installer shall have the following:

1. Current approval, license, or authorization as applicator by the manufacturer.
2. At least 5-years' experience in installing specified system.
3. Capability to provide payment and performance bond to building Owner.

B. Comply with the published recommendations and instructions of the roofing membrane manufacturer.

C. Perform Work in a sequential manner to avoid construction traffic over completed areas as installation progresses.

1.08 SEQUENCING

A. Perform work in a sequential manner to avoid construction traffic over completed areas as installation progresses.

B. Preparation work shall be limited to area sizes that can be completed (insulation, roof membrane and flashings), by end of day or before the arrival of inclement weather. Take care to maintain proper drainage on areas throughout the progress of Work

1.09 DELIVERY, STORAGE AND HANDLING

A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible.

B. Store materials clear of ground and moisture with weather protective covering.

1. Protect foam insulation from direct exposure to sunlight.
2. Provide ventilation to prevent condensation and degradation of insulation products.

C. Keep combustible materials away from ignition sources.

1.10 WARRANTY

A. *See Section 01 70 00 - "Execution and Closeout Requirements", for additional warranty requirements.*

B. Comply with warranty procedures required by manufacturer, including notifications, scheduling, and inspections.

C. Warranty: Manufacturer's System Warranty covering membrane, roof insulation, and other indicated components of the system, for the term indicated.

1. Warranty Period: 20 years from date of Substantial Completion.
2. Limit of Liability: No dollar limitation.
3. Scope of Coverage: Repair leaks in the roofing system caused by:
   a. Ordinary wear and tear of the elements.
   b. Unintentional damage due to normal rooftop inspections, maintenance, or service.
   c. Manufacturing defects in materials supplied by Warrantor.
   d. Defective workmanship used to install these materials.
   e. Damage due to winds up to 72 mph (116 km/h).

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Roof System:

1. Carlisle SynTec Systems: carlislesyntec.com.
2. Elevate-Amrize: elevatecommercialbp.com.
3. Johns Manville: jm.com.
4. Substitutions: See *Section 01 60 00 - "Product Requirements*".

B. Manufacturer of Insulation: Same manufacturer as roof membrane.

2.02 ROOFING SYSTEM DESCRIPTION

A. Roofing System: EPDM single-ply membrane.

1. Membrane Attachment: Fully Adhered.
2. Comply with applicable local building code requirements.
3. Provide assembly having Underwriters Laboratories, Inc. (UL) Class A Fire Hazard Classification.

2.03 EPDM MEMBRANE MATERIALS

A. Roofing and Flashing Membrane: Black, cured synthetic single-ply membrane composed of EPDM with the following properties:

1. Reinforcement: None; membrane complying with ASTM D4637 Type I.
2. Thickness: 0.060-inch.
3. Nominal Thickness Tolerance: Plus/minus 10-percent.

4. Sheet Width: Provide the widest available sheets to minimize field seaming.
5. Acceptable Products:
    a. 0.060-inch Sure-Seal non-reinforced EPDM Membrane, by Carlisle.
    b. 60-mil RubberGard non-reinforced Fire Retardant FR EPDM Membrane, by Elevate.
    c. JM EPDM NR 60-mil, By Johns Manville.

B. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.
1. Perimeter Fastening Strip: 6-inch wide, 45-mil reinforced EPDM membrane with pre-applied 35-mil EPDM tape adhesive along one edge; for membrane attachment below the roof membrane.
2. Metal Plates Used for Fastening Membrane: Steel with Galvalume coating; corrosion-resistance meeting FM 4470 criteria.

C. Flashing Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized and vulcanized EPDM rubber, complying with ASTM D4811, Type II or ASTM D4637, Type I as appropriate, by manufacturer, for use and with the following properties:
1. Thickness: 0.060-inch.

D. Bonding Adhesive: Neoprene-based, formulated for compatibility with EPDM membrane and wide variety of substrate materials, including masonry, wood, and insulation facings.

E. Self-Adhering Flashing Membrane: Semi-cured 45-mil EPDM membrane laminated to 35-mil EPDM tape adhesive.

F. Pre-Molded Pipe Flashings: EPDM, molded for quick adaptation to different sized pipes.
1. Secure to penetration with stainless steel gear drive clamp.

G. Lap Splice Tape: 35-mil EPDM-based, formulated for compatibility with EPDM membrane and high-solids primer.

H. Splice Adhesive: Synthetic polymer-based, formulated for compatibility with EPDM membrane and metal surfaces.

I. Adhesive Primer: Synthetic rubber-based primer formulated for compatibility with EPDM membrane and tape adhesive.

J. Seam Edge Treatment: EPDM rubber-based sealant, formulated for sealing exposed edges of membrane at seams.

K. Pourable Sealer: 2-part polyurethane, 2-color for reliable mixing.

L. Water Block Seal: Butyl rubber sealant for use between two surfaces, not exposed.

2.04 ROOF INSULATION

A. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1; Grade 2; Closed cell Polyisocyanurate insulation with organic or inorganic, fiberglass facing on both sides. With the following characteristics:
1. Compressive Strength: 20 psi when tested in accordance with ASTM C1289.
2. UL-Classified and FM-approved for direct to steel deck applications.
3. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
4. Board Size: 48-inches by 96-inches, nominal.
    a. Exception: Board to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches nominal.
5. Flat-Stock Thicknesses: As indicated on Contract Drawings; fill board thickness shall not exceed 2-inches.
6. Tapered Insulation Configuration:
    a. Starting Thickness: As indicated on Contract Drawings.
    b. Rate of Taper: As indicated on Contract Drawings.

7. Acceptable Product: As recommended by roof membrane manufacturer.

B. Insulation Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.

C. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be provided; use only adhesives furnished by roof membrane manufacturer.

D. Spray Filler Foam:Two-component, expanding closed-cell polyurethane foam, 1.7 lb. nominal density,

1. OlyFill Foam Sealant, by OMG Roofing Products; omgroofing.com, or equal,

2. Substitutions: See *Section 01 60 00 - "Product Requirements".*

2.05 ACCESSORY MATERIALS

A. Tapered Edge Strips (0" start):

1. High-density wood fiberboard, thickness and width as needed to comply with Contract Drawings, conforming to ASTM C208.

2. Polyisocyanurate Edge Strips: SureSlope TES, by Atlas Roofing: atlasrwi.com.

B. Roof Walkway Pads: EPDM, 0.30-inch-thick by 30 by 30 inches, or 30 by 36 inches, with butyl tape adhesive strips laminated to the bottom, as furnished by roof membrane manufacturer .

C. Termination Bars:

1. Aluminum bars with integral caulk ledge; 1.3 inches wide by 0.10 inch thick.

PART 3 - INSTALLATION

3.01 GENERAL

A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for the specified roofing system, unless specified herein, whichever is most stringent. Where manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.

B. Obtain relevant instructions and maintain copies at Project site for duration of installation period.

C. Do not start Work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.

D. Perform Work using competent and properly equipped personnel.

E. Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.

F. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80-degrees F.

G. Protect adjacent construction, property, vehicles, and persons from damage related to roofing Work; repair or restore damage caused by roofing Work.

1. Protect from spills and overspray from, adhesives, sealants and coatings.

2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.

3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

H. Until ready for use, keep materials in their original containers as labeled by the manufacturer.

I. Consult membrane manufacturer's instructions, container labels, and Safety Data Sheets (SDS) for specific safety instructions. Keep adhesives, sealants, primers and cleaning materials away from all sources of ignition.

3.02 EXAMINATION

A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment, and that deflection will not strain or rupture roof components or deform deck.

B. Verify that surfaces and site conditions are ready to receive Work. Correct defects in substrate before commencing with roofing Work.

C. Examine roof substrate to verify that it is properly sloped to drains.

D. Verify that specifications and Contract Drawings are workable and not in conflict with roofing manufacturer's recommendations and instructions; start of Work constitutes acceptable of Project conditions and requirements.

E. Verify that wood nailers have been properly installed.

3.03 PREPARATION

A. Refer to *Section 07 01 50.19 - "Preparation for Re-Roofing*".

B. At Roof Areas 14 and 15, ensure that existing asphalt membrane to remain is intact, clean and acceptable for installation of subsequent roof system materials.

3.04 INSULATION INSTALLATION

A. Install insulation in accordance with Contract Drawings.

B. Install insulation in a manner that will not compromise vapor retarder integrity.

C. Install only as much insulation as can be covered with the completed roofing system before the end of the day's Work or before the onset of inclement weather.

D. Lay roof insulation in courses parallel to roof edge; stagger joints 12-inches minimum between layers.

E. Tapered insulation layout: Refer to Contract Drawings.

1. Provide tapered saddles in valley lines:
   a. Lay saddle boards starting at the edge of the tapered insulation sumps, or drainage point.
   b. Lay out saddles using a 1:2 ratio, or 22.5-degree plan angle (e.g., 10'-0" dimension along valley corresponds to 5'-0" dimension parallel with slope – connecting line represents the leading edge of the saddle).
   c. Whenever possible, increase angle to incorporate full-width boards at ridge of saddle.
2. At projections greater than 24-inches in width, provide tapered insulation crickets on upslope side.
   a. Lay out boards with leading edges of cricket a minimum of 6-inches out from curb corners to extend beyond edges of roof flashings.

F. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4-inch. Fill gaps greater than 1/4-inch with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4-inch.

G. Mechanical Fastening: Using specified fasteners and insulation plates engage fasteners through insulation into deck to depth and in pattern required by membrane manufacturer for specified warranty.

1. Refer to Construction Drawings – "Wind Uplift Plan", for design wind pressures, insulation fastener-and-plate spacing, perimeter sheet metal flashing design parameters, and for various wind Zone areas and dimensions.
2. Provide additional fasteners and plates twelve 12-inches, on center, around all penetrations.

H. Cold Adhesive Attachment for insulation: Apply in accordance with membrane manufacturer's instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact.

1. Refer to Construction Drawings – "Wind Uplift Plan", for adhesive bead spacing, perimeter sheet metal flashing design parameters, and for various wind Zone areas and dimensions.

3.05 SINGLE-PLY MEMBRANE INSTALLATION

A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30-minutes before attachment or splicing; in colder weather allow for longer relax time.

B. Lay out the membrane pieces so that field and flashing splices are installed to shed water.

C. Install membrane without wrinkles and without gaps or fishmouths in seams;

D. Install membrane adhered to the substrate, with edge securement as specified.

E. Adhered Membrane: Bond membrane sheet to substrate using membrane manufacturer's bonding adhesive specified herein at manufacturer's recommended application rate and procedures.

1. Do not apply bonding material to seaming area of membrane.

F. Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than 2 in 12-inches (1:6) using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer.

1. Exceptions: Round pipe penetrations less than 18-inches in diameter and square penetrations less than 4-inches square.

G. Bond and test seams and laps in accordance with membrane manufacturer's recommended application rate and procedures.

1. As required by manufacturer for specified warranty term, provide wider seam tape or secondary cover strip at field laps.

3.06 ROOF DRAIN FLASHING

A. Coordinate adjustment or replacement of existing cast iron drain bowls with Owner, as indicated on Contract Drawings.

B. At existing drains, wire brush clean drain clamping surface and clamping ring of existing roofing materials and cement. Provide all new clamps or bolts. Reuse undamaged existing clamping rings and strainers.

C. Taper insulation around roof drains to provide a smooth transition from roof surface to drain opening. Do not slope insulation greater than 3/12.

D. Install a watertight seal using water cut-off mastic between roof membrane and drain bowl flange.

3.07 FLASHING AND ACCESSORIES INSTALLATION

A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as indicated on Contract Drawings.

3.08 FIELD QUALITY CONTROL

A. See *Section 01 40 00 - "Quality Requirements",* for additional requirements.

B. Inspection by Manufacturer:

1. Manufacturer shall provide periodic inspections during the course of Work. Inspection intervals shall include project start-up support and initial inspection, interim (50-percent) inspection and final inspection.

2. Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person).

C. Perform corrections necessary for issuance of warranty.

3.09 CLEANING

A. Clean contaminants generated by roofing work from building and surrounding areas, including adhesives, and sealants.

B. Repair or replace building components and finished surfaces damaged or defaced due to Work of this section; comply with recommendations of manufacturers of components and surfaces.

C. Remove leftover materials, trash, debris, equipment from Project site and surrounding areas.

3.10 PROTECTION

A. Protect installed roofing and flashings from subsequent construction operations and inclement weather.

B. Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged roofing to original condition.

END OF SECTION

STR-SEG

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Fabricated sheet metal items: Continuous cleats, coping, fascia, counter flashing, cap flashing, transition/closure panels, scuppers, spillouts and penetration pans.

1.02 RELATED REQUIREMENTS

A. Section 07 53 23 - EPDM Single-Ply Roofing.

1.03 REFERENCE STANDARDS

A. AISI - American Iron and Steel Institute.

B. ANSI/SPRI/FM 4435 ES-1 - Wind Design Standard for Edge Systems Used with Low-Slope Roofing Systems.

C. ASTM International Standards, latest editions unless otherwise stated:

1. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware;

2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate;

D. National Roofing Contractors Association (NRCA) – The NRCA Roofing and Waterproofing Manual, ML104; Fifth Edition, with interim updates.

E. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2012.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Meeting: Convene one week before starting Work of this section.

1.05 SUBMITTALS

A. See *Section 01 30 00 - "Administrative Requirements*", for submittal procedures.

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

C. Mock-Ups: Construct 4-foot minimum sections of finished detail assembly, including continuous cleats.

D. Submit manufacturer's standard color chart for Owner's selection.

E. If shop-fabricated, flashings must demonstrate compliance with ES-1 test requirements and with design wind pressures, as shown in the Contract Drawings.

1.06 QUALITY ASSURANCE

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

B. Coordinate and be responsible for removal and reinstallation of items not specified to be removed and replaced as may be necessary for proper installation of its Work.

C. Utilize good weather to utmost.

1. Plan and schedule Work to occur during least threatening weather.

2. Have standing agreement with subcontractors, parties agreeing to proceed as arranged, but also agreeing to adjust to sudden changes of weather.

D. Work, once begun, will leave building subject to leakage and therefore must be considered in state of emergency when weather threatens.

1. Existing building shall be protected from water entering through any roof, parapet or wall area under repair for the life of Project.

E. Remove only as much flashing as can be made watertight each day.

1. Make an effective watertight seal between existing and new at the end of each day's Work.

2. Remove seal prior to continuing.

1.07 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 SHEET MATERIALS

A. Aluminum: ASTM B209 0.040 and 0.050; mill finish.

2.02 ACCESSORIES

A. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.

B. Butyl tape caulk: 1/8-inch thick by 1-1/2 inch wide, minimum, butyl tape sealant.

C. Sealant: Type polyurethane or silicone water tight sealants specified in *Section 07 90 05 - "Joint Sealers".*

D. Fasteners and Anchors: Where not specified, size fasteners to suit conditions and materials.

1. Metal Jointing with Pop Rivets:
   a. Rivets shall be a minimum 1/8-inch diameter, of length required to properly engage both pieces of sheet metal.
   b. Rivets shall match the type and finish of sheet metal being joined.
2. Metal to Wood Concealed Fasteners:
   a. Ring shank nails: Hot-dipped galvanized steel per ASTM A153/A153M.
3. Metal to Wood Exposed Fasteners:
   a. Number 10 nonmagnetic stainless-steel screws with EPDM bonded washer.
4. Metal to Substrate Fasteners: (Cleats)
   a. Roofing Nails: 10-gauge by 1-1/4-inch.
5. Metal to Metal Concealed Fasteners:
   a. Cadmium-plated, bugle-head sheet metal screws, number 10 minimum.
6. Metal to Metal Exposed Fasteners:
   a. Nonmagnetic stainless-steel; pop rivets; same finish as sheet metal.
   b. Number 8 nonmagnetic stainless-steel pan head screws (counter flashing to reglet/receiver only).
   c. Number 10 nonmagnetic stainless-steel screws with EPDM bonded washer.
7. Metal to Concrete and Masonry Concealed Fasteners:
   a. Nail-drive expansion anchor: Zinc alloy (nylon not allowed) with stainless-steel pin.
   b. Screw anchors: Zinc-plated carbon steel.
8. Metal to Concrete and Masonry Exposed Fasteners:
   a. 1/4-inch nonmagnetic stainless-steel screw anchors with bonded EPDM washer.

2.03 FABRICATION

A. Sheet metal flashings and trim shall be fabricated in accordance with dimensions indicated on Contract Drawings, and/or as field-measured and verified by Contractor prior to fabrication.

B. Deliver shop fabricated and manufactured products to site ready for designed installation. Field fabricate to fit applications indicated and perform optimally with respect to weather resistance, water-tightness, durability, strength and uniform appearance.

C. Fabricate to allow controlled expansion in running lengths not only for movement of metal components in relationship to one another, but also to adjoining dissimilar materials in a manner sufficient to prevent water infiltration, deformation, or damage.

D. Fabricate items in maximum lengths and hold joints to a minimum. At no time shall any piece be shorter than 3-feet in length unless piece makes up an entire run.

E. Unless otherwise noted, drip edges, where shown, shall be 3/4-inches with exposed edges hemmed 1/2-inch. Hem exposed edges on underside 1/2-inch; miter and seam corners.

F. Do not "punch" brake points. Finish all joints neatly with lines trimmed true and sharp.

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

H. Form pieces in longest possible lengths.

I. Fabricate splice plates (batten or under) to fit main section configuration snugly, leaving no open gaps or bridging.

J. Face dimensions greater than 8-inches shall be fabricated with 1/2-inch stiffening ‘V’-groove in center.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions under which Work of this section will be installed.

1. Bring to Consultant's attention any conditions detrimental to the proper and timely completion of Work.
2. Do not proceed until satisfactory conditions have been corrected.

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

C. Counterflash, with architectural sheet metal, vertical-surfaces base flashed with roof system membrane.

3.02 PREPARATION

A. See *Section 07 01 50.19 - “Preparation for Re-Roofing”*.

B. Remove and dispose of existing architectural sheet metal flashing from areas to receive new.

C. Verify that wood blocking and nailers are securely anchored and that roof projections and penetrations are in place and set and braced.

D. Install starter and edge strips, and cleats before starting installation.

E. Back paint concealed surfaces, between dissimilar metals, with protective backing paint to a minimum dry film thickness of 15-mil.

3.03 SHEET METAL JOINTING

A. Solid joints for prefinished steel and aluminum sheet metal:

1. Lap sheet metal sections 2-inches, minimum.
2. Install butyl tape caulk between sections.
3. Fasten with pop-rivets on 2-inch maximum centers.

B. Lapped joints:

1. Install running sections in maximum of 10-foot lengths.
2. Lap sheet metal sections 2-inches, minimum.
3. At lap, notch the bottom hem of one section 2-inches back from the end, to accommodate the adjacent section.
4. Hook the overlying sheet metal flashing onto the adjacent sheet metal flashing section; creating a 2-inch minimum lap.

C. Drive-cleat joints:

1. Install running sections in maximum of 10-foot lengths.
2. Notch at corners and fold back top edges 1/2-inch to create a 1/2-inch, minimum, gap between sections.

3. Lap sides of sheet metal sections 2-inches, minimum.
4. Fabricate a minimum 1-1/2-inch-wide drive cleat, with 1/2-inch down-turned hems on each side to engage hems on the adjacent sheet metal flashing section.
    a. Notch drive cleat at overlaps.
    b. Tabbed portion of drive cleat: single thickness and even.
5. Fabricate drive cleat long enough to fold down onto each side a minimum of 2-inches.

3.04 INSTALLATION

A. Coordinate with installation of roof system and substrates to receive Work of this section which are required to assure each element of the Work performs properly and combines elements in waterproof and watertight system.

B. General installation procedures:
1. Install and attach as shown on Contract Drawings.
2. Finish flashings, where applicable, must be fully engaged and continuously crimped onto the underlying cleat.
3. Anchor substrates to withstand lateral and thermal stresses and loading pressures.
    a. Conceal fasteners wherever possible and as indicated on Contract Drawings.
    b. Use exposed fasteners only where permitted.
4. Fit flashings tight in place.
    a. Field bends on pieces greater than 6-inches in length shall utilize a portable break to produce sharp, straight lines.
    b. Make corners square, surfaces true and straight in planes, and lines accurate to profiles. Hand-bent or “wrapped” pieces shall be cause for rejection of the component.
5. All points where the sheet metal flashing end or transitions into a different flashing detail shall be flashed with a field-formed sheet metal closure. The use of mastic or excessive caulking shall not be acceptable.

C. Concealed Continuous Cleats:
1. Provide new architectural sheet metal concealed cleats as shown on Contract Drawings.
2. Fabricate using 8'-0" or 10’-0" flat stock sheets.
3. Provide a 3/4-inch long, 45-degree bend along bottom edge.
4. Provide 1/4-inch space between sections.
5. Secure to substrate at 6-inches on center with 1-1/4-inch long galvanized roofing nails, fasteners shall be 1-3/4-inches from hem on exterior, and 1/2-inch from hem on interior, where applicable.

D. Fascia Flashing:
1. Provide new architectural sheet metal fascia cover as shown on Contract Drawings.
2. Fabricate using 8'-0" or 10’-0" flat stock sheets.
3. Provide lapped joints.
4. Where shown on Contract Drawings, secure to continuous cleats; hand tool (crimp) to fully engage.
5. Stagger joints between fascia cover and adjacent flashing.

E. Coping:
1. Provide new architectural sheet metal coping where shown on Contract Drawings. Installed sample required for review by Owner and Consultant.
2. Fabricate using 8'-0" or 10’-0" flat stock sheets.
3. Install with drive cleats at horizontal joints; lap vertical portions of joints 2-inches.
4. Stagger all joints between fascia, flashing and edges.
5. Corners shall be mitered, seamed and sealed.

6. Secure outside edges to hem of installed continuous cleat; where applicable, field crimp roof side hem onto continuous cleat along entire length.
7. Secure roof side face with 1-1/2-inch galvanized metal screws with weather tight washers at maximum 18-inches, on center, through ob-round holes.
8. Where coping abuts a wall, install under closure flashing, as indicated on Contract Drawings.

F. Roof Edge:
1. Provide new architectural sheet metal, as shown on Contract Drawings.
2. Fabricate using 8'-0" or 10'-0" flat stock sheets.
3. Secure exterior leg to continuous cleat; hand tool (crimp) to fully engage; where indicated.
4. Install over nailers and completed membrane; secure to blocking 1-inch from roofside edge at 3-inches on center, maximum, in staggered rows offset by 1/2-inch.
5. Lap sections a minimum of 2-inches, by removing hem and taper cutting drip from underlying section, and seal.
6. Apply EPDM strip-in flashing over secured flange.

G. Surface-Mounted Counter Flashing:
1. Provide new architectural sheet metal counter flashing as shown on Contract Drawings.
2. Fabricate using 8'-0" or 10'-0" flat stock sheets.
3. Unless otherwise noted, counter flashing shall run in a straight line and shall lap top of roof flashings a minimum of 3-inches.
4. Brake counter flashing longitudinally to provide spring action; holding bottom firmly against roof flashing.
5. Provide 2-inch laps at joints by removing hem and taper cutting drip from adjacent section.
   a. Inside corners: Notched and lapped 1-1/2-inches through corner.
   b. Outside corners: Notched, mitered, lapped and seamed.
6. Apply butyl tape caulk to back surface of counter flashing fastening leg prior to installing.
7. Provide termination bar over counter flashing fastening leg when installing.
8. Fasten through termination bar and counter flashing with concrete or masonry screw type fasteners, as required, a maximum of 12-inches on center.
   a. Provide additional fasteners a maximum of 2-inches from each end of termination bar.
   b. Do not fasten through counter flashing joints.
9. Fill and seal sealant lip; force sealant into all voids and tool joint to provide water-shed surface.

H. General Counter Flashings:
1. Provide new architectural sheet metal counter flashing as shown on Contract Drawings.
2. Fabricate using 8'-0" or 10'-0" flat stock sheets.
3. Unless otherwise noted, counter flashing shall run in a straight line and shall lap top of roof flashings a minimum of 3-inches.
4. Brake counter flashing longitudinally to provide spring action; holding bottom firmly against roof flashing.
5. Provide 2-inch laps at joints by removing hem and taper cutting drip from underlying section.
   a. Inside corners: Notched and lapped 1-1/2-inches through corner.
   b. Outside corners: Notched, mitered, lapped and seamed.
6. Insert counter flashing behind existing unit flange, fasten as indicated on Contract Drawings.
7. Fasten counter flashing to curb with stainless-steel sheet metal screws through pre-punched holes; minimum 2 per side.

I. Transition/Closure Panels:

1. Provide new architectural sheet metal transition/closure panels where shown on Contract Drawings and as required.
2. Fabricate closure and corner panels; lapping, riveting and sealing joints.
3. Secure exterior leg to continuous cleat; hand tool (crimp) to fully engage; where indicated.
4. Secure transition/closure panels to substrate 8-inches on center through tape caulk and seal; as indicated on Contract Drawings.

J. Shop-Fabricated Scuppers:
1. Fabricate in two sections - one solid-jointed unit on the interior and another solid unit on exterior, to be joined at exterior edge of wall opening.
2. Fabricate interior scupper unit (flange and tube) to:
   a. Extend a minimum of 4-inches onto the interior wall surface on all sides of scupper opening.
   b. Extend 4-inches minimum onto roof surface out from base of wall or cant strip.
   c. Extend a minimum of 1-inch beyond the exterior face of wall on top and sides.
   d. Extend a minimum of 1-1/2 inches beyond the exterior face of wall on bottom edge, with hemmed drip edge.
3. Fabricate exterior trim unit to extend a minimum of 3-inches onto the exterior wall surface on all sides of scupper opening.
   a. Fasten trim to substrate at 8-inches on center through tape caulk and seal edges watertight.

K. Penetration Pans:
1. Provide new architectural sheet metal penetration pans where shown on Contract Drawings and as required.
2. Fabricate penetration pans lapping, riveting and sealing.
3. Fabricate penetration pans to provide minimum 3-inch height above finished roof system.

L. Seal metal joints watertight.

3.05 FIELD QUALITY CONTROL

A. Inspection will involve observation of Work during installation to ascertain compliance with specified requirements.

END OF SECTION

STR-SEG

SECTION 07 90 05
JOINT SEALERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Sealants and joint backing.

1.02 REFERENCE STANDARDS

A. ASTM International Standards, latest editions unless otherwise stated:
   1. ASTM C920 - Standard Specification for Elastomeric Joint Sealants;
   2. ASTM C1193 - Standard Guide for Use of Joint Sealants;
   3. ASTM D1056 - Standard Specification for Flexible Cellular Materials--Sponge or Expanded Rubber.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work with other sections referencing this section.

1.04 SUBMITTALS

A. See Section 01 30 00 - “Administrative Requirements”, for submittal procedures.

B. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Samples: Submit one sample, 6-inches in length, or manufacturer’s standard color chart, illustrating sealant color(s) for selection by Owner.

1.05 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.06 WARRANTY

A. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.
   1. Correct defective Work within a 2-year period after Date of Substantial Completion.

B. See Section 01 70 00 - “Execution and Closeout Requirements”, for additional warranty requirements.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Polyurethane Sealants:
   1. Bostik; bostik.com/us.
   2. Pecora Corporation; pecora.com.
   3. Sika Corporation; usa.sika.com.
   4. Tremco Construction Products Group; tremcosealants.com.

B. Silicone Sealants:
   1. Dow (DOWSIL); dow.com.
   2. Sika Corporation; usa.sika.com.
   3. Tremco Construction Products Group; tremcosealants.com.

C. Butyl Sealant:
   1. Pecora Corporation; pecora.com.
   2. Sika Corporation; usa.sika.com.
   3. Tremco Construction Products Group; tremcosealants.com.

2.02 SEALANTS

A. Non-sag Polyurethane Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses NT, I, M, G, O and A; single-component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion.
   1. Movement Capability: Plus, or minus twenty-five percent.
   2. Service Temperature Range: -40 to 180 degrees F.
   3. Color: To be selected by Consultant from manufacturer's standard range.
   4. Applications: Use for:
      a. Control, expansion, and soft joints in masonry.
      b. Joints between concrete and other materials.
      c. Joints between metal and other materials.
      d. Other exterior joints for which no other sealant is indicated.
   5. Polyurethane Products:
      a. Chem-Calk 915, by Bostik.
      b. Dynatrol I-XL, by Pecora.
      c. Sikaflex 1a or NP 1, by Sika.
      d. Dymonic, by Tremco.
   6. Substitutions: See Section 01 60 00 - “Product Requirements”.

B. Masonry Silicone Sealant: ASTM C920, Grade NS, Class 50, Uses NT, A, G, M, O, single component, neutral curing, low modulus, non-sagging, non-staining, fungus resistant, non-bleeding.
   1. Movement Capability: Plus, or minus fifty percent.
   2. Service Temperature Range: -65 to 180 degrees F.
   3. Color: To be selected by Consultant from manufacturer's standard range.
   4. Shore A Hardness Range: 15 to 35.
   5. Applications: Use for:
      a. Control, expansion, and soft joints between masonry components.
      b. Joints between sheet metal components and concrete or masonry.
   6. Products:
      a. DOWSIL 756 SMS, by Dow.
      b. Sikasil WS-290, by Sika.
      c. Spectrem 3, by Tremco.
   7. Substitutions: See Section 01 60 00 - “Product Requirements”.

C. Metal Silicone Sealant: ASTM C920, Grade NS, Class 50, Uses NT, A, G, M, O, single component, neutral curing, medium modulus, non-sagging, non-staining, fungus resistant, non-bleeding
   1. Movement Capability: Plus, or minus fifty percent.
   2. Service Temperature Range: -65 to 180 degrees F.
   3. Color: To be selected by Consultant from manufacturer's standard range.
   4. Shore A Hardness Range: 15 to 35.
   5. Applications: Use for:
      a. Joints between aluminum components.
      b. Joints between aluminum components and glazing.
   6. Products:
      a. DOWSIL 795, by Dow.

b. Sikasil WS-295, by Sika.
c. Spectrem 2, by Tremco.

7. Substitutions: See Section 01 60 00 - “Product Requirements”.

D. Non-sag Hybrid Sealant: ASTM C920, Grade NS, Class 25 minimum, Uses NT, A, G, M, O; single component, non-sagging, non-staining, non-bleeding.

1. Cure Type: Neutral.
2. Fungus resistant.
3. Color: To be selected by Consultant from manufacturer's standard range.
4. Movement Capability: Plus, or minus twenty-five percent.
5. Service Temperature Range: minus 65 to 180 degrees F (minus 54 to 82 degrees C).
6. Shore A Hardness Range: 15 to 35, Shore A.
7. Applications: Use for:
   a. Joints between EIFS panels.
   b. Joints between metal and EIFS
8. Products:
   a. MasterSeal NP 150, by Sika (Master Builders Solutions product line).
   b. SoudaSeal 50LM, by Soudal.
   c. SuperSeal PE, by TK Products.
9. Substitutions: See Section 01 60 00 - “Product Requirements”.

E. Butyl Sealant: ASTM C920, Grade NS, Class 12-1/2, Uses NT, M, A, G, O, single component, solvent release, non-skinning, non-sagging.

1. Color: To be selected by Consultant from manufacturer's standard range.
2. Movement Capability: Plus, or minus 12-1/2 percent.
3. Service Temperature Range: minus13 to 180 degrees F (minus 25 to 82 degrees C).
4. Shore A Hardness Range: 10 to 30.
5. Applications: Use for:
   a. Concealed sealant bead in sheet metal work.
6. Products:
   a. Pecora BA-98, by Pecora.
   b. Sikalastomer-511, by Sika.
   c. Trempro JS 773, by Tremco.
7. Substitutions: See Section 01 60 00 - “Product Requirements”.

2.03 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing:

1. Round foam rod compatible with sealant; closed cell polyethylene; oversized 30 to 50 percent larger than joint width.
2. Extruded polyurethane foam rod compatible with sealant, open-cell, oversized 25 percent larger than joint width.
3. Quarter-round fillet backer rod, closed-cell polyethylene, 1/4-inch diameter.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive Work.

B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

A. Plan Work and take whatever action is necessary to prevent dirt and debris from contaminating or preventing proper applications. It is the responsibility of this applicator to verify conditions exist in accordance with manufacturer's requirements for proper installation and performance.

B. Remove loose materials and foreign matter that could impair adhesion of sealant.

C. Clean and prime joints in accordance with manufacturer's instructions.

D. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

E. Protect elements surrounding Work of this section from damage or disfigurement.

3.03 INSTALLATION

A. Perform Work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Dry-tool joints concave.

3.04 CLEANING

A. Clean adjacent soiled surfaces.

B. Remove debris from Project site.

3.05 PROTECTION

A. Protect elements surrounding Work of this section from damage or disfigurement.

B. Repair or replace defaced and/or disfigured finishes caused by Work of this section.

C. Protect sealants until cured.

END OF SECTION

Roof Replacement 2027

Project No. 16006 Date: 11/20/26

STR SEG | SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

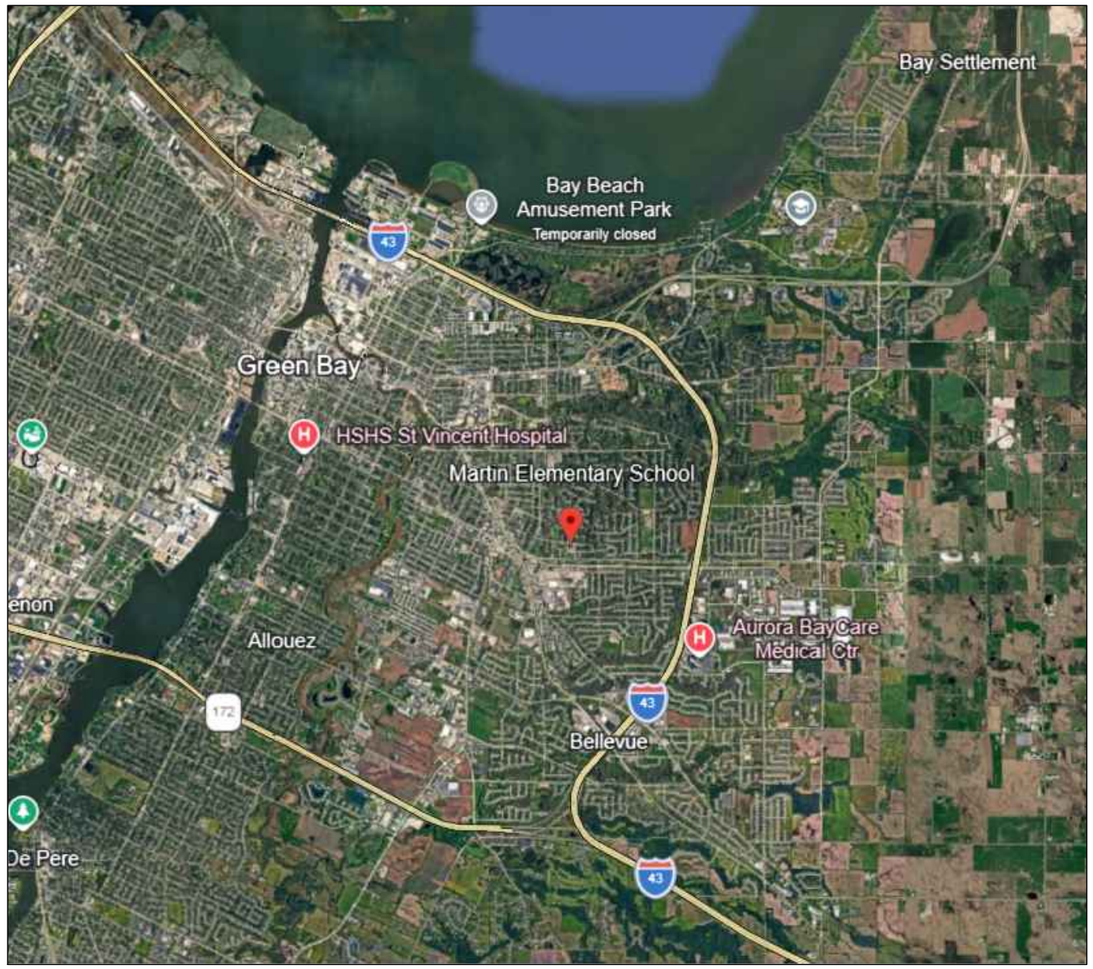
Martin Elementary School

626 Pinehurst Ave - Green Bay, WI

Green Bay Area Public School District

DRAWING INDEX

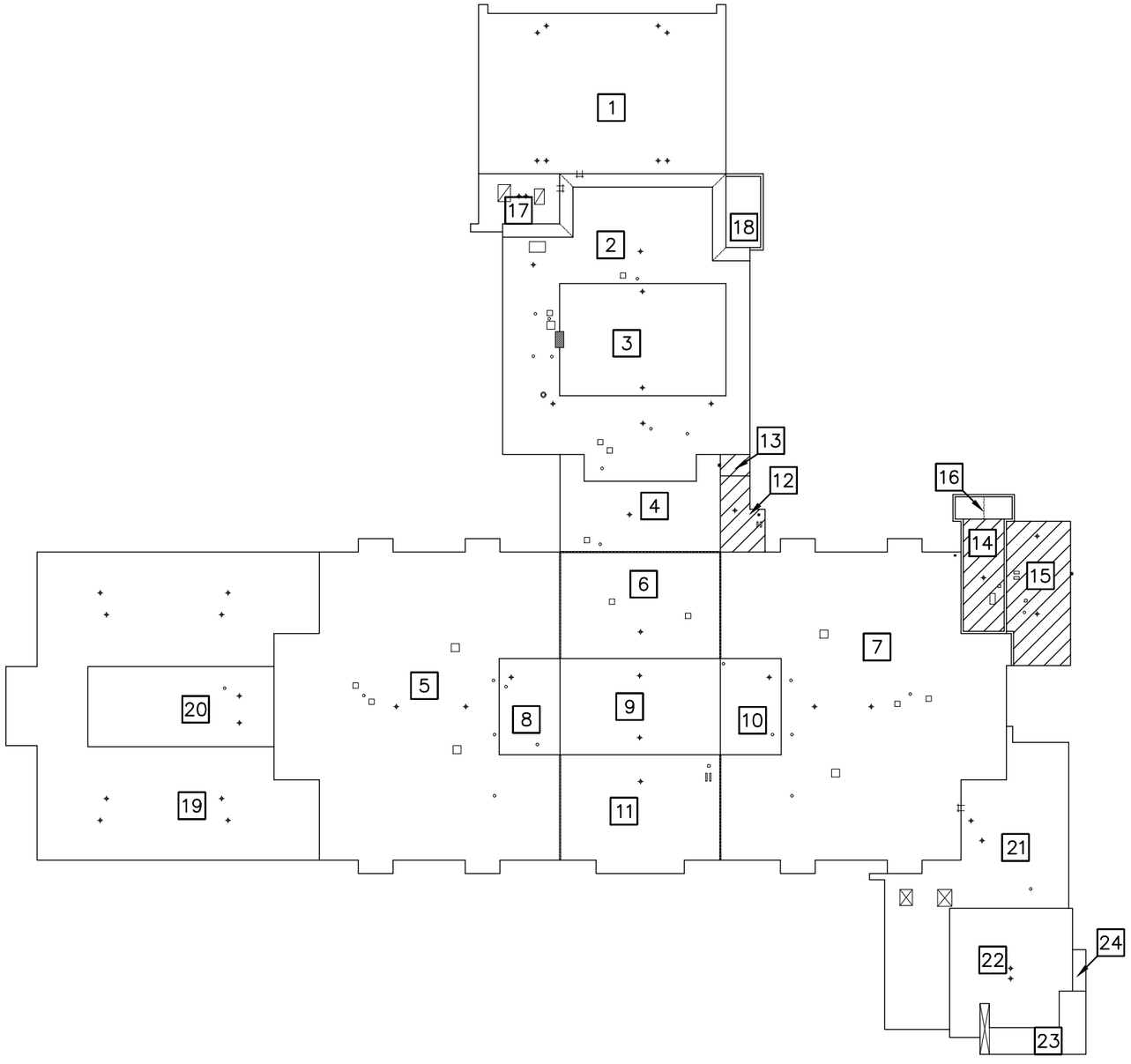
COVER SHEET	
A100	OVERALL ROOF PLAN
A101	DETAIL REFERENCE PLAN
A102	WIND UPLIFT PLAN
A500 THRU A517	ROOFING DETAILS



LOCATION MAP N



AERIAL SITE PHOTO N



N

KEY

- STRUCTURAL SLOPE
- 1/8" PER FOOT TAPER
- 1/4" PER FOOT TAPER
- 1/2" PER FOOT TAPER
- ROOF AREA DESIGNATION
- ROOF REPAIR DESIGNATION
- ROOF DRAIN
- O.S. OVERFLOW SCUPPER TUBE
- O.D. OVERFLOW DRAIN INLET
- ROOF EDGE SCUPPER
- GUTTER EDGE
- ROOFTOP HVAC UNIT
- TYPICAL ROOF CURB
- TYPICAL ROOF HATCH
- TYPICAL SKYLIGHT
- TYPICAL CURBED STACK
- CHIMNEY
- TYPICAL PORTAL CURB
- ROOF LADDER
- TYPICAL SMALL PIPE
- TYPICAL PLUMBING VENT
- TYPICAL HOT STACK
- PITCH PAN
- EXPANSION JOINT
- SLOPE TRANSITION
- AB ABANDONED EQUIPMENT

AREA OF WORK

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

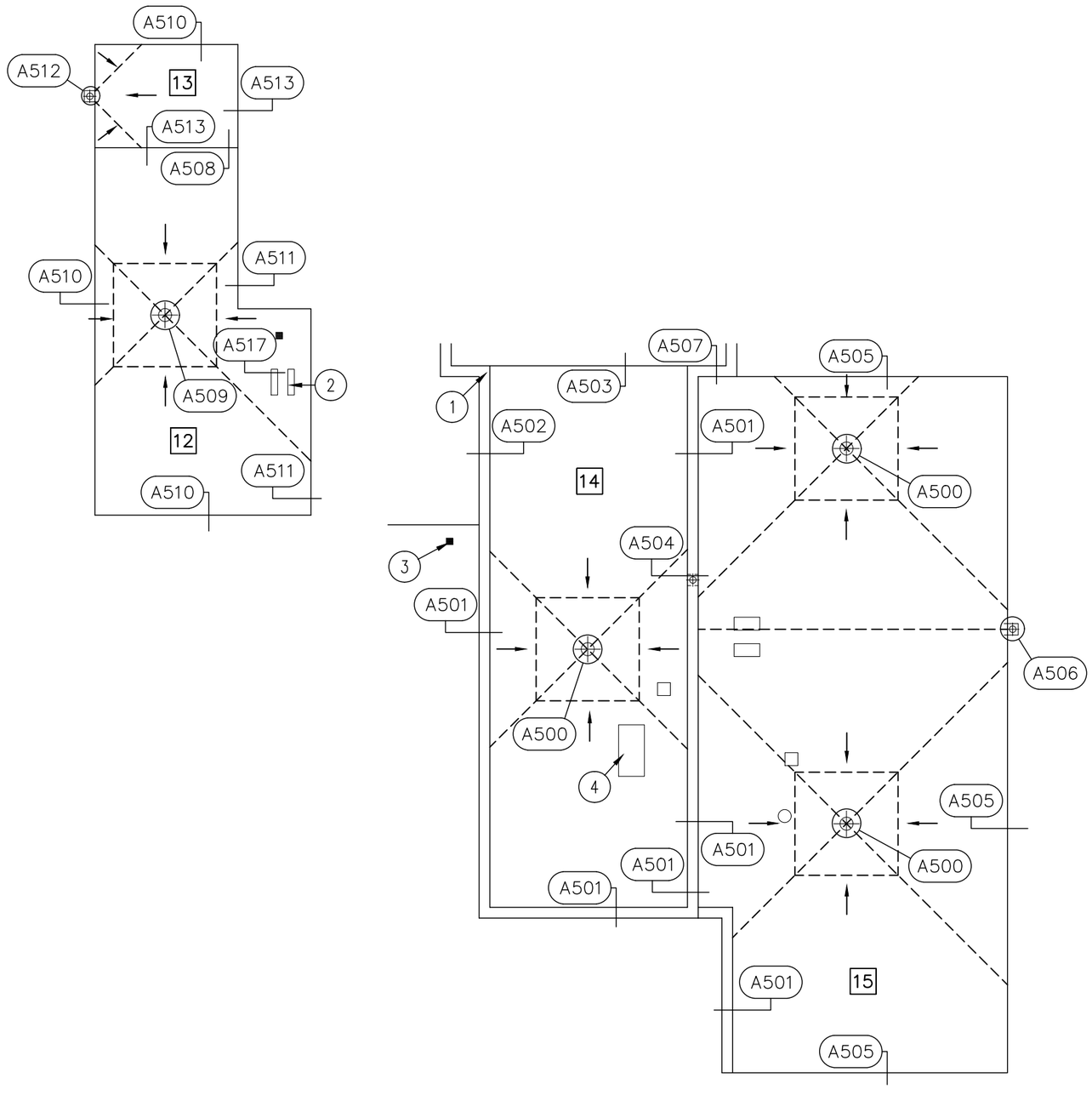
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

OVERALL ROOF PLAN

Drawn by EM
Checked by DS

Sheet No.
A100



ROOF CONSTRUCTION:

ROOF AREAS 12 & 13:
- EXISTING STEEL DECK
- 1.5" POLYISOCYANURATE INSULATION BASE LAYER – MECHANICALLY FASTEN TO DECK
- TAPERED POLYISOCYANURATE INSULATION
  - 1.5" START WITH 1/4" PER TAPER – ADHERE IN ADHESIVE
- 60–MIL ADHERED EPDM MEMBRANE

ROOF AREAS 14 & 15:
- EXISTING STEEL DECK
- EXISTING ASPHALT MEMBRANE
- 1.5" POLYISOCYANURATE INSULATION BASE LAYER – MECHANICALLY FASTEN TO DECK
- TAPERED POLYISOCYANURATE INSULATION
  - 1.5" START WITH 1/4" PER TAPER – ADHERE IN ADHESIVE
- 60–MIL ADHERED EPDM MEMBRANE

NOTES:

(1) – REMOVE, STORE AND REINSTALL SHEET METAL FLANGE

(2) – COORDINATE WITH OWNER FOR DISCONNECTION TO TEMPORARY REMOVAL OF SECURITY LIGHT

(3) – REFILL PITCH PAN

(4) – COORDINATE WITH OWNER FOR CONNECTIONS TO TEMPORARY REMOVAL OF CONDENSER

N

KEY

- STRUCTURAL SLOPE
- 1/8" PER FOOT TAPER
- 1/4" PER FOOT TAPER
- 1/2" PER FOOT TAPER
- ROOF AREA DESIGNATION
- ROOF REPAIR DESIGNATION
- ROOF DRAIN
- O.S. OVERFLOW SCUPPER TUBE
- O.D. OVERFLOW DRAIN INLET
- ROOF EDGE SCUPPER
- GUTTER EDGE
- ROOFTOP HVAC UNIT
- TYPICAL ROOF CURB
- TYPICAL ROOF HATCH
- TYPICAL SKYLIGHT
- TYPICAL CURBED STACK
- CHIMNEY
- TYPICAL PORTAL CURB
- ROOF LADDER
- TYPICAL SMALL PIPE
- TYPICAL PLUMBING VENT
- TYPICAL HOT STACK
- PITCH PAN
- EXPANSION JOINT
- SLOPE TRANSITION
- AB ABANDONED EQUIPMENT

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

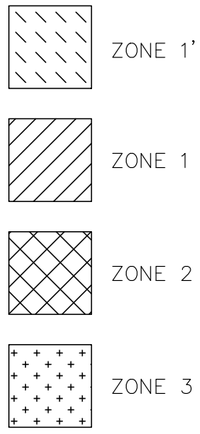
11/20/26 | Project No. 16006

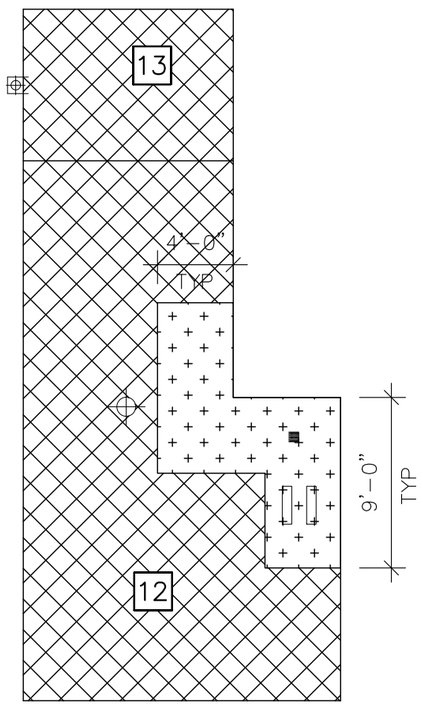
DETAIL REFERENCE PLAN

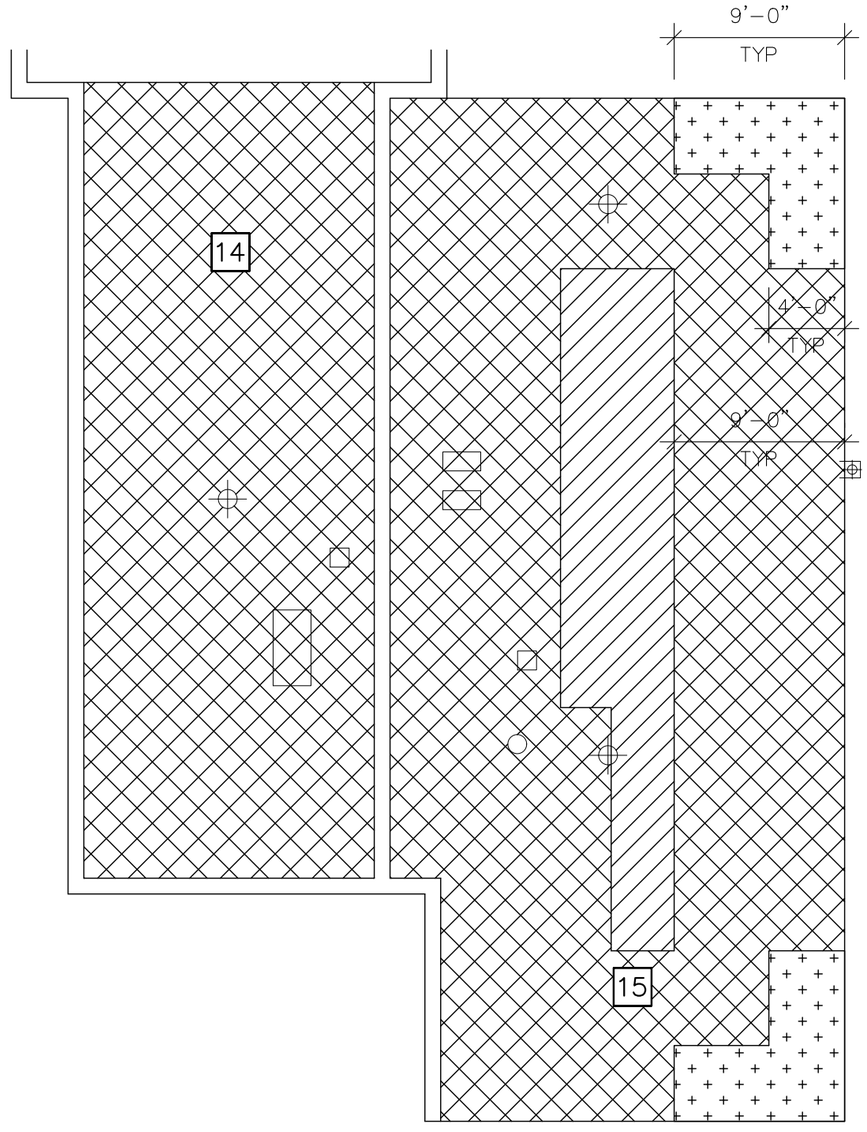
Drawn by EM
Checked by DS

Sheet No.
A101

ZONE	WIND UPLIFT PRESSURE (PSF)	ADHESIVE RATES: BEADS PER 4X4 BOARD WIDTH	FASTENING RATES: FASTENERS PER 4X8 BOARD
1'	−61		
1	−106	4	6
2	−140	6	8
3	−190	8	10

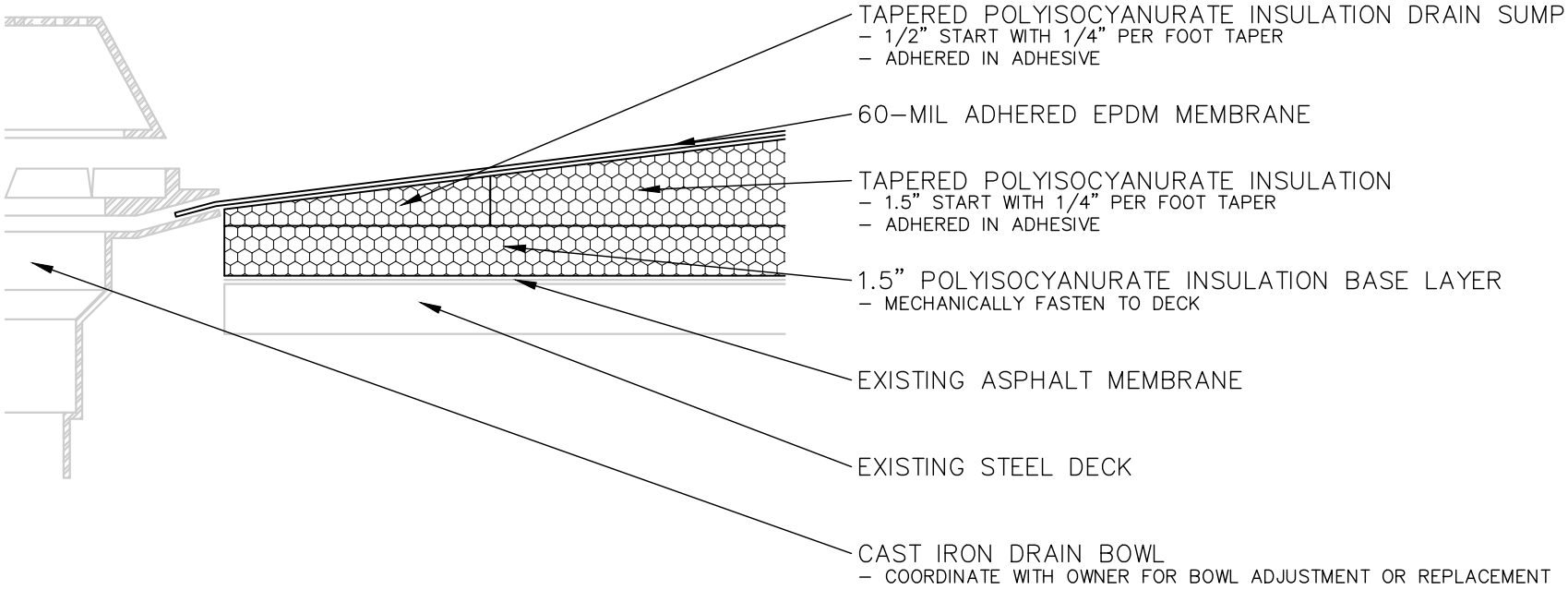






N

STR SEG	SPECIALTY ENGINEERING GROUP LLC 122 E. OLIN AVENUE, SUITE 190 MADISON, WI 53713 TEL: 262 253 4700 | www.str-seg.com	Green Bay Area Public School District Roof Replacement 2027		Martin Elementary School 626 Pinehurst Ave - Green Bay, WI	Drawn by EM Checked by DS	Sheet No. A102
		11/20/26	Project No. 16006	WIND UPLIFT PLAN		



NOTE: SET OR ADJUST TO 2" ABOVE DECK

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

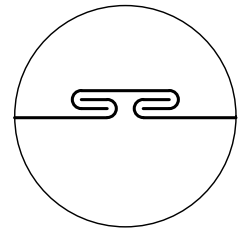
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

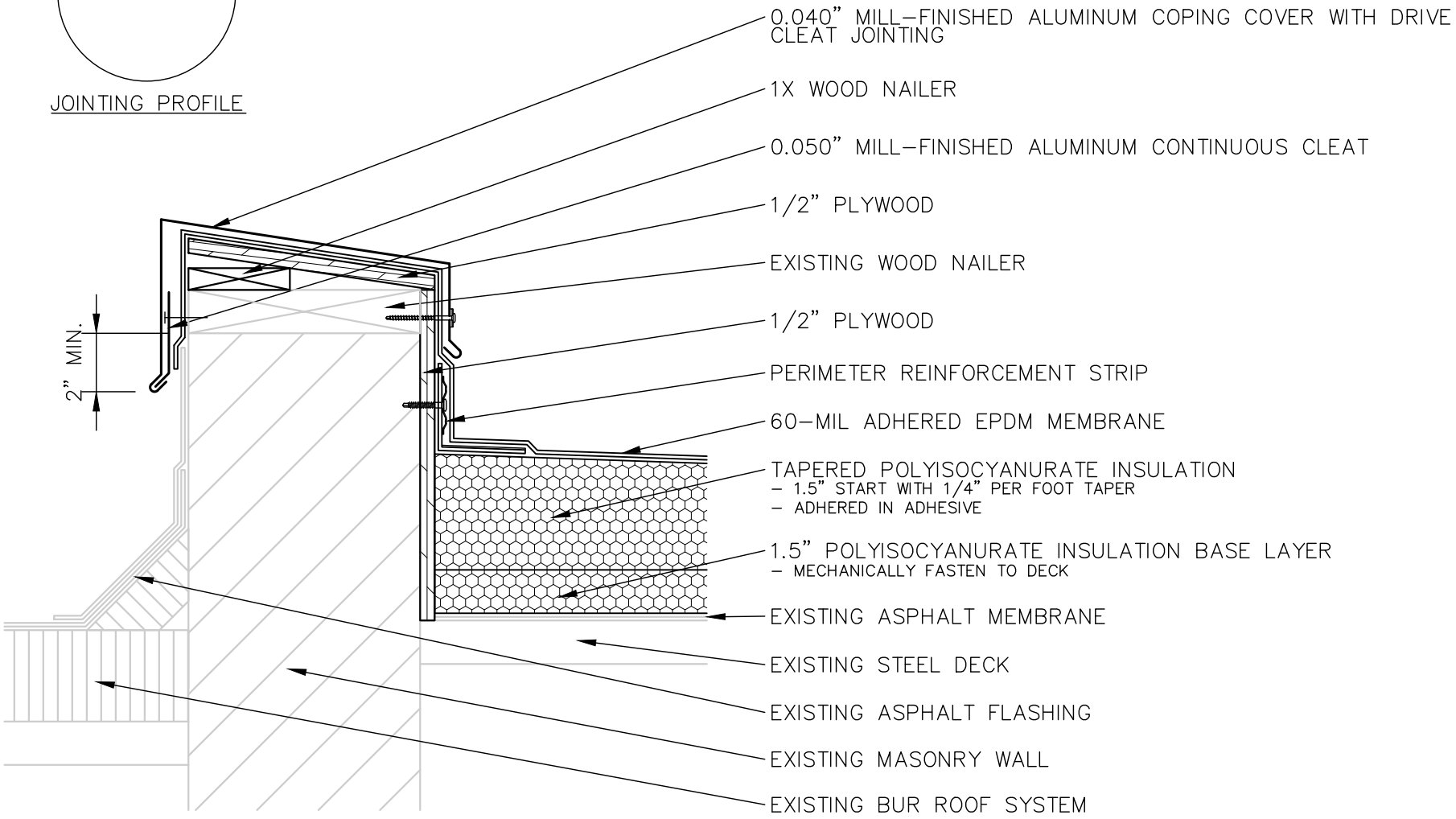
DRAIN FLASHING

Drawn by EM
Checked by DS

Sheet No.
A500



JOINTING PROFILE



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

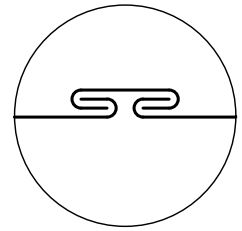
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

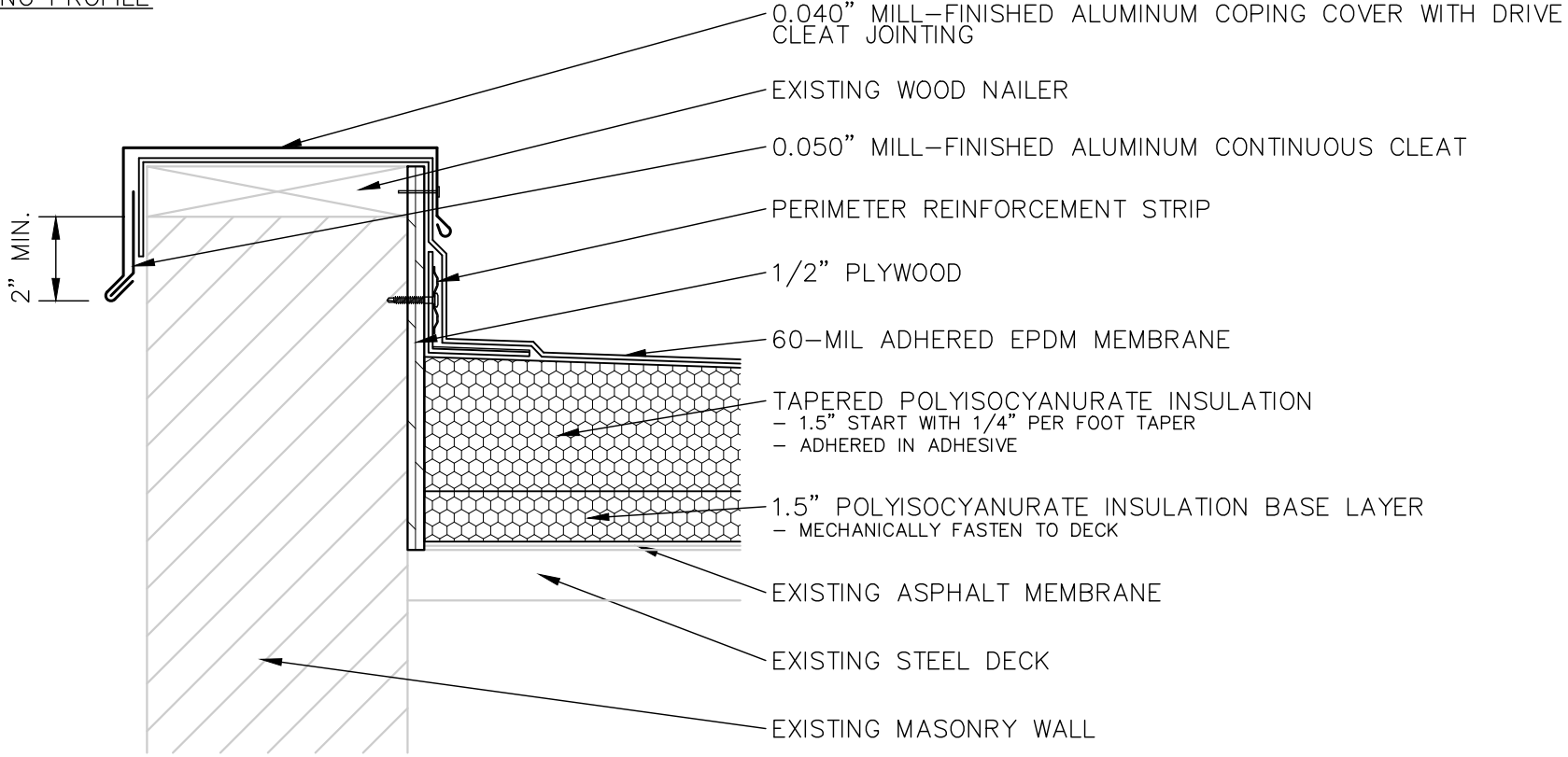
AREA DIVIDER FLASHING

Drawn by EM
Checked by DS

Sheet No.
A501



JOINTING PROFILE



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

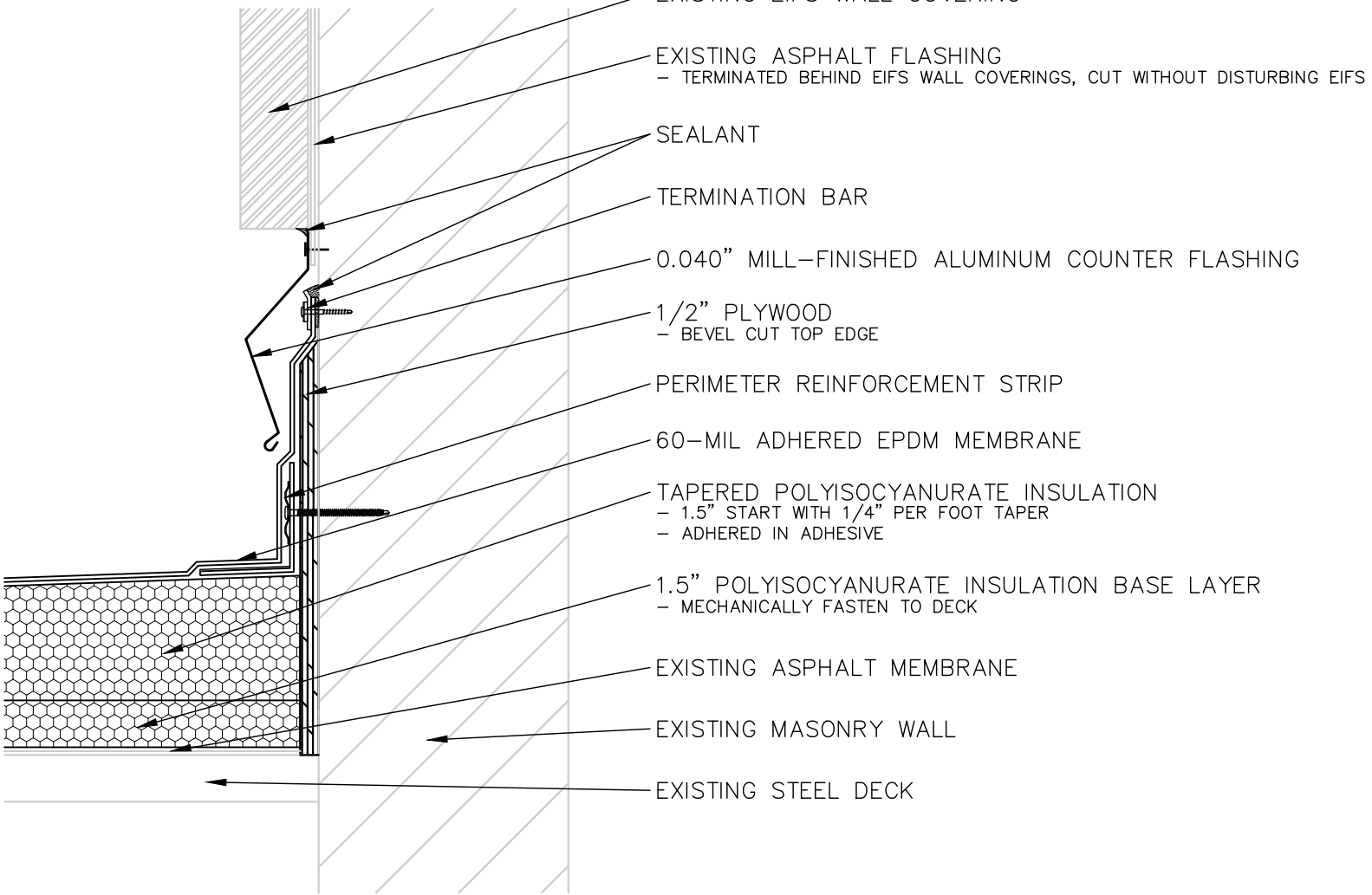
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

PARAPET FLASHING

Drawn by EM
Checked by DS

Sheet No.
A502



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

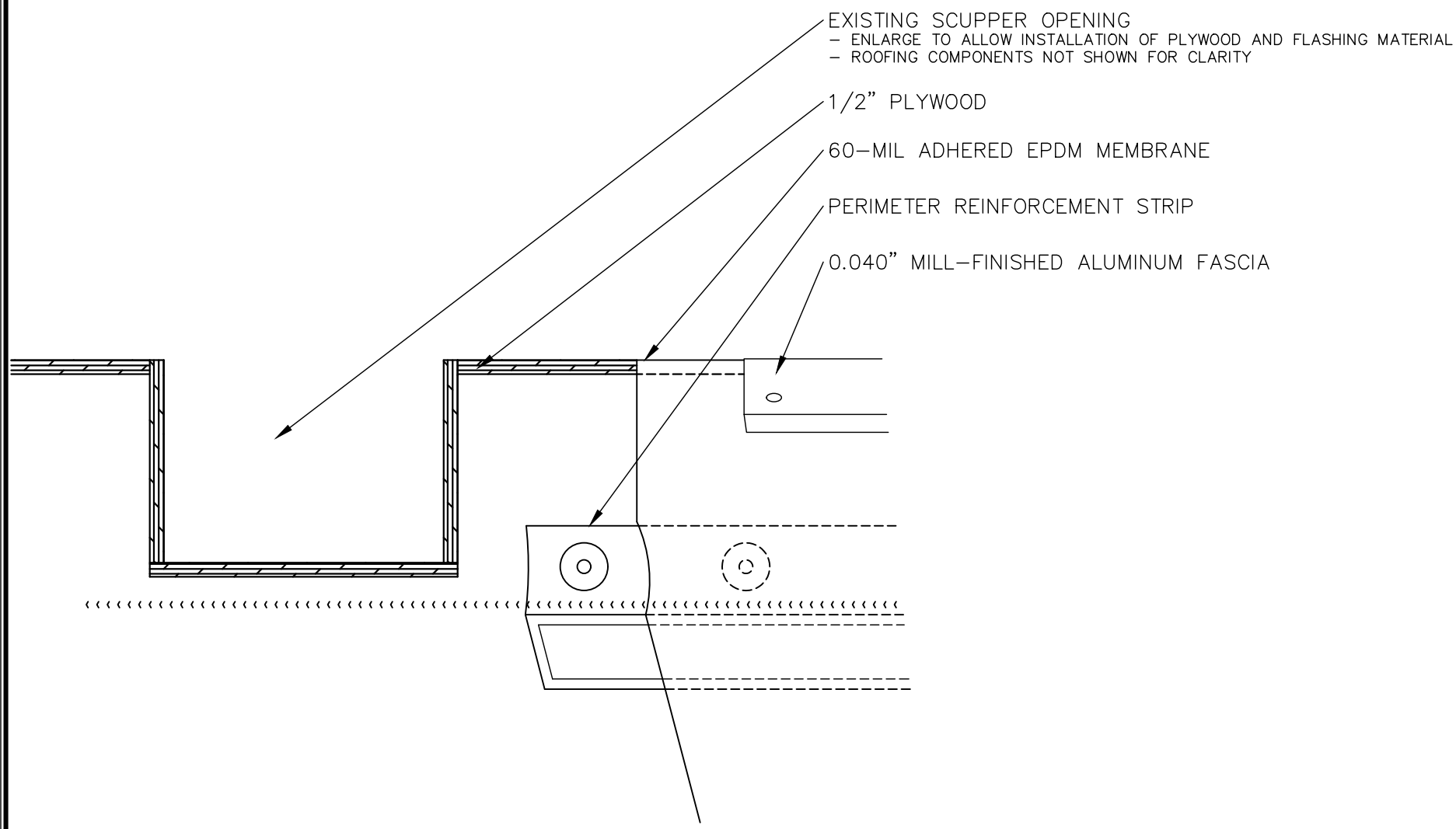
11/20/26 | Project No. 16006

WALL FLASHING

Drawn by EM
Checked by DS

Sheet No.
A503

SEE A501 FOR CONSTRUCTION



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

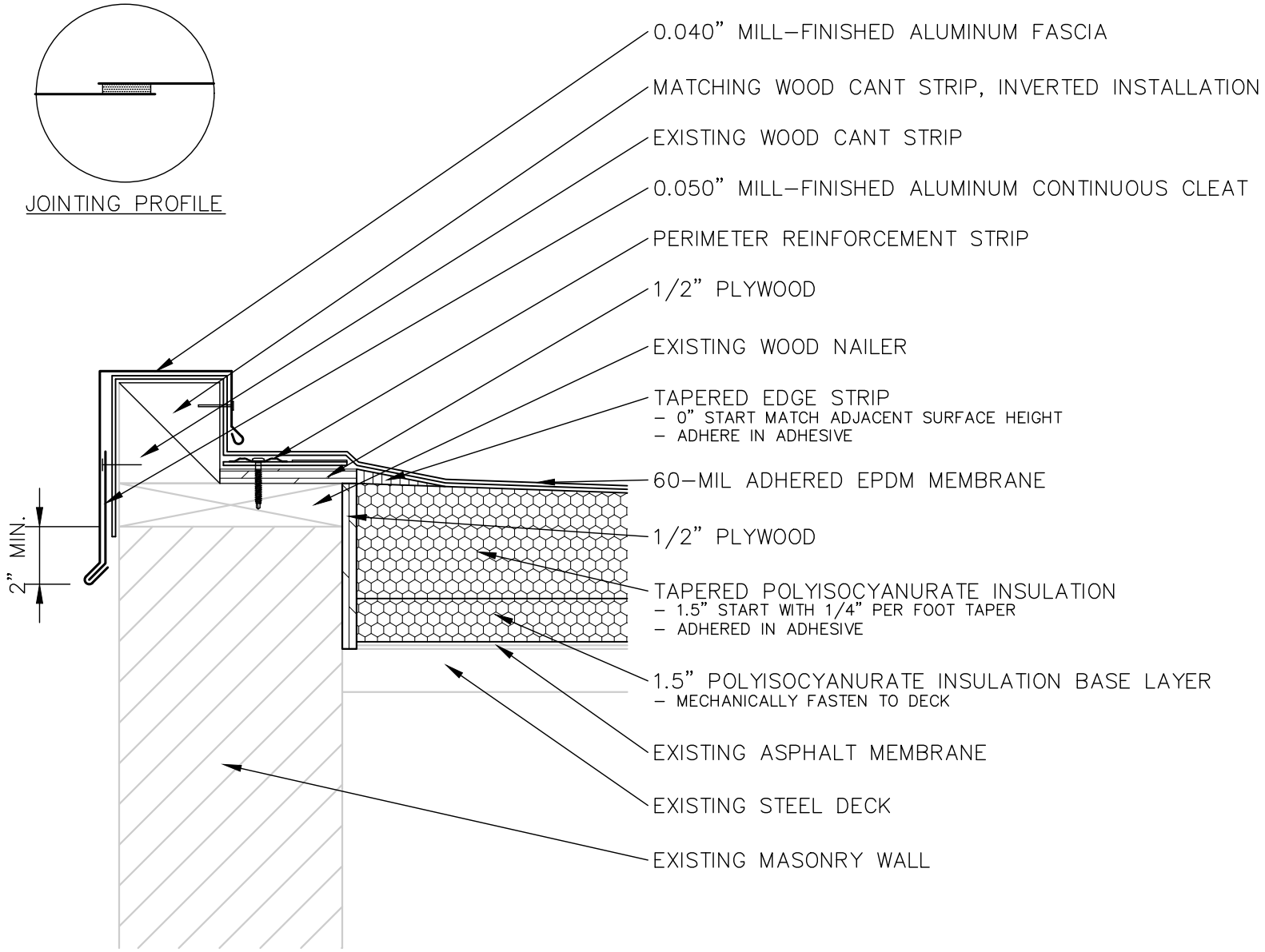
11/20/26 | Project No. 16006

Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

SCUPPER FLASHING

Drawn by EM
Checked by DS

Sheet No.
A504



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

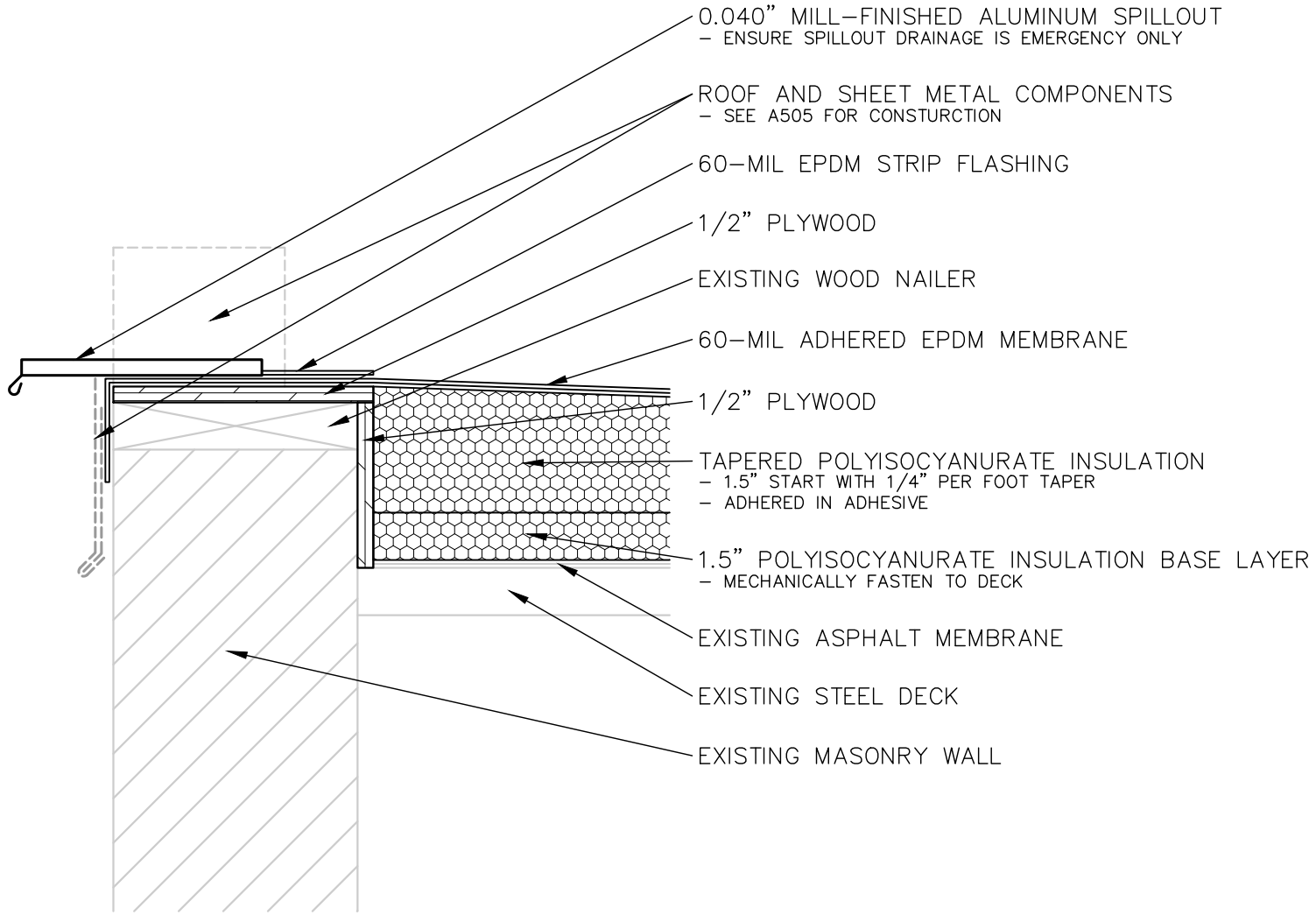
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

ROOF EDGE FLASHING

Drawn by EM
Checked by DS

Sheet No.
A505



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

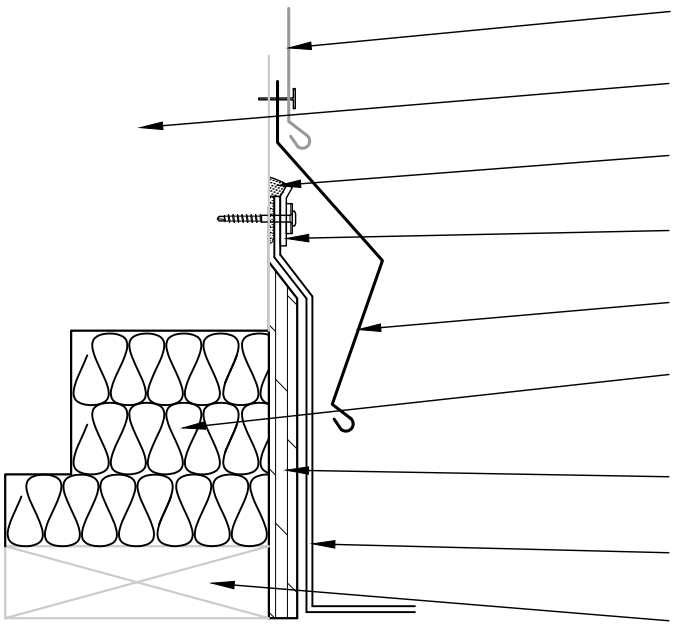
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

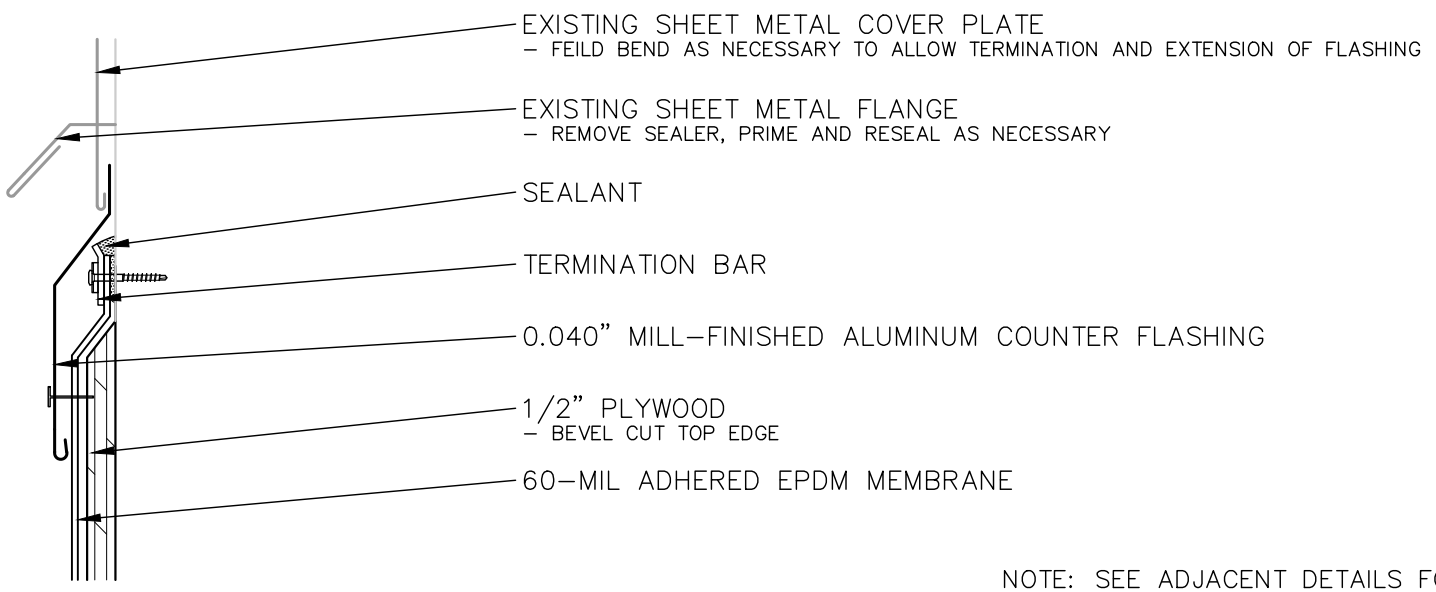
11/20/26 | Project No. 16006

SCUPPER FLASHING

Drawn by EM
Checked by DS

Sheet No.
A506





NOTE: SEE ADJACENT DETAILS FOR CONSTRUCTION

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

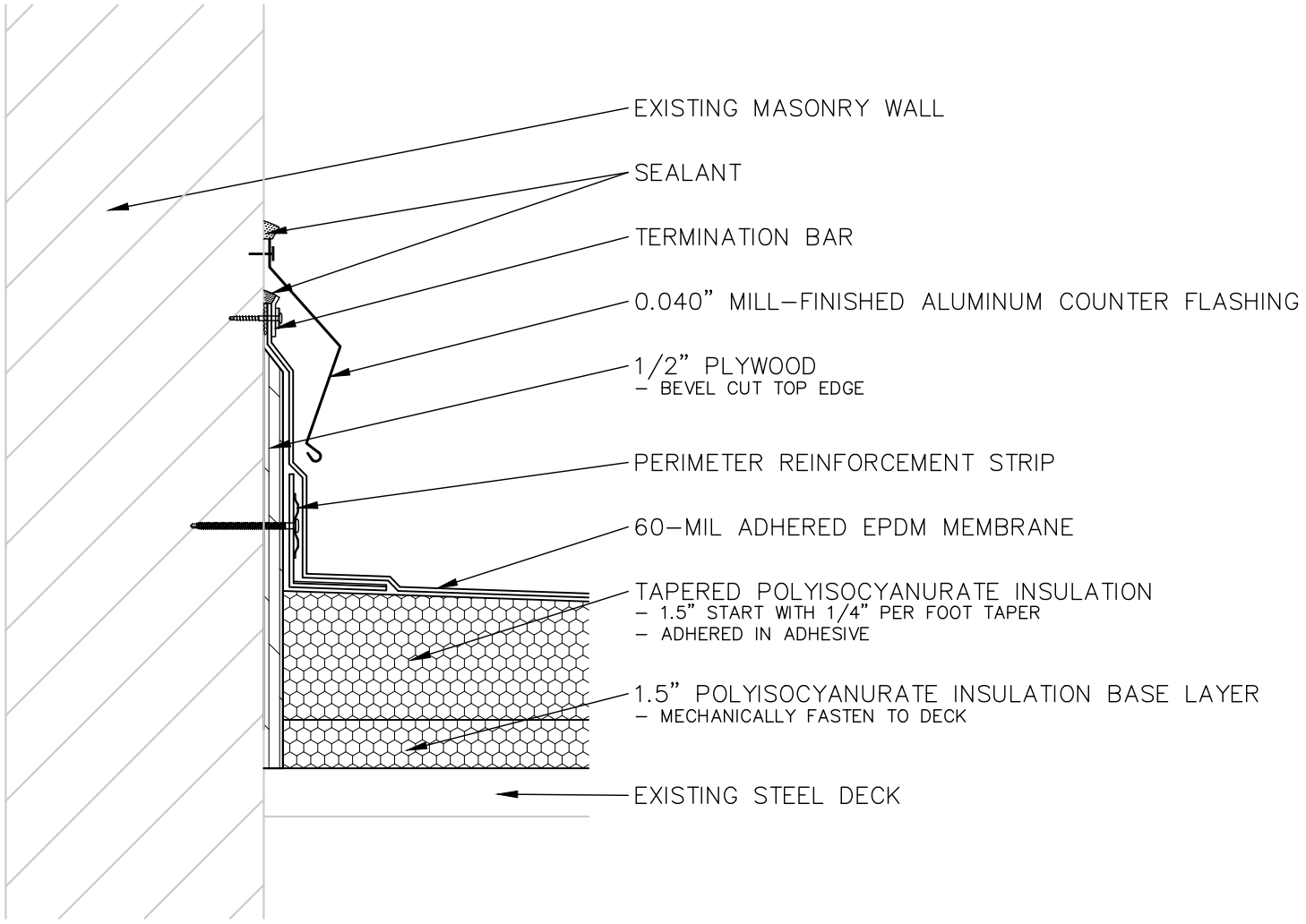
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

NW CORNER CLOSURE FLASHING

Drawn by EM
Checked by DS

Sheet No.
A507



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

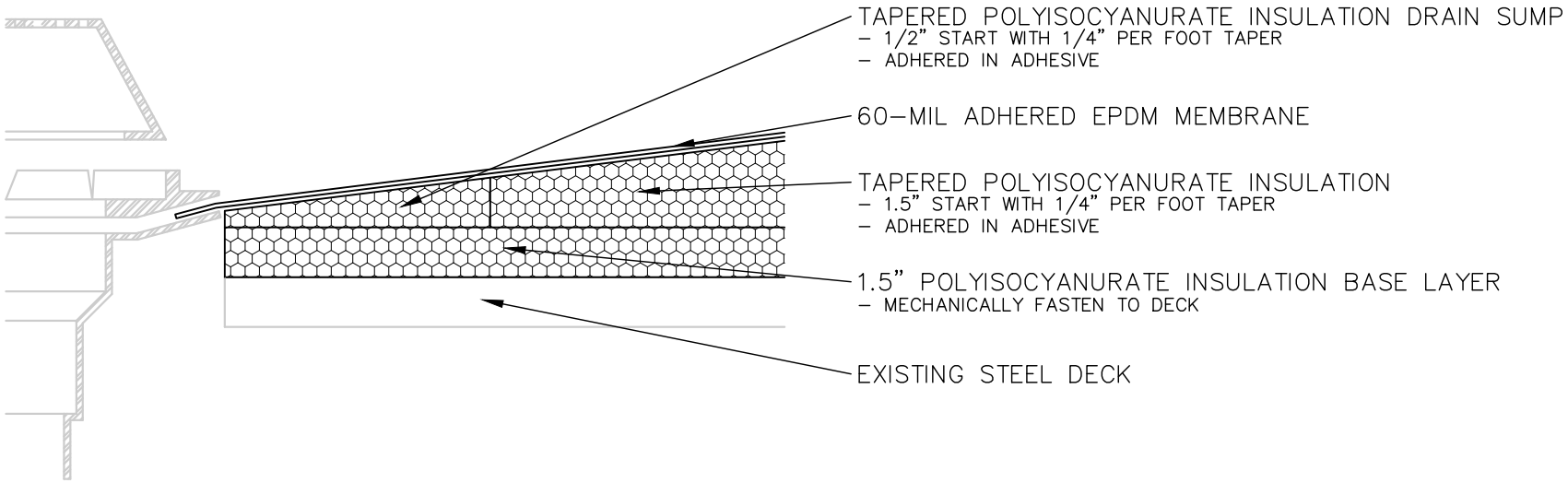
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

WALL FLASHING

Drawn by EM
Checked by DS

Sheet No.
A508



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

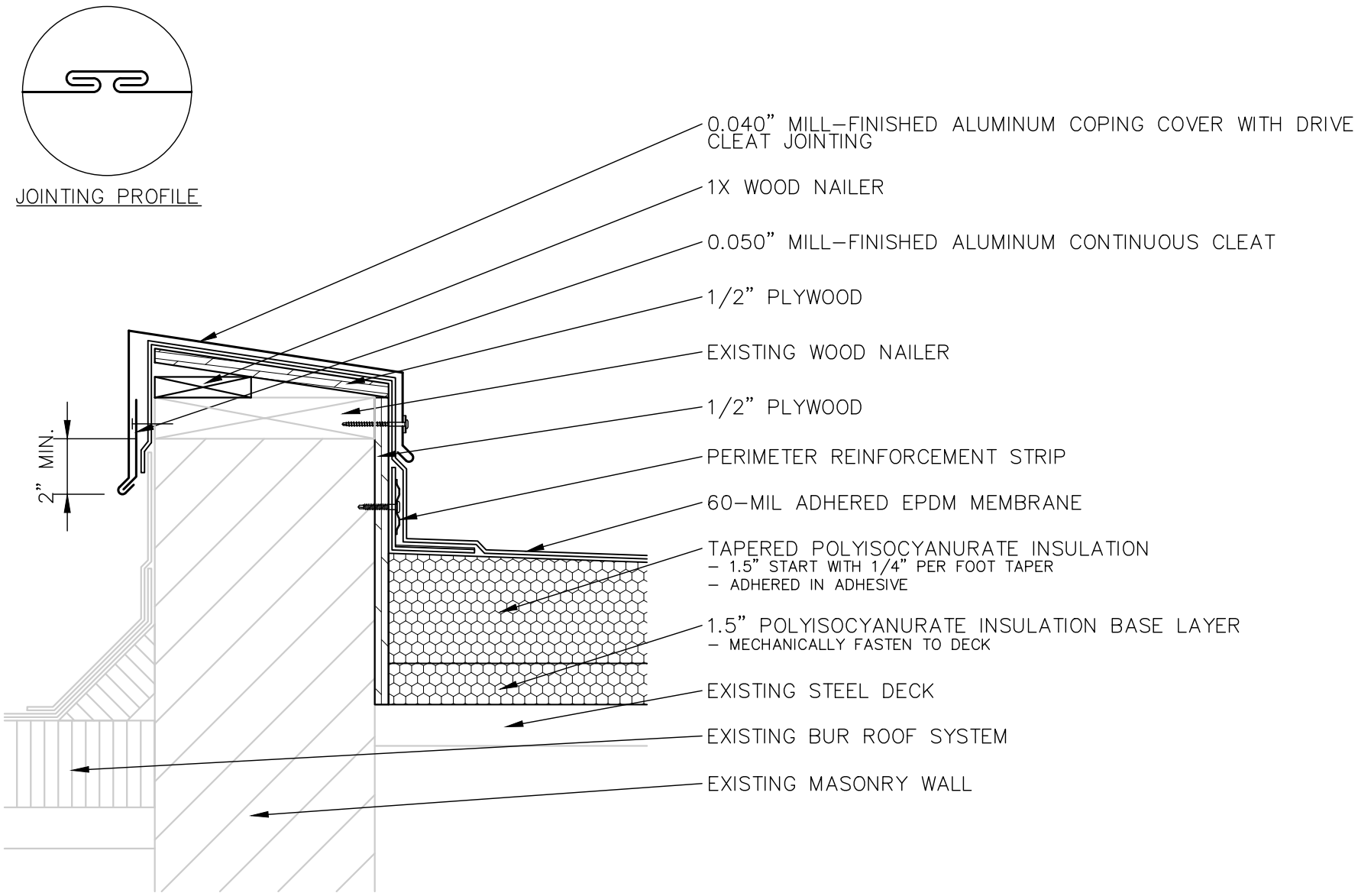
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

DRAIN FLASHING

Drawn by EM
Checked by DS

Sheet No.
A509



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

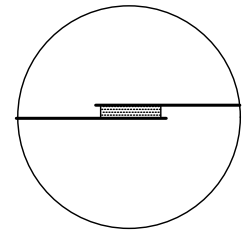
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

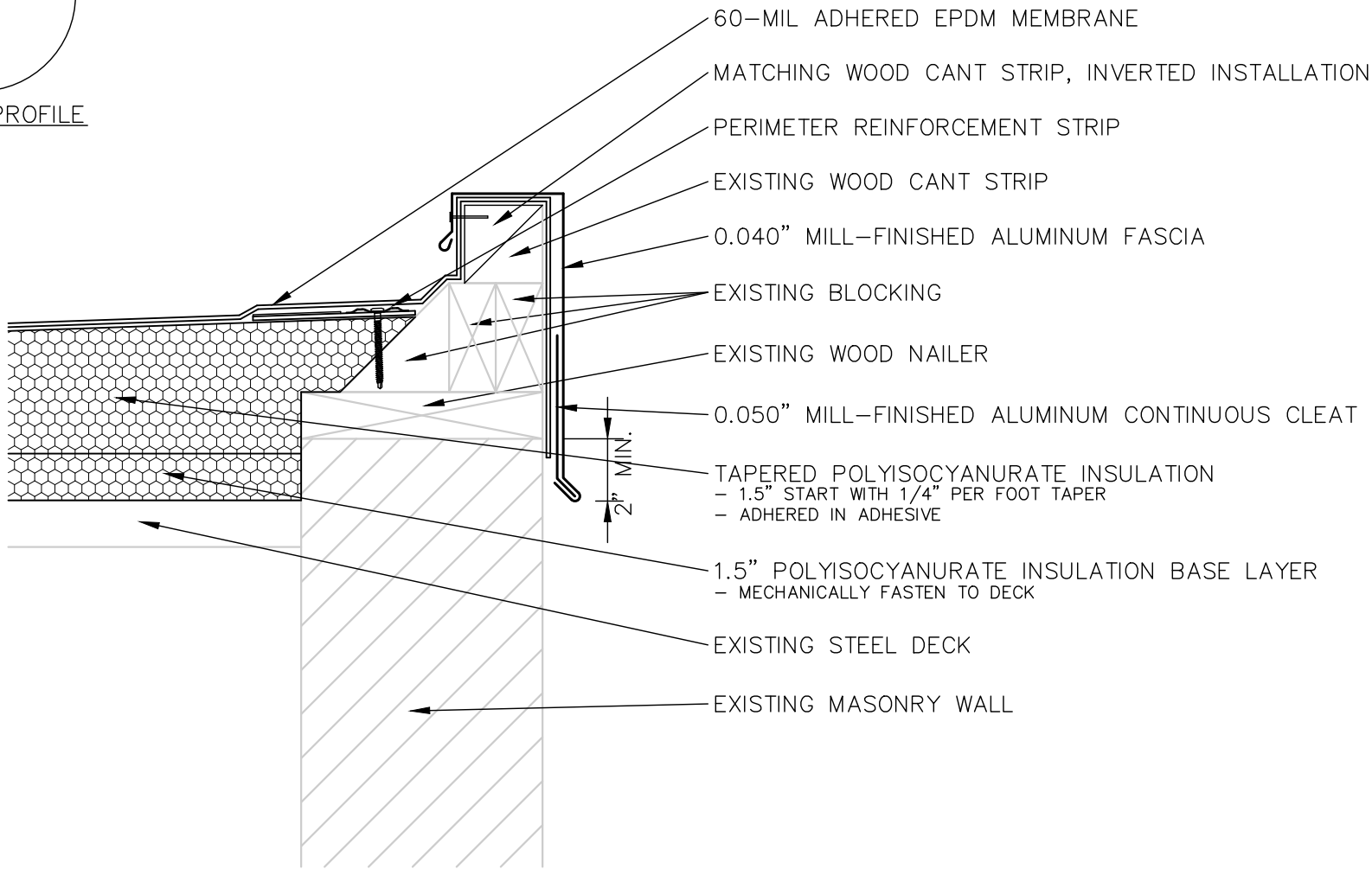
AREA DIVIDER FLASHING

Drawn by EM
Checked by DS

Sheet No.
A510



JOINTING PROFILE



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

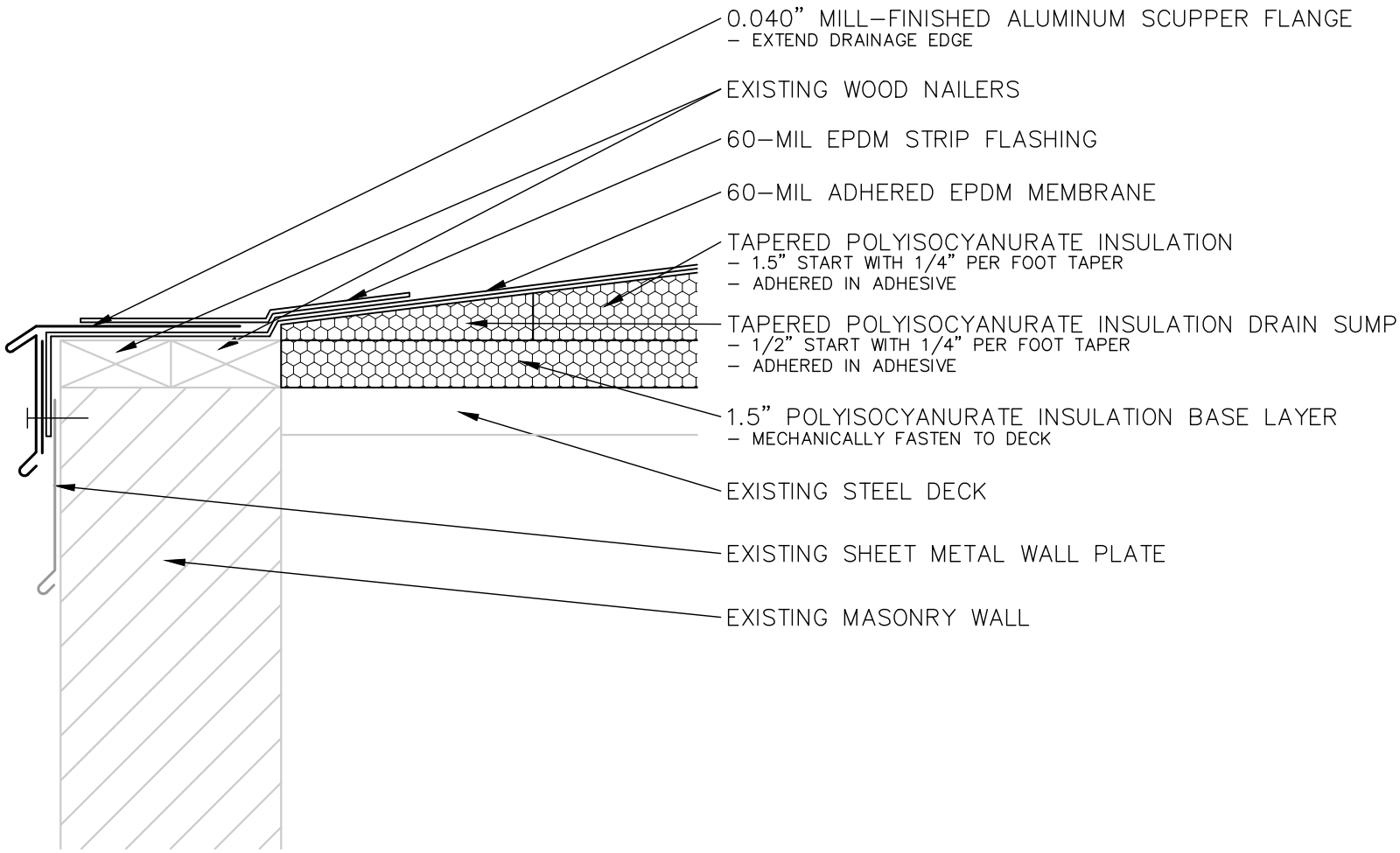
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

ROOF EDGE FLASHING

Drawn by EM
Checked by DS

Sheet No.
A511



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

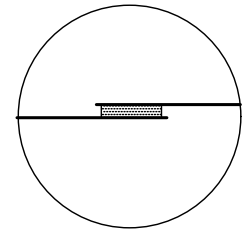
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

SCUPPER FLASHING

Drawn by EM
Checked by DS

Sheet No.
A512



JOINTING PROFILE

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

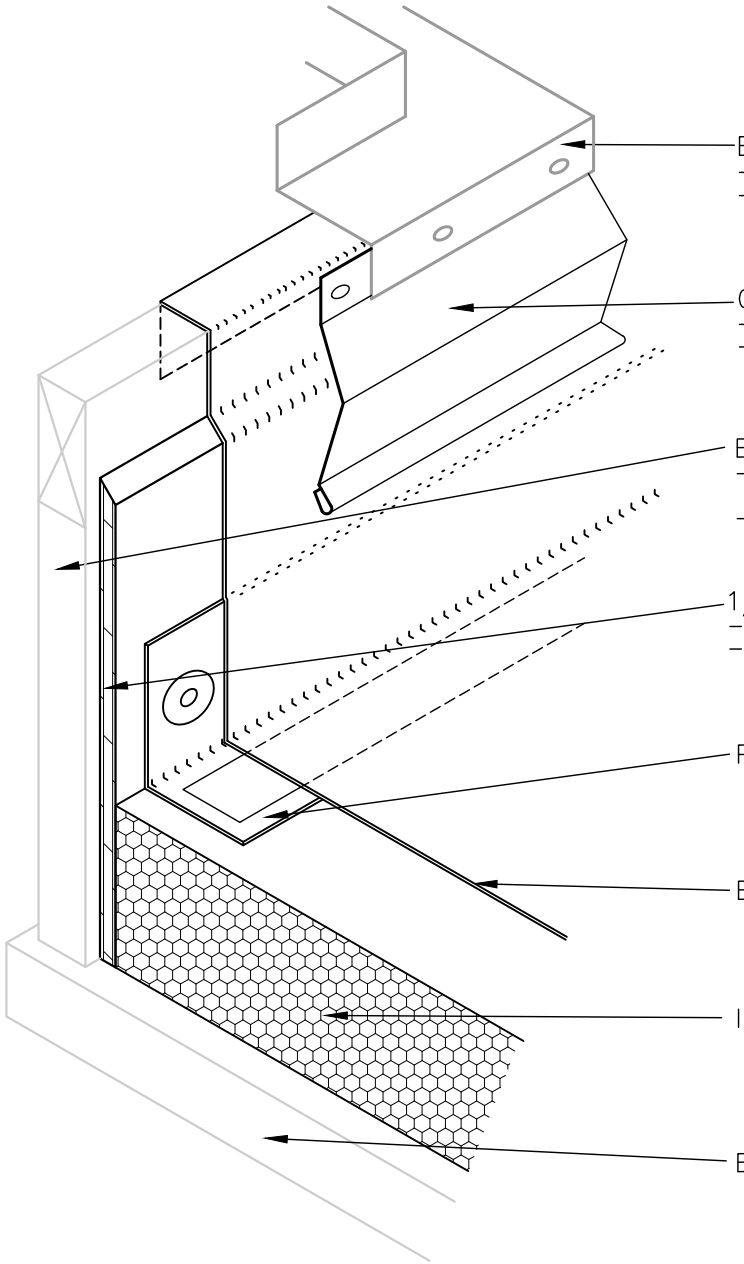
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

ROOF EDGE FLASHING

Drawn by EM
Checked by DS

Sheet No.
A513



EXISTING UNIT HOOD
- REMOVE TO ALLOW FOR INSTALLATION OF NEW FLASHINGS
- RE-FASTEN TO BLOCKING THROUGH NEW COUNTER FLASHING USING EXISTING HOLES

0.040" MILL-FINISHED ALUMINUM COUNTER FLASHING
- INSTALL BEHIND EXISTING HOOD WITH SOLID-JOINTED CORNERS
- FASTEN TOP TO SHIM NAILER AT 12" O.C.

EXISTING CURB
- ADD NEW 2" NOMIAL THICKNESS BLOCKING WHERE REQUIRED TO PROVIDE MINIMUM FLASHING HEIGHT
- FASTEN TO TOP OF EXISTING CURB AT 12" O.C.

1/2" PLYWOOD
- BEVEL CUT TOP EDGE
- INSTALL WITH 2" MIN. ALLOWANCE FOR FLASHING AND EXISTING CAP

PERIMETER REINFORCEMENT STRIP

EPDM SINGLE-PLY ROOF MEMBRANE

INSULATION

EXISTING STEEL DECK

NOTE:
USE AT ASPHALT CONTAMINATED CURBS

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

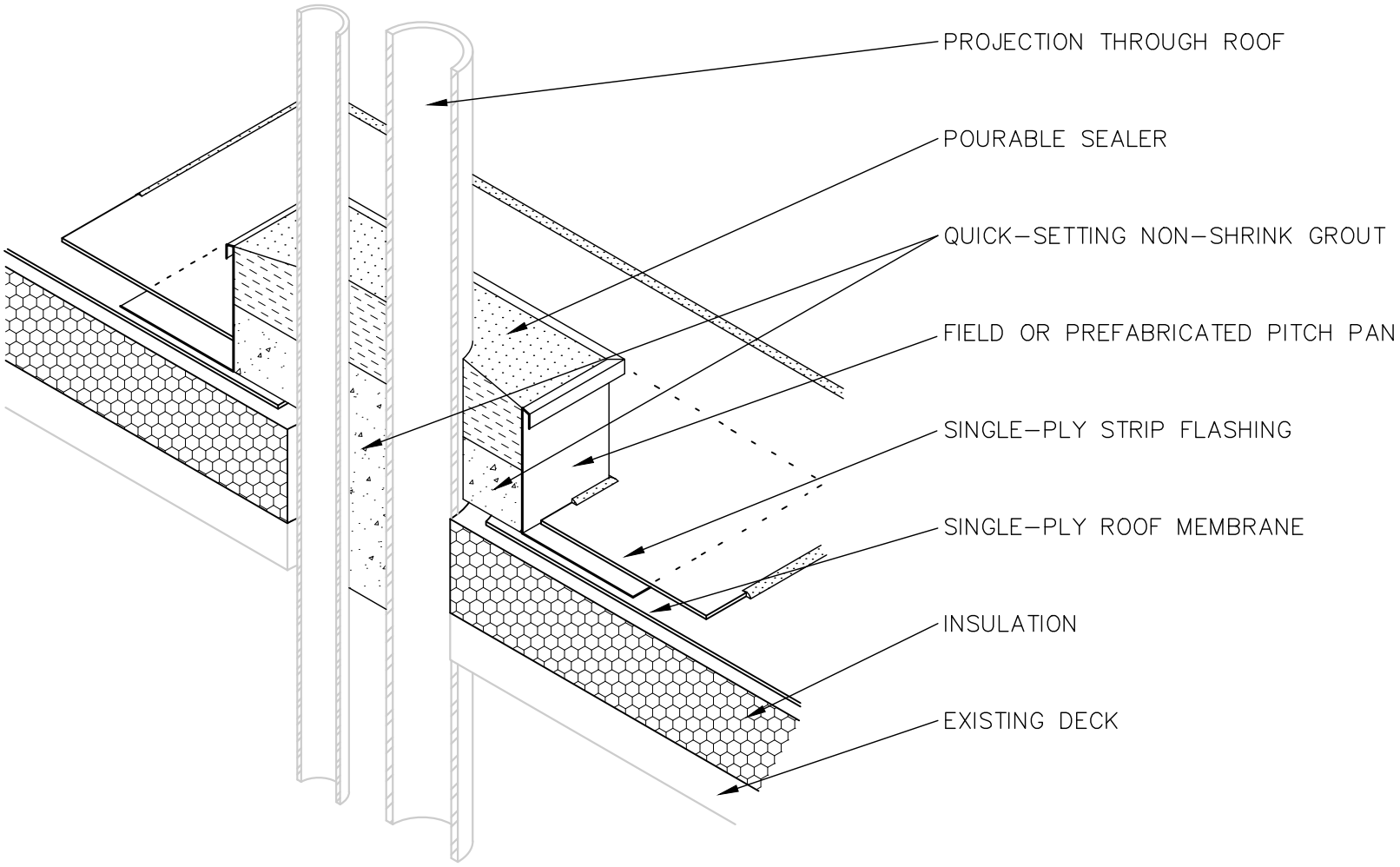
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

TYPICAL CURB FLASHING

Drawn by EM
Checked by DS

Sheet No.
A514



STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

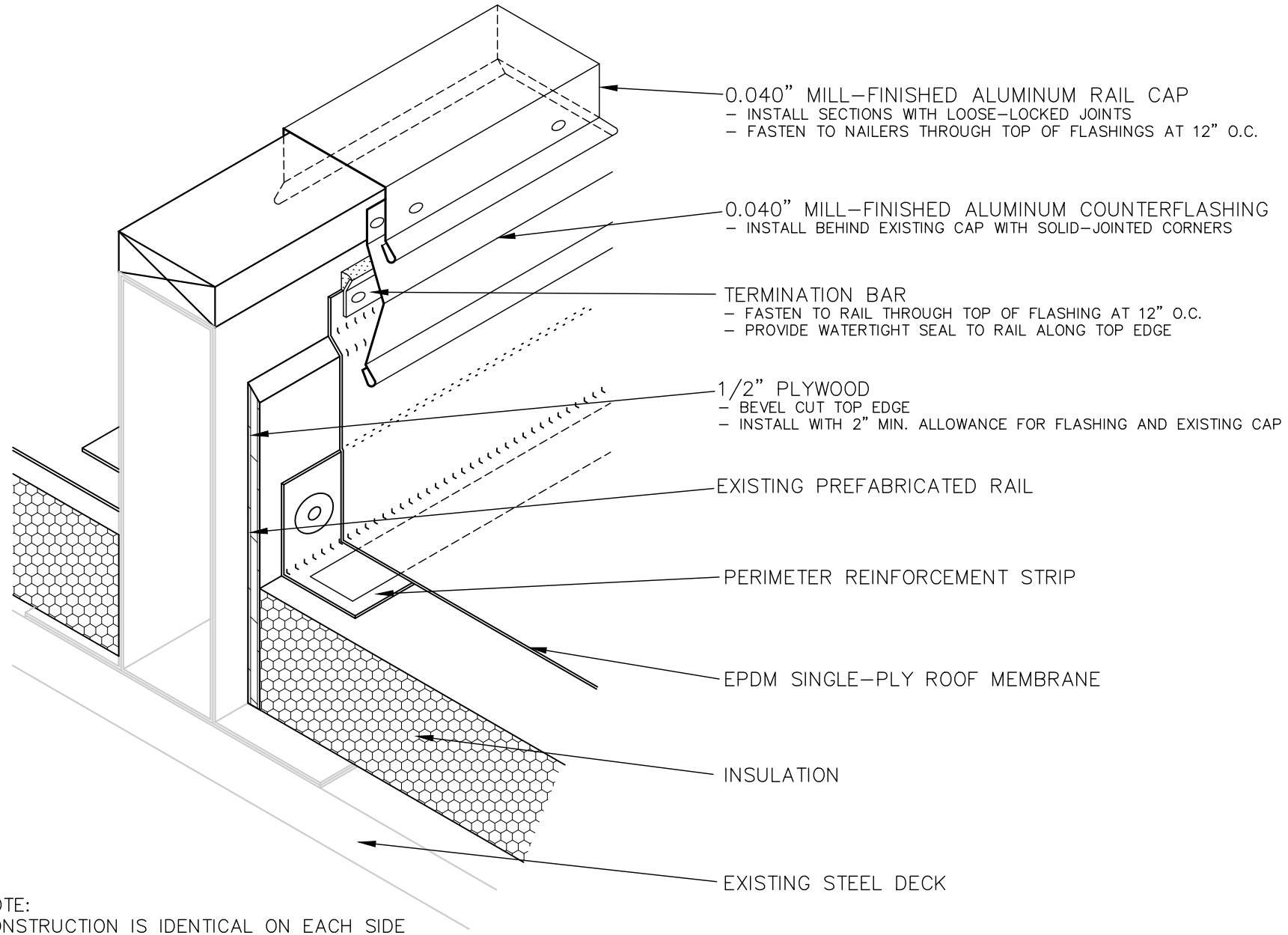
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

TYPICAL PITCH PAN FLASHING

Drawn by EM
Checked by DS

Sheet No.
A515



NOTE:
CONSTRUCTION IS IDENTICAL ON EACH SIDE

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

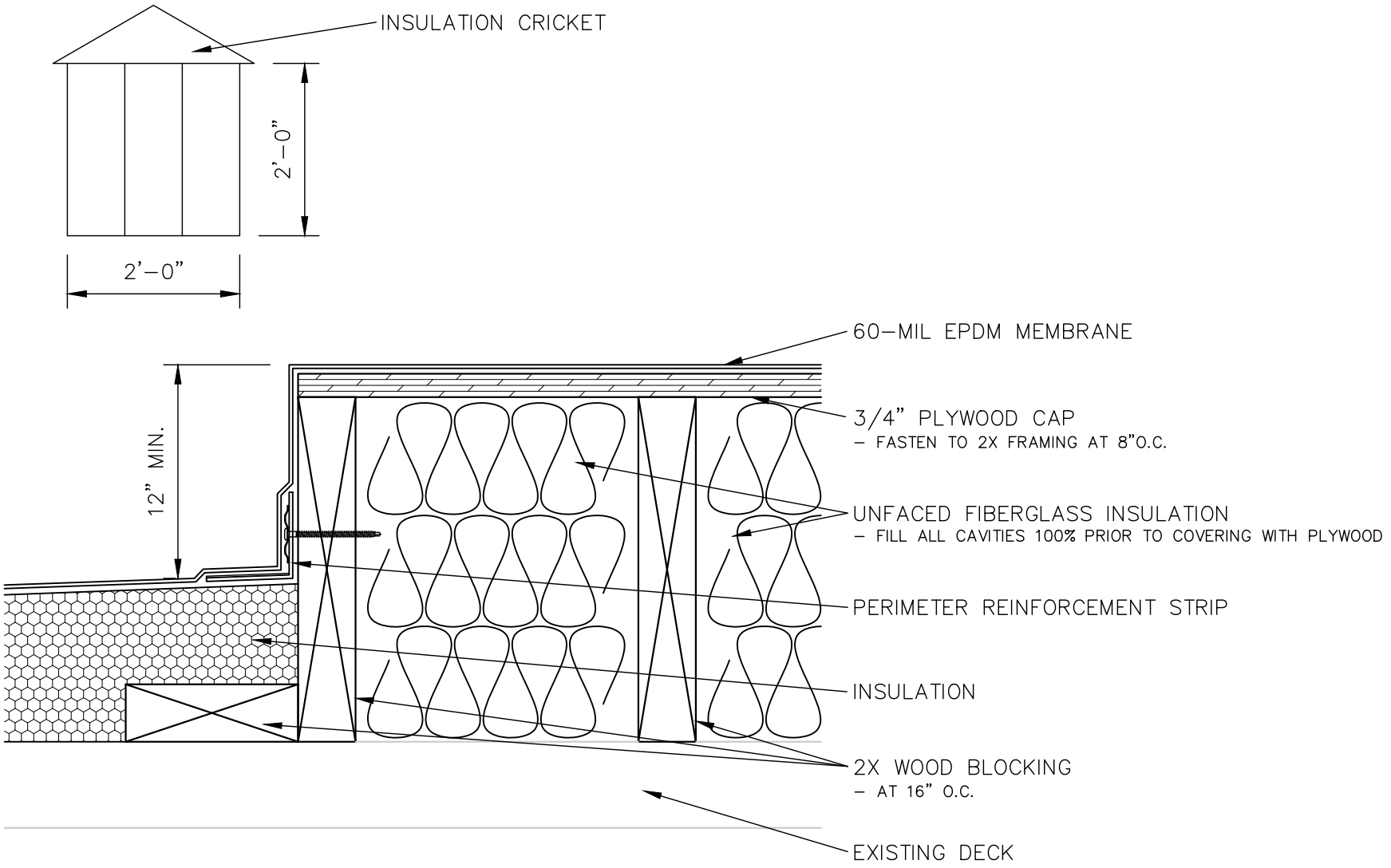
Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

TYPICAL SUPPORT FLASHING

Drawn by EM
Checked by DS

Sheet No.
A516



NOTE:
– INSTALL WITH INSULATION CRICKET ON UPSLOPE SIDE
– COORDINATE WITH OWNER FOR RE–INSTALLATION OF SECURITY LIGHT

STR SEG
SPECIALTY ENGINEERING GROUP LLC
122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

Green Bay Area Public School District
Roof Replacement 2027

Martin Elementary School
626 Pinehurst Ave - Green Bay, WI

11/20/26 | Project No. 16006

INSULATED WOOD CURB FLASHING

Drawn by EM
Checked by DS

Sheet No.
A517