
HURON INTERMEDIATE SCHOOL DISTRICT

ADMIN BUILDING ROOFING

BAD AXE, MICHIGAN

JUNE 4, 2026



SECTION 00 0100

PROJECT DIRECTORY

PROJECT : Huron Intermediate School District
Admin Building Roofing

PROJECT LOCATION : Huron Intermediate School District
1299 S. Thomas Rd.
Bad Axe, MI 48413

CM / CONSULTANT : R.C. Hendrick & Son, Inc.
2885 S. Graham Road
Saginaw, MI 48609
989.781.8116 (Phone)
989.781.9512 (Fax)

DESIGNER / SPECIFIER : Duro-Last
525 Morley Drive
Saginaw, MI 48601

END OF SECTION 00 0100

SECTION 00 0110

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SECTION 00 1000

ADVERTISEMENT FOR BID

Notice is hereby given Huron ISD is receiving bids from trade contractors for the following project:

ADMIN BUILDING ROOFING

Complete proposals will be received for the following work categories in accordance with drawings and specifications as prepared by the Architect, Engineers and/or Construction Manager.

BID CATEGORY 1: ALL TRADES WORK

Bids will be received at the Office of The Superintendent until **2:00 p.m. on Tuesday, June 23rd, 2026** at which time the bids will be publicly opened and read aloud.

Proposals should be submitted in TRIPLICATE and be addressed to:

Joe Candela - Superintendent of Schools
Huron Intermediate School District
1299 S. Thomas Rd.
Bad Axe, MI 48413

R.C. Hendrick & Son, Inc. is the CM and/or Owner's Consultant on this Project. Please do not phone, fax, or email bids to the Construction Manager.

The Owner reserves the right to reject any, part of any or all bids and to waive all informalities in the bidding procedures. The Owner reserves the right to reject any bid when Bidder fails to submit data required by the Bidding Documents, or if the bid is submitted incomplete or irregular. No telephonic, telegraphic, email, fax bids or modification to a submitted bid will be received or considered by the Owner.

Each bid that exceeds Fifty Thousand Dollars (\$50,000) must be submitted with an attached certified check or bid bond from a surety company approved to do business in the State of Michigan, payable to the Owner in an amount not less than five percent (5%) of the base bid.

Bids may not be withdrawn for a period of sixty (60) days after the bid date.

PRE-BID CONFERENCE

There is a pre-bid conference scheduled for **Wednesday, June 10th, 2026 at 2:00 p.m.** The meeting is not mandatory, however, a site visit to familiarize yourself with existing conditions is highly encouraged. Trevor Wagerster from Duro-Last will conduct the meeting.

SCHEDULE

Project may begin in June 2026 and must be complete by August 24, 2026.

QUESTIONS / RFIs

All questions regarding the plans and specifications are to be emailed to R.C. Hendrick & Son, Inc. at chip@rchendrick.com.

DRAWINGS, SPECIFICATIONS AND ADDENDUMS

Plans, Specifications and Addendums will be available for download from the R.C. Hendrick Plan Room located at www.rchendrick.com. Click on "Plan Room" and then follow the link to access the project files. If a password is required to access the files, please email the Project Manager associated with the project.

Addendums will be posted to R.C. Hendrick's Online Plan Room. Addendums will be posted no later than 12:00 Noon on the day before the bid is due. R.C. Hendrick will send out a notice that an addendum is available to all known planholders. **It is the responsibility of every bidder to check the project site for addendums and note them on the bid form.**

END OF SECTION 00 1000

SECTION 00 2000

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

Definitions set forth in the General Conditions of the Contract Construction, AIA Document A232 - Current Edition, and in other contract documents are applicable to the Bidding Documents.

Bidding Documents: Bidding Documents include the Drawings, Specifications, Addenda prepared by the Architects, Engineers, Consultants and Construction Manager and anything referenced within those documents.

Addenda: Addenda are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

Bid: A bid is a complete and properly signed proposal to do the work for a stipulated sum, submitted in accordance with the Bidding Documents.

Base Bid: The sum stated in the Bid Form for which the Bidder offers to perform the work described in the Bidding Documents as the Base Bid.

Alternate: An alternate is an amount stated in the Bid to be added or deducted from the Base Bid if the corresponding change in the work, as described in the Bidding Documents, is accepted.

Unit Price: An amount stated as a price per unit of measurements for materials or services described in the Bidding Documents.

Bidder: A person or entity who submits a bid.

Furnish: This term is used to mean supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation and similar operations.

Install: The term is used to describe operations at the Project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

Provide: To furnish and install, complete and ready for the intended use.

2. CONSTRUCTION MANAGER

R.C. Hendrick & Son, Inc. has been selected by the Owner to organize and/or direct the complete construction of the project and, as such, will act as a representative of the Owner in those matters so designated. Depending on the contractual arrangement with the Owner, R.C. Hendrick may not have on-site supervision and may not be available for questions during the construction process.

3. BIDDING PROCEDURE

R.C. Hendrick's online Plan Room is the official location for all bidding documents. **It is each bidder's responsibility to ensure that they have viewed all addenda posted to the Plan Room.** Addendums will be posted no later than 12:00 Noon on the day before the bid is due.

Bidders are to bid COMPLETE Bid Categories only. Bids for partial categories or noting any exceptions may cause your bid to be rejected. If you feel that something is part of your category that should not be included, please submit a Pre-Bid RFI.

Bidders shall include all work noted in the Bid Category Description as well as General Bid Category Notes which apply to ALL Categories.

Each Bidder by submitting this Bid to the Owner represents that they have read and understand the Bidding Documents. Each bidder also represents that they have made a site inspection, familiarized themselves with the local conditions under which the work is to be performed, and have correlated observations with requirements of the Bidding Documents.

Bids shall be submitted in TRIPLICATE. (1) One Original and (2) Two Copies of the Bid Form are required. Fill in ALL blanks on the bid form. Information must be typed or in ink. Express sums in both words and figures. The amount in words will govern in case of a discrepancy. The signer of the bid must initial all interlineations, alterations and erasures.

Enclose the bid and other documents required in a sealed envelope. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with "Sealed Bid Enclosed" printed on the envelope.

Address the envelope to the party receiving the bids and state project name, the bidder's name and address, and the designated Bid Category # for which the bid is submitted on the outside of the envelope. If you are bidding on more than one Bid Category, each bid must be in its own **clearly marked** envelope.

Bids will be **PUBLICLY** opened after the deadline to submit bids. Only properly identified bids received on time will be opened.

4. COMBINED BIDS

If you intend on offering a discount as part of a Combined Bid, you MUST submit a base bid in each category and each category MUST be in a separate envelope. The Combined Bid must be entered on at least one Bid Form submitted by the bidder.

5. ALTERNATES

Alternates are listed on the Bid Form and are described in further detail in the Architectural Specification. Each bidder should review all Alternates and determine if what is described in the Specification and shown on the Drawings causes an addition or deduction to their Base Bid. Bidders shall indicate on the Bid Form if the Alternate is an ADD or DEDUCT to the Base Bid and indicate the costs associated. If the Alternate does not affect your scope of work, enter "No Change" in the space provided. The Owner will have the right to accept Alternates in any order or combination and to determine the low bidder on the basis of the sum of the base bid and the accepted Alternate.

6. VOLUNTARY ALTERNATES

The bidder may submit voluntary alternates with their bid. Voluntary Alternates are changes in scope or a specification. Voluntary alternates shall be listed in the appropriate space on the Bid Form. If additional pages are necessary, attach them to the end of the Bid Form on your company letterhead. Voluntary alternates will be reviewed after the award of a contract and the Owner reserves the right to accept or reject any Voluntary Alternate.

7. QUESTIONS AND DISCREPENCIES

Notify the Construction Manager at least five (5) days prior to bid of ambiguities, inconsistencies, or error discovered upon examination of the Bidding Documents, site or local conditions. Submit requests for clarification or interpretation of the Bidding Documents in writing. Interpretation, correction, or change of the Bidding Documents will be made by Addendum, all other forms will be non-binding. Questions should be EMAILED to the Project Manager listed in the R.C. Hendrick Online Plan Room.

8. SUBSTITUTIONS

The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality. Pre-Bid substitution requests must be submitted in writing and received by the CM at least ten (10) days prior to bid date. The burden of proof of the merit of the proposed substitute is upon the proposer. The Owner's decision of acceptance or rejection of a proposed substitution will be final.

Requests for substitutions shall include:

1. The name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cut-sheets, performance, test data and other information necessary for an evaluation.
2. A statement setting forth any changes in other materials, equipment, other work that incorporation of the substitute would require, shall be included.

9. MODIFICATION OR WITHDRAWAL OF A BID

A bid may not be modified or withdrawn following the time and date designated for the receipt of bids. Prior to the time and date designated for receipt of bids, a submitted bid may be withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Notice shall be in writing over the signature of the bidder or in person. Withdrawal notice shall be submitted by mail, telegram, or fax postmarked on or before the date and time for receipt of bids. Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.

10. OWNER'S RESERVATION OF RIGHTS

The Owner reserves the right to reject any, part of any or all bids and to waive all informalities in the bidding procedures. The Owner reserves the right to reject any bid when Bidder fails to submit data required by the Bidding Documents, or if the bid is submitted incomplete or irregular. No telephonic, telegraphic, email, fax bids or modification to a submitted bid will be received or considered by the Owner.

The Owner will have the right to accept Alternates in any order or combination and to determine the low bidder on the basis of the sum of the base bid and the accepted Alternate.

It is the Owner's intent to award a contract to the lowest responsible and competent bidder provided the bid has been submitted in accordance with the requirements of the bidding documents and does not exceed the funds available for construction.

The Owner reserves the right to cancel the project and contract at any point. The contractor will be reimbursed for work performed up to cancellation based upon the amount of work completed.

11. SUBSURFACE MATERIALS AND SOIL BORINGS (N/A)

12. BONDS

Bid Bond

Each bid which exceeds \$50,000 must be submitted with an attached certified check, money order, or a bid bond from a surety company approved to do business in the State of Michigan, payable to the **Owner** in an amount not less than 5% of the base bid sum of the work.

Performance Bond & Labor and Material Payment Bond

Prior to the execution of the contract, furnish bonds covering the faithful performance of the contract and the payment of all obligations arising there under. Include cost of bonds in the base bid. The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of their power of attorney.

13. POST BID INFORMATION

The Bidder shall within seven (7) days of notification of selection for the award of the Contract for the work, submit the following information.

- A. Designation of the Work to be performed by the Bidder with his own forces.
- B. Proprietary names and the suppliers of principal items or systems of materials and equipment proposed for the Work.
- C. List of names of the subcontractors or other persons or entities (including those who are to furnish materials or equipment fabricated to the special design) proposed for the principal portions of the Work.
- D. A list of proposed job site staff and home office staff directly involved with this Project. Indicate the qualifications, pay rates, titles, responsibilities, and duties of each person.
- E. Certificates evidencing insurance coverage in the amounts and types specified.
- F. An interim construction schedule in a bar graph format.
- G. A completed Schedule of Values in the format provided by the Owner.

The Bidder will be required to establish to the satisfaction of the Owner, the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

Prior to the award of the Contract, the Bidder will be notified in writing. If the Owner has reasonable objection to any proposed person or entity, the Bidder may at his option, (1) withdraw his bid or (2) submit an acceptable substitute person or entity with an adjustment in cost occasioned by such substitution. The Owner may at his discretion, accept the adjusted bid price or disqualify the Bidder.

The Owner reserves the right to request financial statements from the bidder before the award of a contract.

14. POST BID INTERVIEW

The selected Contractor as determined by the Owner may be required to attend a pre-contract award interview at the job site office of R.C. Hendrick & Son, Inc. for the purpose of reviewing the submitted bid for compliance with specified products, methods of installation, warranties, general job procedures, post bid information and related items.

Meeting minutes of the pre-contract interview will be taken by R.C. Hendrick. Before concluding the interview, the minutes will be signed by those in attendance. The interview may be recorded in person or via conference call and will become part of the contract.

15. TAXES

Each bidder shall include in their proposal, and agree to pay, all fees and taxes including Sales and Use which they may be required to pay in connection with the performance of the contract. Also, the bidder includes and agrees to pay for all contributions to unemployment compensation, health and welfare, appropriate benefits, or other purposes now or hereafter during the term of the contract and the Owner and Construction Manager shall not be liable for any additional charges.

16. INDEMNIFICATION AND GENERAL LIABILITY INSURANCE

Each trade contractor shall agree to indemnify and hold harmless the Owner, Architect and R.C. Hendrick from and against any and all general liability claims whatsoever arising out of or occurring during and occasioned directly or indirectly by its negligence or fault. Prior to entering into a contract, each trade contractor shall provide evidence satisfactory to the Owner, Architect and R.C. Hendrick of adequate general liability insurance coverage which names the Owner, Architect and R.C. Hendrick as additional insured. Each trade contractor shall also provide evidence of Worker's Compensation Insurance in the amounts required by the State of Michigan.

17. LOCAL PRODUCTS

All prime bidders, subcontractors and suppliers shall utilize products that are local to the region or State whenever possible where price, quality and performance are equal to or better than non-local products.

18. MINORITY SUBCONTRACTORS

Bidders are encouraged to use the services of minority subcontractors if possible in the pursuance of this project.

19. NON-COLLUSION CLAUSE

By submitting and signing the proposal form, the bidder declares that neither the bidding firm nor agents of the bidding firm or any other members of the proposed team have entered into any collusion or agreement concerning any aspect of the proposal.

20. CONSTRUCTION DOCUMENT RESPONSIBILITIES

All bidders are responsible for the COMPLETE set of drawings and specifications including the CM Issued Front-End, Technical Specifications (Architectural, Mechanical, and Electrical), Drawings (Civil, Structural, Architectural, Mechanical, Electrical, etc.). Bidders are to familiarize themselves with the work of other trades and participate in the coordination of work activities.

All bidders are to include, in their entirety, the work and instructions described in Division 0 – "Bidding and Contract Requirements" and Division 1 – "General Requirements."

21. WARRANTY

All work shall be guaranteed for a period of twelve (12) months from the date of substantial completion of the entire Bid Package unless more specifically stated in the contract documents. All service during this 12-month period shall be rendered without charge to the Owner. This 12-month warranty does not replace any longer warranties required by the specification.

22. SITE VISIT

All contractors are required to visit the site to familiarize themselves with existing conditions either through the Pre-Bid Conference or through a visit you have scheduled with R.C. Hendrick. Contractors shall not visit or walk through the site without permission from R.C. Hendrick.

23. SUBMITTALS

Submittals of product data, shop drawings, color charts and samples are required for this project. When submitting information electronically all contractors shall use the Portable Document Format (.pdf) for all email attachments. Forms and requests that are submitted in a different format may be rejected resulting in delays to the schedule and payments.

24. ADDITIONAL SETS OF DRAWINGS AND SPECS

The Owner will not furnish additional sets to the successful bidder(s). Contractors will need to purchase or reproduce additional sets of plans and specifications at their own expense.

25. PERMITS AND INSPECTIONS

Contractors shall submit and pay for all applicable permits required for their work. Contractors shall also schedule timely inspections and provide inspection reports to the Owner. The Owner shall secure and pay for the Building Permit ONLY.

26. EXTRA WORK

The maximum amount of markup for extra work is 15% and that shall include overhead, profit, estimating expense, other office expense, insurance and bonds.

27. CLEANUP

All contractors shall provide daily and weekly cleanup including dust control. If contractors are not cleaning up, they shall be notified by the Owner and if there is not a response, the Owner will hire a cleaning company and backcharge the contractor(s).

28. LAYOUT

All contractors are responsible for their own layout and field dimensions.

29. TEMPORARY ENCLOSURES AND WEATHER PROTECTION

All temporary enclosures shall be weather-tight and secure at the end of every work day. Contractors shall be responsible for any damage due to enclosures not being weather-tight or not secure.

30. SWORN STATEMENTS AND WAIVERS

Sworn statements and waivers are required with every payment request. Final payment will not be issued without full unconditional waivers from all suppliers.

31. PROJECT CLOSEOUT

Closeout documents must be submitted in both paper and electronic (PDF) formats.

END OF SECTION 00 2000

SECTION 00 2400

BID CATEGORY DESCRIPTIONS

**BID CATEGORY #1
ALL TRADES WORK**

The work scope for this Bid Category includes, but is not limited to the work as specified in the R.C. Hendrick Project Manual, Durolast's Technical Specification, the Drawings and any Addenda issued prior to the bid date.

Provide all labor, materials and equipment to satisfy the following Specification Sections and Notes unless otherwise noted.

Division 0 Bidding and Contract Requirements

07 41 13 Metal Roof Panels

Bid Category Notes (Including, but not limited to):

AREA OF WORK : CRICKET AND VALLEYS BEHIND MAIN ENTRANCE

1. Remove existing roof panels from designated area behind and beside main entrance.
2. Inspect existing HT ice and water underlayment, add new underlayment as required.
3. Install 60 mil Duro Tuff membrane on the cricket and thru the valleys extending up the roof slope a minimum of 36" from the valley.
4. Extend a 12" strip of Duro Tuff membrane down both sides of the entrance dormer side walls.
5. Terminate roof membrane as required.
6. Install new metal roof panels to designated area of work.
7. Install new metal trims and closures as required for a water tight application
8. Install new water divertors as required.
9. Terminate the panels on the high side of the valleys using offset cleats and sealed with mastic.
10. Provide complete clean up and removal of all job related debris.

NOTE: Bidders are responsible for repairs to any landscaping, sidewalks, parking lots & etc. caused by their operations.

UNIT PRICE:

Unit Price #1 - Remove and replace wet insulation per 12" x 12" x 1".

Unit Price #2 - Remove and replace damaged metal deck per square foot.

Unit Price #3 - Remove and replace damaged gypsum deck per square foot.

END OF SECTION 00 2400

SECTION 00 4000

BID FORM

TO : Joe Candela - Superintendent of Schools
Huron Intermediate School District
1299 S. Thomas Rd.
Bad Axe, MI 48413

RE : Admin Building Roofing

Having carefully reviewed the bidding documents described in Section 00 1000 and understanding the scope of work involved in the proposed Bid Category and those that interface with it, we hereby propose to furnish labor, materials, tools, equipment, supervision, insurance and services required for the completion of all work required for the Bid Category indicated in accordance with the Bid Category Description and the Contract Documents prepared by the Architect and Construction Manager.

BID CATEGORY #: _____ **DESCRIPTION:** _____

BIDDERS NAME: _____

BASE BID:

Total Base Sum of _____
_____ Dollars \$ _____

(OPTIONAL) COMBINED BID FOR CATEGORIES: _____ :

Total Combined Sum of _____
_____ Dollars \$ _____

ADDENDA:

And having received and examined the following Addenda: (include date for acknowledgement)

- Addendum Number _____, dated _____, 2026
- Addendum Number _____, dated _____, 2026
- Addendum Number _____, dated _____, 2026
- Addendum Number _____, dated _____, 2026
- Addendum Number _____, dated _____, 2026

ALTERNATES:

Bidders shall indicate on the Bid Form if the Alternate is an ADD or DEDUCT to the Base Bid and indicate the costs associated. If the Alternate does not affect your base bid you must circle NO CHANGE.

UNIT PRICES:

Unit prices shall include all necessary material plus costs for delivery, installation, insurance, bonds, applicable taxes, overhead and profit.

Unit Price #1 Remove and Replace Wet Insulation \$ _____ per 12"x12"x1'

Unit Price #2 Remove and Replace Damaged Metal Deck \$ _____ per sq. ft.

Unit Price #3 Remove and Replace Damaged Gypsum Deck \$ _____ per sq. ft.

VOLUNTARY ALTERNATES / SUBSTITUTIONS:

Bidder is cautioned to bid on the "Standards" specified. The following substitutions from the "Standards" specified are listed herein for consideration, and if accepted, the contract sum may be adjusted in accordance with the following:

_____ Add / Deduct \$ _____

_____ Add / Deduct \$ _____

EXPERIENCE MODIFICATION RATE (EMR):

List the EMR for your firm as described by your insurance carrier for the past three (3) years.

2025 _____ 2024 _____ 2023 _____

TIME AND MATERIAL RATES: (REQUIRED)

Labor rates listed below include the following: Cost of labor including Michigan Single Business Tax, Social Security and Medicare, Federal and State Unemployment tax, and Fringe Benefits Under Collective Bargaining Agreements, and Worker's Compensation Insurance. The rates listed below do not include overhead and/or profit. These rates are only for additions and/or deletions to the contract that could not have been anticipated at the time of the bid.

Trade	Straight Time	Shift Time	1 ½ Time	Double Time

WORK TIME:

The undersigned hereby agrees to complete the entire work per the Milestone Schedule.

IRAN BUSINESS RELATIONSHIP AFFIDAVIT:

Pursuant to the Michigan Iran Economic Sanctions Act, 2012 P.A. 517, by submitting a bid, proposal or response, Respondent certifies, under civil penalty for false certification, that it is fully eligible to do so under law and that it is not an "Iran Linked Business," as that term is defined in the Act.

CONTRACT:

The undersigned agrees that the above Base Bid Prices shall hold for 60 days and Alternate Prices for 120 days after receipt of proposals, to accept provisions of "Instructions to Bidders."

SUBMITTED BY:

Firm Name: _____

Address: _____

City/St/Zip: _____

Email Address: _____

Signed: _____ Title: _____

Typed Name: _____ Date: _____

Phone: _____ Fax: _____

If Bidder is a Corporation, indicate State of Incorporation: _____

If a Partnership, give full names of all Partners: _____

Please submit (3) copies and retain (1) copy for your records.

END OF SECTION 00 4000

SECTION 00 4100

FAMILIAL DISCLOSURE STATEMENT

All bidders must complete the following familial disclosure form in compliance with MCL 380.1267 (Public Act 232 of 2004) and attach this information to the bid.

By the attached sworn and notarized statement we are disclosing the following familial relationship(s) that exists between the owner or any employee of the bidder and any member of the board, intermediate school board, or board of directors or the superintendent of the school district, intermediate superintendent of the intermediate school district, or chief executive officer of the public school academy. The Owner shall not accept a bid that does not include this sworn and notarized disclosure statement.

Disclose any familial relationship and complete the form below in its entirety:

The following are familial relationships as described above (provide employee name, family contact name, family contact position, and familial relationship or NONE.)

Signature(s): _____ Title: _____

Name of firm: _____

STATE OF MICHIGAN)
) SS
COUNTY OF)

On this _____ day of _____, 20____, before me a Notary Public in and for said county, personally appeared _____, agent of the said firm _____ and who acknowledged the same to be his free act and deed as such agent.

Notary Public

END OF SECTION 00 4100

SECTION 00 7300

SUPPLEMENTARY CONDITIONS

GENERAL CONDITIONS

1. The General Conditions of this contract are the American Institute of Architects Standard Document A232-2009, titled "General Conditions of the Contract for Construction, Construction Manager as Adviser Edition." This document is hereby made part of the Contract Documents.
2. The following supplements modify AIA Document A232-2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 2 - OWNER

1. Delete subparagraph 2.2.5 and substitute:
2.2.5 - The Contractor will be furnished, subject to a deposit, all copies of drawings and specifications reasonably necessary for execution of the work as determined by the Construction Manager.

ARTICLE 3 - CONTRACTOR

1. Add Section 3.4.2.1 to Section 3.4.2:
3.4.2.1 After the Contract has been executed, the Owner, Construction Manager and Architect will consider requests for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).
By making requests for substitutions, the Contractor:
 - .1 represents that it has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
 - .2 represents that it will provide the same warranty for the substitution as it would have provided for the product specified;
 - .3 certifies that the cost data presented is complete and includes all related costs for the substituted product and for Work that must be changed as a result of the substitution, except for the Architect's redesign costs, and waives all claims for additional costs related to the substitution that subsequently become apparent; and
 - .4 shall coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
2. Delete subparagraph 3.4.3 and substitute:
3.4.3 The Contractor shall at all times enforce strict discipline and good order among the Contractor's employees and any subcontractor employed by the contractor and shall not employ on the work any unfit person or anyone not skilled in the task assigned to them.

3. Add subparagraph 3.7.6
3.7.6 Regarding OSHA fines: The Contractor for any fines incurred as a result of the Contractor shall reimburse the Construction Manager for similar fines against the Construction Manager.
4. Add subparagraph 3.9.4
3.9.4 The Construction Manager reserves the right to cause the replacement of the superintendent, assistant superintendent or employee of the contractor who is not qualified, in the opinion of the Construction Manager to do the work.

ARTICLE 5 - SUBCONTRACTORS

1. RE: Subparagraphs 5.2.1, 5.2.2, 5.2.3, and 5.2.4.
Delete the words, "the Construction Manager or Architect" and insert the words, "the Construction Manager and Architect."

ARTICLE 7 - CHANGES IN THE WORK

1. Add Subparagraph 7.1.4
7.1.4 The maximum allowable markup on Changes in the Work shall be eleven percent (11%) which includes overhead, profit, estimating expenses, other office expense, bond and insurance costs."
2. RE: Subparagraph 7.3.7
Delete the words, "the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount." and insert the words, "Section 7.1.4."

ARTICLE 8 - TIME

1. Add subparagraph 8.3.4
8.3.4 Claims for Delay: In the event the contractor is delayed in completing the work by the Owner for any reason, whether intentional or otherwise, and the delay does not preclude the contractor from completing the work within the time period specified in the contract agreement, the contractor shall be entitled to no remedy for such delay.

ARTICLE 9 - PAYMENTS AND COMPLETION

1. Add subparagraph 9.3.1.3
9.3.1.3 Up to time the work is substantially complete, the owner will make monthly payments to the contractor, based on the schedule of values of 90% of the value of labor and materials incorporated in the work and of 90% of all tangible materials stored at the site during that month. The Owner will have retained five percent (5%) of the total contract price for "Closeout Materials" and five (5%) of the total contract price for "Punch List Completion". The Contractor may request payment of the retained percentages upon completion of that portion of their Work.

2. Add subparagraph 9.3.1.4
9.3.1.4 Deliver estimates to the Construction Manager for approval as agreed upon. The form of application for payment shall be AIA Document G732-2009, notarized by Contractor and supported by AIA Document G703 – Continuation Sheet.
3. Add clause .8 to subparagraph 9.5.1
.8 Unsatisfactory clean-up in accordance with subparagraph 3.15.

ARTICLE 11 - INSURANCE AND BONDS

1. Add the following Sections 11.1.2.1 through 11.1.2.4 to Section 11.1.2:
11.1.2.1 The limits for Worker’s Compensation and Employers’ Liability insurance shall meet statutory limits mandated by State and Federal laws. If (1) limits in excess of those required by statute are to be provided, (2) the employer is not statutorily bound to obtain such insurance coverage, or (3) additional coverages are required, additional coverages and limits for such insurance shall be as follows:

WORKER’S COMPENSATION AND EMPLOYER’S LIABILITY INSURANCE:

Worker’s Compensation:	State of Michigan Statutory Limits
Employer’s Liability:	\$500,000 - each accident \$500,000 - disease (each employee) \$500,000 - disease (policy limit)

- 11.1.2.2** The limits for Commercial General Liability insurance including coverage for Premises-Operations, Independent Contractors’ Protective, Products-Completed Operations, Contractual Liability, Personal Injury and Broad Form Property Damage (including coverage for Explosion, Collapse, and Underground Hazards) shall be as follows:

COMMERCIAL GENERAL LIABILITY INSURANCE:

Bodily Injury	\$1,000,000 - each occurrence \$2,000,000 - aggregate
Property Damage	\$1,000,000 - each occurrence \$2,000,000 - aggregate
Fire Damage (any one fire)	\$100,000
Medical Expense (any one person)	\$5,000

Notes:

- (1) Products-Completed Operations Insurance shall be maintained for a minimum period of one (1) year after final payment.
- (2) The Owner, Architect and Construction Manager shall be listed as additional insured. The Owner shall be the certificate holder.

11.1.2.3 Automobile Liability insurance (owned, non-owned and hired vehicles) for bodily injury and property damage:

AUTOMOBILE LIABILITY INSURANCE:

Bodily Injury	\$1,000,000
Property Damage	\$1,000,000

11.1.2.4 Umbrella or Excess Liability Coverage:

UMBRELLA / EXCESS LIABILITY INSURANCE:

Umbrella / Excess Insurance	\$2,000,000 - each occurrence
	\$2,000,000 - aggregate

2. Add Subparagraph 11.3.11

11.3.11 The provisions of this paragraph 11.3 shall not operate to relieve the Contractor of responsibility for loss or damage to the Contractor's own or rented property or property of Contractor's employees of whatever kind or nature, including but not limited to: tools, equipment, forms, scaffolding and temporary structures, including their contents. The Owner shall in no event be liable for loss or damage to the aforementioned items or other property of the contractor that is not included in the permanent construction.

3. Delete Subparagraph 11.3.7 Waivers of Subrogation

ARTICLE 13 - MISCELLANEOUS PROVISIONS

1. Delete subparagraph 13.6 - Interest in its entirety.

END OF SECTION 00 7300



EM BattenLok® HS Metal Roof Panel

SECTION 07 41 13 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Mechanically-seamed, standing seam metal roof panels, with related metal trim and accessories.
- B. The system shall also include insulation, single ply membrane and associated ES-1 compliant edge flashings for low slope roof, supplied and warranted by a single source manufacturer of the System. Refer to those sections within this document

1.2 RELATED REQUIREMENTS

- | |
|--|
| |
|--|
- A. [Division 01 Section "Sustainable Design Requirements" for related LEED® general requirements.](#)
 - B. Division 05 Section "Structural Steel Framing" for structural steel framing supporting metal panels.
 - C. Division 05 Section "Steel Decking" for continuous metal decking supporting metal panels.
 - D. Division 05 Section "Cold-Formed Metal Trusses" for cold-formed metal trusses supporting metal panels.
 - E. Division 07 Section [\["Thermal Insulation"\]](#) [\["Roof Insulation"\]](#) for thermal insulation installed under metal panels.
 - F. Division 07 Section "Air Barriers" for air barriers within roof assembly and adjacent to roof assembly.
 - G. Division 07 Section "Metal Wall Panels" for factory-formed metal wall [\[and soffit\]](#) panels.
 - H. Division 07 Section "Sheet Metal Flashing and Trim" for formed sheet metal copings, flashings, reglets, and roof drainage items in addition to items specified in this Section.
 - I. Division 07 Section "Manufactured Roof Specialties" for manufactured copings, reglets, and roof drainage items in addition to items specified in this Section.
 - J. Division 07 Section ["Joint Sealants"](#) for field-applied [Joint Sealants](#).
 - K. Division 13 Section "Metal Building Systems" for steel framing supporting metal panels.

1.3 REFERENCES

- | |
|--|
| |
|--|
- A. American Architectural Manufacturer's Association (AAMA): www.aamanet.org:
 - 1. AAMA 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) & Zinc-Aluminum Coated Steel Substrates.
 - 2. AAMA 809.2 - Voluntary Specification Non-Drying Sealants.

 - B. American Society of Civil Engineers (ASCE): www.asce.org/codes-standards:
 - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

 - C. ASTM International (ASTM): www.astm.org:
 - 1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
 - 4. ASTM A 980 - Standard Specification for Steel, Sheet, Carbon, Ultra High Strength Cold Rolled.
 - 5. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
 - 6. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
 - 7. ASTM D 1003 - Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics.
 - 8. ASTM D 2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
 - 9. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
 - 10. ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
 - 11. ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
 - 12. ASTM E 1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
 - 13. ASTM E 1980 - Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

 - D. Cool Roof Rating Council (CRRC®): www.coolroofs.org/productratingprogram.html:
 - 1. CRRC-1-2008 - CRRC Product Rating Program.

 - E. International Accreditation Service (IAS):
 - 1. IAS AC 472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part B.

 - F. Underwriters Laboratories, Inc. (UL): www.ul.com:
 - 1. UL 580 - Tests for Uplift Resistance of Roof Assemblies

 - G. US Environmental Protection Agency: www.energystar.gov/index.cfm:

1. ENERGY STAR® Reflective Roof Products.

H. US Green Building Council (USGBC): www.usgbc.org:

1. LEED® - Leadership in Energy and Environmental Design (LEED®) Green Building Rating Systems.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Prior to erection of framing, conduct preinstallation meeting at site attended by owner, architect, manufacturer's technical representative, inspection agency and related trade contractors.

1. Coordinate building framing in relation to metal panel system.
2. Coordinate openings and penetrations of metal panel system.
3. Coordinate work of Division 07 Sections "Roof Specialties" and "Roof Accessories" and openings and penetrations and manufacturer's accessories with installation of metal panels.

1.5 QUALITY ASSURANCE

A. Manufacturer/Source: Provide metal roof panel assembly and accessories from a single manufacturer providing fixed-base roll forming, and accredited under IAS AC 472 Part B.

B. Manufacturer Qualifications: Approved manufacturer listed in this section with minimum five years experience in manufacture of similar products in successful use in similar applications.

C. Installer Qualifications: Experienced installer [certified by metal panel manufacturer] with minimum of five years experience with successfully completed projects of a similar nature and scope.

1. Installer's Field Supervisor: Experienced mechanic [certified by metal panel manufacturer] supervising work on site whenever work is underway.

1.6 ACTION SUBMITTALS

- A. Product Data: Manufacturer's data sheets for specified products.

a. .

- B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1 ½" per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, roof accessories, lightning arresting equipment, and special details. Make distinctions between factory and field assembled work.
 1. Indicate points of supporting structure that must coordinate with metal panel system installation.
 2. Include data indicating compliance with performance requirements.
 3. Include structural data indicating compliance with requirements of authorities having jurisdiction.
- C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of manufacturer's full range of colors.
- D. Samples for Verification: Provide 12" (305 mm-) long section of each metal panel profile. Provide color chip verifying color selection.

INFORMATIONAL SUBMITTALS

1.7

- A. Product Test Reports: Indicating compliance of products with requirements, witnessed by a professional engineer.
- B. Qualification Information: For installer's firm and field supervisor.

- C. IAS Accreditation Certificate: Indicating that manufacturer is accredited under provisions of IAS AC 472.

- D. Manufacturer's Warranty: Sample copy of manufacturer's standard warranty.

CLOSEOUT SUBMITTALS

1.8

- A. Maintenance data.
- B. Manufacturer's Warranty: Executed copy of manufacturer's standard warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping.
 - 1. Deliver, unload, store, and erect metal panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.
 - 2. Store in accordance with manufacturer's written instructions. Provide wood collars for stacking and handling in the field.

1.10 COORDINATION

- A. Coordinate sizes, profiles, and locations of roof curbs and other roof-mounted equipment and roof penetrations, based upon sizes of actual selected equipment.

1.11 WARRANTY

- A. Special Manufacturer's Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal panel assemblies that fail in materials and workmanship within one year from date of Substantial Completion.

C. Special Panel Finish Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal panels that evidence deterioration of factory-applied finish within [25] years from date of substantial completion, including:

1. Fluoropolymer Two- Coat System:

- a. Color fading in excess of [5] [10] Hunter units per ASTM D 2244.
- b. Chalking in excess of No. [8] [6] rating per ASTM D 4214.
- c. Failure of adhesion, peeling, checking, or cracking.

:

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis of Design Manufacturer: **EXCEPTIONAL Metals' Metal Roof and Wall Systems, Division of Duro-Last[®], Inc. Exceptional Metals, Saginaw, (800) 248-0280** Email: info@EXCEPTIONALMETALS.com; Web: www.exceptionalmetals.com.

1. Provide basis of design product[, or comparable product approved by architect prior to bid].

2.2 PERFORMANCE REQUIREMENTS

A. General: Provide metal roof panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.

S

C. Radiative Property Performance:

1. **Solar Reflectance Index:** Minimum 78 for roof slopes of 2:12 or less and 29 for roof slopes greater than 2:12 under medium wind conditions, per ASTM E 1980.
2. **ENERGY STAR® Qualified:** Listed on USDoE ENERGY STAR® Roof Products Qualified Product List.
3. **Energy Performance:** Listed in CRRC Rated Product Directory, with minimum properties as required by applicable energy efficiency or High-Performance Green Building standard.

D. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:

1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
 - a. Wind Uplift Testing: Certify capacity of metal panels by actual testing of proposed assembly per ASTM E 1592.
2. Snow Loads: [___ lbf/sq. ft. (___ Pa)] [As indicated].
3. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of [1/120] [1/180] [1/240] of the span with no evidence of failure.
4. Seismic Performance: Comply with ASCE 7, Section 9, "Earthquake Loads."

E. Wind Uplift Resistance: Comply with UL 580 for wind-uplift class [UL-30] [UL-60] [UL-90].

F. **Florida State Building Code Compliance:** Comply with requirements of Florida State Building Code. www.floridabuilding.org/pr/pr_app_srch.aspx

G. Air Infiltration, ASTM E 1680: Maximum 0.25 cfm/sq. ft. (1.27 L/s per sq. m) at static-air-pressure difference of 6.24 lbf/sq. ft. (300 Pa).

H. Water Penetration Static Pressure, ASTM E 1646: No uncontrolled water penetration at a static pressure of 12 lbf/sq. ft. (575 Pa).

I. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.

2.3 METAL ROOF PANELS

A. Mechanically-seamed, Concealed Fastener, Metal Roof Panels: Structural metal roof panel consisting of formed sheet metal with vertical ribs at panel edges, installed by lapping and

mechanically interlocking edges of adjacent panels, and attaching panels to supports using concealed clips and fasteners in a weathertight installation.

1. Basis of Design: **EXCEPTIONAL Metals, EM BattenLok® HS**, www.exceptionalmetals.com.

2. **Aluminum-Zinc Alloy-Coated Steel Sheet:** ASTM A 792/A 792M, structural quality, **Grade 50, Coating Class AZ50** (Grade 340, Coating Class AZM150), pre-painted by the coil-coating process per ASTM A 755/A 755M.
3. **Aluminum-Zinc Alloy-Coated Steel Sheet:** ASTM A 792/A 792M, structural quality, **Grade 50, Coating Class AZ55** (Grade 340, Coating Class AZM165) unpainted Galvalume Plus® coating.

- a. Nominal Coated Thickness: **[24 gauge]**
- b. Panel Surface: **[Smooth with striations in pan] [Stucco embossed with flat pan] [Stucco embossed with striations in pan] [Stucco embossed with pencil ribs in pan]**. Field verify - Match existing
- c. Exterior Finish: **[Fluoropolymer two-coat system] [**
- d. Color: **[As indicated] [As selected by architect from manufacturer's standard colors] [Match existing color]**.

4. Panel Width: **[16" (406 mm)]**.
5. Panel Seam Height: **2" (50.8 mm)**.
6. Joint Type: Mechanically seamed.

2.4 METAL ROOF PANEL ACCESSORIES

- A. General: Provide complete metal roof panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in **[manufacturer's standard profiles] [profiles as indicated]**. Provide required fasteners, closure strips, thermal spacers, splice plates, support plates, and sealants as indicated in manufacturer's written instructions.
- B. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet.
- C. Panel Clips: Provide panel clip of type specified, at spacing indicated on approved shop drawings.
 1. **Two-piece Floating:** ASTM C 645, with ASTM A 653/A 653M, **G90 (Z180)** hot-dip galvanized zinc coating, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.

2. **Single-Piece Fixed:** ASTM A 653/A 653M, **G90 (Z180)** hot-dip galvanized zinc coating, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.
- D. **Panel Fasteners:** Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by roof panel manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.
- E. **Joint Sealers:** Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
 1. **Factory-Applied Seam Sealant:** Manufacturer's standard hot-melt type.
 2. **Tape Sealers:** Manufacturer's standard non-curing butyl tape, AAMA 809.2.

-
- F. **Steel Sheet Miscellaneous Framing Components:** ASTM C 645, with ASTM A 653/A 653M, **G60 (Z180)** hot-dip galvanized zinc coating.
 - G. **Roof Accessories:** Approved by metal roof panel manufacturer. Refer to Section 07 72 00 "Roof Accessories" for requirements for roof accessories.
 - H. **Snow Guards:** Approved by metal roof panel manufacturer. Refer to Section 07 72 53 "Snow Guards" for requirements for snow guards attached to metal roof panels.

FABRICATION

2.5

- A. **General:** Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. **Fabricate metal panel joints** configured to accept factory-applied sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.
- C. **Form panels** in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- D. **Sheet Metal Flashing and Trim:** Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

2.6 FINISHES

- A. **Finishes General:** Prepare, pre-treat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
-

S

- A. Fluoropolymer Two-Coat System: 0.2 – 0.3 mil primer with 0.7 - 0.8 mil 70 percent PVDF fluoropolymer color coat, AAMA 621[, meeting solar reflectance index requirements].
 - 1. Basis of Design: **EXCEPTIONAL Metals, Signature® 300**.
- B. Interior Finish: **0.5 mil (0.013 mm)** total dry film thickness consisting of primer coat and wash coat of manufacturer's standard light-colored acrylic or polyester backer finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine metal panel system substrate and supports with installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panel installation.
 - 1. Inspect metal panel support substrate to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
 - 2. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system manufacturer but not greater than the following:
 - a. **¼" (6 mm)** in **20' (6.1 m)** in any direction.
 - b. **3/8" (9 mm)** over any single roof plane.
- B. Correct out-of-tolerance work and other deficient conditions prior to proceeding with insulated metal roof panel system installation.

3.2 PREPARATION

- A. **Miscellaneous Supports:** Install subframing, girts, furring, and other miscellaneous panel support members according to ASTM C 754 and manufacturer's written instructions.
- B. Flashings: Provide flashings as required to complete metal roof panel system. Install in accordance with Section 07 62 00 "Sheet Metal Flashing and Trim" and approved shop drawings.

3.3 METAL PANEL INSTALLATION

- A. Mechanically-Seamed, Standing Seam Metal Roof Panels: Install weathertight metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal roof panels in orientation, sizes, and locations indicated, free of waves, warps, buckles, fastening stresses, and distortions. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Attach panels to supports using clips, screws, fasteners, and sealants recommended by manufacturer and indicated on approved shop drawings.
 - 1. Fasten metal panels to supports with concealed clips at each location indicated on approved shop drawings, with spacing and fasteners recommended by manufacturer.
 - 2. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
 - 3. Provide weatherproof jacks for pipe and conduit penetrating metal panels of types recommended by manufacturer.
 - 4. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by manufacturer.

3.4 ACCESSORY INSTALLATION

- A. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
 - 2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
 - 3. Provide concealed fasteners except where noted on approved shop drawings.
 - 4. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.
- B. Joint Sealers: Install joint sealers where indicated and where required for weathertight performance of metal panel assemblies, in accordance with manufacturer's written instructions.
 - 1. Prepare joints and apply sealants per requirements of Division 07 Section "[Joint Sealants](#)."

3.5 FIELD QUALITY CONTROL

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- A. CLEANING AND PROTECTION

3.6

- A. Remove temporary protective films immediately in accordance with metal roof panel manufacturer's instructions. Clean finished surfaces as recommended by metal roof panel manufacturer.

- B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the architect.

END OF SECTION



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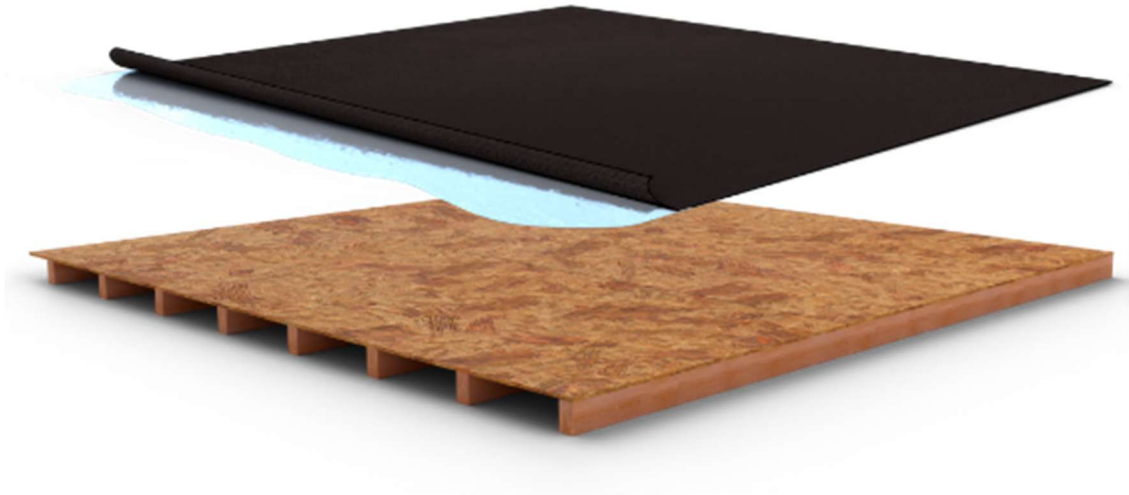
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3-part Specification

Huron ISD

VALLEYS AND CRICKET BEHIND MAIN ENTRANCE

1299 S. Thomas Rd
Bad Axe, MI 48413



PART 1 GENERAL

1.1 SUMMARY

- A. Membrane Type: Duro-Tuff 60-Mil Membrane (Roll Goods)
 - 1. Roll Width: 120" (Installed widths may vary)
 - 2. Membrane Color: Midnight Bronze
 - 3. Attachment Type: Adhered
 - 4. Adhesive: Duro-Last® SB IV Adhesive [Roll On]
- B. Deck Type: OSB Deck (5/8 in.)
- C. Prefabricated flashings, corners, parapets, stacks, vents, and related details.
- D. Fasteners, adhesives, and other accessories required for a complete roofing installation.
- E. Traffic Protection.

Scope of Work:

- 1. Remove existing metal roof panels on cricket and both valleys.
- 2. Install 60 mil Duro Tuff on cricket and thru valleys extending up the roof slope a minimum of 36" from valley

3. Extend a 12" strip of membrane down both sides of the entrance dormer.
4. Terminate as required.
5. Coordinate all work with metal roofing contractor
- 6.

1.2 REFERENCES

- A. ASTM INTERNATIONAL (ASTM)
 1. (2019) Standard Test Methods for Coated Fabrics (D751)
 2. (2021) Standard Specification for Poly(Vinyl Chloride) Sheet Roofing (D4434/D4434M)
 3. (2022) Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board (C1289)
 4. (2020) Standard Test Methods for Fire Tests of Roof Coverings (E108)
 5. (2020) Standard Test Methods for Fire Tests of Building Construction and Materials (E119)
- B. UL SOLUTIONS (UL)
 1. (2021) UL Roofing Systems (TGFU.R10128)
- C. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
 1. (2014) Minimum Design Loads for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-10)
 2. (2017) Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-16)
 3. (2022) Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-22)
- D. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 1. (2019) NRCA Roofing Manual - Membrane Systems

1.3 SYSTEM DESCRIPTION

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- C. Physical Properties (must meet or exceed):
 1. Roof product must meet the requirements of Type III PVC sheet roofing as defined by ASTM D4434.
 2. Thickness: 60 mil, nominal, in accordance with ASTM D751.

3. Thickness over Scrim: ≥ 31 mil in accordance with ASTM D7635.
 4. Breaking Strength: ≥ 437 lbf. (machine direction) and ≥ 304 lbf. (cross machine direction) in accordance with ASTM D751 Grab Method.
 5. Elongation at Break: $\geq 29\%$ (machine direction) and $\geq 30\%$ (cross machine direction) in accordance with ASTM D751 Grab Method.
 6. Seam Strength: ≥ 463 lbf. in accordance with ASTM D751 Grab Method.
 7. Tear Strength: ≥ 78 lbf. (machine direction) and ≥ 190 lbf. (cross machine direction) in accordance with ASTM D751 Procedure B.
 8. Low Temperature Bend: Pass at -40 °F in accordance with ASTM D2136.
 9. Heat Aging: Pass after being conditioned for 56 days in oven maintained at 176 °F in accordance with ASTM D3045.
 10. Accelerated Aging: Pass after 10,000 hours of total test time in accordance with ASTM G155.
 11. Dimensional Stability: Change of 0.30% (machine direction) and 0.10% (cross machine direction) in accordance with ASTM 1204.
 12. Water Absorption: $< 2.29\%$ at 158 °F for 168 hours in accordance with ASTM D570.
 13. Static Puncture Resistance: ≥ 33 lbf. in accordance with ASTM D5602.
 14. Dynamic Puncture Resistance: ≥ 14.7 ft-lbf. in accordance with ASTM D5635.
- D. Cool Roof Rating Council (CRRC) (Membrane must be listed on the CRRC website):
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.

1.4 SUBMITTALS

- A. Product data sheets to be used, with the following information included:
 1. Preparation instructions and recommendations
 2. Storage and handling requirements and recommendations
 3. Installation methods
 4. Maintenance requirements
- B. Sustainability Documentation:
 1. NSF/ANSI Standard 347 Certificate
 2. Type III product-specific Environmental Product Declaration
- C. Shop Drawings: Indicate insulation pattern, overall membrane layout, field seam locations, joint or termination detail conditions, and location of fasteners.
- D. Provide verification samples for each product specified (two samples representing each product, color and finish):

1. 4-inch by 6-inch sample of roofing membrane, of color specified.
 2. 4-inch by 6-inch sample of walkway pad.
 3. Termination bar, fascia bar with cover, drip edge, and gravel stop if to be used.
 4. Each fastener type to be used for installing membrane, insulation/recover board, termination bar and edge details.
- E. Installer Certification: Certification from the roofing system manufacturer that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- F. Manufacturer's warranties.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with manufacturer's installation instructions.
- B. Manufacturer Qualifications: A manufacturer specializing in the production of standard reinforced PVC membranes systems and utilizing a Quality Control Manual during the production of the membrane roofing system that has been approved by and is inspected by Underwriters Laboratories.
- C. Installer Qualifications: Company specializing in installation of roofing systems similar to those specified in this project and approved by the roofing system manufacturer.
- D. Source Limitations: Obtain components for membrane roofing system from roofing membrane manufacturer.
- E. There shall be no deviations from the roof membrane manufacturer's specifications or the approved shop drawings without the prior written approval of the manufacturer.

1.6 REGULATORY REQUIREMENTS

- A. Conform to applicable code for roof assembly fire hazard, wind uplift, and cool roof requirements.
- B. Fire Hazard Requirements: Provide membrane roofing materials with the following fire-test-response characteristics. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
1. Class A
 2. Fire-test-response standard: Comply with ASTM E108 for application and roof slopes indicated.
 3. Fire-Resistance Ratings: Comply with ASTM E119 for fire-resistance-rated roof assemblies of which roofing system is a part.
 4. Conform to applicable code for roof assembly fire hazard requirements.
- C. Wind Uplift Requirements: Roofing System Design: Provide a roofing system designed to resist uplift pressures calculated according to the current edition of ASCE/SEI 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

1.7 PRE-INSTALLATION MEETING

- A. Convene meeting not less than one week before starting work of this section.

- B. Review methods and procedures related to roof deck construction and roofing system including, but not limited to, the following:
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing installer, roofing system manufacturer's representative, deck installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
 2. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 3. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 4. Review structural loading limitations of roof deck during and after roofing.
 5. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 6. Review governing regulations and requirements for insurance and certificates if applicable.
 7. Review temporary protection requirements for roofing system during and after installation.
 8. Review roof observation and repair procedures after roofing installation.
 9. Review existing roof manufacturer's recycling program and return roofing system to the manufacturer for recycling.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Store roof materials and place equipment in a manner to avoid permanent deflection of deck.
- E. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.9 WARRANTY

- A. Contractor's Warranty: The contractor shall warrant the roof application with respect to workmanship and proper application for two (2) years from the effective date of the warranty issued by the manufacturer.
- B. Manufacturer's Warranty: Must warrant that the product membrane, material and accessories are free from manufacturing defects at the time of delivery and will not become defective during the term of the warranty. In addition the warranty must meet the following criteria:
 - 1. Warranty Period: 20 years from date issued by the manufacturer.
 - 2. Must provide adequate or sufficient drainage.
 - 3. Issued direct from and serviced by the roof membrane manufacturer.
 - 4. Transferable for the full term of the warranty.
 - 5. No additional charge for the warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Duro-Last®, which is located at: 525 Morley Drive, Saginaw, MI 48601. Telephone: 800-248-0280.
- B. All roofing system components to be provided or approved by Duro-Last
- C. Substitutions: Not permitted.

2.2 ROOFING SYSTEM COMPONENTS

- A. Roofing Membrane:
 - 1. Properties:
 - a. Type: Duro-Tuff 60-Mil Membrane (Roll Goods)
 - b. Roll Width: 120" (Installed widths may vary)
 - c. Membrane Color: Midnight Bronze
 - d. Attachment Type: Adhered
 - e. Adhesive: Duro-Last® SB IV Adhesive [Roll On]
 - 2. Features:
 - a. ASTM D4434, Type III
 - b. Fabric-reinforced, PVC, NSF/ANSI 347 Gold or Platinum Certification, and a product-specific third-party verified Environmental Product Declaration.
 - c. Minimum recycle content 7% post-industrial and 0% post-consumer.
 - d. Recycled at end of life into resilient flooring or concrete expansion joints.
- B. Deck Type:
 - 1. Properties:
 - a. Type: OSB Deck (5/8 in.)

- C. Accessory Materials: Provide accessory materials supplied by or approved for use by Duro-Last®:
 - 1. Sheet Flashing: Manufacturer's standard reinforced PVC sheet flashing.
 - 2. Penetrations and Flashings: Manufactured using standard reinforced PVC membrane.
 - a. Duro-Last® Inside and Outside Corners
 - b. Duro-Last® Stack Flashing
 - c. Duro-Last® Curb Flashing
 - 3. Drains, Scuppers, and Vents: Manufactured using standard reinforced PVC membrane.
 - a. Duro-Last® Drain Boot
 - b. Duro-Last® Drain Guard
 - c. Composite Drain Rings (CDRs)
 - 4. Non-Fleece Membrane Adhesives: Compatible with roofing system and supplied by Duro-Last.
 - a. Duro-Last® SB IV Adhesive [Roll On]
 - 5. Additional Roof Components: Compatible with roofing system and supplied by Duro-Last.
 - a. Roof Trak® III Walkway Pad (PVC)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that the surfaces and site conditions are ready to receive work.
- B. Verify that the deck is supported and secured.
- C. Verify that the deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to drains, valleys, eaves, scuppers or gutters.
- D. Verify that the deck surfaces are dry and free of standing water, ice or snow.
- E. Verify that all roof openings or penetrations through the roof are solidly set.
- F. If substrate preparation is the responsibility of another contractor, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Surfaces shall be clean, smooth, free of fins, sharp edges, loose and foreign material, oil, grease, and bitumen.
- D. Tearing off Existing Single-Ply System:

1. Remove existing single-ply membrane and return to the manufacturer for recycling.

3.3 INSTALLATION

A. Roofing Membrane:

1. General Requirements

- a. Install membrane in accordance with the roof manufacturer's requirements.
- b. Cut membrane to fit neatly around all penetrations and roof projections.

2. Duro-Tuff 60-Mil Membrane (Roll Goods)

- a. Read the adhesive's Safety Data Sheet (SDS) prior to using the adhesive.
- b. Follow application guidelines outlined in the adhesive's Product Data Sheet.
- c. Inspect the surface of the deck/substrate. The deck/substrate must be clean, smooth, dry, and free of sharp edges, dust, contaminants, oil, grease, and loose, foreign material that may affect the installation of the roofing system and its performance.
- d. Unroll roofing membrane and position with a minimum 6-inch overlap.
- e. Fold the roof section back onto itself to expose half of the roof area to be covered by that section.
- f. Apply adhesive in front of the fold along its length. Apply at the required rate in smooth, even coatings without voids, globs, puddles or similar irregularities. Use care not to contaminate the area of the membrane where hot air welding will occur.
- g. Lift the top layer of membrane and, starting at the fold, use a stiff squeegee or broom to push the membrane into the adhesive.
- h. Repeat previous steps for the second half of the roof section.

B. Weld overlapping sheets together using hot air. Minimum weld width is 1-1/2 inches.

C. Check field welded seams for continuity and integrity and repair all imperfections by the end of each work day.

D. Flashings: Complete all flashings and terminations as indicated on the drawings and in accordance with the membrane manufacturer's requirements.

1. Provide securement at all membrane terminations at the perimeter of each roof level, roof section, curb flashing, skylight, expansion joint, interior wall, penthouse, and other similar condition.
 - a. Do not apply flashing over existing thru-wall flashings or weep holes.
 - b. Secure flashing on a vertical surface before the seam between the flashing and the main roof sheet is completed.
 - c. Extend flashing membrane a minimum of 6 inches (152 mm) onto the main roof sheet beyond the mechanical securement.
 - d. Use care to ensure that the flashing does not bridge locations where there is a change in direction (e.g. where the parapet meets the roof deck).

2. Penetrations:

- a. Flash all pipes, supports, soil stacks, cold vents, and other penetrations passing through the roofing membrane as indicated on the Drawings and in accordance with the membrane manufacturer's requirements.
 - b. Utilize custom prefabricated flashings supplied by the membrane manufacturer.
 - c. Existing Flashings: Remove when necessary to allow new flashing to terminate directly to the penetration.
3. Pipe Clusters and Unusual Shapes:
- a. Clusters of pipes or other penetrations which cannot be sealed with prefabricated membrane flashings shall be sealed by surrounding them with a prefabricated vinyl-coated metal pitch pan and sealant supplied by the membrane manufacturer.
 - b. Vinyl-coated metal pitch pans shall be installed, flashed and filled with sealant in accordance with the membrane manufacturer's requirements.
 - c. Pitch pans shall not be used where prefabricated or field fabricated flashings are possible.
- E. Roof Drains: Coordinate installation of roof drains and vents.
1. Drain Assemblies with Clamping Rings:
- a. Remove existing roofing system materials from drain bowl and clamping ring.
 - b. The membrane must extend beyond the inside of the clamping ring.
 - c. Use a manufacturer supplied or approved sealant (1/2 tube minimum) between the membrane and drain bowl assembly.
 - d. After the membrane is properly installed onto the bowl and the clamping ring set in place, all bolts securing the ring must be installed to provide constant, even compression on the sealant. If bolts are broken or missing, replacements must be installed.
2. Drain Boots:
- a. Remove existing flashing and asphalt at existing drains in preparation for sealant and membrane.
 - b. Use a manufacturer supplied or approved sealant (1/2 tube minimum) to the outside of the drain boot and insert it into the drain.
 - c. Fasten membrane around the perimeter of the drain with the same fastening pattern as the field membrane, no less than 1 fastener per drain.
 - d. Install a pair of composite drain rings (CDRs) to compress the boot to the pipe. Ensure the CDR openings face in opposite directions.
 - e. Secure the manufacturer's drain guard over the opening by heat welding the attachment tabs to the roof membrane.
- F. Edge Details:

1. Provide edge details as indicated on the Drawings. Install in accordance with the membrane manufacturer's requirements.
 2. Join individual sections in accordance with the membrane manufacturer's requirements.
 3. Coordinate installation of metal flashing and counter flashing.
 4. Manufactured Roof Specialties: Coordinate installation of copings, counter flashing systems, gutters, downspouts, and roof expansion assemblies.
- G. Walkways:
1. Install walkways in accordance with the membrane manufacturer's requirements.
 2. Provide walkways where indicated on the Drawings.
 3. Install walkway pads at roof hatches, access doors, rooftop ladders and all other traffic concentration points regardless of traffic frequency. Provided in areas receiving regular traffic to service rooftop units or where a passageway over the surface is required.
 4. Do not install walkways over flashings or field seams until manufacturer's warranty inspection has been completed.
- H. Water Cut-Offs:
1. Provide water cut-offs on a daily basis at the completion of work and at the onset of inclement weather.
 2. Provide water cut-offs to ensure that water does not flow beneath the completed sections of the new roofing system.
 3. Remove water cut-offs prior to the resumption of work.
 4. The integrity of the water cut-off is the sole responsibility of the roofing contractor.
 5. Any membrane contaminated by the cut-off material shall be cleaned or removed.

3.5 PROTECTION

- A. Protect installed roofing products from construction operations until completion of project.
- B. Where traffic is anticipated over completed roofing membrane, protect from damage using durable materials that are compatible with membrane.
- C. Repair or replace damaged products after work is completed.

END OF SECTION

TERMS OF SERVICE

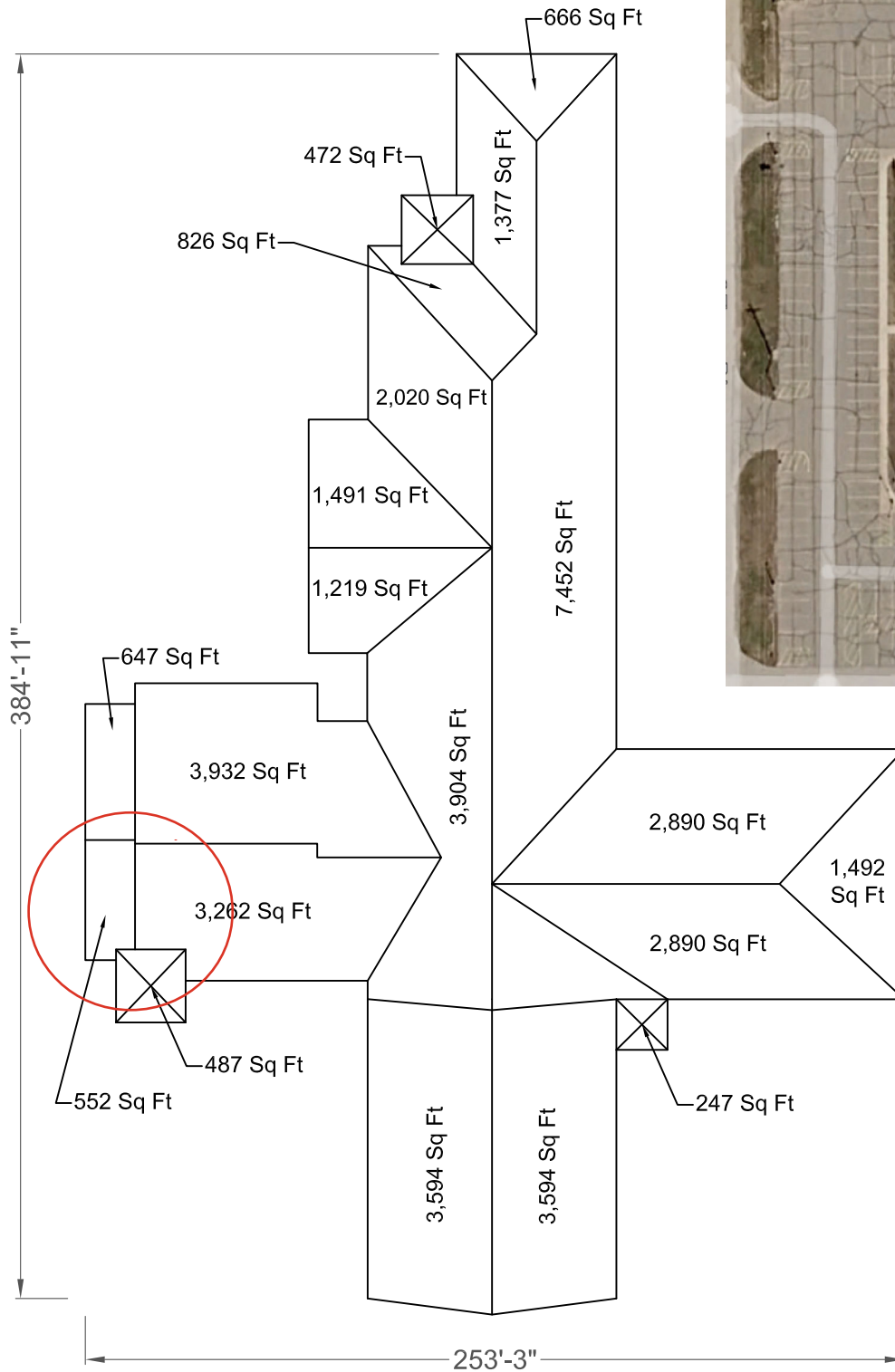
- The Specification Generator is a program (the "Program") that creates a document that can, and in most cases should, be modified by the specifier to meet the requirements of an individual project. Duro-Last® is not responsible for the accuracy of any document created in full or in part by this Program.
 - Duro-Last is providing this Program to specifiers without charge to aid in their development of roofing project specifications. The user of any specification created with this Program is solely responsible for its content and accuracy with respect to complying with Duro-Last specifications, project requirements and all applicable regulatory codes. This Program should not be construed to replace any system design provided by a professional architect or engineer, who

remains ultimately responsible for the design integrity and safety of all building components including the applicability of all relevant building codes and regulations.

- Duro-Last and its employees and independent sales personnel representing Duro-Last DISCLAIM responsibility for and are not liable for damages (direct or consequential, including but not limited to loss of profits) or damage to buildings or their contents, with respect to the use of this Program and/or any specifications created through its use.



Duro-Last is part of the Amrize family



Huron ISD Presentation Drawing

Total Sq Ft
Approx. - 43,014

Bidders to verify all measurements

		525 E Morley Drive Saginaw, MI 48601 Fax: 989-758-6359 Phone: 800-248-0280 engineering@duro-last.com		Project #: 300388
Legend Factory Field Curb Stack Walkpad	Drawn By: Ken Werle Date: 6/3/26 Scale: N.T.S.	Huron ISD Bad Axe, MI DL - Trevor Wagerter	Revision Date By	- 00/00/00 00/00/00 00/00/00 - - -
<p><small>Duro-Last Roofing, Inc. is the supplier of the materials only. The proposed layout is based upon the information provided by the contractor and/or independent sales rep. All quantities are the sole responsibility of the architect, installing contractor, independent sales rep, or owners representative prior to ordering.</small></p>				

Legend

- 📍 1299 S Thomas Rd
- 📍 Bad Axe Nazarene Church
- 📍 Huron County Great Start
- 📏 Path Measure



📍 Bad Axe Nazarene Church

S Thomas Rd

📍 1299 S Thomas Rd

📍 Huron County Great Start

