

# 2023 Waterford School District Pierce Middle School Roofing Replacement 5145 Hatchery Road Waterford Twp., Michigan 48329



Orientation	Scale
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**Project**  
2023 WATERFORD SCHOOL DISTRICT  
PIERCE MIDDLE SCHOOL  
ROOFING REPLACEMENT

**Project Location**  
5145 HATCHERY RD.,  
WATERFORD TWP., MI 48329

**Sheet Name**  
COVER SHEET

**Seal**

REV	ISSUED FOR	DATE	BY
	FOR BID	3-9-23	KD

**SME Project No.**  
090588.01

**Project Manager:**  
KD

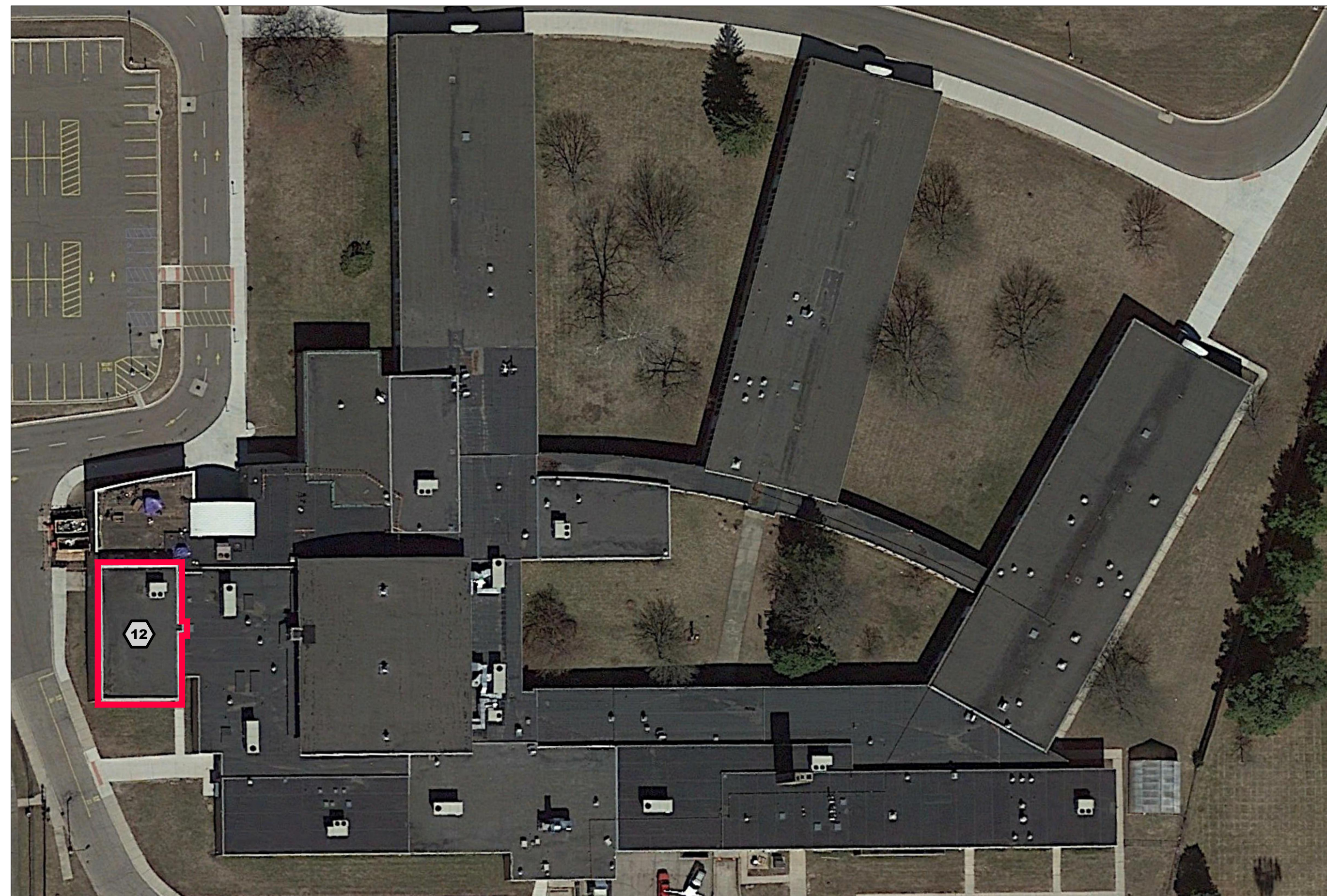
**Designer:**  
KD

**CADD:**  
GUS

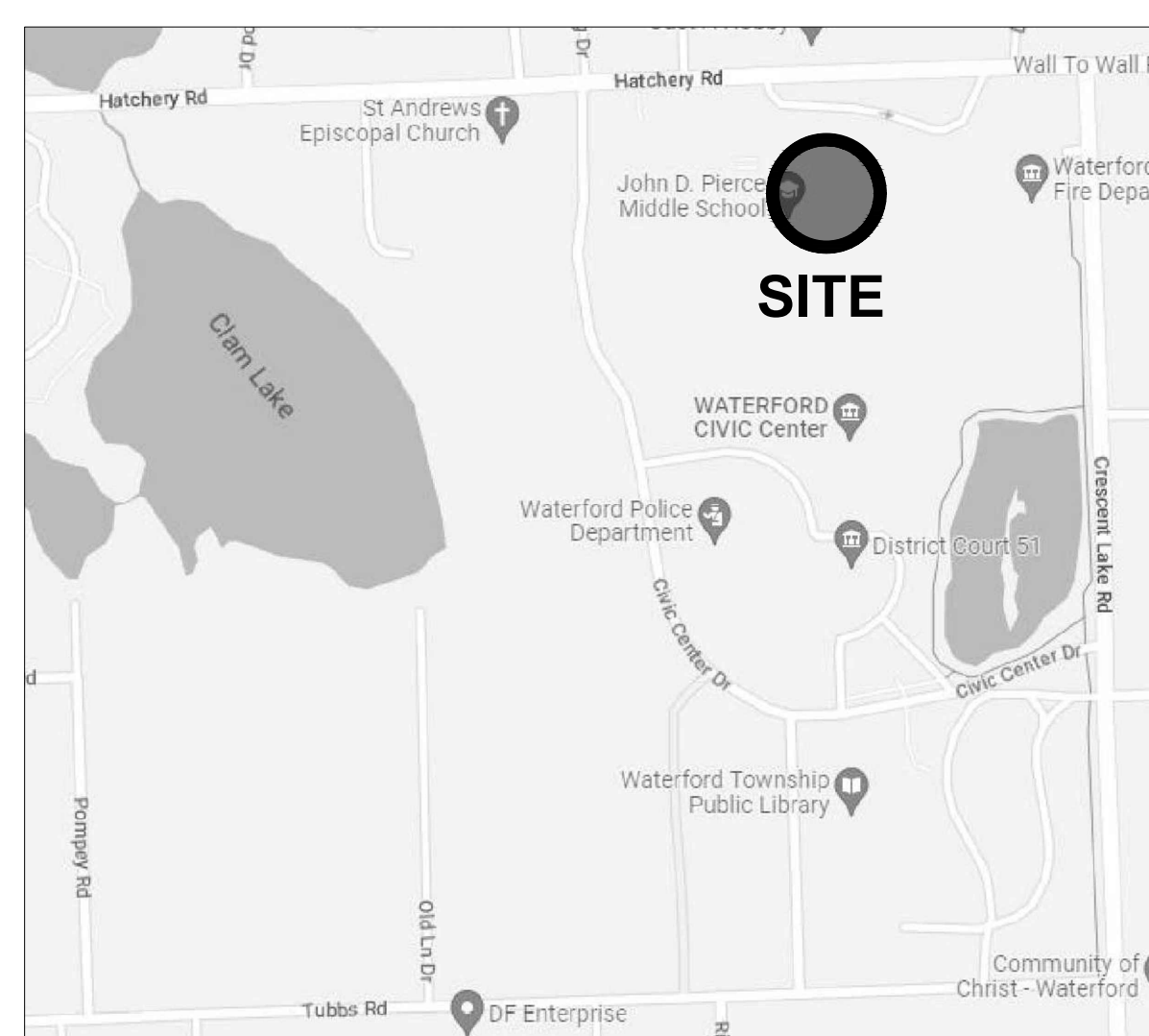
**Checked By:**  
KD

**Reviewed By:**  
LD

**Sheet No.**  
GO.0



**OVERALL SITE AERIAL IMAGE**  
NOT TO SCALE



**LOCATION MAP**  
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### GENERAL NOTES

1. THE BUILDING WILL REMAIN PARTIALLY OCCUPIED WITH THE OWNER'S SCHEDULED SUMMER MAINTENANCE, CONSTRUCTION AND ACADEMIC/ATHLETIC ACTIVITIES DURING THE COURSE OF THIS PROJECT. CLOSELY COORDINATE WORK WITH THE OWNER'S REPRESENTATIVE AND OTHER ACTIVITIES THAT MAY BE OCCURRING AT THE SITE.
2. WHERE NOT INDICATED ON THE PROJECT DRAWINGS OR DESCRIBED IN THE SUMMARY OF WORK, PROVIDE THE MANUFACTURER'S STANDARD DETAILS. PROVIDE SPECIFIED CONTRACTOR'S SHOP DRAWINGS AND SPECIAL DETAILING REQUIREMENTS WITH THE PROJECT SUBMITTALS.
3. PROVIDE NECESSARY TEMPORARY FENCING, BARRICADES, OR STRUCTURES AND OTHER SUCH MEASURES AS NEEDED TO PROTECT PEDESTRIAN AND VEHICLE TRAFFIC ADJACENT TO THE WORK AREA.
4. PROVIDE TEMPORARY PROTECTION FOR EXTERIOR WALLS AND WINDOWS, ENTRANCES, LANDSCAPING AND PAVEMENTS. RESTORE DAMAGES CAUSED BY ROOFING OPERATIONS TO PRE-PROJECT CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
5. IN ADDITION TO ITEM 4 ABOVE, PROVIDE TEMPORARY PROTECTION FOR ROOFING THAT WILL BE TRAFFICKED OVER, OR USED FOR STAGING PURPOSES, INCLUDING BOTH NEW AND OLD ROOF AREAS. TO REDUCE THE POTENTIAL FOR LEAKAGE, SECTIONS ADJACENT TO THE WORK AREAS NOT INCLUDED IN THIS PROJECT ARE TO BE PROTECTED DURING THE FLASHING TIE-INS. THE CONTRACTOR WILL BE HELD RESPONSIBLE TO REPAIR SECTIONS DAMAGED DURING THIS PROJECT.
6. PROVIDE TEMPORARY ROOFING, TIE-INS, WATER BLOCKS, AND INTERIOR PROTECTION DURING THE ROOFING REPLACEMENT TO PREVENT LEAKAGE INTO THE BUILDING, AND WATER DAMAGE TO INTERIOR FURNISHINGS, FINISHES, STORED MATERIALS AND EQUIPMENT.
7. SPREAD OUT STORED MATERIALS ON THE ROOF SO AS NOT TO OVERLOAD THE ROOF DECKS.
8. STORE MATERIALS OFF THE GROUND ON PALLETS, AND COVERED WITH OPAQUE, BREATHABLE WATERPROOF TARPULINS TO PROTECT FROM UV EXPOSURE AND WET WEATHER.
9. STORE CONTAINERS OF MATERIALS SENSITIVE TO HIGH TEMPERATURES IN THE SHADE, OR IN CLIMATE CONTROLLED LOCATIONS.
10. STORAGE OF MATERIALS INSIDE THE BUILDING IS PROHIBITED UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE OWNER'S REPRESENTATIVE. NO STORAGE OF FLAMMABLE MATERIALS ON OR WITHIN THE BUILDING IS PERMITTED. HOIST FLAMMABLES TO THE GROUND AND EITHER SECURELY STORE OR REMOVE FROM THE SITE AT THE END OF EACH WORK DAY. STORE FLAMMABLE FLUIDS A MINIMUM 50 FEET AWAY FROM THE BUILDING WHEN NOT IN USE.
11. REMOVE DEBRIS FROM THE ROOF AND GROUNDS DAILY AND DISPOSE IN A PROPER MANNER.
12. PROMPTLY REPORT UNANTICIPATED CONDITIONS UNCOVERED DURING ROOFING REMOVAL AND REPLACEMENT THAT ARE CONTRARY TO THE PROJECT DOCUMENTS, OR WILL NEGATIVELY IMPACT THE NEW ROOFING SYSTEM, TO THE ENGINEER AND OWNER'S REPRESENTATIVE FOR REVIEW.
13. VERIFY DIMENSIONS AND FIELD CONDITIONS BEFORE ORDERING MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND VERIFYING WORK ITEMS REQUIRED FOR A COMPLETE WORK PRODUCT. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE UNDERSIDE OF THE ROOF DECK FOR CONDUITS OF OTHER UTILITIES THAT MAY BE DAMAGED FROM THE ROOFING PROJECT.
14. INSTALL NEW ROOFING IN COMPLIANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS OF THE LATEST REVISED EDITION OF THE NRCA ROOFING AND WATERPROOFING MANUAL, AND THE ROOFING MANUFACTURER.
15. PROVIDE SHEET METAL COMPONENTS THAT COMPLY WITH THE LATEST EDITION OF THE SMACNA ARCHITECTURAL SHEET METAL MANUAL. COPINGS AND PERIMETER EDGE FLASHINGS TO BE TESTED AND INSTALLED ANSI-SPRI ES-1 ASSEMBLIES.
16. SUBMIT THE SPECIFIC ROOFING MANUFACTURER'S PRODUCT DATA SHEETS, INSTALLATION GUIDELINES AND CONSTRUCTION DETAILS, AND THE SHEET METAL MANUFACTURER'S PRODUCT DATA SHEETS AND INSTALLATION INSTRUCTIONS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIALS.
17. PROVIDE LICENSED ELECTRICAL, PLUMBING, OR HVAC SUBCONTRACTORS TO DISCONNECT AND RECONNECT MECHANICAL UNITS, ADJUST OR RELOCATE UTILITIES, RAISE CURBS, ABANDON DESIGNATED CURBS, RAISE DUCTWORK, INSTALL NEW DRAINS OR SCUPPER COMPONENTS, AND ABANDON DESIGNATED DRAINS AND PIPING. IN-PLACE SYSTEMS SHALL ACCOMMODATE NEW INSULATION THICKNESSES AND MEET WARRANTY REQUIREMENTS FOR FLASH HEIGHT BY ROOFING MANUFACTURER. ALL MECHANICAL UNITS AND UTILITIES MUST BE OPERATIONAL AND DRAINS FREE FLOWING AT THE COMPLETION OF THE PROJECT. THIS INCLUDES CONDUITS DAMAGED BY SCREWS OR OTHER ITEMS THAT MAY DAMAGE UTILITIES. WORK TO BE COMPLETED IN ACCORDANCE WITH LOCAL CODES AND JURISDICTION(S) OF AUTHORITY. DO NOT SHUT OFF OR INHIBIT UTILITY SERVICES WITHOUT NOTIFYING OWNER'S REPRESENTATIVE IN ADVANCE.
18. EXISTING DRAINS ARE TO BE REPLACED DOWN TO THE FIRST CONTINUOUS SECTION OF VERTICAL OR HORIZONTAL PIPING BENEATH THE DECK FOR ALL STANDARD DRAIN AND OVERFLOW DRAINS THAT ARE TO BE REMOVED AND REPLACED.
19. NEW DRAIN LOCATIONS SHALL BE CONNECTED TO NEAREST ROOF STORM WATER PLUMBING SYSTEM.

### LIST OF DRAWINGS

SHEET NO.	SHEET TITLE
G0.0	COVER SHEET
G1.0	ROOF AREA 12 WIND DESIGN LOADING / ZONE PLAN
A1.0	ROOF PLAN AREA 12
A5.0	DETAILS

### ENGINEER

SME  
43980 PLYMOUTH OAKS BLVD.  
PLYMOUTH, MI 48170  
(734) 454-9900  
CONTACT: KYLE DAMEROW, EIT

### OWNER / CLIENT

WATERFORD SCHOOL DISTRICT  
501N. CASS LAKE ROAD  
WATERFORD, MICHIGAN 48328  
(248) 682-7800  
OWNER REPRESENTATIVE: MR. JOHN KEGLOVITZ  
WWW.WATERFORD.K12.MI.US

### APPLICABLE CODES

2015 MICHIGAN BUILDING CODE

### SCOPE OF WORK

BASE BID WORK:

WORK INCLUDES PROVIDING LABOR, MATERIALS, EQUIPMENT, AND ADMINISTRATION NECESSARY TO INTEGRATE A NEW ADHERED, BLACK REINFORCED 60-MIL EPDM SINGLE-PLY ROOFING MEMBRANE, WITH A 20-YEAR WARRANTY, INTO THE TOTAL BUILDING SYSTEM AS SHOWN ON THIS DRAWING SET.

ROOF AREAS:

ROOF AREA 12 IS APPROXIMATELY 2,830 SQUARE FEET.

TOTAL ROOF AREA IS APPROXIMATELY 2,830 SQUARE FEET.

WORK TASKS INCLUDE:

REMOVE THE EXISTING AGGREGATE SURFACED BUILT-UP ROOF (BUR) MEMBRANE AND INSULATION TO EXPOSE THE STRUCTURAL DECKS.

A. REVIEW ROOFING SUBSTRATES AND REPAIR OR REPLACE DETERIORATED ROOF DECK, PARAPET WALLS AND NAILERS AS NEEDED BASED ON UNCOVERED CONDITIONS DURING SELECTIVE DEMOLITION.

B. INSTALL SUBSTRATE BOARD AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING.

C. INSTALL VAPOR RETARDER TO SUBSTRATE BOARD OR BASE SHEET AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 26 00 VAPOR RETARDERS.

D. INSTALL POLYISOCYANURATE INSULATION AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING. INSULATION SYSTEM TO MEET R-30.

E. INSTALL COVER BOARD AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING.

F. INSTALL NEW METAL FLASHINGS AS SHOWN ON THE PROJECT DRAWINGS AND AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 62 00 SHEET METAL FLASHING AND TRIM.

G. WHERE MECHANICAL UNITS ARE LIFTED TO ALLOW ROOF REPLACEMENT, REINSTALL FASTENERS WITH INTEGRAL RUBBER GASKETS ON ALL SIDES OF THE UNIT.

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Mar 07, 2023 - 10:23am - gus.luvell - FILE LOCATION: \\sme-hq-pw\p\WP\090588.01\CAD\Design Files\MAT\Revit\BIDS\090588.01 COVER.dwg

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Orientation	Scale
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Project  
**2023 WATERFORD SCHOOL DISTRICT  
PIERCE MIDDLE SCHOOL  
ROOFING REPLACEMENT**

Project Location  
**5145 HATCHERY RD.,  
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Sheet Name  
**ROOF AREA 12  
WIND DESIGN LOADING /  
ZONE PLAN**

Seal

Revisions

REV	ISSUED FOR	DATE	BY
	FOR BID	3-9-23	KD

SME Project No.  
**090588.01**

Project Manager:  
**KD**

Designer:  
**KD**

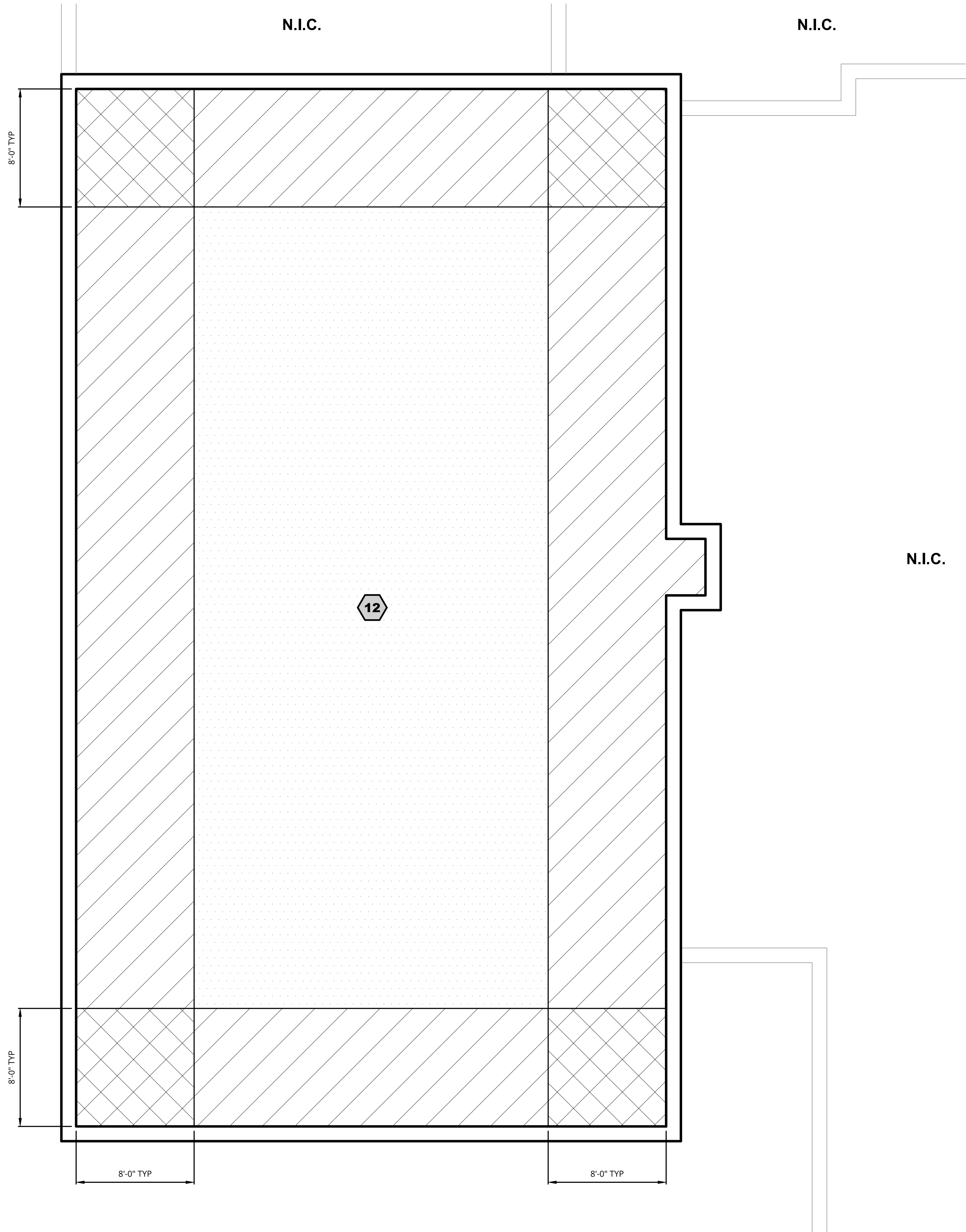
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Reviewed By:  
**LD**

Sheet No.  
**G1.0**

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**LEGEND**

-  ROOF AREA
-  ZONE 1
-  ZONE 2
-  ZONE 3

**WIND DESIGN CRITERIA (MBC 2015)**  
PIERCE MIDDLE SCHOOL  
ULTIMATE DESIGN (FACTORED) BASIC WIND SPEED (3 SECOND GUST) = 120 MPH  
NOMINAL WIND SPEED = 93 MPH  
EXPOSURE CATEGORY = C  
RISK CLASSIFICATION = III  
INTERNAL PRESSURE COEFFICIENT (ENCLOSED BUILDING) = +/- 0.18

TABLE 1  
SERVICE (UNFACTORED) DESIGN WIND LOADS - COMPONENTS AND CLADDING

ROOF SURFACE VERTICAL PRESSURE (PSF)	
ZONE 1	- 21
ZONE 2 AND TOP/SIDE OF PARAPET	- 35
ZONE 3 AND TOP/SIDE OF PARAPET	- 53

- NOTE:  
" - # " INDICATES PRESSURE ACTING AWAY FROM THE ROOF SURFACE, I.E. SUCTION
- NOTES:  
1. WORK WIND DESIGN LOADING ZONE PLAN WITH TABLE 1, THIS SHEET.  
2. WIND UPLIFT PRESSURE GIVEN IN TABLE 1 TO BE USED FOR DESIGN OF ROOFING FASTENING SYSTEM(S).  
3. DESIGN PRESSURES BASED ON EFFECTIVE WIND AREA OF 10FT<sup>2</sup> OR LESS.

**ROOF AREA 12  
WIND DESIGN LOADING / ZONE PLAN**  
SCALE: 1/4" = 1'-0"



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ROOFING REPLACEMENT

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**Sheet Name**  
ROOF PLAN AREA 12

**Seal**

**Revisions**

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1	FOR BID	3-9-23	KD

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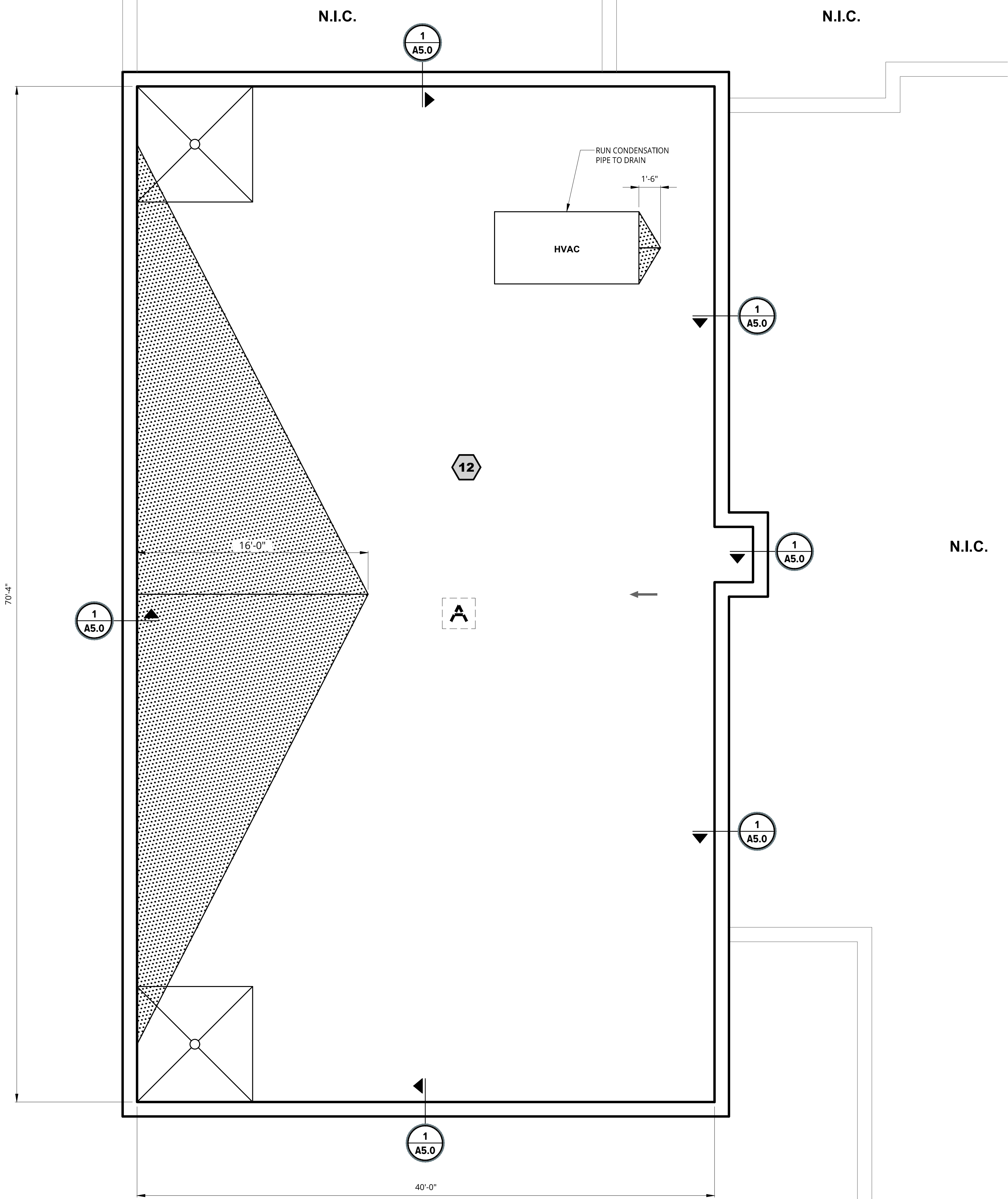
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KD

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**Reviewed By:**  
LD

**Sheet No.**  
A1.0



**LEGEND**

- # ROOF AREAS
- NEW ROOF DRAIN WITH 8'-0" x 8'-0" SUMP, REFER TO DETAIL 1 ON SHEET A5.0
- HVAC HVAC ROOF TOP UNIT ON CURB, PER DETAIL 2 ON SHEET A5.0
- A ABANDONED CURB, VERIFY ABANDONMENT WITH OWNERS REPRESENTATIVE. REFER TO NOTE 2
- ← WATER SHED DIRECTION
- N.I.C. ROOF AREA NOT IN CONTRACT
- ½" PER FOOT TAPERED SADDLE
- 1 A5.0 DETAIL CALL OUT

PIERCE MIDDLE SCHOOL NOTES:  
 1. FIELD VERIFY ALL DIMENSIONS.  
 2. AT ABANDONED UNITS AND CURBS, CONTRACTOR SHALL PROVIDE AN ENGINEERED DETAIL FOR GYPSUM DECK INFILL (SIGNED AND STAMPED BY AN ENGINEER LICENSED IN THE STATE OF MICHIGAN). DETAIL TO BE PROVIDED TO SME (ENGINEER) FOR REVIEW AND SUBSEQUENT APPROVAL PRIOR TO INSTALLATION

**ROOF PLAN AREA 12**  
SCALE: 1/4" = 1'-0"

**ISSUED FOR BID**

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 PLOT DATE:

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**Sheet Name**  
**FLASHING DETAILS**

**Seal**

**Revisions**

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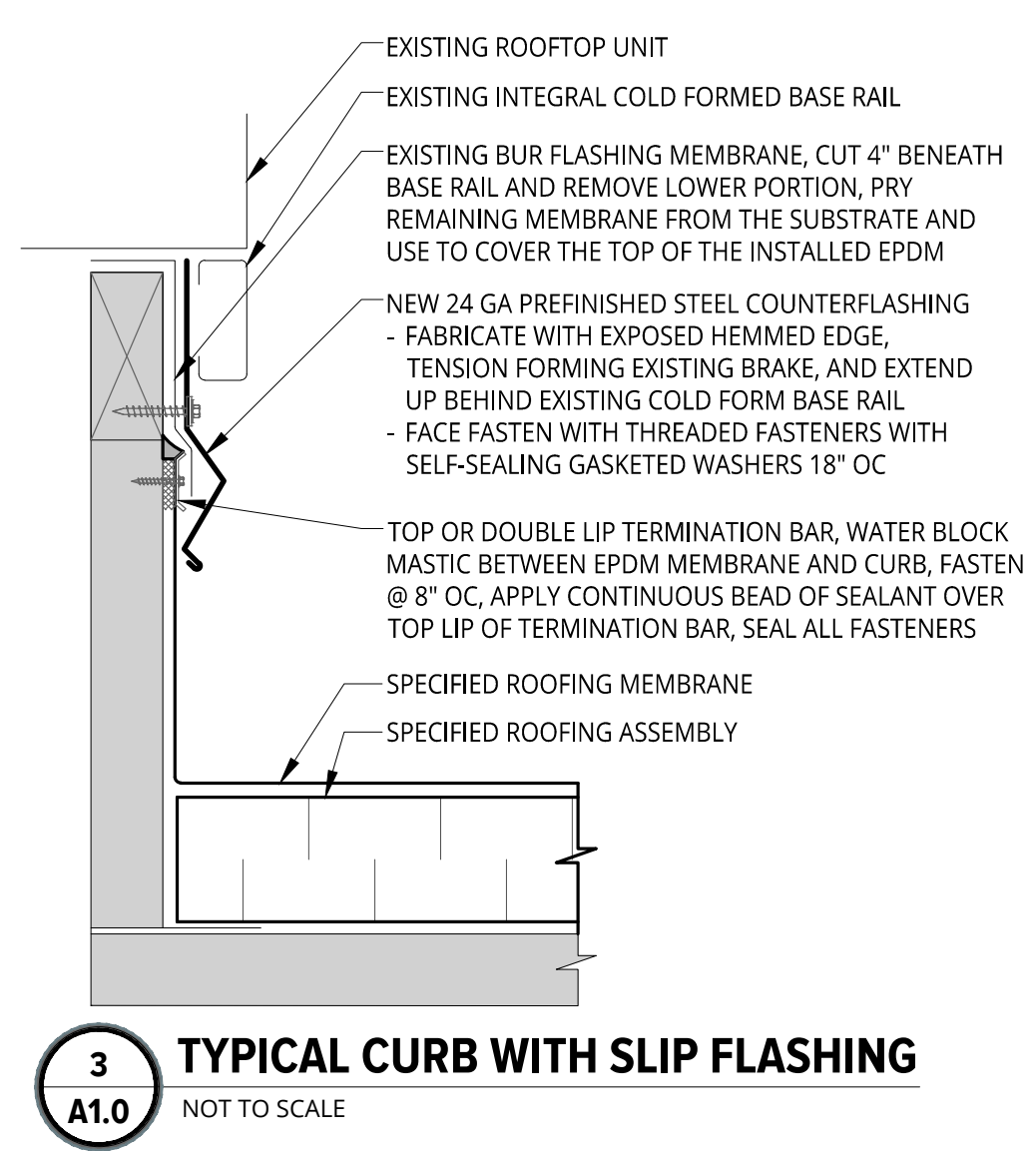
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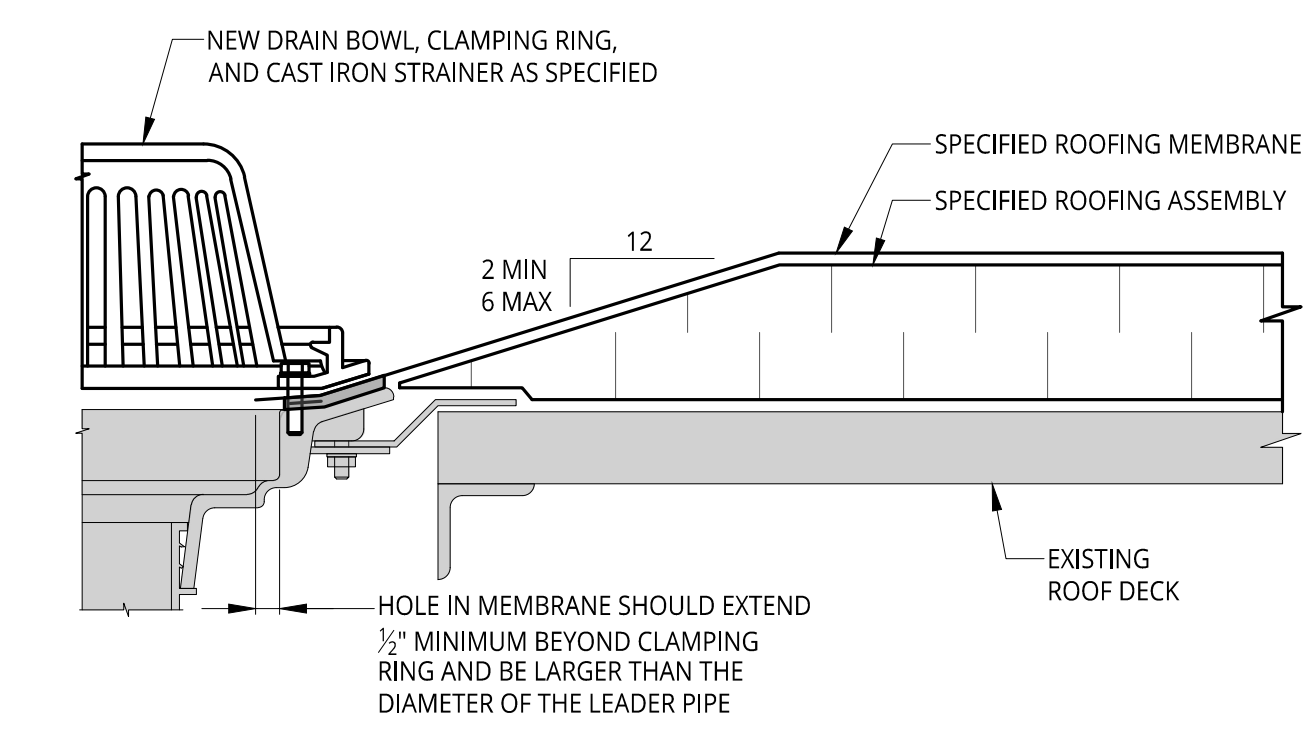
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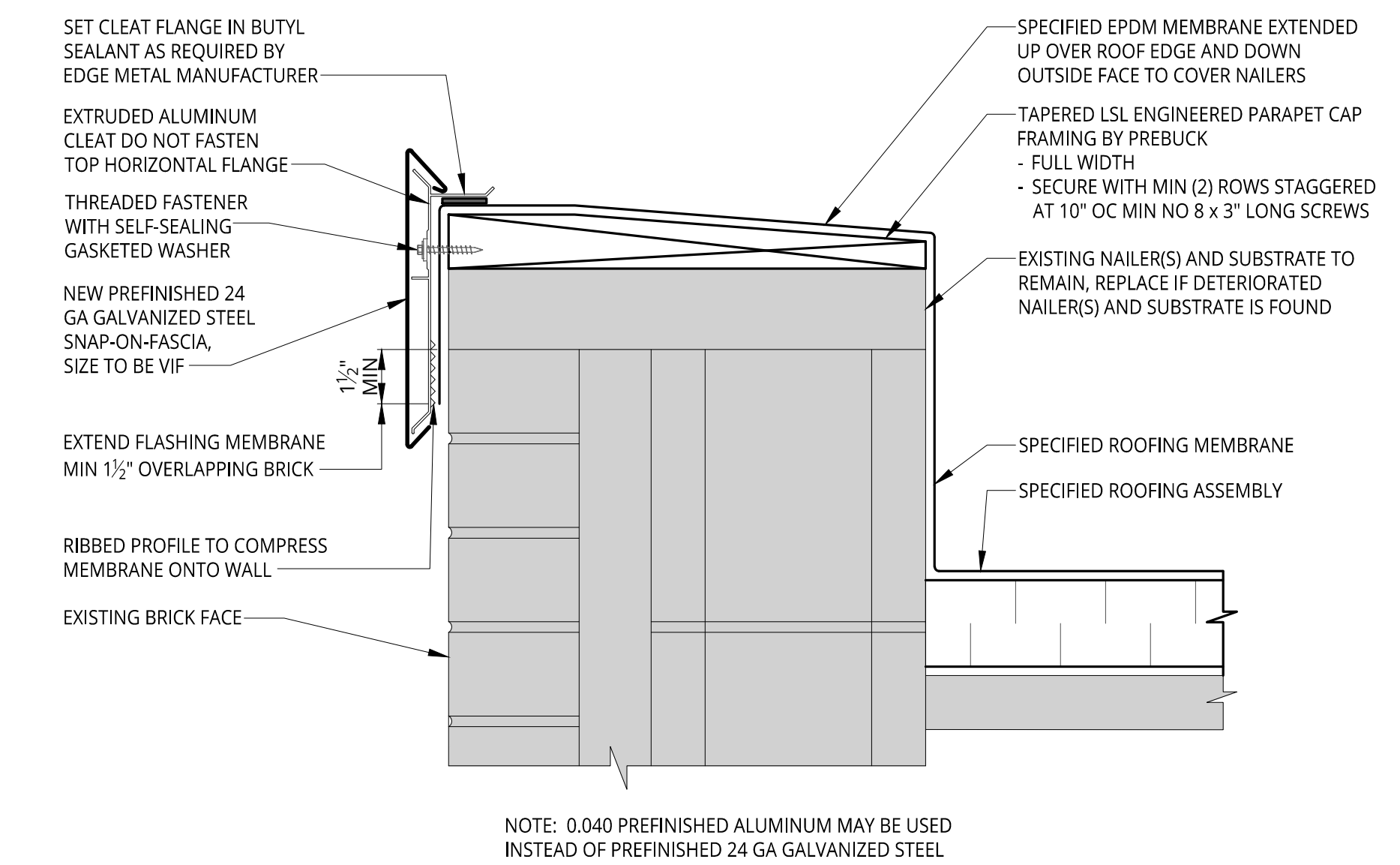


**3 TYPICAL CURB WITH SLIP FLASHING**  
 A1.0 NOT TO SCALE



- NOTES:**
- DO NOT RUN SEAMS THROUGH DRAINS OR SUMPS.
  - WHERE FIELD SEAMS ARE WITHIN 18" OF DRAINS, THEY SHALL BE STRIPPED IN WITH 5" WIDE UNCURED EPDM.
  - DRAIN HEIGHT TO REMAIN AS IS, INSTALL TAPERED INSULATION TO CREATE A 4"x4" (UNCO) SUMP AREA AROUND EACH DRAIN, WITH MODIFICATIONS AS NEEDED AT EXPANSION JOINTS AND TIGHT SPACES. NEW INSULATION MAY NEED TO BE OMITTED TO ALLOW SUMPED AREA.
  - AT EXISTING DRAIN LOCATIONS, REPLACE DRAIN PIPING TO FIRST CONTINUOUS STRETCH. DIAMETER TO MATCH EXISTING.
  - NEW DRAIN LOCATIONS, SHALL BE CONNECTED TO NEAREST ROOF STORM WATER PLUMBING SYSTEM.

**2 ROOF DRAIN**  
 A1.0 NOT TO SCALE



NOTE: 0.040 PREFINISHED ALUMINUM MAY BE USED INSTEAD OF PREFINISHED 24 GA GALVANIZED STEEL

**1 PERIMETER EDGE METAL FLASHING**  
 A1.0 NOT TO SCALE

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