

**PROJECT SUMMARY****SUMMARY OF WORK: Ref. Section 00 02 00**

General: Troy School District (TSD) 2022 Roof Program work for three (3) schools covering approximately 86,500 sq. ft. Roofing work includes roof replacement and restoration required to remediate all work identified in the specifications and drawings inclusive of all Bid Documents requirements.

Schedules: Ref. "PROJECT WORK SCHEDULE" on this Sheet A1.0 - Cover Page.

**BID SUMMARY:**

- Sealed bids should be submitted through Buildingconnect.com with the following link: <https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc>. No physical bids will be accepted in person or via delivery service. Bids are to be submitted no later than 11:00 am Thursday, November 11, 2021. The District will not consider or accept a bid received after the date and time specified for bid submission. Bids will be publicly opened immediately following the close of receiving bids with the following virtual meeting link: [meet.google.com/vccs-lybr-xmj](https://meet.google.com/vccs-lybr-xmj) or phone number (352) 720-0237 PIN 769 080 789. No oral, email, telephonic or telegraphic proposals shall be considered.
- A mandatory pre-bid meeting has been scheduled for 10:00 A.M., Thursday, October 28, 2021 at Troy School District Administration Building, 4400 Livernois, Troy, Michigan 48098. The roofing contractors will have access to walk the roofs post bid meeting. Please wear face coverings inside the building.
- Allowances Section 012100: Allowances will be defined on individual school roof plans under "Allowances". These allowances will be stated on the bid form.
- Unit Pricing Section 004322: Unit Pricing for unit work is defined on the Unit Price Bid Form in Section 000301. Unit Pricing bid values are entered by unit price individually on form.
- Alternates Section 012300: Alternates are individually listed on school roof plans and bids for Alternates. Alternated bid value are to be entered on Bid Form (Section 000300) as enumerated.
- TSD reserves the right to issue contracts to multiple contractors.
- Any questions regarding bid specifications must be received by 10am, Monday, November 8, 2021. Questions must be submitted in writing the online RFI form at [www.wtproject.net](http://www.wtproject.net) any questions on how to use the RFI form contact Ann Crrippen at (586) 731-3095 x10 or Peter Kinnunen at (586) 731-3095 x12. No response will be made to oral questions.

**EXISTING ROOF SYSTEM CONSTRUCTION: Ref. Roof Plans**

All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**NEW ROOF ASSEMBLY SUMMARY: Reference Roof Plans**

- Roof System: Ref. Roof Plan Schedules**
  - Roof Membrane: EPDM, 60 mil, unreinforced and fully adhered.
  - Insulation: Min. two layers. Top layer must be adhered.
  - Underlayment: (as required) Modified base sheet, Ref. Individual Roof Plans.
  - Deck: Multiple types, Ref. Individual Roof Plans.
- Roof System Performance:**
  - Warranty: 20 yr. Materials manufacturer, No Dollar Limit (NDL) materials and installation.
  - Wind: FM Global (FMG): FM Standard 4470 Meets - Windstorm Classification FMG 90.
  - Underwriters Laboratory External Fire Resistance - Class "A".
  - Energy: Michigan Uniform Energy Code: R30 condition dependent
  - Drainage: Drainage Performance Acknowledgement"

**GENERAL SHEET NOTES**

- All work shall be executed in accordance with the appropriate document of the Contract Documents.
- Any conflicts between specifications and drawings shall be brought to the attention of the Owner and Consultant immediately. In all situations the more restrictive and higher quality shall govern.
- All dimensions to, of, and in existing building and roof shall be verified in the field by contractor. Field measure existing conditions to verify material quantities and dimensions prior to fabrication on component material.
- Details shown are typical. Similar details apply to similar conditions unless otherwise indicated.
- The drawings herein are related to an alteration/ restoration to an existing structure. The specified work was based upon as much observation, destructive testing, etc. as circumstances permitted.

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02 41 19	SELECTIVE DEMOLITION
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**ROUGH CARPENTRY**

06 10 00	ROUGH CARPENTRY
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**THERMAL AND MOISTURE PROTECTION**

07 22 50	SINGLE PLY ROOF INSULATION
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07 90 00	JOINT SEALERS

**PLUMBING**

22 14 26.14	ROOF DRAINS
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**DRAWINGS**

Ref. Sheet A1.00 - Sheet Index

**GENERAL CONSTRUCTION DETAIL NOTES**

Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 - A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

- A. Flashing Heights:** Perimeters, curbs, penetrations shall be raised as necessary to meet the new insulation heights, tapered edge strip and tapered insulation height to meet typical industry standard of 8 in. base flashing height.
- B. Drains Existing:** Remove existing drain flashings. Furnish and install ½ inch per foot sloped tapered insulation sump area (8 ft. x 8ft. minimum) as detailed. Clean and reuse existing drains and accessories, replace all damaged, nonfunctional, incompatible, missing and broken drain components. Replace all plastic strainers with new cast iron. All replacement bowls, strainers, and clamping rings shall be cast iron. Provide new stainless-steel bolts. All nonmetallic drains strainers shall be replaced with fitted. Ref. to Details 1.09, 1.10, 1.11 and 1.12.
- C. Tapered Insulation:** Furnish and install new tapered insulation, crickets, saddles and kick-backs as designated on roof plan to provide a finished slope of 1/4 in/ft. slope and a min length to width ratio of 3:1. All equipment w/ curb size greater than 24 in. shall have cricket install on up slope side. Contractor responsible for identifying and notifying Consultant and Owner all existing tapered insulation not called out on plans for determination of unit costing. Verify in Pre-bid Conference additional ponded areas identified on the roof and install as noted.
- D. Curbs - Movable Equipment:** Lift equipment from curbs; run new fully adhered membrane flashing up and over top of curb; install continuous sealing material over top of curb. Reset equipment and mechanically fasten to curb. Coordinate with Owner prior to moving equipment to install new flashings. Metal equipment flashing and/or counter flashing must extend a minimum of 3 in. past the termination of the base flashing; add metal counter flashing as required. Ref. to Details 1.17 and 1.18.
- E. Curbs - Non-Movable Equipment:** Terminate new fully adhered membrane flashing at unit framing member. Metal equipment flashing and/or counter flashing must extend a minimum of 3 in. past the termination of the base flashing; add metal counter flashing as required. Ref. to Details 2.01.
- F. Equipment on Support Curbs - Non-Movable Equipment:** Cut corners of metal flashing cap, terminate new adhered membrane flashing to curb nailer. Reposition metal; install new shop fabricated corner metal, riveted and set in sealant. Wire brush and apply rust inhibitive paint to rusted cap metal. Ref. to Detail 3.02.
- G. Equipment on Support Curbs - Movable Equipment:** Raise or move equipment to furnish and install new metal cap on curb. Ref. to Detail 2.18.
- H. Round penetrations:** All penetrations shall be cleaned down to surface where any sealant will contact; Install new prefabricated pipe boots or field wrap with membrane. Install draw band, sealants and rain collars as detailed. Ref. to Details 2.03 & 2.04
- I. Heat Stacks:** Install new metal jacks and collars. Reuse existing metal jacks and storm collars when approved by consultant. Clean surfaces and apply new field wrapped EPDM flashing. Reattach and reseal storm collars. Ref. to Detail 2.05.
- J. Steel Support Posts:** Install split pipe boot or field wrap flashing with membrane. Terminate with draw band and sealant. Ref. to Detail 2.07.
- K. Prefabricated Pipe Chase Cover:** Reuse existing pipe cover. Replace any damaged or missing clamping bands or sealants. Ref. to Detail 3.01.
- L. Gas line and conduit support blocks:** Provide pressure treated wood supports. Install pads under all wood supports. Ref. to Details 3.03 and 3.11.
- M. Condensate Drain Lines:** Reuse, repair or replace all damaged or unusable drain lines. Add additional drain line to extend minimum 4 ft. from equipment or to any drains within 20 ft. Provide manufacturer's approved splash pan/pad/block where condensate drainage water would contact the roof membrane.
- N. All utility service lines (gas, water, electric, cable, etc.) to be raised as necessary to accommodate new insulation height and meet code requirements.**
- O. Abandoned Curbs & Penetrations:** Owner will mark all equipment to be removed and the curb capped. Remove all equipment and curbs as designated by owner and identified at the prebid conference. Where directed, remove curbs flush to deck surface, install framing and matching decking material. For abandoned curbs to remain in place, install new base flashing and install new 24 gauge sloped metal cap. Provide interior protection when removing any equipment or penetration. All small round abandoned penetrations that have no utility service as confirmed by Owner shall be removed to deck patched according to deck type. Ref. to Detail 2.15.
- P. Pitch pans:** Pitch pans can only be used when approved by Consultant. In the event they are to be used furnish and install new pitch pans, clean all penetrations down to original surface, blocking required at all pitch pans. Ref. Details 2.09.
- Q. Door Threshold:** Remove threshold plate and carry flashing up over and set in water block. Before resetting threshold mechanically attach termination bar, fasten min. 6 in. o.c. Door Threshold: Remove and dispose of existing counter flashing. Roof flashing to extend up and under existing threshold plate. Furnish and install new metal counter flashing and sealant.
- R. Downspout Outlets:** Provide concrete splash blocks set on walkpad at all roof downspout conductors
- S. Vent Thru Roof Piping:** Install PVC pipe extensions to all VTR piping prior to installation of new pipe boot flashing as needed to allow a minimum 8-inch flashing height. Attach screen wire mesh over the top of the pipe. Ref. Detail 2.06, PER CODE.
- T. Walk Pads:** Provide walk pads at roof access hatches and ladder access locations.

**Project Work Schedule**

School	Reroofing and/or Restoration Sq. Ft.	TSD 2022 Roof Work	Project Time Frame
Troy High School	39,300	Roof Areas L: Sec. 1-2, O, Q, and R: Sec. 1-3	6/17/2022 - 8/19/2022
Athens High School	36,200	Roof Areas E, K and H: Sec. 1-5	6/17/2022 - 8/19/2023
Schroeder Elementary School	11,000	Roof Areas C, D and E	6/17/2022 - 8/19/2024
<b>Total Roof Area (Sq. Ft.)</b>	<b>86,500</b>		



Troy School District  
 BID No. 9930  
 2022 Roofing Project

**DIRECTORY**

**OWNER:**  
 Troy School District  
 4400 Livernois  
 Troy, MI 48098

**CONTACT:**  
 Rob Carson  
 Director of Operations  
 Phone: (248) 823-4067  
 E-Mail: RCarson@troy.k12.mi.us

**PROJECT LOCATION:**  
 See Project List

**CONTACT:**  
 Michelle Kerns  
 Bond Representative  
 Phone: (248) 921-3929  
 E-Mail: MKerns@troy.k12.mi.us

**ROOFING CONSULTANTS:**  
 WeatherTech Consulting Group, Inc.  
 7747 Auburn Rd.  
 Utica, MI 48317

**CONTACT:**  
 Peter Kinnunen  
 VP of Operations  
 Phone: (586) 731-3095  
 E-Mail: pkinnunen@wtcog.net

**Project List**

Troy High School	4777 Northfield Pkwy. Troy, MI 48098
Athens High School	4333 John R Rd. Troy, MI 48085
Schroeder Elementary School	3541 Jack Dr. Troy, MI 48084

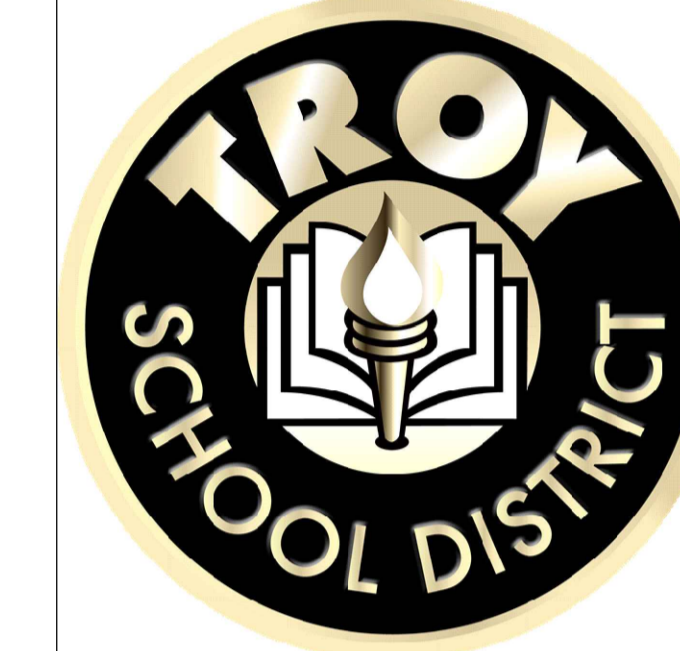
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A5.1	Detail Sheet
A5.2	Detail Sheet

**PROFESSIONAL**

**WeatherTech**  
 Roofing/Waterproofing Consultants  
 Consulting Group, Inc.  
 Corporate Office:  
 7747 Auburn Road  
 Utica, MI 48317

Phone #: 586-731-3095  
 Fax #: 586-731-6863  
 Email: [weathertech@wtcog.net](mailto:weathertech@wtcog.net)  
 Web Site: [www.wtcog.net](http://www.wtcog.net)

**CLIENT**

Troy School District  
 4400 Livernois  
 Troy, MI 48098

**PROJECT**

Troy School District  
 BID No. 9930  
 2022 Roofing Program

WTProject No: TSD-R102-21

**ISSUE**

DATE	DESCRIPTION
10/21/2021	Review
10/22/2021	OTB

File Name: TSD 2021 - A1.0 Cover Page

Drawn By: MD

Checked By: PK, AC, AW

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**SHEET TITLE**  
Cover Sheet

# A1.0

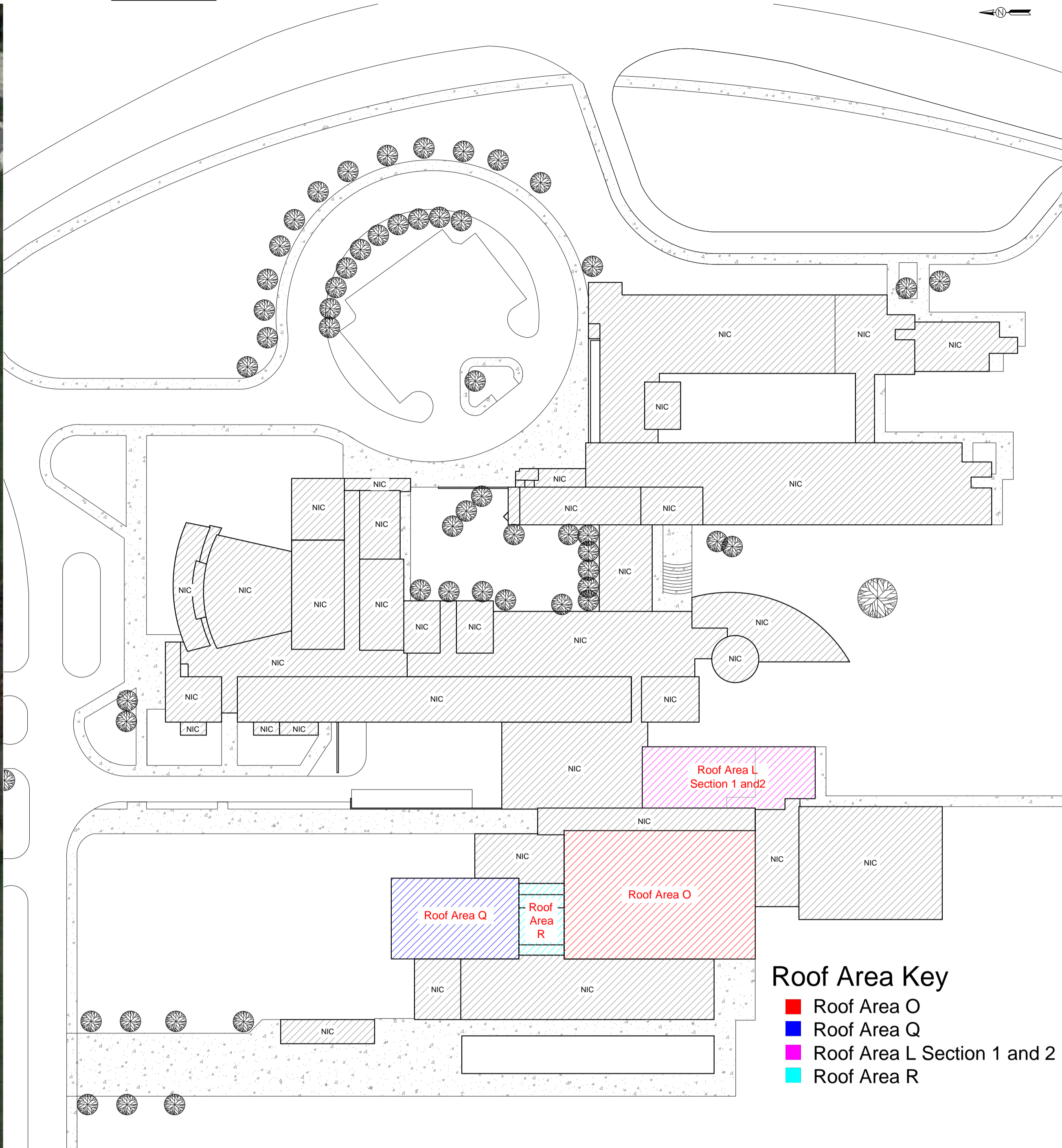
SHEET 1 OF 20



Satellite Image



SITE PLAN



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Corporate Office:  
7747 Auburn Road  
Utica, MI 48317

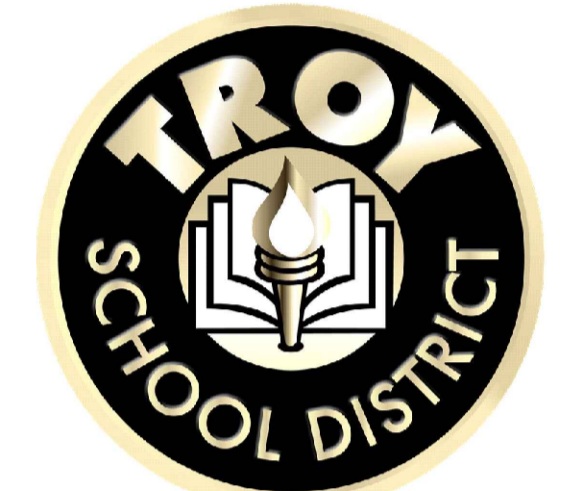
Phone #: 586-731-3095

Fax #: 586-731-6863

Email: weathertech@wtcg.net

Web Site: www.wtcg.net

CLIENT



Troy School District  
4400 Livernois  
Troy, MI 48098

PROJECT



Troy High School  
4777 Northfield Pkwy.  
Troy, MI 48098

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTPProject No: TSD-R102-21

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File Name: TSD 2021 - A2.0 Troy High School

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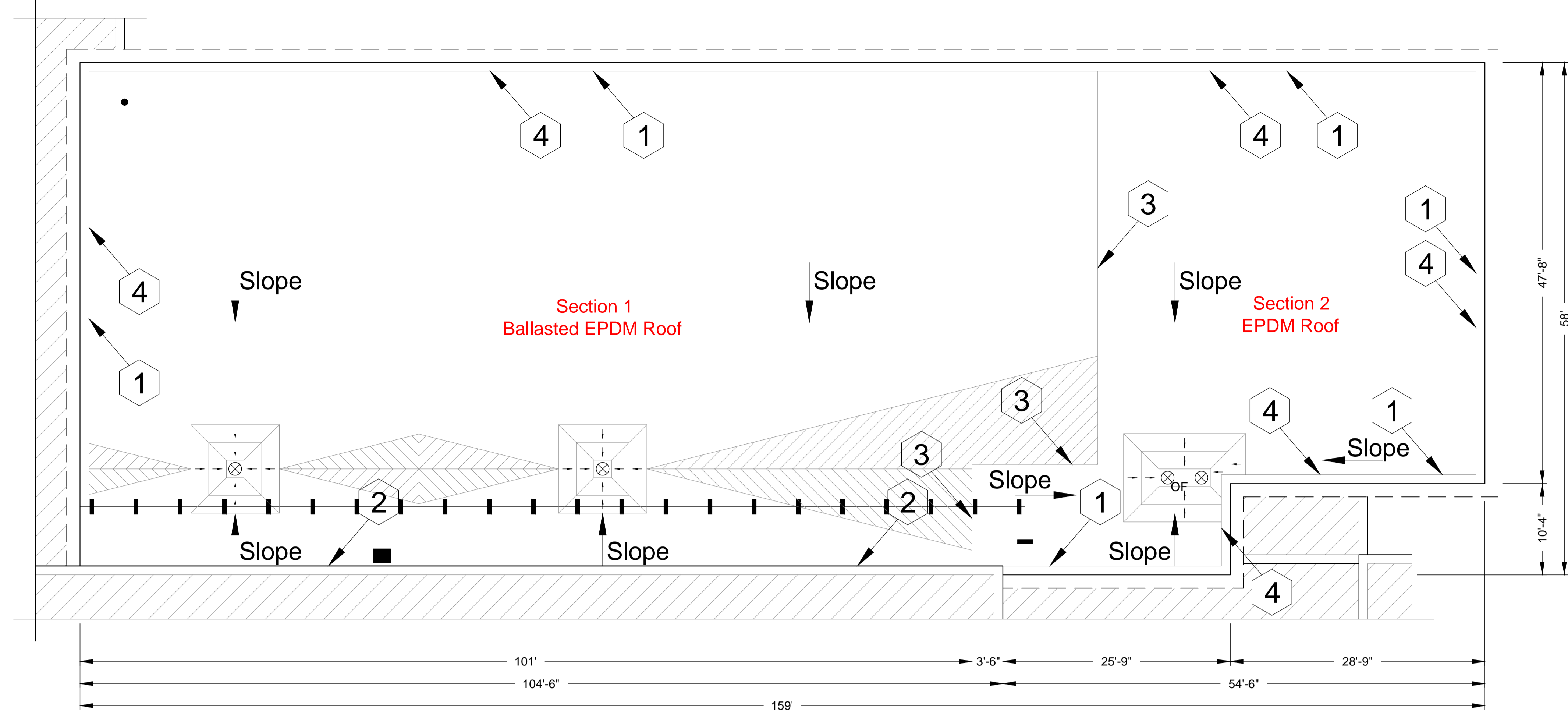
SHEET TITLE

Logistics Plan  
Troy High School

**A2.0**

SHEET 2 OF 39





Troy High School  
Roof Area L, Section 1 and 2  
Roof Plan  
Scale: 1/8" = 1'

**Troy High School - Troy School District**  
**Sheet Notes - Roof Area L - Sections 1 & 2**

**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.  
**Approx. Roof Area L 9,400 sq. ft.**

- New Roof System: Roof Areas L Section 1 and 2 Ref. Detail 1.01.**
  - Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - Insulation:** R30:
    - 1) First layer mechanically attached to deck.
    - 2) Second layer set-in low-rise foam adhesive.
  - Tapered Insulation:** Exists in various locations, see roof plan and details.
  - Deck:** Metal: Repair as necessary to comply w/ building codes.
  - Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 25 ft.

- EXISTING ROOF SYSTEM CONSTRUCTION**  
All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**Roof Area L-1 Core Sample Results**

- Roof Membrane:** Ballasted EPDM roof system.
- Insulation:**
  - 1) First insulation layer approx. 2.25-inch polyisocyanurate insulation.
- Deck:** Metal: Contractor to verify.

**Roof Area L-2 Core Sample Results**

- Roof Membrane:** Fully Adhered EPDM roof system.
- Insulation:**
  - 1) First insulation layer approx. 1.50-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 1.50-inch polyisocyanurate insulation.
- Deck:** Metal: Contractor to verify.

- Warranty/Guarantee:**
  - Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.

- Allowances:** See Bid Form.

- Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

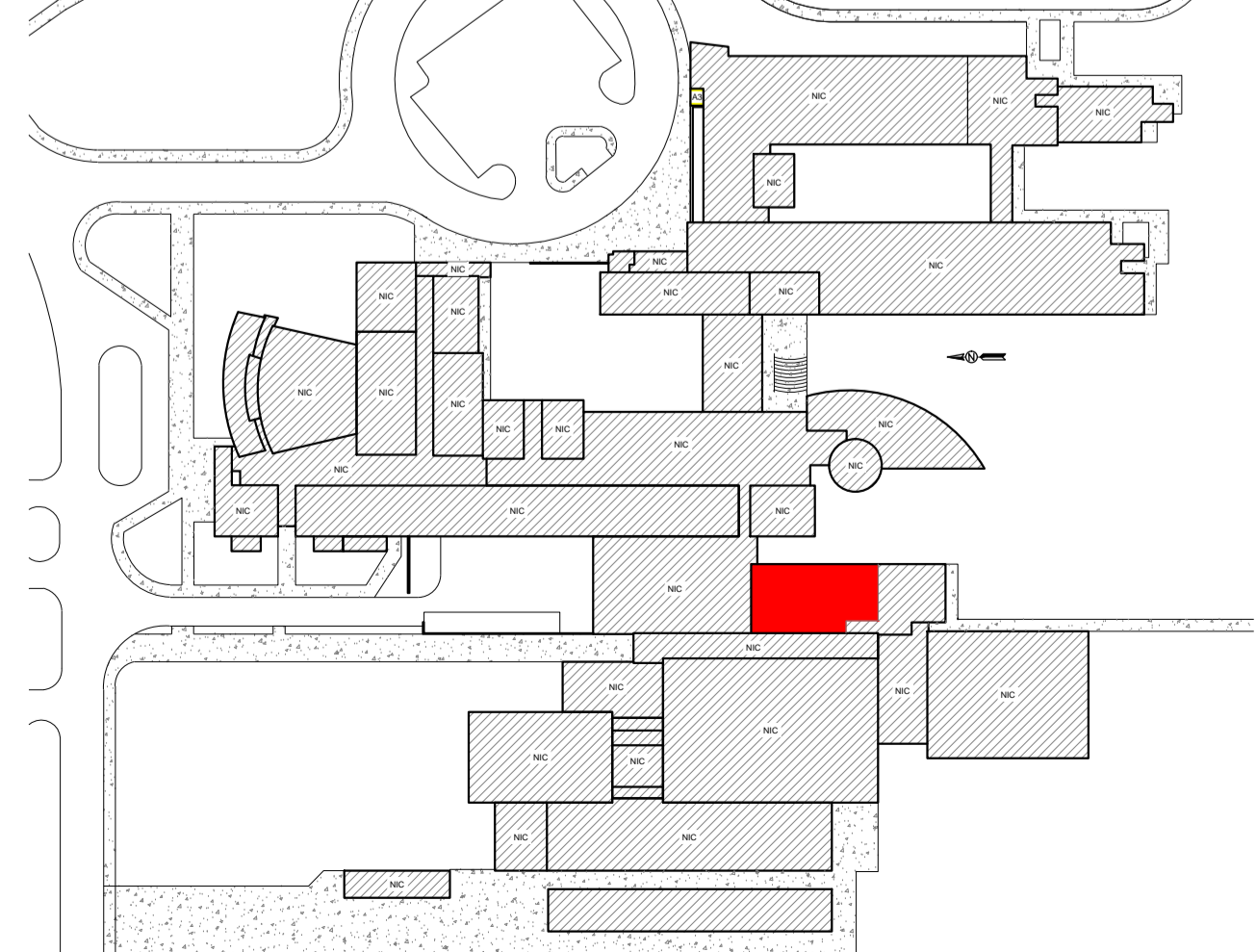
**General Construction Details: Ref. A1.0**  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

- Perimeter Edge:** Provide new 24-gauge prefinished metal edge flashing with a continuous face cleat; color as selected by owner. Ref. Details 1.05, and 1.06. Photos 925, 927, 933, 935 and 952.
- Metal Counter Flashings:** Existing receiver flashing to remain; install termination bar and new 015 stainless steel counterflashing. At locations without receiver flashing; provide termination bar and new surface mounted counter flashing. Ref. Detail 1.14. Photos 922 and 937.
- Roof Expansion Joint:** Furnish and install wood nailer as needed to allow proper flashing height; install 6 mil polyethylene liner, compressible batt insulation, foam rod stock and fully adhered EPDM. Ref. Detail 3.04. Photo 944 and 948.
- Lightning Protection:** Remove and dispose of existing lightning protection cables and air terminals. Ref. Photo 956 and 957.

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
⊕	Screen Support Stanchion	⊖	Railing or Fencing	⊞	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⊞	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
▲	Tapered Insulation or Saddles	▨	Metal Roofing	▨	Shingles or Clay Tiles

**KEY PLAN**

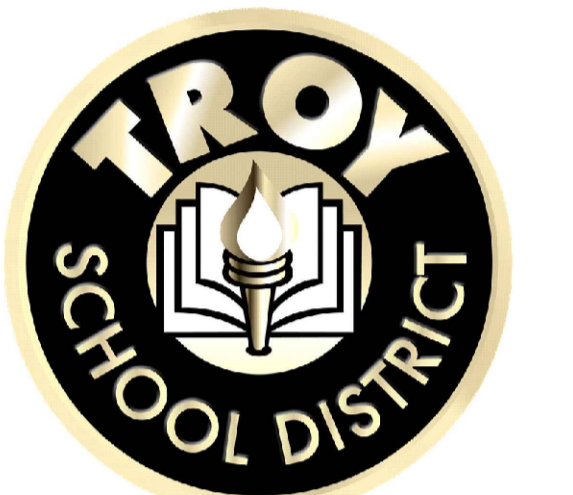


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Email: weathertech@wtcg.net  
Web Site: www.wtcg.net

**CLIENT**



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4400 Livernois  
Troy, MI 48098

**PROJECT**



Troy High School  
4777 Northfield Pkwy.  
Troy, MI 48098

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTPProject No: TSD-R102-21

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10/21/2021	Review
10/22/2021	OTB

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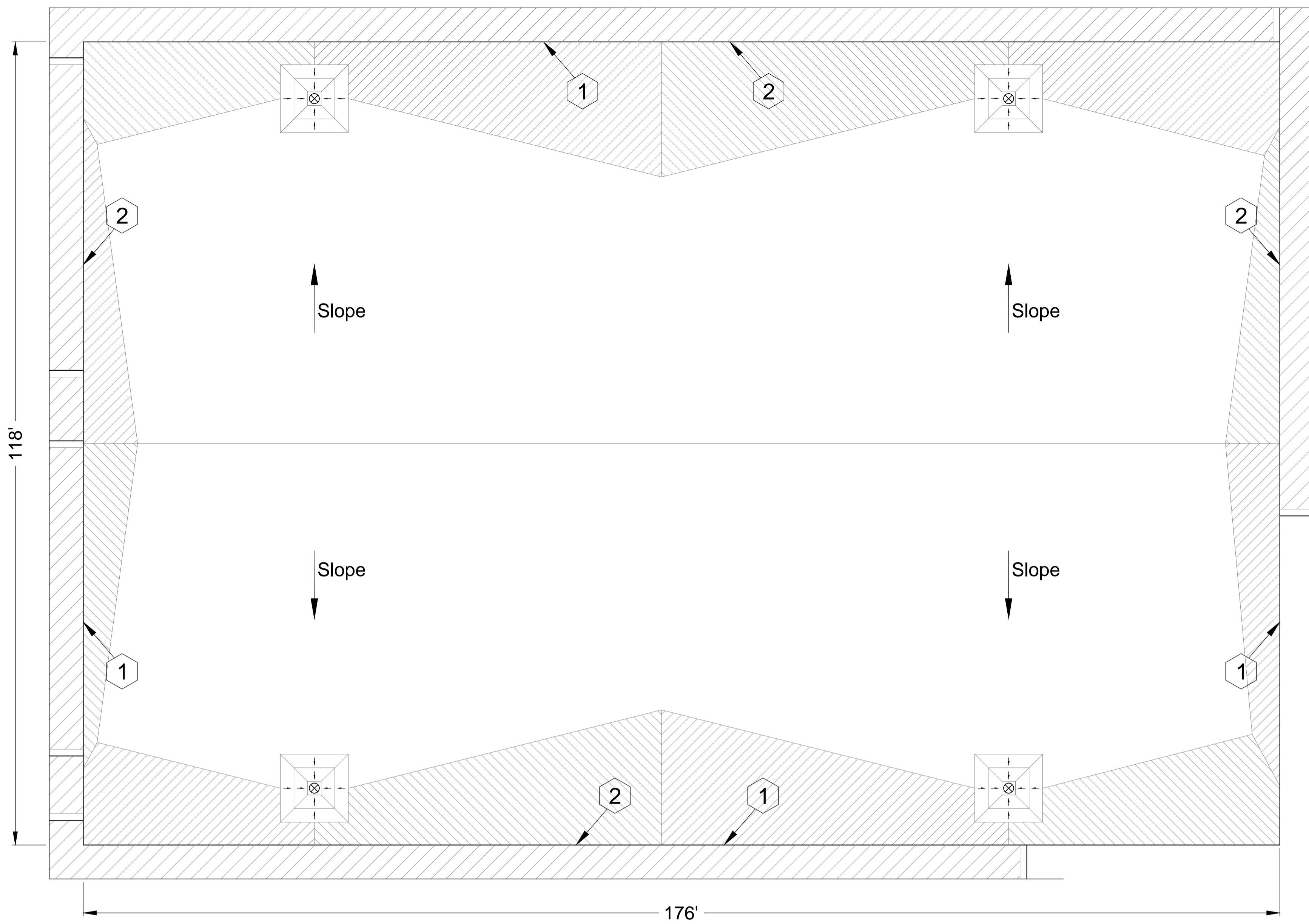
**SHEET TITLE**

Roof Plan,  
Troy High School  
Roof Area L  
Sections 1 and 2

**A2.1**

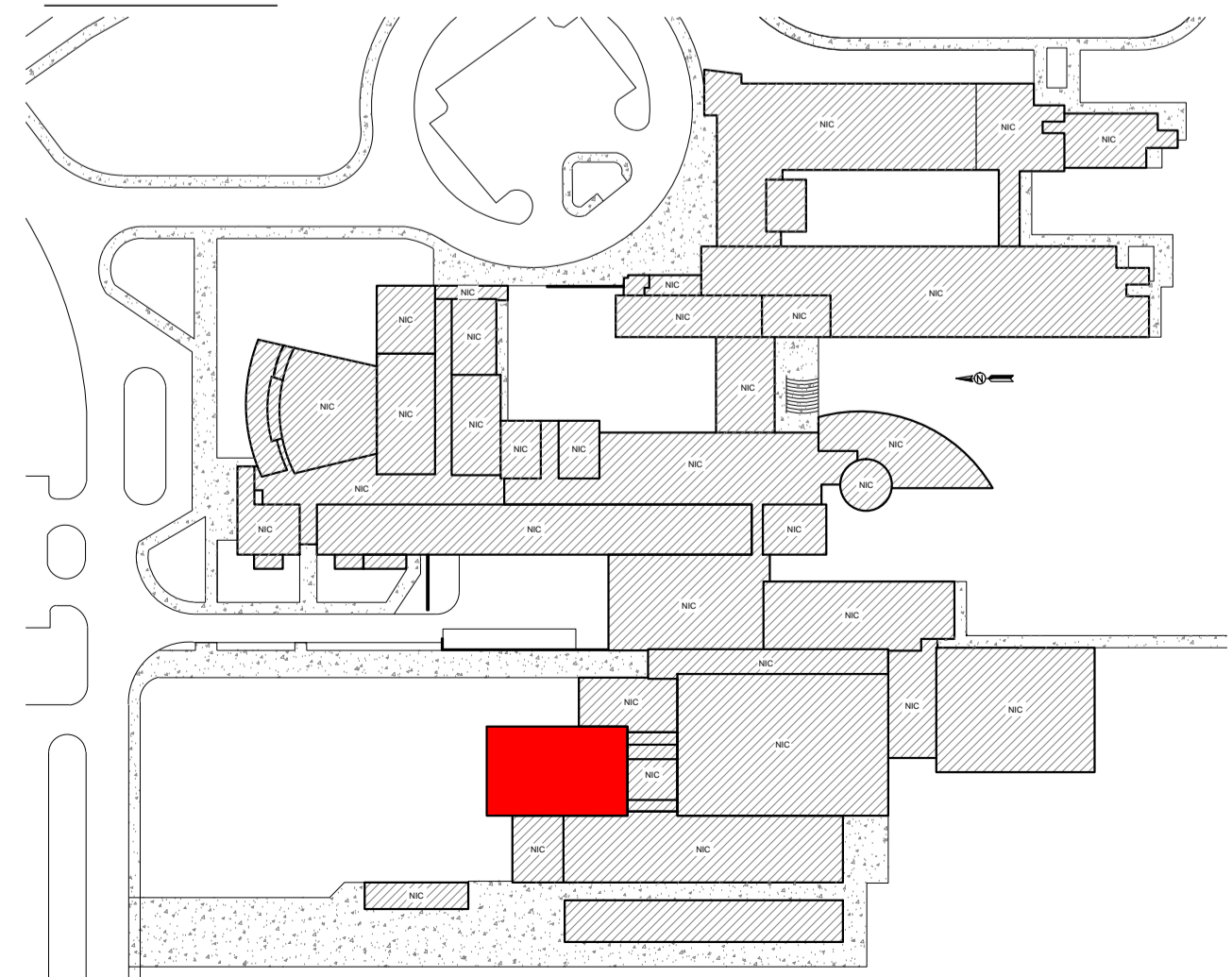
SHEET 3 OF 20





Troy High School  
Roof Area O  
Roof Plan  
Scale: 3/32" = 1'

KEY PLAN



**Troy High School - Troy School District**  
**Sheet Notes - Roof Area O**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.  
**Approx. Roof Area 20,200 sq. ft.**

1. **New Roof System: Roof Areas O Detail 1.01.**
  - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - b. **Insulation:** R30:
    - 1) First layer mechanically attached to deck.
    - 2) Second layer set-in low-rise foam adhesive.
  - c. **Tapered Insulation:** Exists in various locations, see roof plan and details.
  - d. **Deck:** Metal: Repair as necessary to comply w/ building codes.
  - e. **Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 35 feet

2. **EXISTING ROOF SYSTEM CONSTRUCTION**  
All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**Roof Area O Core Sample Results**

- a. **Roof Membrane:** Ballasted EPDM roof system.
- b. **Insulation:**
  - 1) First insulation layer approx. 2.25-inch polyisocyanurate insulation.
- c. **Deck:** Metal: Contractor to verify.

3. **Warranty/Guarantee:**
  - a. Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
4. **Allowances:** See Bid Form.
5. **Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

1. **Perimeter Edge:** Remove existing edge metal and install wood nailers as needed to match the height of the new insulation. Provide new 24-gauge metal edge flashing with continuous face cleat. Provide fascia extension with a continuous cleat. Ref. Details 1.06 and 3.10. Photos 916 and 920.
2. **Lightning Protection:** Remove and dispose of existing lightning protection cables and air terminals. Ref. Photo 919.

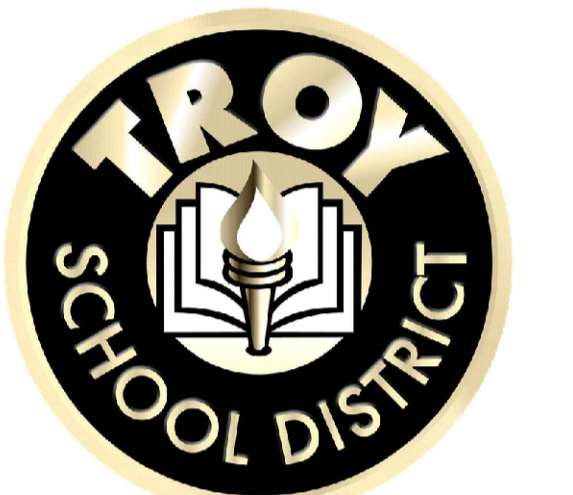
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⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊠	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
—○—	Screen Support Stanchion	—○—	Railing or Fencing	—+—	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	—L—	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	△	Revision
△	Tapered Insulation or Saddles		Metal Roofing	□	Shingles or Clay Tiles

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CLIENT



Troy School District  
4400 Livernois  
Troy, MI 48098

PROJECT



Troy High School  
4777 Northfield Pkwy.  
Troy, MI 48098  
Troy School District  
BID No. 9930  
2022 Roofing Program  
WTPProject No: TSD-R102-21

ISSUE

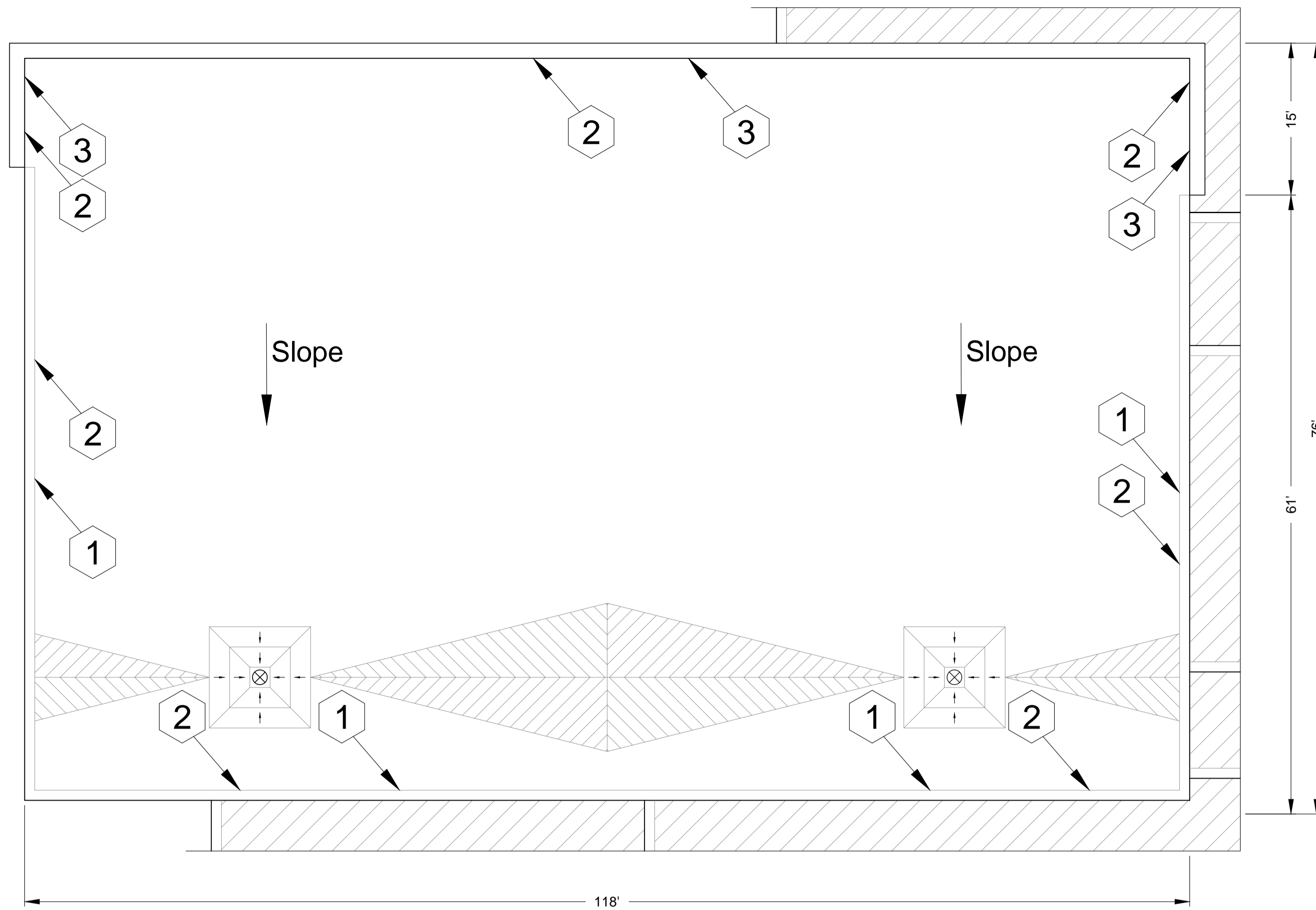
DATE	DESCRIPTION
10/21/2021	Review
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SHEET TITLE  
Roof Plan,  
Troy High School  
Roof Area O

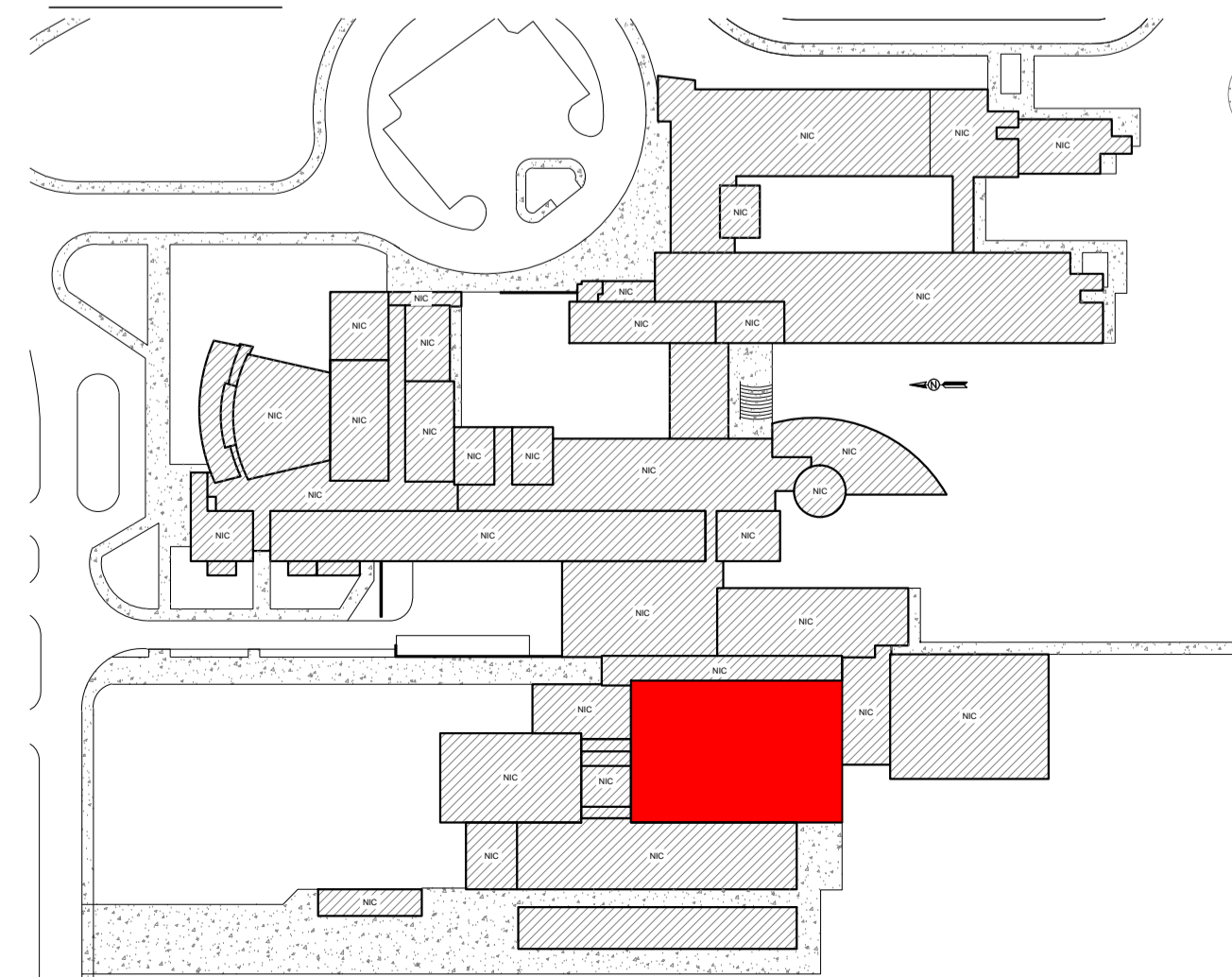
A2.2





Troy High School  
Roof Area Q  
Scale: 1/8" = 1'

KEY PLAN



**Troy High School - Troy School District**  
**Sheet Notes - Roof Area Q**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.  
**Approx. Roof Area 8,400 sq. ft.**

- New Roof System: Roof Areas R Section 1 Detail 1.01.**
  - Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - Insulation:** Average R 30.
    - Tapered Insulation: ¼ inch per foot tapered polyisocyanurate insulation in low rise foam adhesive. Minimum thickness 1.5 inch. All joints staggered and offset between layers.
  - Tapered Insulation:** Exists in various locations, see roof plan and details.
  - Deck:** Metal: Repair as necessary to comply w/ building codes.
  - Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 30 feet

- EXISTING ROOF SYSTEM CONSTRUCTION**  
All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**Roof Area R Section 1 Core Sample Results**

- Roof Membrane:** Ballasted EPDM roof system.
- Insulation:**
  - First insulation layer approx. 2.0-inch polyisocyanurate insulation.
  - Second insulation layer: Tapered polystyrene insulation
- Deck:** Metal: Contractor to verify.

- Warranty/Guarantee:**
  - Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
- Allowances:** See Bid Form.
- Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

- Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. Ref. Details 1.07, 1.08, 3.07, 3.08 and 3.09. Photos 846 and 849.
- Perimeter Edge:** Remove existing edge metal and install wood nailers as needed to match the height of the new insulation. Provide new 24-gauge metal edge flashing with continuous face cleat. Provide fascia extension with a continuous cleat. Ref. Details 1.06 and 3.10. Photos 854 and 860.
- Lightning Protection:** Remove and dispose of existing lightning protection cables and air terminals. Ref. Photos 846 and 860.

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊠	Equipment Unit on Curb	□	Ductwork or Flanged	⊠	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
⋈	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
—○—	Screen Support Stanchion	—○—	Railing or Fencing	—○—	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⌋	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊠	Revision
▲	Tapered Insulation or Saddles		Metal Roofing	⊠	Shingles or Clay Tiles

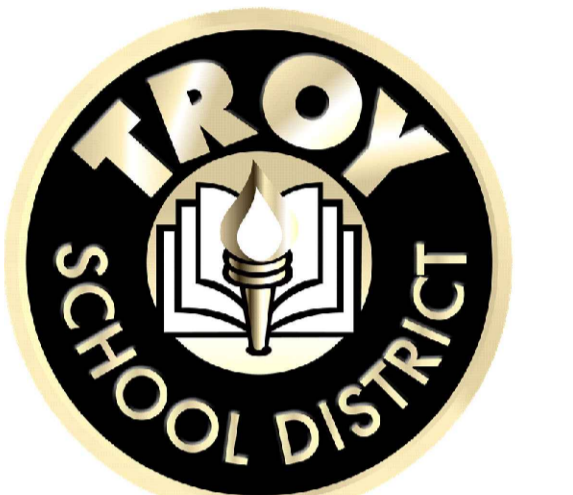
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**WeatherTech**

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Troy School District  
4400 Livernois  
Troy, MI 48098

PROJECT



Troy High School  
4777 Northfield Pkwy.  
Troy, MI 48098

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTPProject No: TSD-R102-21

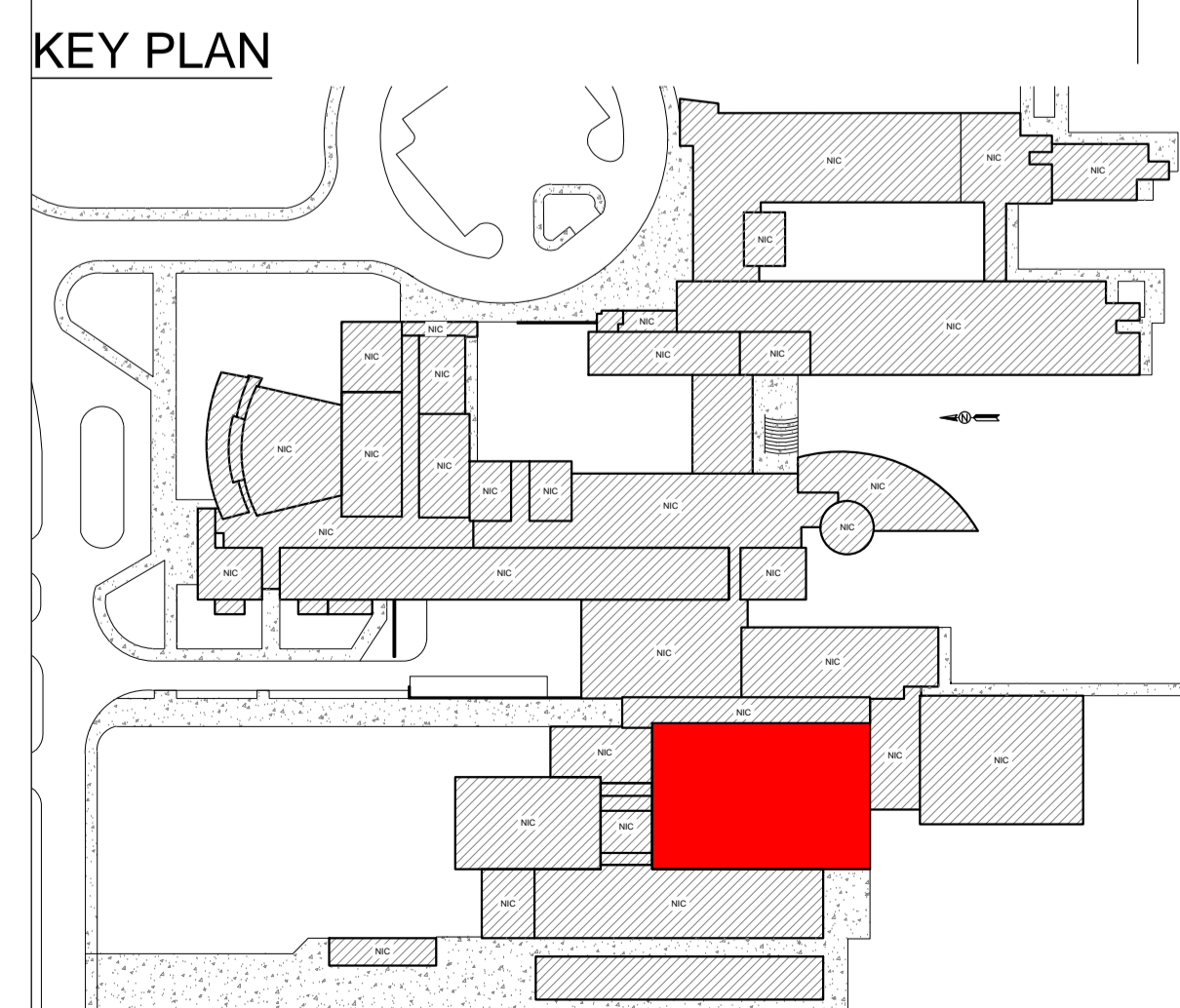
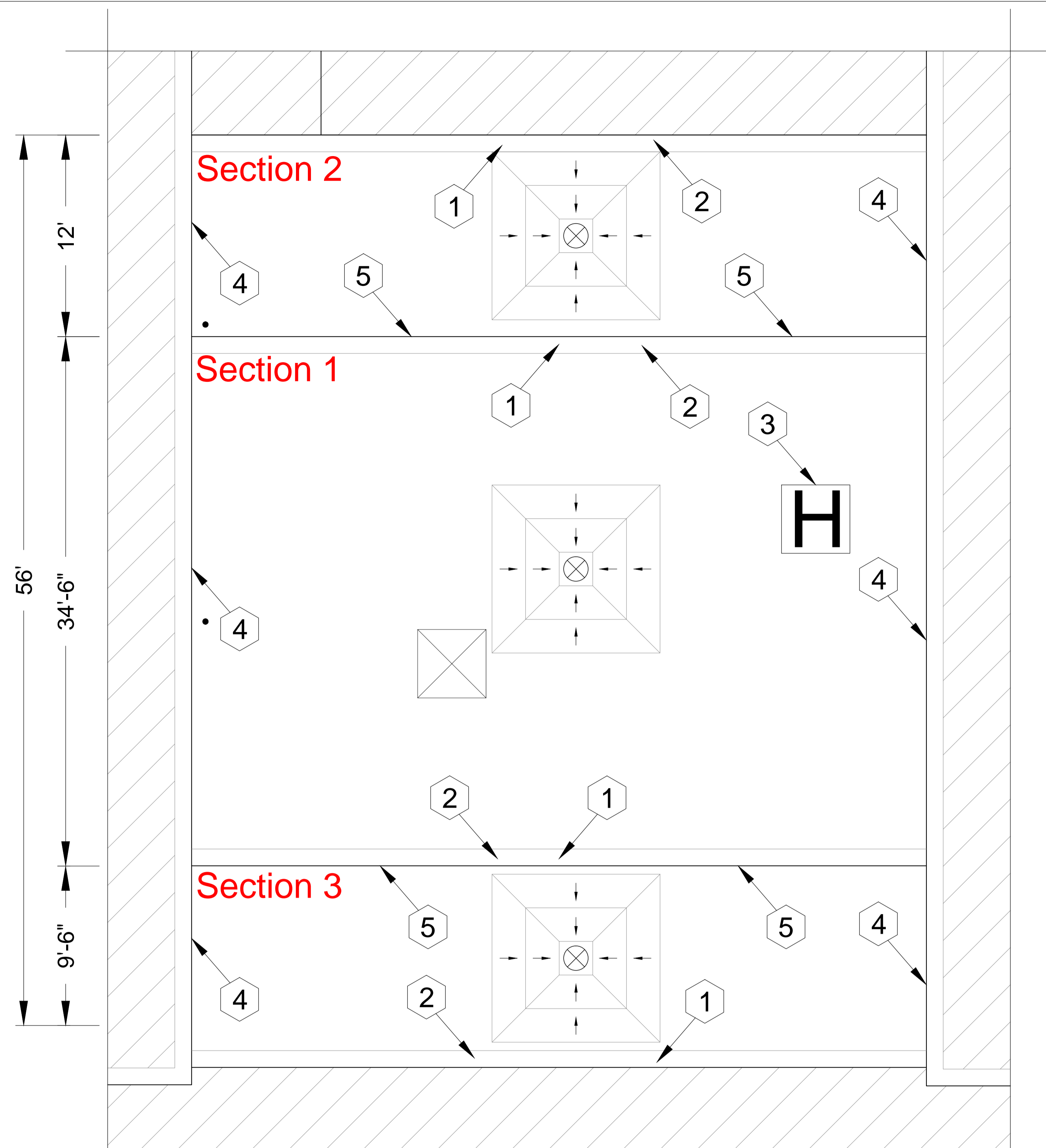
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**SHEET TITLE**  
**Roof Plan,**  
**Troy High School**  
**Roof Area Q**

**A2.3**





Troy High School  
Roof Area R  
Sections 1, 2 and 3  
Scale: 1/4" = 1'

**Troy High School - Troy School District**  
**Sheet Notes - Roof Area R Sections 1, 2 & 3**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
 Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.  
**Approx.**  
**Sf: Roof Area R-1: 1,500 sq. ft.; R-2: 600 sq. ft.; R-3: 600 sq.ft. Total approx. area: 2,700 sq. ft.**  
**1. New Roof System: Roof Areas R1 Sections 1, 2 & 3 Detail 1.01.**  
**a. Roof Membrane:** EPDM, 60 mil, adhered to insulation.  
**b. Insulation:**  
 1) Tapered Insulation: 1/8 inch per foot tapered polyisocyanurate insulation in low rise foam adhesive. Minimum thickness 1.5 inch. All joints staggered and offset between layers.  
**c. Tapered Insulation:** Exists in various locations, see roof plan and details.  
**d. Deck:** Metal: Repair as necessary to comply w/ building codes.  
**e. Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.  
**Building Height:** Ground to building edge: 40 to 50 feet

**2. EXISTING ROOF SYSTEM CONSTRUCTION**  
 All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**Roof Area R Section 1 Core Sample Results**  
**a. Roof Membrane:** Ballasted EPDM roof system.  
**b. Insulation:**  
 1) First insulation layer approx. 2.0-inch polyisocyanurate insulation.  
 2) Second insulation layer: Tapered polystyrene insulation  
**c. Deck:** Metal: Contractor to verify.

**Roof Areas R Section R-2 & R-3 Core Sample Results**  
**a. Roof Membrane:** Ballasted EPDM roof system.  
**b. Insulation:**  
 1) First insulation layer approx. 2.0-inch polyisocyanurate insulation.  
 2) Second insulation layer: Tapered polystyrene insulation  
**c. Deck:** Metal: Contractor to verify.

**3. Warranty/Guarantee:**  
**a.** Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.

**4. Allowances:** See Bid Form.

**5. Asbestos: Ref. to Section 024119 and Appendix 1:** Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
 Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

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- Perimeter Edge:** Remove existing edge metal and install wood nailers as needed to match the height of the new insulation. Provide new 24-gauge metal edge flashing with continuous face cleat. **Ref Details 1.06 and 3.10. Photos 876, 888 and 898.**
- Lightning Protection:** Remove and dispose of existing lightning protection cables and air terminals. **Ref. Photo 869.**
- Roof Hatch:** Reuse existing roof access hatch; add wood nailers as needed to match thickness of new insulation. Install an OSHA approved gated safety railing; install walk pad at three sides of hatch **Ref Details 2.12 and 2.13. Photo 865.**
- Metal Counter Flashings:** Existing receiver flashing to remain; install termination bar and new 015 stainless steel counterflashing. **Ref. Detail 1.14 and Photos 880 and 882.**
- Louwer Wall Base:** Existing metal flashing to remain in place; install termination bar and new .015 stainless steel counterflashing up behind existing metal flashing. **Ref Photo 890 and 892.**

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	○	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
⋈	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
⊕	Screen Support Stanchion	⊕	Railing or Fencing	⊕	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⊕	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊕	Revision
⊕	Tapered Insulation or Saddles		Metal Roofing	⊕	Shingles or Clay Tiles

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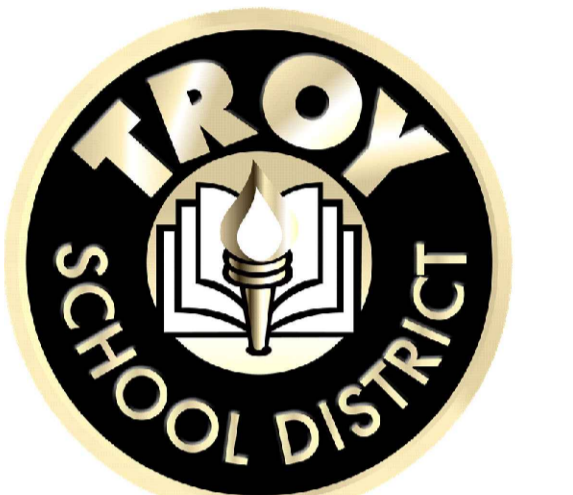


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 Web Site: www.wtcg.net

**CLIENT**



Troy School District  
 4400 Livernois  
 Troy, MI 48098

**PROJECT**



Troy High School  
 4777 Northfield Pkwy.  
 Troy, MI 48098

Troy School District  
 BID No. 9930  
 2022 Reroofing Program

WTPProject No: TSD-R102-21

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**SHEET TITLE**

Roof Plan,  
 Troy High School  
 Roof Area R,  
 Section 1, 2 and 3

**A2.4**

SHEET 6 OF 20



Troy High School, Roof Area L Section 1 and 2



922



925



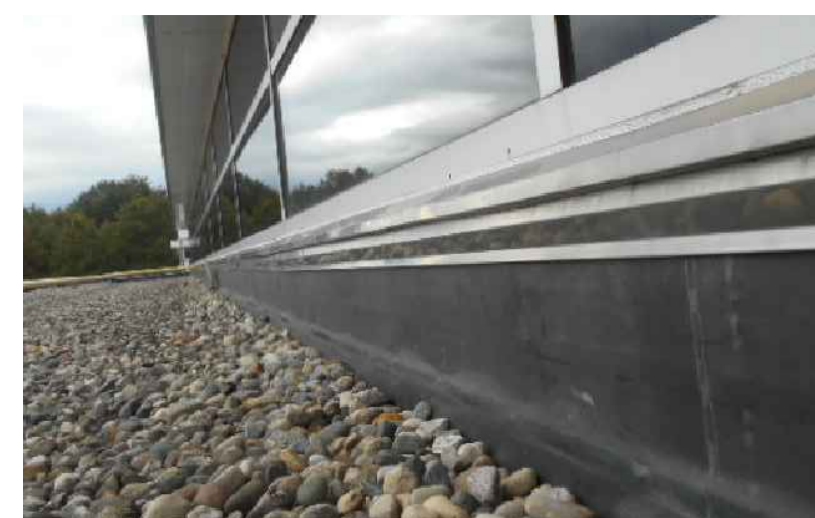
927



933



935



937



944



948



952



956



957

Troy High School, Roof Area O



916



919



920

Troy High School, Roof Area O



846



849



854

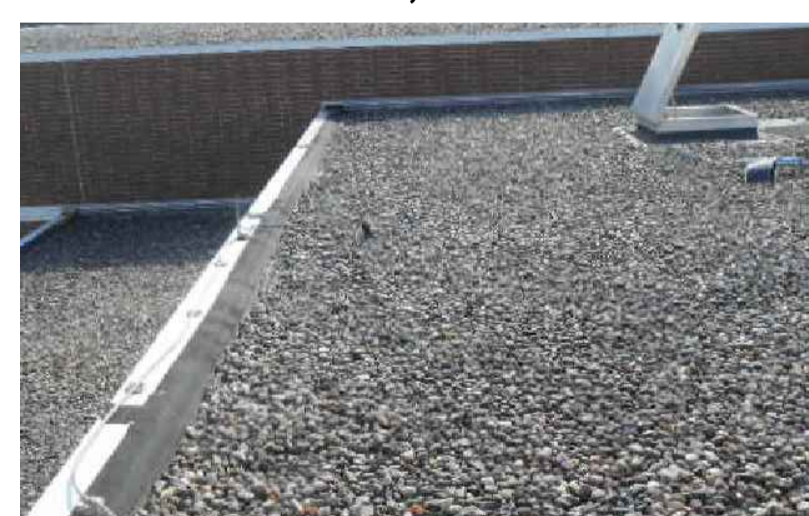


860

Troy High School, Roof Area R Sections 1, 2 and 3



865



869



876



880



882



888



890



892



898

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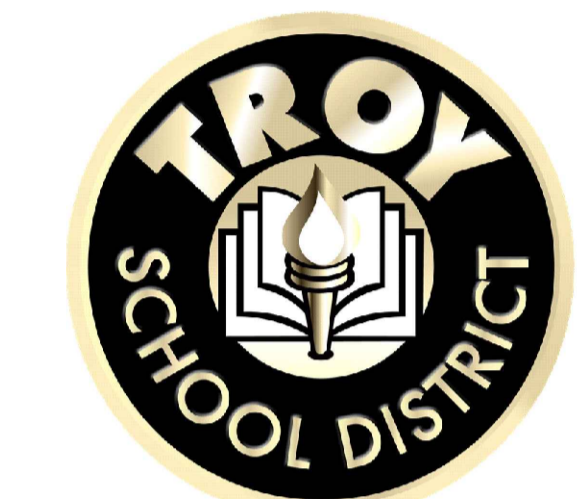


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4400 Livernois  
Troy, MI 48098

PROJECT



Troy High School  
4777 Northfield Pkwy.  
Troy, MI 48098

Troy School District  
BID No. 9930  
2022 Roofing Program

WTPProject No: TSD-R102-21

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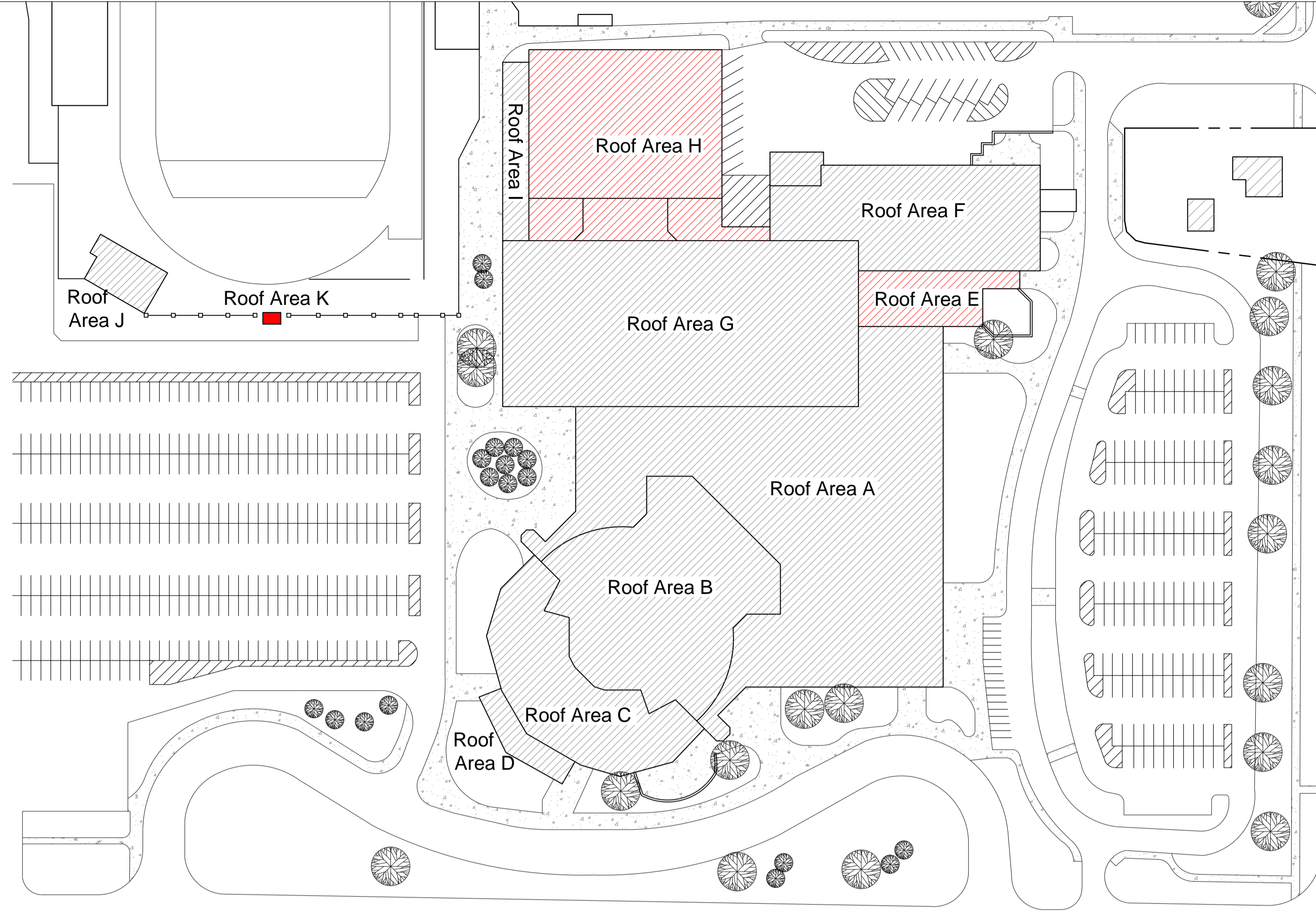
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Photo Sheet,  
Troy High School

**A2.5**

SHEET 7 OF 20





Site Plan



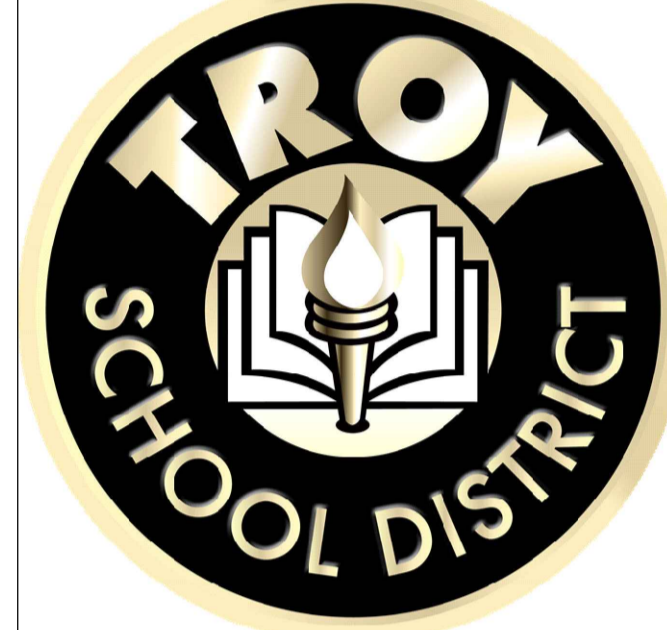
Satellites Image

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Troy School District  
 4400 Livernois  
 Troy, MI 48098

**PROJECT**



Athens High School  
 4333 John R Rd.  
 Troy, MI 48085

Troy School District  
 BID No. 9930  
 2022 Reroofing Program  
 WTPProject No: TSD-R102-21

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**SHEET TITLE**

Logistics Plan  
 Athens High School

**A3.0**

SHEET 8 OF 20





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Troy School District  
4400 Livernois  
Troy, MI 48098

PROJECT



Athens High School  
4333 John R Rd.  
Troy, MI 48085

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTProject No: TSD-R102-21

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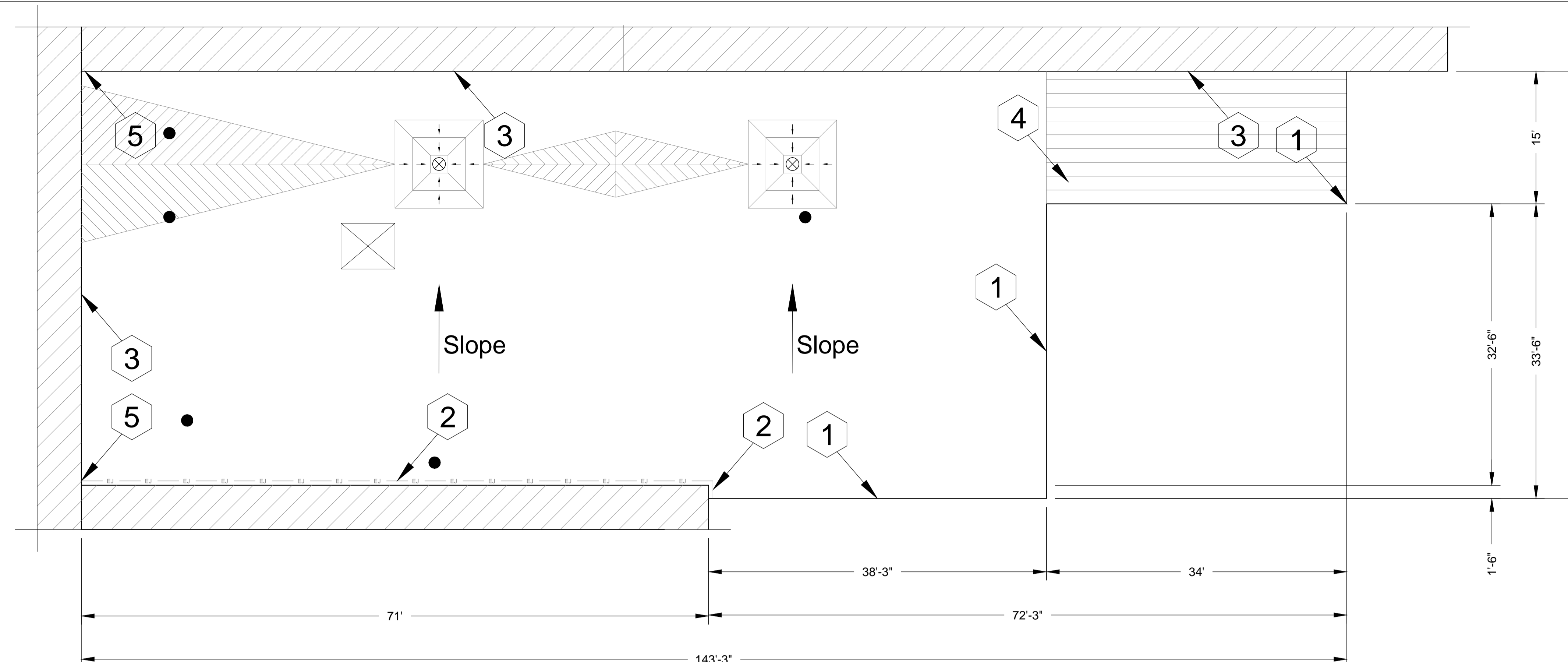
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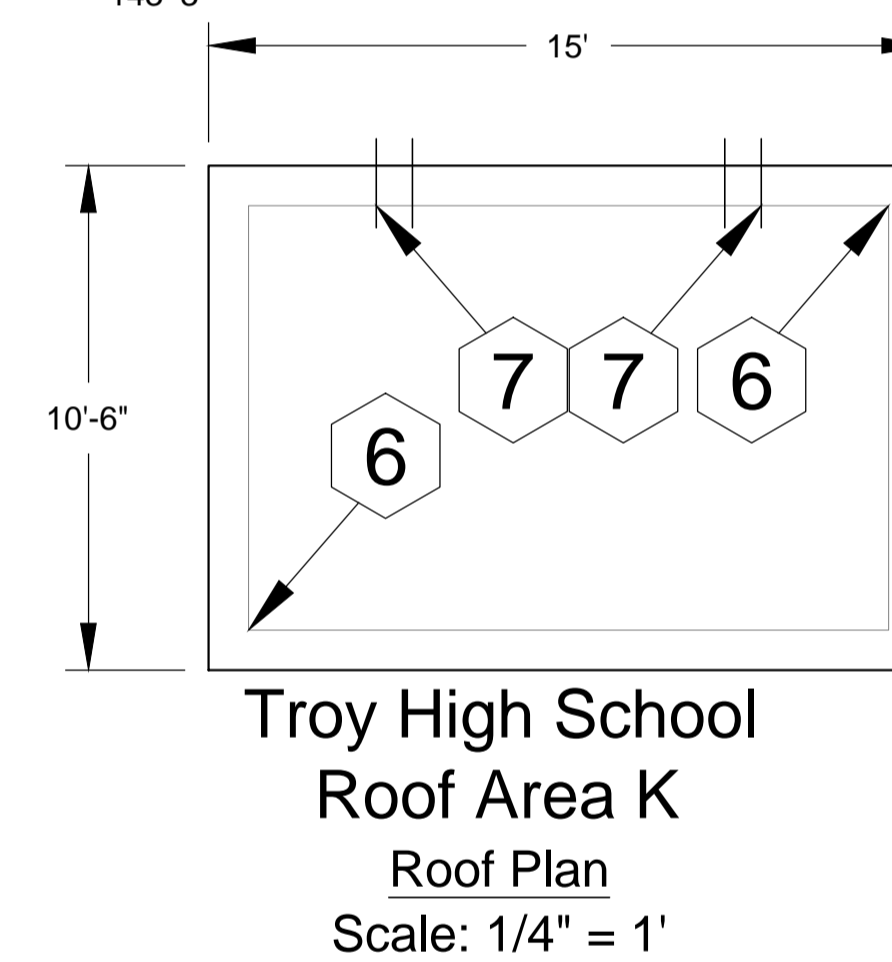
**Roof Plan**  
Athens High School  
Roof Area E and K

**A3.1**

SHEET 9 OF 20



**Troy High School**  
**Roof Area E**  
Roof Plan  
Scale: 1/8" = 1'



**Troy High School**  
**Roof Area K**  
Roof Plan  
Scale: 1/4" = 1'

- Roof Area K Core Sample Results**
- d. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
  - e. **Insulation:**
    - 1) First insulation layer approx. 2.5-inch polyisocyanurate insulation.
    - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
  - f. **Deck:** Metal: Contractor to verify.
- 4. Warranty/Guarantee:**
- a. Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
- 5. Allowances:** See Bid form.
- 6. Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.
- General Construction Details:** Ref. A1.0  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

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1. **Perimeter Edge:** Remove existing edge metal and install wood nailers as needed to match the height of the new insulation. Provide new 24-gauge metal edge flashing with continuous face cleat. Provide fascia extension with a continuous cleat. Ref. Details 1.06 and 3.10. Photos 780 and 882.
  2. **Wall Expansion Joint:** Furnish and install wood nailers as needed to allow proper flashing height; install 6 mil polyethylene liner, compressible batt insulation and a 24-gauge prefinished metal expansion joint cover. Ref. Detail 3.12. Photos 775 and 778.
  3. **Metal Counter Flashing:** Existing Receiver flashing to remain, Install termination bar and new 24-gauge prefinished metal counter flashings. Ref. Detail 3.13. Photos 771 and 774.
  4. **Tapered Insulation:** Provide tapered insulation (slope 1/4 inch per foot) set-in low-rise foam adhesive.
  5. **Vertical Expansion Joint:** Install self adhering membrane over wall joint; fabricate and install a 24-gauge prefinished metal expansion joint cover. Ref. Detail 3.14. Photos 776 and 777.
  6. **Metal Coping:** Remove existing metal coping and install new 24 gauge prefinished galvanized metal coping with continuous face cleat, color as selected by Owner. Ref. Details 1.07, 1.08, 3.07, 3.08 and 3.09. Photos 837 and 829.
  7. **Scupper:** Furnish and install new through-wall scupper liner. Install new prefinished metal leader box and downspouts; size and color to match existing. Ref. Detail 3.15, 3.16 and 3.17. Photo 834.

**Athens High School - Troy School District**  
**Sheet Notes - Roof Area E and K**

**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**

Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.

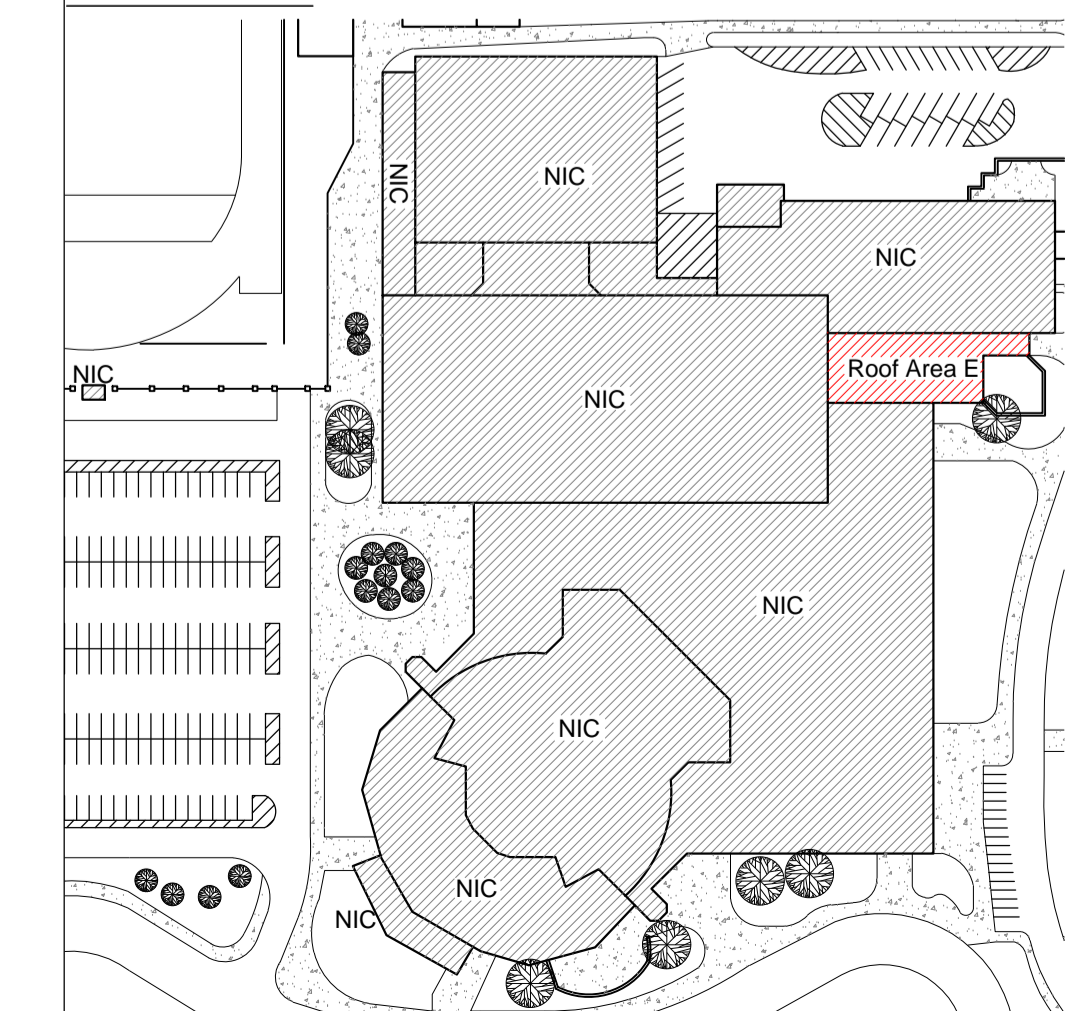
- Approx. Roof Area E: 5,800 sq. ft. and Roof Area K: 200 sq. ft.**
1. **Roof System: Roof Area E; Ref Detail 1.01.**
    - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
    - b. **Insulation:** R30:
      - 1) First layer mechanically fastened to deck;
      - 2) Second layer set-in low-rise foam adhesive. All joints staggered and offset between layers.
    - c. **Tapered Insulation:** Exists in various locations, see roof plan and details.
    - d. **Deck:** Metal: Repair as necessary to comply w/ building codes.
    - e. **Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck, roof deck interior conditions exist.
    - f. **Building Height:** Ground to building edge: 20 ft.
  2. **Roof System: Roof Area K; Ref Detail 1.01.**
    - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
    - b. **Insulation:**
      - 1) First layer: 2.0 polyisocyanurate insulation mechanically fastened to deck
      - 2) Second layer: ¼ inch per foot tapered polyisocyanurate insulation set-in low-rise foam adhesive, minimum thickness 1.50 inches. All joints staggered and offset between layers.
    - c. **Deck:** Metal: Repair as necessary to comply w/ building codes.
    - d. **Building Height:** Ground to building edge: 14 ft.

- 3. EXISTING ROOF SYSTEM CONSTRUCTION**  
All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

- Roof Area E Core Sample Results**
- a. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
  - b. **Insulation:**
    - 1) First insulation layer approx. 1.5-inch polyisocyanurate insulation.
    - 2) Second insulation layer approx. 0.75-inch fiberboard insulation.
  - c. **Deck:** Metal: Contractor to verify.

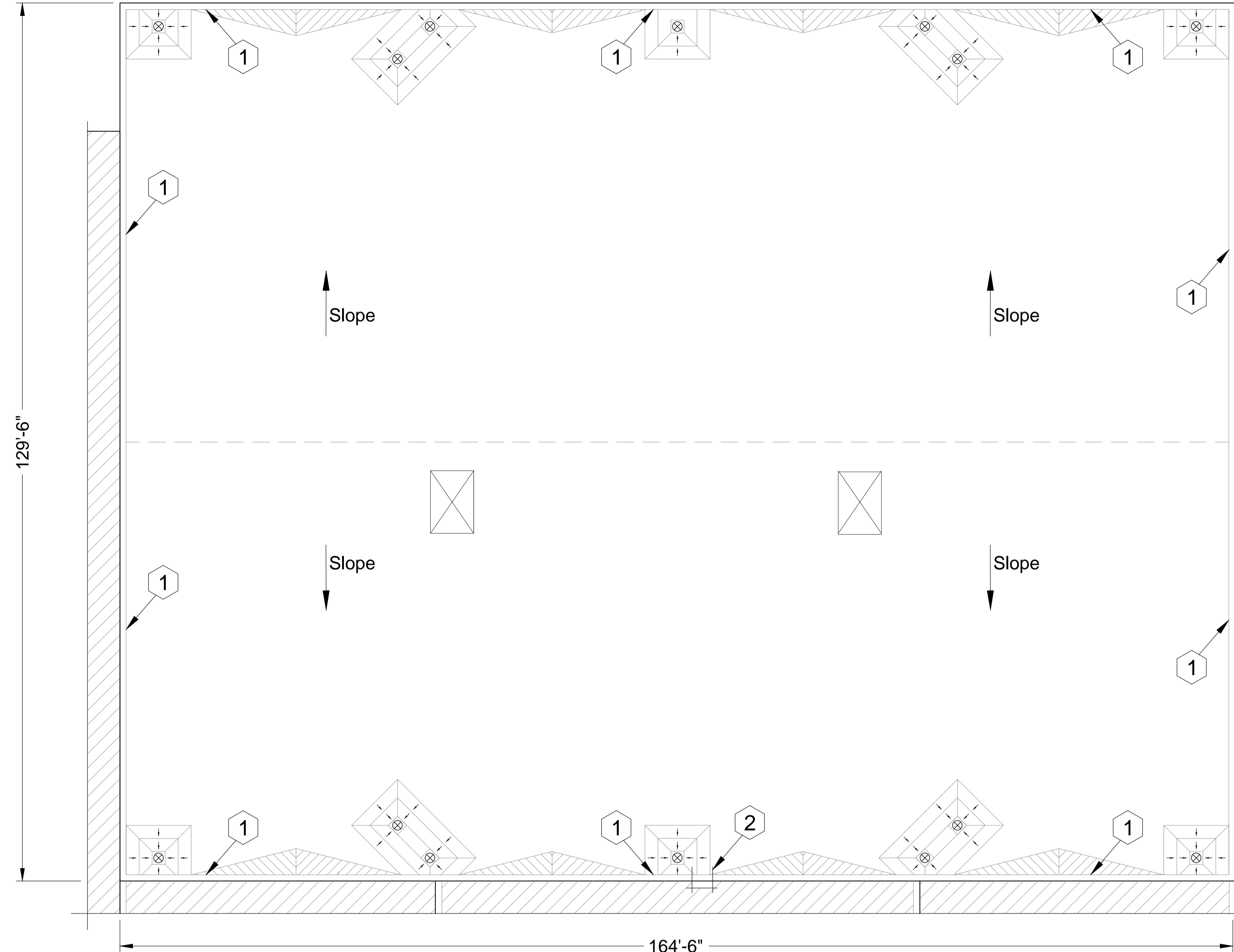
Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
⋈	Roof Ladder	W	Walkway Pad	⊙	Satellite Dish
⋈	Screen Support Stanchion	⋈	Railing or Fencing	⋈	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⋈	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
⊞	Tapered Insulation or Saddles		Metal Roofing	⊞	Shingles or Clay Tiles

**KEY PLAN**



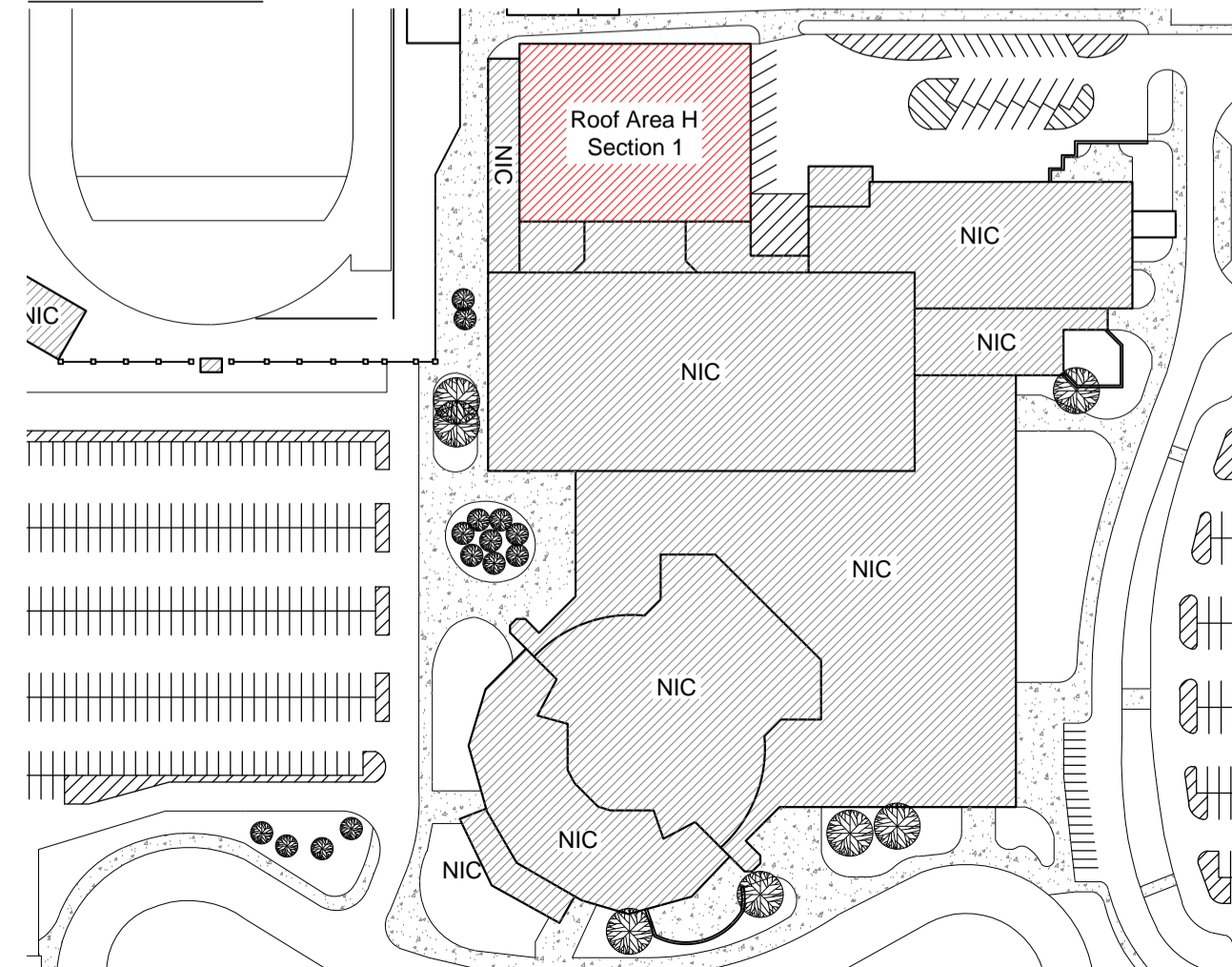


**Section 1**



**Athens High School**  
**Roof Area H**  
**Section 1**  
**Roof Plan**  
**Scale: 3/32" = 1'**

**KEY PLAN**



**Athens High School - Troy School District**  
**Sheet Notes - Roof Area H - Section 1**

**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
 Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system. **Roof Area H-1: approx. 23,200 sq. ft.**

1. **Roof System: Roof Area H-1; Ref Detail 1.01.**
  - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - b. **Insulation:** R30:
    - 1) First layer mechanically fastened to deck;
    - 2) Second layer set-in low-rise foam adhesive. All joints staggered and offset between layers.
  - c. **Tapered Insulation:** Exists in various locations, see roof plan and details.
  - d. **Deck:** Metal: Repair as necessary to comply w/ building codes.
  - e. **Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck, roof deck interior conditions exist.

**Building Height:** Ground to building edge: 40 ft.

2. **EXISTING ROOF SYSTEM CONSTRUCTION**  
**All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.**

**Roof Area H Core Sample Results**  
 a. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.  
 b. **Insulation:**  
 1) First insulation layer approx. 2.50-inch polyisocyanurate insulation.  
 2) Second insulation layer approx. 0.50-inch fiberboard insulation.  
 c. **Deck:** Metal: Contractor to verify.

**Note:** Electrical conduits are attached to the underside of the metal deck in some areas, it is the contractor's responsibility to confirm all existing conditions.

3. **Warranty/Guarantee:**
  - a. Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
4. **Allowances:** See Bid Form.
5. **Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
 Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
 All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

1. **Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. Ref. Details 1.07 and 1.08; Photos 718 and 730.
2. **Ladder:** Remove existing pitch pan, verify support is properly attached to decking; install field wrapped membrane flashing, draw band, galvanized metal rain hood and sealants; install walk pad at ladder base. Ref. Photo 059.

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
⊞	Screen Support Stanchion	⊞	Railing or Fencing	⊞	Pipe or Conduit on Support Block
-GAS-	Gas Line	-AD-	Area Divider	-EJ-	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⊞	Elevation Change
⊗	Roof Drain	⊞	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
⊞	Tapered Insulation or Saddles		Metal Roofing	⊞	Shingles or Clay Tiles

**PROFESSIONAL**

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**CLIENT**

**Troy School District**  
 4400 Livernois  
 Troy, MI 48098

**PROJECT**

**Athens High School**  
 4333 John R Rd.  
 Troy, MI 48085

**Troy School District**  
 BID No. 9930  
 2022 Reroofing Program  
 WTPProject No: TSD-R102-21

**ISSUE**

DATE	DESCRIPTION
10/21/2021	Review
10/22/2021	OTB

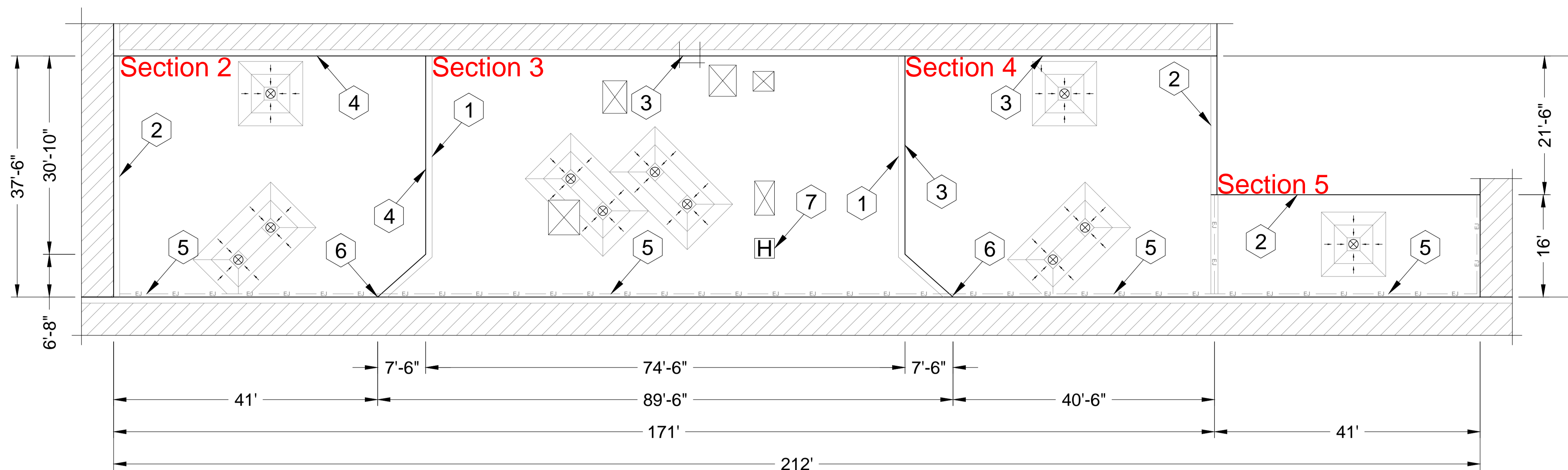
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 Drawn By: MD  
 Checked By: PK, AC, AW  
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**SHEET TITLE**  
**Roof Plan**  
 Athens High School  
 Roof Area H,  
 Section 1

**A3.2**

**SHEET 10 OF 20**





**Athens High School  
Roof Area H  
Sections 2, 3, 4 and 5  
Roof Plan  
Scale: 3/32" = 1'**

**Athens High School - Troy School District  
Sheet Notes - Roof Area H - Sections 2, 3, 4 & 5**

**Schedule**

**WORK DESCRIPTION - ROOF REPLACEMENT**

Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system.

**Approx. SF: Roof Area H-2: 1,900 sq. ft.; H-3: 2,850 sq. ft.; H-4 1,900 sq. ft.; H-5 600 sq. ft. Total approx. area: 5,250 sq. ft.**

1. **Roof System: Roof Area H-2, 3, 4 & 5; Ref Detail 1.01.**
  - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - b. **Insulation:** R30:
    - 1) First layer mechanically fastened to deck;
    - 2) Second layer set-in low-rise foam adhesive. All joints staggered and offset between layers.
  - c. **Tapered Insulation:** Exists in various locations, see roof plan and details.
  - d. **Deck:** Metal: Repair as necessary to comply w/ building codes.
  - e. **Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck, roof deck interior conditions exist.

**Building Height:** Ground to building edge: 20-40 ft.

**2. EXISTING ROOF SYSTEM CONSTRUCTION**

All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.

**Roof Area H-2 Core Sample Results**

- a. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- b. **Insulation:**
  - 1) First insulation layer approx. 2.75-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
- c. **Deck:** Metal: Contractor to verify.

**Roof Area H-3 Core Sample Results**

- d. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- e. **Insulation:**
  - 1) First insulation layer approx. 2.50-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
- f. **Deck:** Metal: Contractor to verify.

**Roof Area H-4 Core Sample Results**

- g. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- h. **Insulation:**
  - 1) First insulation layer approx. 2.50-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.75-inch fiberboard insulation.
- i. **Deck:** Metal: Contractor to verify.

**Roof Area H-5 Core Sample Results**

- j. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- k. **Insulation:**
  - 1) First insulation layer approx. 1.25-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.75-inch fiberboard insulation.
- l. **Deck:** Metal: Contractor to verify.

**Note:** Electrical conduits are attached to the underside of the metal deck in some areas, it is the contractor's responsibility to confirm all existing conditions.

**3. Warranty/Guarantee:**

- a. Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.

**4. Allowances:** See Bid Form.

**5. Asbestos: Ref. to Section 024119 and Appendix 1:** Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**

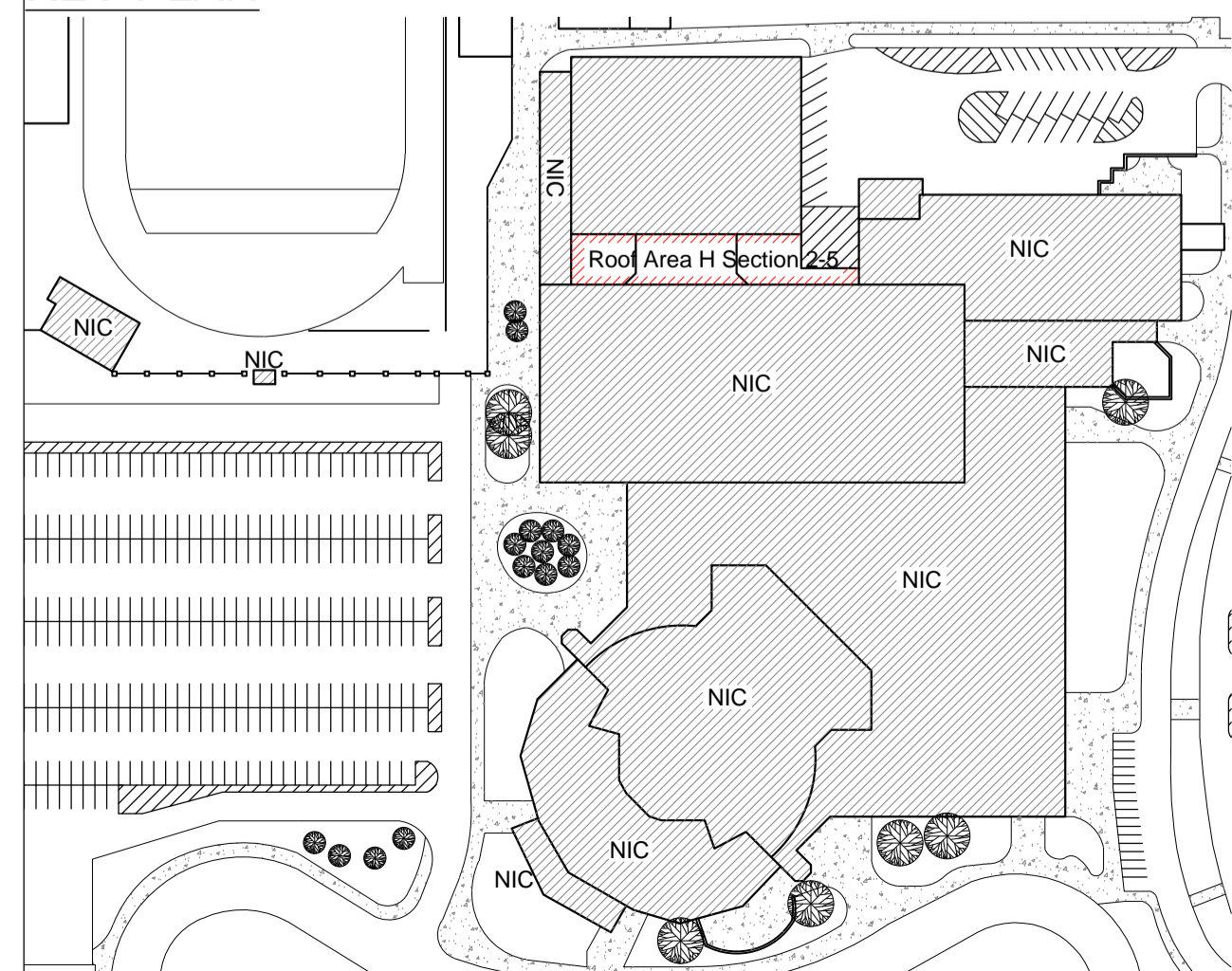
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**

All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

1. **Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. (H-3) Ref. Details 1.07 and 1.08; Photos 734 and 739.
2. **Perimeter Edge: (H-2, H-4 & H-5)** Furnish and install wood nailer as needed to match new insulation thickness; provide new 24-gauge prefinished edge metal with a continuous face cleat; color as selected by owner. Ref. Details 1.06 and 1.07; Photos 755, 803 and 868.
3. **Low Metal Siding Base:** Trim existing metal panels to allow proper flashing height; install plywood over masonry block; install EPDM flashing, new drip rail to match siding as close as possible, termination bar and new prefinished metal counter flashings. Ref. Detail 1.16; Photos 740 and 741.
4. **Metal Siding Base:** Install termination bar and new 24-gauge prefinished metal counterflashing. Ref. Detail 1.16 and Photo 806.
5. **Wall Expansion Joints:** Furnish and install wood nailers as needed to allow proper flashing height; install 6 mil polyethylene liner, compressible batt insulation and a 24-gauge prefinished metal expansion joint cover. Ref. Detail 3.12. Photos 742, 754, 757, 801 and 802.
6. **Vertical Expansion Joint:** Remove existing bellows expansion joint, install self adhering membrane over wall joint; fabricate and install a 24 gauge prefinished metal expansion joint cover. Ref. Detail 3.14; Photos 752, 762, 764, 794 and 797.
7. **Roof Hatch:** Install new Bilco S20 type roof access hatch and an OSHA approved safety railing system; Add nailers as needed to match new insulation thickness. Provide walk pad on three sides of hatch. Ref. Detail 2.12 and 2.13.

**KEY PLAN**



Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
—○—	Screen Support Stanchion	—○—	Railing or Fencing	—○—	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	↘	Roof Slope	—L—	Elevation Change
⊗	Roof Drain	⊕	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⚠	Revision
▲	Tapered Insulation or Saddles		Metal Roofing	■	Shingles or Clay Tiles

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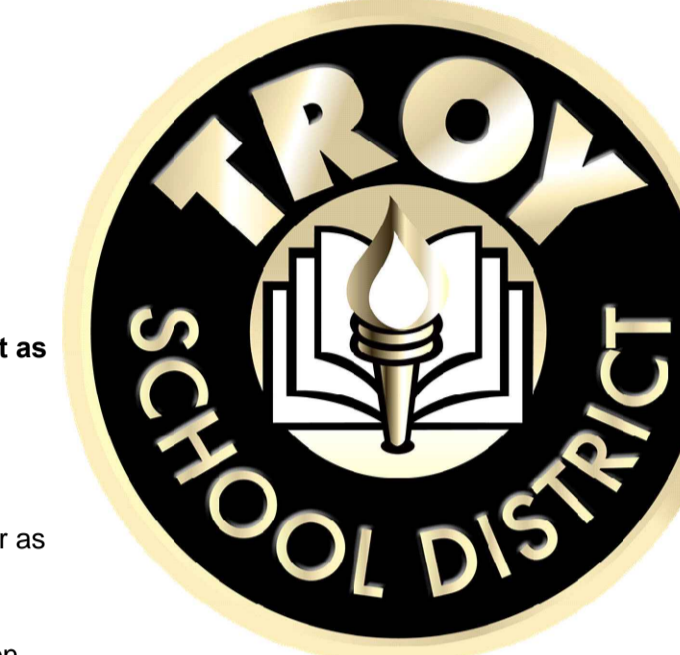


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**CLIENT**



Troy School District  
4400 Livernois  
Troy, MI 48098

**PROJECT**



Athens High School  
4333 John R Rd.  
Troy, MI 48085

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTProject No: TSD-R102-21

**ISSUE**

DATE	DESCRIPTION
10/21/2021	Review
10/22/2021	OTB

File Name: TSD 2021 - A3.0 Athens High School  
Drawn By: MD

Checked By: PK, AC, AW

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**SHEET TITLE**

**Roof Plan**  
Athens High School  
Roof Area H,  
Section 2, 3, 4 and 5

**A3.3**

SHEET 11 OF 20



Athens High School, Roof Area E and K



771



774



775



776



777



778



780



829



834



837



882

Athens High School, Roof Area H Section 1



59



718



730

Athens High School, Roof Area R Sections 2, 3 4, and 5



734



739



740



741



742



752



754



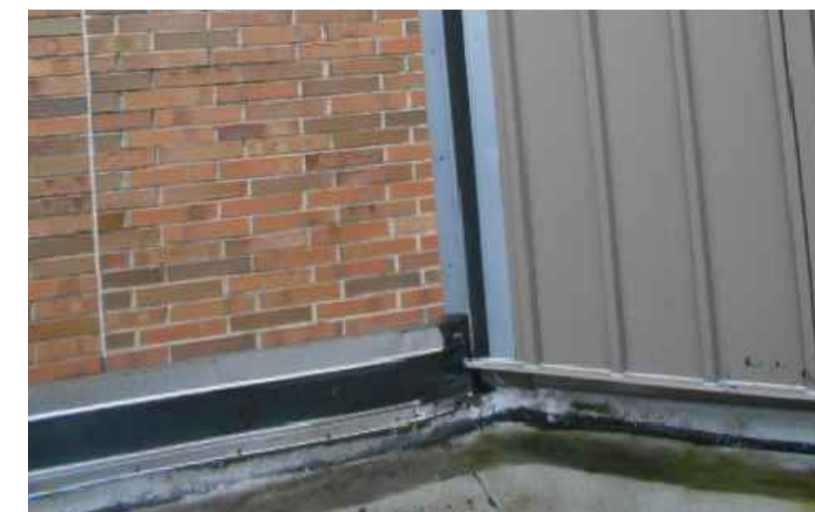
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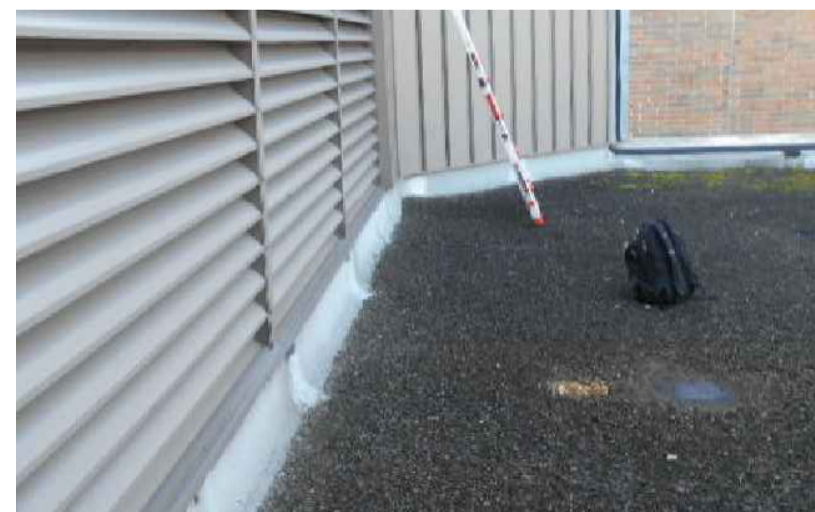
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801



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PROFESSIONAL

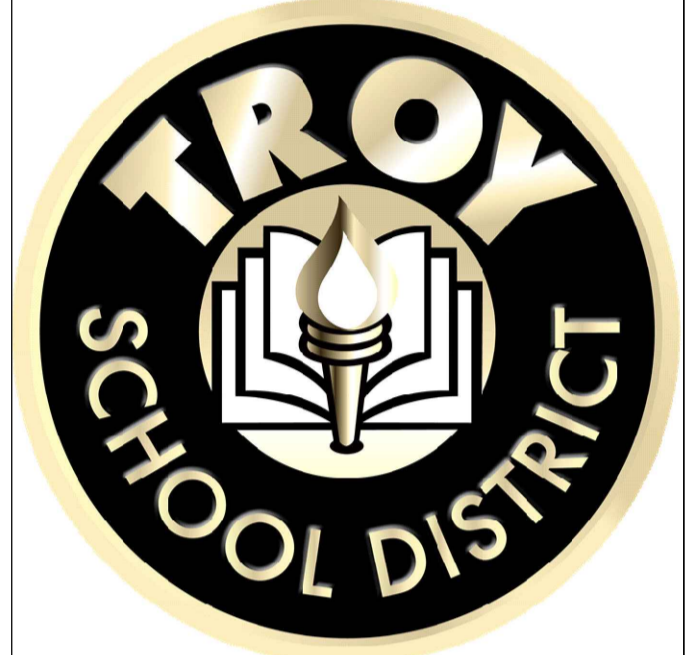


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Troy, MI 48098

PROJECT



Athens High School  
4333 John R Rd.  
Troy, MI 48085

Troy School District  
BID No. 9930  
2022 Reroofing Program  
WTPProject No: TSD-R102-21

ISSUE

DATE	DESCRIPTION
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SHEET TITLE

Photo Sheet  
Athens High School

**A3.4**

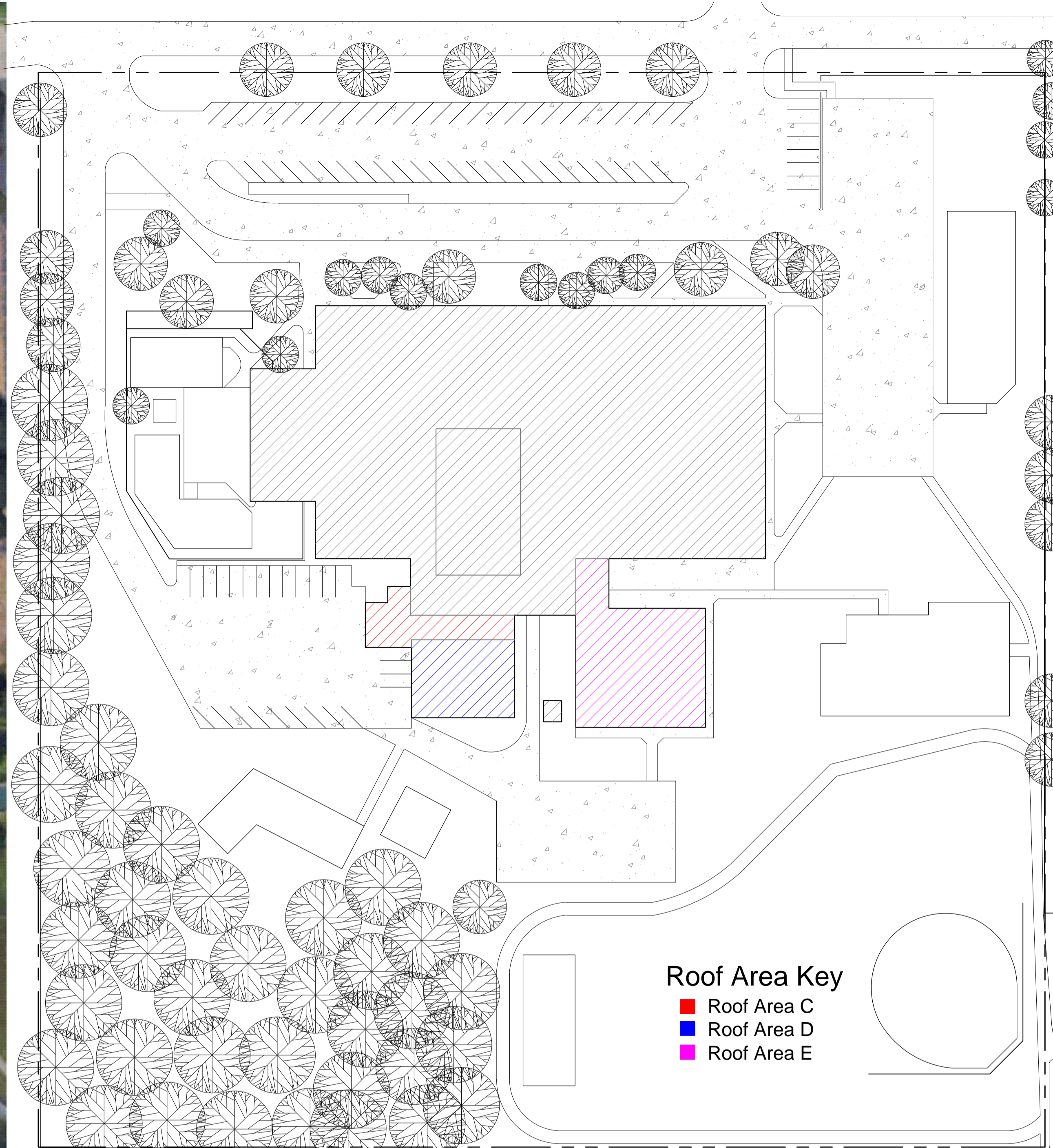
SHEET 12 OF 20



Satellite Image



SITE PLAN



Roof Area Key

- Roof Area C
- Roof Area D
- Roof Area E

PROFESSIONAL

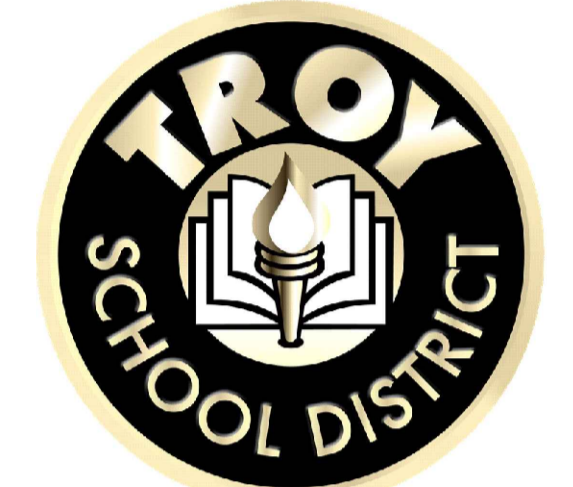


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4400 Livernois  
Troy, MI 48098

PROJECT



Schroeder Elementary School  
3541 Jack Dr.  
Troy, MI 48084

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTProject No: TSD-R102-21

ISSUE

DATE	DESCRIPTION
10/21/2021	Review
10/22/2021	OTB

File Name: TSD 2021 - A10.0 Schroeder Elementary School

Drawn By: MD

Checked By: PK, AC, AW

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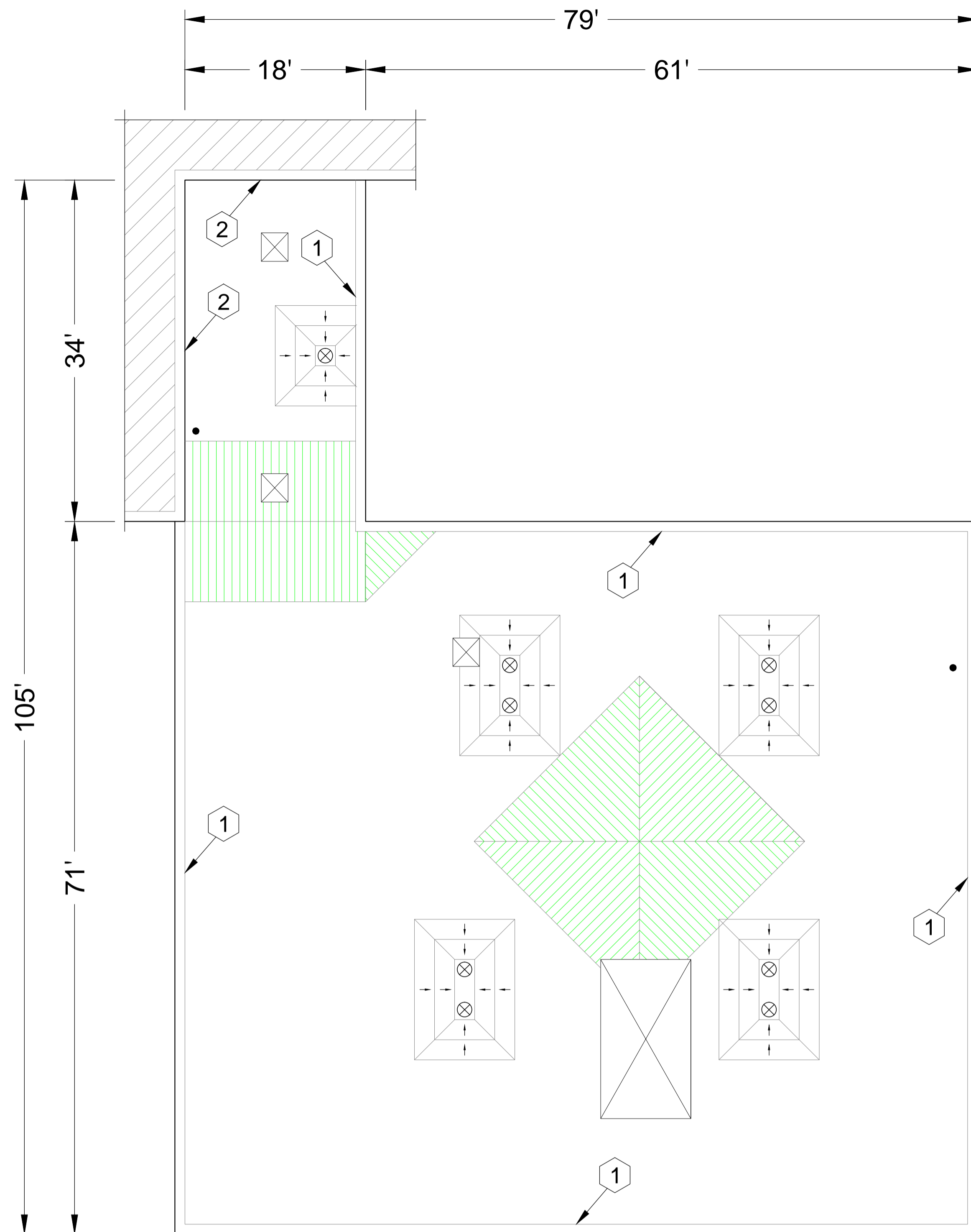
SHEET TITLE

Logistics Plan  
Schroeder Elementary School

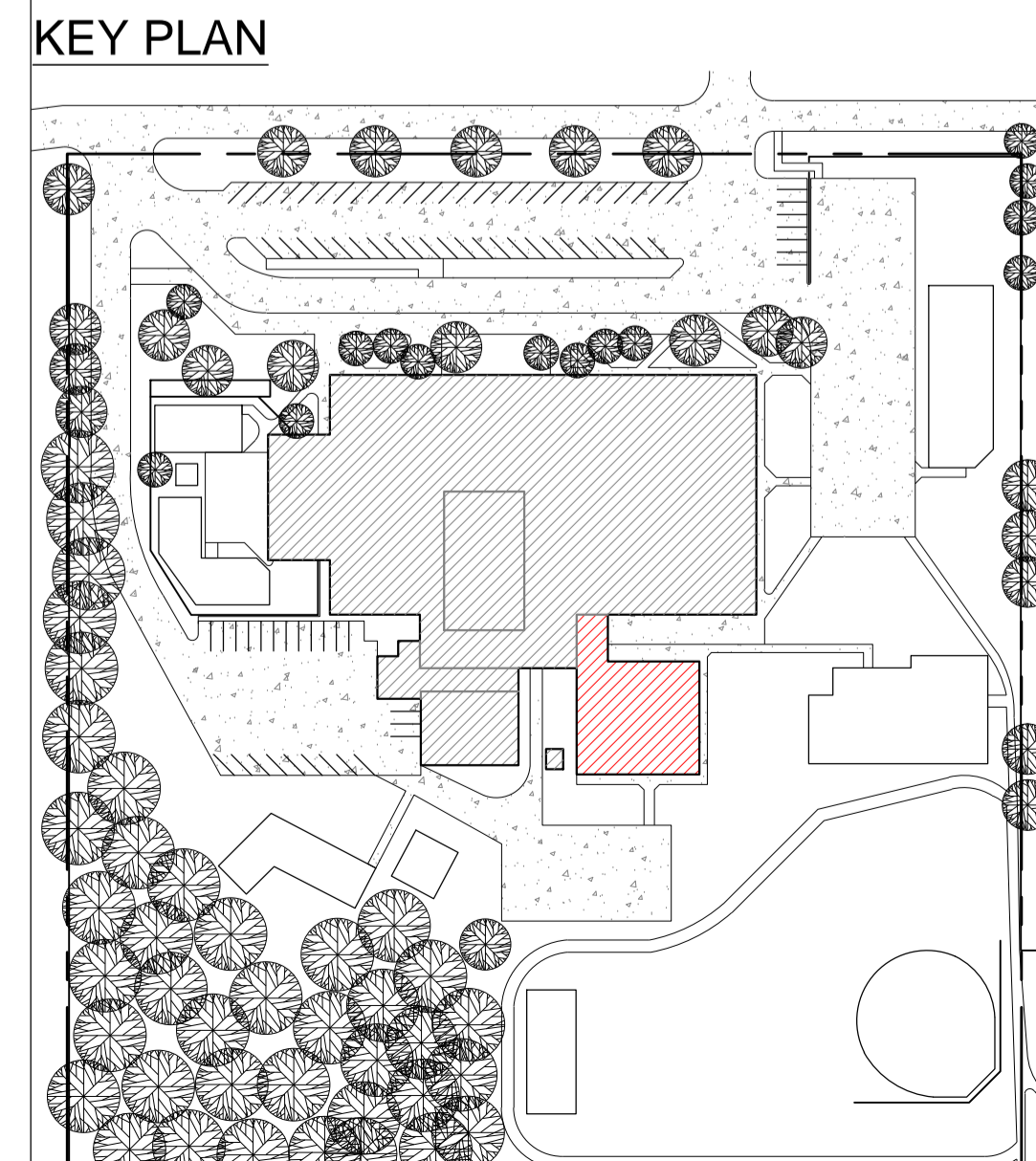
**A4.0**

SHEET 13 OF 20





Schroeder Elementary School  
Roof Area C  
Roof Plan  
Scale: 1/8" = 1'



P0125



P0127



P0129

**Schroeder Elementary School - Troy School District**  
**Sheet Notes - Roof Area C**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system. **Roof Area C: approx. 6,200 sq. ft.**

- Roof System: Roof Area C; Ref Detail 1.01.**
  - Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - Insulation:** R30:
    - 1) First layer mechanically fastened to deck
    - 2) Second layer set in low rise foam adhesive. All joints staggered and offset between layers.
  - Tapered Insulation:** Exists in various locations, see roof plan and details.
  - Deck:** Metal: Repair as necessary to comply w/ building codes.
  - Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 20 ft.

- EXISTING ROOF SYSTEM CONSTRUCTION**  
**All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.**

**Roof Area C Core Sample Results**

- Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- Insulation:**
  - 1) First insulation layer approx. 3.0-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
- Deck:** Metal: Contractor to verify.

**Note:** Electrical conduits are attached to the underside of the metal deck in some areas, it is the contractor's responsibility to confirm all existing conditions.

- Warranty/Guarantee:**
  - Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
- Allowances:** See Bid form.
- Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

- Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. Ref. Details 1.07, 1.08, 3.07, 3.08 and 3.09. Photos 127 and 129.
- Area Divider:** Furnish and install new 24-gauge prefinished cap metal. Ref. Detail 2.10. Photo 125.

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
⊞	Screen Support Stanchion	⊞	Railing or Fencing	⊞	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	↘	Roof Slope	⊞	Elevation Change
⊗	Roof Drain	⊞	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
⊞	Tapered Insulation or Saddles		Metal Roofing	⊞	Shingles or Clay Tiles

**PROFESSIONAL**

**WeatherTech**  
Roofing/Waterproofing Consultants  
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Utica, MI 48317

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Email: weathertech@wtcg.net  
Web Site: www.wtcg.net

**CLIENT**

**Troy School District**  
4400 Livernois  
Troy, MI 48098

**PROJECT**

**Schroeder Elementary School**  
3541 Jack Dr.  
Troy, MI 48084

Troy School District  
BID No. 9930  
2022 Reroofing Program

WTProject No: TSD-R102-21

**ISSUE**

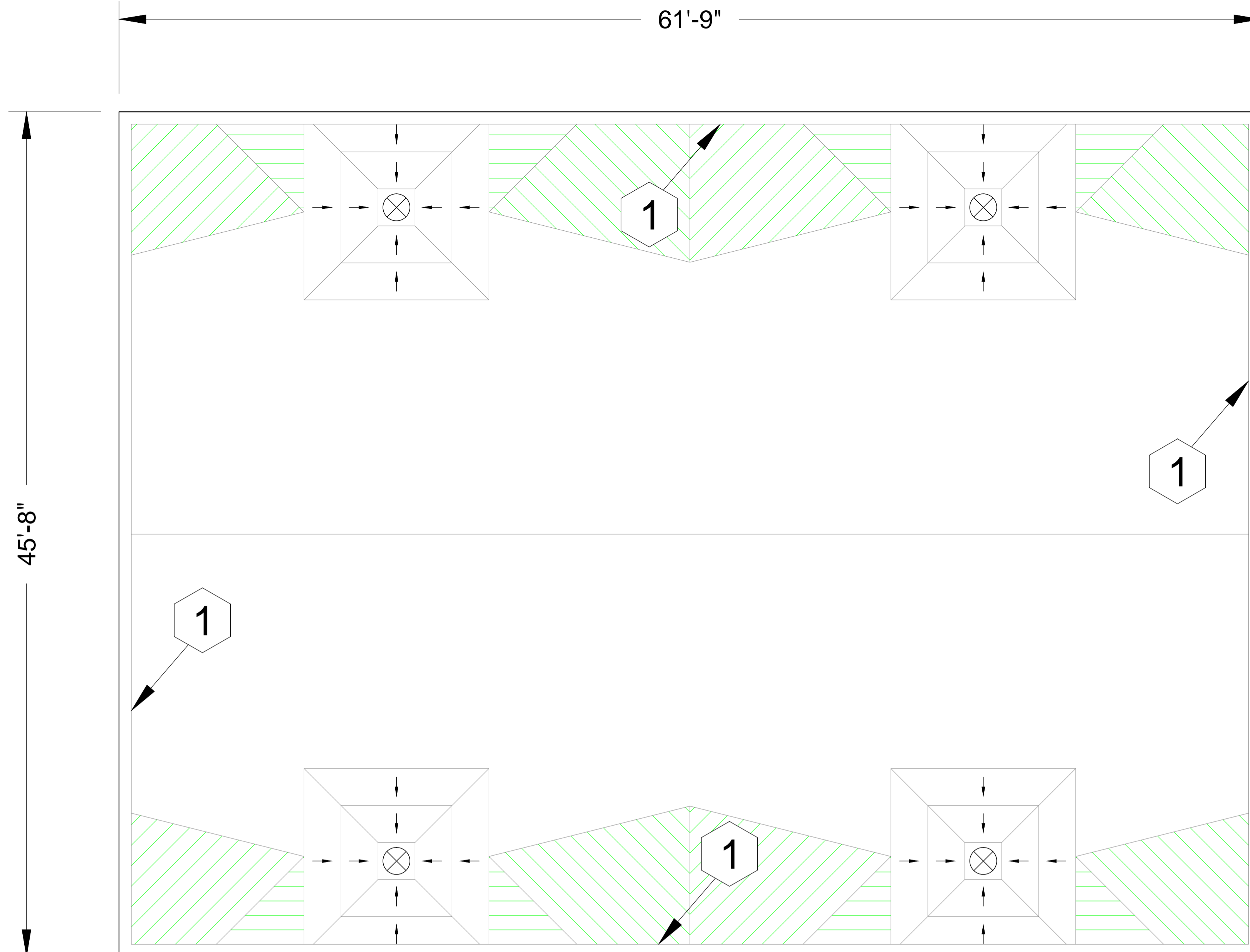
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10/21/2021	Review
10/22/2021	OTB

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**SHEET TITLE**  
**Roof Plan**  
Schroeder Elementary School  
Roof Area C

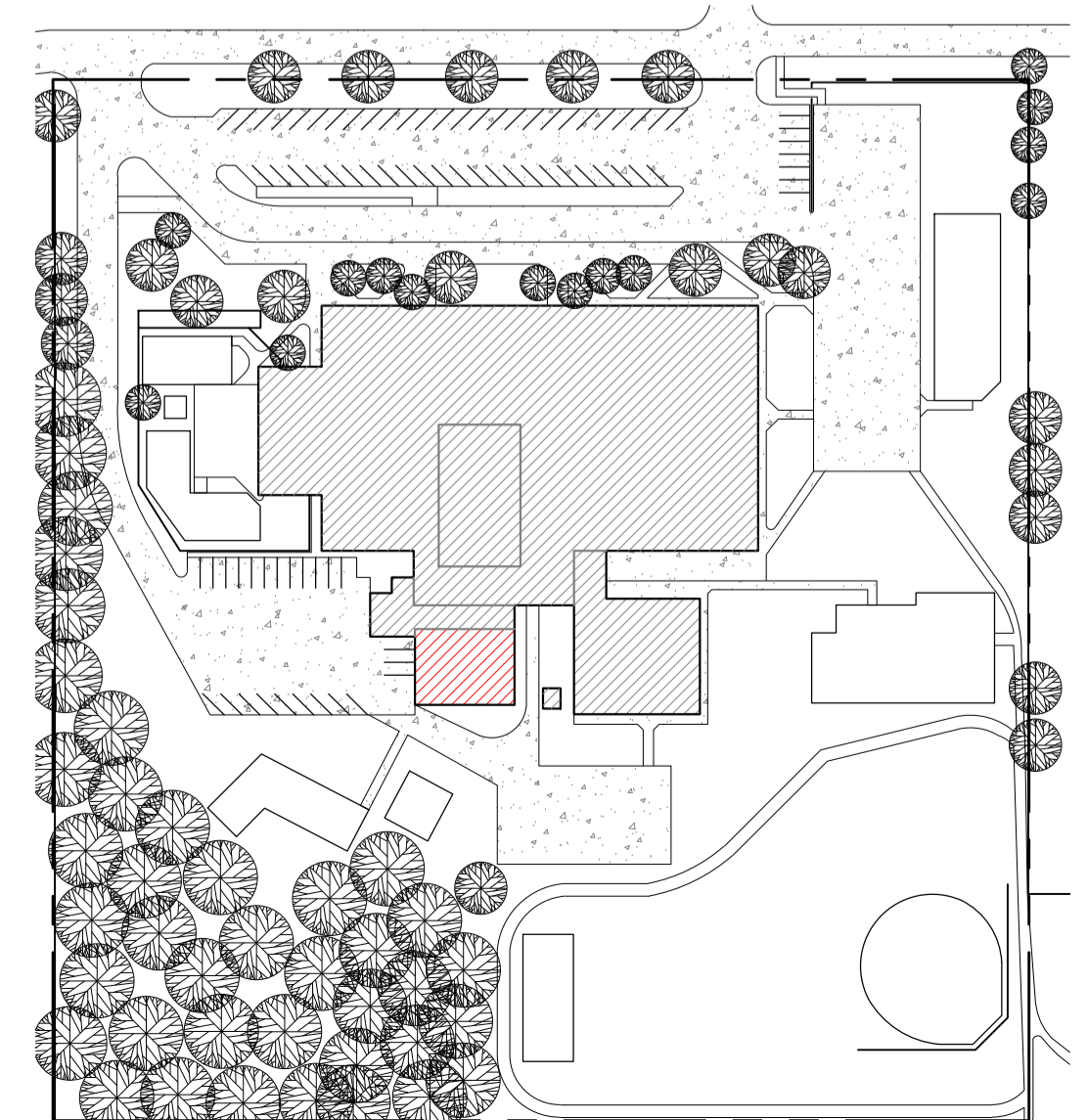
**A4.1**  
SHEET 14 OF 20





Schroeder Elementary School  
Roof Area D  
Roof Plan  
Scale: 1/4" = 1'

KEY PLAN



P0674



P0687

**Schroeder Elementary School - Troy School District**  
**Sheet Notes - Roof Area D**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system. **Roof Area D: approx. 2,900 sq. ft.**

- Roof System: Roof Area C; Ref Detail 1.01**
  - Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - Insulation:** R30:
    - 1) First layer mechanically fastened to deck;
    - 2) Second layer set-in low-rise foam adhesive. All joints staggered and offset between layers.
  - Tapered Insulation:** Exists in various locations, see roof plan and details.
  - Deck:** Metal: Repair as necessary to comply w/ building codes.
  - Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 30 ft.

- EXISTING ROOF SYSTEM CONSTRUCTION**  
**All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.**

**Roof Area C Core Sample Results**

- Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- Insulation:**
  - 1) First insulation layer approx. 1.5-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
- Deck:** Metal: Contractor to verify.

**Note:** Electrical conduits are attached to the underside of the metal deck in some areas, it is the contractor's responsibility to confirm all existing conditions.

- Warranty/Guarantee:**
  - Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
- Allowances:** See bid form.
- Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details:** Ref. A1.0  
Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

- Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. Ref. Details 1.07, 1.08, 3.07, 3.08 and 3.09. Photos 674 and 687.

Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	☼	Satellite Dish
⊞	Screen Support Stanchion	⊞	Railing or Fencing	⊞	Pipe or Conduit on Support Block
-GAS-	Gas Line	-AD-	Area Divider	-EJ-	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⊞	Elevation Change
⊗	Roof Drain	⊞	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
⊞	Tapered Insulation or Saddles		Metal Roofing	⊞	Shingles or Clay Tiles

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**CLIENT**

**Troy School District**  
4400 Livernois  
Troy, MI 48098

**PROJECT**

**Schroeder Elementary School**  
3541 Jack Dr.  
Troy, MI 48084

Troy School District  
BID No. 9930  
2022 Reroofing Program  
WTPProject No: TSD-R102-21

**ISSUE**

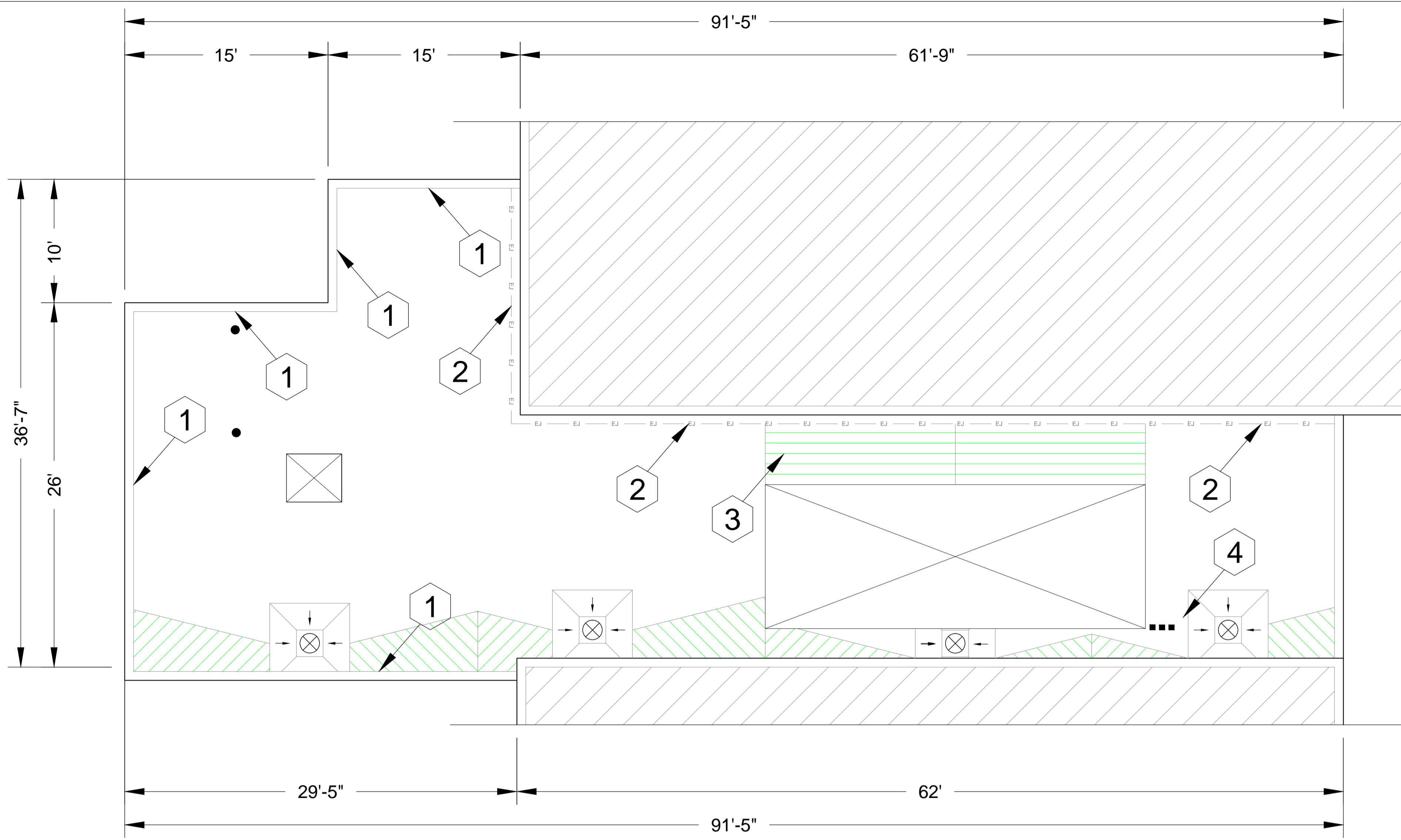
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10/22/2021	OTB

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**SHEET TITLE**  
**Roof Plan**  
Schroeder Elementary School  
Roof Area D

**A4.2**  
SHEET 15 OF 20





Schroeder Elementary School  
 Roof Area E  
 Roof Plan  
 Scale: 1/8" = 1'

**Schroeder Elementary School - Troy School District**  
**Sheet Notes - Roof Area E**  
**Schedule**  
**WORK DESCRIPTION - ROOF REPLACEMENT**  
 Work includes: Removal and disposal of existing roofing, insulation, flashing systems and all sheet metal flashings down to the surface of the deck, repair deteriorated decking, install new roof insulation, fully adhered EPDM single ply roof membrane including all flashing, new roof related sheet metal, and accessories as detailed in the specifications and drawings. Completed work shall comply with all Contract Documents and roofing manufacturer's requirements to receive the specified warranted roof system. **Roof Area E: approx. 2,300 sq. ft.**

1. **Roof System: Roof Area C; Ref Detail 1.01.**
  - a. **Roof Membrane:** EPDM, 60 mil, adhered to insulation.
  - b. **Insulation:** R30:
    - 1) First layer mechanically fastened to deck;
    - 2) Second layer set-in low-rise foam adhesive. All joints staggered and offset between layers.
  - c. **Tapered Insulation:** Exists in various locations, see roof plan and details.
  - d. **Deck:** Metal: Repair as necessary to comply w/ building codes.
  - e. **Interior Ceiling:** Drop ceiling, may be some small areas of exposed deck roof deck interior conditions exist.

**Building Height:** Ground to building edge: 20 ft.

2. **EXISTING ROOF SYSTEM CONSTRUCTION**  
**All existing roof system constructions were determined by test cuts and observation; conditions may vary. Contractor responsible for confirming all existing roof system constructions and conditions.**

**Roof Area C Core Sample Results**

- a. **Roof Membrane:** Gravel surfaced bituminous built-up roof membrane.
- b. **Insulation:**
  - 1) First insulation layer approx. 1.5-inch polyisocyanurate insulation.
  - 2) Second insulation layer approx. 0.50-inch fiberboard insulation.
- c. **Deck:** Metal: Contractor to verify.

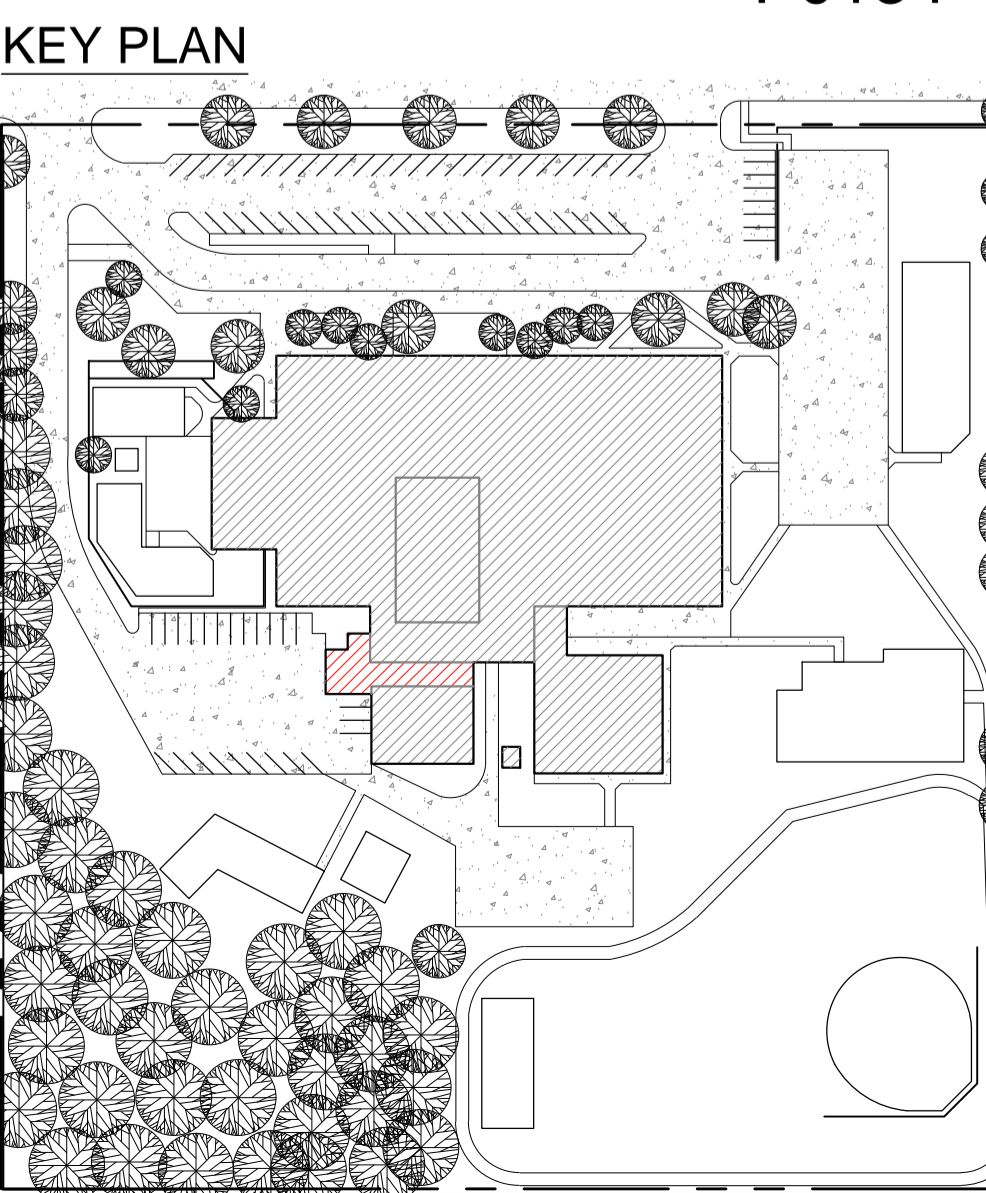
**Note:** Electrical conduits are attached to the underside of the metal deck in some areas, it is the contractor's responsibility to confirm all existing conditions.

3. **Warranty/Guarantee:**
  - a. Manufacturer to provide a 20 year "No-Dollar-Limit" material and installation warranty covering the roof system, flashings and manufacturer's accessories.
4. **Allowances:** See bid form.
5. **Asbestos:** Ref. to Section 024119 and Appendix 1: Asbestos testing results to be supplied by TSD selected 3rd party firm and will be incorporated into Appendix 1. Refer to Appendix 1 for asbestos testing results. No ACM.

**General Construction Details: Ref. A1.0**  
 Use the General Construction Details on Sheet A1.0 for detail construction description as applicable when any detail is not specifically called out in Key Notes for the applicable Roof Area and Section. Detail drawings called out in General Construction Details can be found on Sheets A5.0 to A5.3. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

**Key Notes:**  
 All detail references in Key Notes are considered typical and applicable to like conditions except as specifically amended on this Sheet. Refer to Sheet A1.0 General Construction Detail Notes for applicable construction detail descriptions and Sheets A5.0 to A5.3 for construction detail drawings. Contractor to provide Shop Drawing as necessary for field conditions not directly identified in Contract Documents.

1. **Metal Copings:** Provide new 24-gauge prefinished metal copings with a continuous face cleat; color as selected by owner. Ref Details 1.07, 1.08, 3.07, 3.08 and 3.09; Photos 134, 147 and 150.
2. **Expansion Joint:** Provide new 24-gauge prefinished metal expansion joint cover. Replace existing batt insulation and liner, if needed. Ref. Detail 3.05 and Photos 140.
3. **Tapered insulation:** Provide 1/8 inch per foot tapered insulation at mechanical unit. Ref. Photos 140 and 144.
4. **Pipe Penetrations:** Remove existing pitch pan, install field wrapped flashing, draw band, galvanized metal rain collar and sealants. Ref. Detail 2.04 and Photo 145.



Symbol Legend					
Symbol	Notes	Symbol	Notes	Symbol	Notes
●	Conduit, Vent Pipe or Other Penetration	⊙	Insulated Pipe or Heat Stack Penetration	■	Pitch-Pan Pocket
⊗	Equipment Unit on Curb	□	Ductwork or Flanged	⊞	Equip. or Duct on Wood Sleeper or Support Curb
H	Roof Hatch on Curb	A	Abandoned Equipment Curb	S	Skylight on Curb
†	Roof Ladder	W	Walkway Pad	⊙	Satellite Dish
⊞	Screen Support Stanchion	⊞	Railing or Fencing	⊞	Pipe or Conduit on Support Block
—GAS—	Gas Line	—AD—	Area Divider	—EJ—	Expansion Joint
---	Roof Ridges and Valleys	Slope	Roof Slope	⊞	Elevation Change
⊗	Roof Drain	⊙	New Roof Drain		Scupper
	Overflow Scupper	#	Keynote	⊞	Revision
⊞	Tapered Insulation or Saddles		Metal Roofing	⊞	Shingles or Clay Tiles

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**CLIENT**

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 4400 Livernois  
 Troy, MI 48098

**PROJECT**

**Schroeder Elementary School**  
 3541 Jack Dr.  
 Troy, MI 48084

Troy School District  
 BID No. 9930  
 2022 Reroofing Program

WTProject No: TSD-R102-21

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**SHEET TITLE**  
**Roof Plan**  
 Schroeder Elementary School  
 Roof Area E

**A4.3**

SHEET 16 OF 20

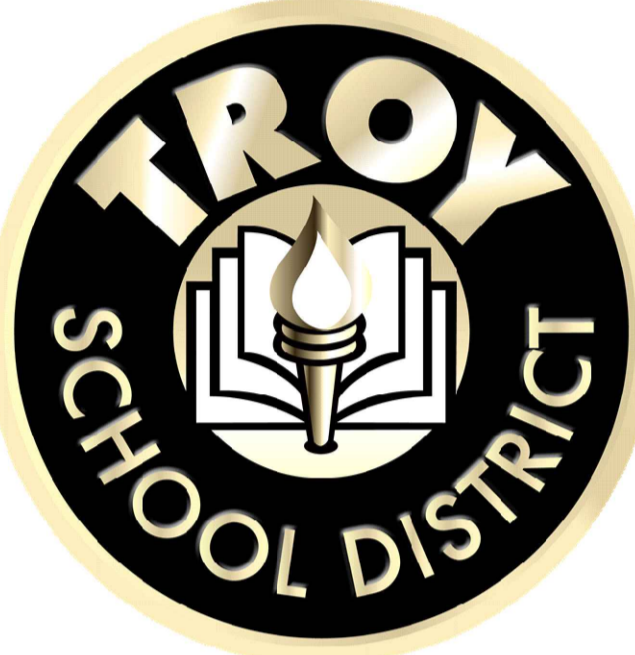




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Phone #: 586-731-3095 Fax #: 586-731-6863 Email: weathertech@wtcg.net Web Site: www.wtcg.net

CLIENT



Troy School District 4400 Livernois Troy, MI 48098

PROJECT

Troy School District BID No. 9910 2022 Roofing Program

WTProject No: TSD-R102-21

ISSUE

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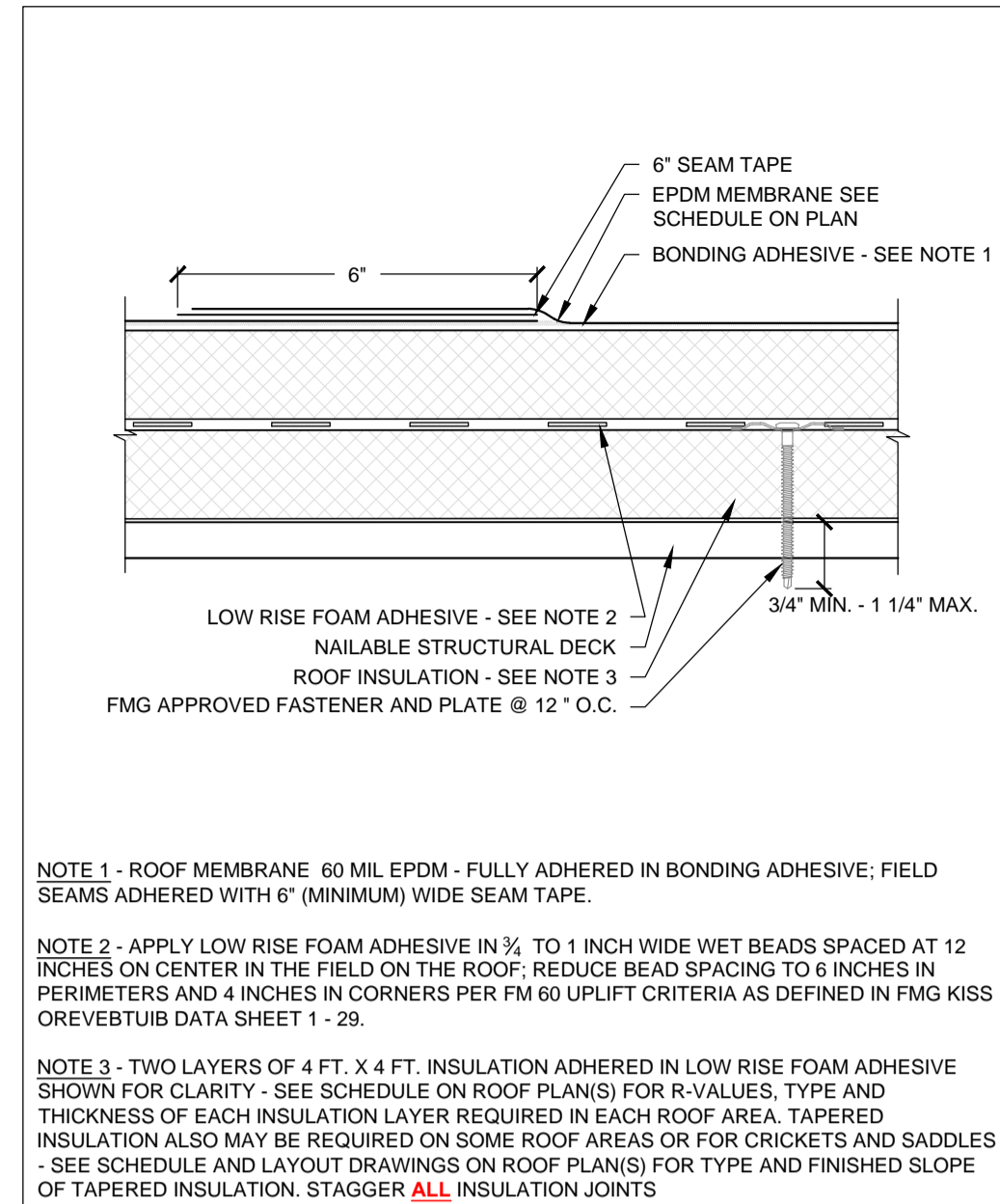
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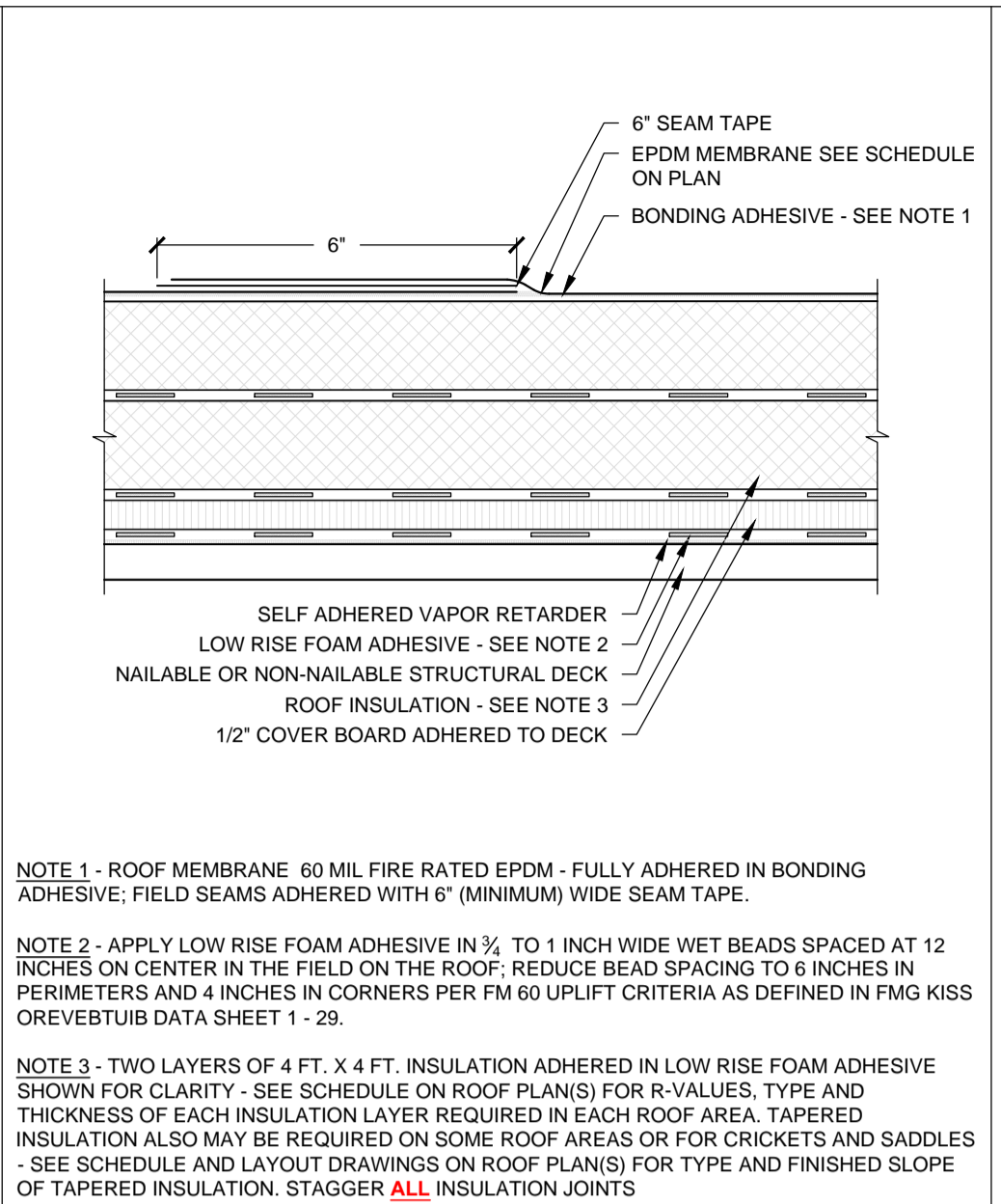
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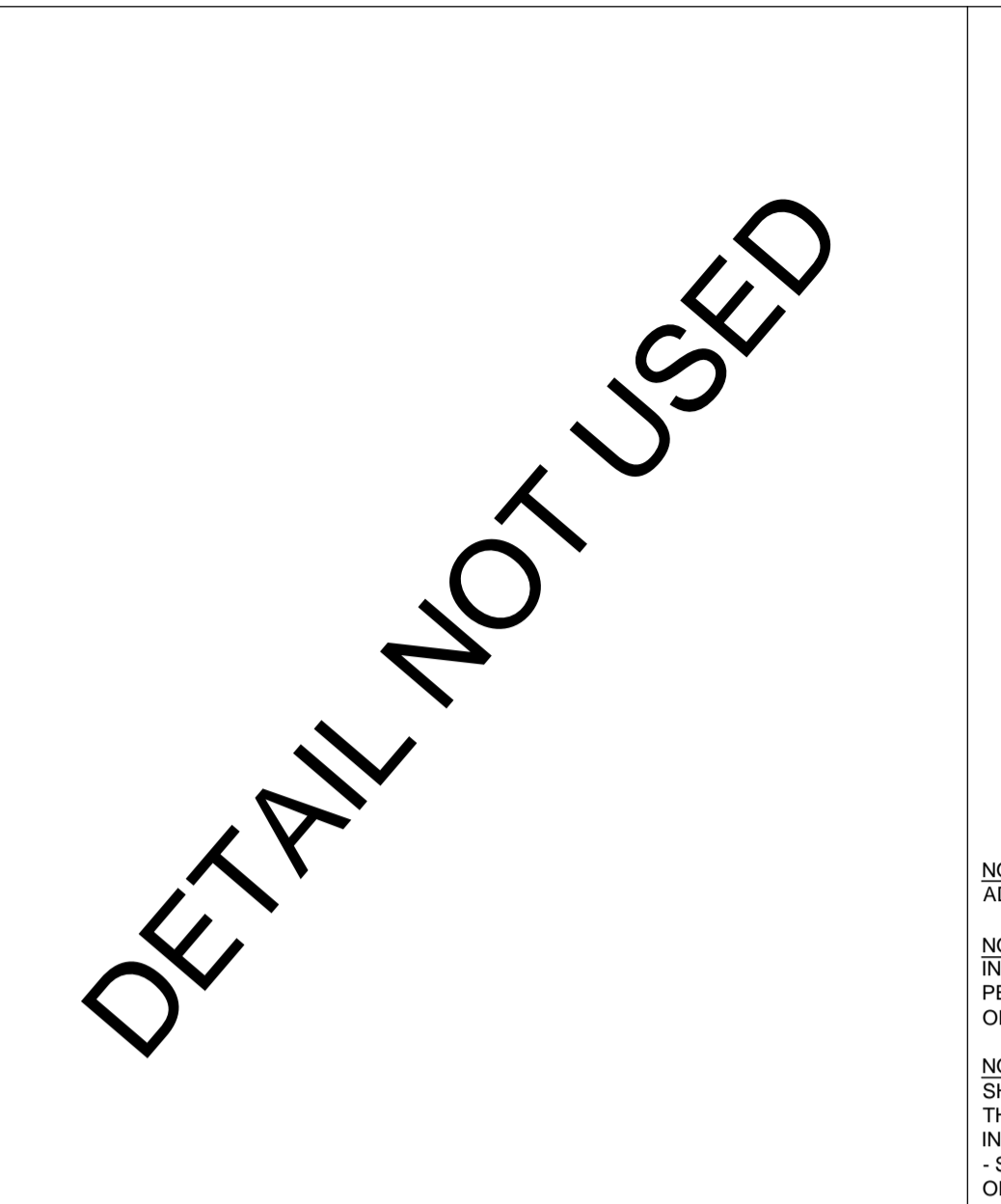
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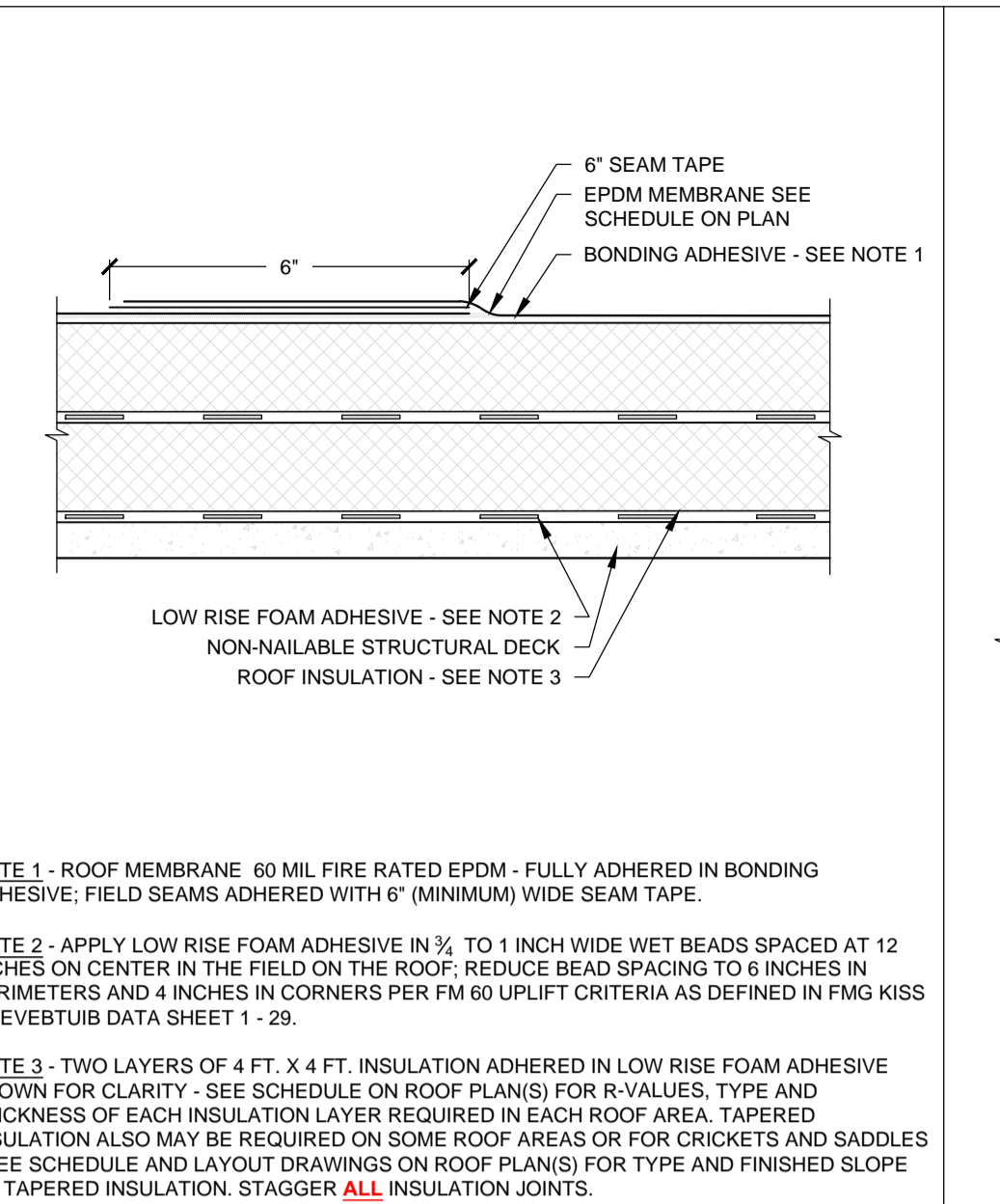
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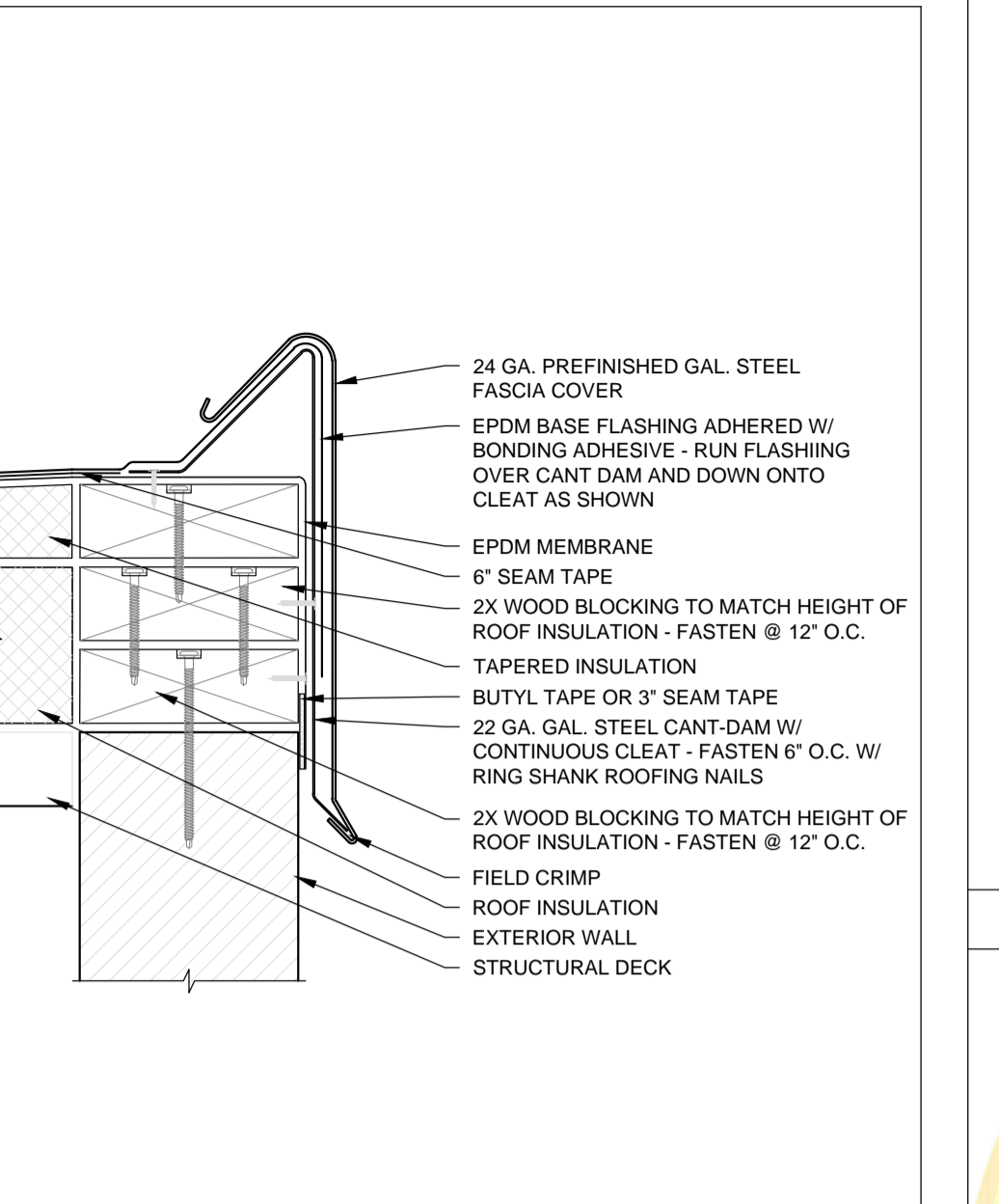
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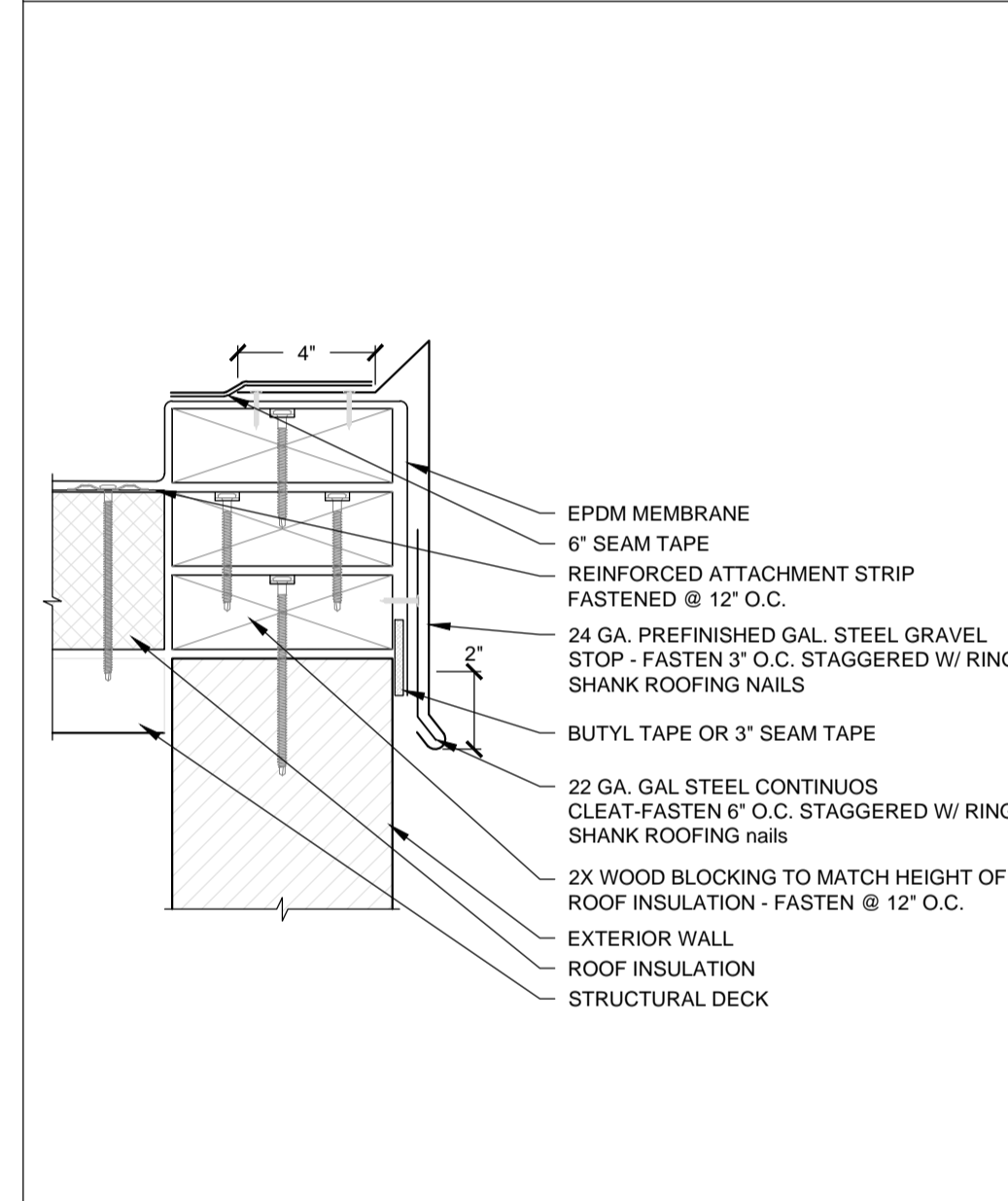
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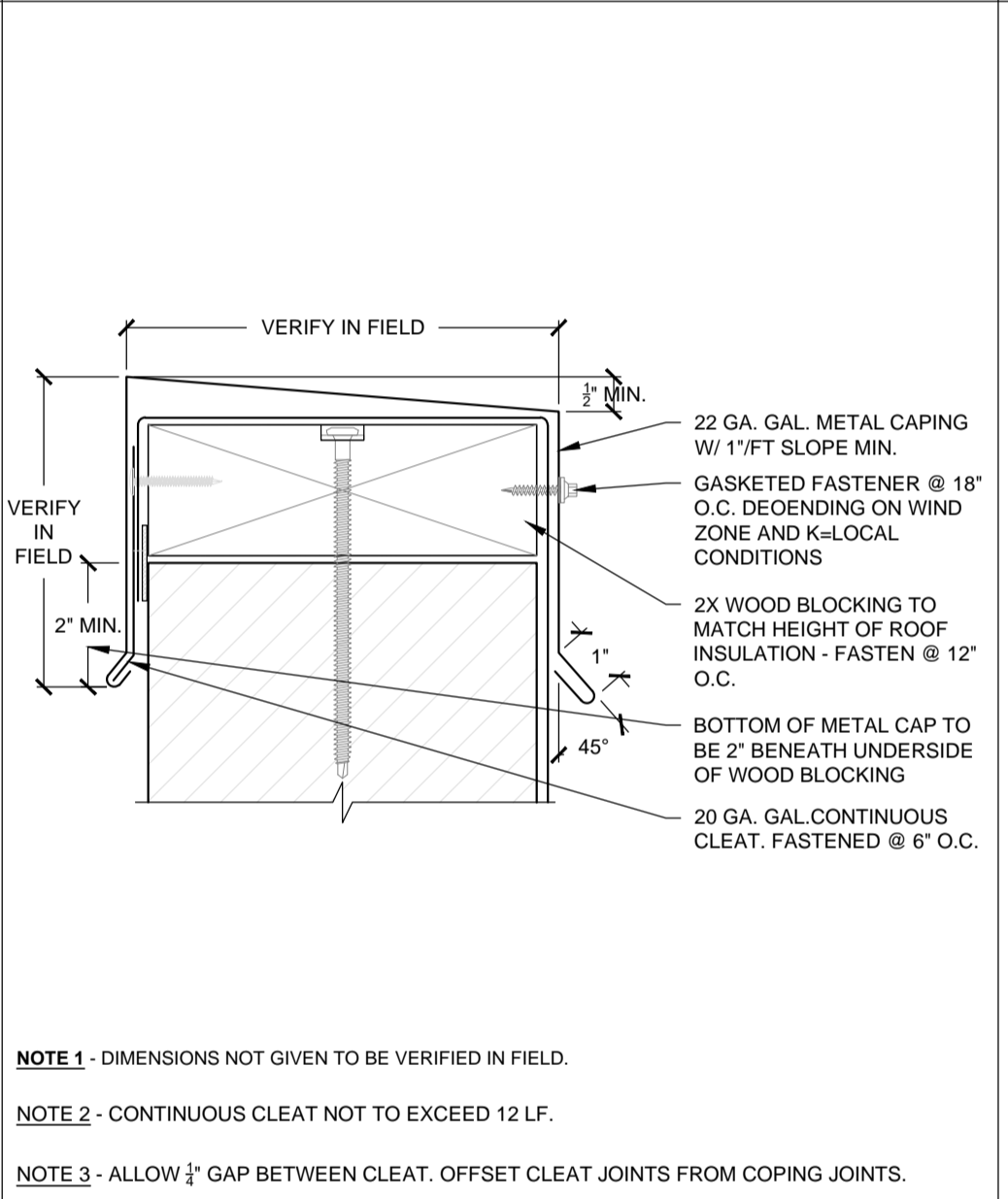
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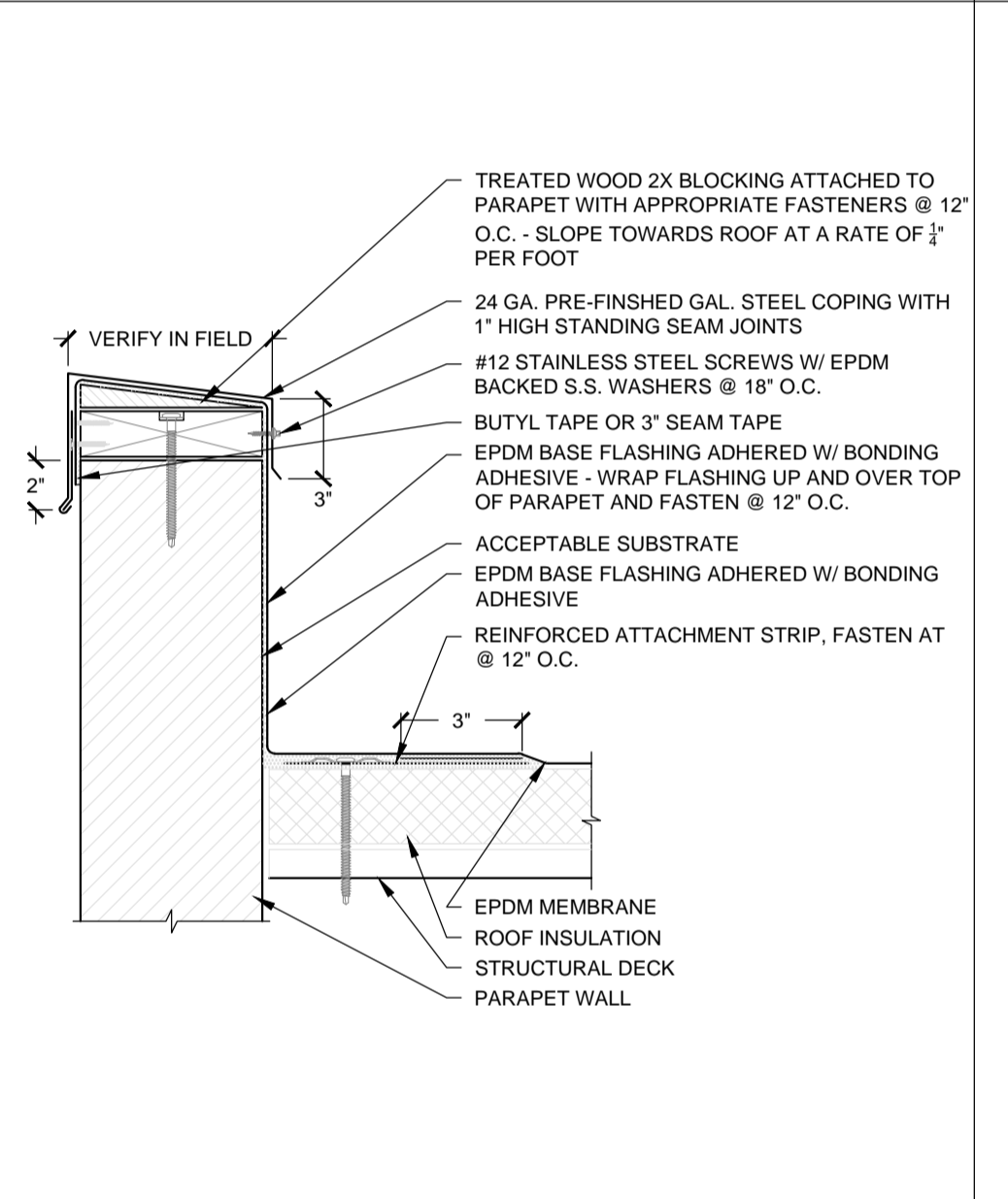
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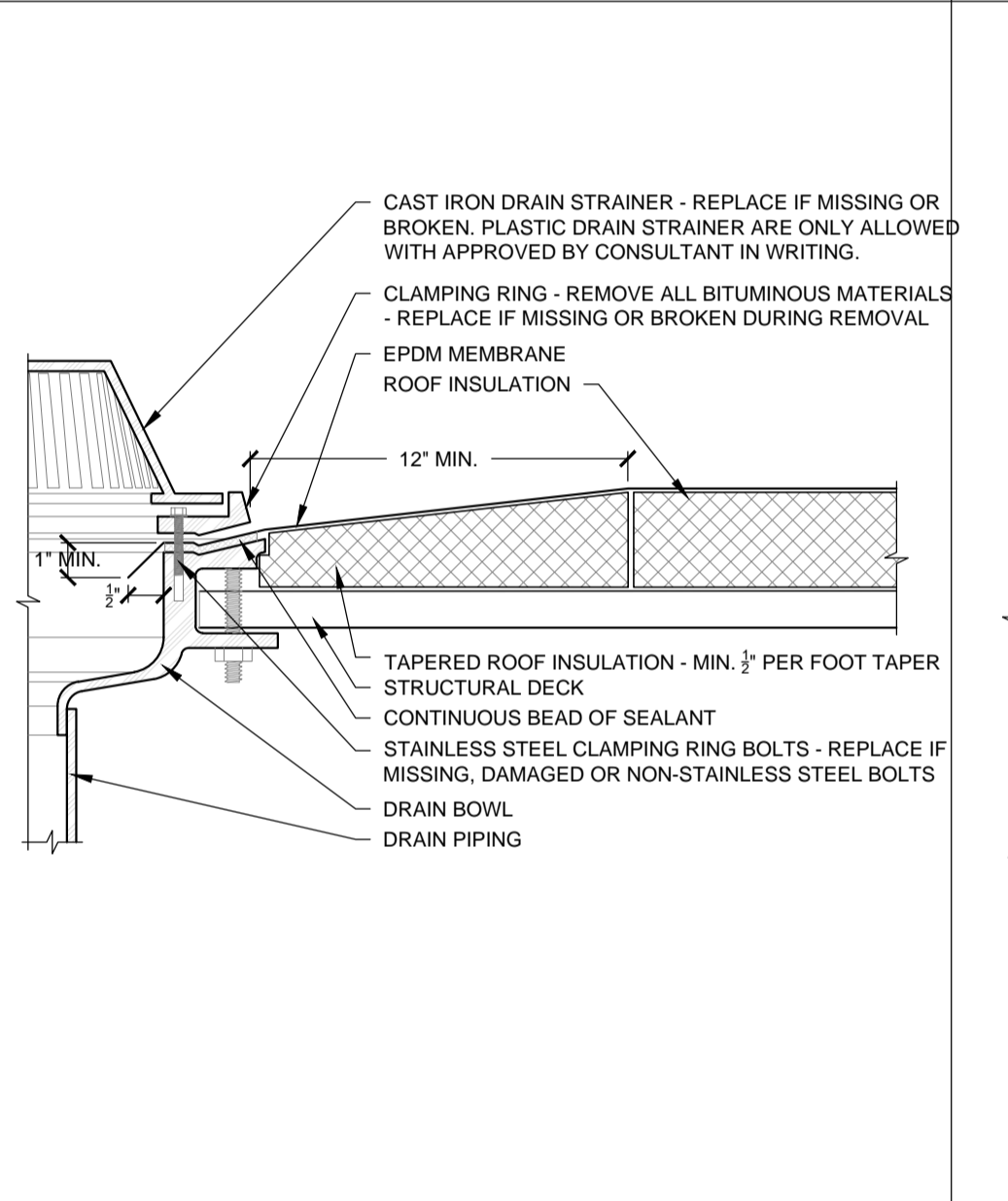
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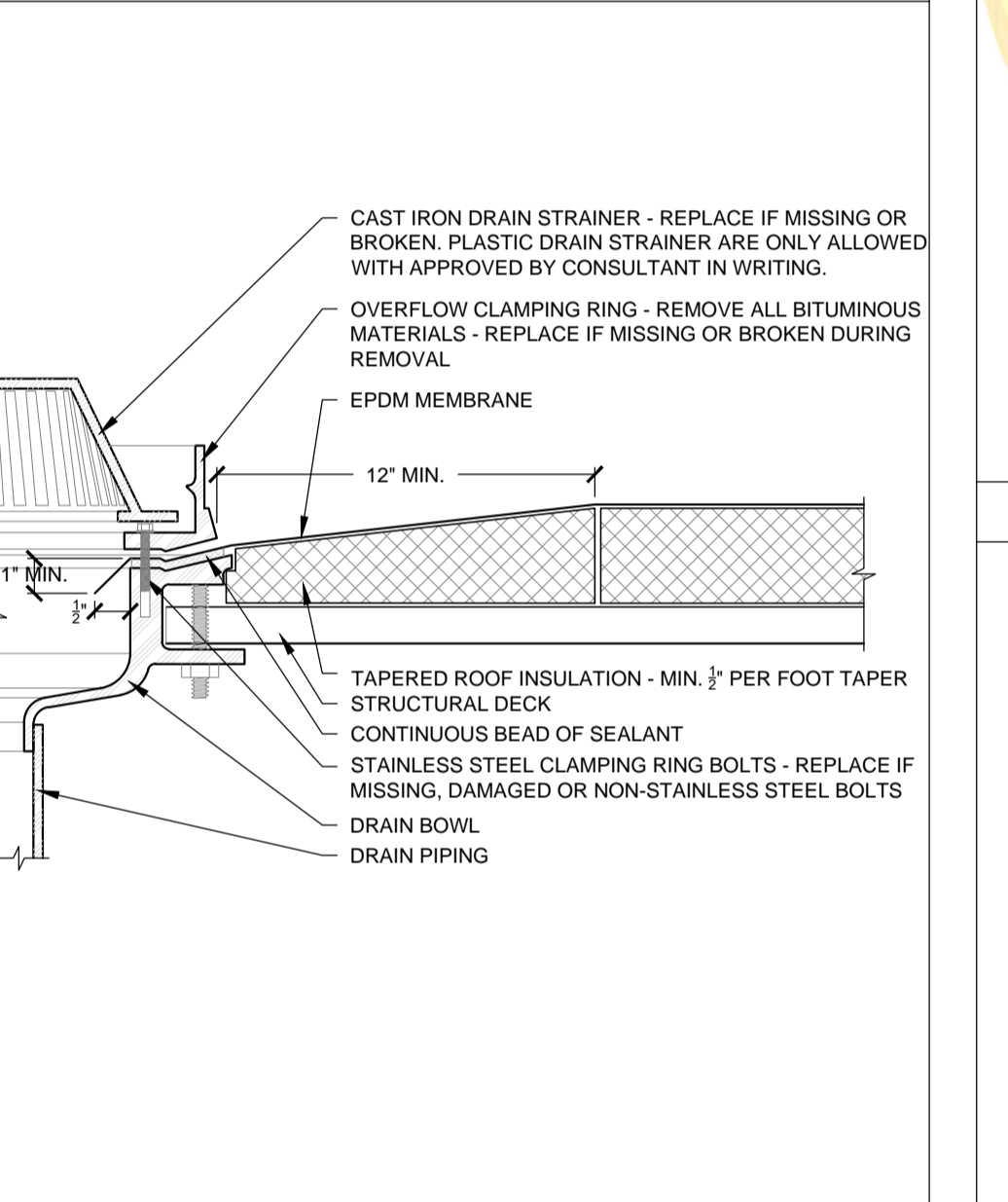
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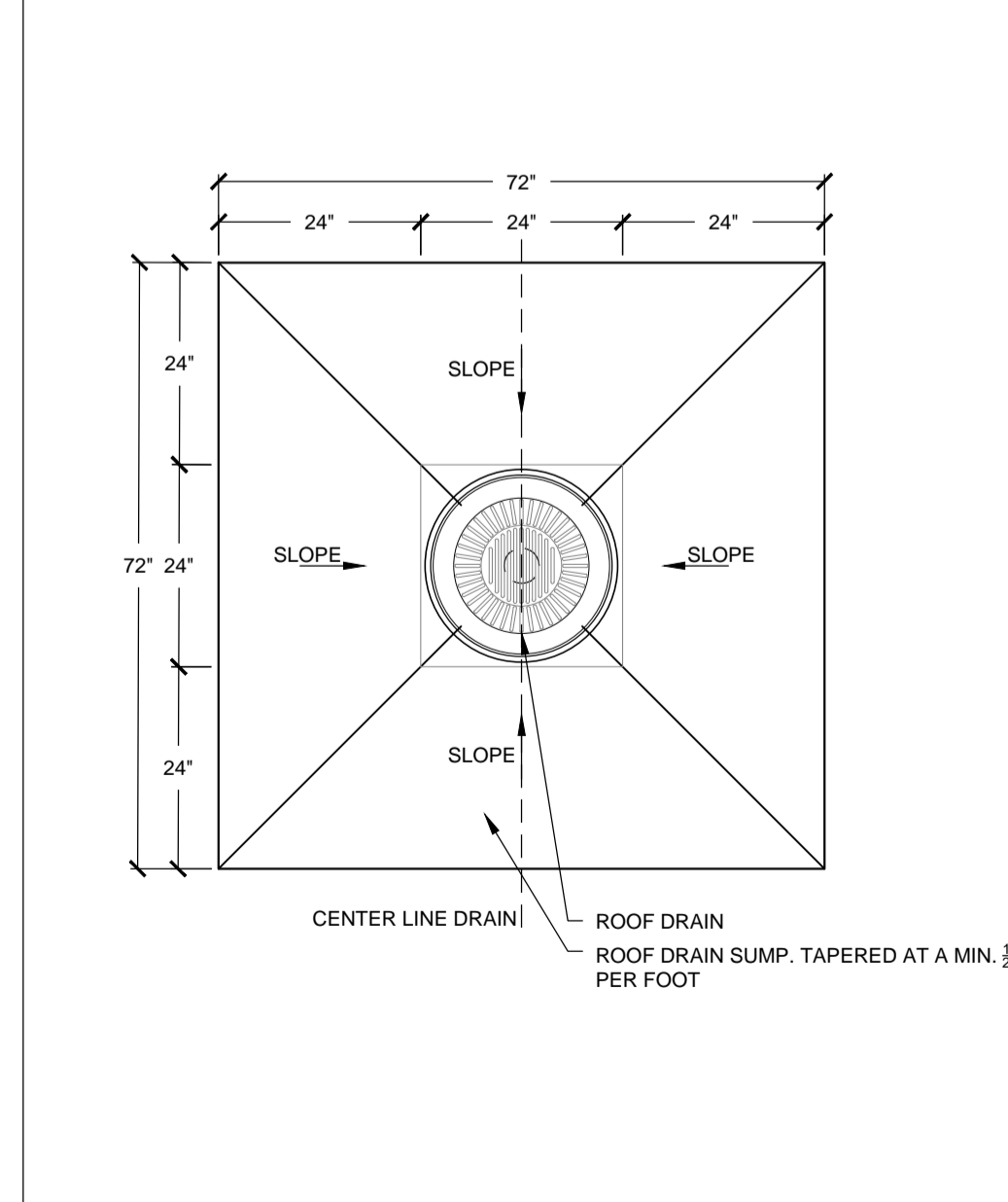
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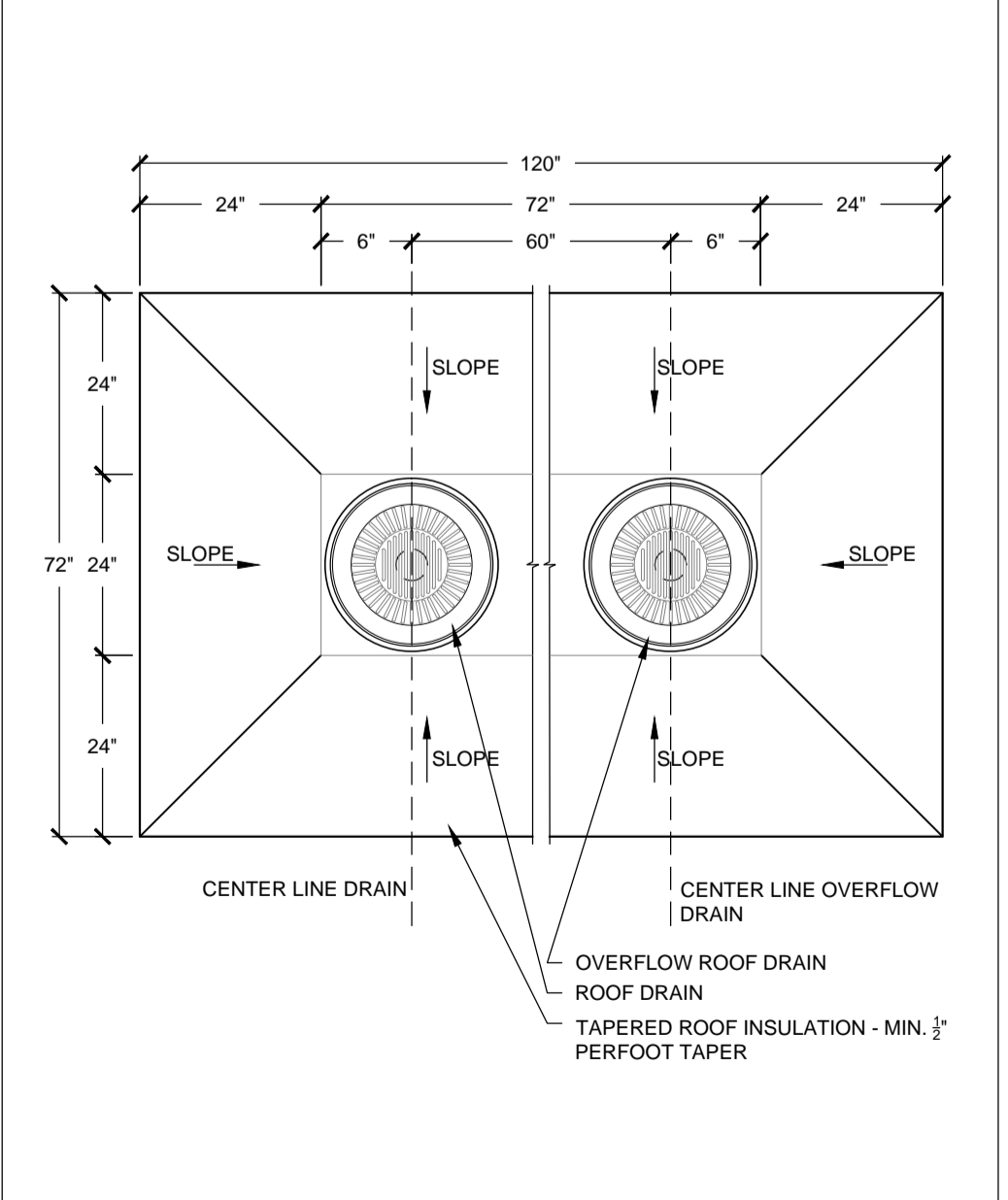
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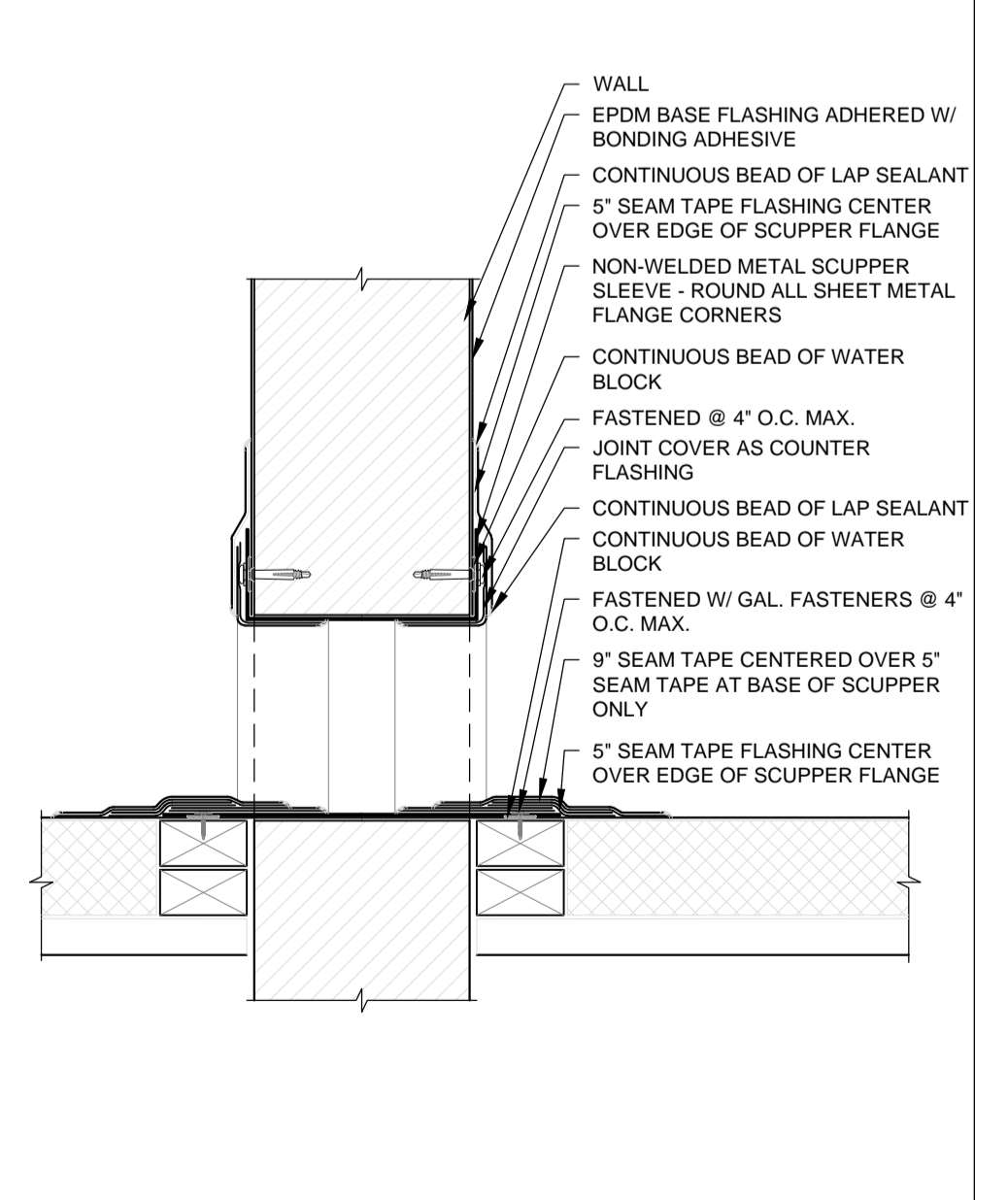
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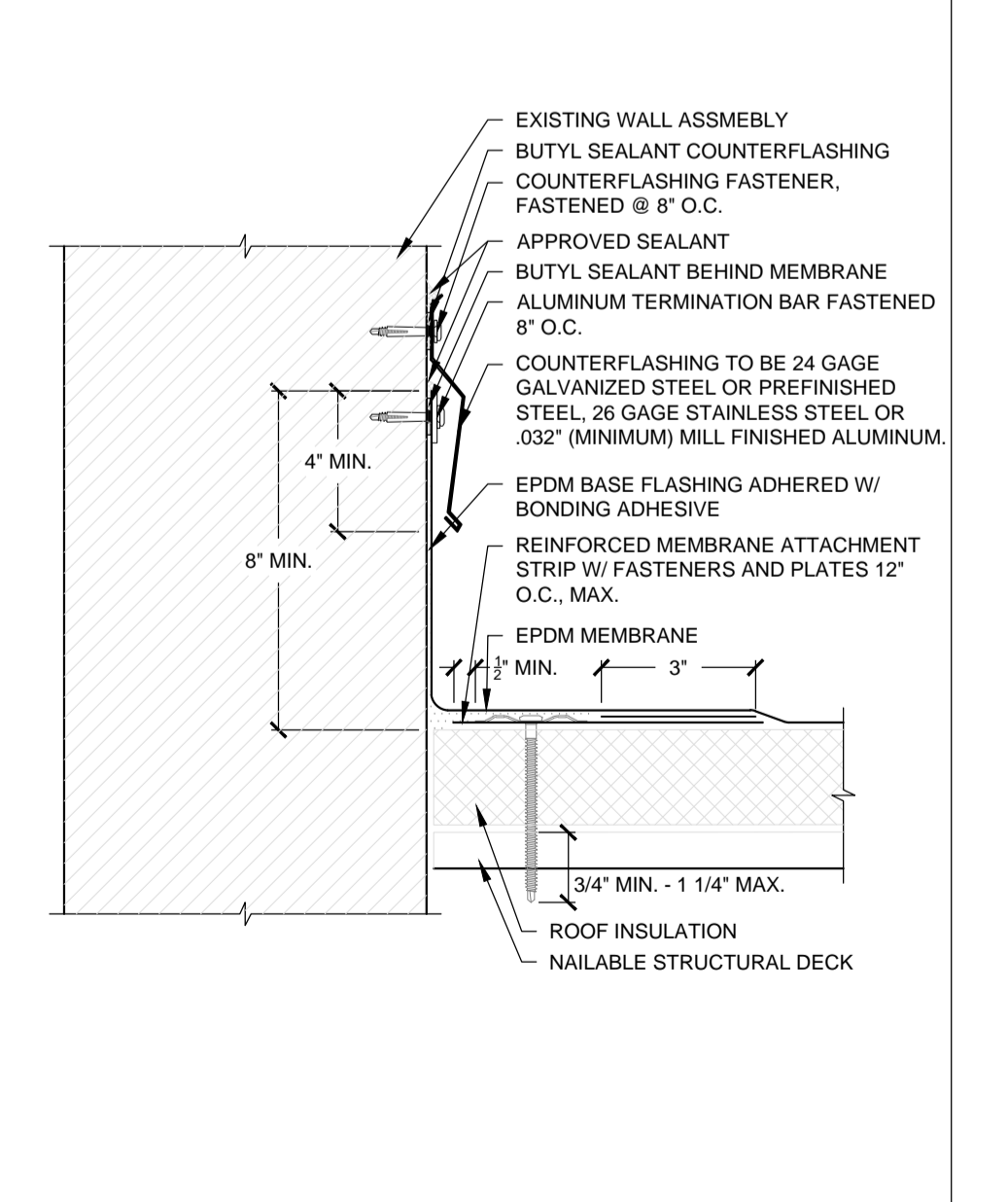
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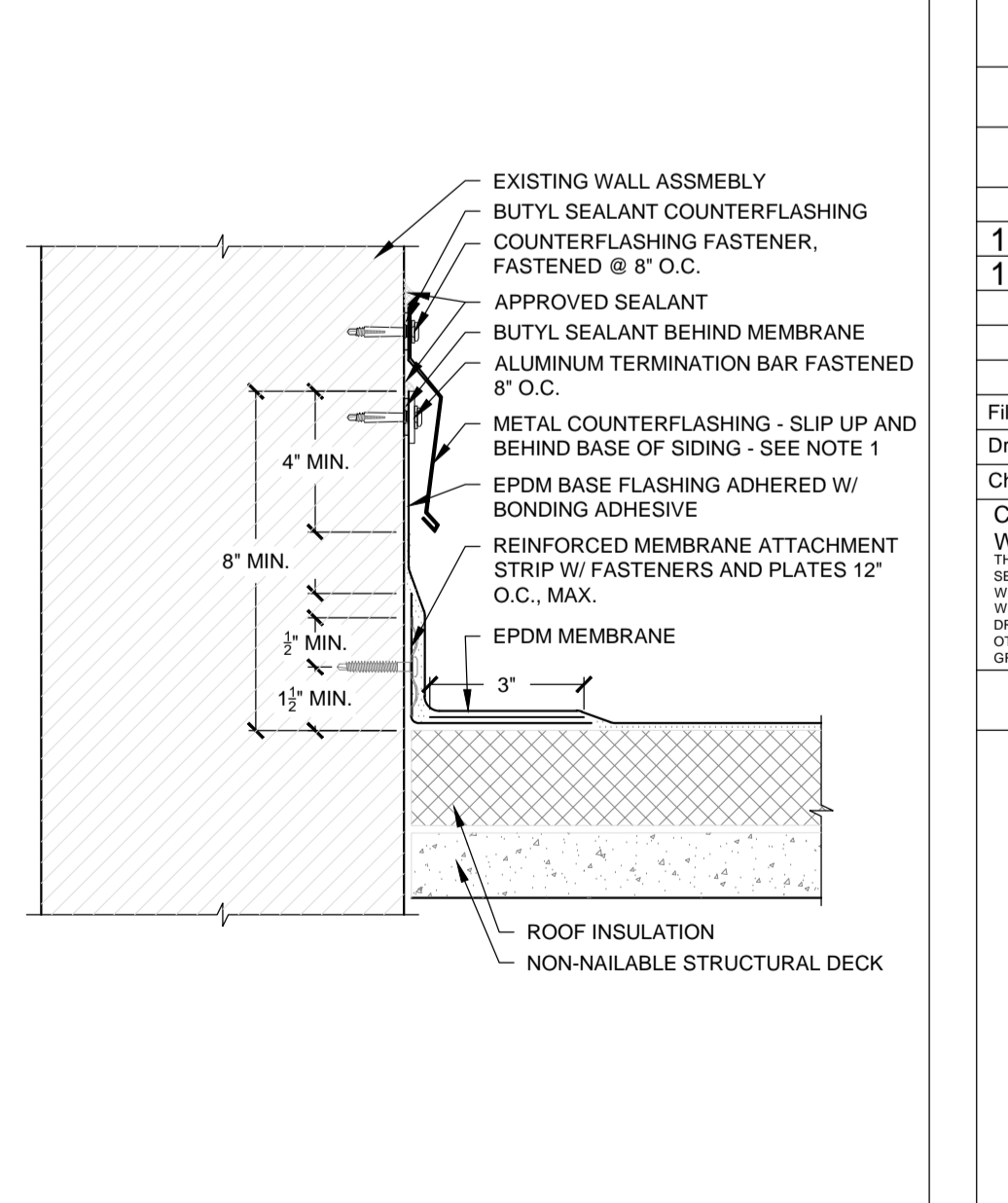
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ROOF TO ROOF THRU-WALL SCUPPER SCALE: N.T.S



BASE FLASHING W/ TERMINATION BAR AND COUNTERFLASHING ON NAILABLE DECK SCALE: N.T.S



BASE FLASHING W/ TERMINATION BAR AND COUNTERFLASHING ON NON-NAILABLE DECK SCALE: N.T.S

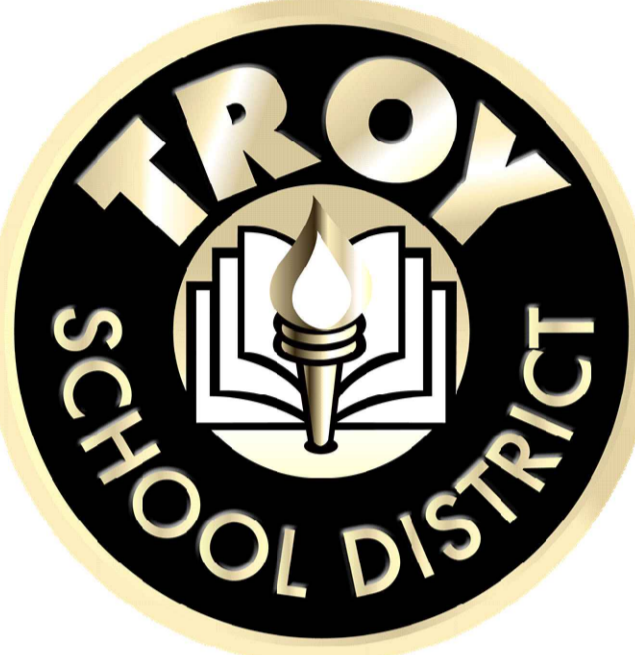
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Troy School District  
 4400 Livernois  
 Troy, MI 48098

PROJECT

Troy School District  
 BID No. 9910  
 2022 Roofing Program

WTProject No: TSD-R102-21

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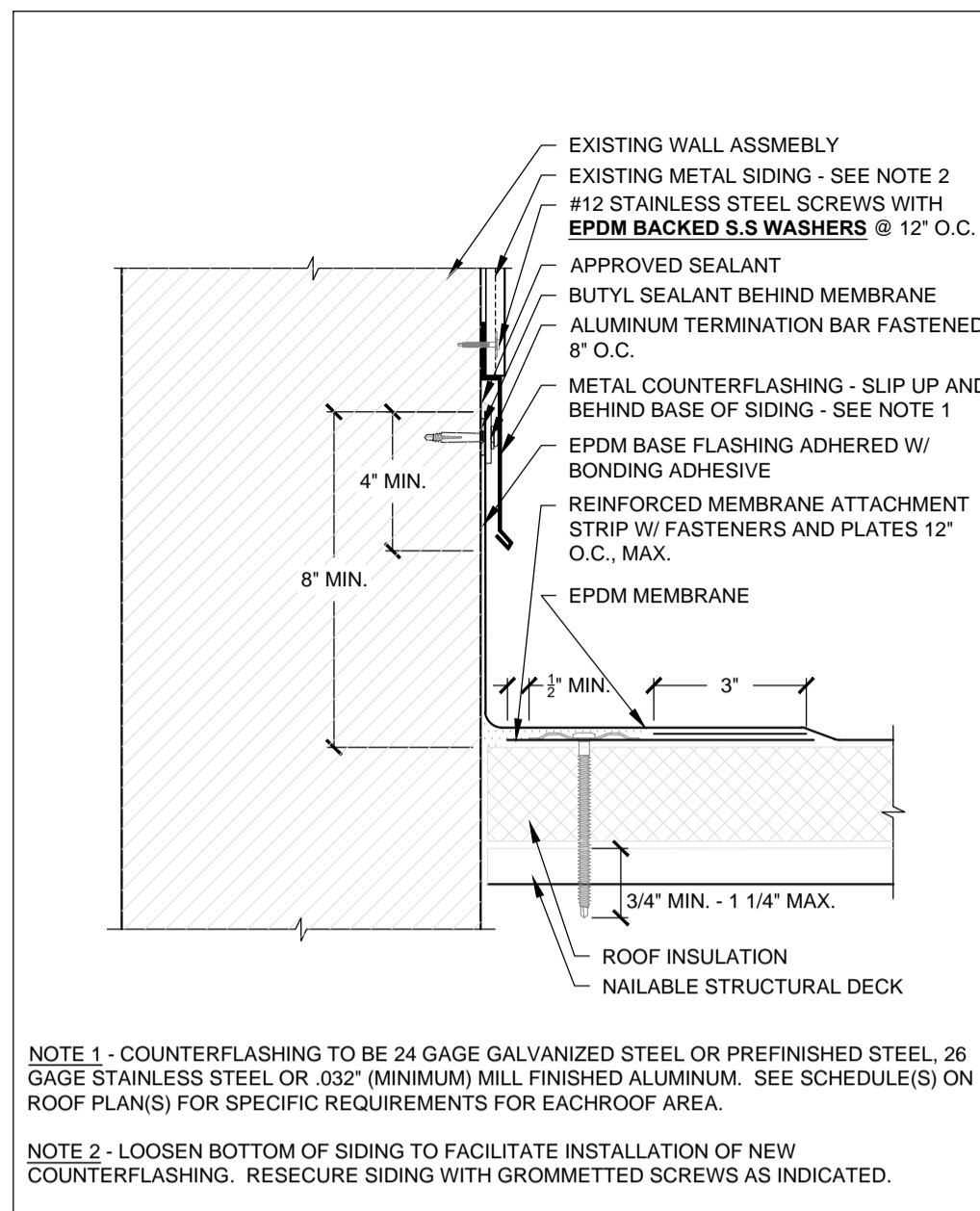
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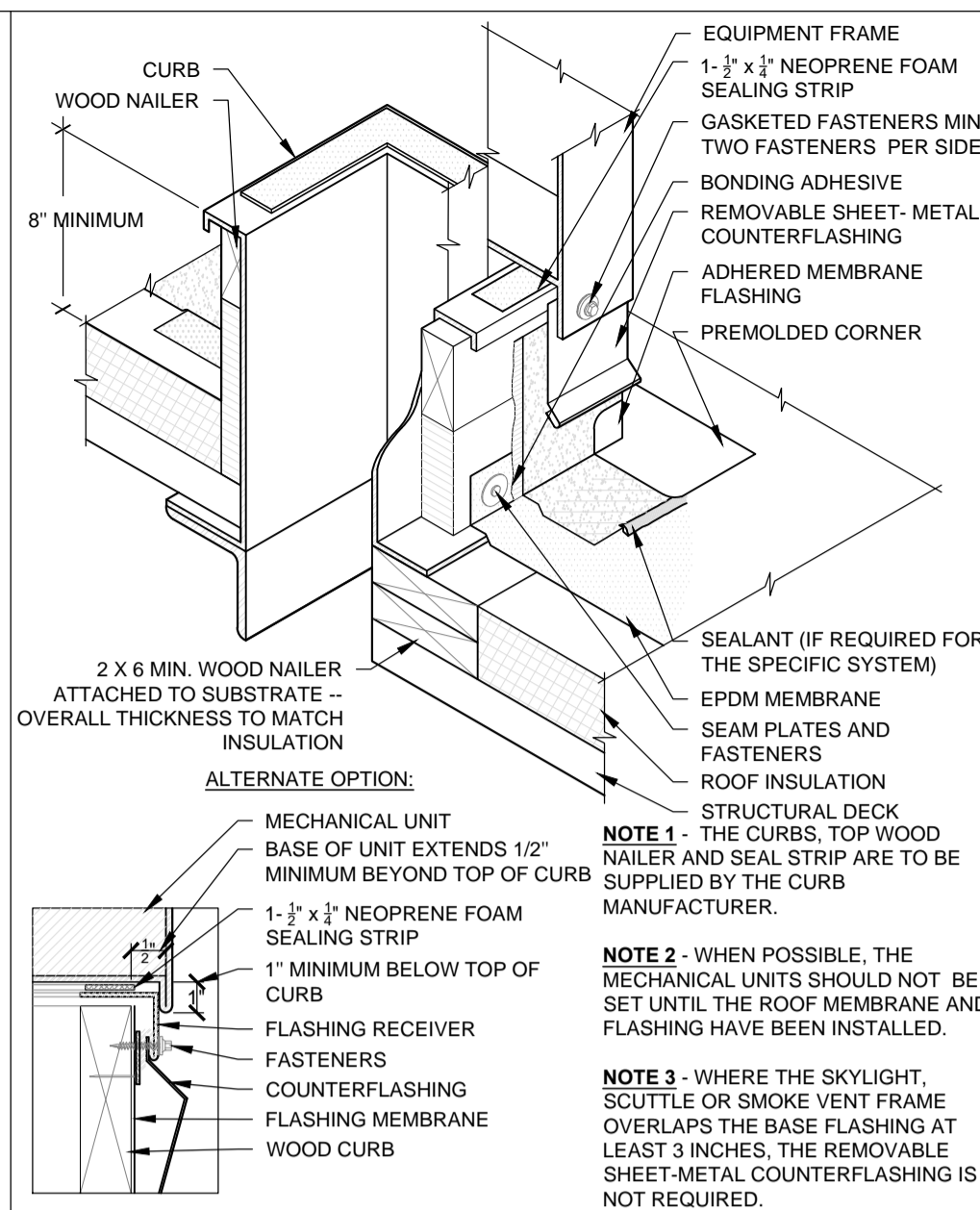
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**A5.1**

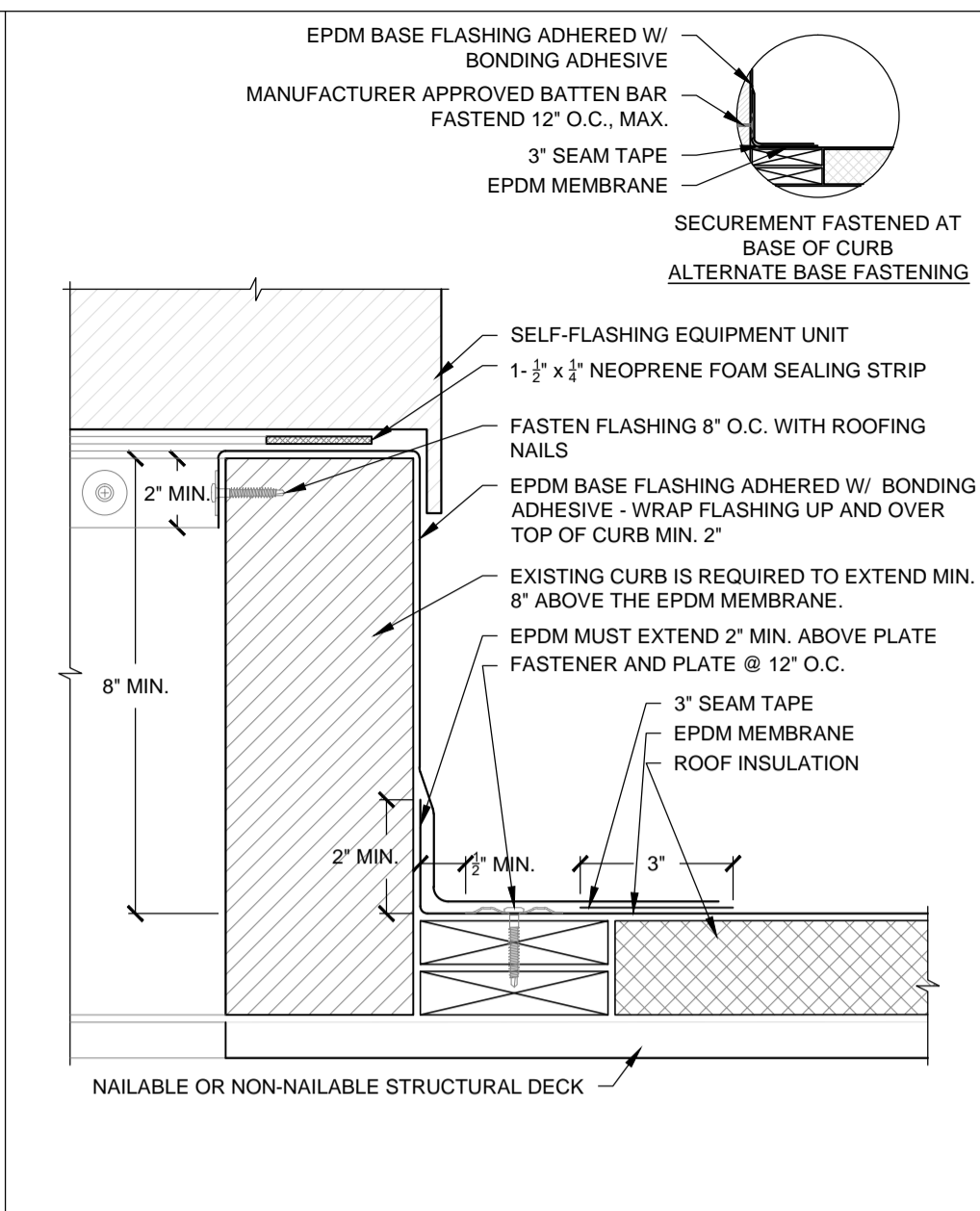
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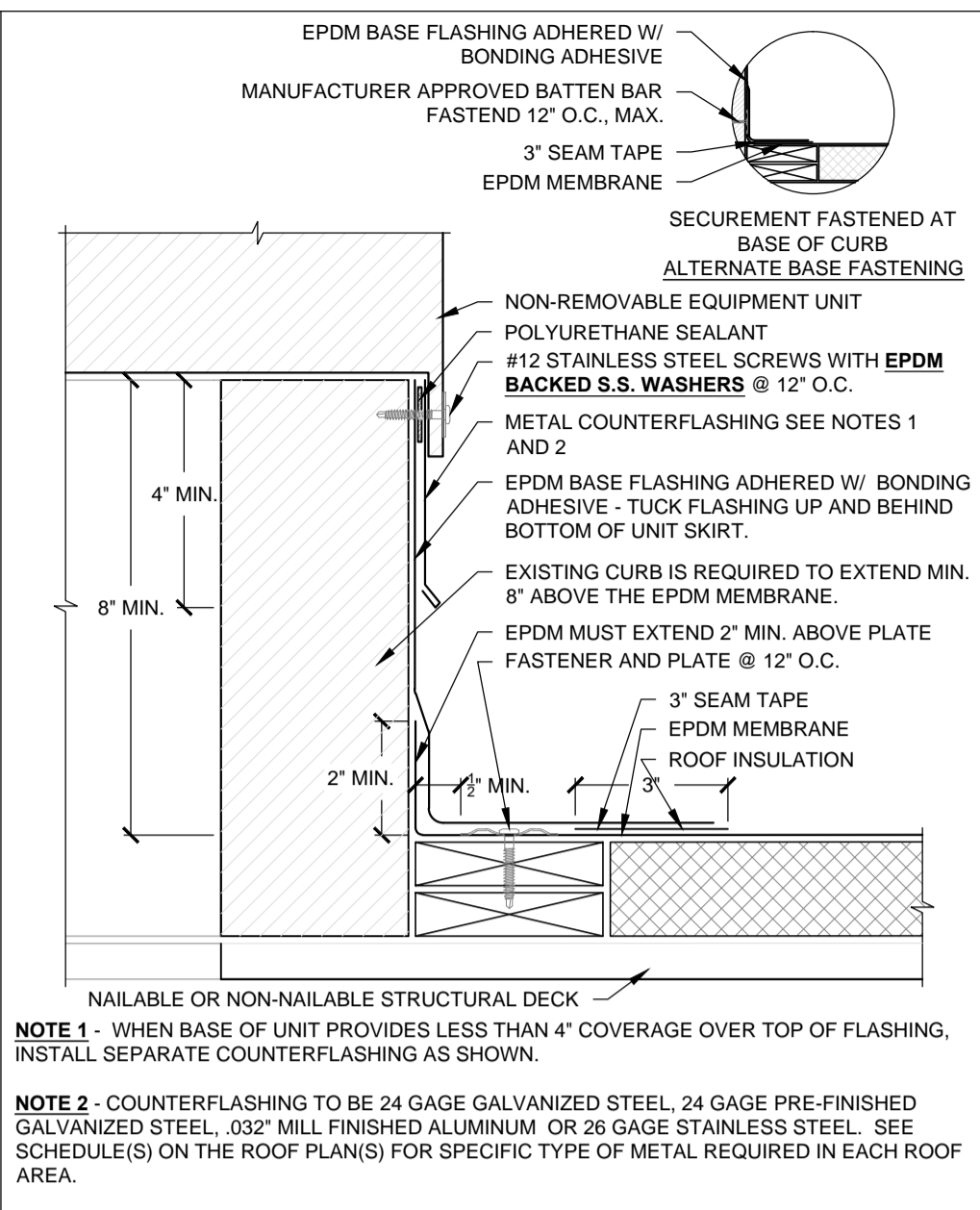
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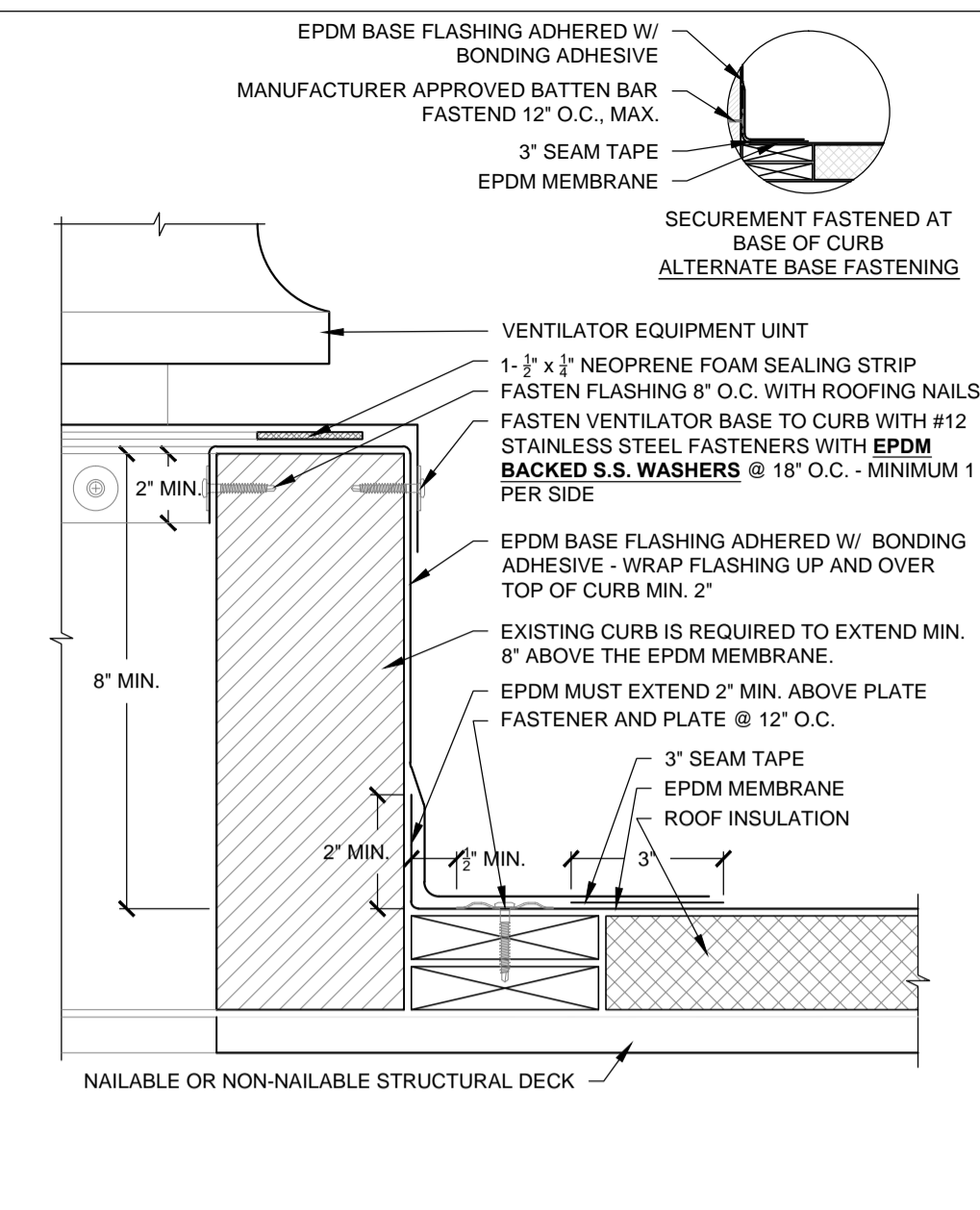
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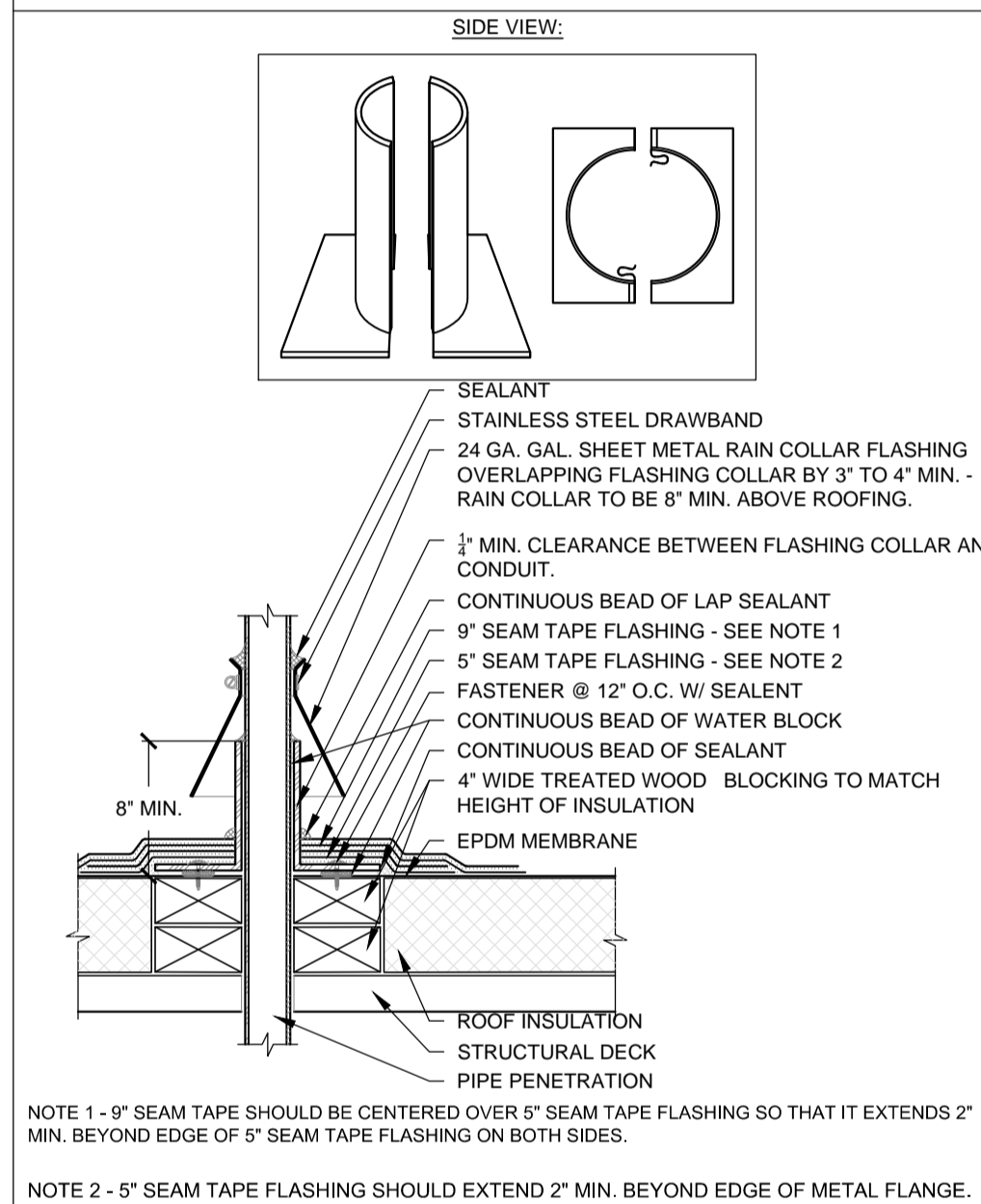
REMOVABLE EQUIPMENT CURB FLASHING  
 SCALE: N.T.S



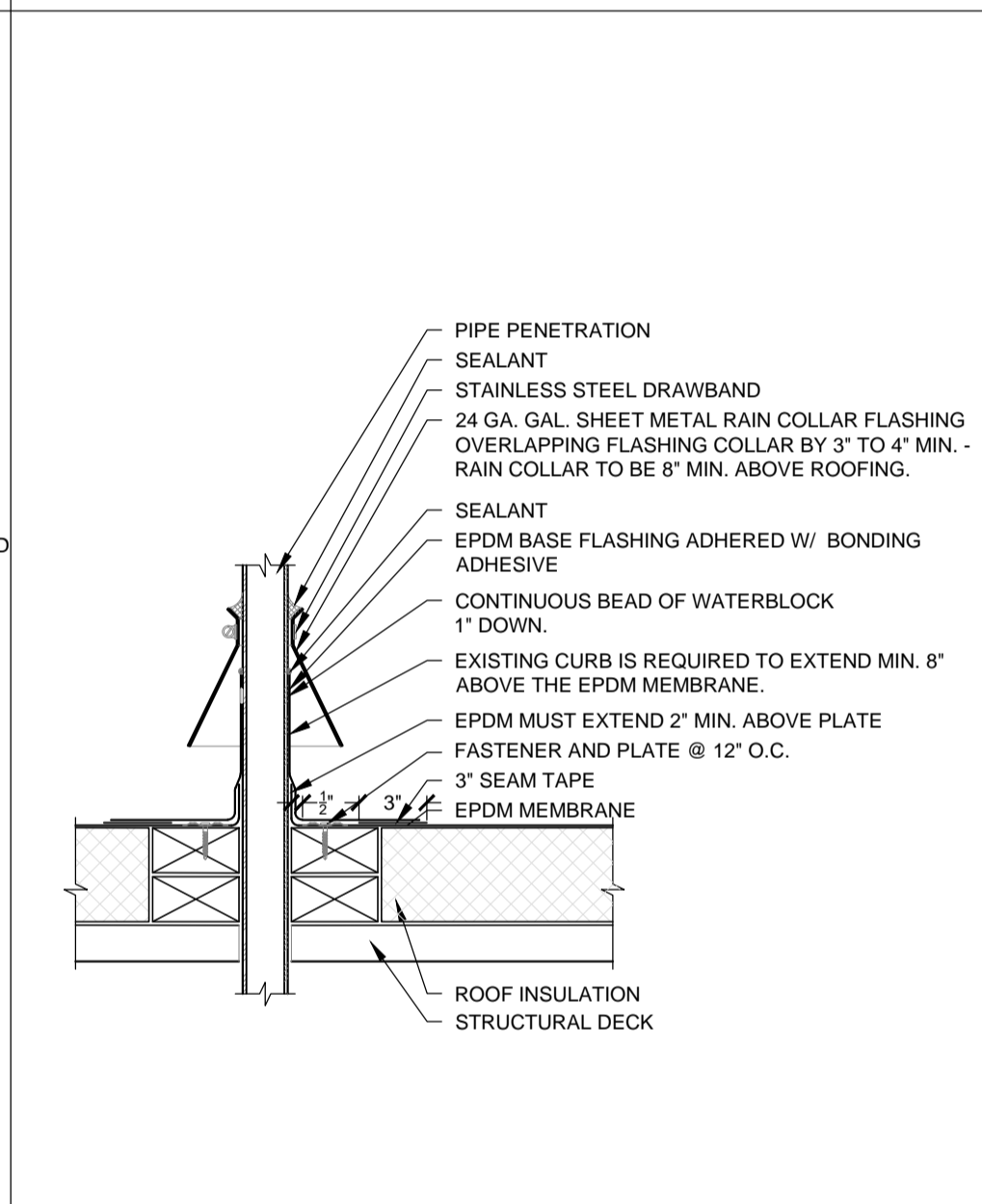
NON-REMOVABLE EQUIPMENT CURB FLASHING  
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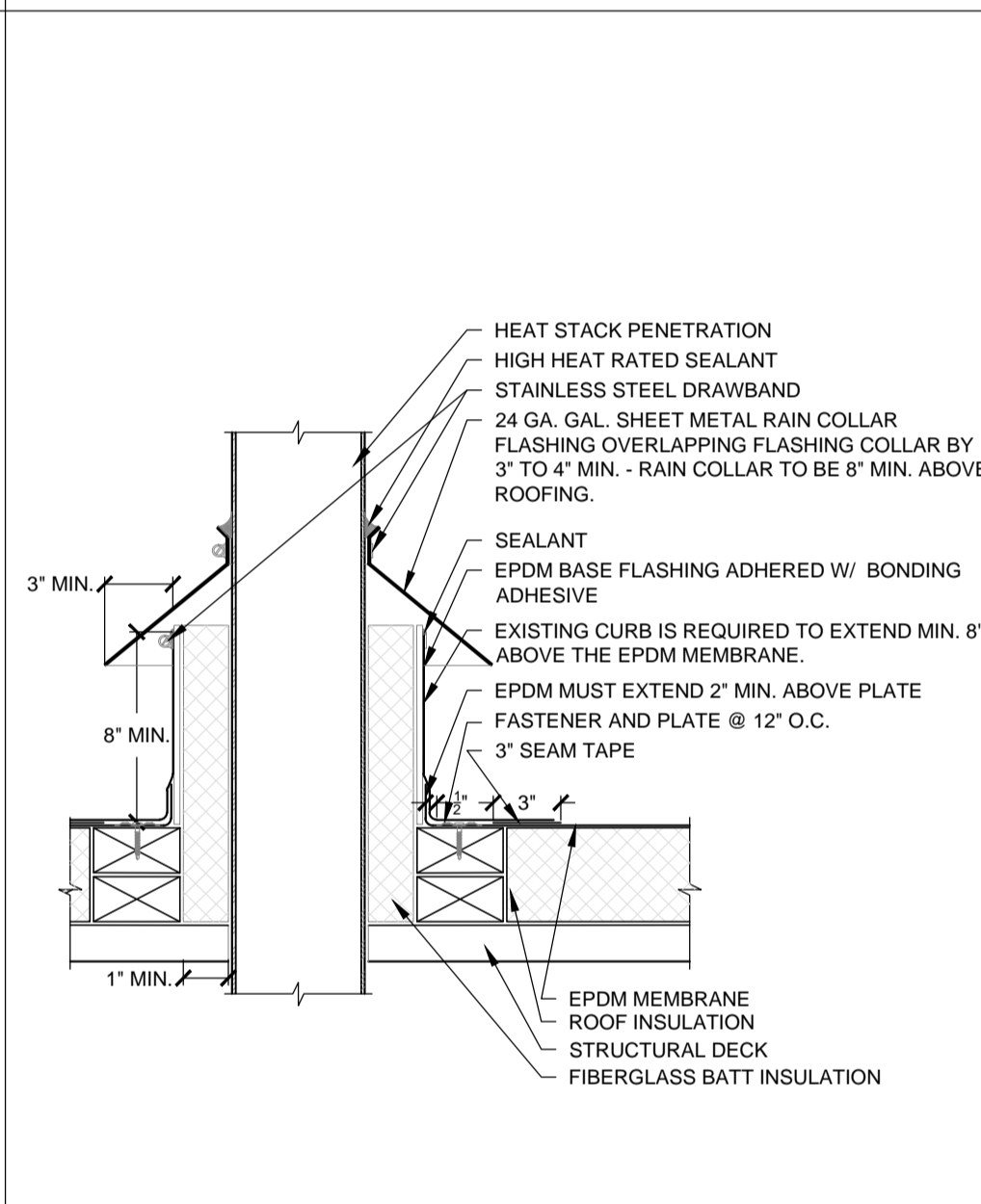
VENTILATOR EQUIPMENT CURB FLASHING  
 SCALE: N.T.S



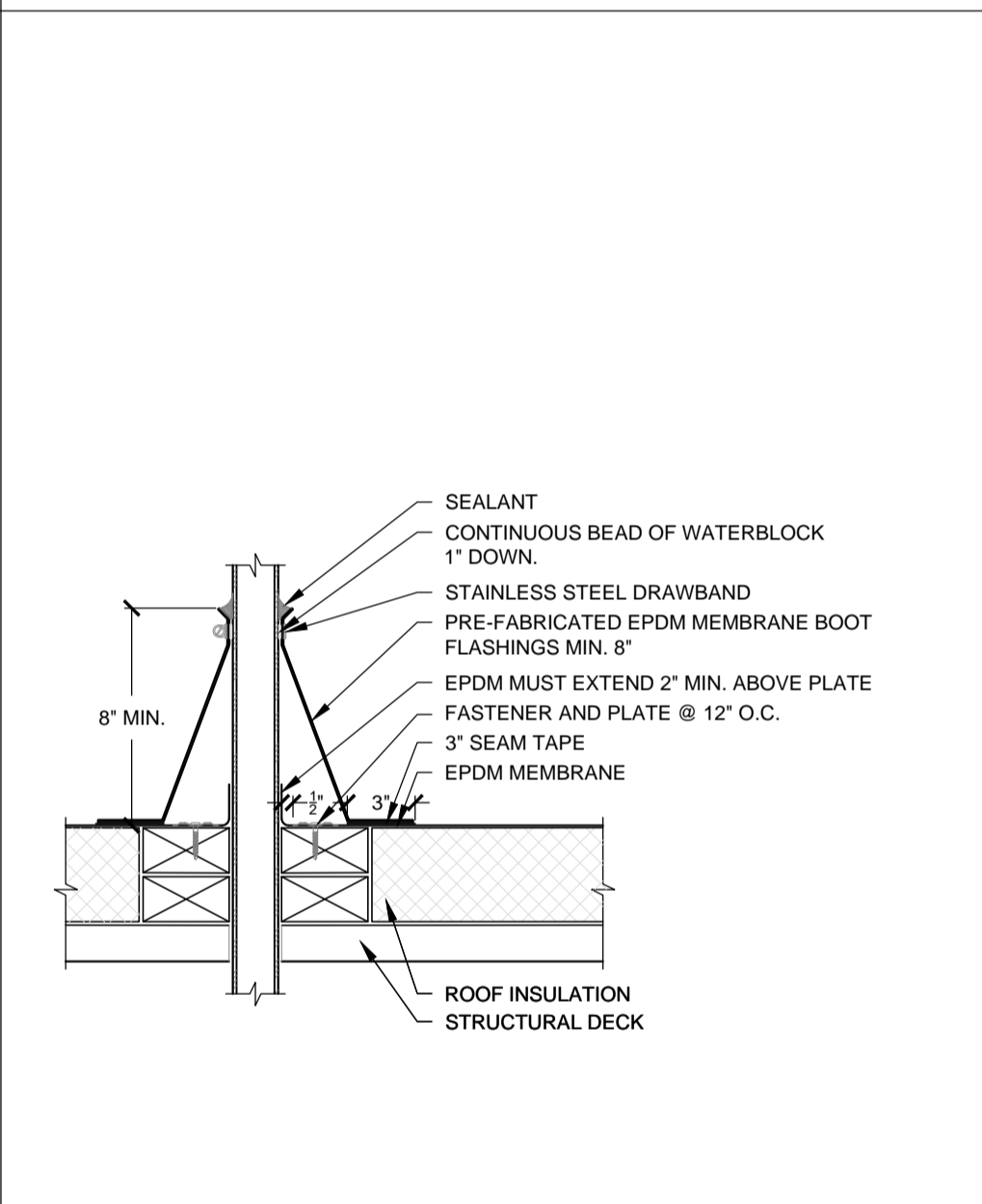
THROUGH ROOF CONDUIT/PIPE FLASHING  
 2 PC COLLAR  
 SCALE: N.T.S



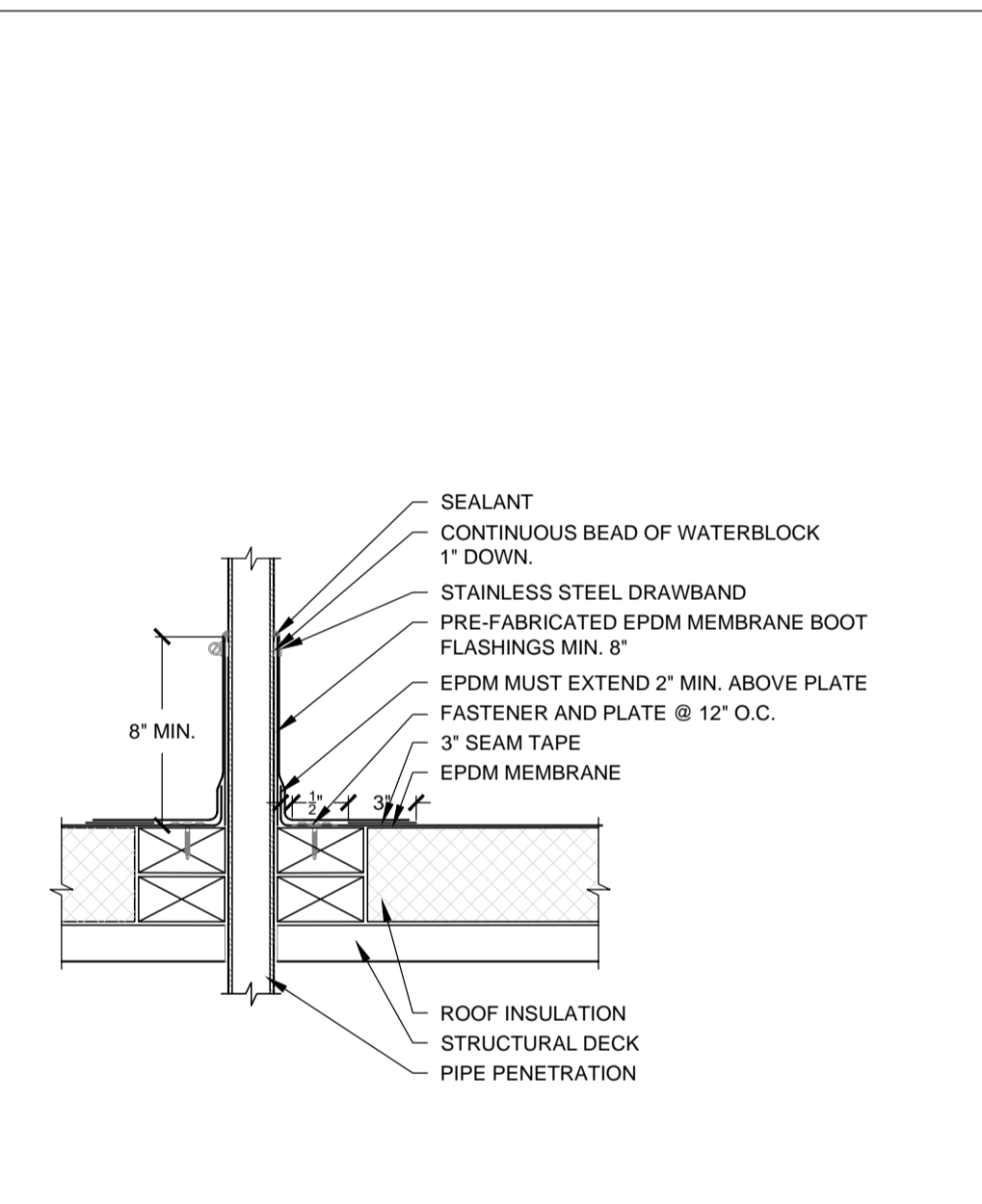
THROUGH ROOF CONDUIT/PIPE FLASHING  
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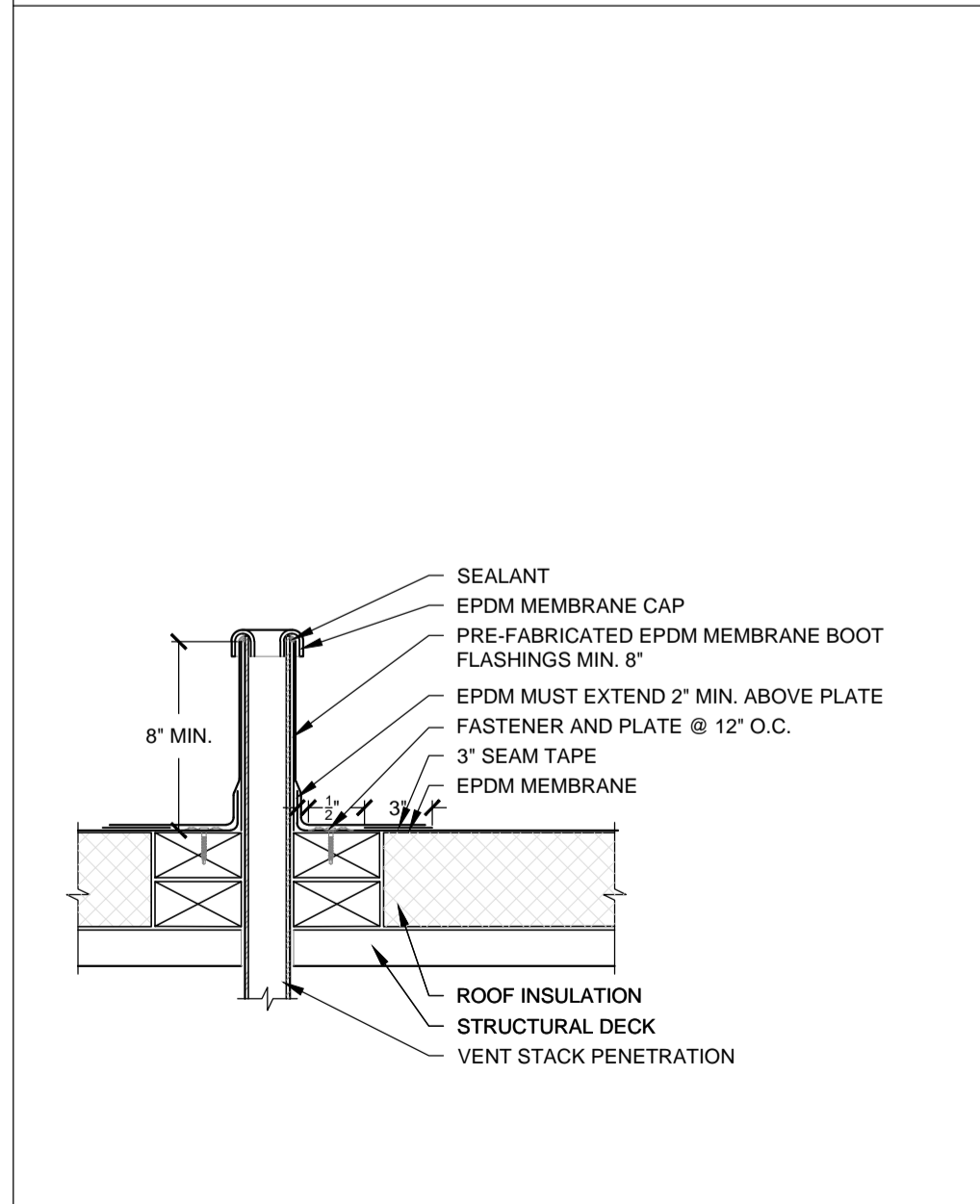
HEAT STACK FLASHING  
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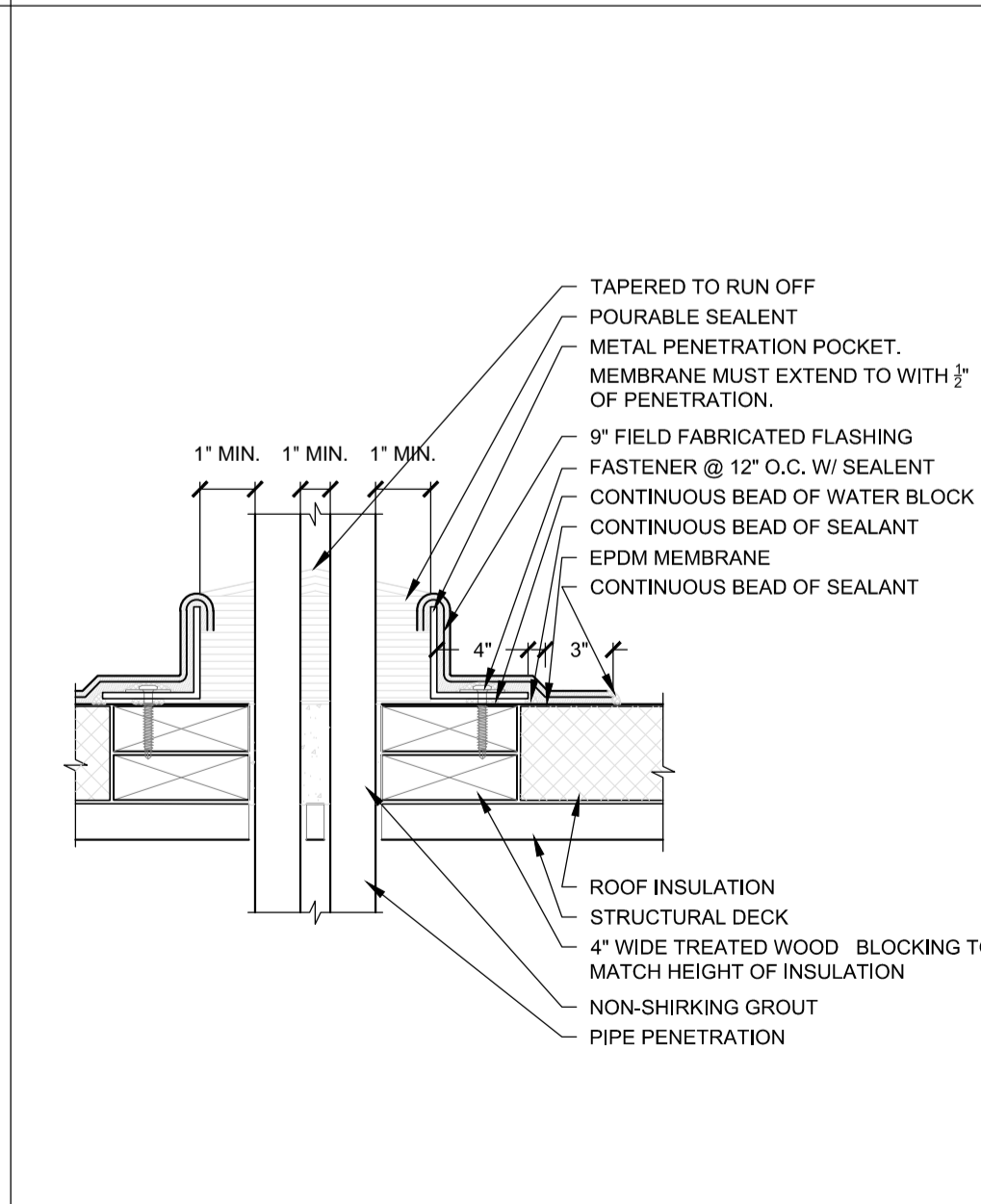
PRE-FABRICATED PIPE FLASHING  
 SCALE: N.T.S



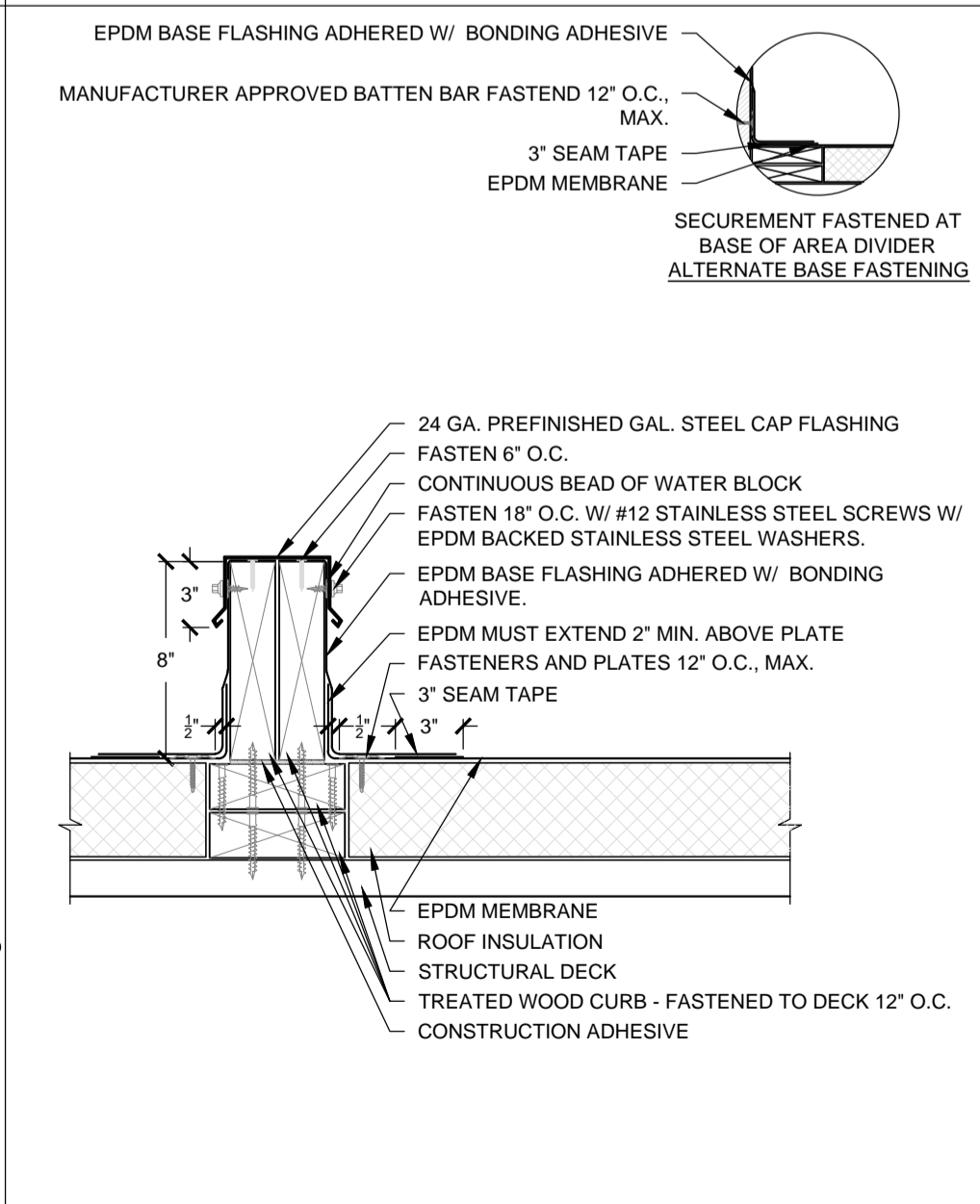
FIELD FABRICATED PIPE FLASHING  
 SCALE: N.T.S



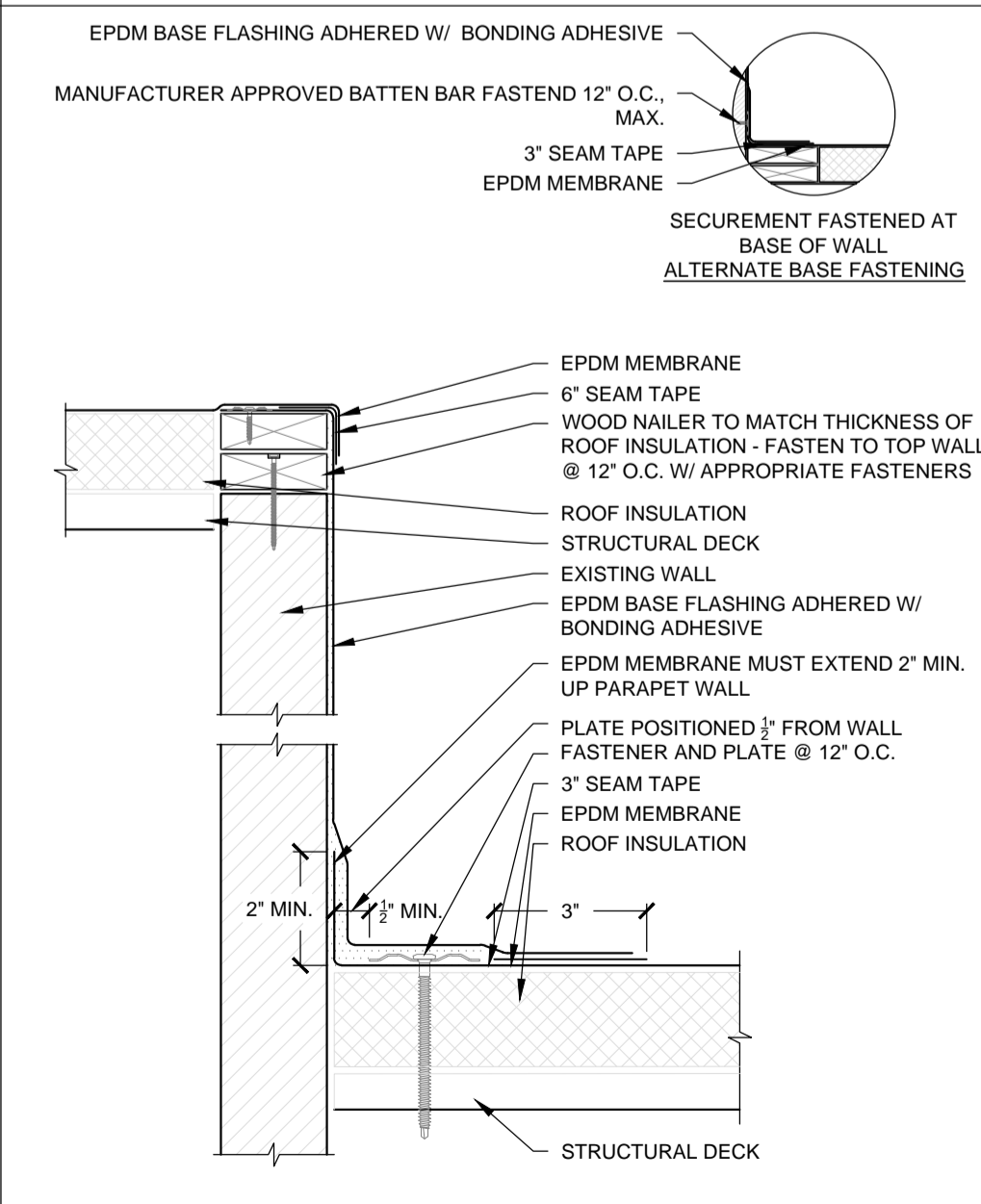
FIELD FABRICATED VENT STACK FLASHING  
 SCALE: N.T.S



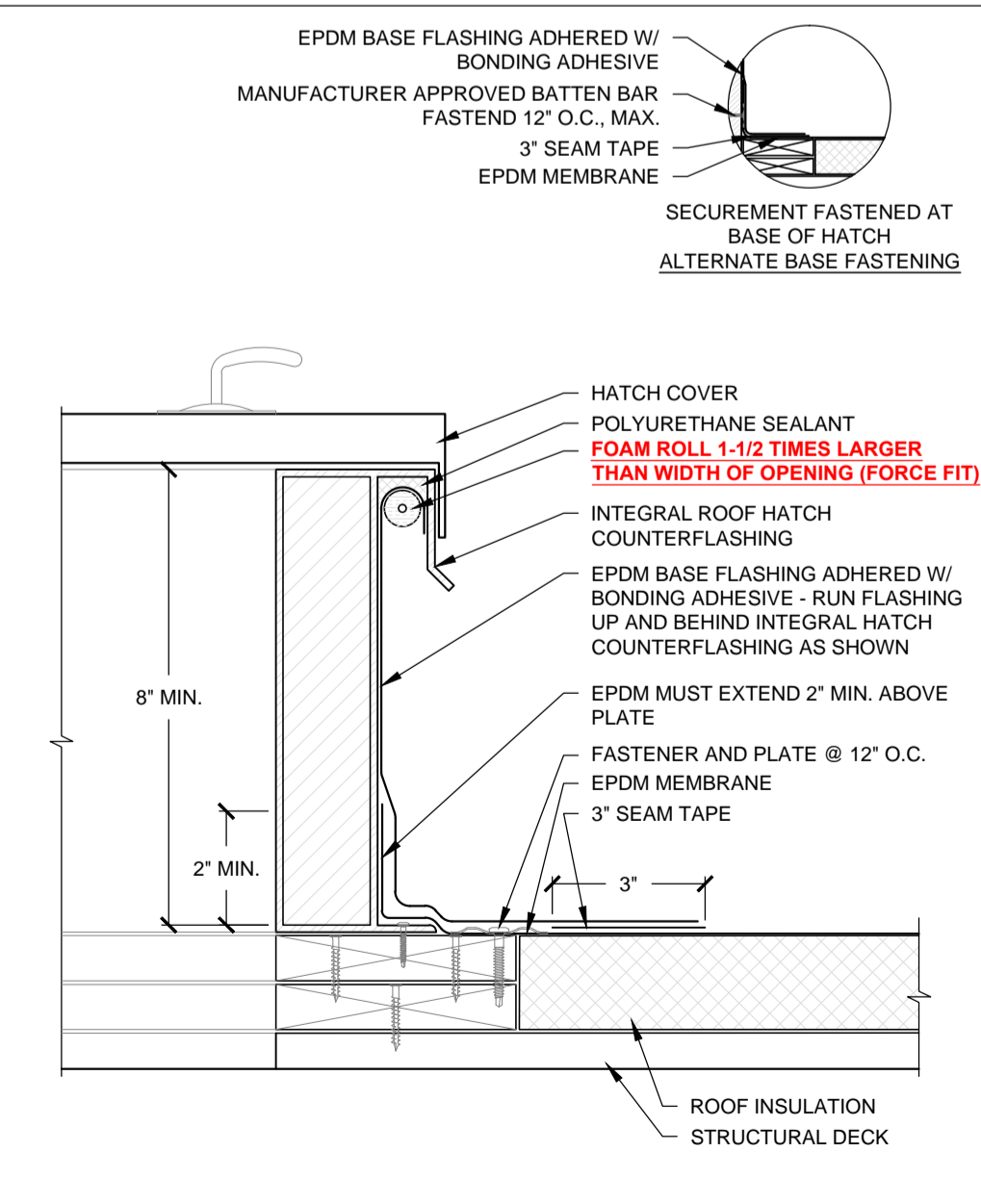
PITCH-PAN POCKET TO NAILER  
 SCALE: N.T.S



ROOF AREA DIVIDER  
 SCALE: N.T.S



BASE FLASHING W/ FASTENER, PLATE AND 3" SEAM TAPE ON NAILABLE DECK  
 SCALE: N.T.S



ROOF HATCH FLASHING  
 SCALE: N.T.S



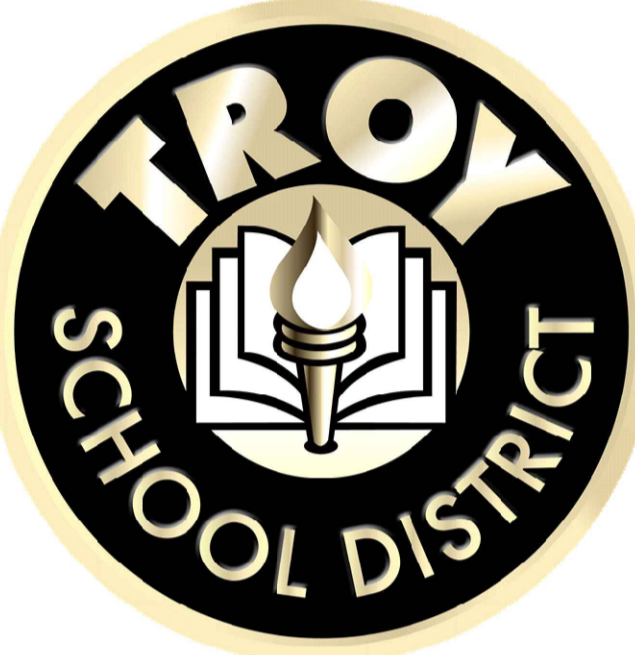


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PROJECT

Troy School District  
BID No. 9910  
2022 Roofing Program

WTProject No: TSD-R102-21

ISSUE

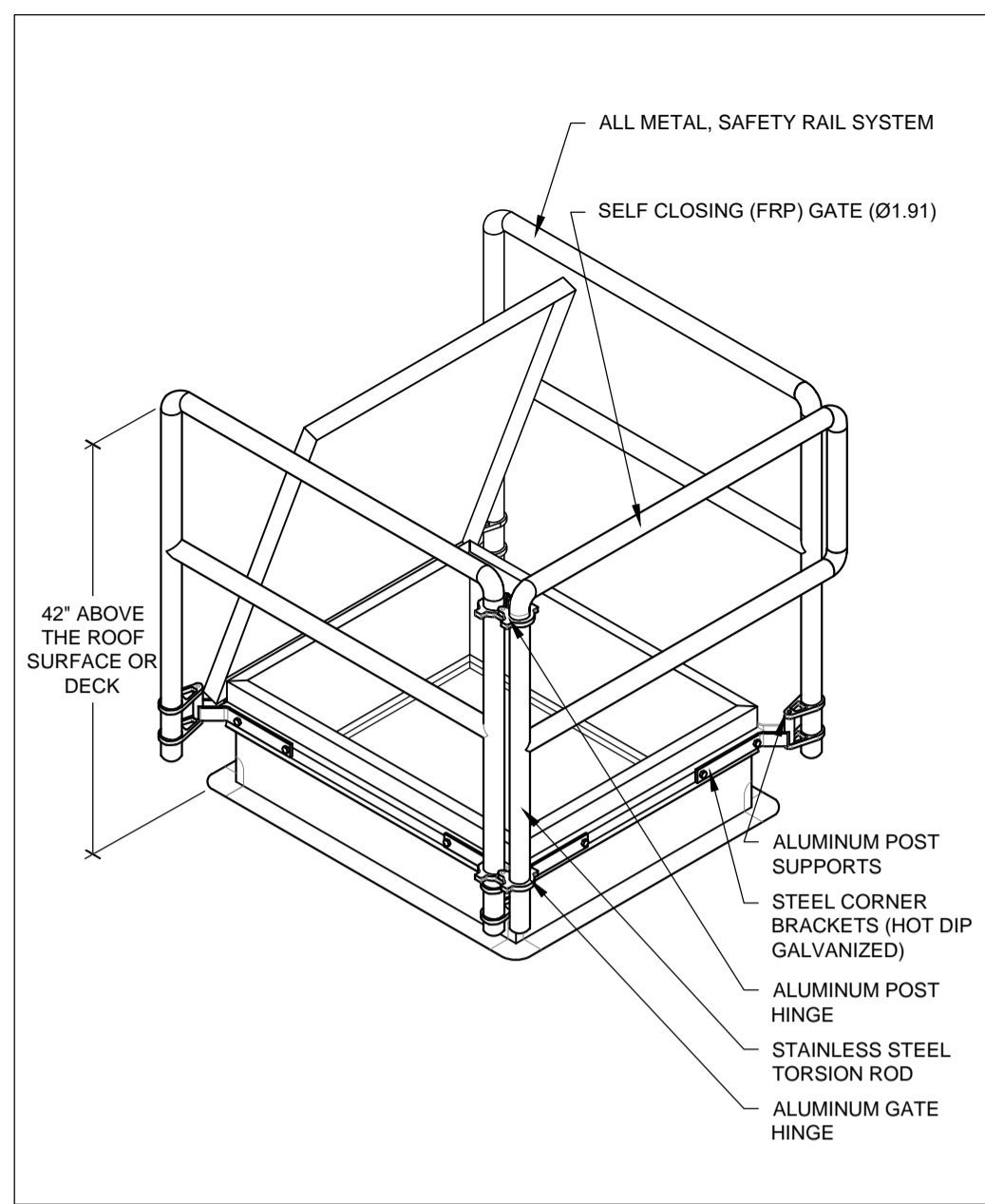
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10/21/2021	Review
10/22/2021	OTB

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Drawn By: MD  
Checked By: PK, AC, AW

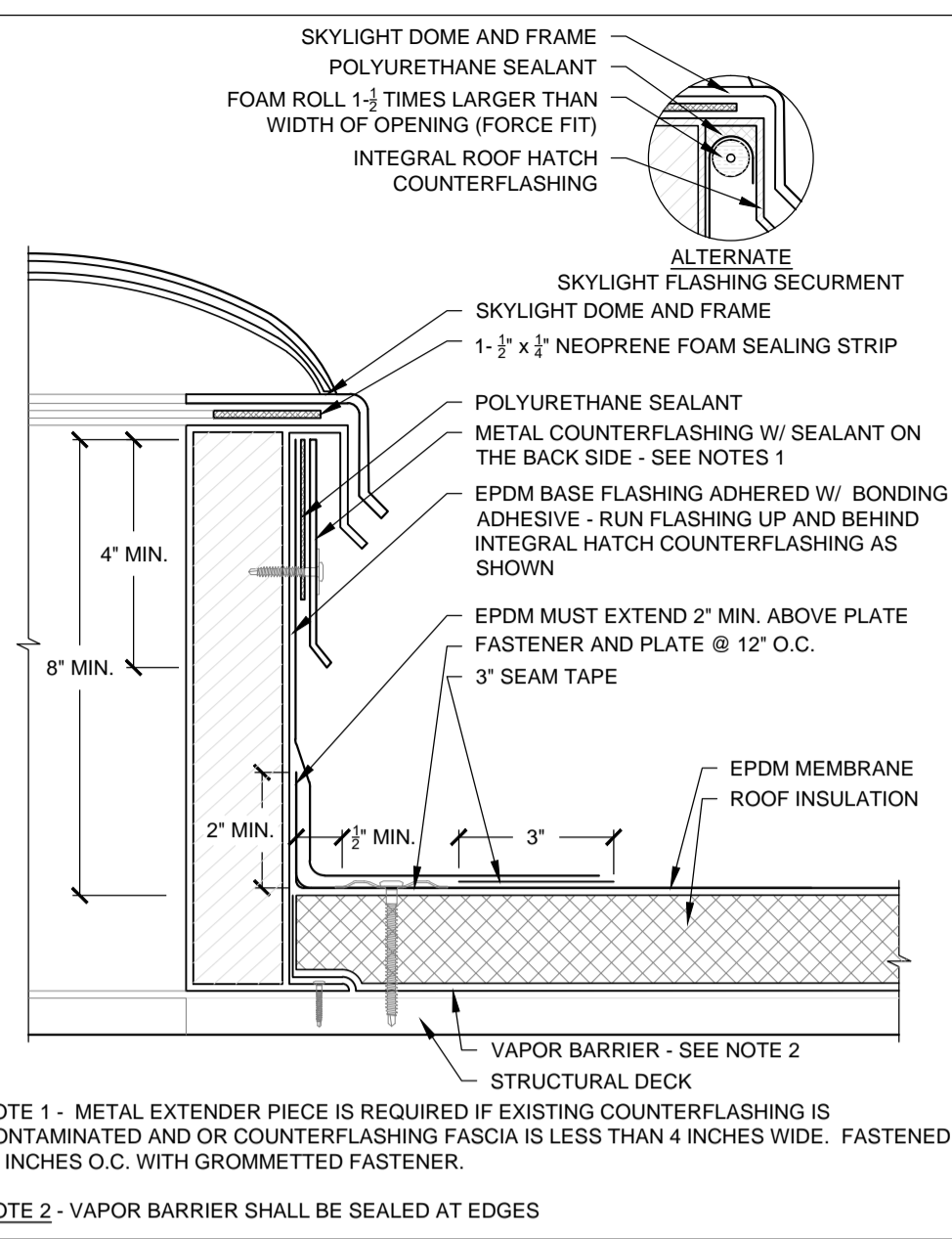
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**SHEET TITLE**  
Detail Sheet

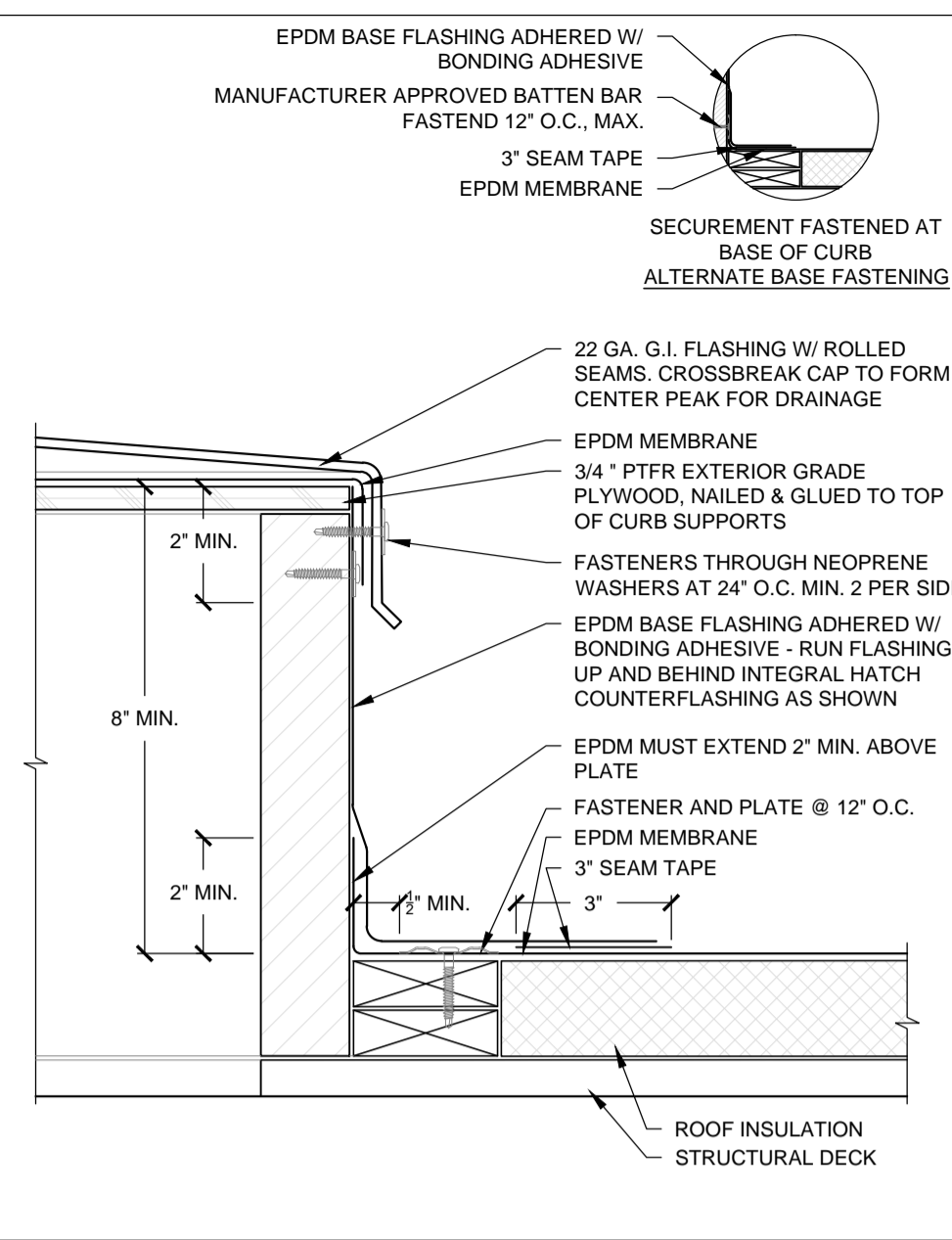
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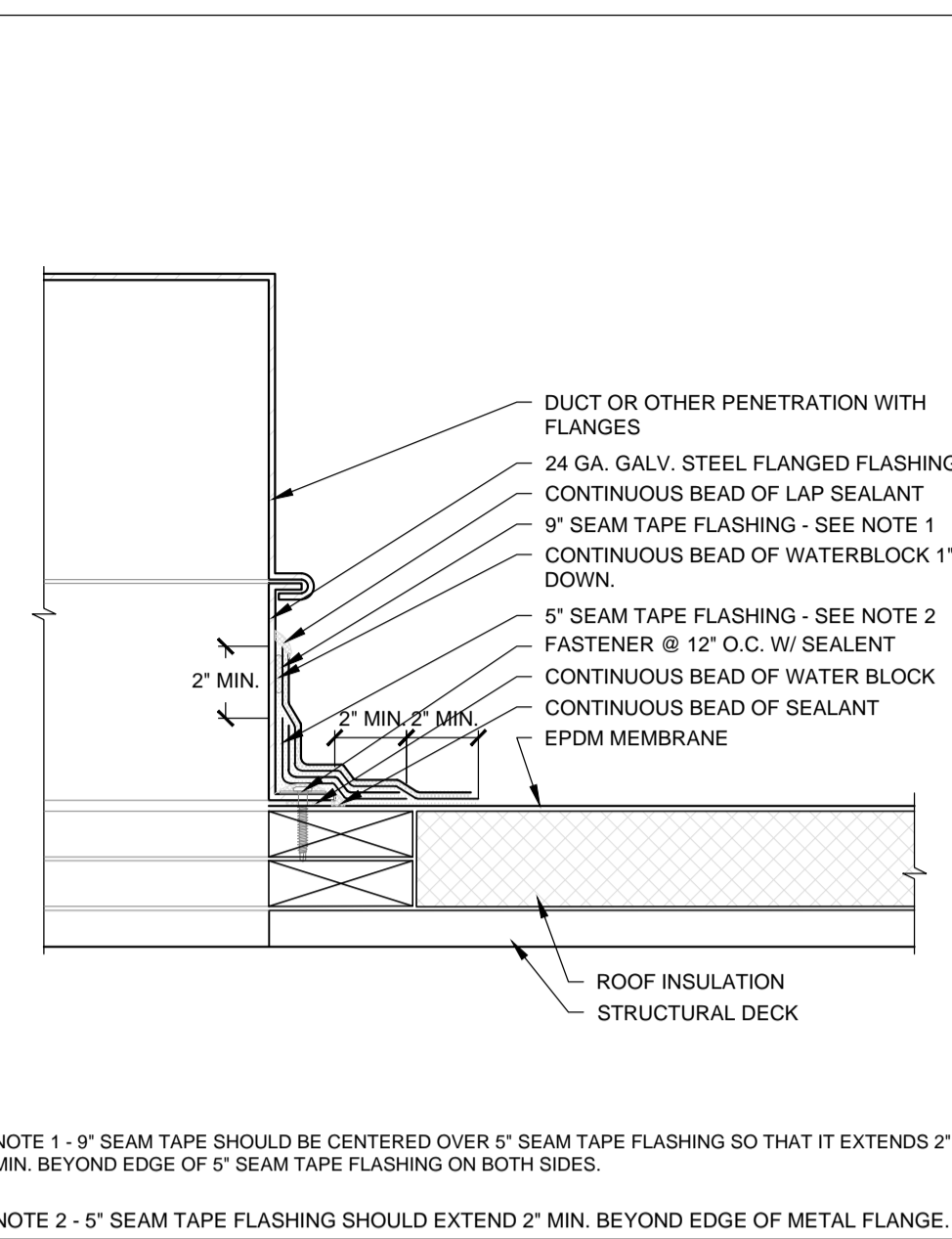
**BILCO BIL-GUARD TYPE SEF HATCH RAIL SYSTEM**  
SCALE: N.T.S. **2.13**



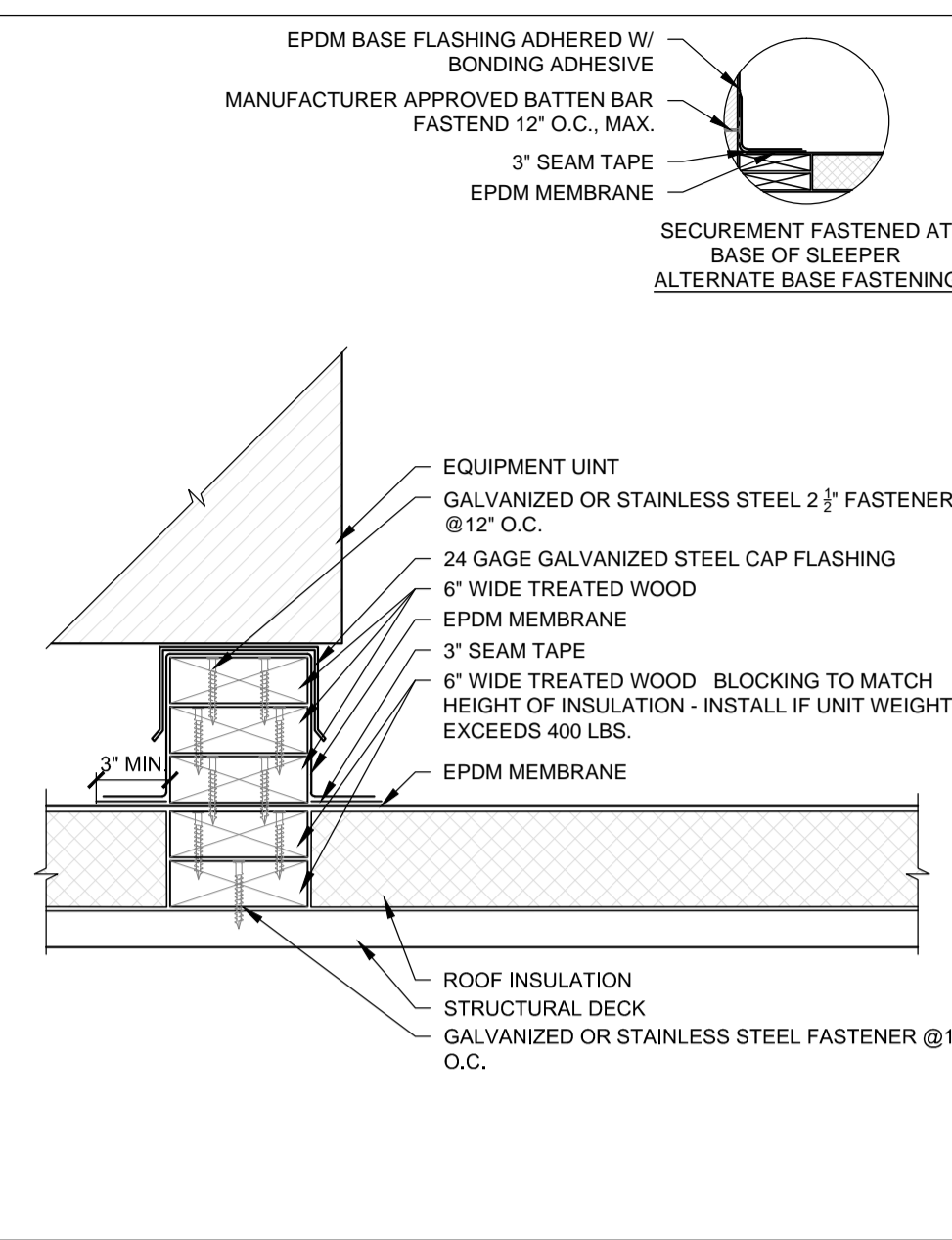
**SKYLIGHT/SMOKE VENT CURB FLASHING**  
SCALE: N.T.S. **2.14**



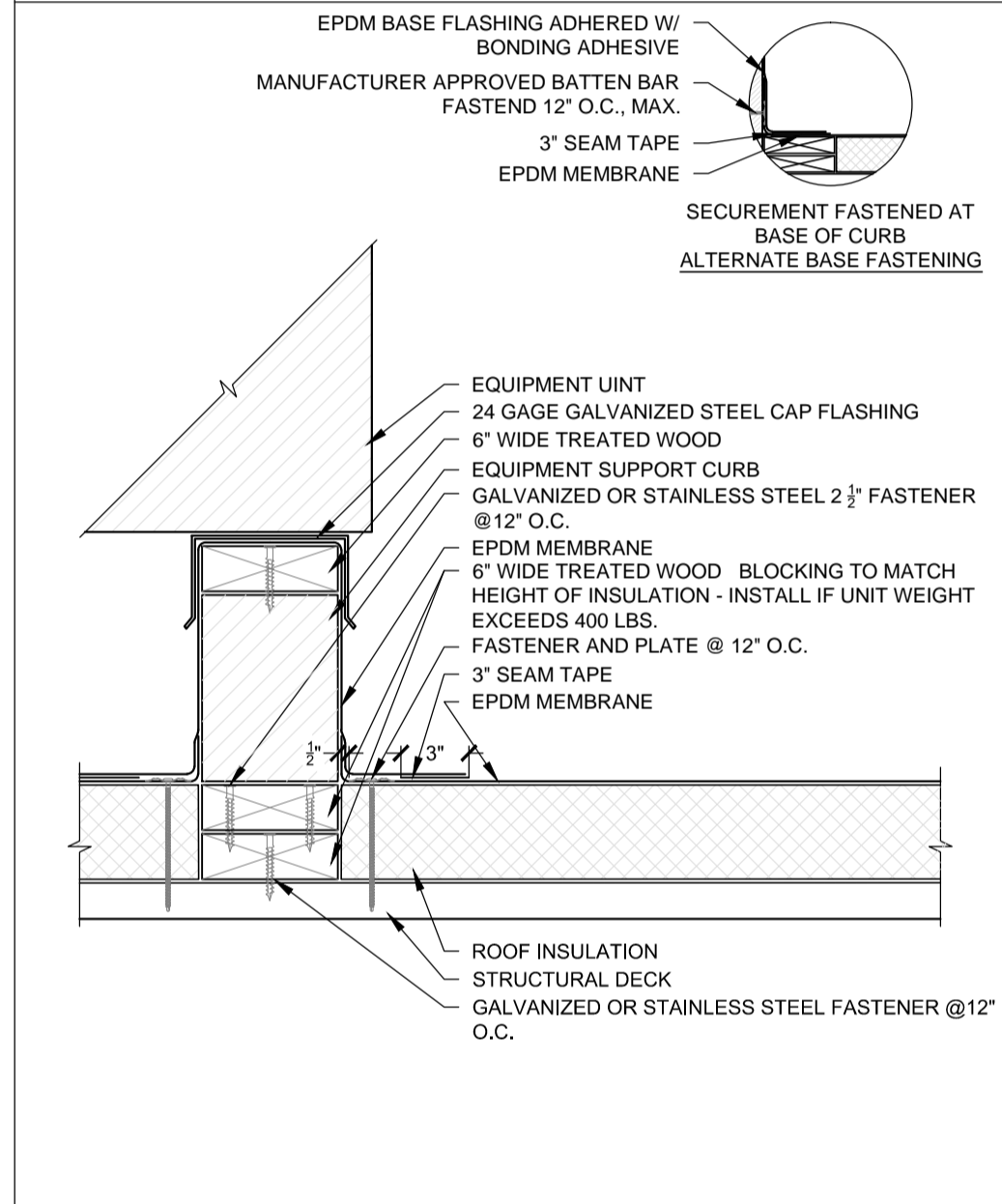
**ABANDONED CURB OPENING**  
SCALE: N.T.S. **2.15**



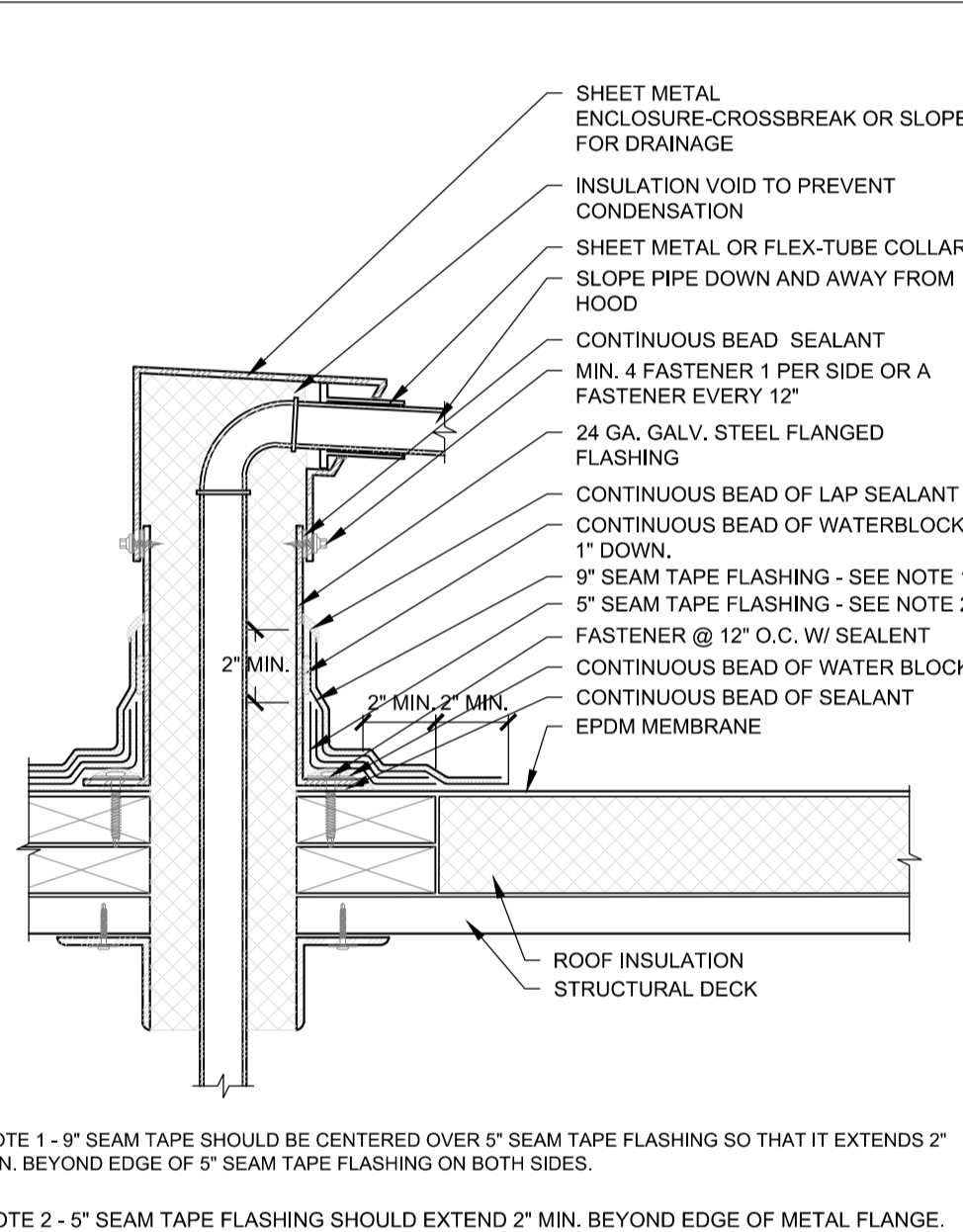
**FLANGED DUCTS FLASHING**  
SCALE: N.T.S. **2.16**



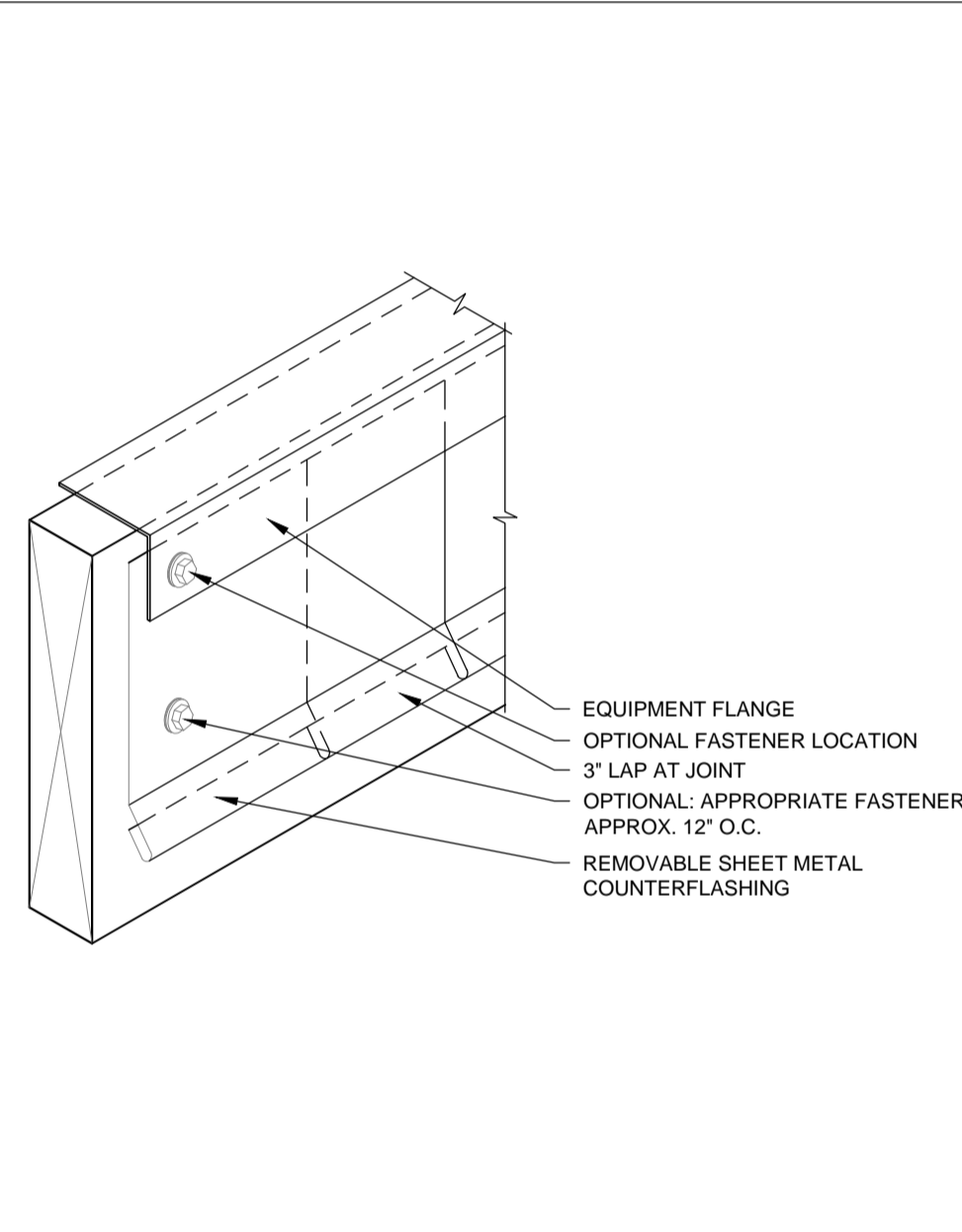
**PROTECTED WOOD SLEEPER**  
SCALE: N.T.S. **2.17**



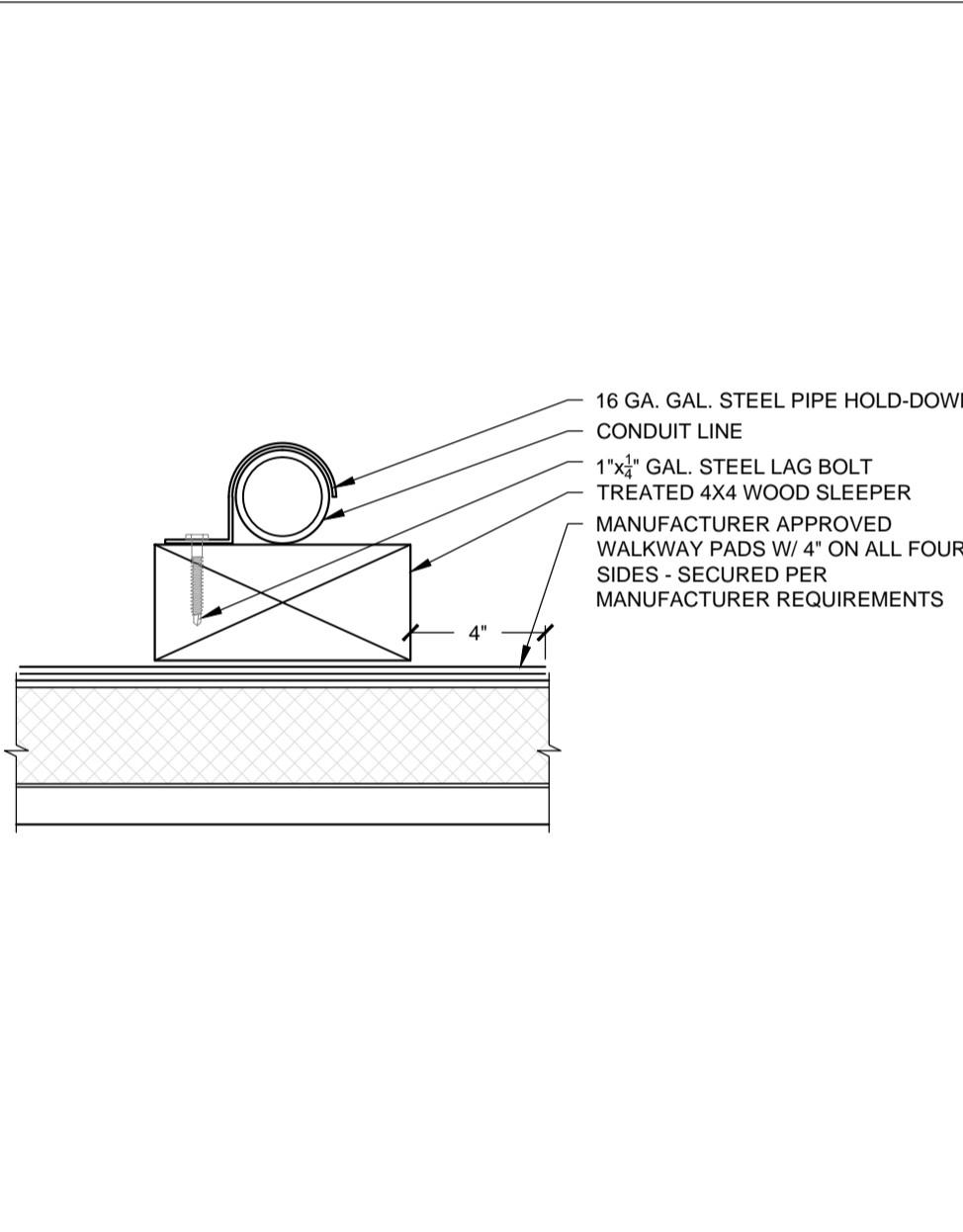
**EQUIPMENT SUPPORT CURB**  
SCALE: N.T.S. **2.18**



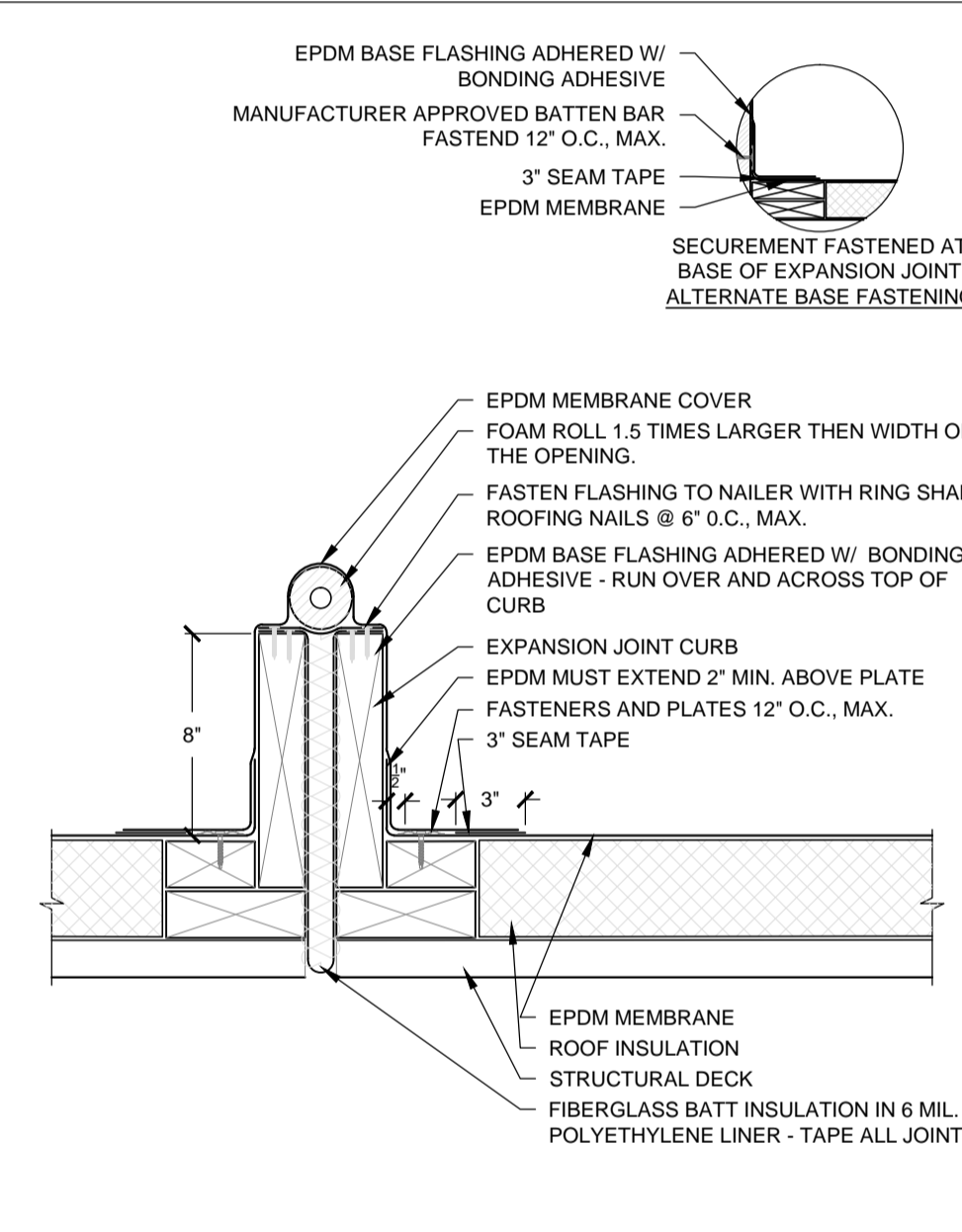
**MULTIPLE PENETRATION CLOSURE BOX**  
SCALE: N.T.S. **3.01**



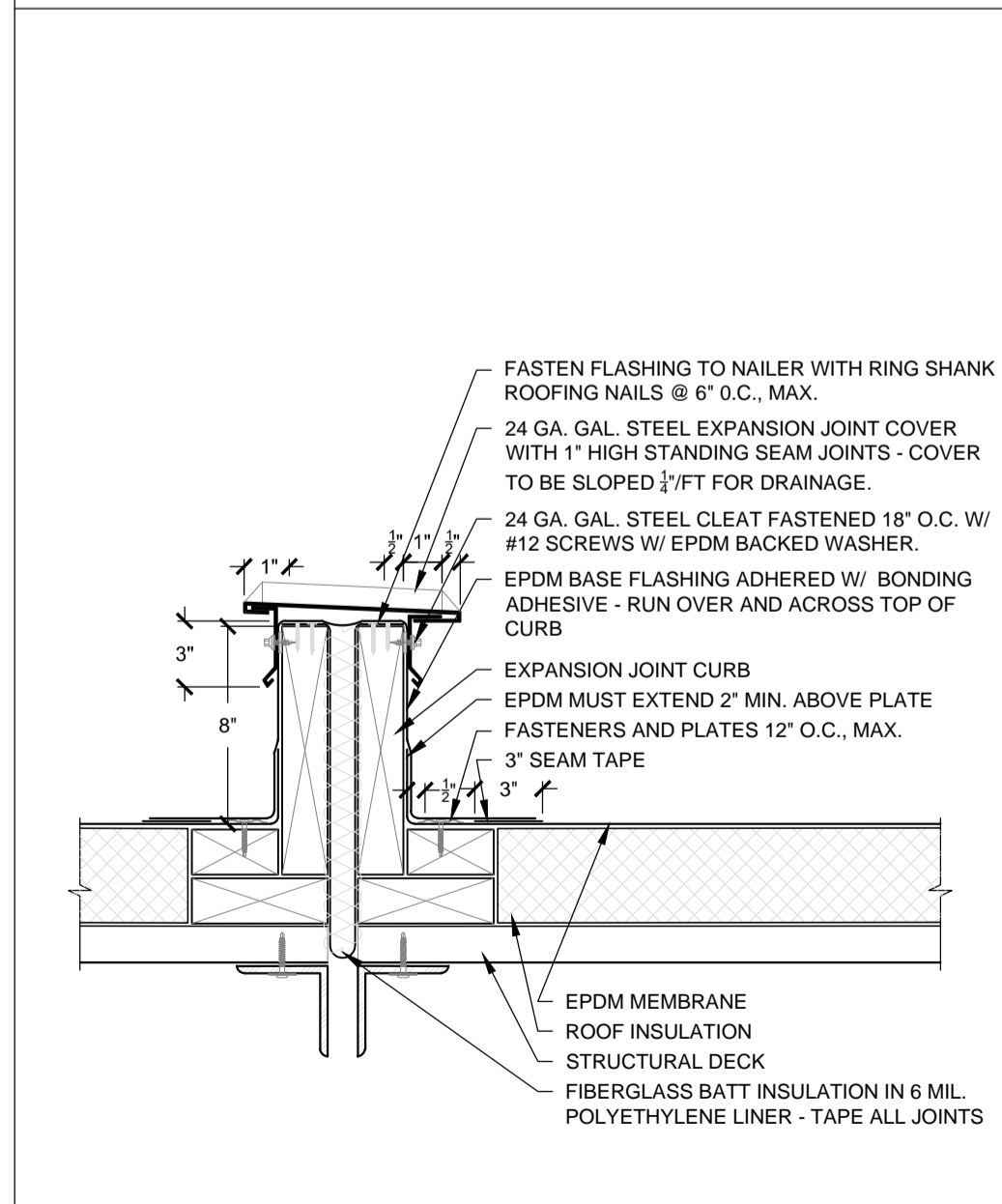
**CURB COUNTERFLASHING (SKIRT FLASHING)**  
SCALE: N.T.S. **3.02**



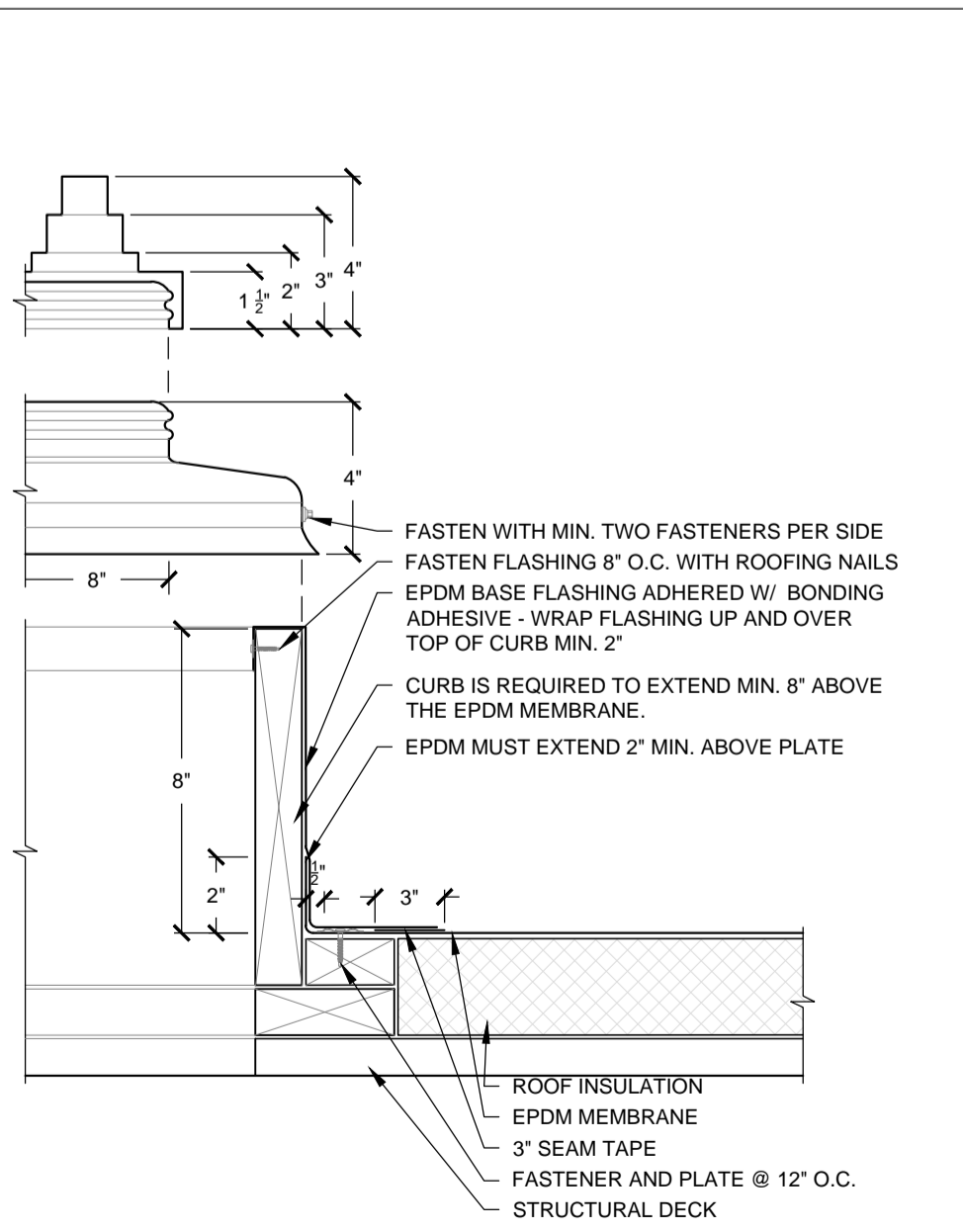
**CONDUIT WOOD SUPPORT BLOCK**  
SCALE: N.T.S. **3.03**



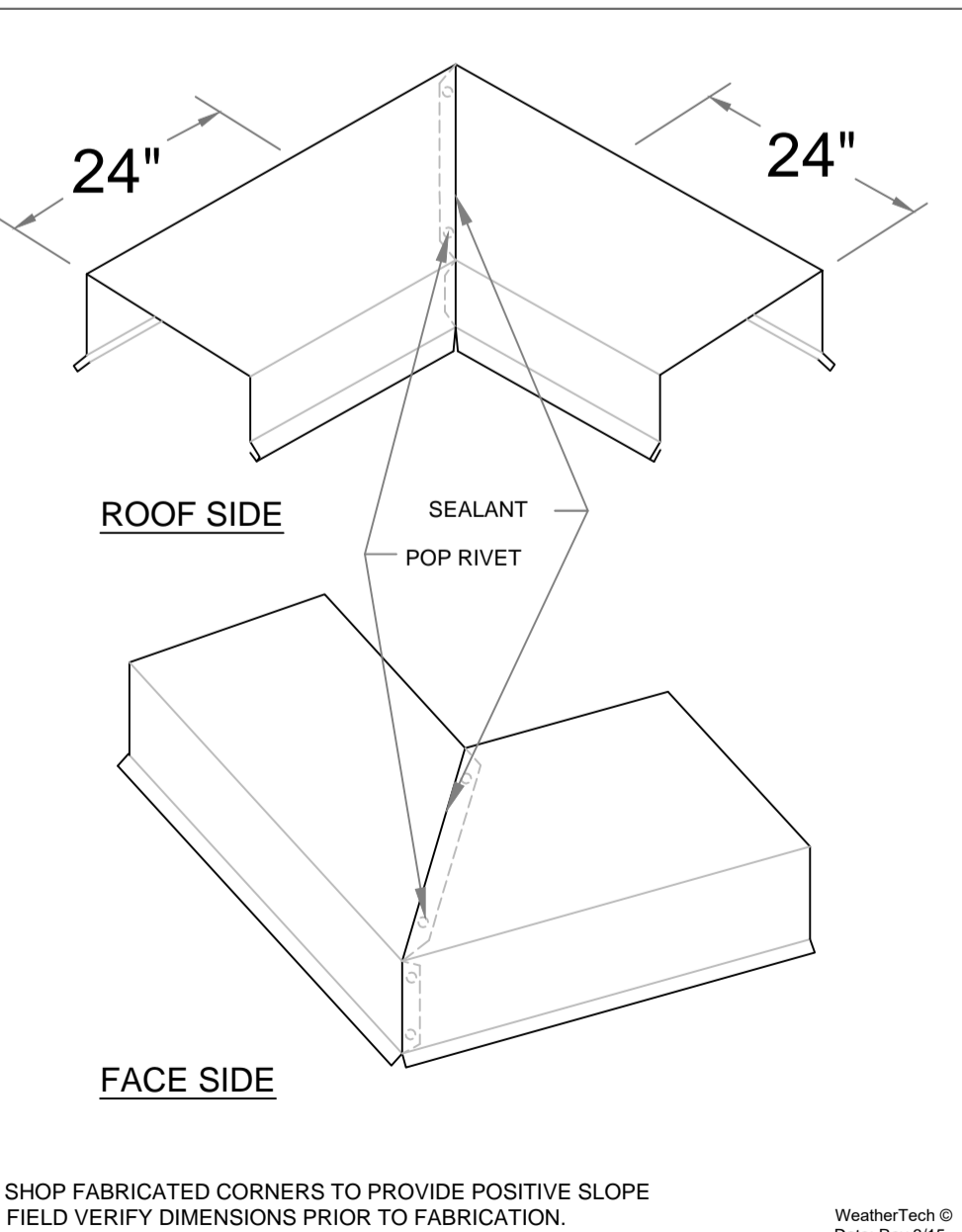
**CURB MOUNTED EXPANSION JOINT**  
SCALE: N.T.S. **3.04**



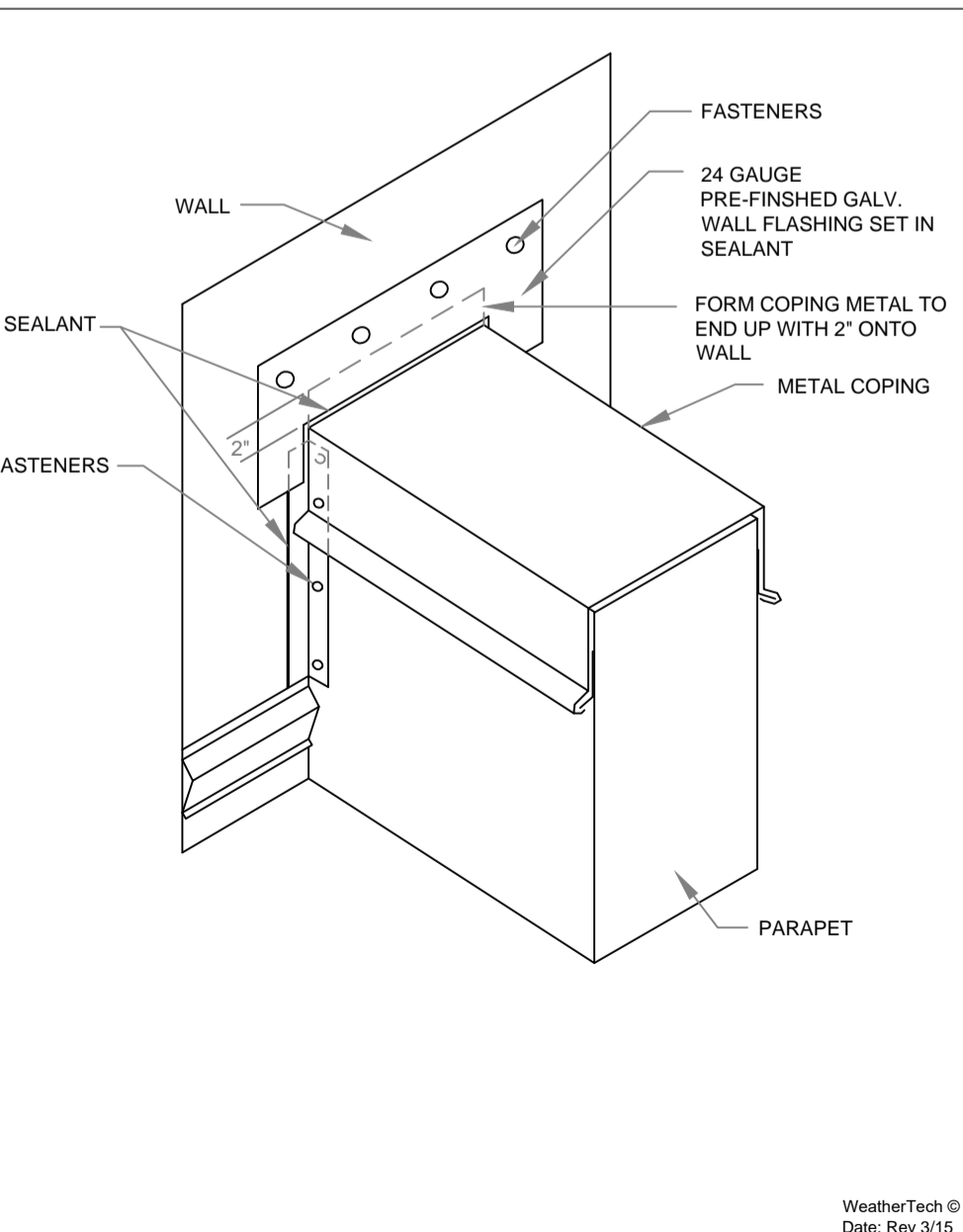
**CURB MOUNTED EXPANSION JOINT @ NEW CURB**  
SCALE: N.T.S. **3.05**



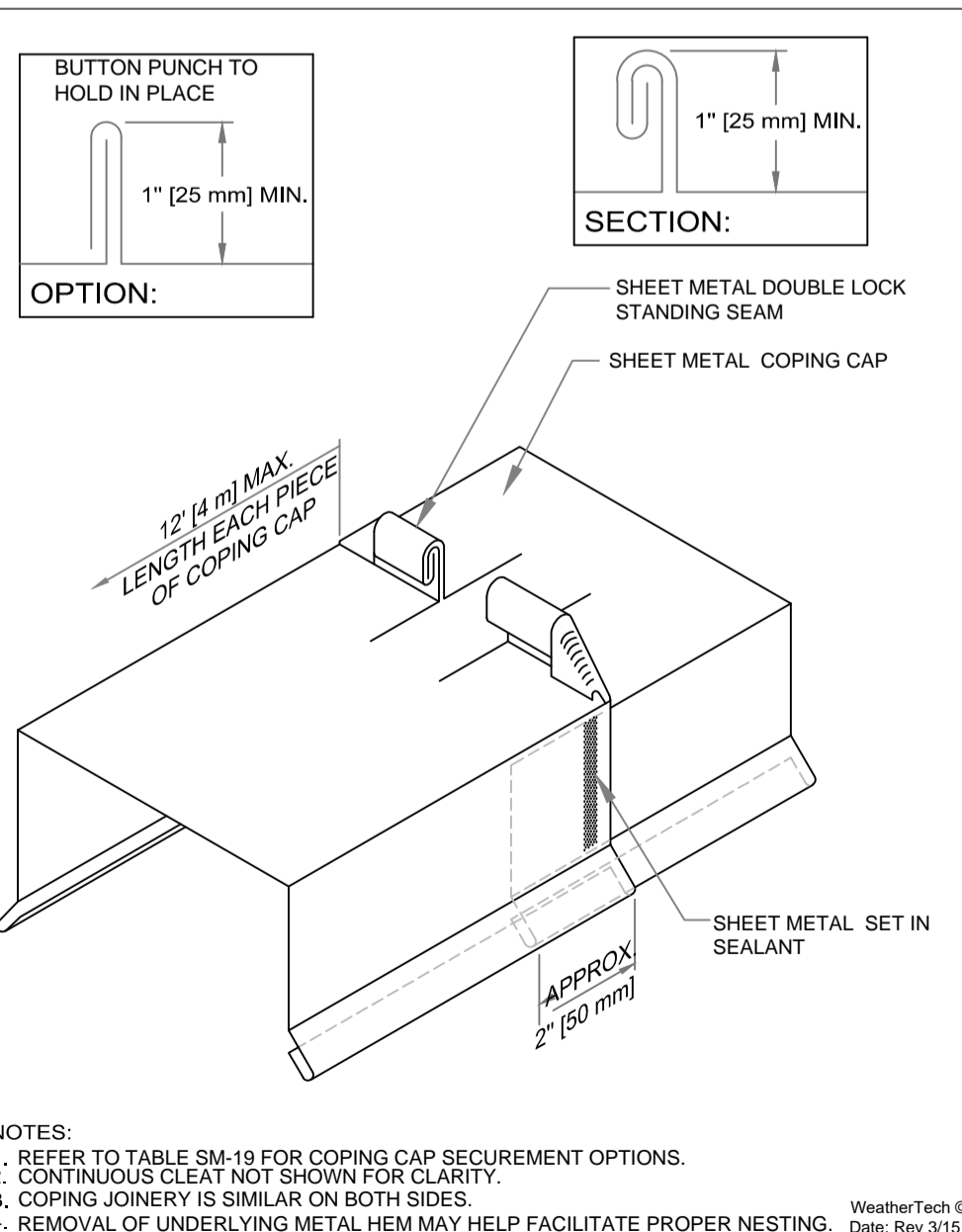
**PORTALS PLUS CONDUIT/PIPE FLASHING CURB AND COVER**  
SCALE: N.T.S. **3.06**



**PARAPET COPING CAP CORNERS**  
SCALE: N.T.S. **3.07**



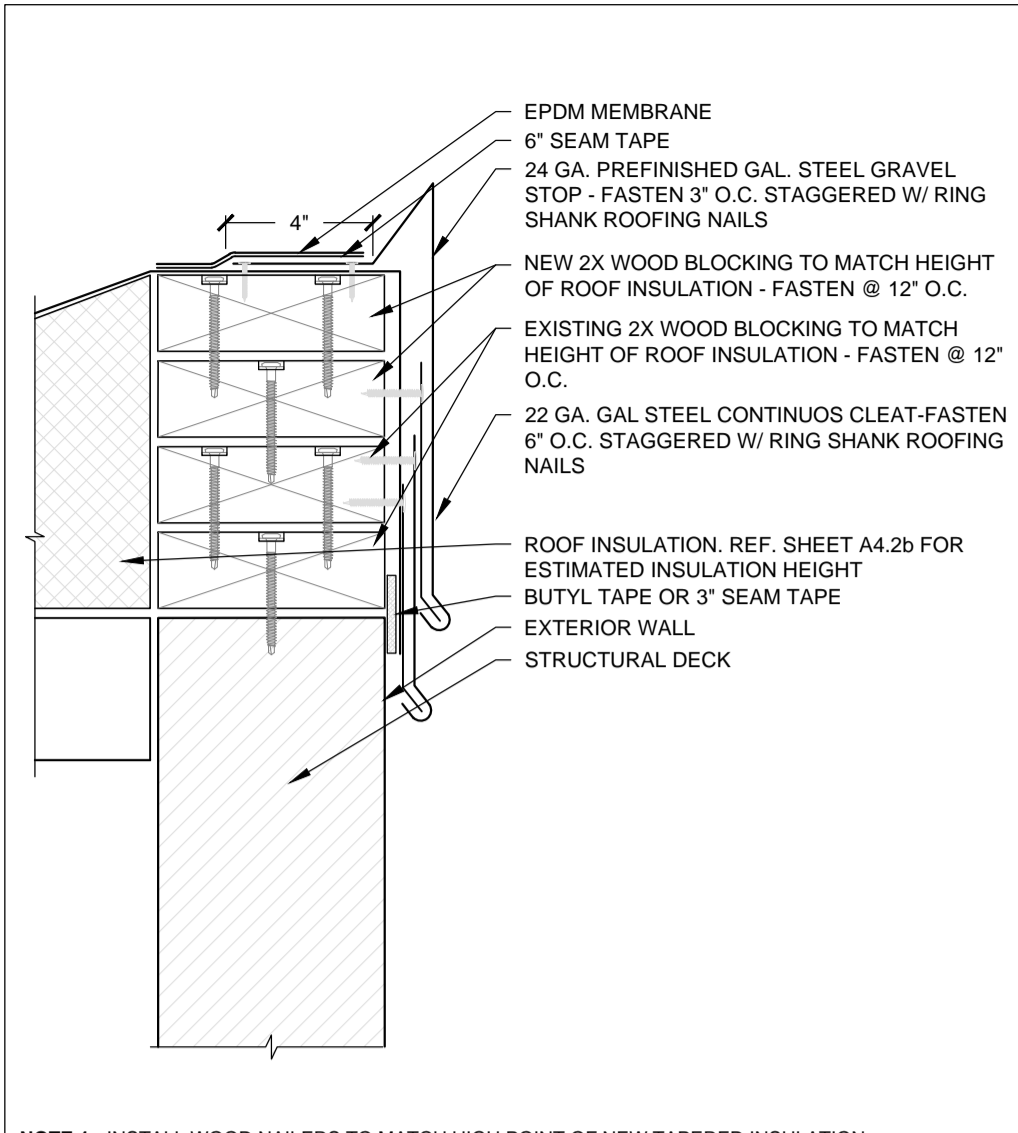
**WALL TERMINATION**  
SCALE: N.T.S. **3.08**



**COPING CAP W/ DOUBLE LOCK STANDING SEAM**  
SCALE: N.T.S. **3.09**

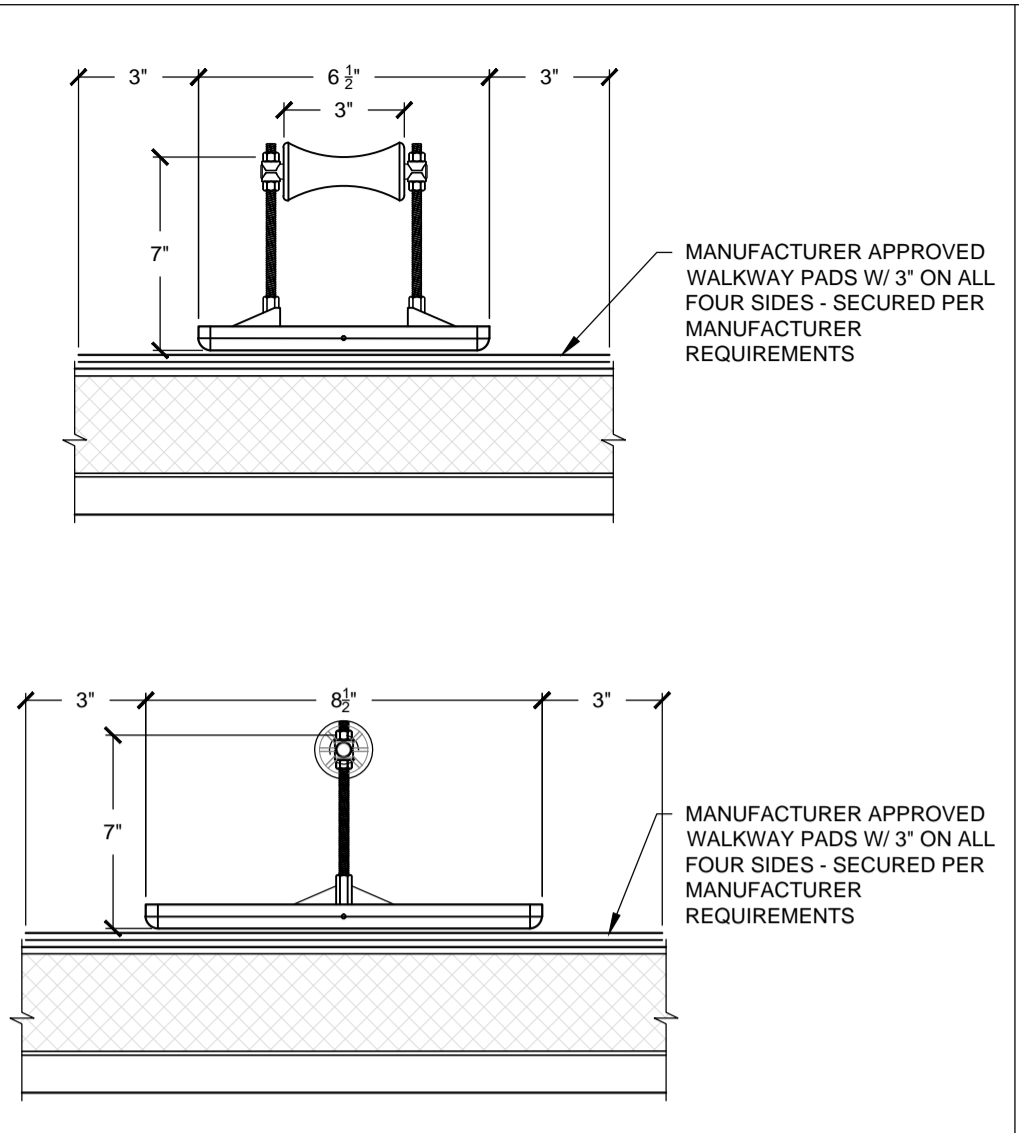
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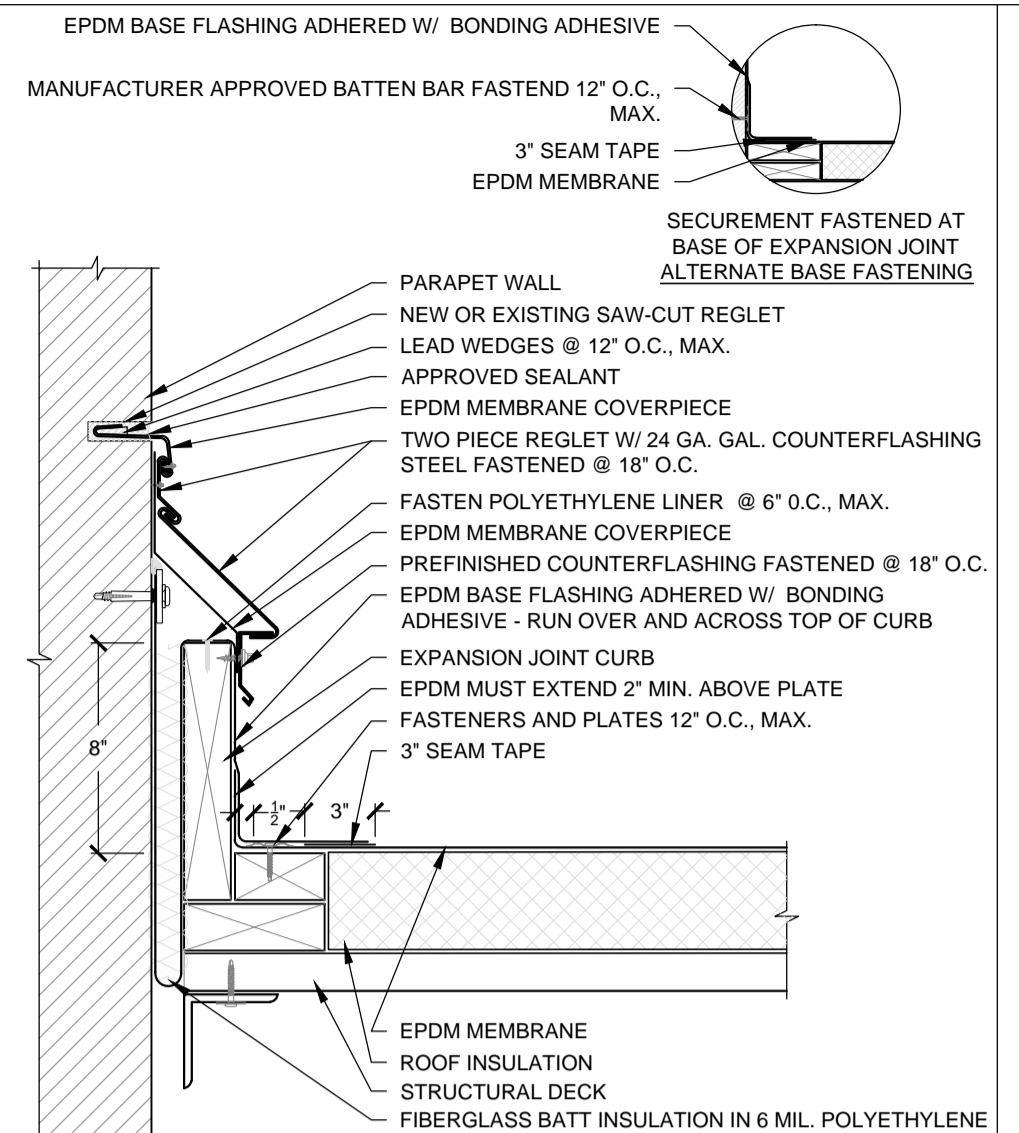
**NOTE 1** - INSTALL WOOD NAILERS TO MATCH HIGH POINT OF NEW TAPERED INSULATION.  
**NOTE 2** - PROVIDE UNIFORM HEIGHT AT EACH ELEVATION.

**3.10** RAISED EDGE METAL AND FLASHING W/ EXTENDED GRAVEL STOP  
SCALE: N.T.S



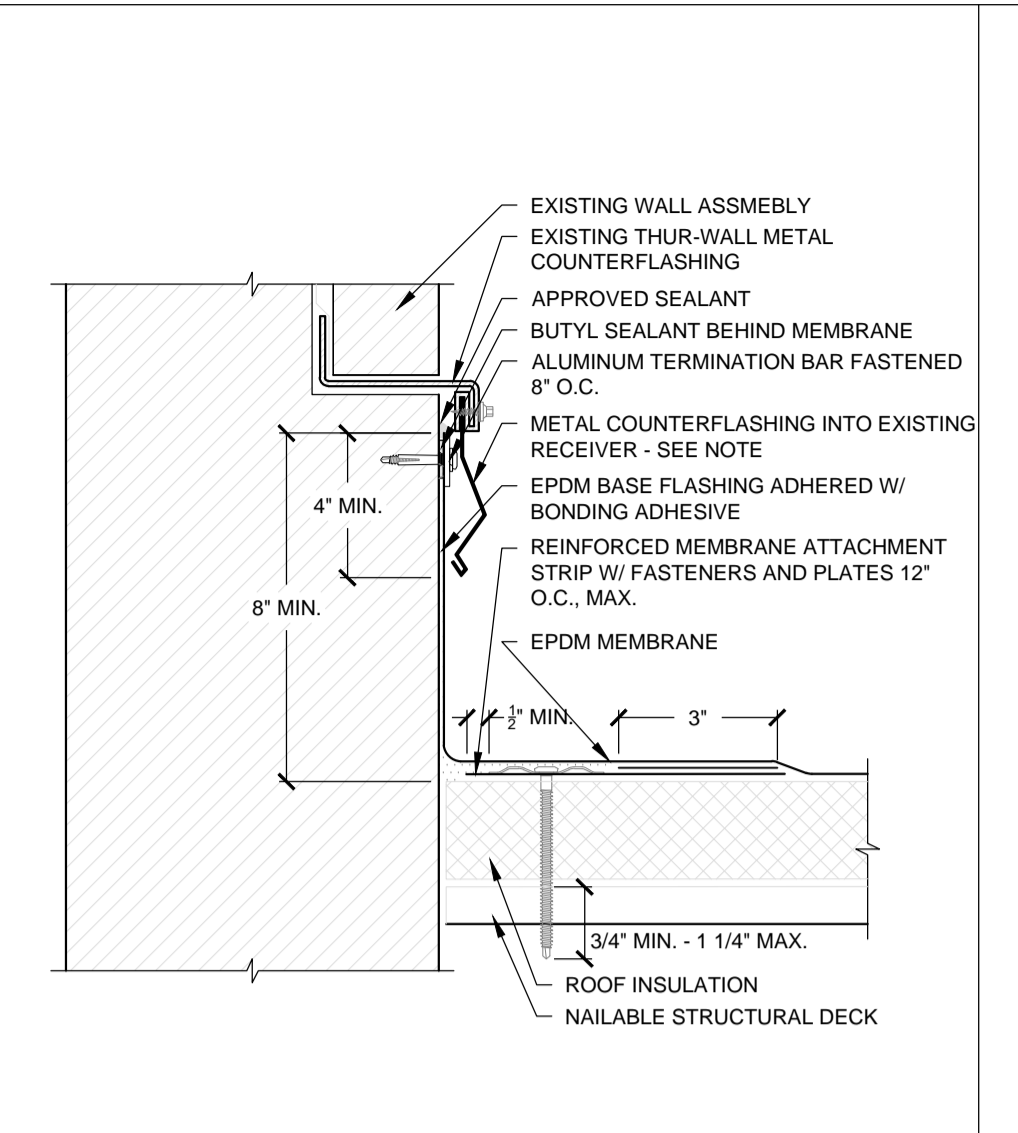
**NOTE 1** - SCUPPER FABRICATED FROM 22 GA. STAINLESS STEEL.  
**NOTE 2** - SOILD SOLDER ALL LAPS AND CORNER INSERTS TO FROM ONE CONTINUOUS PIECE.  
**NOTE 3** - DIMENSIONS NOT GIVEN ARE TO BE VARIFIED IN THE FIELD.

**3.11** GAS LINE SUPPORT  
SCALE: N.T.S



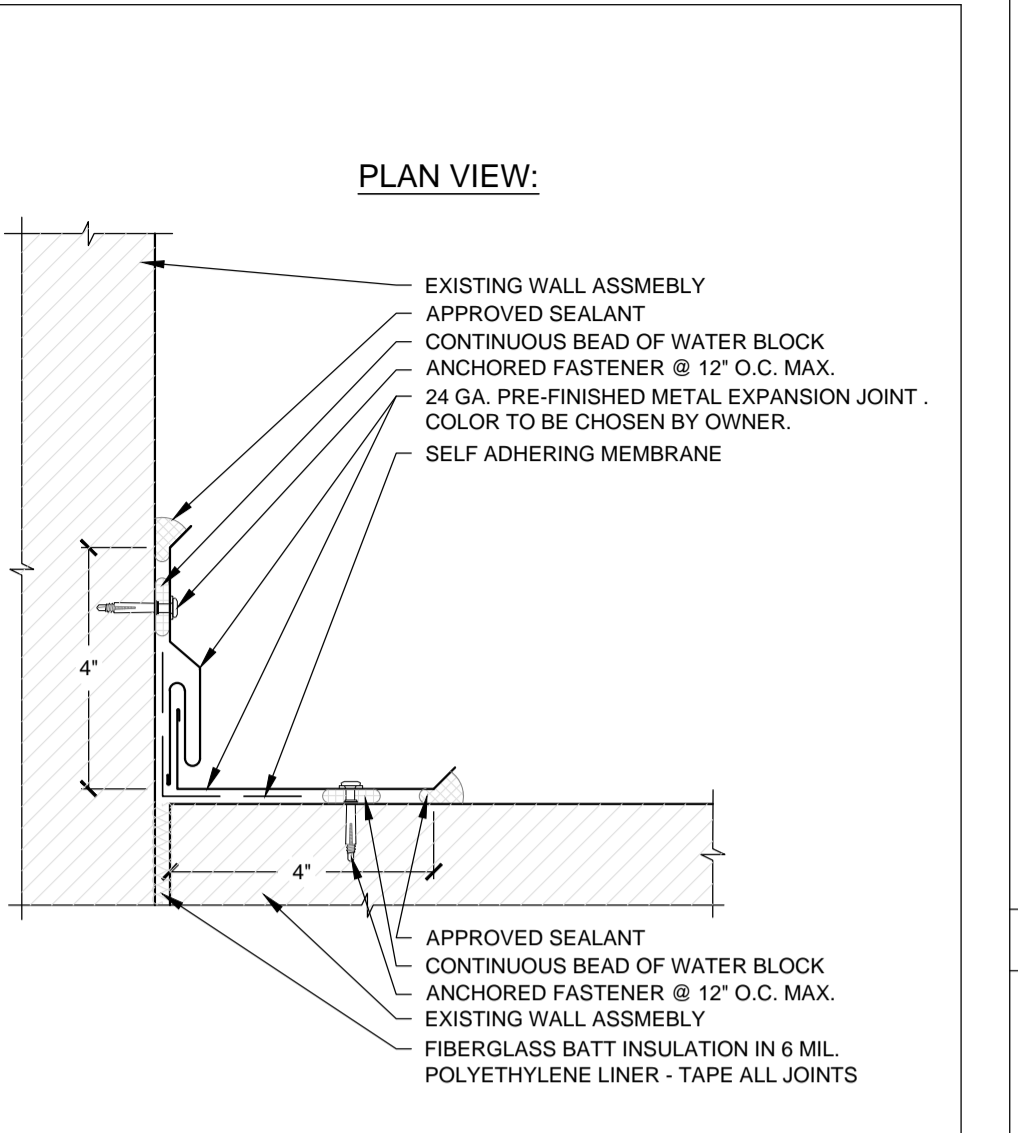
**NOTE 1** - COUNTERFLASHING TO BE 24 GAGE GALVANIZED STEEL, 26 GAGE STAINLESS STEEL OR 16 O.Z. COLD ROLLED COPPER AND SHALL MATCH EXISTING TYPE OF THROUGH-WALL REGLET METAL. SECURE NEW COUNTERFLASHING TO EXISTING REGLET WITH POP RIVETS OF SAME TYPE OF METAL @ 12\"/>

**3.12** ROOF TO WALL EXPANSION JOINT  
SCALE: N.T.S



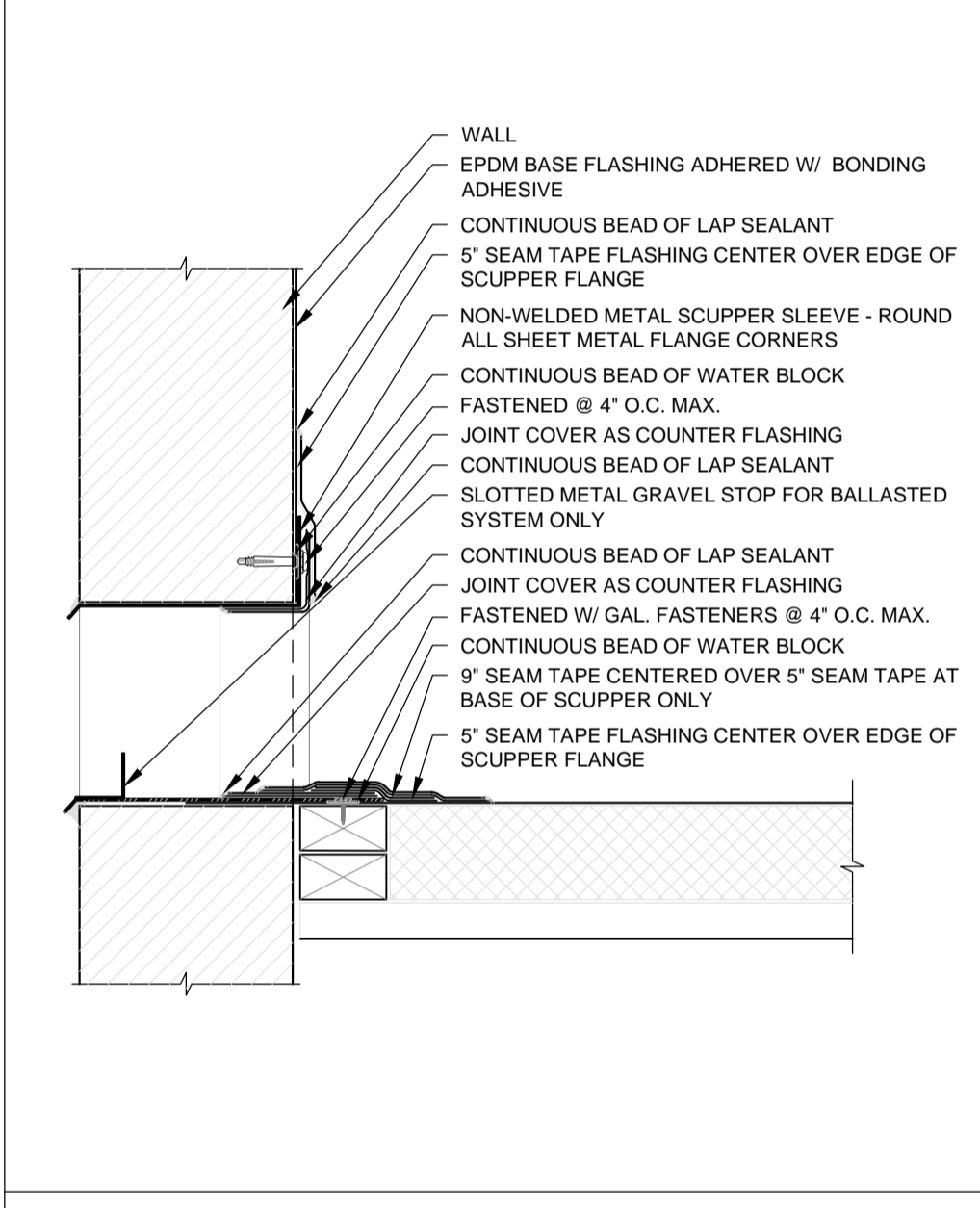
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**3.13** BASE FLASHING W/ THRU WALL ON NAILABLE DECK  
SCALE: N.T.S

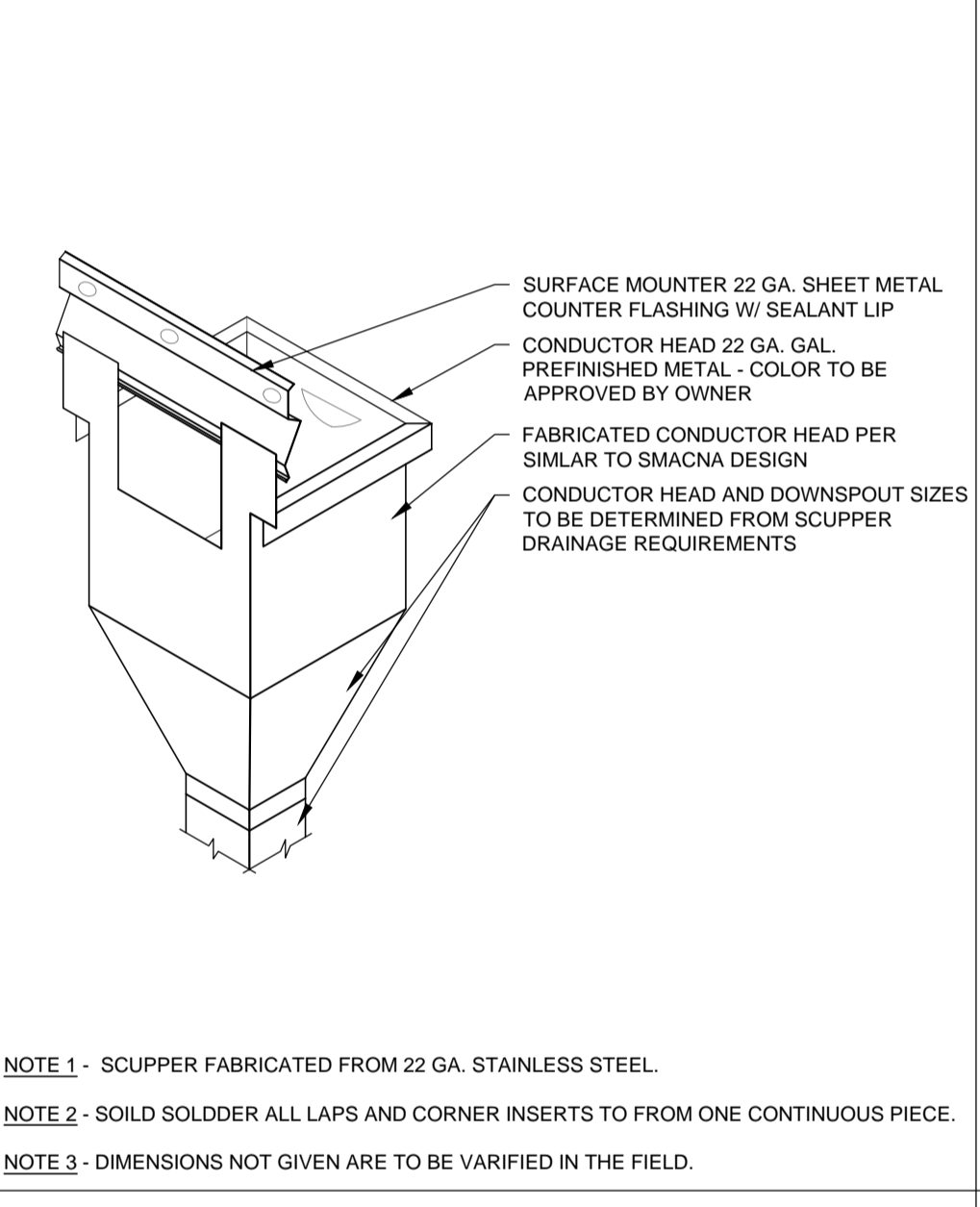


**NOTE 1** - SCUPPER FABRICATED FROM 22 GA. STAINLESS STEEL.  
**NOTE 2** - SOILD SOLDER ALL LAPS AND CORNER INSERTS TO FROM ONE CONTINUOUS PIECE.  
**NOTE 3** - DIMENSIONS NOT GIVEN ARE TO BE VARIFIED IN THE FIELD.

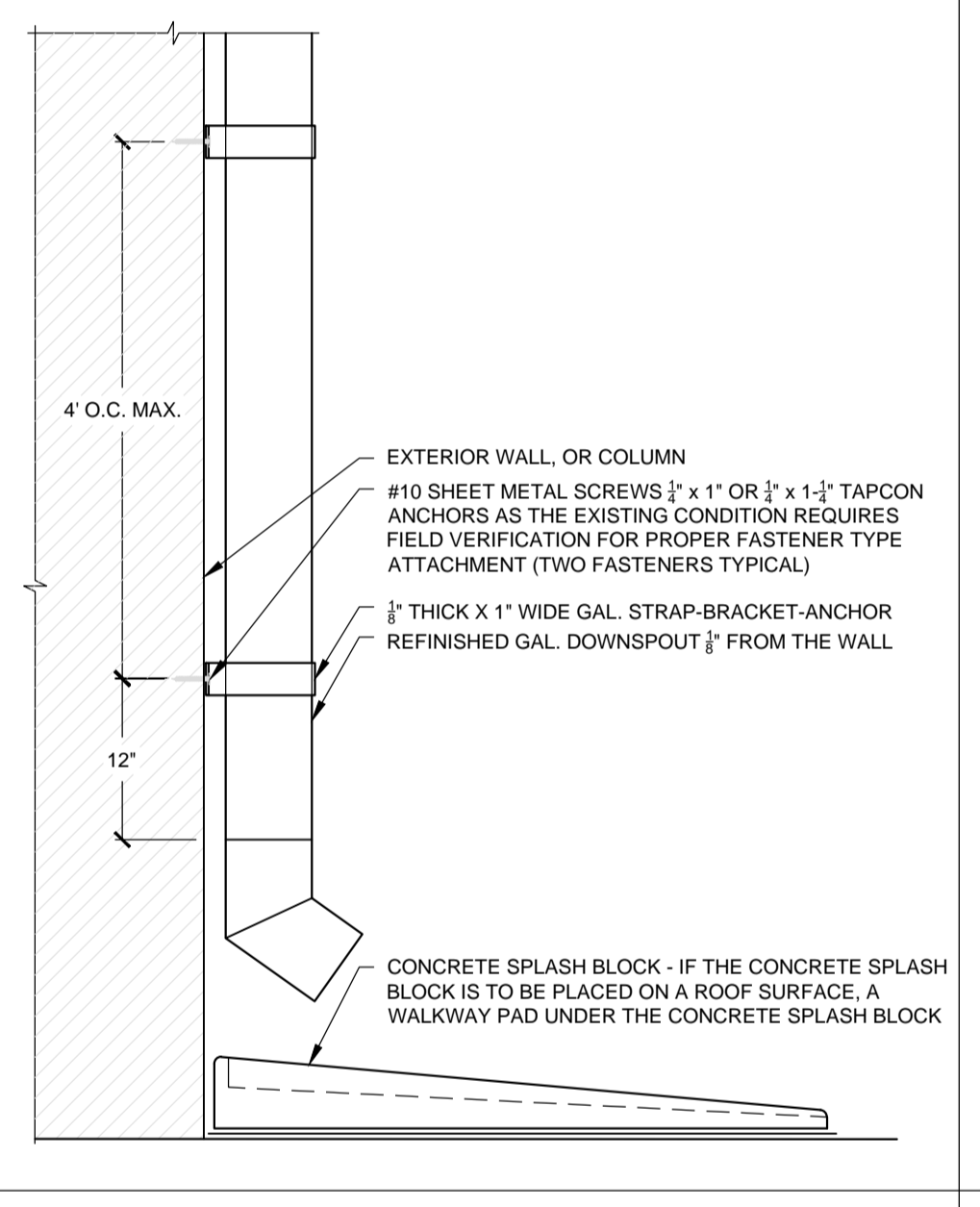
**3.14** WALL TO WALL VERTICAL EXPANSION JOINT  
SCALE: N.T.S



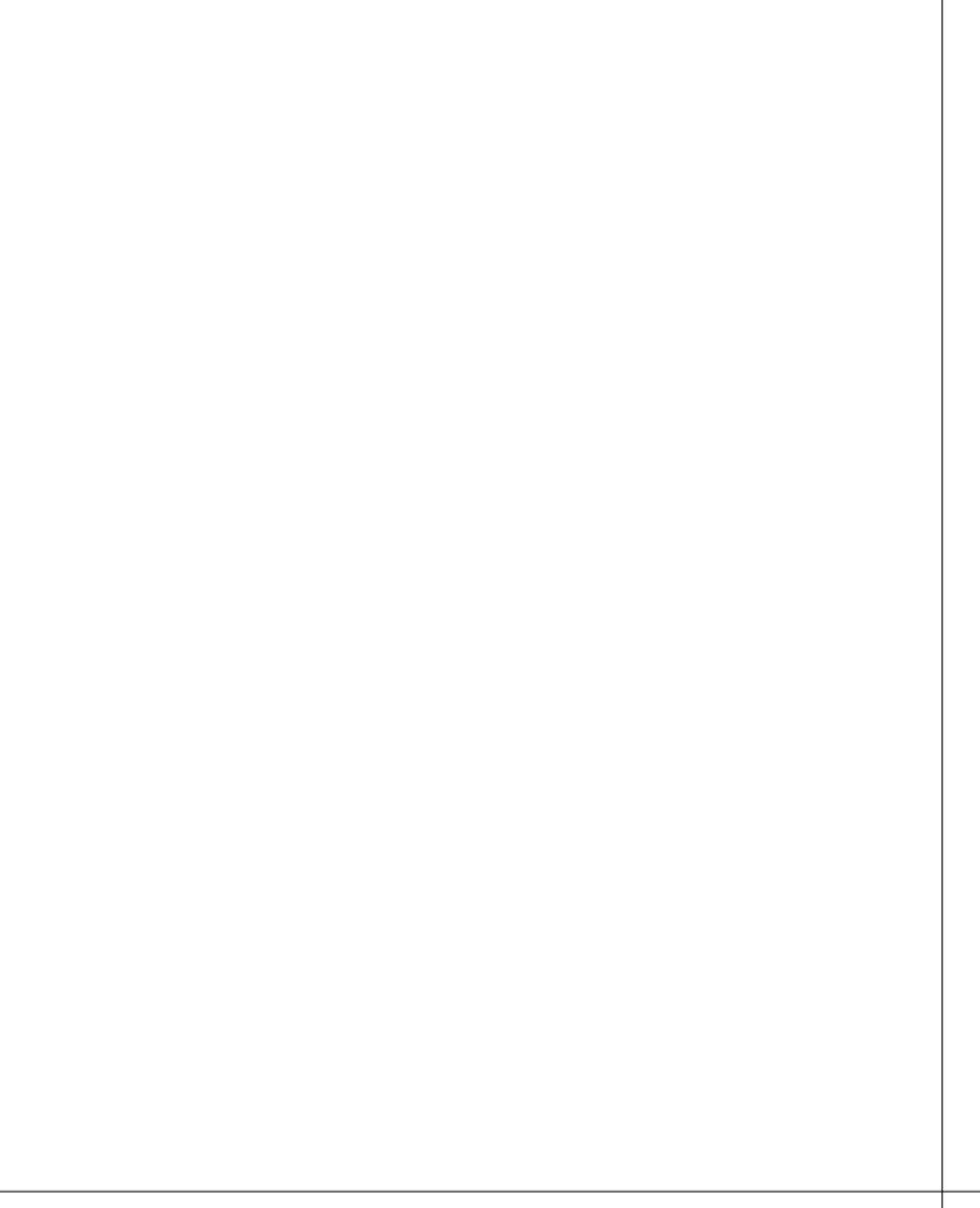
**3.15** THRU-WALL SCUPPER  
SCALE: N.T.S



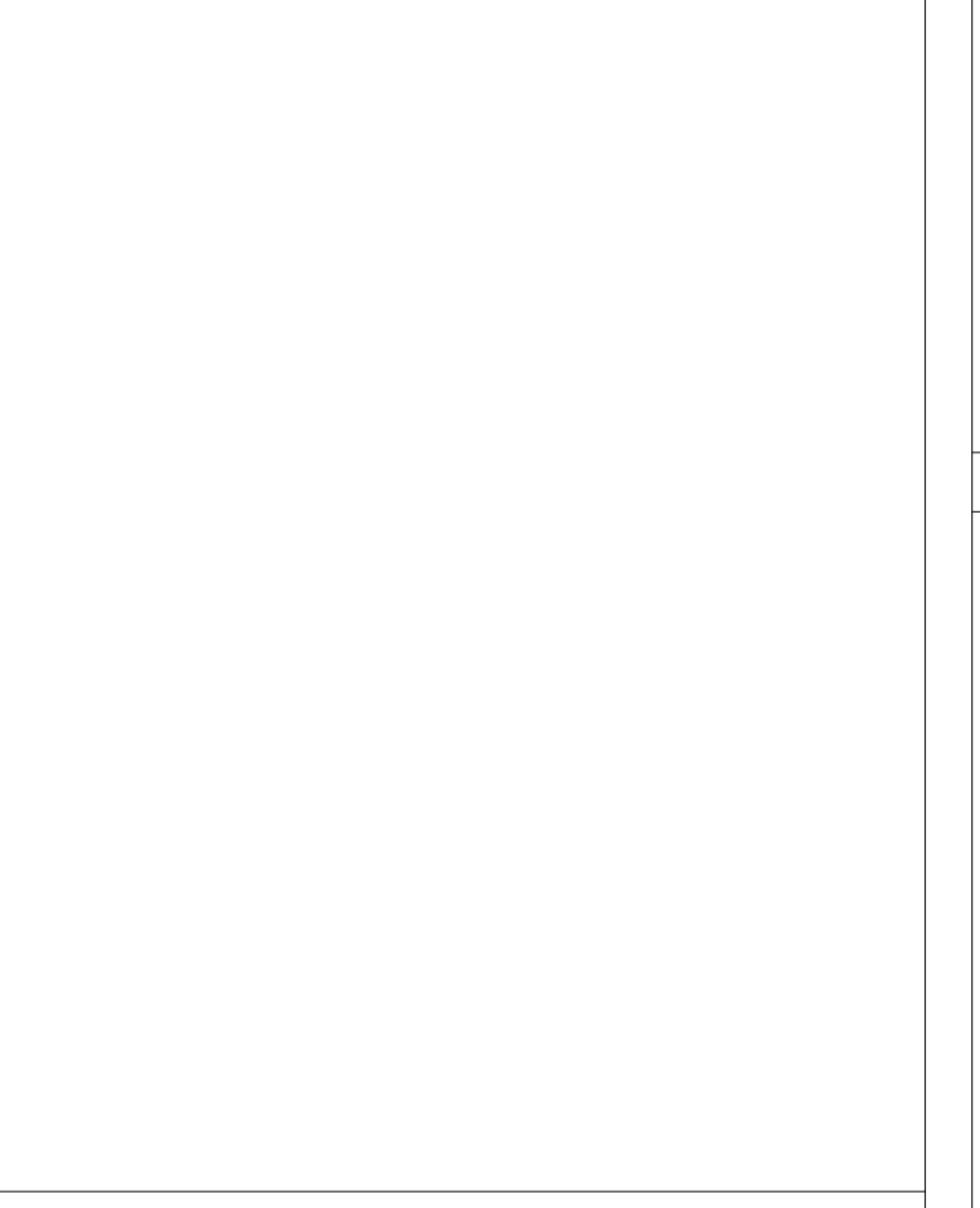
**3.16** SCUPPER CONDUCTOR HEAD  
SCALE: N.T.S



**3.17** DOWNSPOUT AND SPLASH BLOCK  
SCALE: N.T.S



**3.18** [Blank Diagram]



**3.19** [Blank Diagram]

PROFESSIONAL



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PROJECT

Troy School District  
 BID No. 9910  
 2022 Roofing Program

WTProject No: TSD-R102-21

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 Detail Sheet

**A5.3**

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