



AVERY'S CREEK ELEMENTARY

PARTIAL ROOF REPLACEMENT PHASE 2

BUNCOMBE COUNTY SCHOOLS
 15 PARK SOUTH ROAD
 ARDEN, NC 28704

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ENGINEER STATE LICENSE SEAL

PROJECT NAME AND ADDRESS:

BUNCOMBE COUNTY SCHOOLS
 AVERY'S CREEK ELEMENTARY
 PARTIAL ROOF REPLACEMENT PHASE 2
 15 PARK SOUTH ROAD
 ARDEN, NC 28704

ISSUE DATE:
 03.19.2020

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ADDENDUM:
 No. DATE DESCRIPTION:

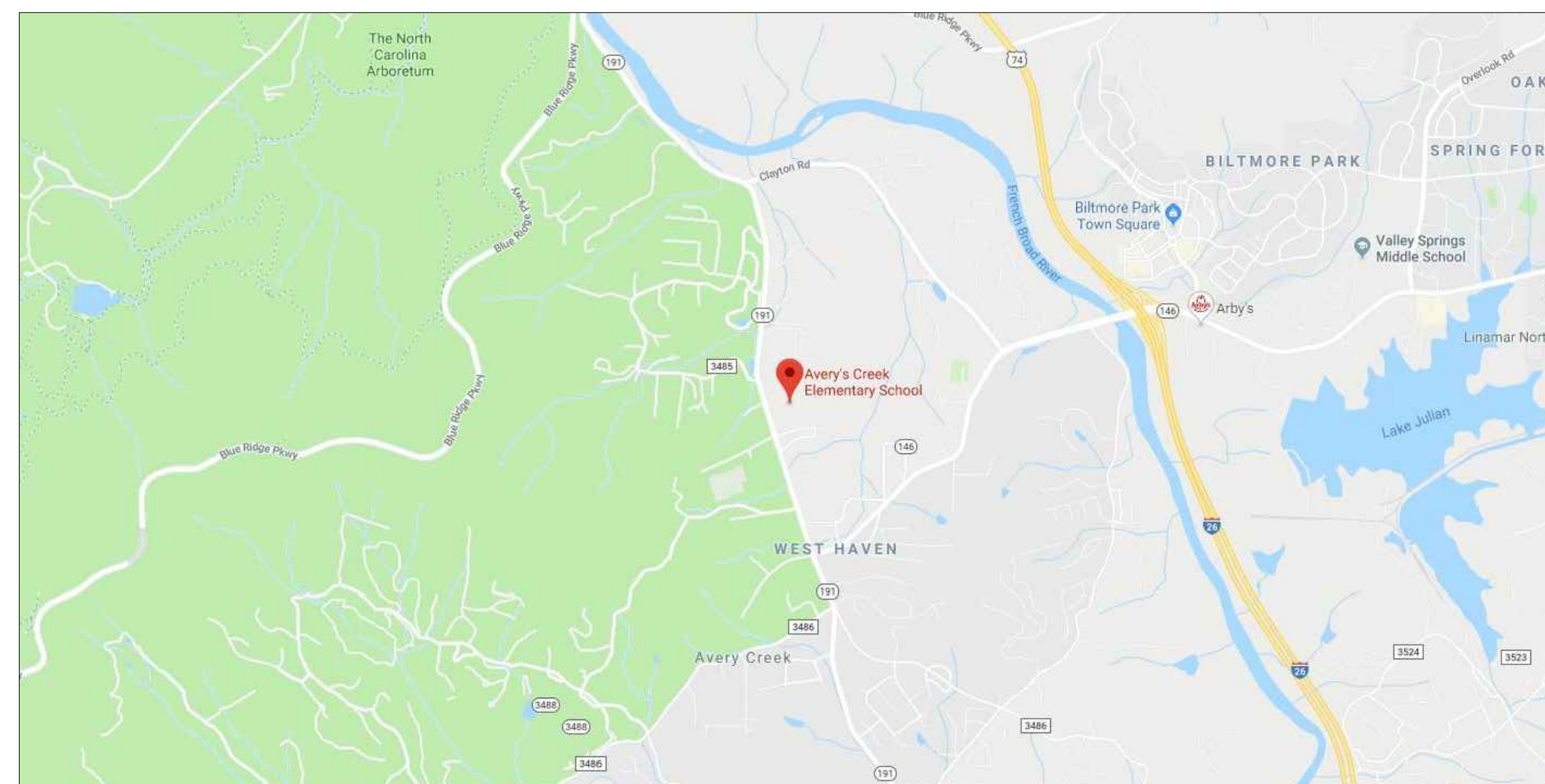
PROJECT TEAM:
 DESIGNED BY:
 JHP
 DRAWN BY:
 IMM
 APR REVIEWER:
 VTN

TERRACON'S PROJECT NUMBER:
 FH196269

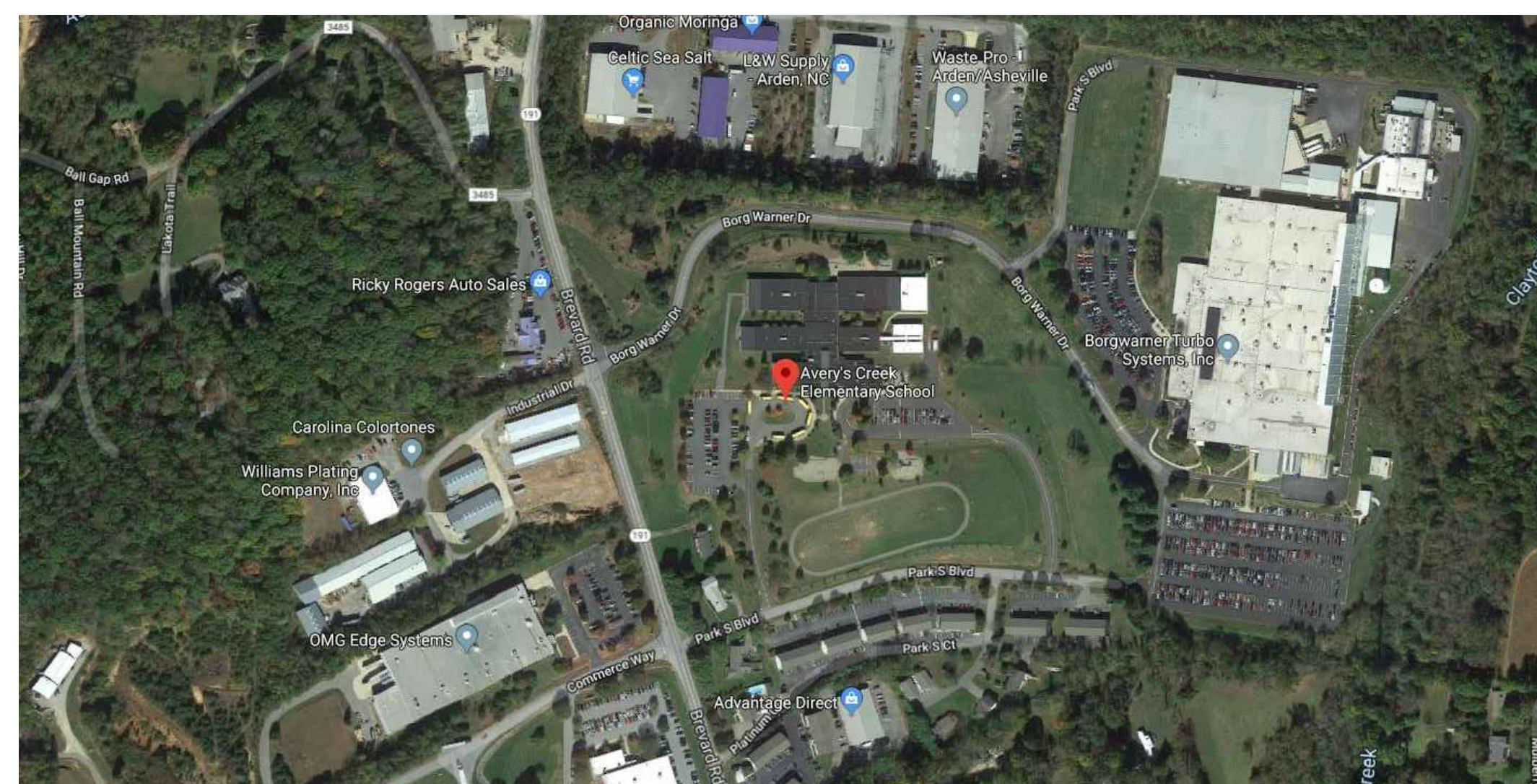
SHEET TITLE:
 COVER SHEET

SHEET NUMBER:
G-101

Project Location



VICINITY MAP



LOCATION MAP

Abbreviations

- MAX. MAXIMUM
 MIN. MINIMUM
 N.I.C. NOT IN CONTRACT
 O.C. ON CENTER
 TYP. TYPICAL
 SIM. SIMILAR

Details / Elevations / Sections Identifier

- X — ELEVATION/DETAIL/SECTION LABEL
 XXX — SHEET SHOWN ON
 [Shaded Box] — SHADING IDENTIFIES EXISTING CONDITIONS AND NOT IN SCOPE OF WORK

CLIENT

BUNCOMBE COUNTY SCHOOLS
 175 Bingham Road
 Asheville, North Carolina 28806

ENGINEERING CONSULTANT

TERRACON CONSULTANTS, INC.
 2701 Westport Road

PROJECT CONTACT:

Jeff H. Poe Jr., PE, MSCE, RRC
 Project Engineer/Facilities
 e: Jeff.Poe@terracon.com
 p: 704.594.8939



APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: AVERY'S CREEK ELEMENTARY SCHOOL PARTIAL ROOF REPLACEMENT PROJECT - PHASE 2 Address: 15 PARK SOUTH BLVD, ARDEN, NC 28704

Table with 5 columns: DESIGNER, FIRM, NAME, LICENSE #, TELEPHONE #. Includes TERRACON CONSULTING, INC. and other project details.

YEAR EDITION OF CODE: 2018 NCEBC
New Construction
Renovation (Existing Bldg)
Uprift
Alteration

Table with 4 columns: FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL. Lists floors from 6th to Basement and total area.

STRUCTURAL DESIGN

DESIGN LOADS: Importance Factors: Wind (Iw), Snow (Ib), Seismic (Is), Live Loads: Roof, Mezzanine, Floor, Snow Load, Wind Load, Dead Loads, Seismic Design Category A and B, C, & D parameters.

PLUMBING FIXTURE REQUIREMENTS

Table showing plumbing fixture requirements for occupancy, waterclosets, urinals, lavatories, showers/tubs, and drinking fountains.

ACCESSIBLE PARKING

Table showing accessible parking requirements: lot or parking area, total # of parking spaces, and # of accessible spaces provided.

ALLOWABLE AREA

Primary Occupancy: Assembly, Business, High-Hazard, Institutional, Mercantile, Storage, Utility and Miscellaneous.
Secondary Occupancy: 508.2, 508.3, 508.4, 508.5, 508.6, 508.7, 508.8.

Non-Separated Mixed Occupancy (303.1 Exception)
Separated Mixed Occupancy (303.1/303.2) - See below for area calculations.

Actual Area of Occupancy A + Allowable Area of Occupancy B + ... = N/A
Actual Area of Occupancy B + Allowable Area of Occupancy C + ... = N/A

Table with 7 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG AREA PER STORY (ACTUAL), (B) TABLE 503.3 AREA, (C) AREA FOR OPEN SPACE INCREASE, (D) AREA FOR SPRINKLER INCREASE, (E) ALLOWABLE AREA OR UNLIMITED, (F) MAXIMUM BUILDING AREA.

- Open space area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)
b. Total Building Perimeter = N/A (P)
c. Ratio (F/P) = N/A

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS: The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided.
THERMAL ENVELOPE Method of Compliance: Prescriptive, Performance, Energy Cost Budget.

ALLOWABLE HEIGHT

Table with 4 columns: ALLOWABLE (TABLE 503), INCREASE FOR SPRINKLERS, SHOWN ON PLANS, CODE REFERENCE.

FIRE PROTECTION REQUIREMENTS

Table with 7 columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), RATING PROVIDED, DETAIL AND SHEET #, DESIGN # FOR RATED ASSEMBLY, DESIGN # FOR RATED PENETRATION, DESIGN # FOR RATED JOINTS.

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT Method of Compliance: Prescriptive, Performance, Energy Cost Budget.
Lighting Schedule: lamp type required in fixture, number of lamps in fixture, ballast type used in the fixture.

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT Method of Compliance: Prescriptive, Performance, Energy Cost Budget.
Thermal Zone: winter dry bulb, summer dry bulb.

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: NO, YES
Exit Signs: NO, YES
Fire Alarm: NO, YES
Smoke Detection Systems: NO, YES
Panic Hardware: NO, YES

EXIT REQUIREMENTS

Table with 6 columns: FLOOR, ROOM OR SPACE DESIGNATION, MINIMUM NUMBER OF EXITS, TRAVEL DISTANCE, ARRANGEMENT MEANS OF EGRESS.

EXIT WIDTH

Table with 6 columns: USE GROUP OR SPACE DESCRIPTION, AREA 1 SQ. FT., AREA 1 PER OCCUPANT, EGRESS WIDTH PER OCCUPANT, REQUIRED WIDTH, ACTUAL WIDTH.

1 See Table 1003.2.2.2 to determine whether net or gross area is applicable.
2 See definition "Area, Gross" and "Area, Net" (Section 1002)
3 Minimum stairway width (Section 1003.3.3); min. corridor width (Section 1004.3.2.2); min. door width (Section 1003.3.1)
4 See Section 1003.2.2.7 for converging exits.
5 The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1003.2.3)
6 Assembly occupancies (Section 1008)



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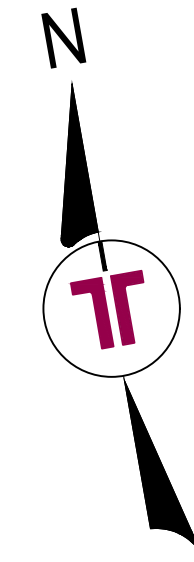
TERRACON'S PROJECT NUMBER: FH196269

SHEET TITLE: APPENDIX B

SHEET NUMBER: G-102

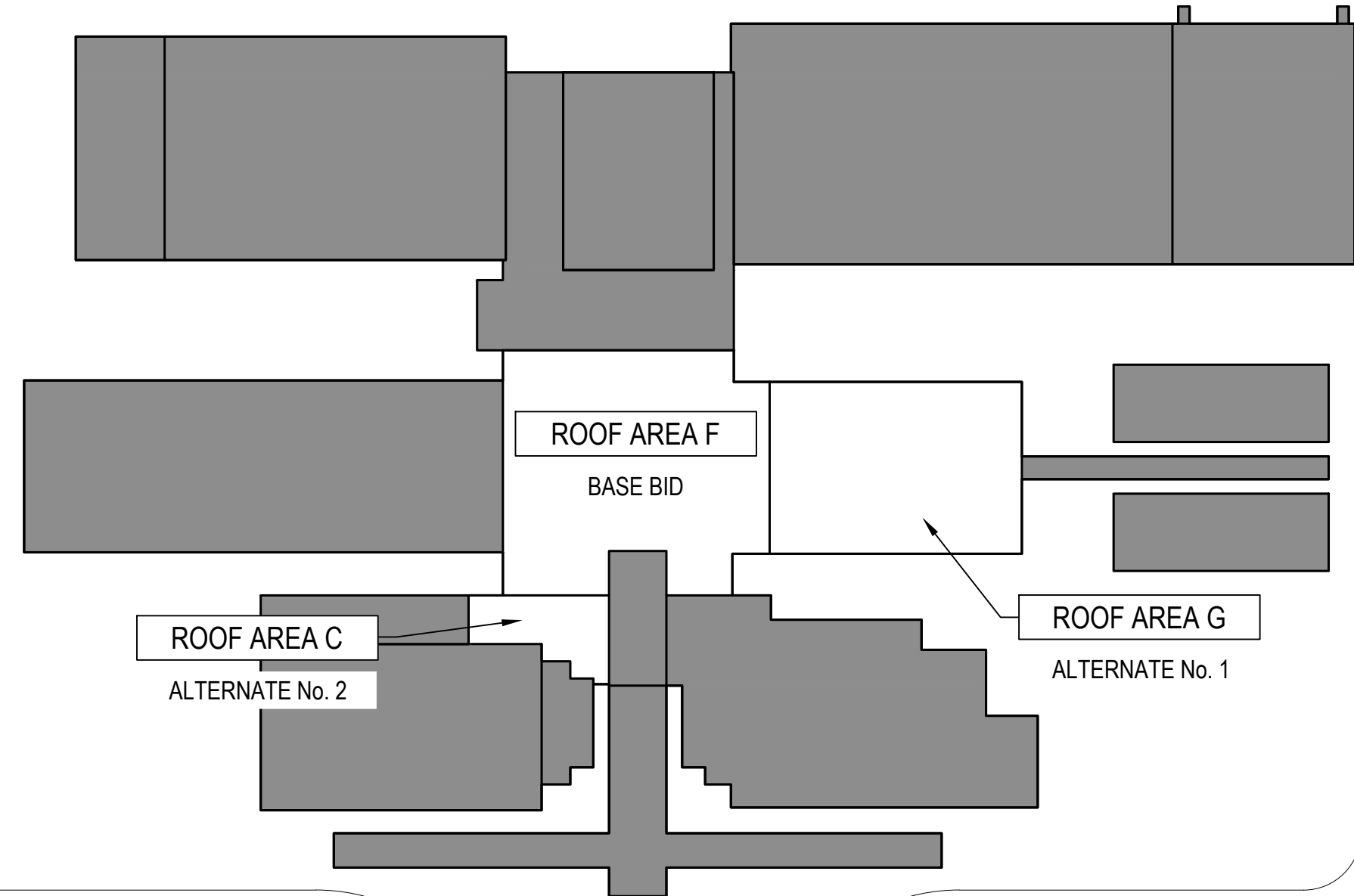
15 PARK SOUTH ROAD ARDEN, NC 28704

KEY PLAN

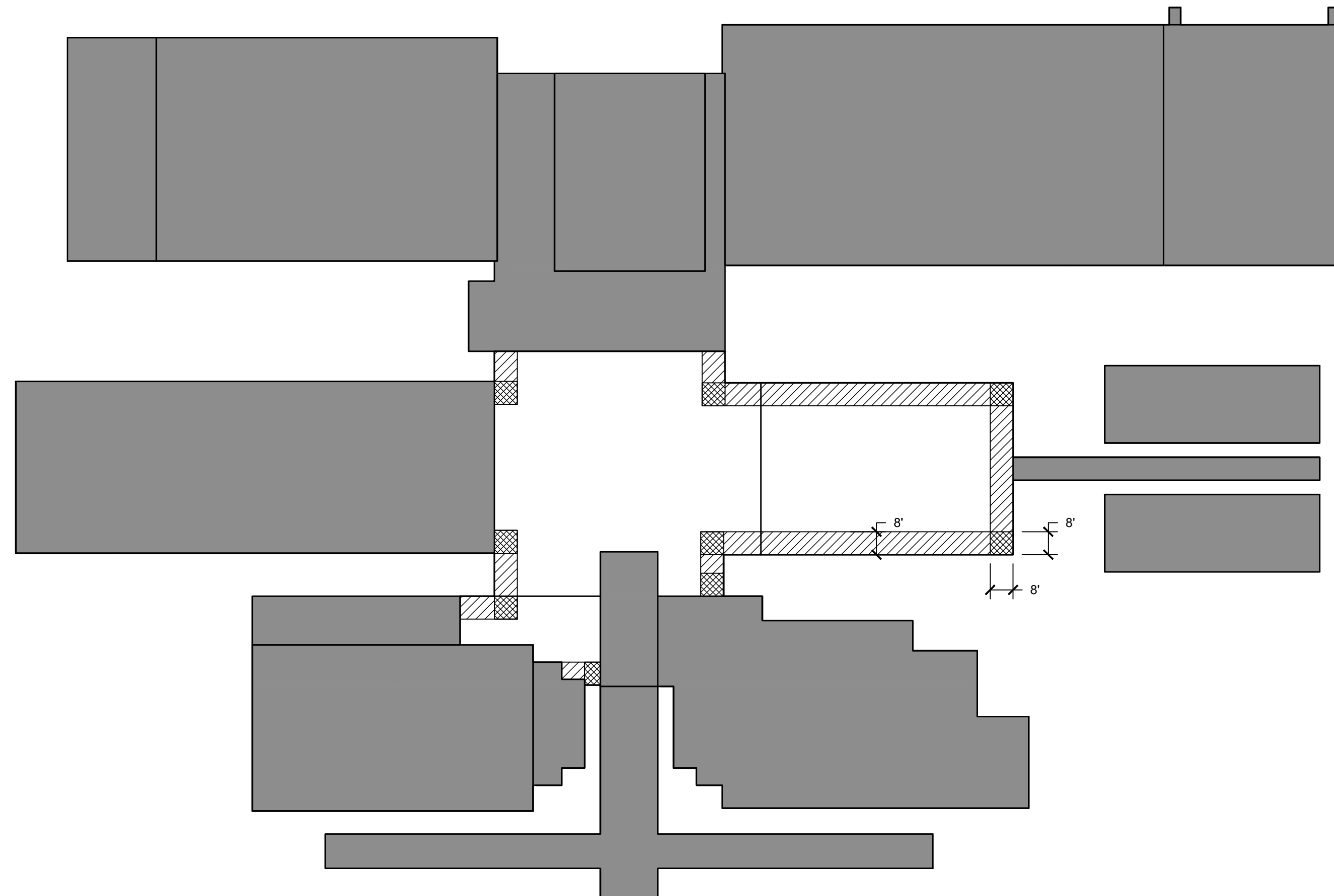


Borg Warner Dr

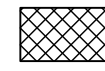
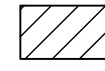

Borg Warner Dr



WIND ZONE PLAN



LEGEND

-  ZONE 3 - CORNERS
-  ZONE 2 - OUTER PERIMETER
-  ZONE 1 - FIELD

Terracon
 Consulting Engineers and Scientists
 2701 Westport Road
 Charlotte, North Carolina
 p. 704.509.1777
 Project No. FH196269
 Terracon NC License No.: F-0869
 terracon.com

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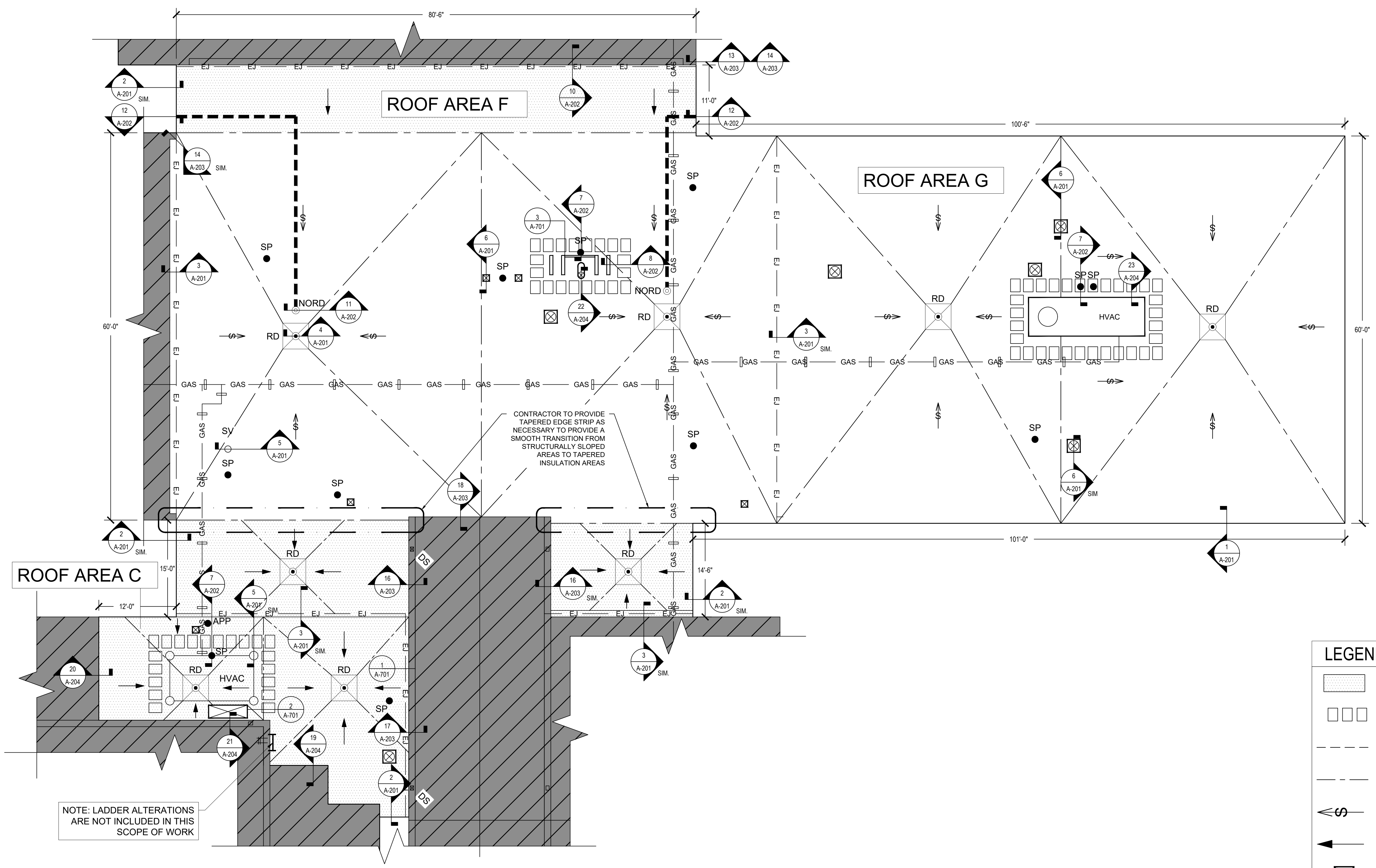
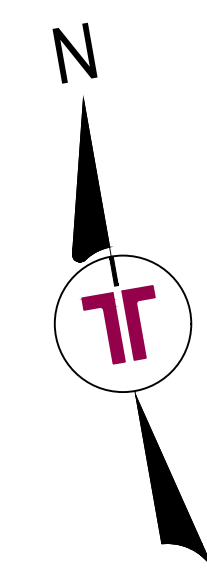
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G-103



CONTRACTOR TO PROVIDE TAPERED EDGE STRIP AS NECESSARY TO PROVIDE A SMOOTH TRANSITION FROM STRUCTURALLY SLOPED AREAS TO TAPERED INSULATION AREAS

NOTE: LADDER ALTERATIONS ARE NOT INCLUDED IN THIS SCOPE OF WORK

CODE SUMMARY

NORTH CAROLINA BUILDING CODE (2018 EDITION) AND ASCE 7-10

BASIC WIND SPEED = 120 MPH
 BUILDING CATEGORY = III
 EXPOSURE CATEGORY = B
 INTERNAL PRESSURE COEF. = +/- .18

THE NEW ROOF SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE FOLLOWING WIND UPLIFT PRESSURES:

1. INTERIOR ZONE = -26 PSF
 2. EDGE ZONE: 8' = -44 PSF
 3. CORNER ZONE: 8'x8' = -66 PSF

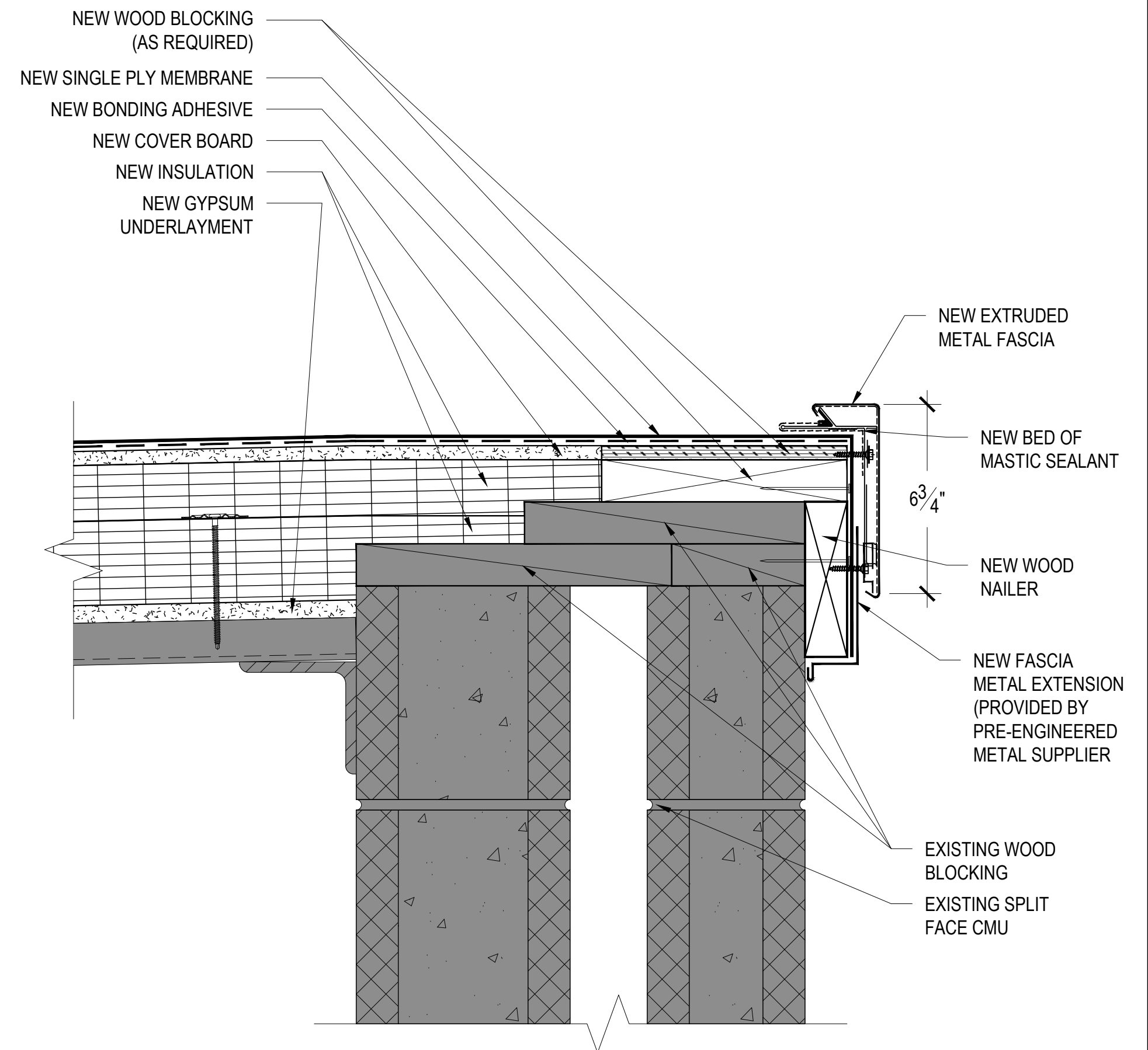
GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- CONDUITS AND COAX CABLES ARE TO BE PRESERVED AND UNDAMAGED.
- CONTRACTOR IS TO MAINTAIN POSITIVE DRAINAGE.
- TAPERED EDGE STRIP IS NOT SHOWN FOR CLARITY.
- ROOF DECK IS GENERALLY SLOPED AT 1/4" PER FOOT, UNLESS INDICATED OTHERWISE.
- CONTRACTOR SHALL NOTIFY ENGINEER AS SOON AS POSSIBLE IF CONDITIONS ARE FOUND THAT INHIBIT OR ALTER THE PROPER INSTALLATION OF MATERIALS.

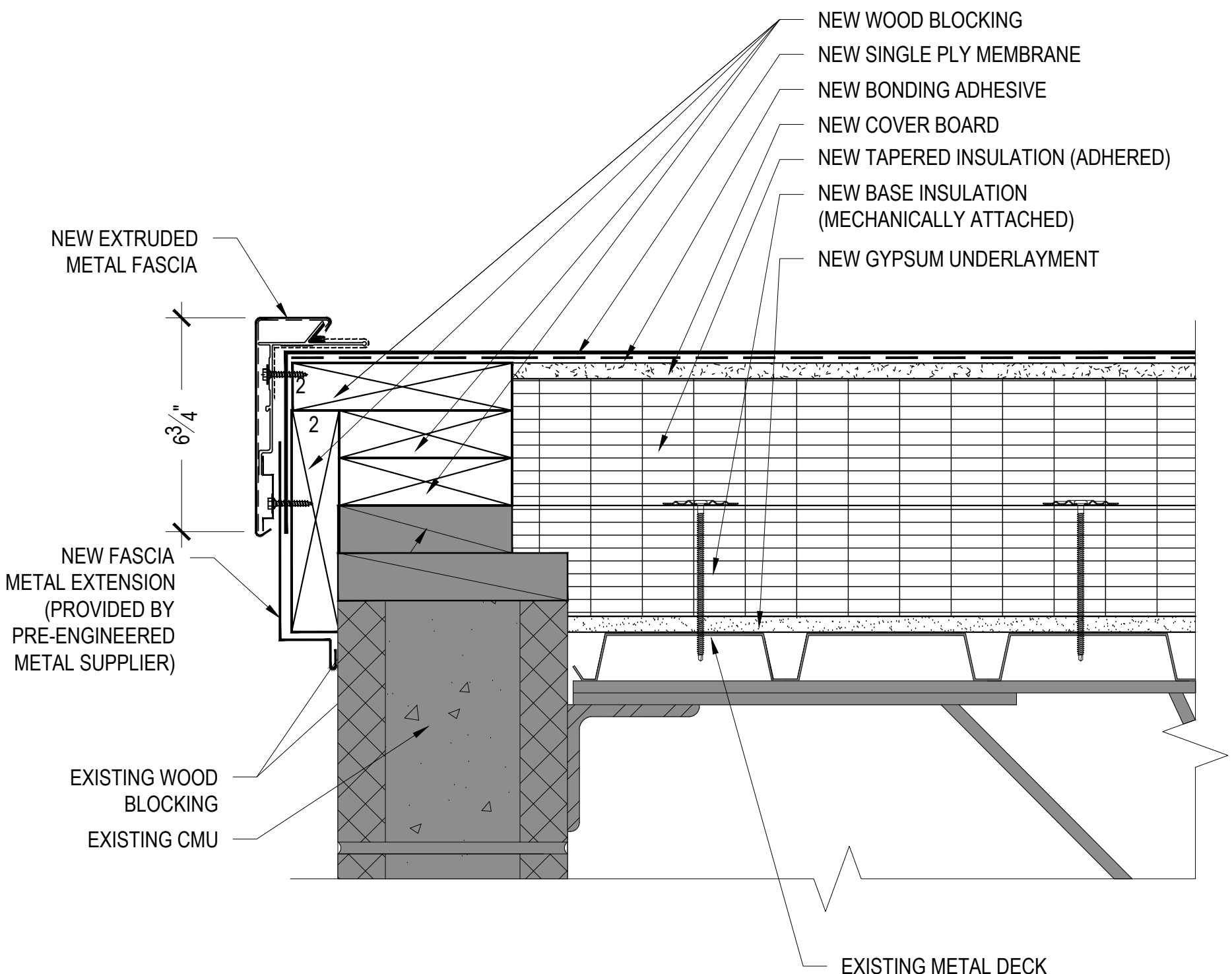
LEGEND

- TAPERED INSULATION
- NEW WALK PADS
- RIDGE LINE
- VALLEY LINE
- SLOPE IN STRUCTURE
- SLOPE IN INSULATION
- EXISTING EQUIPMENT CURB
- SEALANT POCKET
- ROOF DRAIN AND SUMP
- NEW OVERFLOW ROOF DRAIN
- OVERFLOW DRAIN LEADER
- EXISTING DOWNSPOUT
- EXISTING GAS LINE ON SLEEPERS
- EXISTING EXPANSION JOINT
- ABANDONED PIPE PENETRATION

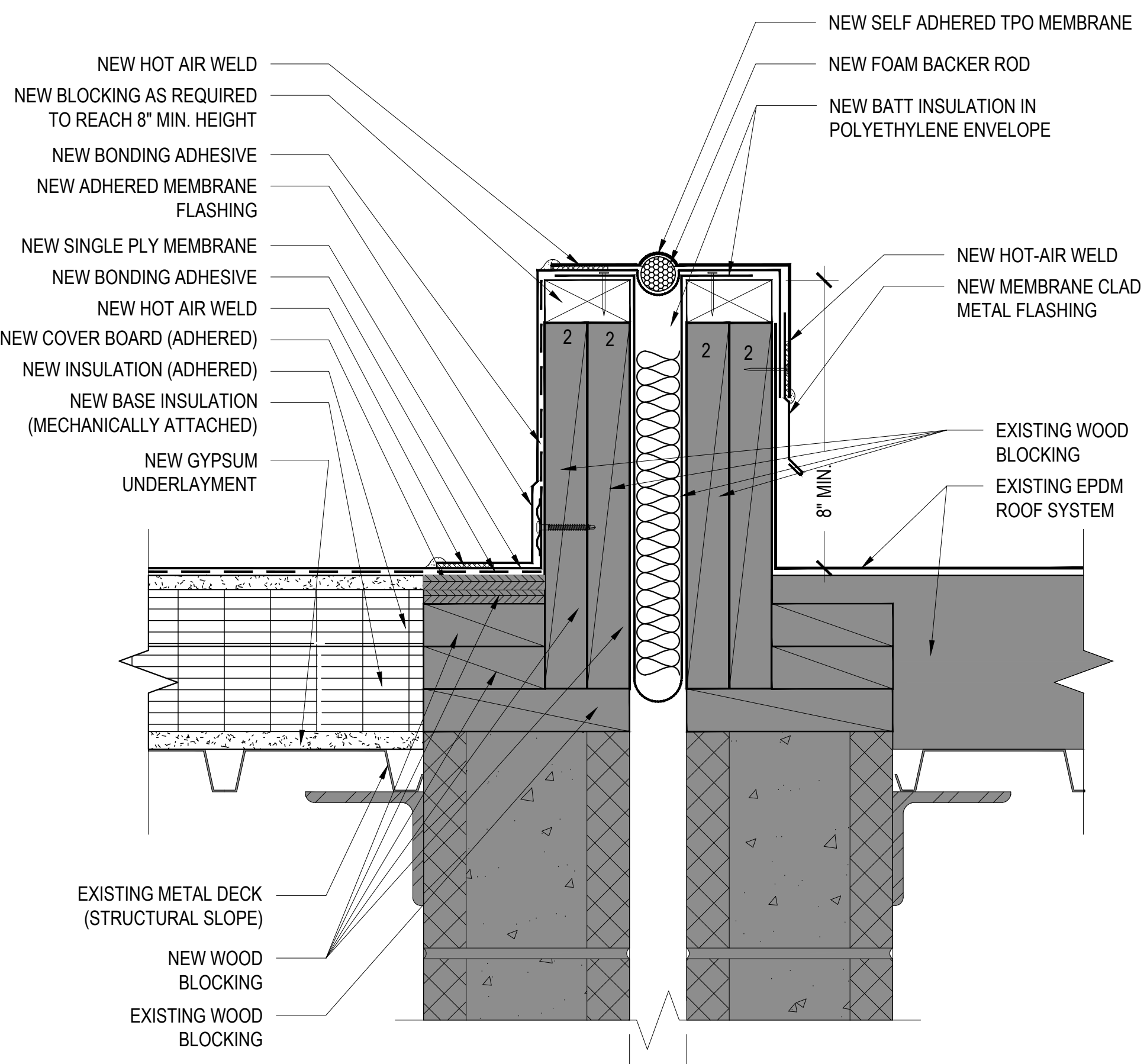
1 ROOF PLAN
 1/8"=1'-0"



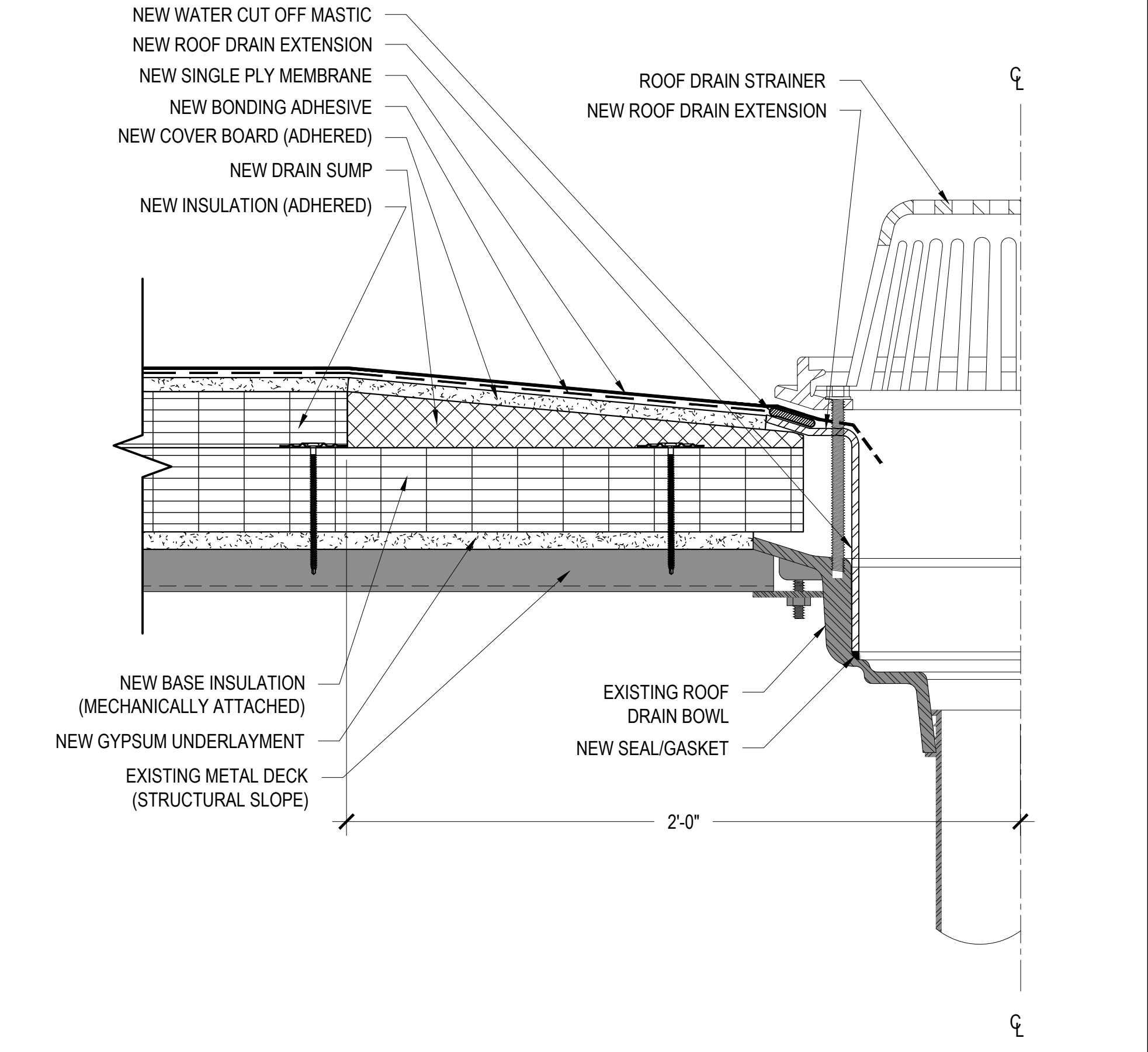
1 EAVE DETAIL
 3"=1'-0"



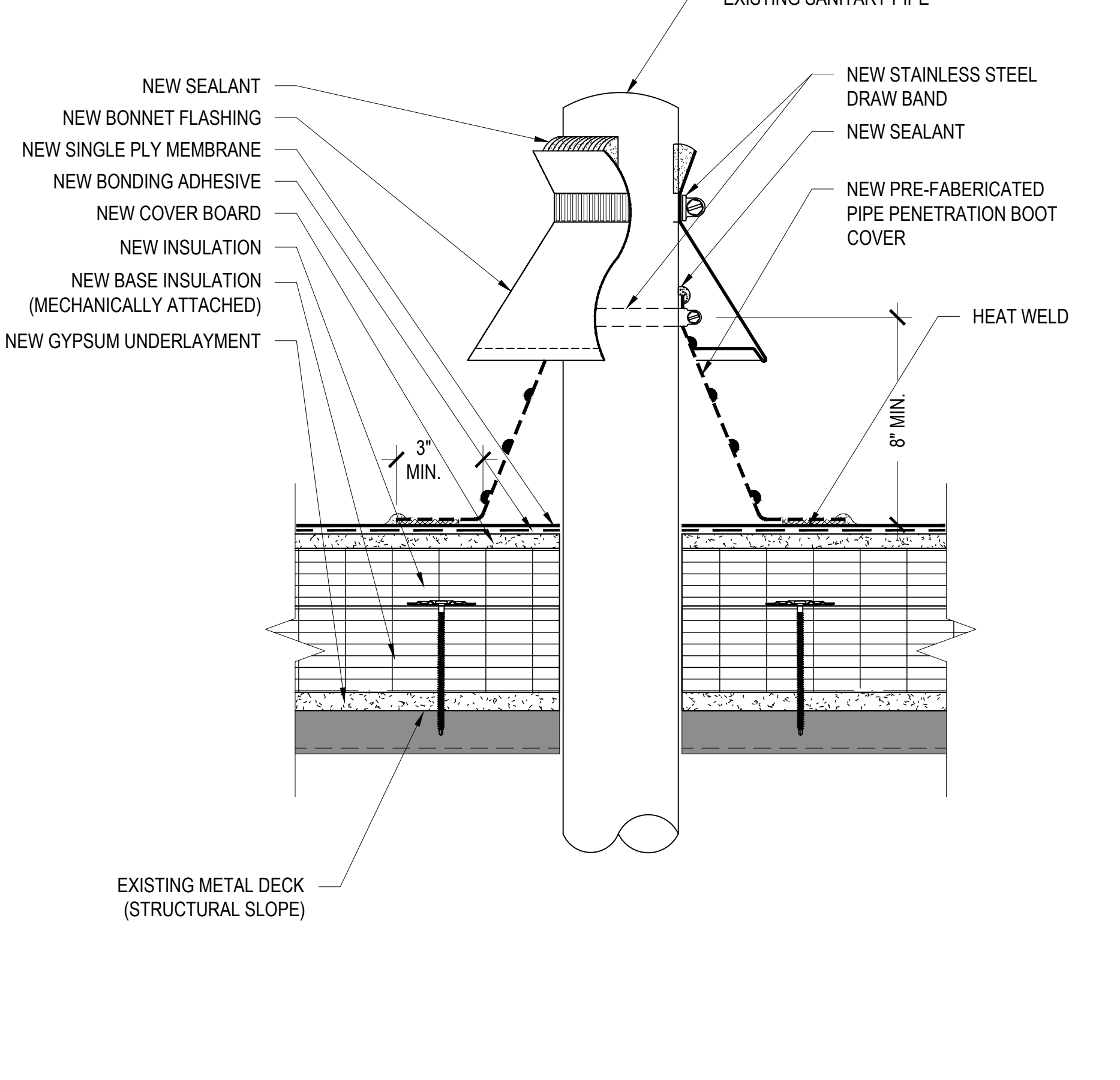
2 EAVE DETAIL w/ TAPERED INSULATION
 3"=1'-0"



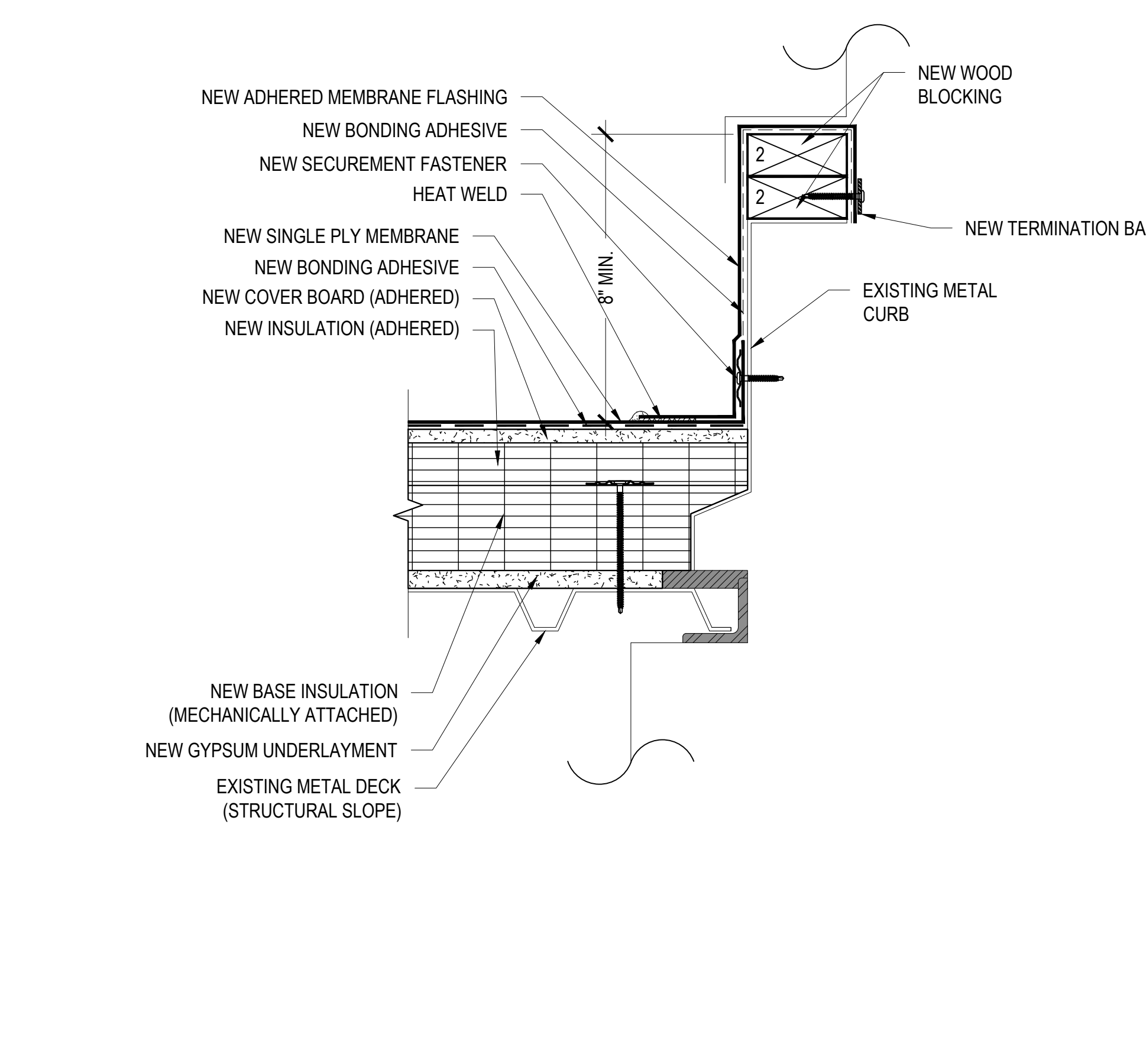
3 EXPANSION JOINT DETAIL
 3"=1'-0"



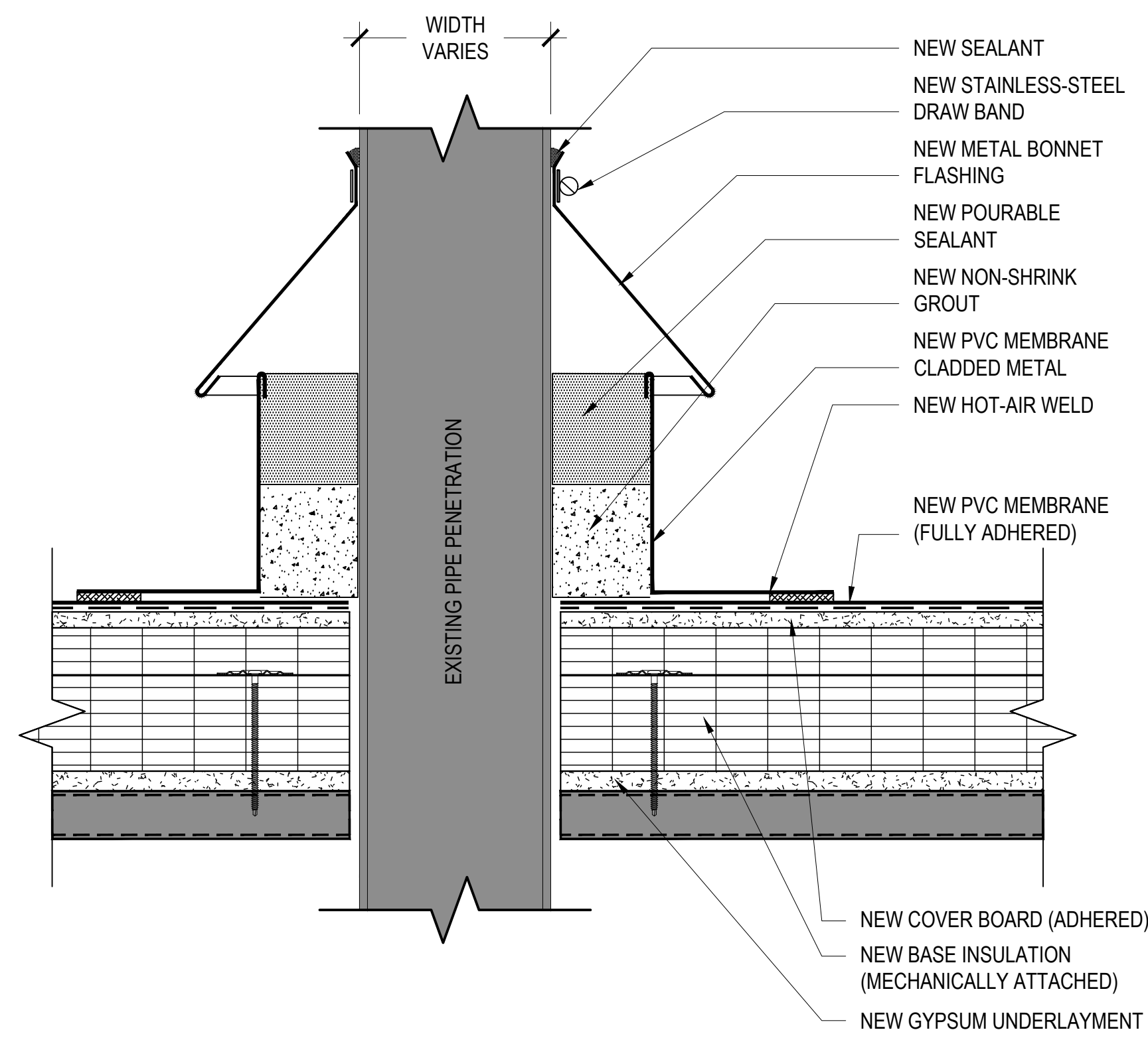
4 ROOF DRAIN DETAIL
 3"=1'-0"



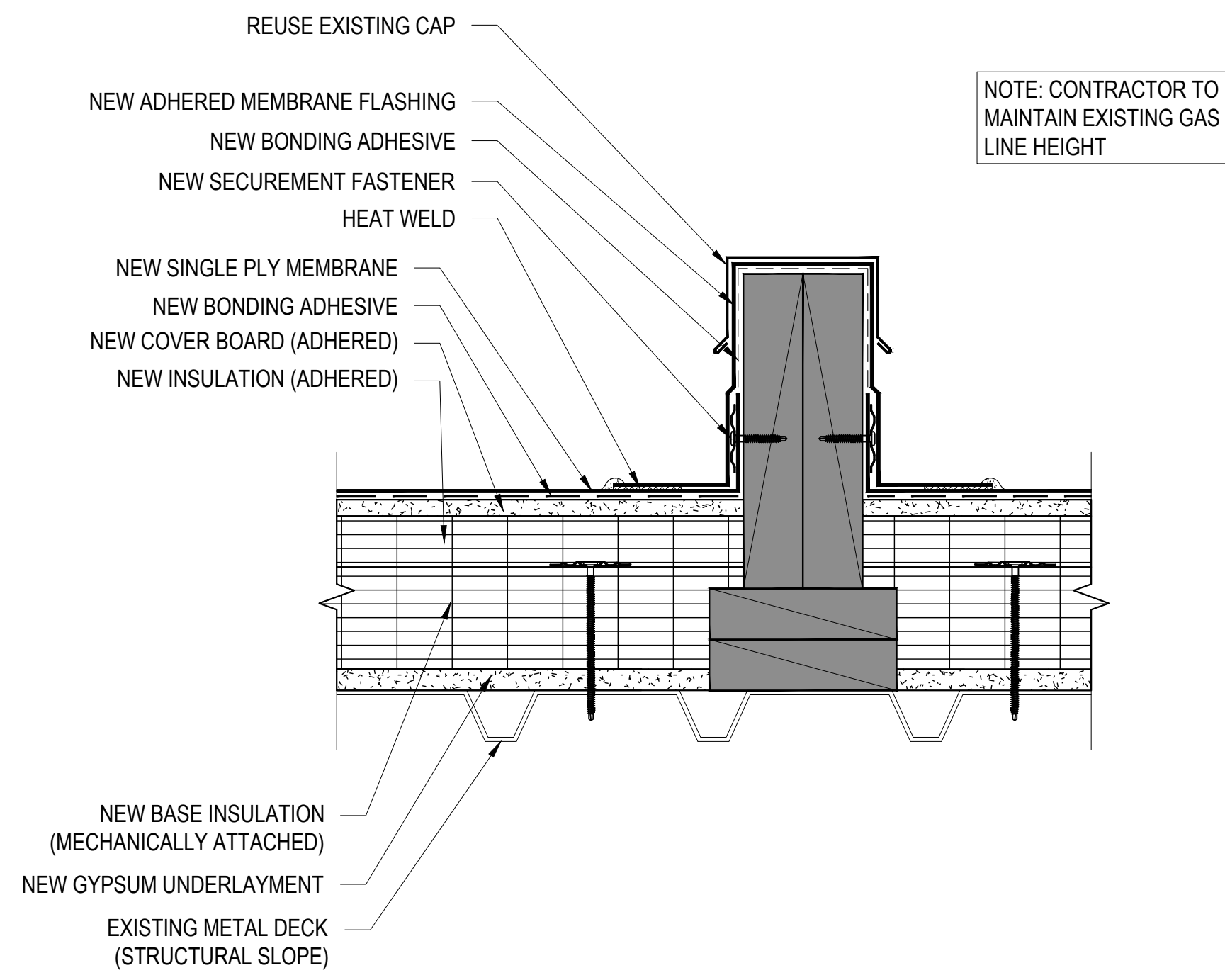
5 PIPE/STRUCTURAL SUPPORT PENETRATION DETAIL
 3"=1'-0"



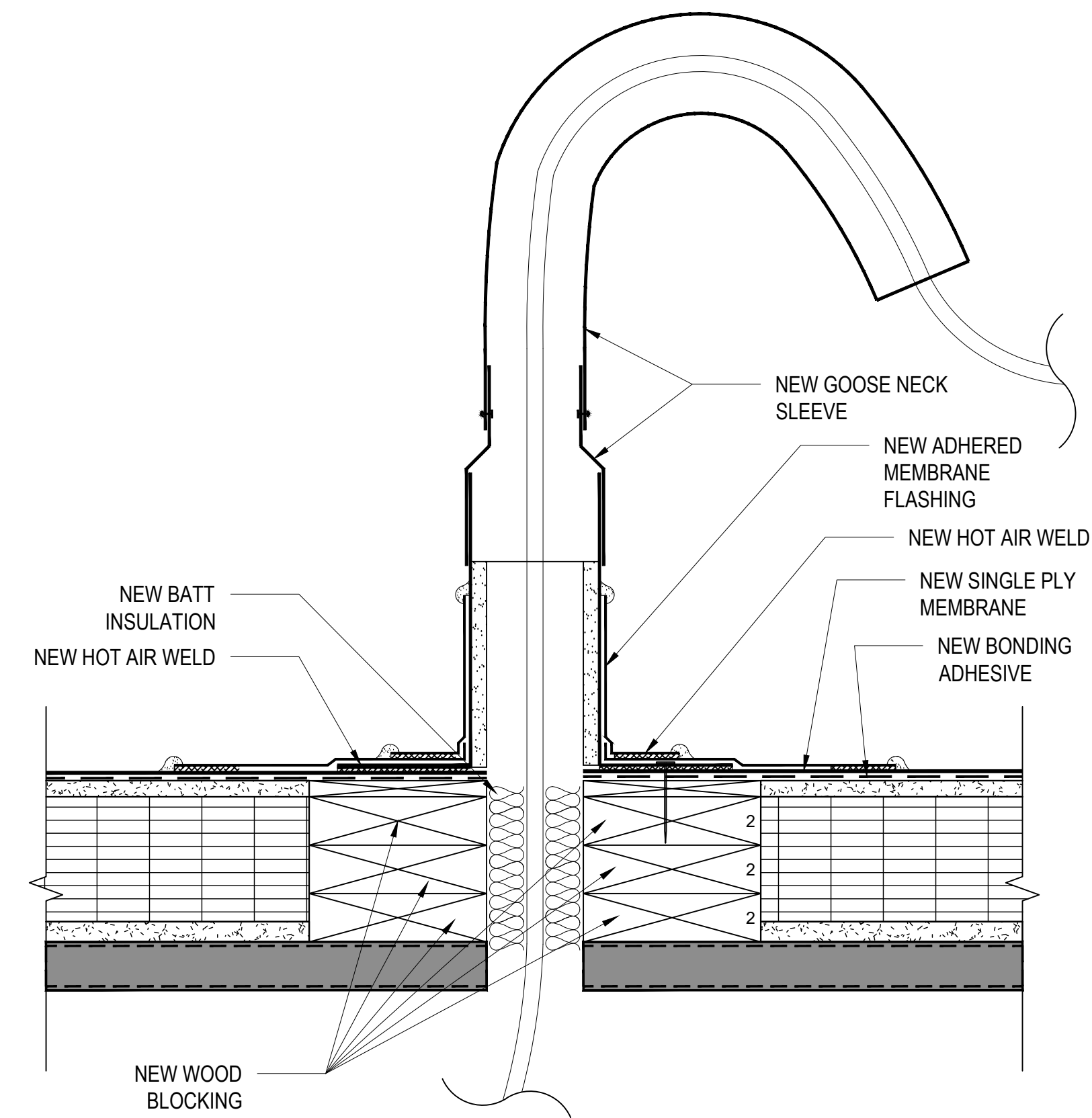
6 EQUIPMENT CURB DETAIL
 3"=1'-0"



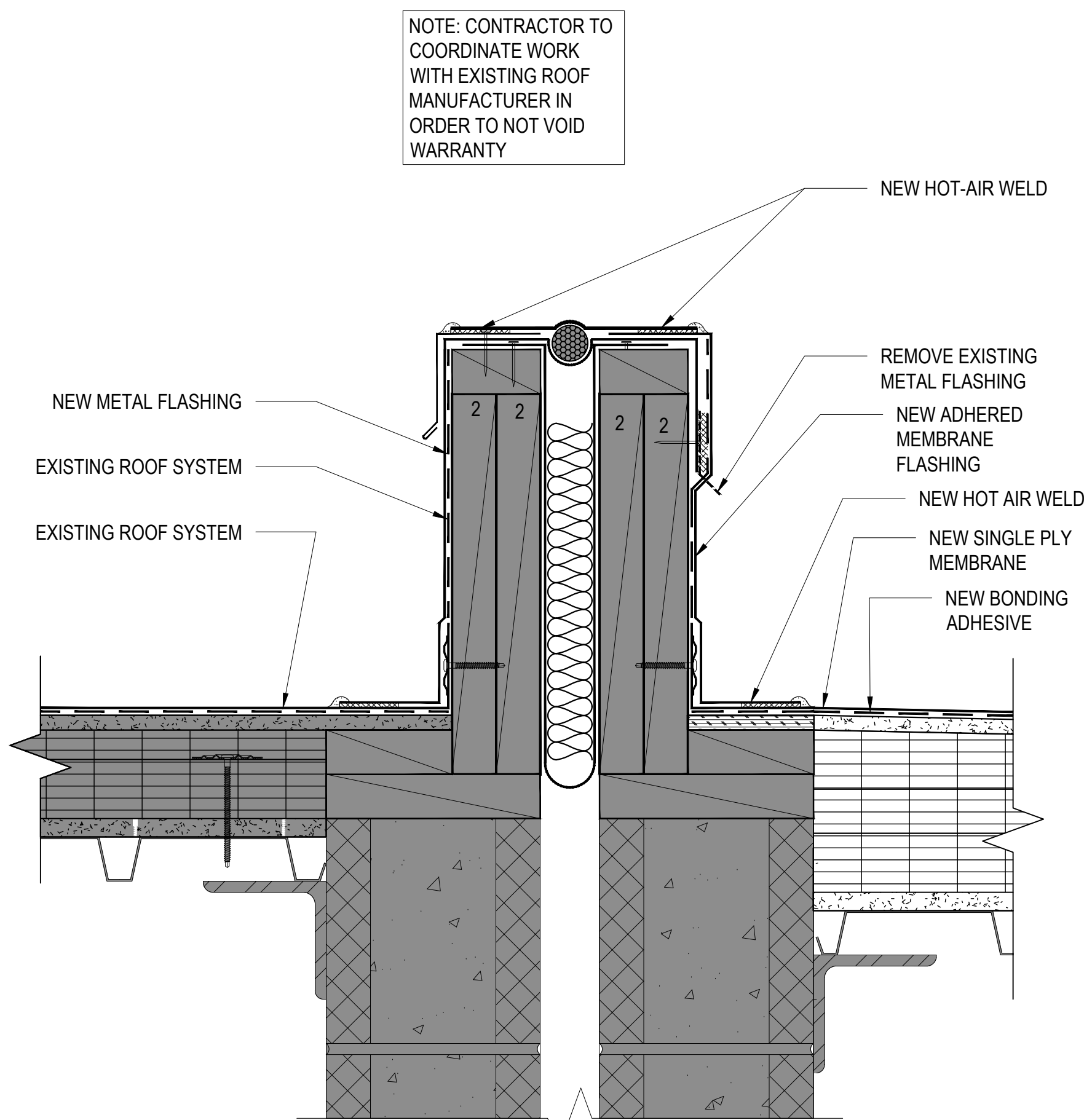
7 TYP. SEALANT POCKET DETAIL
3"=1'-0"



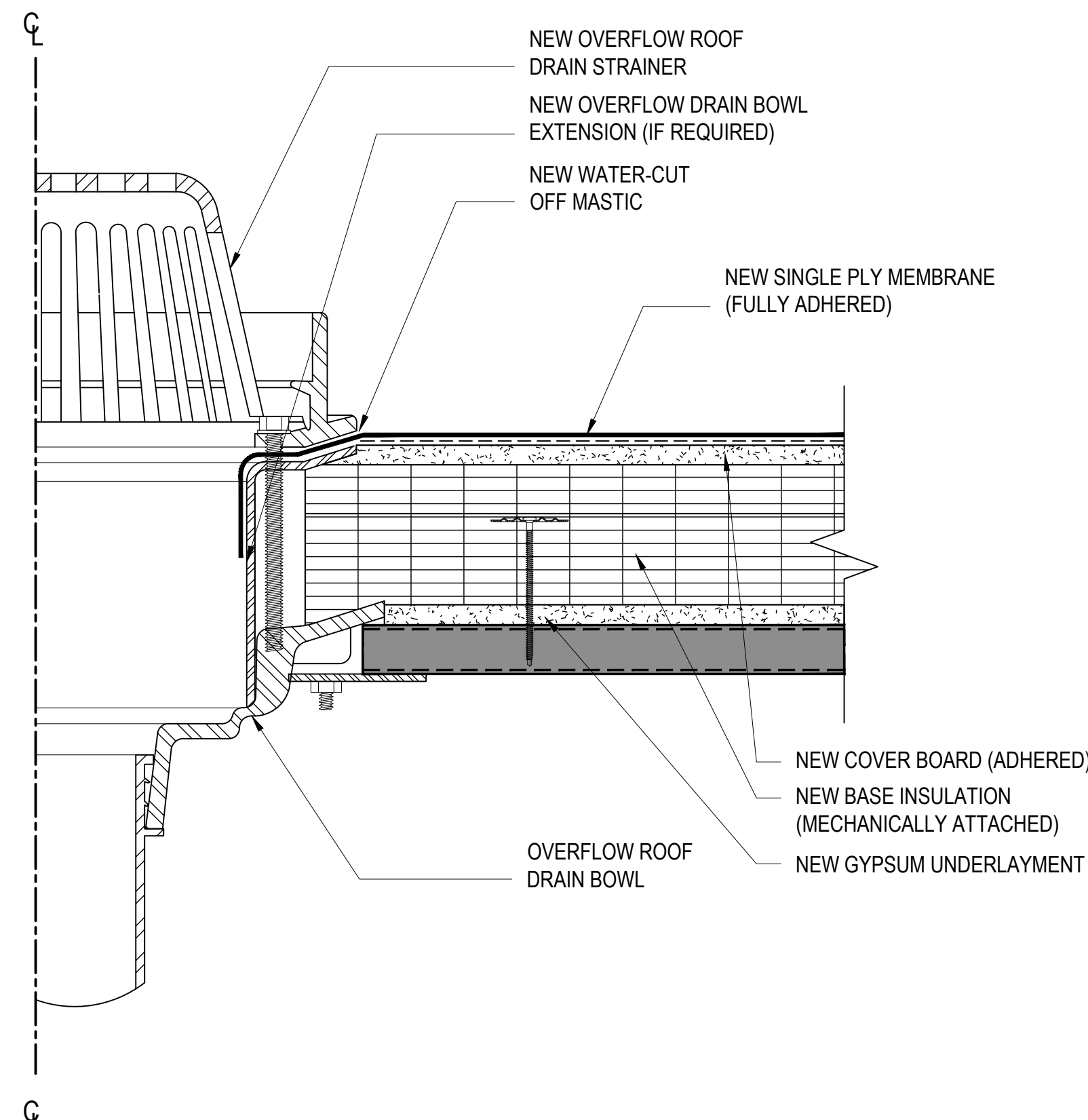
8 EQUIPMENT SLEEPER CURB DETAIL
3"=1'-0"



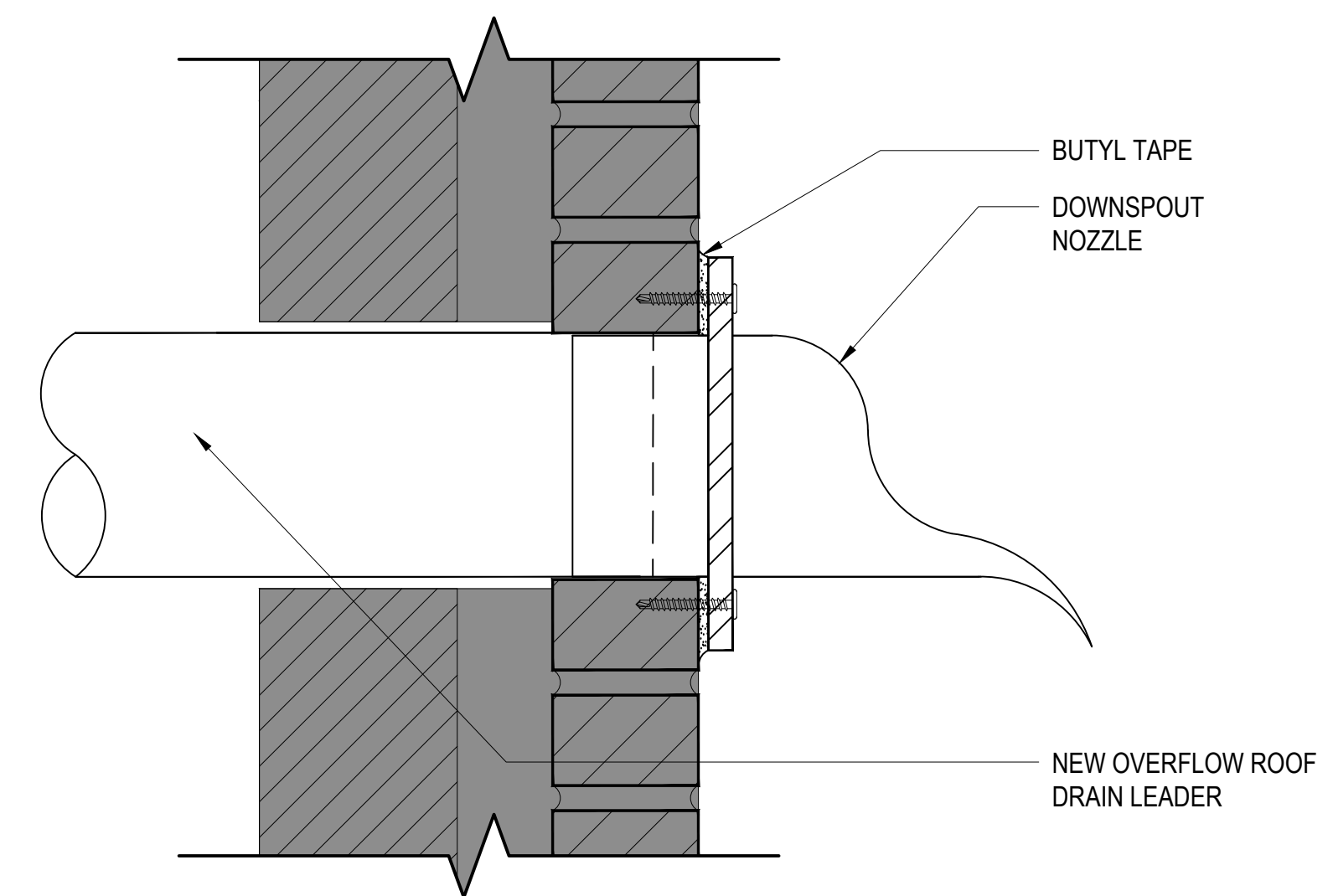
9 GOOSENECK PENETRATION DETAIL
3"=1'-0"



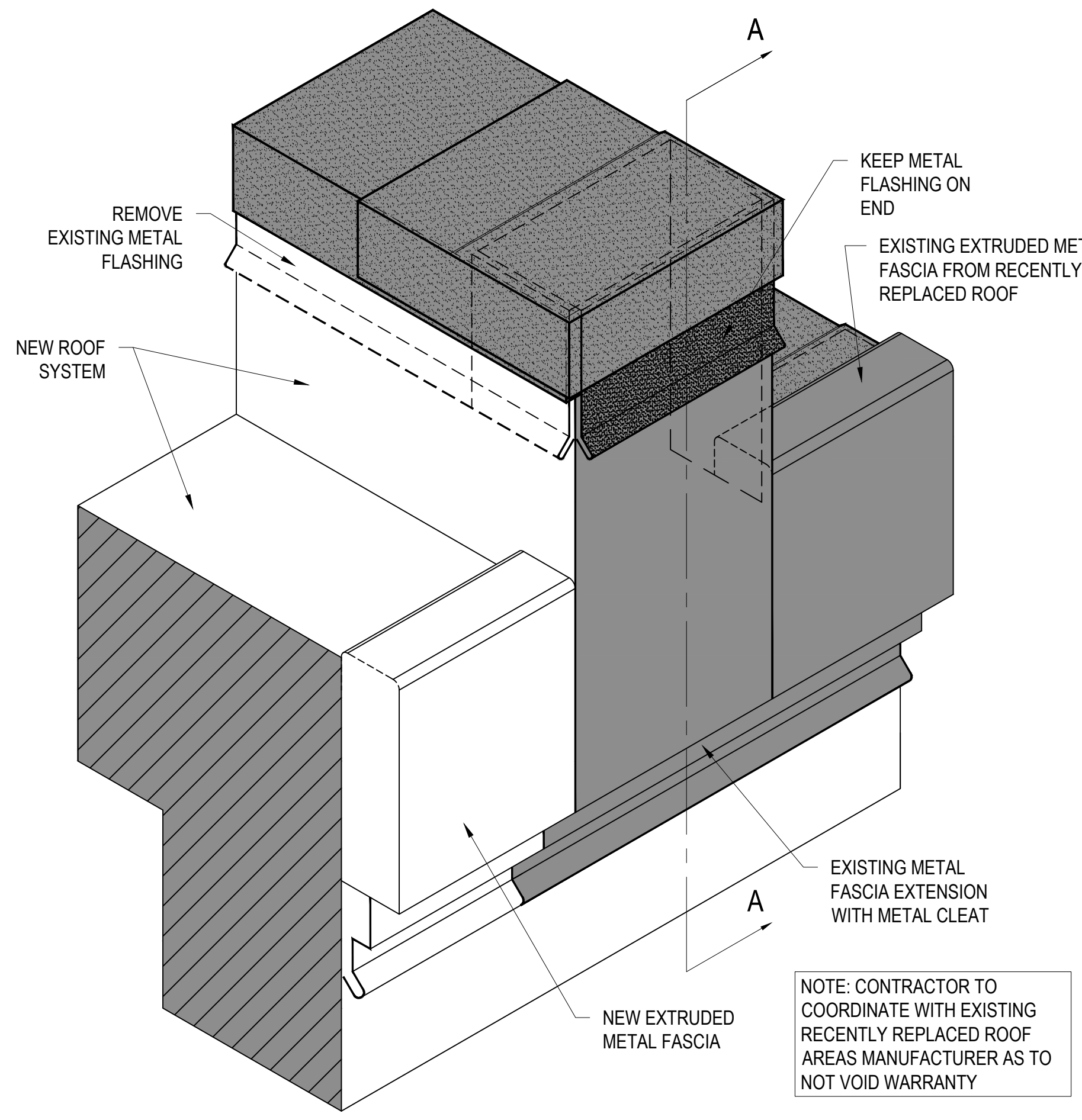
10 EXPANSION JOINT DETAIL
3"=1'-0"



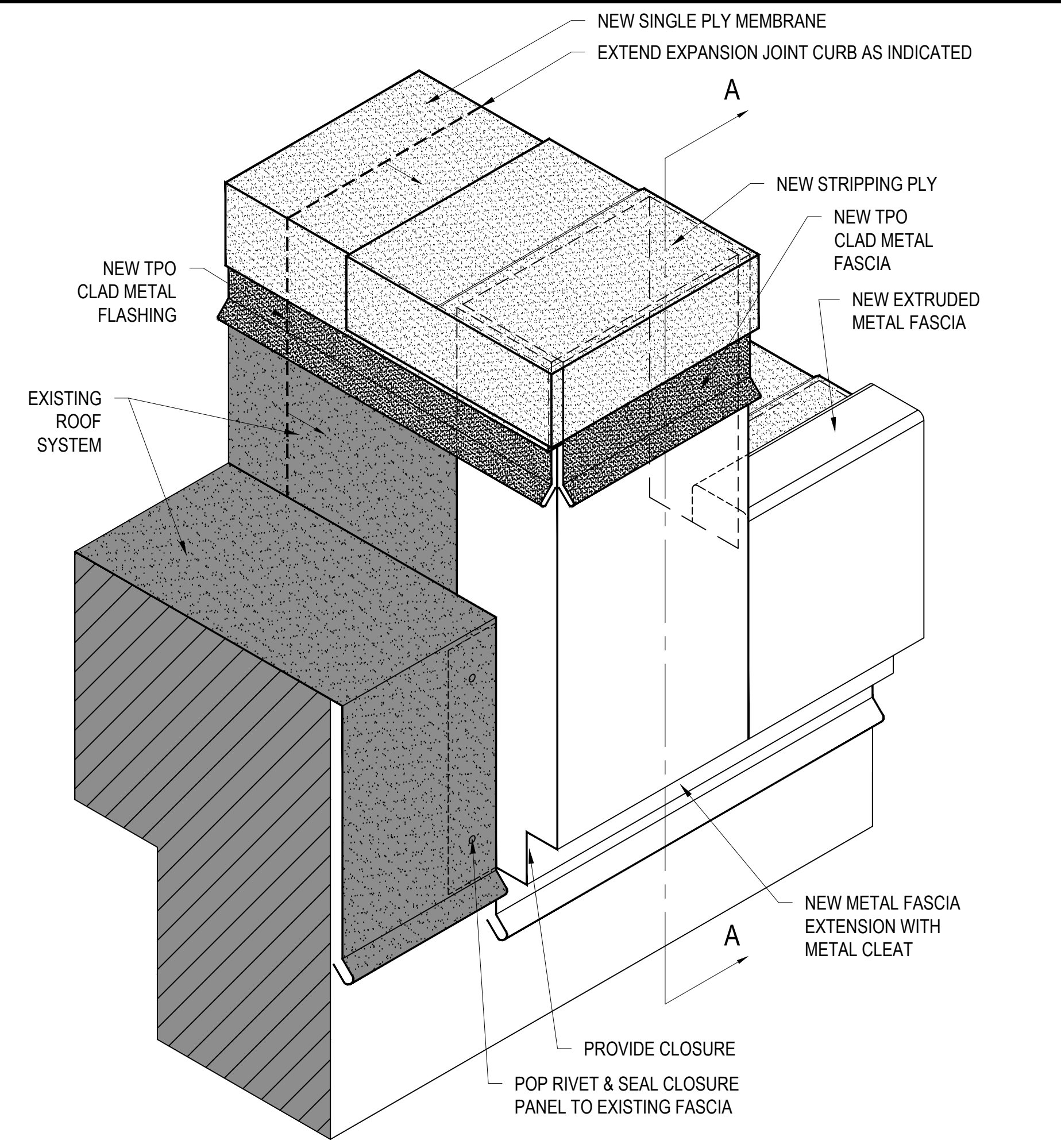
11 OVERFLOW ROOF DRAIN DETAIL
3"=1'-0"



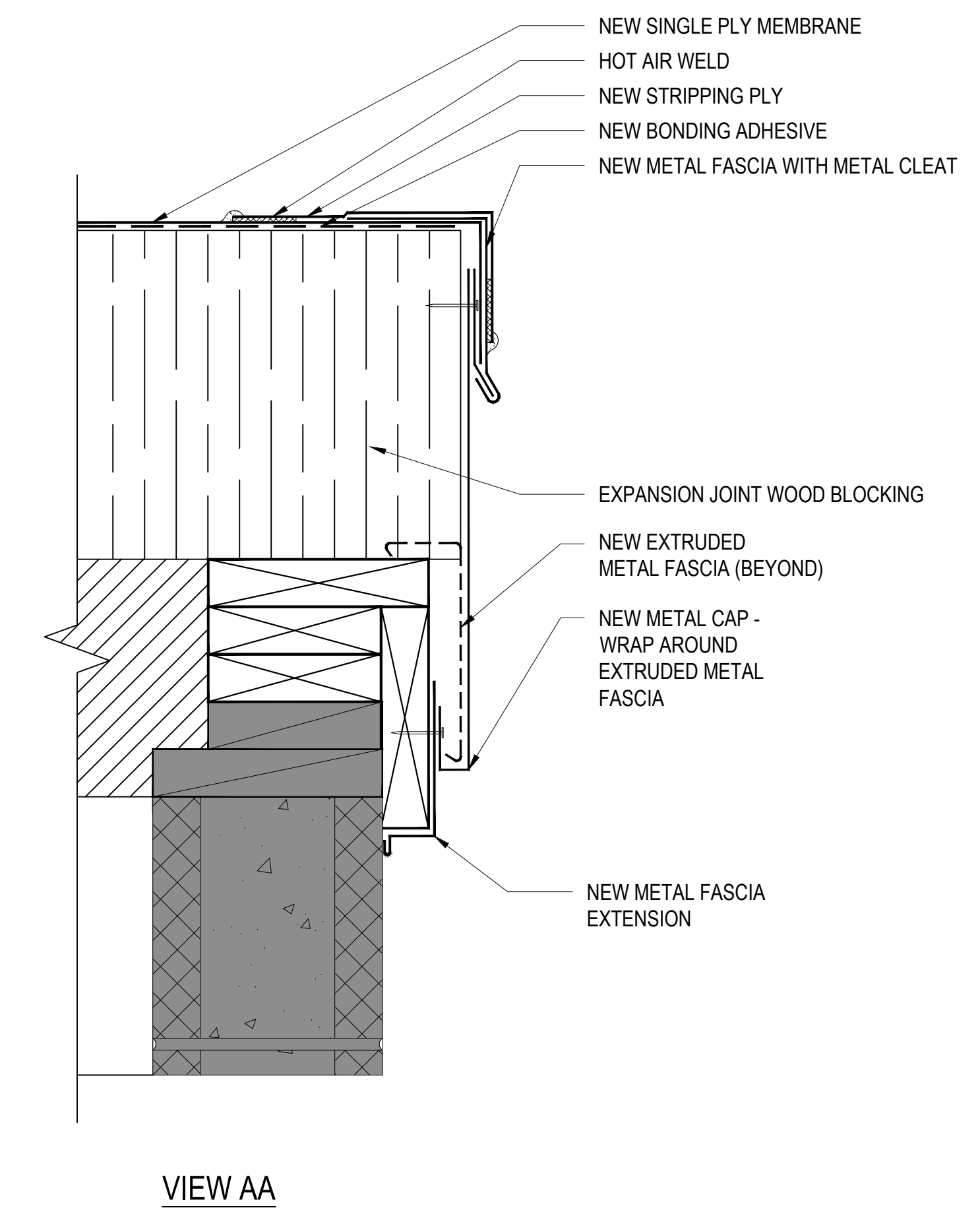
12 NEW OVERFLOW OUTLET DETAIL
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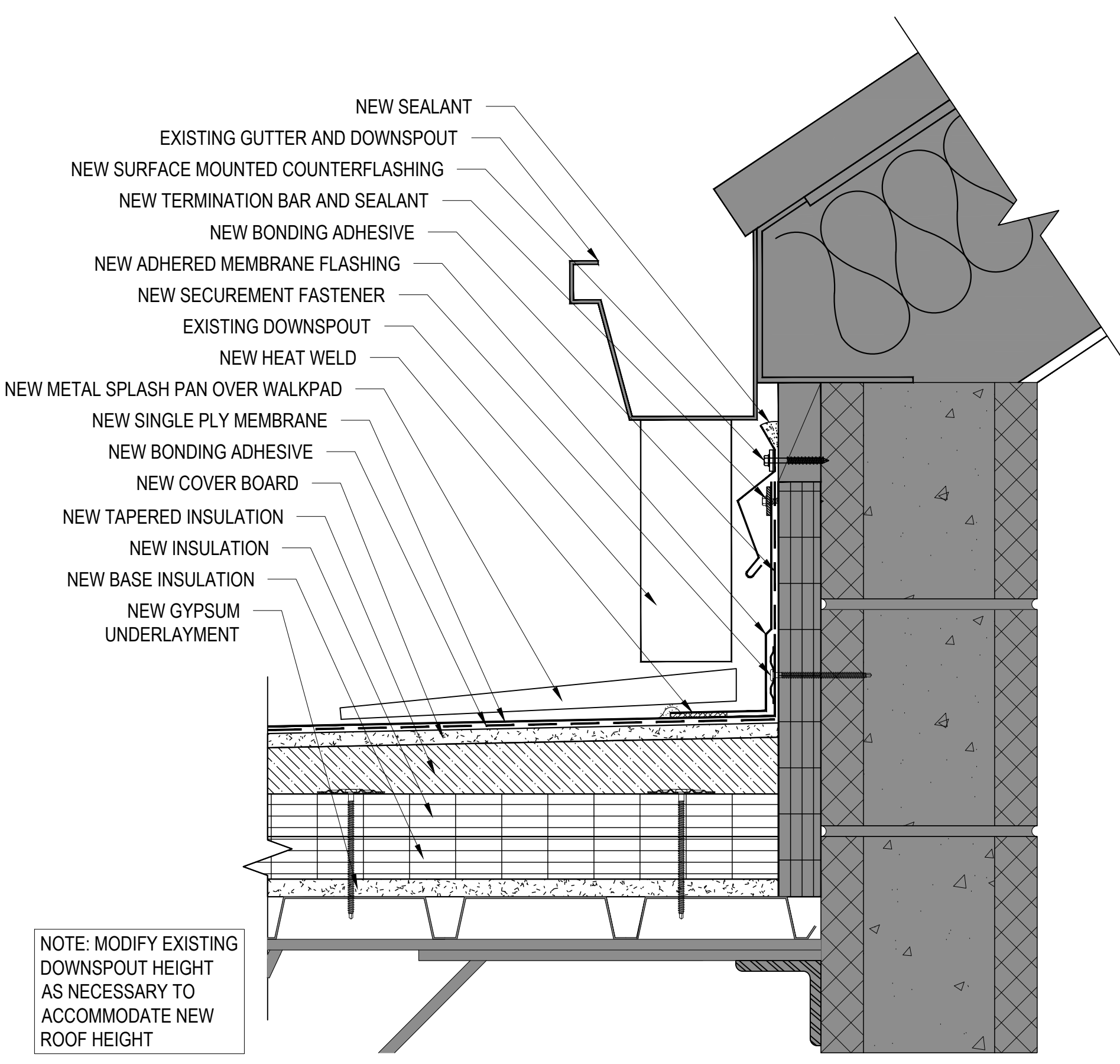
13 EXPANSION JOINT TERMINATION DETAIL AT RECENTLY REPLACED ROOF
3"=1'-0"



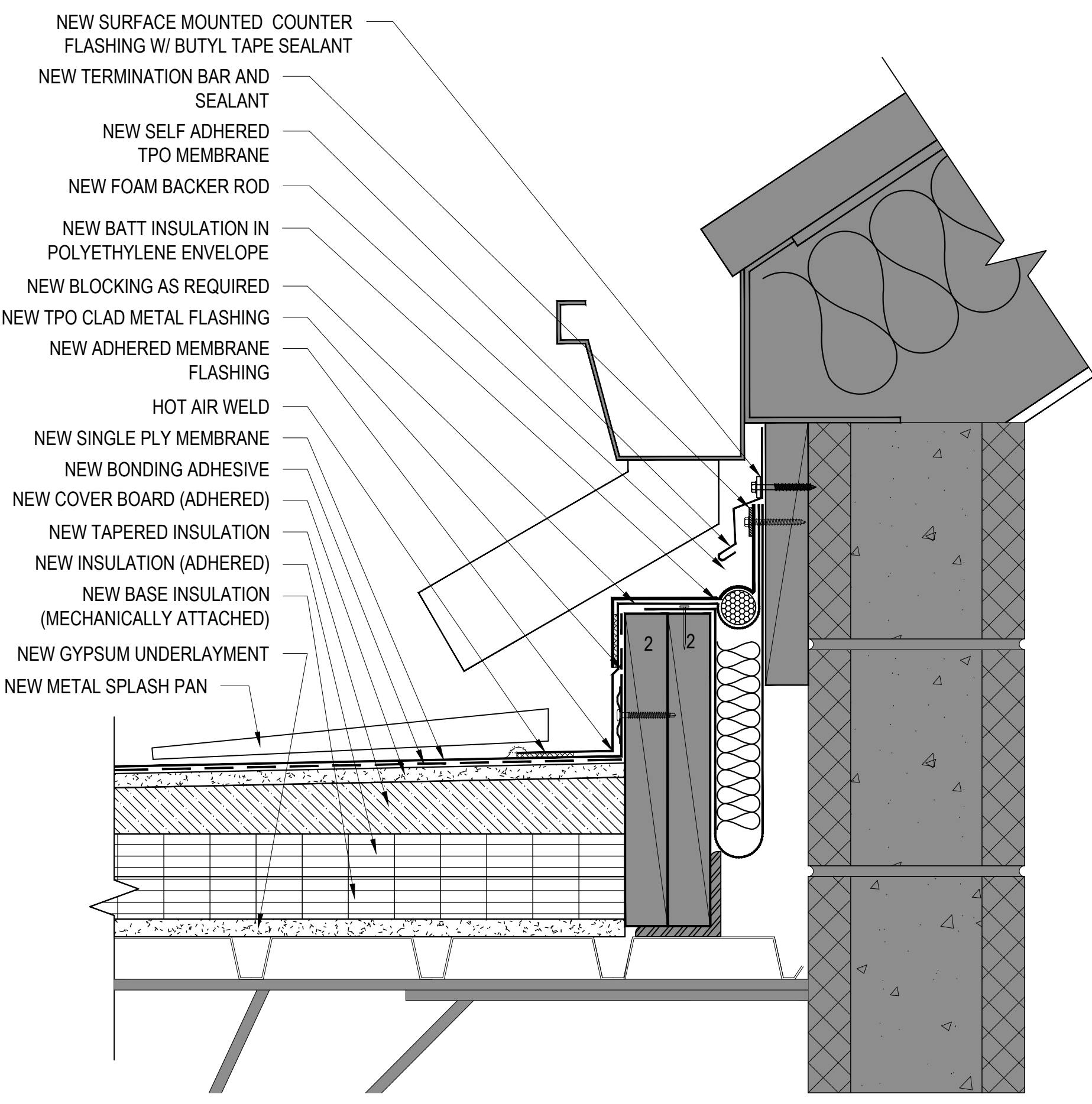
14 EXPANSION JOINT TERMINATION DETAIL AT EXISTING ROOF
3"=1'-0"



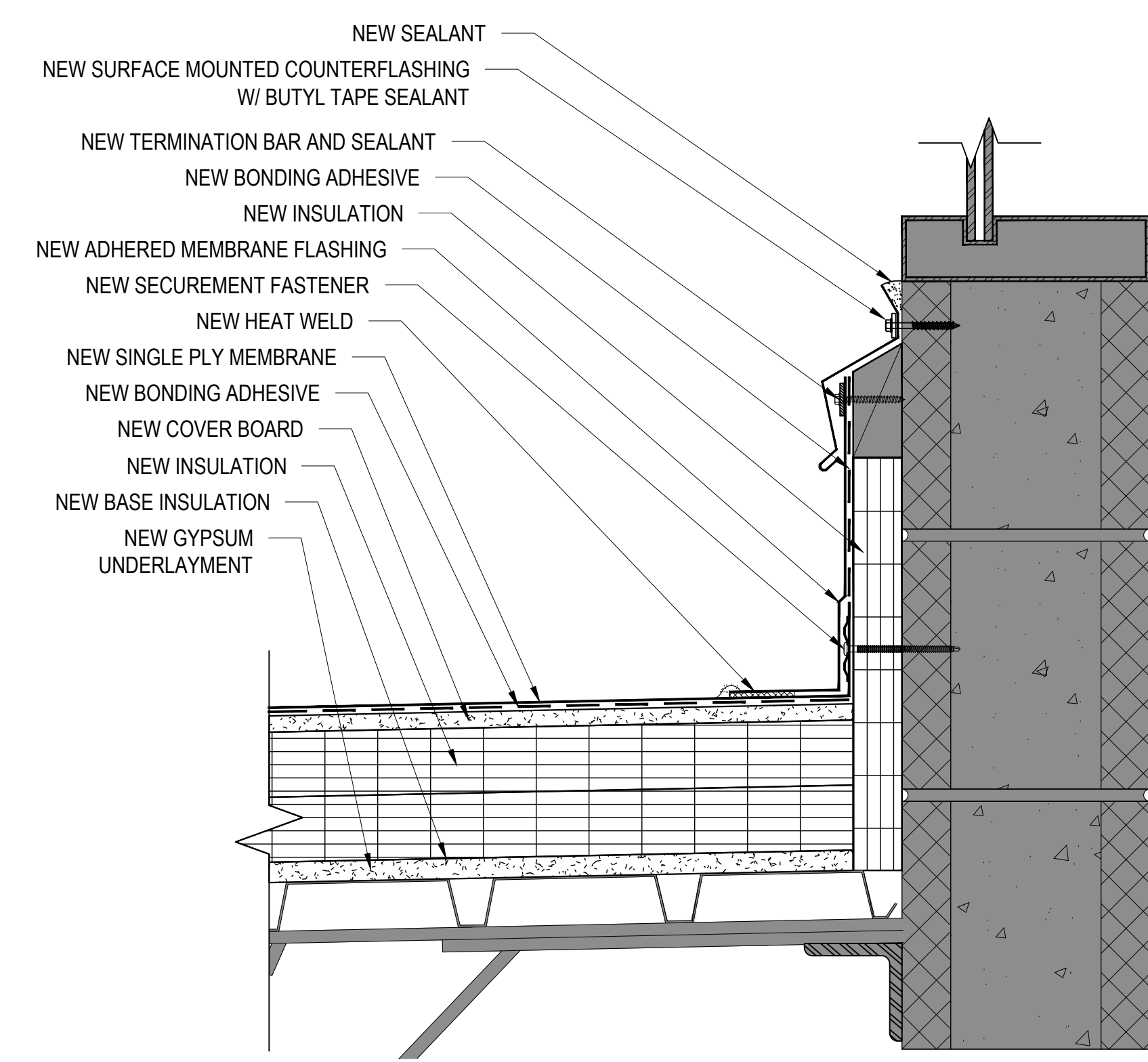
15 EXPANSION JOINT TERMINATION DETAIL
3"=1'-0"



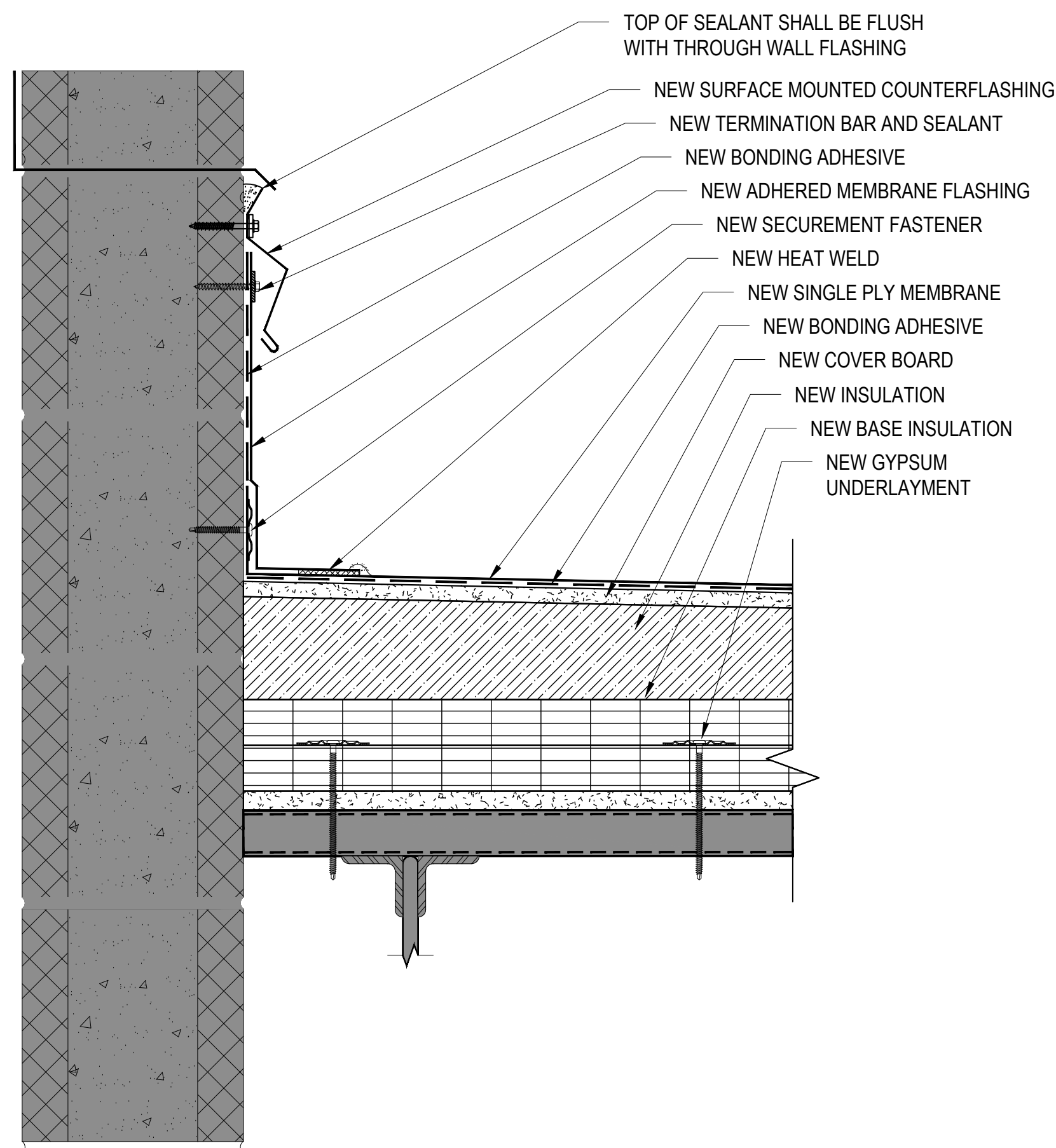
16 BASE FLASHING DETAIL
3"=1'-0"



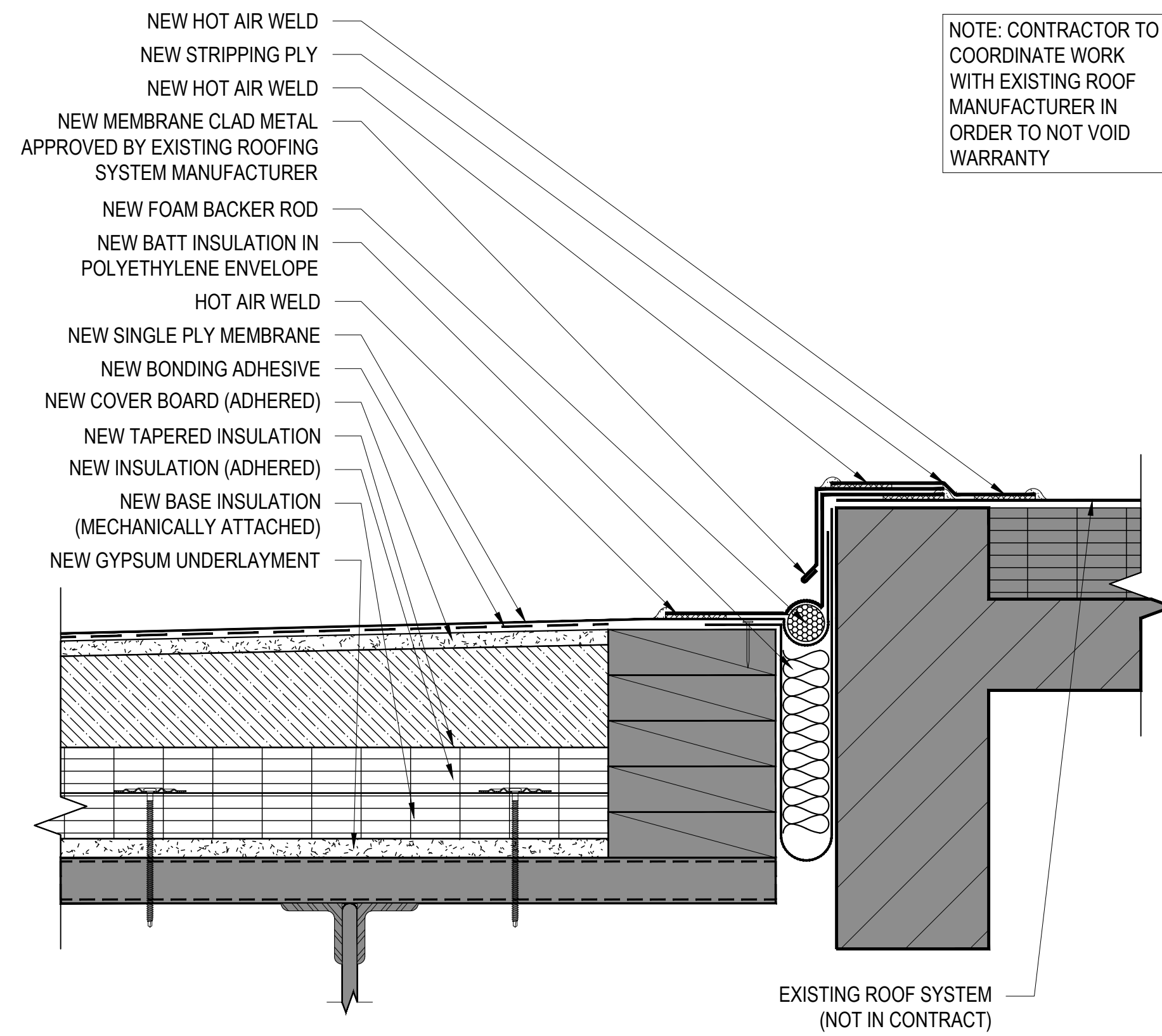
17 EXPANSION JOINT DETAIL
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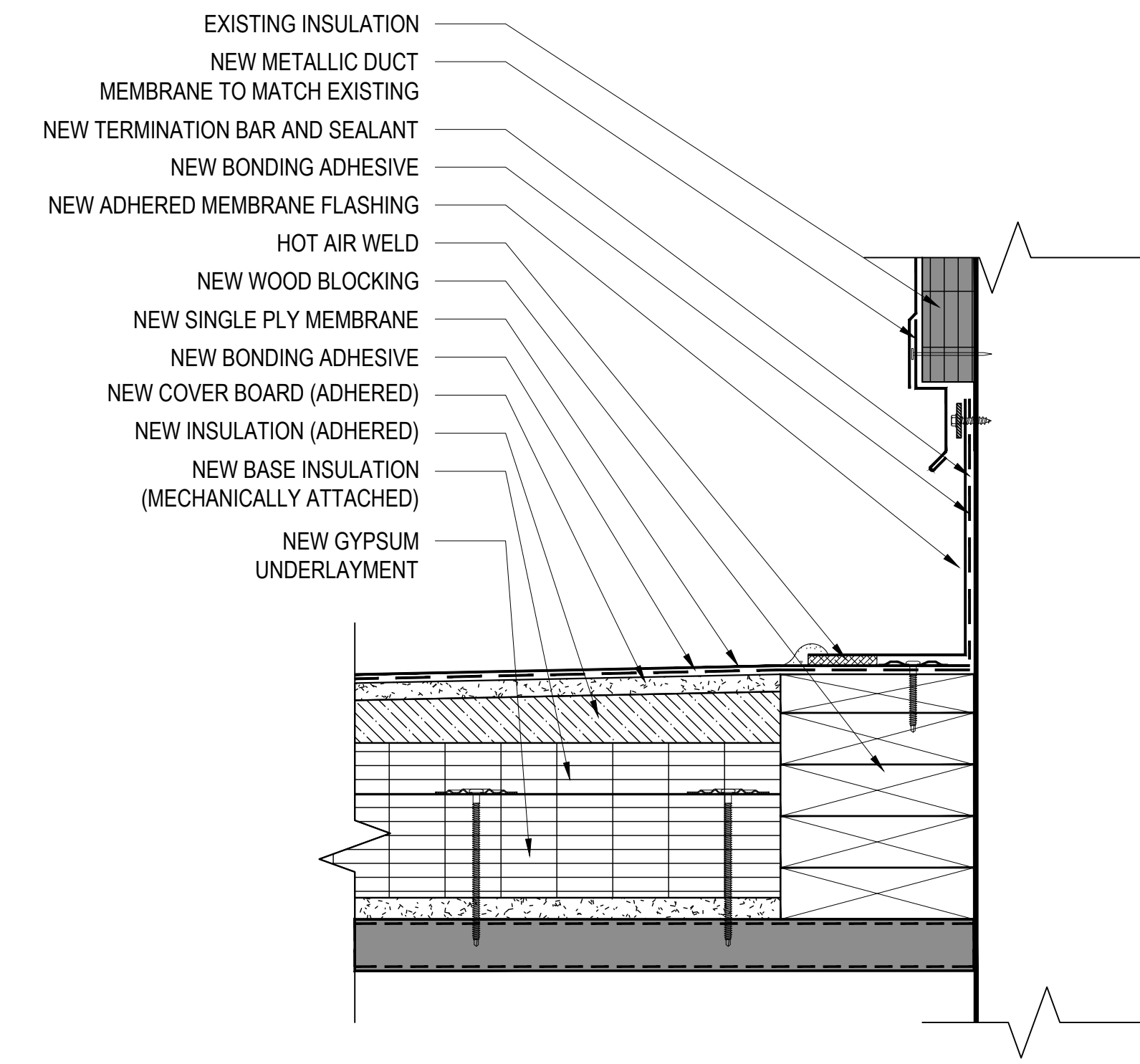
18 BASE FLASHING DETAIL
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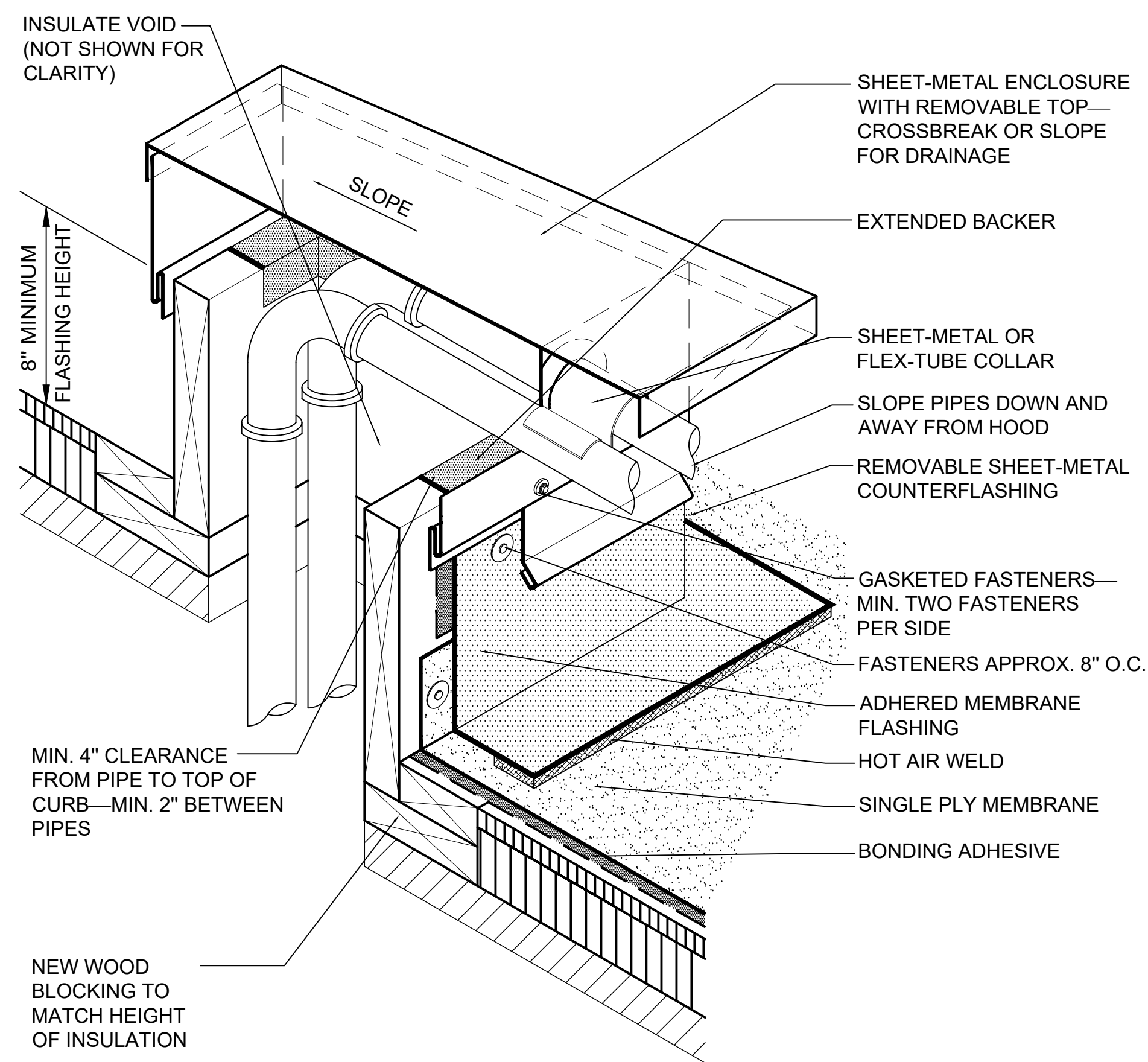
19 BASE FLASHING DETAIL
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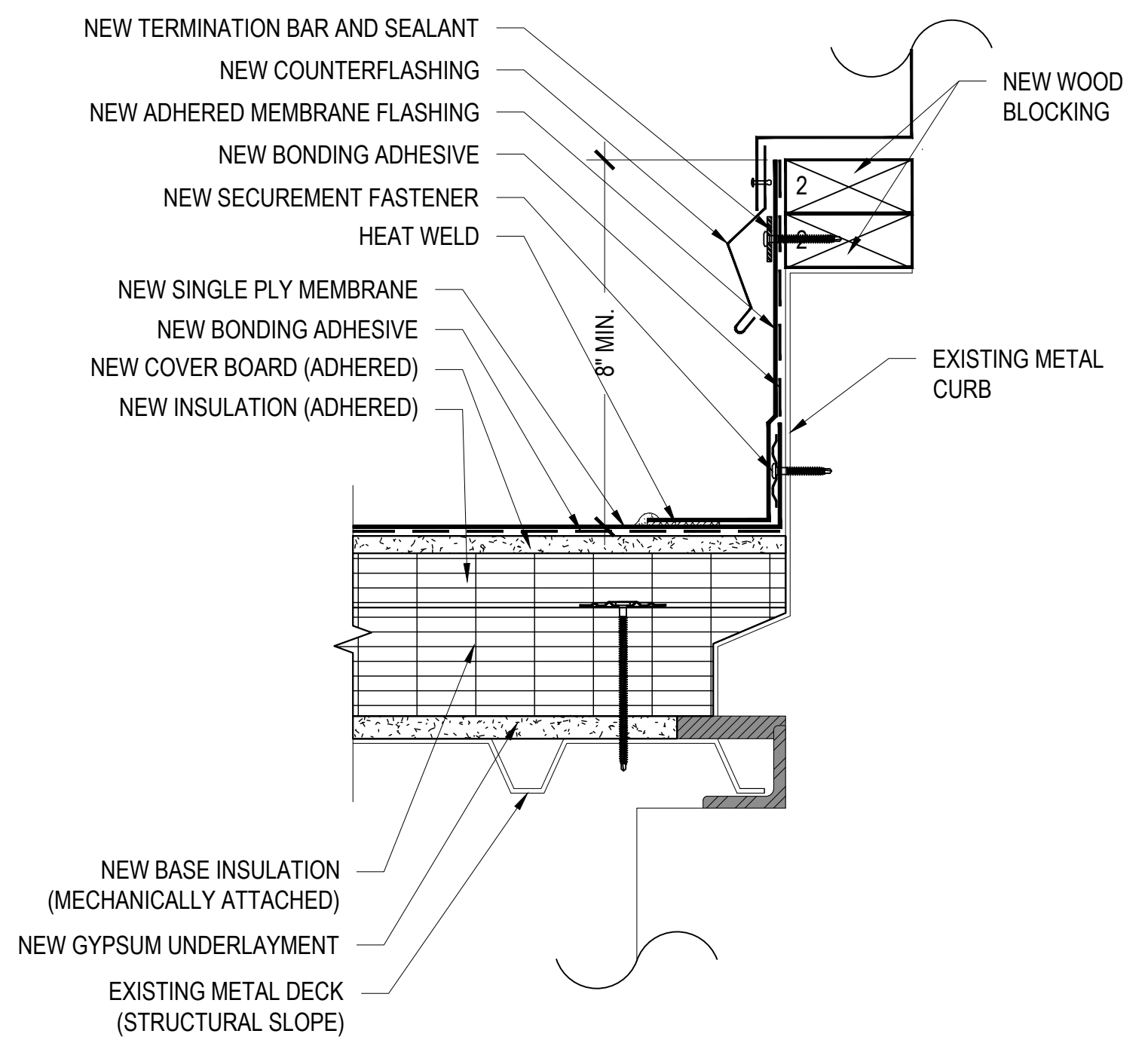
20 EXPANSION JOINT DETAIL
3"=1'-0"



21 DUCT PENETRATION DETAIL
3"=1'-0"



22 MULTI PIPE PENETRATION DETAIL
3"=1'-0"



23 EQUIPMENT CURB DETAIL
3"=1'-0"



1 CONTRACTOR SHALL FASTEN JOINTS IN GUTTER WHERE DISCONNECTED AND RESEAL JOINT
NTS



2 DUCT PENETRATION OVERVIEW
NTS



3 CONTRACTOR TO DETACH FRAME AS REQUIRED TO RAISE CURB FLASHING HEIGHT TO 8" AND REINSTALL TO WORKING ORDER
NTS

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