



Black Mountain Elementary Metal Retrofit Roof Recover Project

Buncombe County Schools
100 Flat Creek Road
Black Mountain, NC 28711

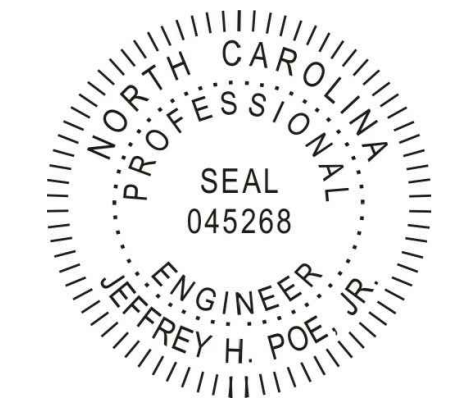
Index of Drawings

General
G-101 Cover Sheet
G-102 Appendix B

Architectural
A-101 Roof Plan
A-201 Details
A-202 Details

Terracon
Consulting Engineers and Scientists
2701 Westport Road
Charlotte, North Carolina
p: 704.599.1777
Project No. FH196034
Terracon NC License No.: F-0869
terracon.com

ENGINEER STATE LICENSE SEAL



PROJECT NAME AND ADDRESS:

Buncombe County Schools
**Black Mountain Elementary
Metal Retrofit Roof Recover Project**
Project Address
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ISSUE DATE:
07.10.2019

ISSUE FOR:
SCHEMATIC DOCUMENTS
NOT FOR CONSTRUCTION

ADDENDUM:
No. DATE DESCRIPTION:

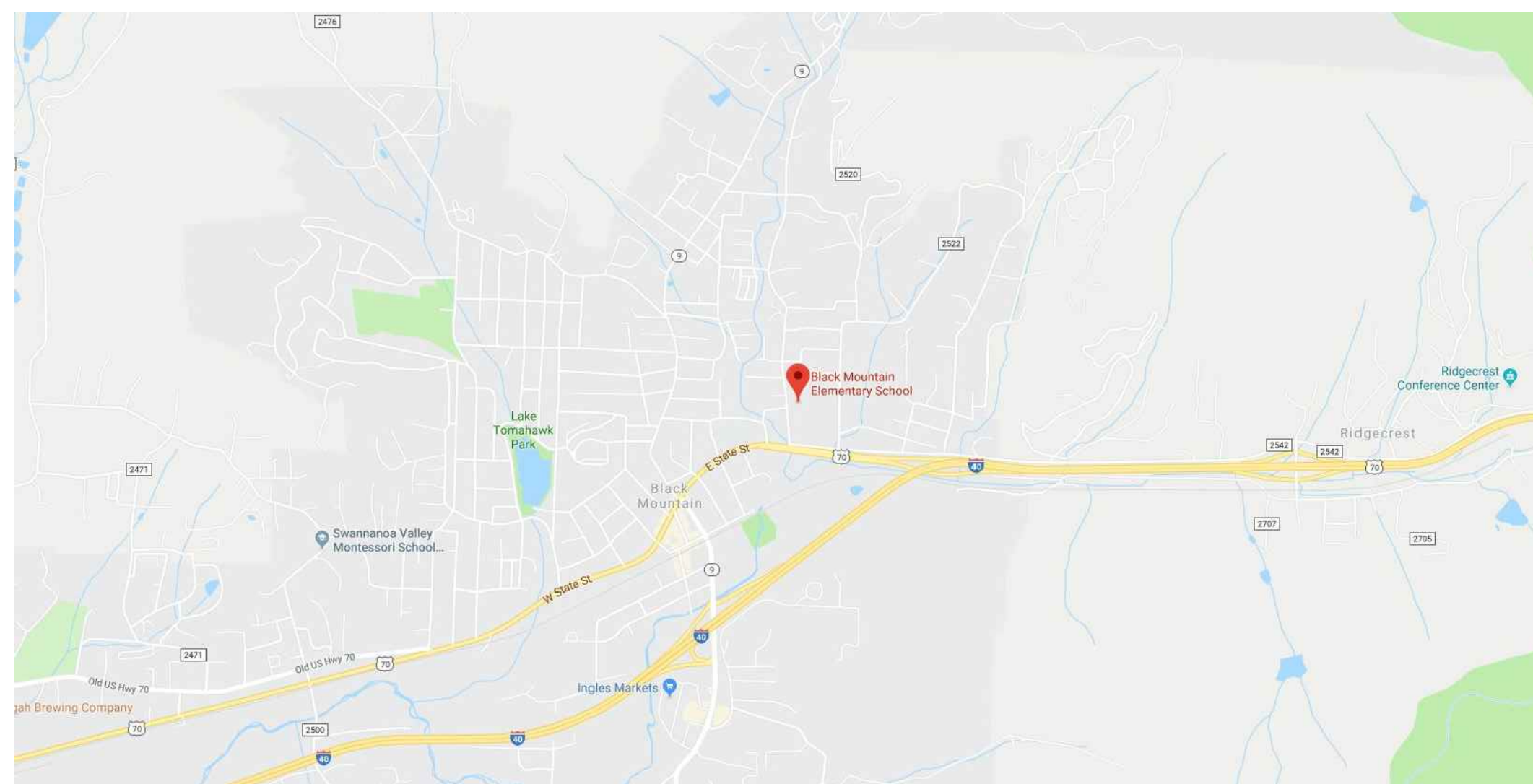
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JHP
DRAWN BY:
IMM
APR REVIEWER:

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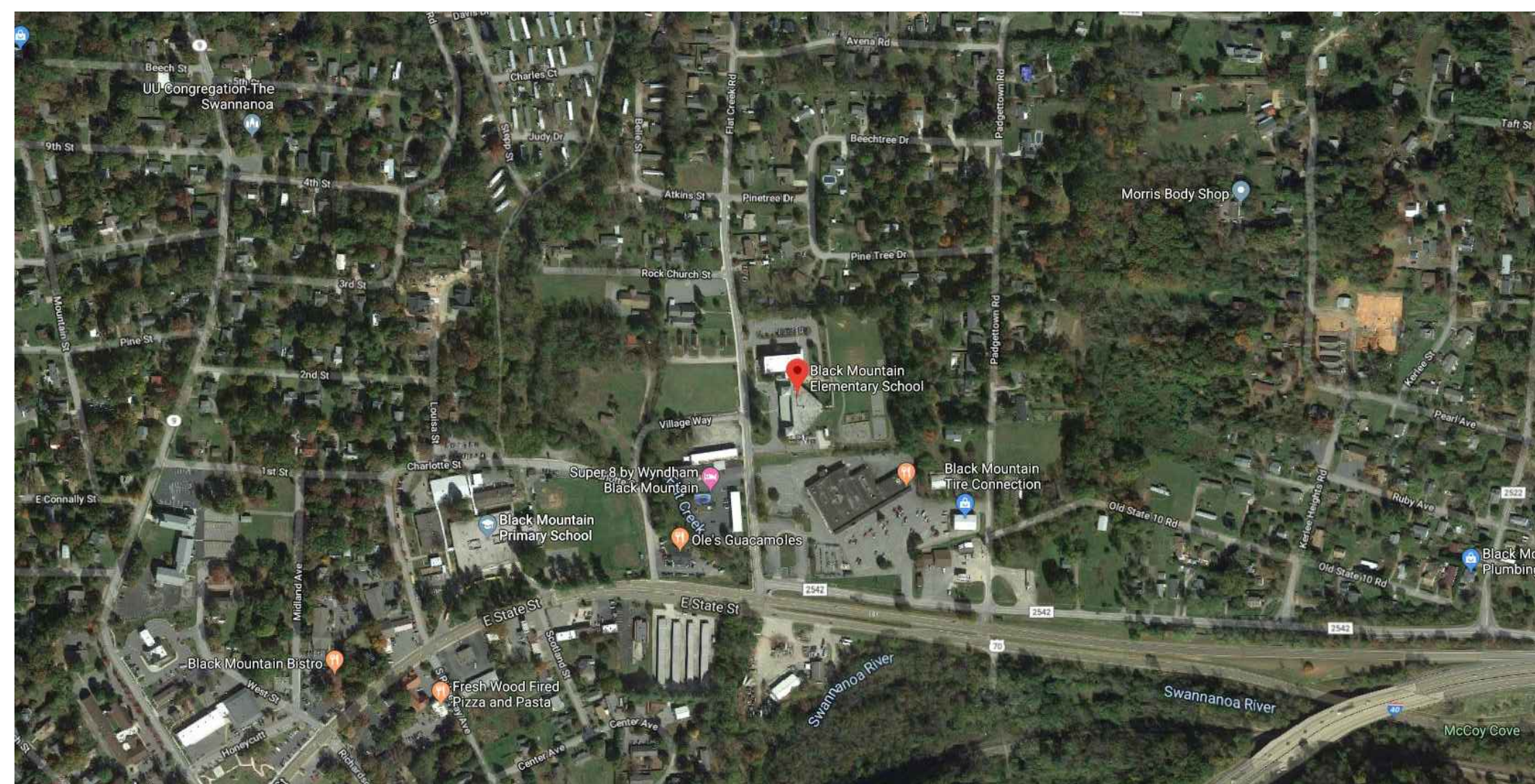
SHEET TITLE:
COVER SHEET

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

ELEVATION/DETAIL/SECTION LABEL
 SHEET SHOWN ON
 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

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**2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL ROOF PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**

Name of Project: Black Mountain Elementary Metal Retrofit Roof Recover Project
 Address: 100 Flat Creek Road, Black Mountain, NC
 Zip Code: 28711
 Proposed Use: N/A
 Owner or Authorized Agent: BUNCOMBE COUNTY SCHOOLS Phone # (828)-255-5921
 Owned By: BUNCOMBE COUNTY SCHOOLS City/County Private State
 Code Enforcement Jurisdiction: City N/A County N/A State

LEAD DESIGN PROFESSIONAL:
 DESIGN FIRM* TERRACON CONSULTANTS, INC.
 DESIGN NAME* JEFF_POE
 LICENSE # 045268 TELEPHONE # 704.509.1777 E-MAIL jeff.poe@terracon.com

2018 EDITION OF NC CODE FOR: Roof Replacement Roof Recover-Level 1 Alteration Roof Repair
 CONSTRUCTED: (date) 1999
 REPAIR: (date) N/A
 RECOVER: (date) N/A

BASIC BUILDING DATA
 Construction Type: I-A II-A III-A IV V-A
 (check all that apply) I-B II-B III-B V-B
 Mixed construction: No Yes Types N/A
 Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
 Standpipes: No Yes Class I II III Wet Dry
 Fire District: No Yes
 Building Height: (feet) 30

OCCUPANCY:
 Assembly
 Business
 Educational
 Factory F-1 and F-2
 Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional
 Mercantile
 Residential R-1 R-2 R-3 R-4
 Storage S-1 S-2
 Utility and Miscellaneous Parking Garage, Repair Garage

NO CHANGE

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE, (FEET)	DETAIL # AND SHEET	DESIGN # FOR RATED ASSEMBLY
Structural frame, including columns, girders, trusses	N/A	N/A	N/A

STRUCTURAL DESIGN

DESIGN LOADS:
 Wind Uplift Reactance (This section to be duplicated for each distinct roof area)

BASIC WIND SPEED 120 MPH (ASCE-7-10)
 EXPOSURE CATEGORY B

DESIGN PRESSURE (PSF):

FIELD 34 PSF
 PERIMETER 52 PSF
 PERIMETER WIDTH 4 FT
 CORNER 73 PSF
 CORNER DIMENSION 4 x 4 FT

DEAD LOADS:
 EXISTING ROOF LOAD 2 lbs PSF
 REPLACEMENT ROOF LOAD 2.6 lbs PSF
 NET LOAD CHANGE 2.6 lbs PSF

SNOW LOAD: 20 PSF

ENERGY SUMMARY

ENERGY REQUIREMENTS:
 THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

Climate Zone: 3 4 5

Method of Compliance:

Prescriptive (Energy Code) R-20
 Performance (Energy Code) R-20
 Prescriptive (ASHRAE 90.1)
 Performance (ASHRAE 90.1)

THERMAL ENVELOPE
 ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
 DESCRIPTION OF ASSEMBLY: NEW METAL ROOF, NEW 4 INCHES POLYSILOCYANRATE INSULATION, EXISTING METAL ROOF, 3 INCHES BATT INSULATION
 U-VALUE OF TOTAL ASSEMBLY: .038
 R-VALUE OF INSULATION: 26
 SKYLIGHTS IN EACH ASSEMBLY: N/A
 U-VALUE OF SKYLIGHT: N/A
 TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY: N/A SQ.FT.

ROOF DRAINAGE SYSTEM DESIGN CALCULATION/SIZING

EXISTING SYSTEM CALCULATION:
 NO CHANGES TO DRAINAGE AREAS

MODIFICATION TO EXISTING SYSTEM:
 CURRENTLY DRAINS OVER EAVES. NEW GUTTERS AND DOWNSPOUTS WILL BE ADDED TO EAVES

NEW (WHERE NONE EXISTS) SECONDARY SYSTEM: NOT APPLICABLE

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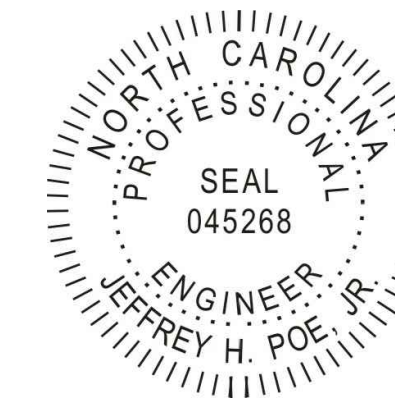
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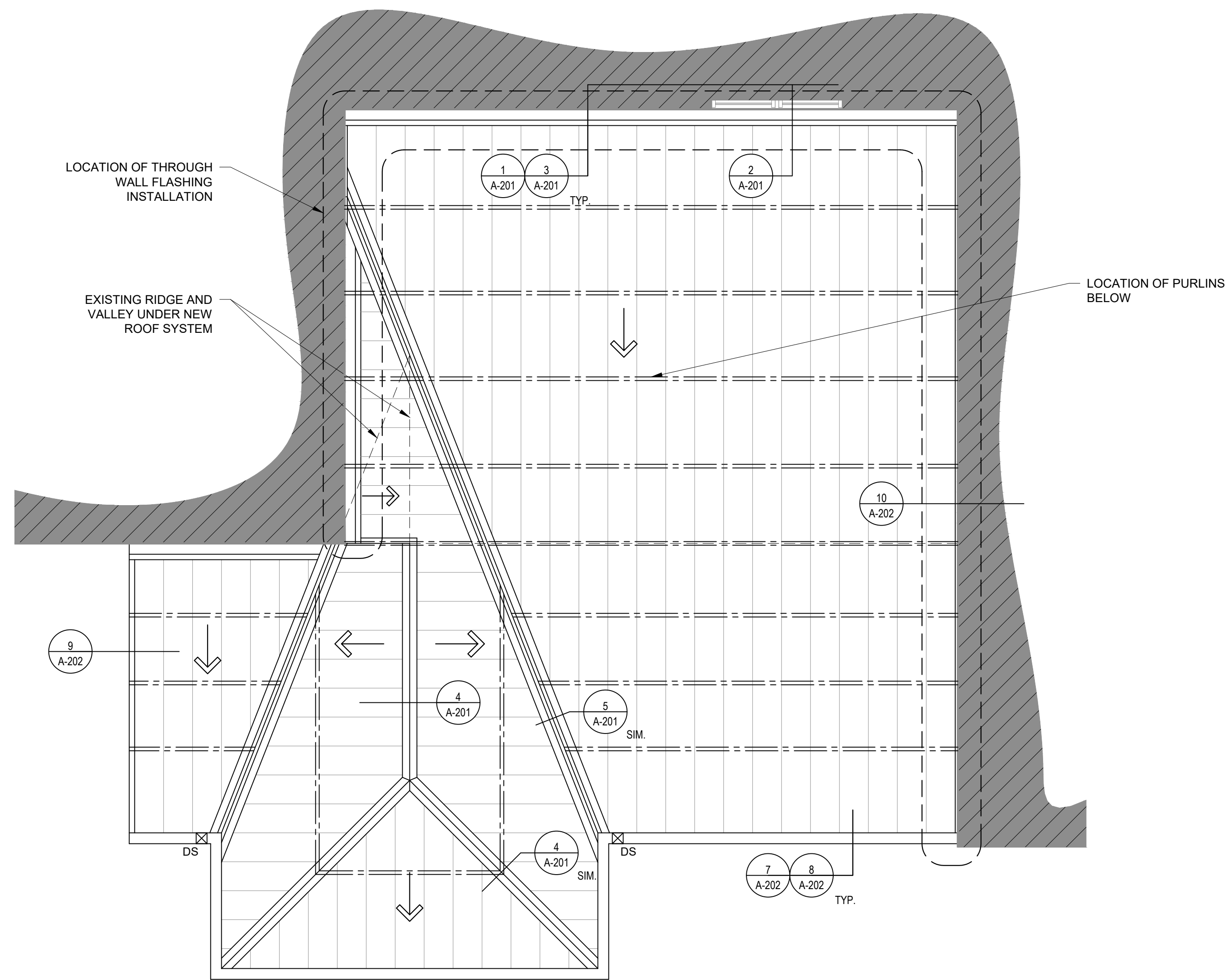
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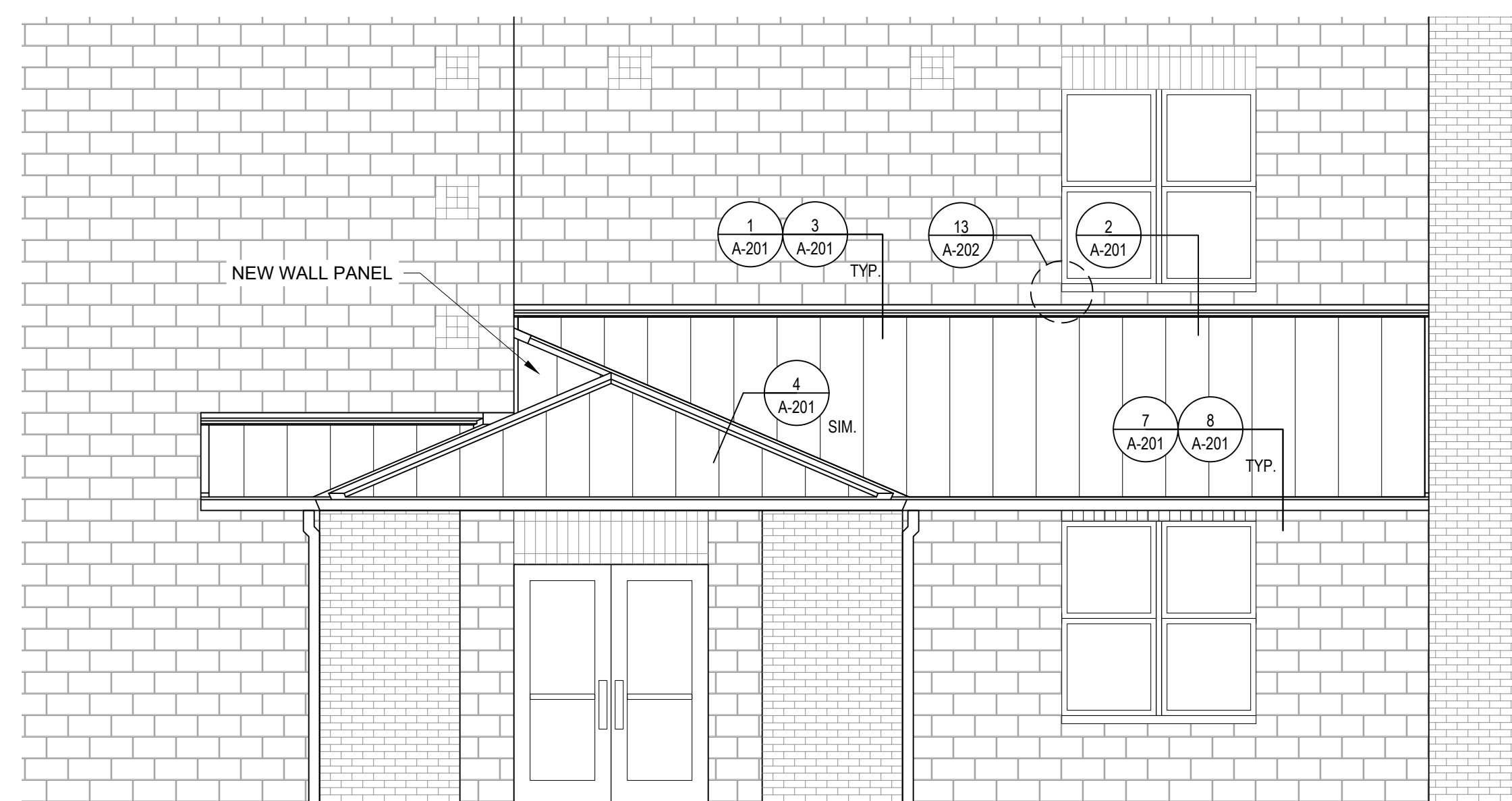
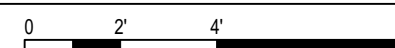
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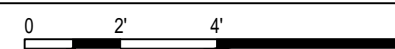
G-102



1 ROOF PLAN
1/4"=1'-0"



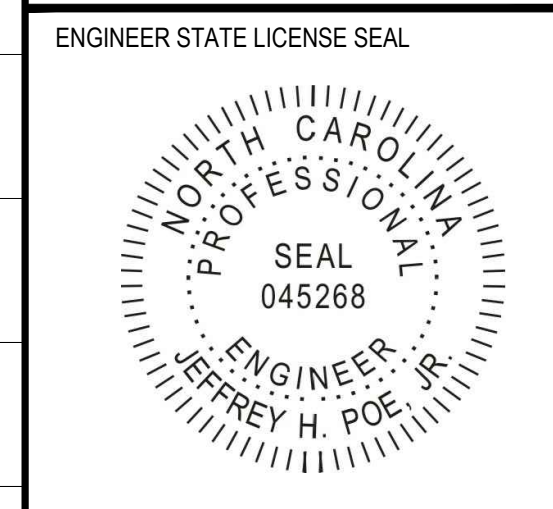
2 ELEVATION
1/4"=1'-0"



LEGEND	
	DETAIL FLAG
	NOT IN CONTRACT
	METAL ROOF PANELS
	EXISTING PURLIN BELOW
	EXISTING DOWNSPOUT
	SLOPE IN STRUCTURE

GENERAL NOTES	
1.	CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
2.	CONTRACTOR TO MATCH SLOPE OF EXISTING CONDITIONS

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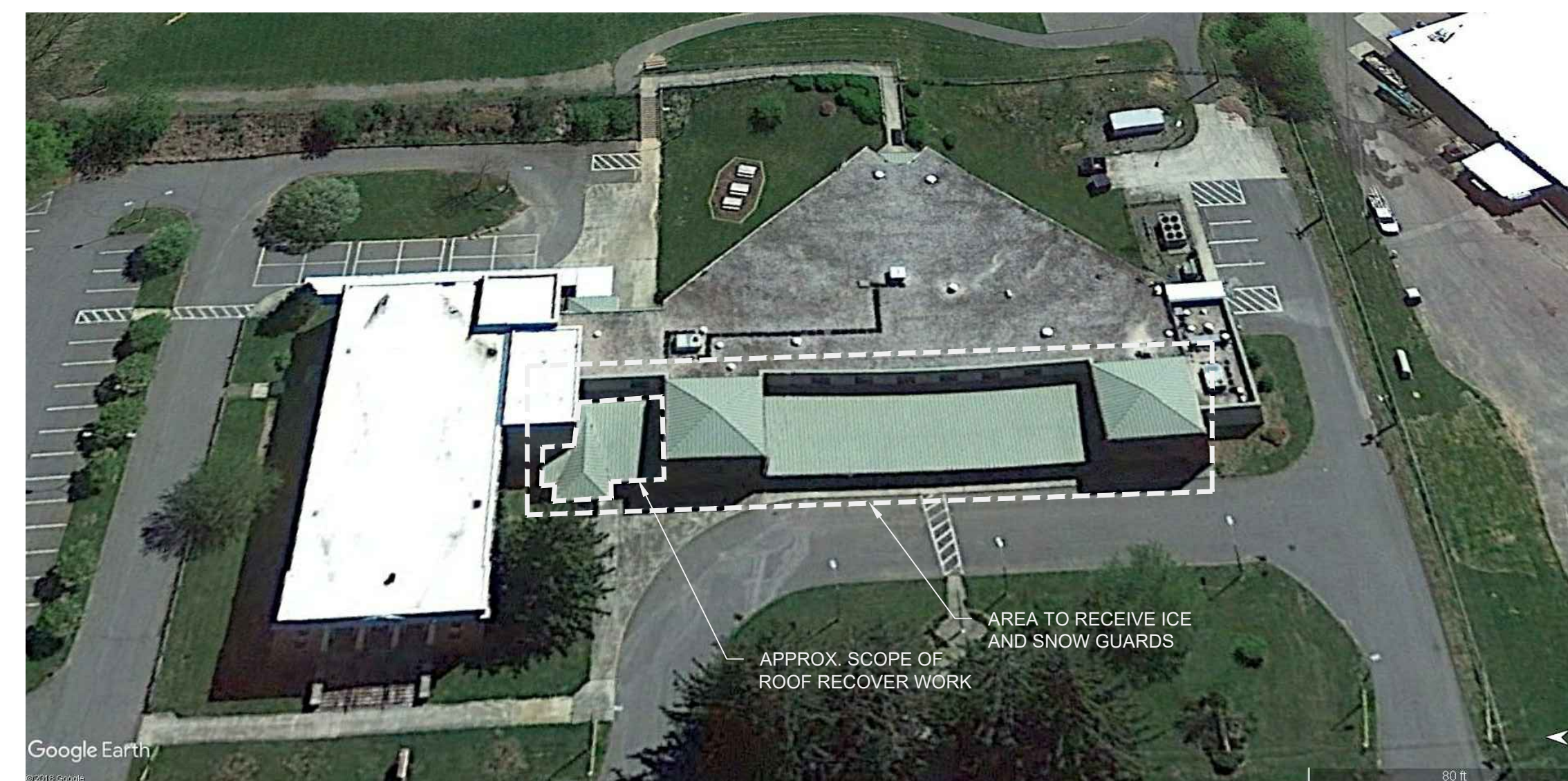
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ROOF PLAN

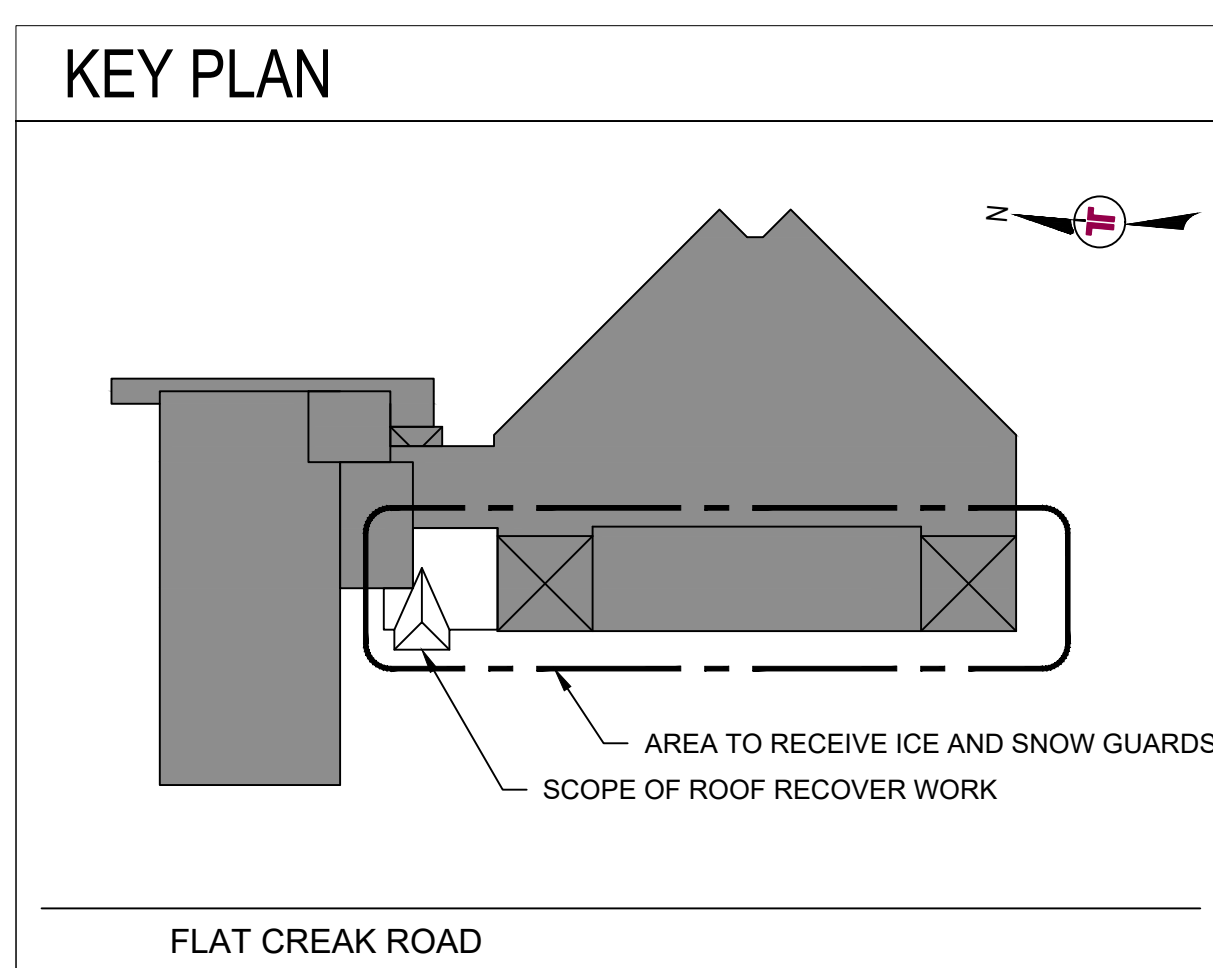
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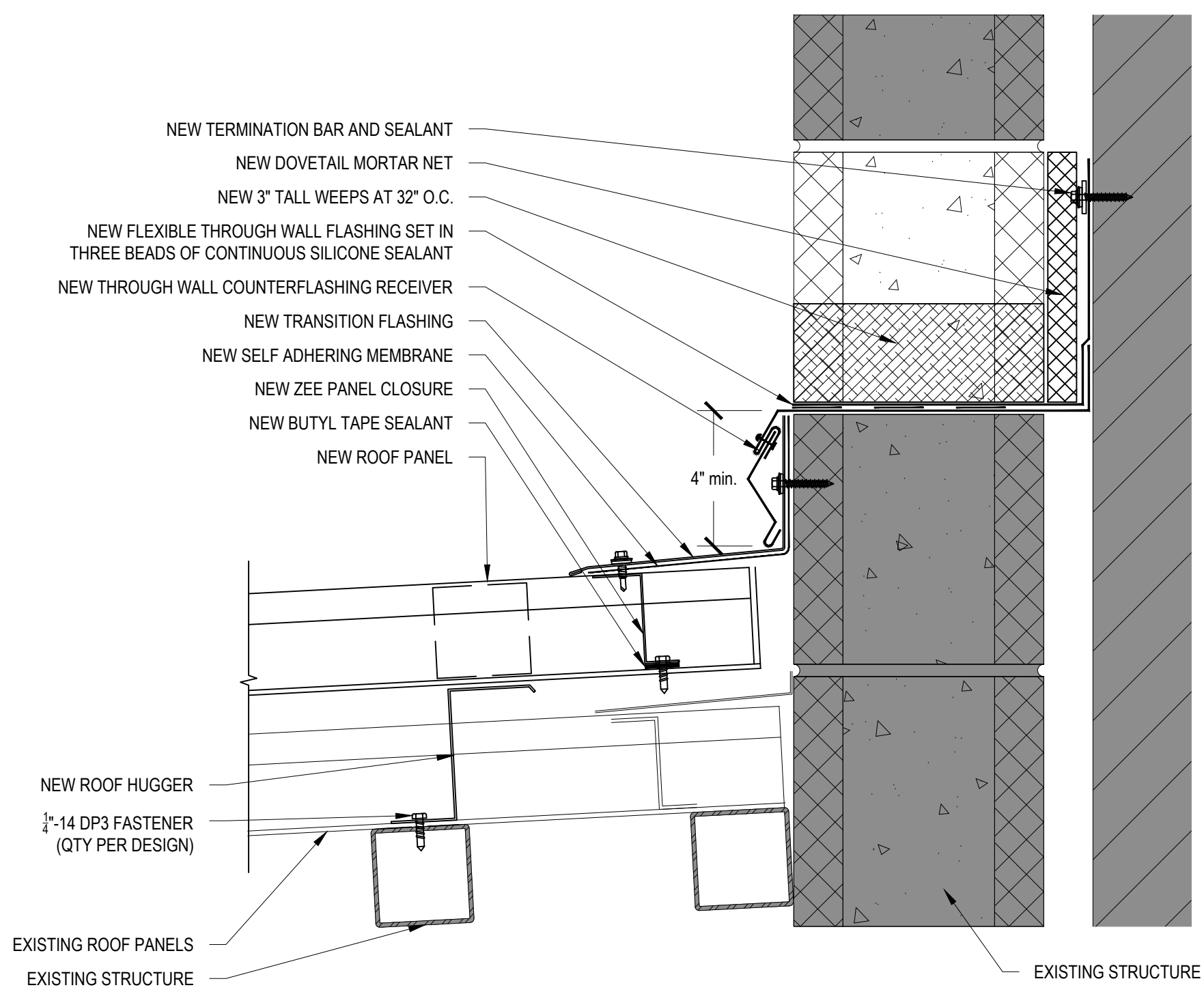
3 OVERALL SITE PLAN PHOTO
NTS



4 EXISTING CONDITIONS
NTS

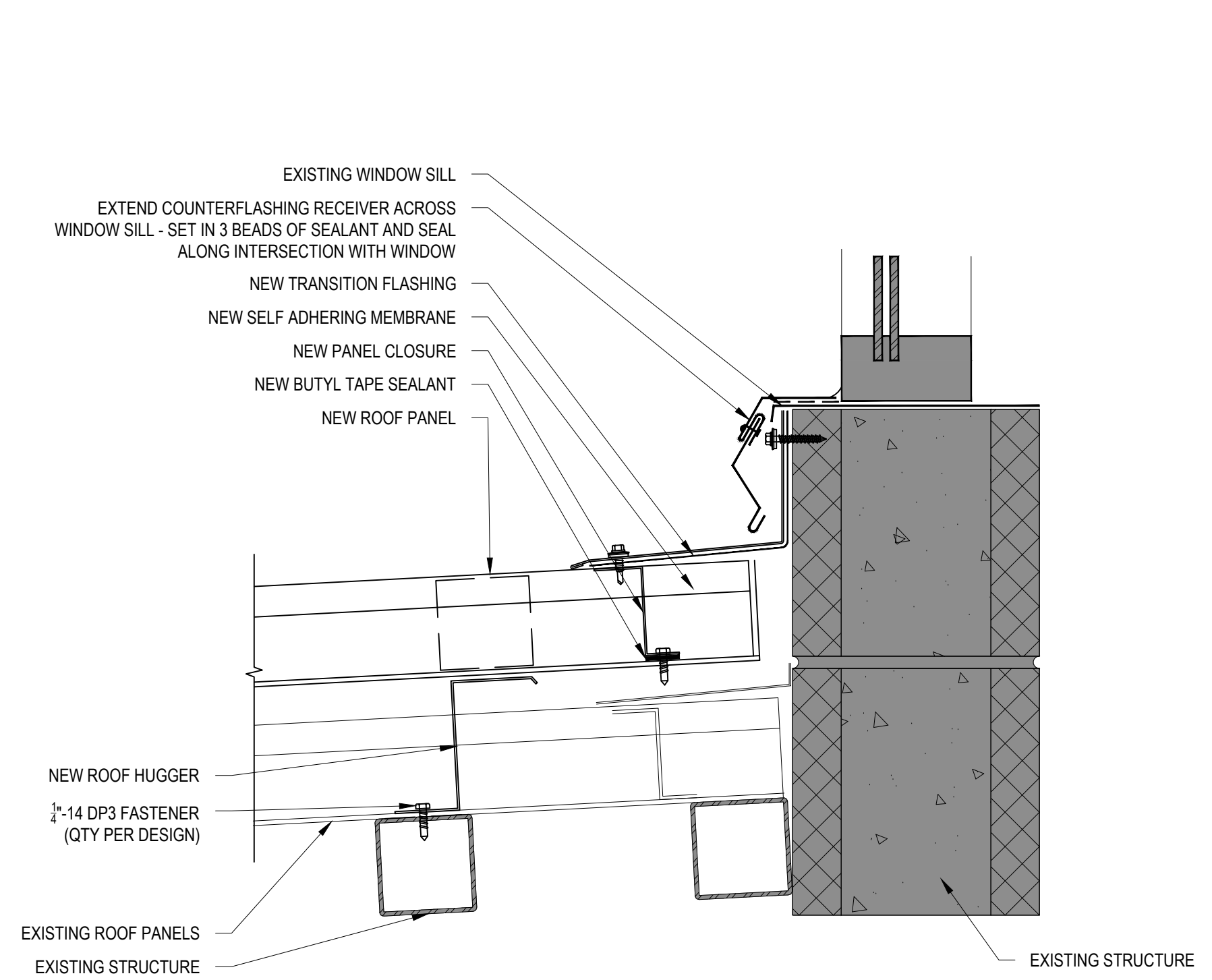


KEY PLAN



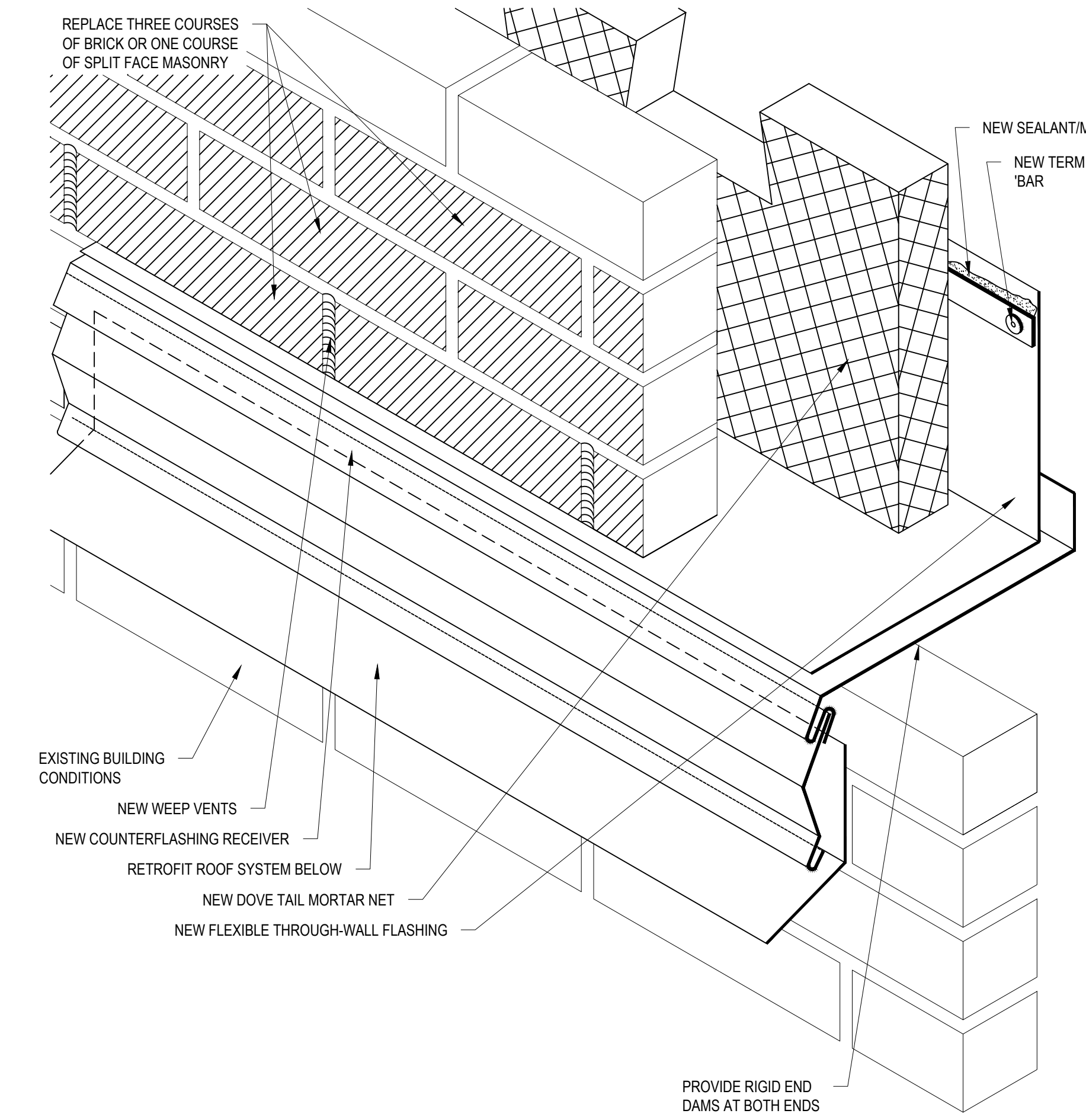
- NOTES:
1. ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM, AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS
 2. THROUGH WALL FLASHING IS TO LAP 6" AND CONTAIN 3 BEADS OF SEALANT WITHIN LAP.

1 TYP. RIDGE/THROUGH WALL FLASHING DETAIL
 3"=1'-0"

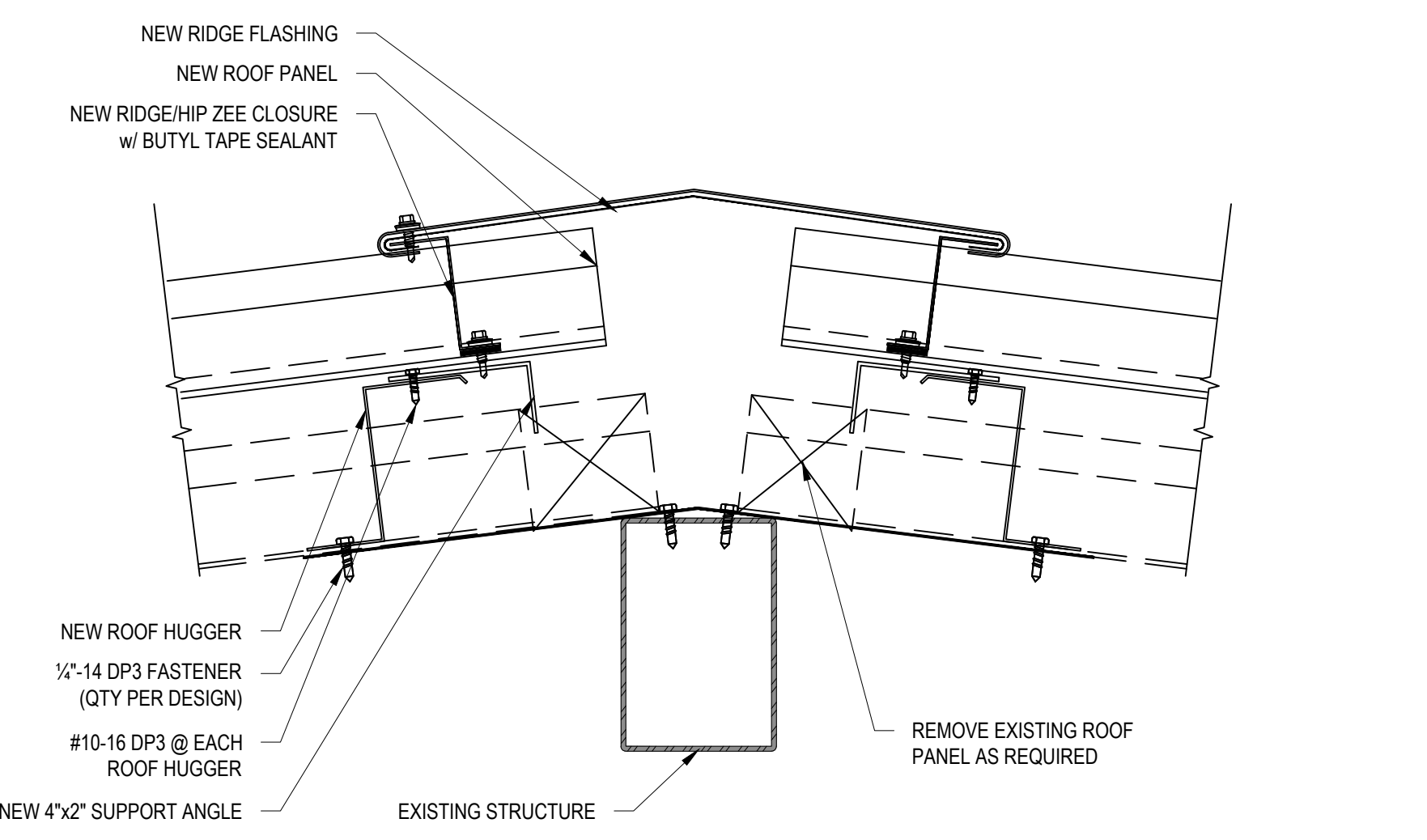


- NOTES:
1. ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM, AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS

2 RIDGE/THROUGH WALL FLASHING AT WINDOW CONDITION
 3"=1'-0"

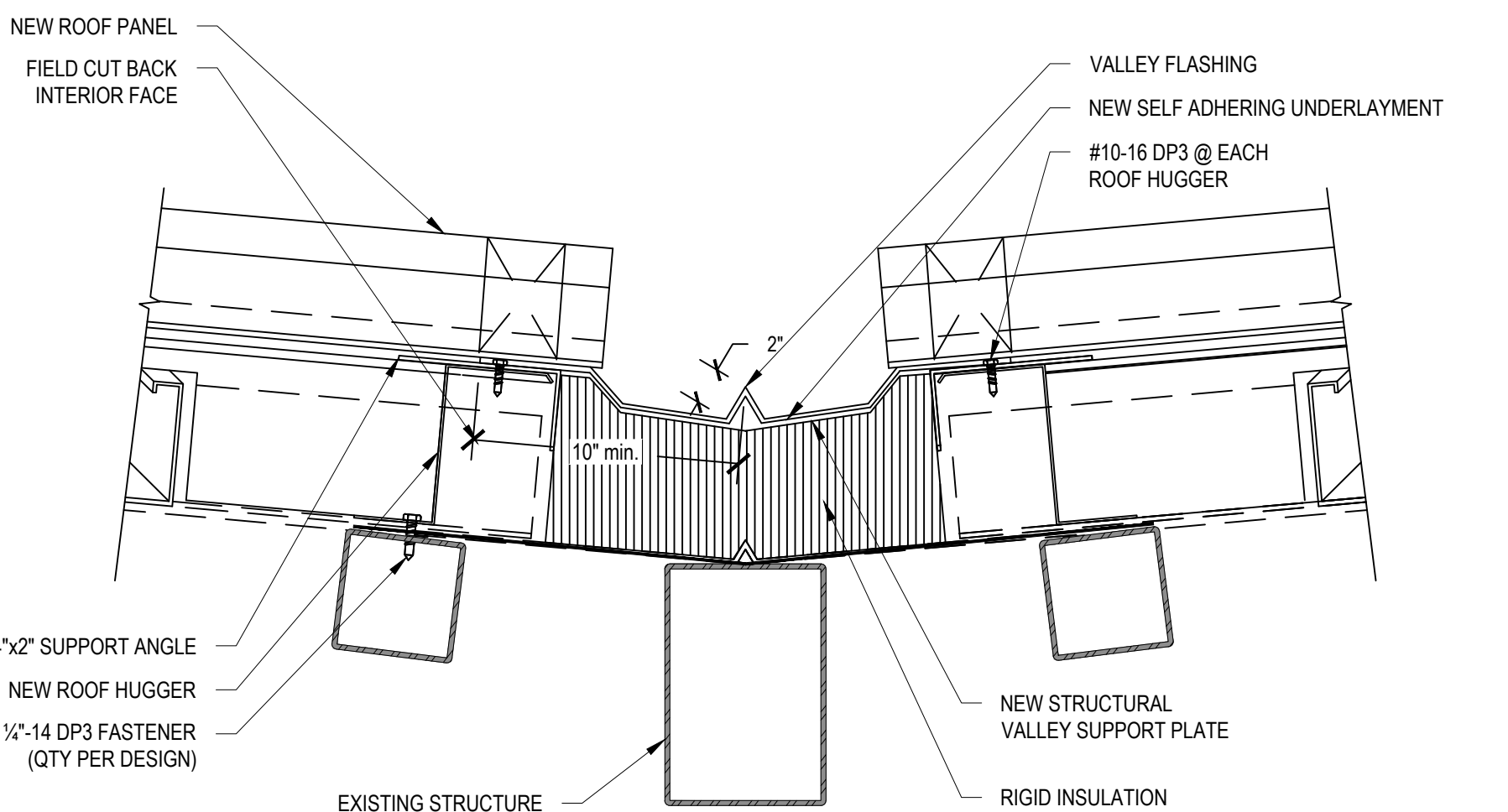


3 TYPICAL THROUGH WALL FLASHING DETAIL
 NTS



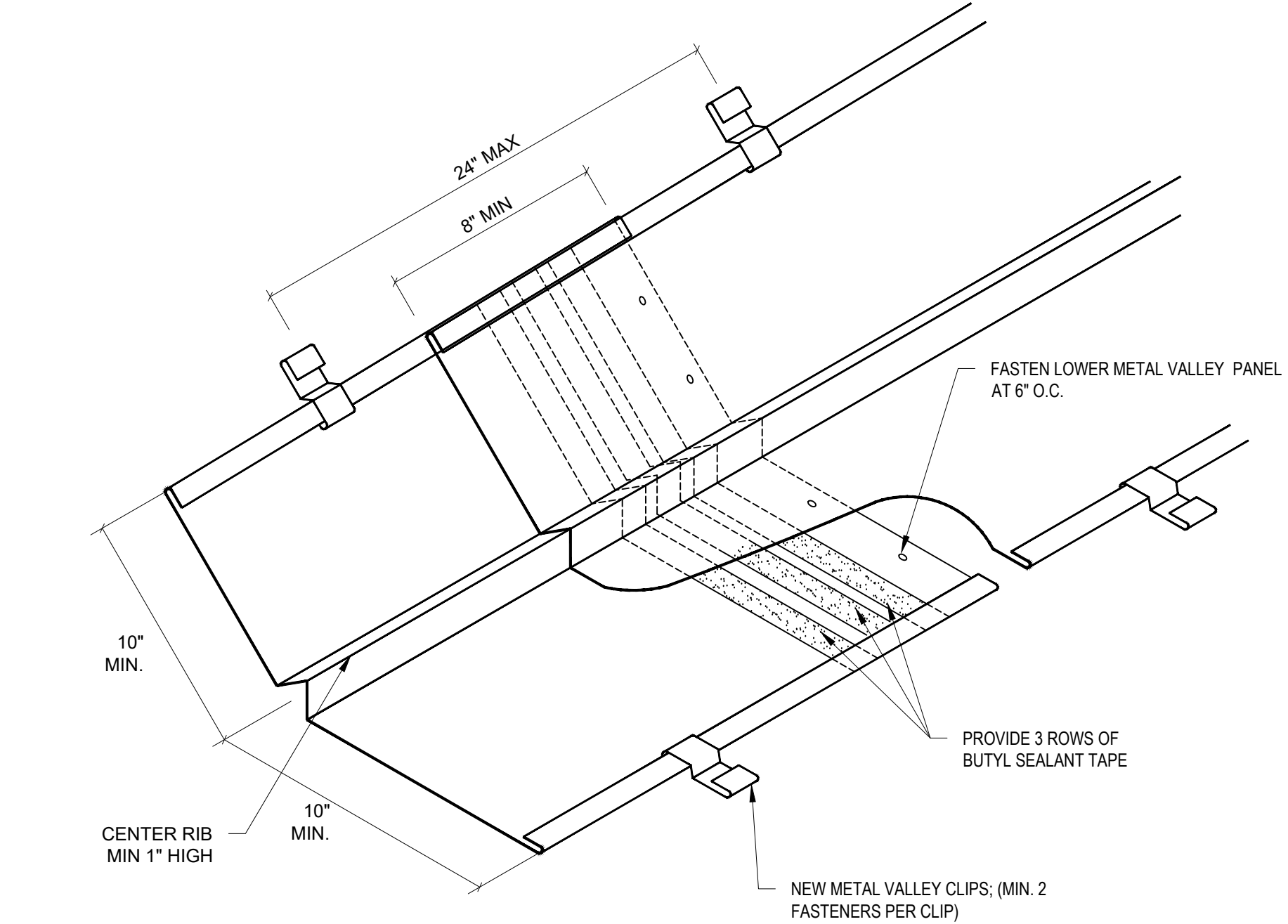
- NOTES:
1. ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM, AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS

4 TYP. RIDGE/HIP DETAIL
 3"=1'-0"

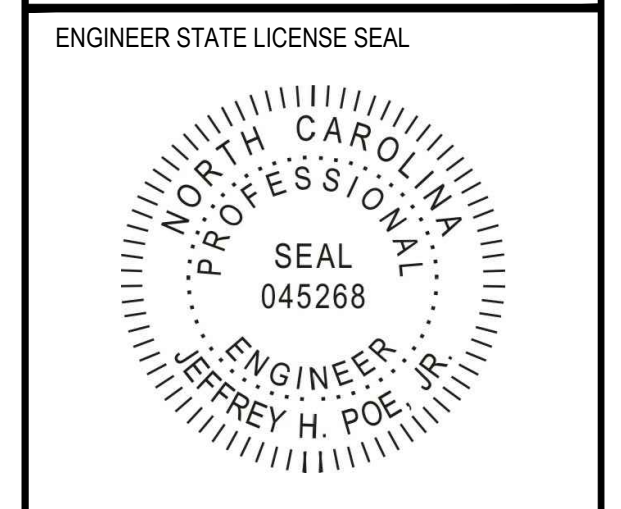


- NOTES:
1. ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM, AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS

5 TYP. VALLEY DETAIL
 3"=1'-0"



6 TYP. VALLEY DETAIL
 3"=1'-0"



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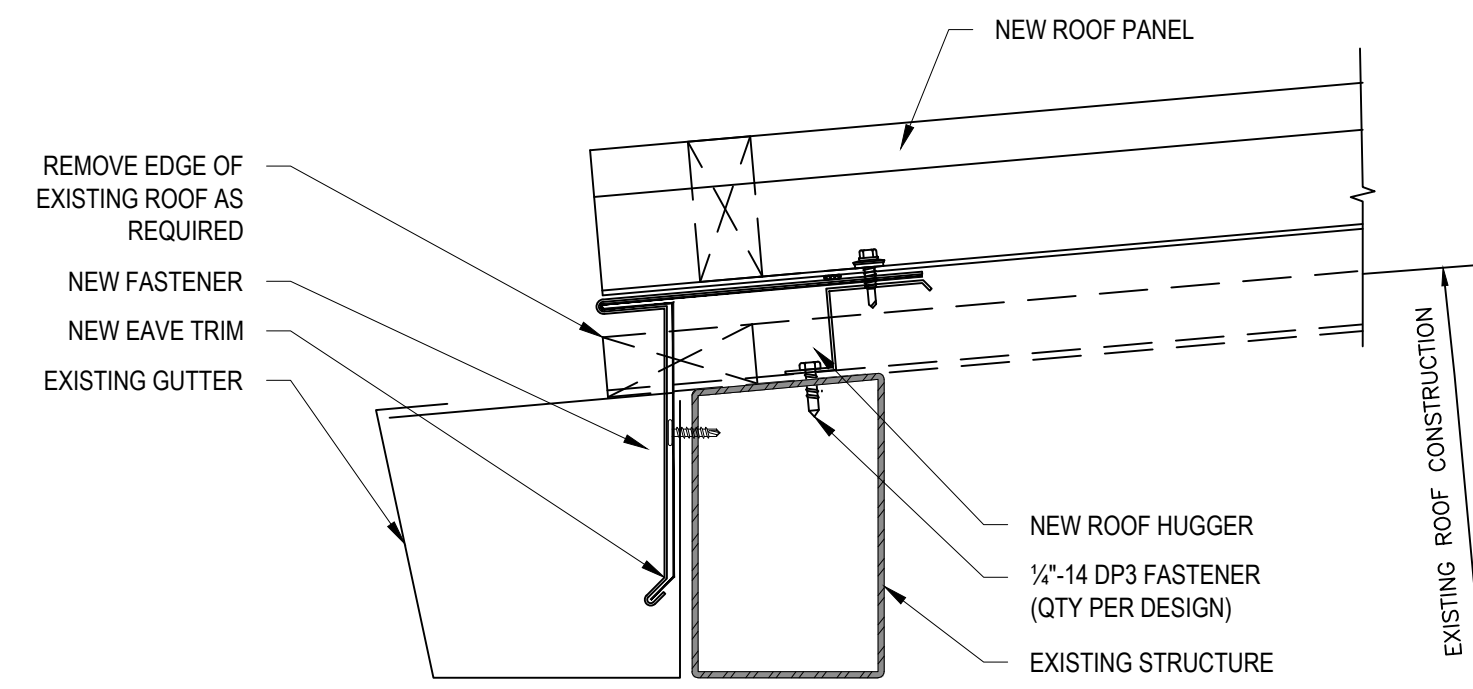
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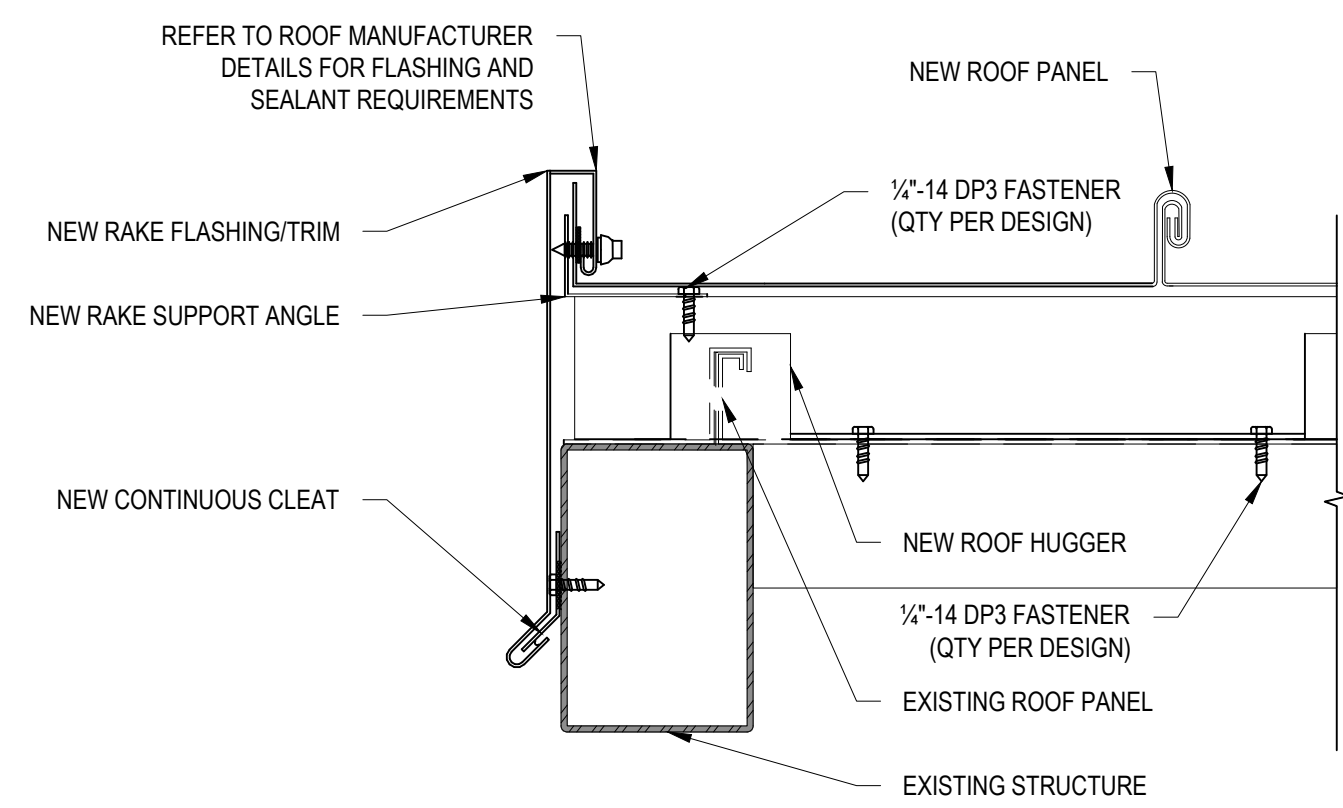
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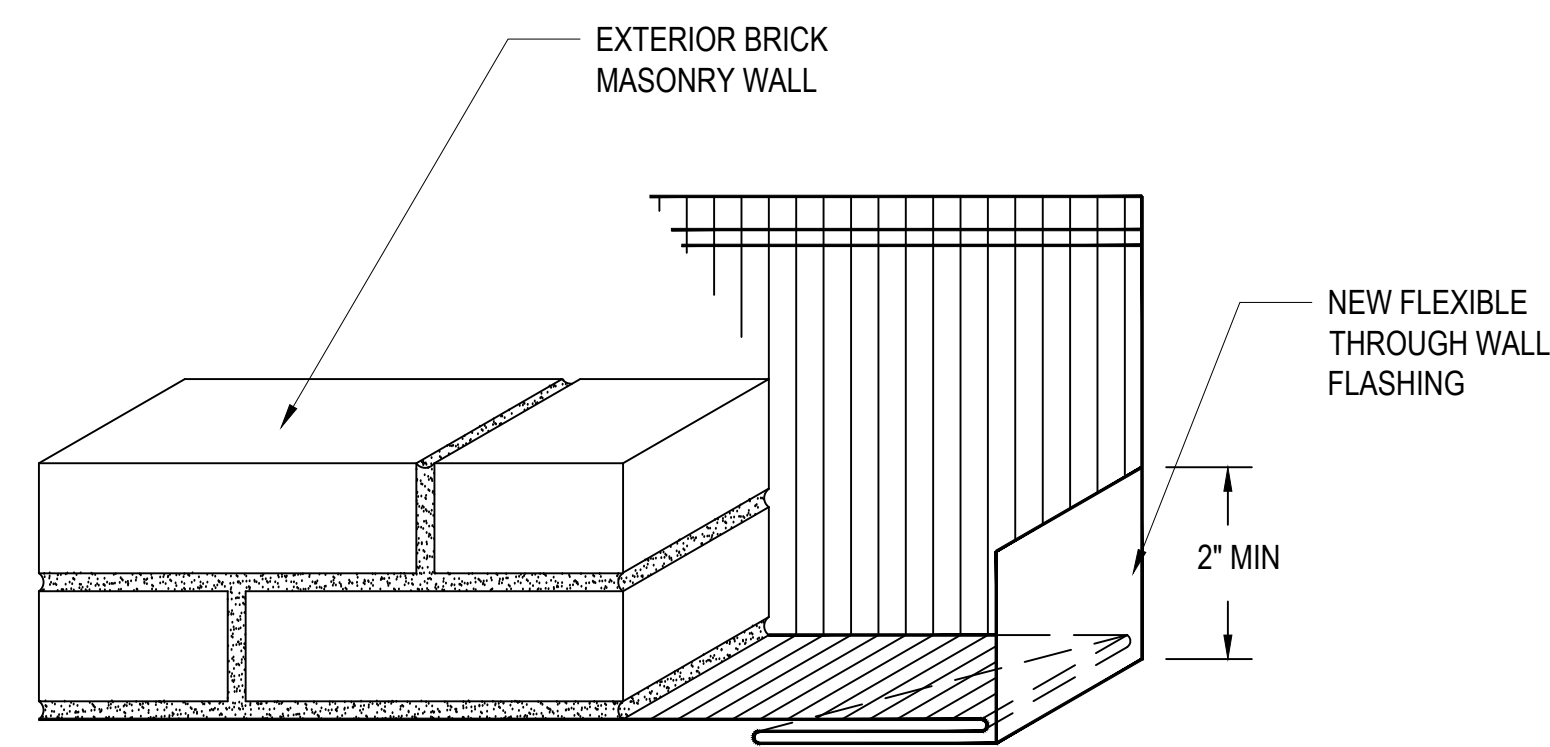
SHEET NUMBER:
A-201



7 TYP. EAVE/GUTTER EDGE DETAIL
3"=1'-0"

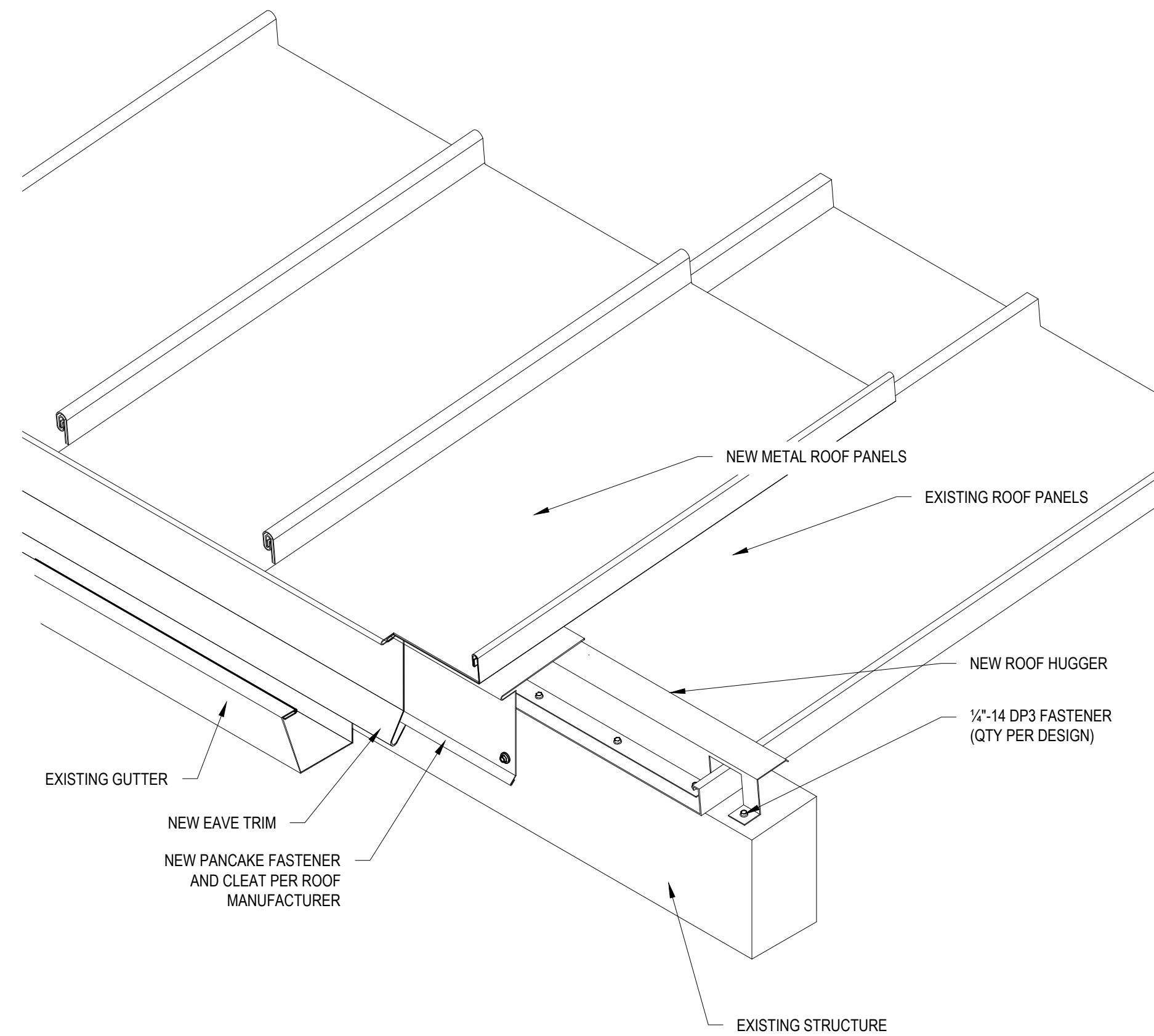


10 TYP. RAKE EDGE DETAIL
3"=1'-0"

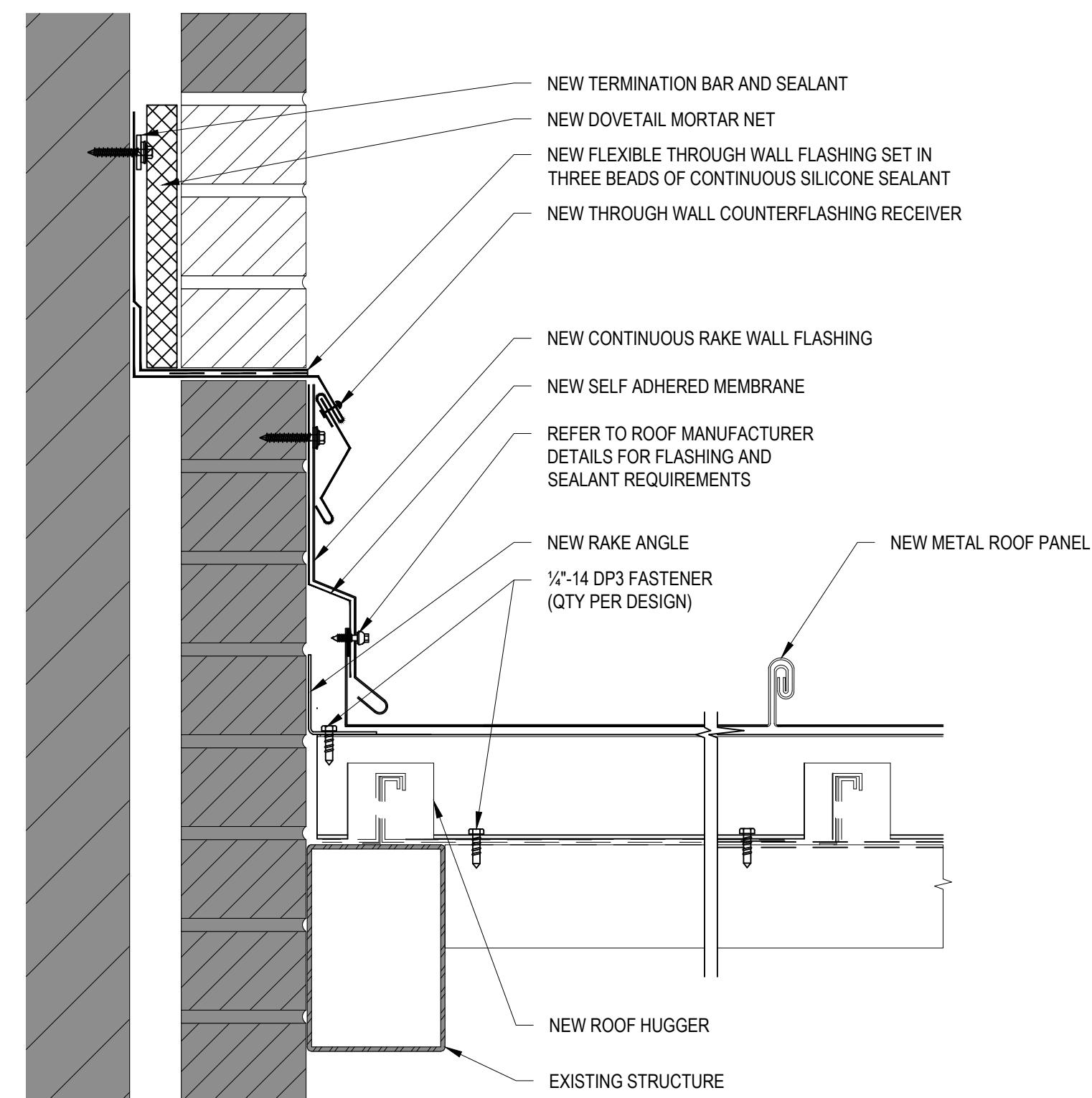


TO BE USED AT ALL LOCATIONS E.G. WINDOW TERMINATIONS, CONTROL JOINTS, ETC. WHERE FLASHINGS ARE NOT CONTINUOUS IN WALLS. METAL THROUGH-WALL FLASHING WITH END DAM NOT SHOWN FOR CLARITY. REFER TO SPECIFICATIONS.

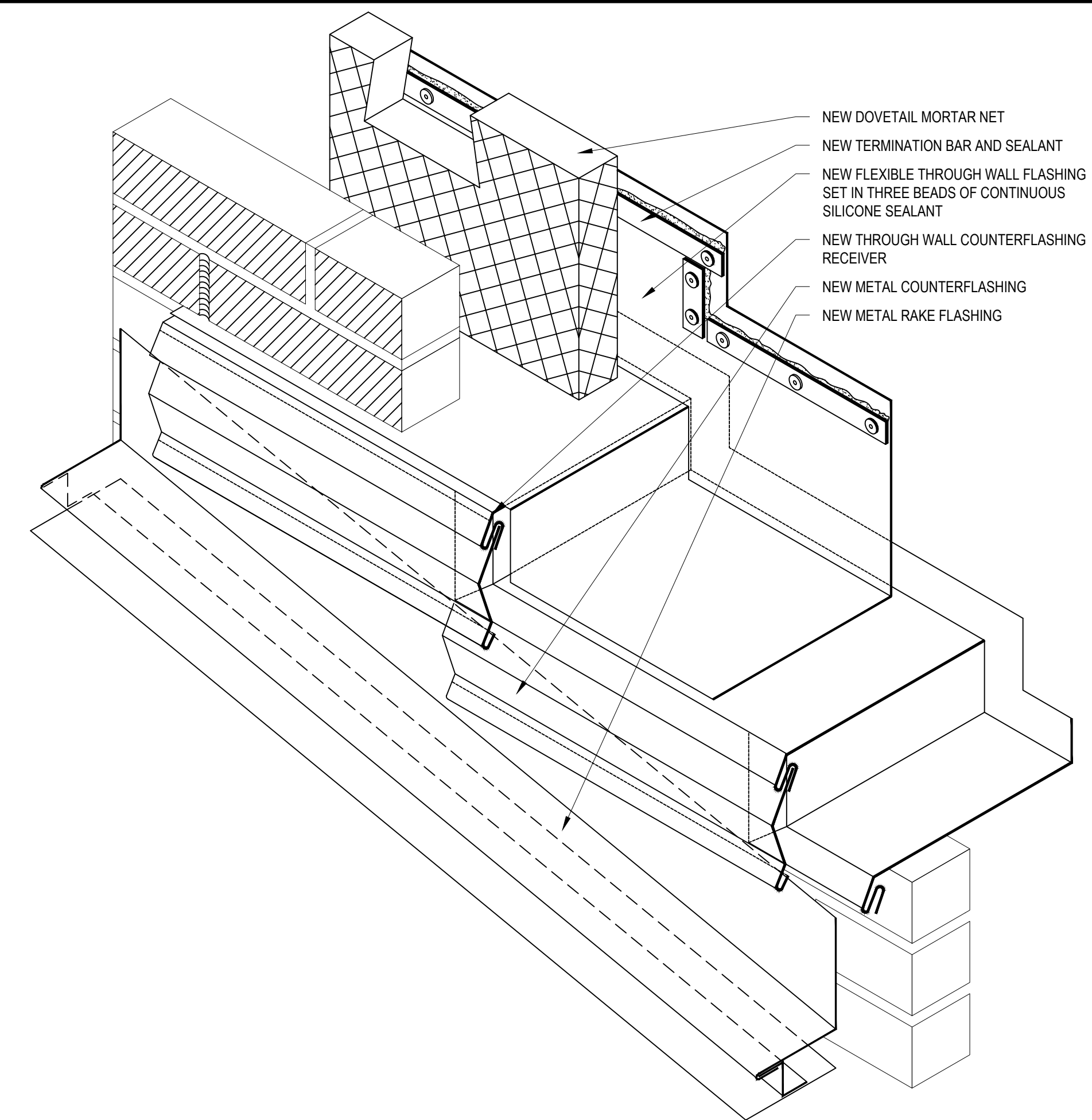
11 FLEXIBLE FLASHING END DAM DETAIL (TYP.)
NTS



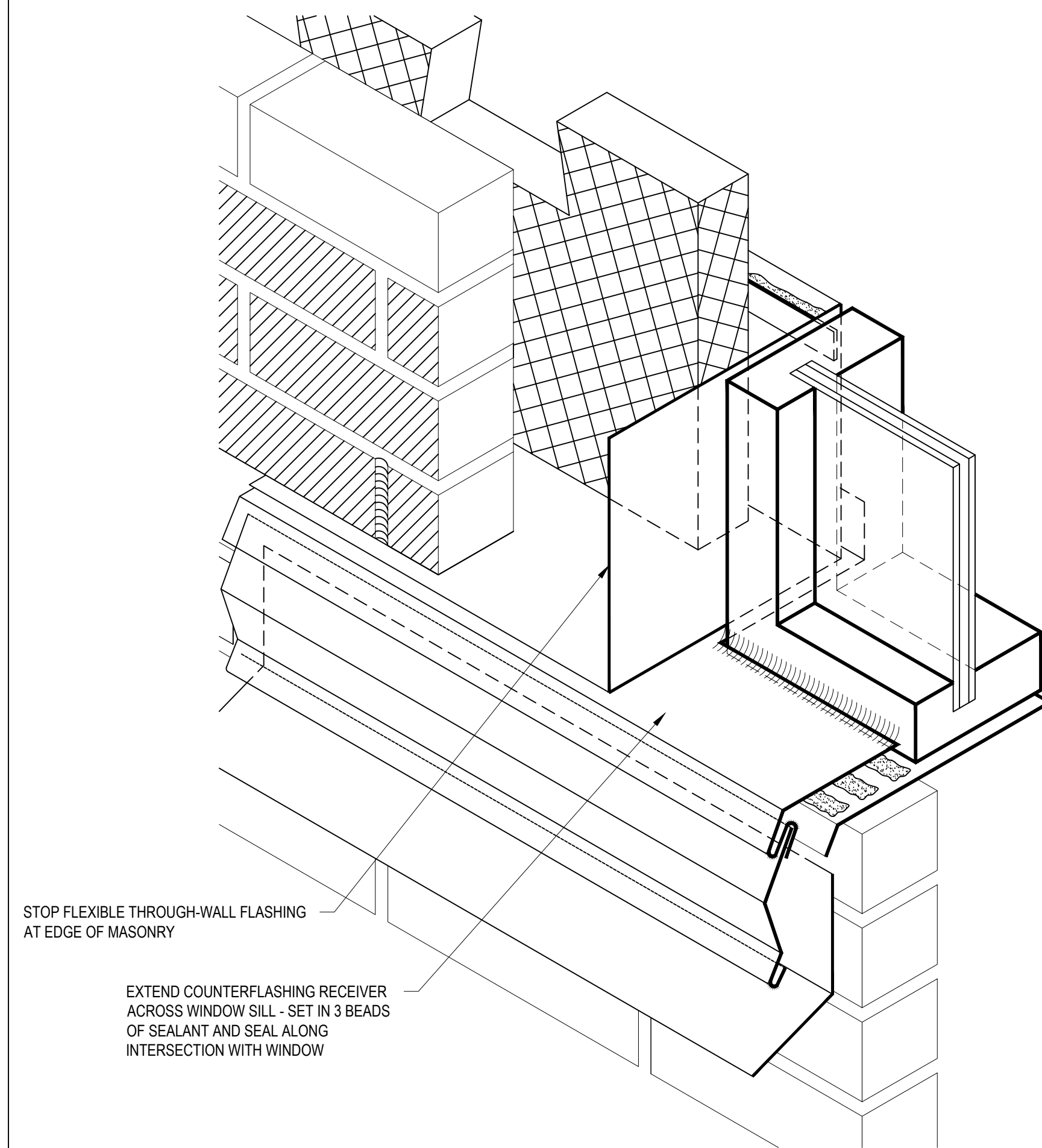
8 TYP. EAVE/GUTTER EDGE DETAIL
1-1/2"=1'-0"



12 TYP. RAKE/THROUGH WALL FLASHING DETAIL
3"=1'-0"

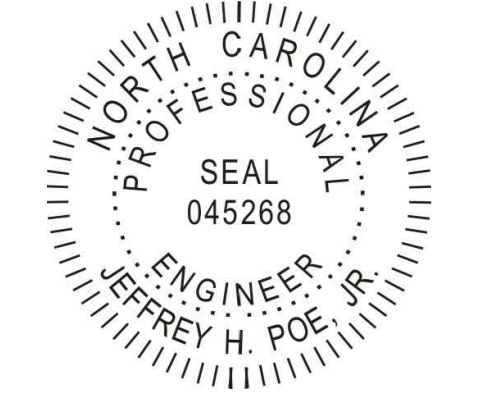


9 TYPICAL THROUGH WALL RAKE FLASHING DETAIL
NTS



13 THROUGH WALL FLASHING @ WINDOW TRANSITION DETAIL
NTS

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A-202