



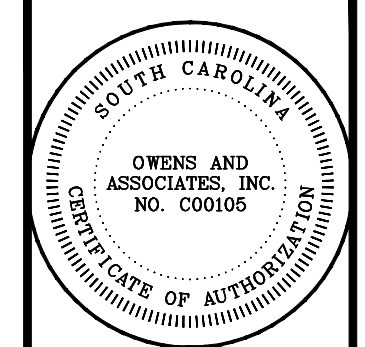
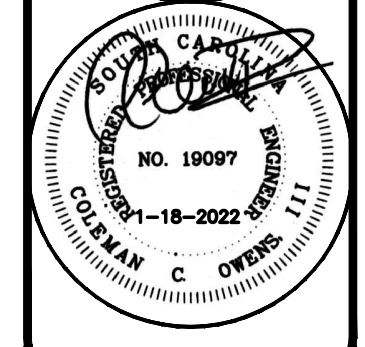
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MECHANICAL AND ROOFING RENOVATIONS TO ST. JAMES MIDDLE SCHOOL SCHOOL


HORRY COUNTY SCHOOL DISTRICT

9775 ST JAMES ROAD
MYRTLE BEACH, SC 29588

OWNER / ENGINEER /CONSULTANT	LIST OF DRAWINGS	PROJECT LOCATION
<p>OWNER: HORRY COUNTY SCHOOL DISTRICT 1160 E. HWY 501 CONWAY, SC 29526 (843) 488-6574</p> <p>MEP ENGINEER: OWENS AND ASSOCIATES, INC. 1007 LAKE HUNTER CIRCLE MT. PLEASANT, SC 29464 (843) 849-6457</p> <p>ROOFING CONSULTANT: SHEPARD AND ASSOCIATES, LLC 3547 DREHER SHOALS RD, SUITE 6 IRMO, SC 29063 (803) 407-8284</p>	<p>GENERAL: COVER- TITLE SHEET</p> <p>MEP PLANS: M-1 PARTIAL MECHANICAL PLAN-AREA "A" M-2 PARTIAL MECHANICAL PLAN-AREAS "B"&"C" M-3 PARTIAL MECHANICAL PLAN-AREAS "D"&"E" M-4 PARTIAL MECHANICAL PLAN-AREA "E" M-5 OVERAL GAS PIPING PLAN M-6 MECHANICAL AND ELECTRICAL SCHEDULES AND DETAILS</p> <p>ROOFING PLANS: R-1 KEY PLAN R-2 LIFE SAFETY PLAN R-3 ROOF AREAS 1&16 R-4 ROOF AREAS 2&17 R-5 ROOF AREAS 3&18 R-6 ROOF AREAS 4&19 R-7 ROOF AREAS 5,6,7,8,9,10&20 R-8 ROOF AREAS 11&12 R-9 ROOF AREA 13 R-10 ROOF AREAS 14&15 R-11 ROOF AREAS 21,22,23,24,C1,C2&C3 D-1 DETAILS D-2 DETAILS D-3 DETAILS D-4 DETAILS D-5 DETAILS D-6 DETAILS</p>	 

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CONSULTING ENGINEERS




Horry County Schools

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SCHOOL

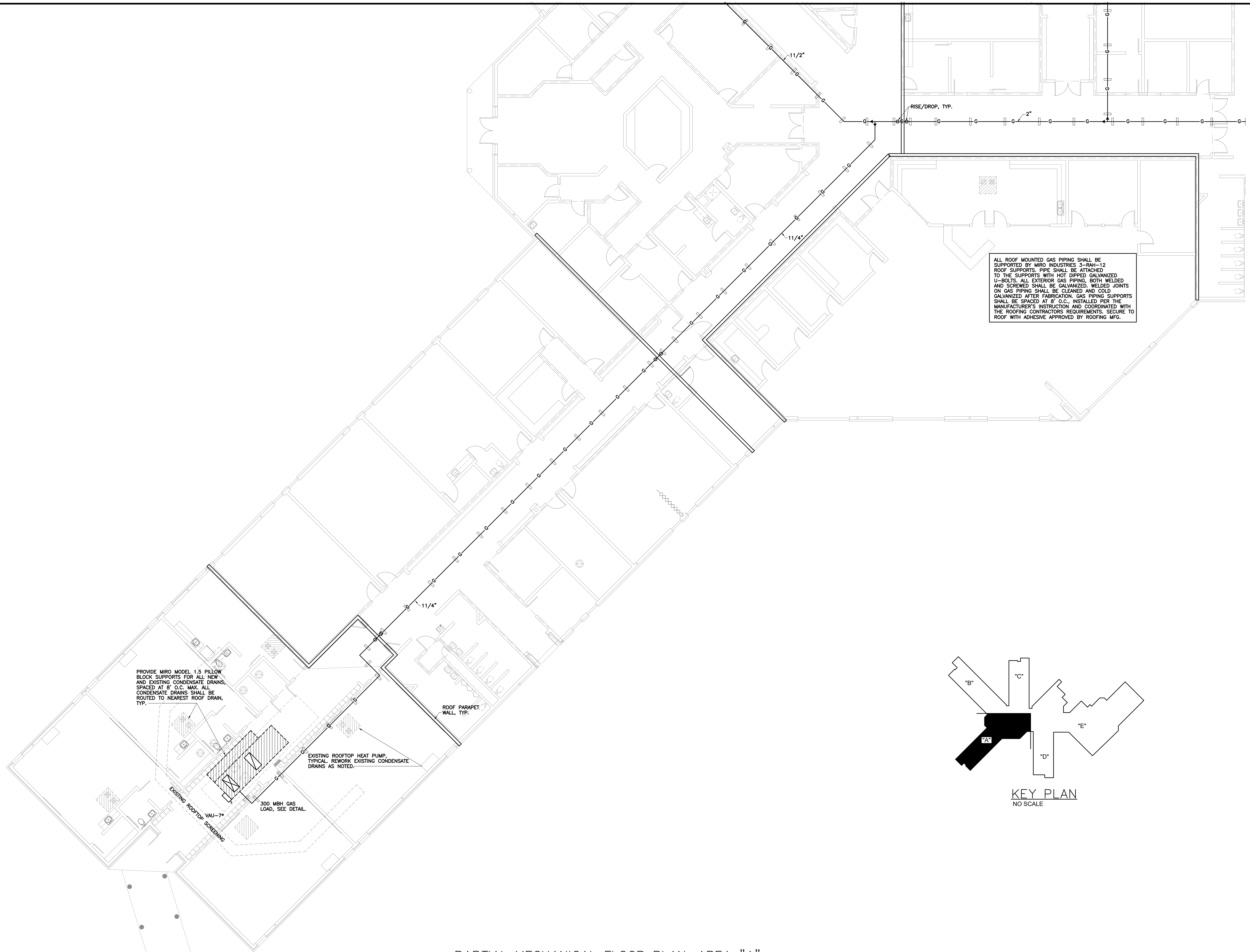
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date: 1-18-2022

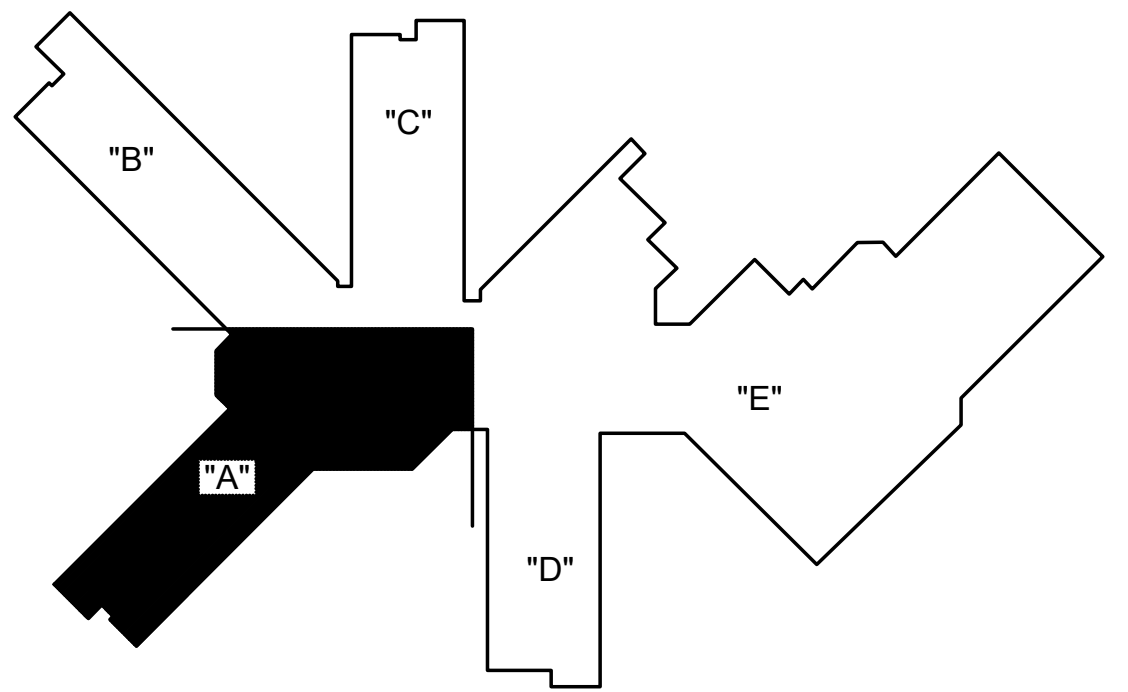


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ALL ROOF MOUNTED GAS PIPING SHALL BE SUPPORTED BY MIRO INDUSTRIES 3-RAH-12 ROOF SUPPORTS. PIPE SHALL BE ATTACHED TO THE SUPPORTS WITH HOT DIPPED GALVANIZED U-BOLTS. ALL EXTERIOR GAS PIPING, BOTH WELDED AND SCREWED SHALL BE GALVANIZED. WELDED JOINTS ON GAS PIPING SHALL BE CLEANED AND COLD GALVANIZED AFTER FABRICATION. GAS PIPING SUPPORTS SHALL BE SPACED AT 8' O.C., INSTALLED PER THE MANUFACTURER'S INSTRUCTION AND COORDINATED WITH THE ROOFING CONTRACTOR'S REQUIREMENTS. SECURE TO ROOF WITH ADHESIVE APPROVED BY ROOFING MFG.

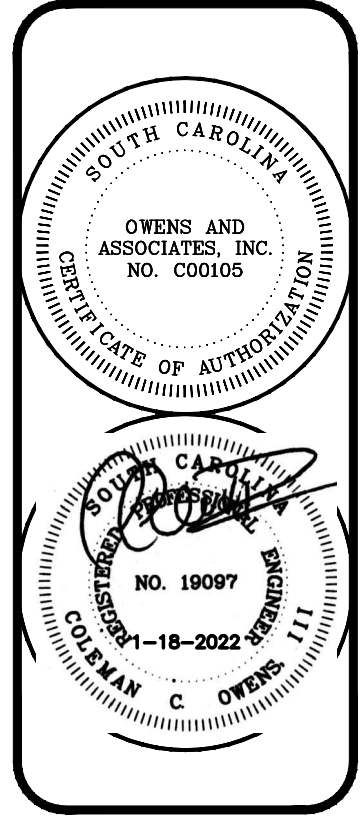


KEY PLAN
NO SCALE

PARTIAL MECHANICAL FLOOR PLAN—AREA "A"

SCALE: 1/8"=1'-0"

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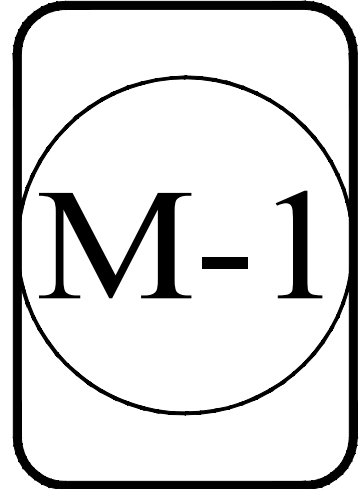
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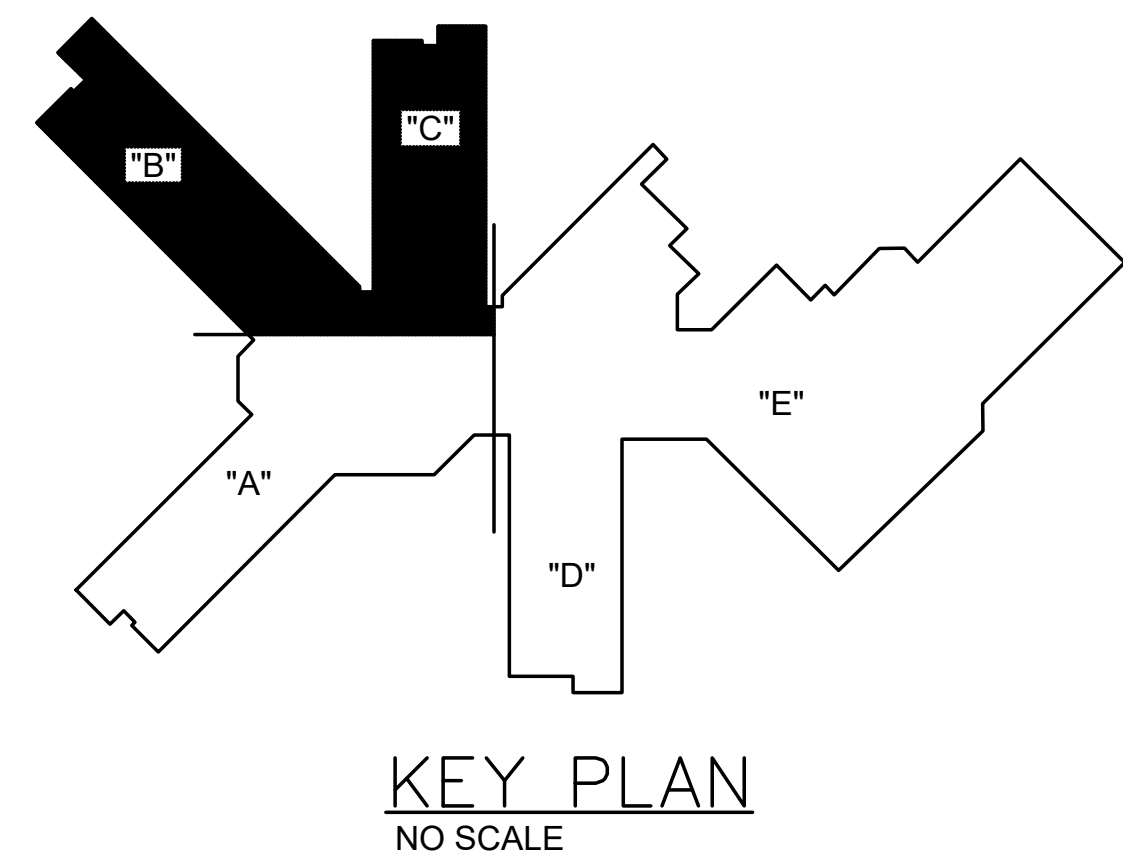
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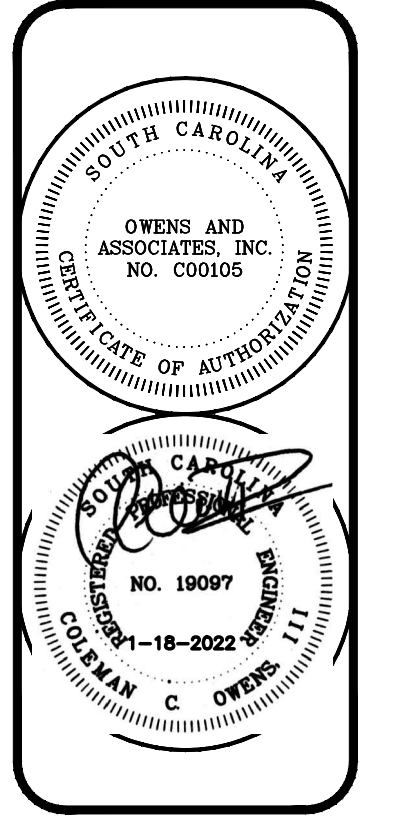
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PARTIAL MECHANICAL FLOOR PLAN-AREAS "B" & "C"
SCALE: 1/8"=1'-0"



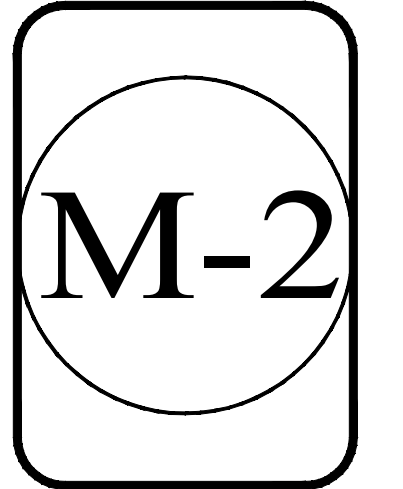
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PROVIDE MIRO INDUSTRIES MODEL 3-RH-12 PIPE SUPPORTS SPACED AT 8' O.C. GLUE TO ROOF PER ROOFING DOCUMENTS WITH APPROVED ADHESIVE. FASTEN PIPE TO STANDS WITH HOT DIPPED GALVANIZED STRAPS, TYPICAL.

PARAPET WALLS, TYPICAL.

RISE TO UPPER ROOF: 11/4"

300 MBH GAS LOAD, SEE DETAIL.

NEW FALL PROTECTION ROOF EDGE GUARD RAILS FOR VAU-2 42" MINIMUM ABOVE ROOF DECK AND 30" BEYOND LENGTH OF VAU-5. RAILS SHALL BE COMPLIANT WITH THE 2018 IBC AND IBC REQUIREMENTS FOR GUARDS. GUARD RAILS SHALL BE GALVANIZED STEEL CONSTRUCTION. RAIL SHALL BE BALLASTED TYPE. SEE ROOFING PLANS FOR MANUFACTURER AND SPECIFICATION OF SAFETY RAIL SYSTEM.

-11/2"

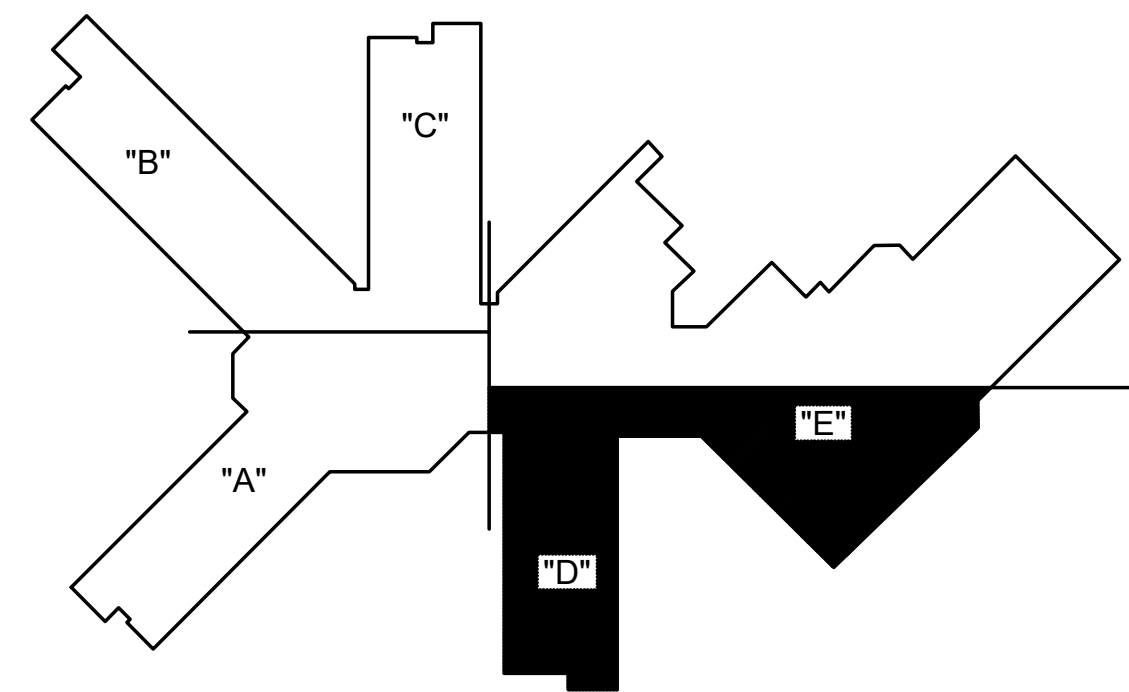
-11/2"

600 MBH GAS LOAD. SEE DETAIL FOR REGULATOR AND GAS SPECIALTIES, TYP.

NEW FUSED DISCONNECT. SEE ELECTRICAL FUSED DISCONNECT SCHEDULE, TYPICAL.

EXISTING ROOFTOP SCREENING

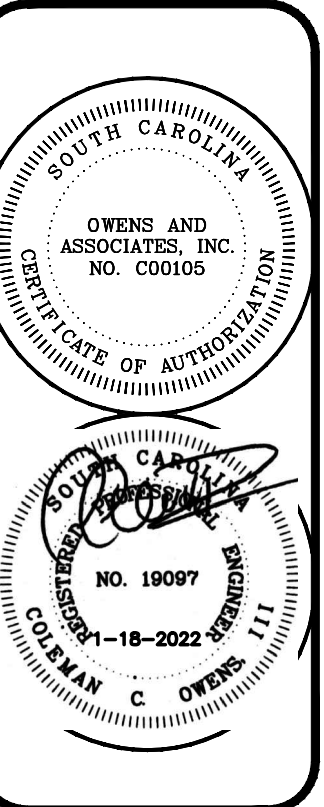
VAU-9*



KEY PLAN NO SCALE

PARTIAL MECHANICAL FLOOR PLAN-AREAS "D"&"E"
SCALE: 1/8"=1'-0"

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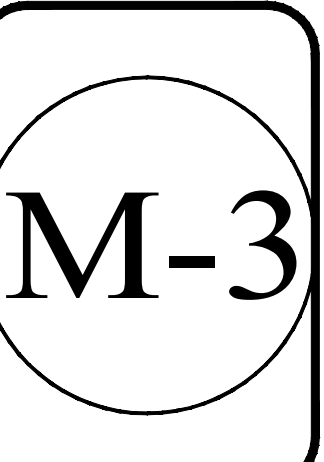
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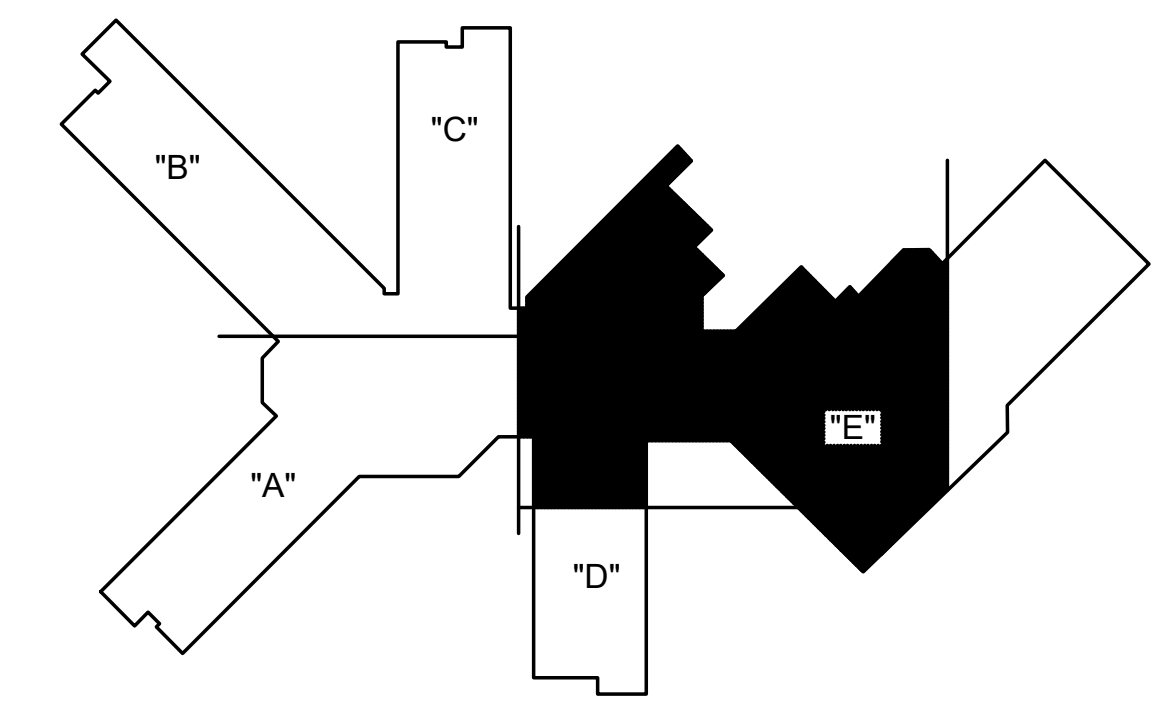
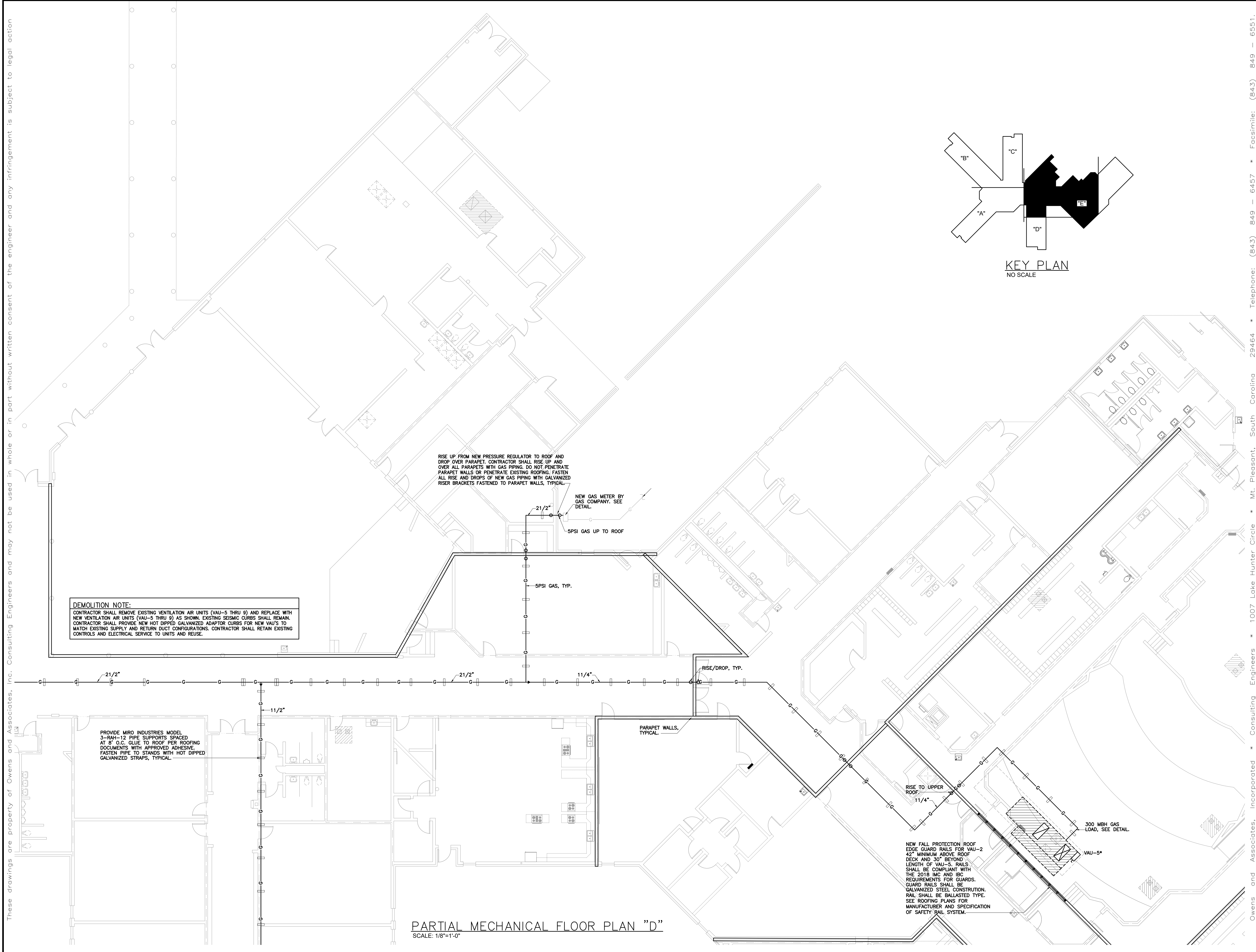
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KEY PLAN
NO SCALE

DEMOLITION NOTE:
CONTRACTOR SHALL REMOVE EXISTING VENTILATION AIR UNITS (VAU-5 THRU 9) AND REPLACE WITH NEW VENTILATION AIR UNITS (VAU-5 THRU 9) AS SHOWN. EXISTING SEISMIC CURBS SHALL REMAIN. CONTRACTOR SHALL PROVIDE NEW HOT DIPPED GALVANIZED ADAPTOR CURBS FOR NEW VAU'S TO MATCH EXISTING SUPPLY AND RETURN DUCT CONFIGURATIONS. CONTRACTOR SHALL RETAIN EXISTING CONTROLS AND ELECTRICAL SERVICE TO UNITS AND REUSE.

RISE UP FROM NEW PRESSURE REGULATOR TO ROOF AND DROP OVER PARAPET. CONTRACTOR SHALL RISE UP AND OVER ALL PARAPETS WITH GAS PIPING. DO NOT PENETRATE PARAPET WALLS OR PENETRATE EXISTING ROOFING. FASTEN ALL RISE AND DROPS OF NEW GAS PIPING WITH GALVANIZED RISER BRACKETS FASTENED TO PARAPET WALLS, TYPICAL.

NEW GAS METER BY GAS COMPANY. SEE DETAIL.
5PSI GAS UP TO ROOF

5PSI GAS, TYP.

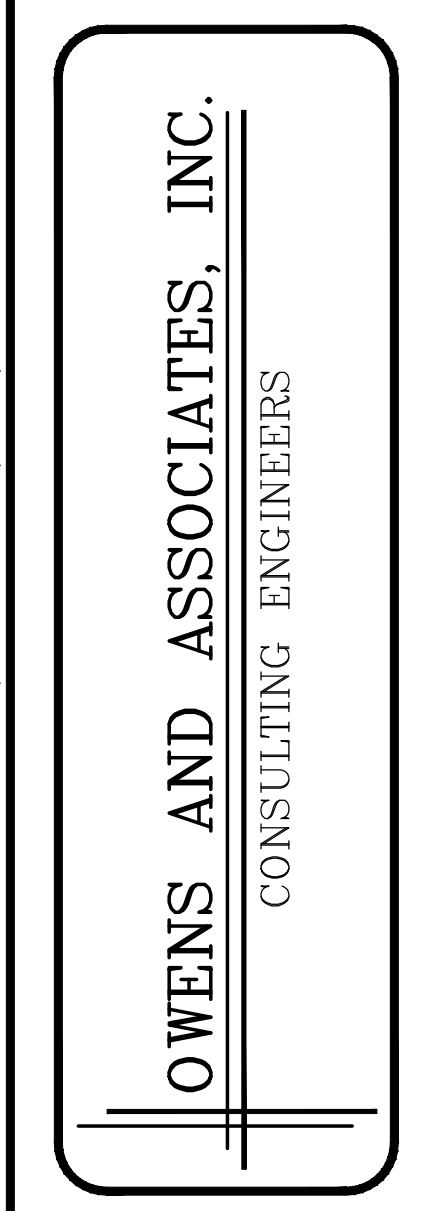
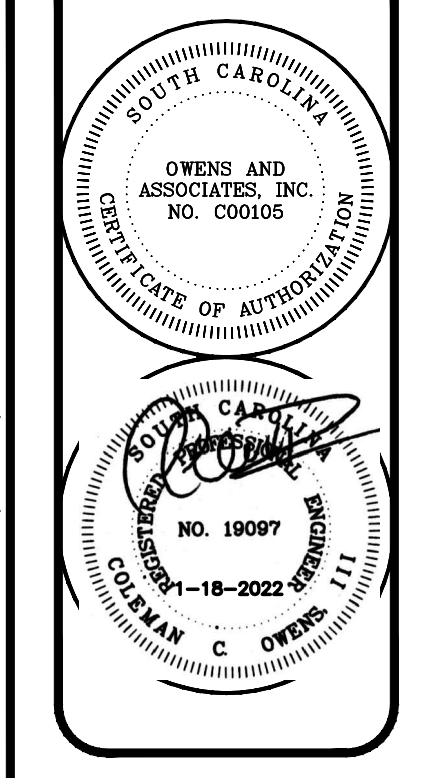
RISE/DROP, TYP.

RISE TO UPPER ROOF
11/4"

300 MBH GAS LOAD, SEE DETAIL.

NEW FALL PROTECTION ROOF EDGE GUARD RAILS FOR VAU-2 42" MINIMUM ABOVE ROOF DECK AND 30" BEYOND LENGTH OF VAU-5. RAILS SHALL BE COMPLIANT WITH THE 2018 IMC AND IBC REQUIREMENTS FOR GUARDS. GUARD RAILS SHALL BE GALVANIZED STEEL CONSTRUCTION. RAIL SHALL BE BALLASTED TYPE. SEE ROOFING PLANS FOR MANUFACTURER AND SPECIFICATION OF SAFETY RAIL SYSTEM.

PARTIAL MECHANICAL FLOOR PLAN "D"
SCALE: 1/8"=1'-0"



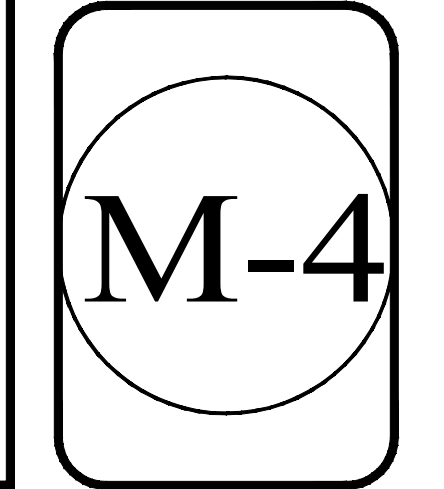
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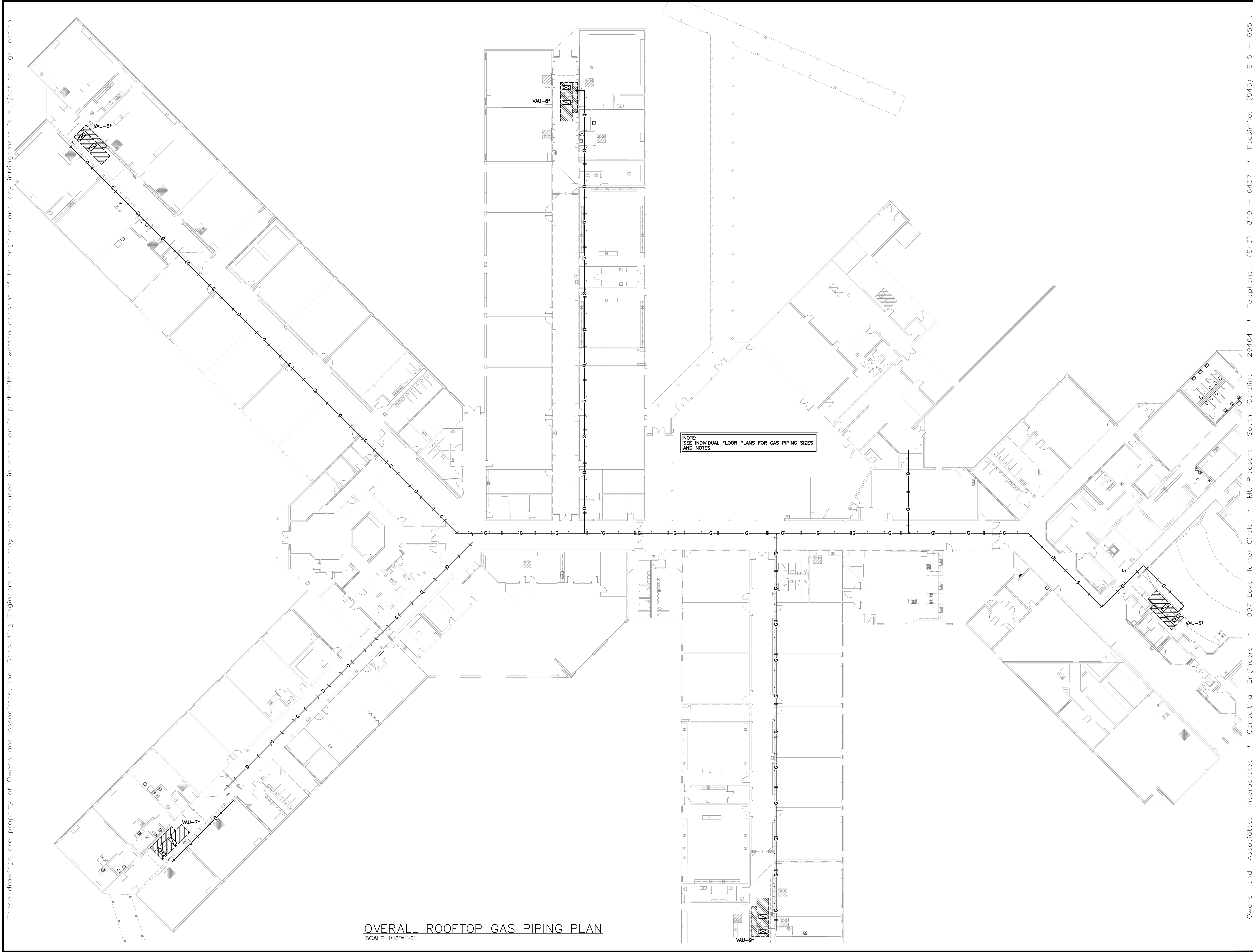
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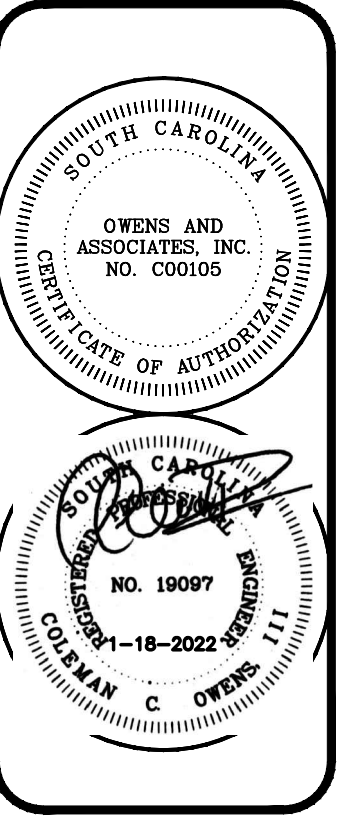
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OVERALL ROOFTOP GAS PIPING PLAN
SCALE: 1/16"=1'-0"

NOTE:
SEE INDIVIDUAL FLOOR PLANS FOR GAS PIPING SIZES
AND NOTES.

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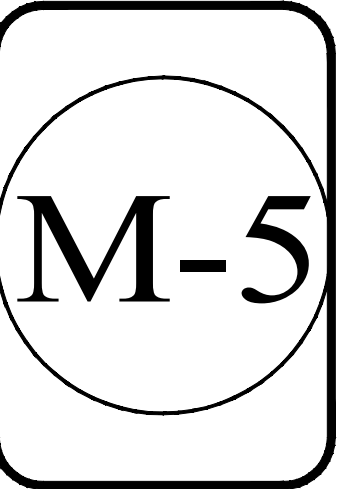


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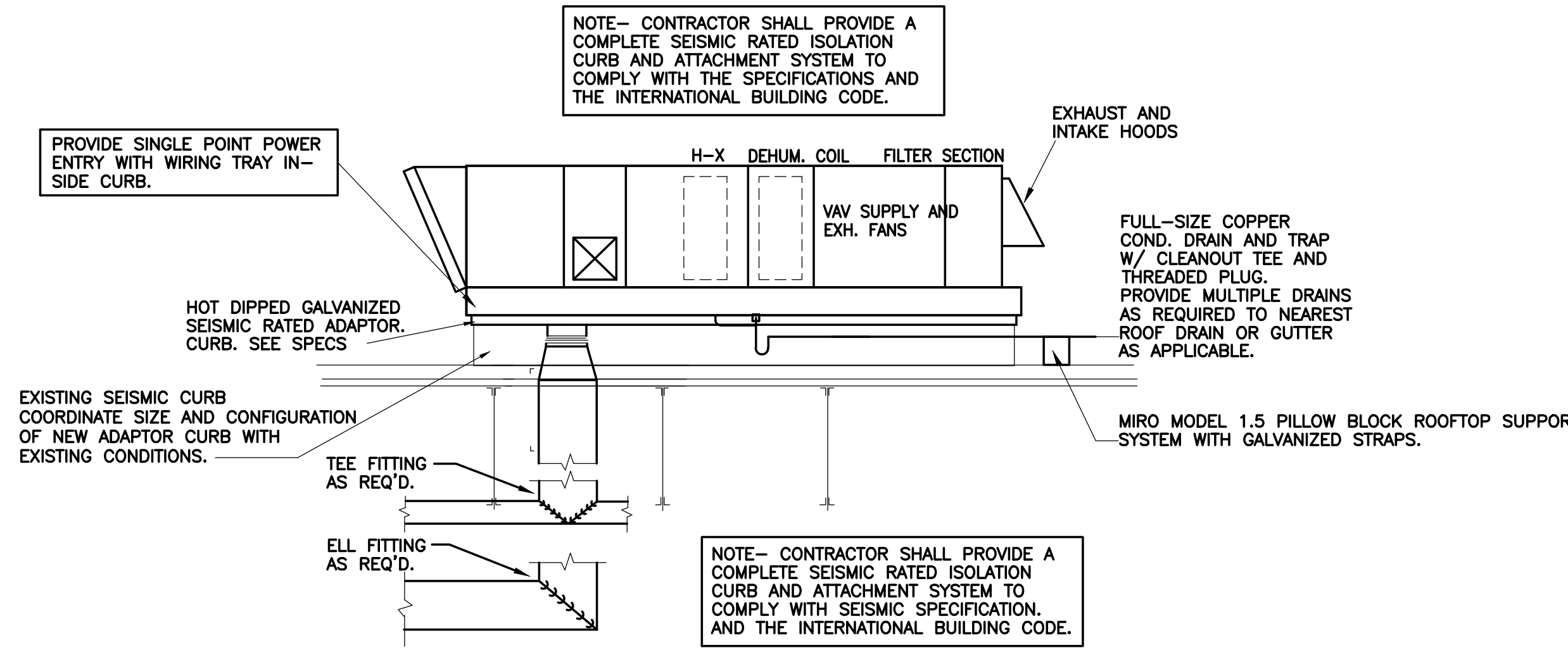
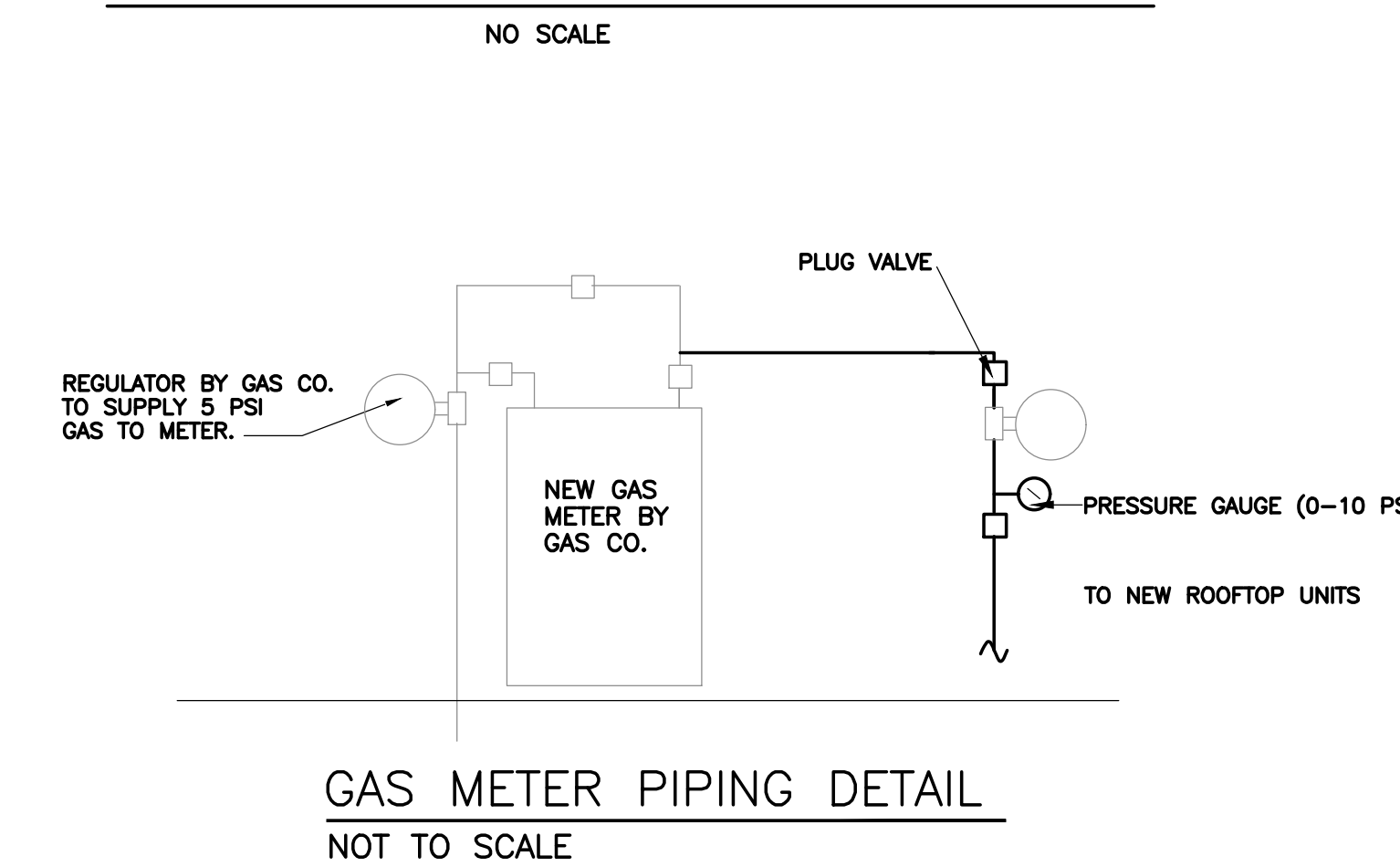
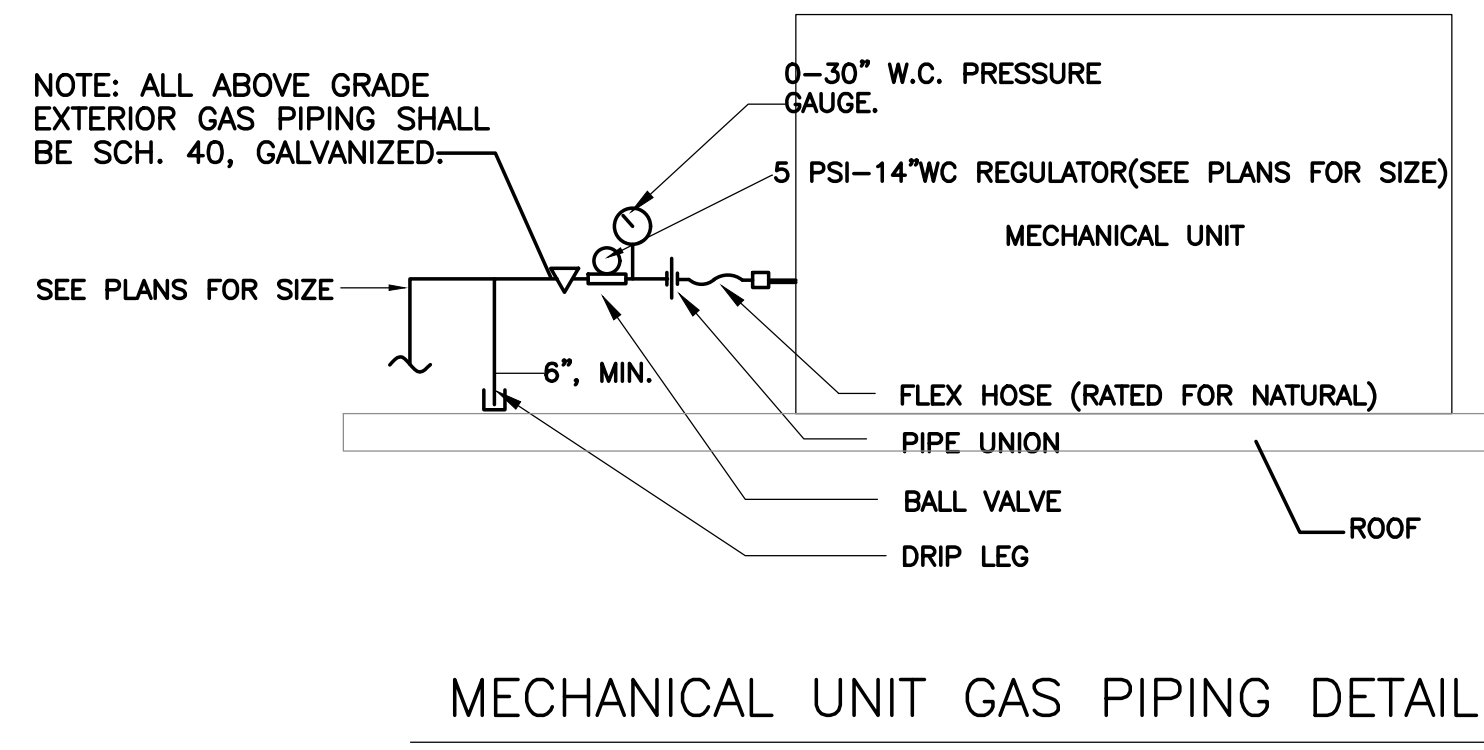
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GENERAL MECHANICAL NOTES:

- SEE ARCHITECTURAL PLANS AND GENERAL SECTIONS OF SPECIFICATIONS FOR DESCRIPTIONS OF ALTERNATES.
- DUCTS TO ROOF MOUNTED EXHAUST FANS SHALL BE ROUTED FULL-SIZE OF EXHAUST GRILLE, WHERE APPLICABLE. COORDINATE INSTALLATION WITH ALL STRUCTURAL MEMBERS. PROVIDE DUCT EASEMENTS AS REQUIRED.
- REFER TO ROOF PLANS. COORDINATE EXACT LOCATIONS FOR ROOF-TOP EQUIPMENT WITH STRUCTURAL PLANS AND GENERAL CONTRACTOR. HEIGHT OF ALL MECHANICAL ROOF CURBS SHALL BE COORDINATED WITH THE MINIMUM HEIGHT REQUIREMENTS OF THE ROOFING BOND. SEE ARCHITECTURAL PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL FURNISH TO OWNER AT COMPLETION OF PROJECT, A COMPLETE SET OF WRITTEN OPERATING INSTRUCTIONS FOR ALL SYSTEMS.
- REFER TO REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING PLANS TO COORDINATE CEILING AIR DEVICE LOCATIONS.
- PROVIDE 2-1/2"x2-1/2"x1/4" GALVANIZED STEEL ANGLES, 3/8" THREADED HANGER ROD, AND OTHER SUPPLEMENTAL STEEL AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT FROM THE STRUCTURE; DUCTWORK, UNIT HEATERS, EXHAUST FANS, ETC.
- ALL RETURN DUCT CONNECTIONS TO AIR DEVICES SHALL BE RECTANGULAR UNLESS OTHERWISE INDICATED ON PLANS. USE OF FLEXIBLE DUCT FOR RETURN IS NOT PERMISSIBLE.
- REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES. CONTRACTOR SHALL COMPLETELY FILL AROUND ALL OPENINGS REQUIRED FOR HIS WORK IN ACCORDANCE WITH DETAILS WITH APPROVED FIRE-PROOF MATERIALS.
- CEILING AIR DEVICE INSTALLATIONS SHALL CONFORM TO THE APPROPRIATE UL ASSEMBLY NUMBER PER THE CODE ANALYSIS DATA FOR THIS PROJECT.
- CONTRACTOR SHALL SEAL ALL DUCTWORK WITH DUCT SEALANT PER SPECIFICATIONS. DUCT TAPE SHALL NOT BE USED TO SEAL DUCTWORK.
- THE CONTRACTOR IS INSTRUCTED TO VISIT THE SITE PRIOR TO SUBMITTING A BID TO FAMILIARIZE HIMSELF WITH ALL WORK TO BE ENCOUNTERED. NO EXTRA CHARGE WILL BE APPROVED AFTER START OF CONSTRUCTION FOR FAILURE TO FOLLOW THESE INSTRUCTIONS.
- CONTRACTOR SHALL PROVIDE THREADED RODS, 1/4", OR OTHER APPROVED MEANS TO LATEROALLY SUPPORT ALL SUSPENDED MECHANICAL EQUIPMENT, DUCTS, ETC. IN ACCORDANCE WITH THE SEISMIC DESIGN REQUIREMENTS IN CHAPTER 16 OF THE INTERNATIONAL BUILDING CODE, LATEST EDITION.

DESIGN CONDITIONS		
	COOLING	HEATING
OUTSIDE	94F DB, 78F WB	20F DB
INSIDE	75F DB, 62.5F WB	72F DB

SYMBOL SCHEDULE	
Ⓣ	THERMOSTAT WITH LOCK COVER
Ⓜ	EXHAUST FAN
TR GR/EX GR	TRANSFER GRILLE / EXHAUST GRILLE
↻	AIR TURNING VANE
↻ S	SPLITTER DAMPER
FD/-	FIRE DAMPER / HOUR RATING
▨	INDICATION OF ROOF MOUNTED EQUIPMENT
⊘	GATE VALVE
⊘	GLOBE VALVE
⊘	FLOW STATION
⊘	CHECK VALVE
⊘	STRAINER
⊘	UNION/FLANGE
⊘	PRESSURE GAUGE WITH PETCOCK
⊘	THERMOMETER
⊘	CIRCUIT SETTER
⊘	PRESSURE REDUCING VALVE
⊘	PRESSURE RELIEF VALVE
⊘	MANUAL AIR VENT
⊘	FLEXIBLE CONNECTION



ROOFTOP VENTILATION AIR UNIT DETAIL
NO SCALE

GENERAL ELECTRICAL NOTES:

- DUE TO THE NATURE OF WORK COVERED UNDER THESE PLANS AND SPECIFICATIONS, ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING VISITED THE SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID.
- ALL CONDUIT PENETRATIONS OF FIRE RATED WALLS AND/OR CEILINGS SHALL BE FIRESTOPPED AS PER UL STANDARDS.
- ALL CONDUIT PENETRATIONS OF EXTERIOR WALLS SHALL BE SEALED AND MADE WEATHERPROOF.
- CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING CEILING TILES AS NECESSARY FOR THE INSTALLATION OF NEW CONDUITS AND DEVICES. CONTRACTOR SHALL REPLACE ANY TILE DAMAGED BY THIS WORK. NEW CEILING TILES TO MATCH EXISTING.
- ALL CONDUIT RUNS SHOWN ON THESE DRAWINGS ARE APPROXIMATE. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY LENGTH AND LOCATION.
- ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS AND THE SPECIFICATIONS, FOR ALL BID ALTERNATES AND ALL PHASING INFORMATION, PRIOR TO SUBMITTING HIS BID.
- ALL BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
- THE MECHANICAL EQUIPMENT BASIS OF DESIGN IS AS INDICATED ON THE MECHANICAL DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ELECTRICAL REQUIREMENTS OF THE MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO ORDERING MATERIALS. MODIFICATIONS TO ANY ELECTRICAL SYSTEM REQUIRED FOR MECHANICAL EQUIPMENT WHICH DIFFERS FROM THE MECHANICAL BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE MECHANICAL AND ELECTRICAL CONTRACTORS. IN NO CASE SHALL SUBSTITUTION OF MECHANICAL EQUIPMENT RESULT IN ADDITIONAL COSTS TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL USE LOCATOR SERVICE TO IDENTIFY ALL UNDERGROUND UTILITIES. DAMAGE TO ANY EXISTING UTILITIES RESULTING FROM INSTALLATION OF NEW ELECTRICAL EQUIPMENT SHALL BE REPAIRED BY THE ELECTRICAL CONTRACTOR.
- ALL FEEDERS SHALL BE ROUTED CONCEALED. ELECTRICAL CONTRACTOR SHALL SAW CUT AND PATCH EXISTING CONCRETE AS NECESSARY TO ROUTE UNDERGROUND CONDUITS. ABOVE CEILING CONDUITS SHALL BE ROUTED CONCEALED.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR BRINGING THE SITE BACK TO ORIGINAL CONDITIONS AFTER THE COMPLETION OF UNDERGROUND ELECTRICAL WORK. THIS IS INCLUSIVE OF SAW CUT ASPHALT AND CONCRETE SURFACES, EXISTING VEGETATION, GRASS, SITE GRADING ETC. THIS CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO THE SITE/FACILITY CAUSED BY ELECTRICAL CONSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL SAW CUT EXISTING CONCRETE AND ASPHALT DRIVES AS REQUIRED TO INSTALL BELOW GRADE CONDUITS. AFTER INSTALLATION OF WORK, CONTRACTOR SHALL BACKFILL AND BRING SOIL TO INITIAL COMPACTION LEVELS AND REPAIR SAW CUT AREAS OF CONCRETE AND ASPHALT DRIVES. PATCHING SHALL MATCH EXISTING WITH REGARD TO REINFORCING AND THICKNESS. ALL SAW CUT TRENCHES SHALL BE MADE IN A WORKMANLIKE FASHION.
- ANY EXISTING ELECTRICAL EQUIPMENT NOT BEING REMOVED OR RELOCATED BUT ON THE SAME CIRCUIT AS ANY ELECTRICAL EQUIPMENT BEING REMOVED OR RELOCATED SHALL BE RECONNECTED TO ALLOW FOR NORMAL OPERATION UNLESS SHOWN OTHERWISE ON THE NEW WORK DRAWINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS AND LABOR FOR THE RECONNECTION OF SAID DEVICES.
- ANY EXISTING ELECTRICAL EQUIPMENT, CIRCUITRY, OR CONDUIT THAT INTERFERES WITH DEMOLITION OR INSTALLATION WORK AND PROVIDE ALL NECESSARY MATERIALS AND LABOR NEEDED TO RETURN THE RELOCATED EQUIPMENT TO A SAFE AND OPERATING CONDITION THAT CONFORMS TO THE CURRENT EDITION OF THE N.E.C. AND ALL LOCAL REGULATIONS. COORDINATE ALL WORK WITH THE OWNER'S REPRESENTATIVE AND ALL OTHER TRADES.
- ANY DEVICE INTERFERING WITH DEMOLITION OR INSTALLATION, NOT BEING REMOVED OR RELOCATED, SHALL NOT BE MOVED WITHOUT WRITTEN CONSENT FROM THE OWNER'S REPRESENTATIVE.
- ALL WORK SHALL BE IN COMPLIANCE WITH THE CODES AND STANDARDS LISTED IN THE ARCHITECTURAL CODE ANALYSIS FOUND ELSEWHERE IN THESE CONTRACT DOCUMENTS.
- FIRE ALARM CONTRACTOR SHALL PROVIDE NEW RETURN DUCT SMOKE DETECTORS AND SUPPLY DUCT MOUNTED CARBON MONOXIDE SENSORS FOR EACH VENTILATION AIR UNIT AS INDICATED. DEVICES SHALL BE CONNECTED TO THE EXISTING BUILDING FIRE ALARM SYSTEM AND, UPON SENSING SMOKE OR PRODUCTS OF COMBUSTION RESPECTIVELY, SHUT DOWN ASSOCIATED UNIT AND REPORT A "TROUBLE" SIGNAL TO THE BUILDING FIRE ALARM PANEL. SMOKE AND CO DETECTORS SHALL NOT SOUND THE BUILDING FIRE ALARM SYSTEM. COORDINATE INSTALLATION OF DEVICES WITH MECHANICAL AND CONTROLS CONTRACTORS.

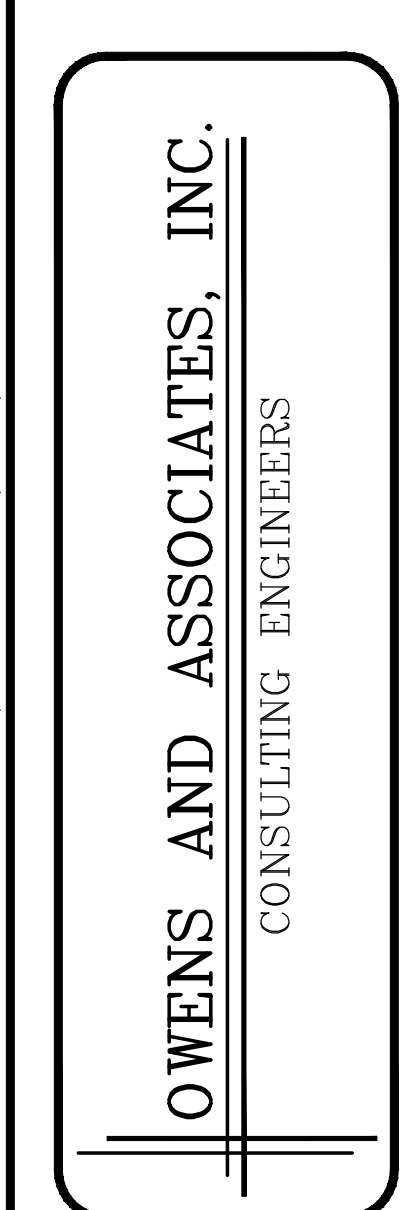
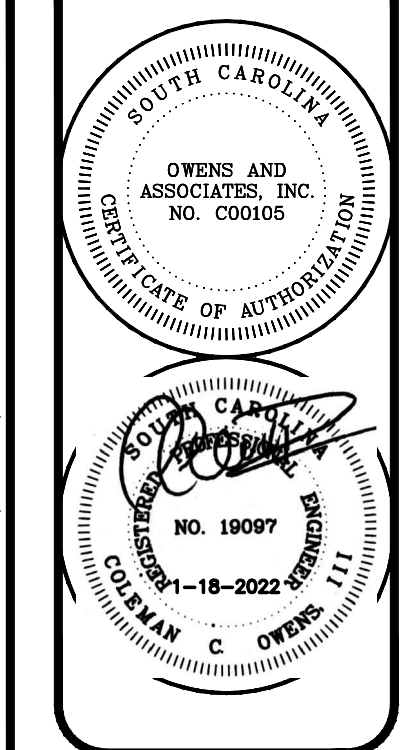
ROOFTOP UNIT ELECTRICAL FUSED DISCONNECT SCHEDULE						
SYM.	DISCONNECT (AMPS)	FUSE (AMPS)	VOLTAGE	PHASE	REQUIREMENTS	
VAU-5	100	90	480	3	1-1/4" C.-3#3 AND 1#6 GROUND	
VAU-6	200	125	480	3	1-1/2" C.-3#1/0 AND 1#2 GROUND	
VAU-7	100	80	480	3	1-1/4" C.-3#3 AND 1#6 GROUND	
VAU-8	200	100	480	3	1-1/2" C.-3#2 AND 1#4 GROUND	
VAU-9	200	100	480	3	1-1/2" C.-3#2 AND 1#4 GROUND	

NOTES: FUSE NEW DISCONNECTS TO THE M.O.C.P. OF EQUIPMENT PROVIDED. DISCONNECTS SHALL BE NEMA 3R BY SQUARE-D OR APPROVED EQUAL. EXTEND EXISTING CIRCUITS TO NEW VENTILATION AIR UNITS UP THRU EXISTING ROOF CURBS BELOW NEW UNITS. DO NOT PENETRATE ROOF WITH POWER CONDUIT. FASTEN NEW DISCONNECTS TO NEW UNITS WITH GALVANIZED BOLTS AND CAULK ALL UNIT PENETRATIONS WEATHERTIGHT.

VENTILATION AIR UNIT SCHEDULE																									
SYM.	VENTILATION AIR			EXHAUST AIR			T.E. WHEEL SUMMER		T.E. WHEEL WINTER		WHEEL EFF.	COOLING COIL			H.C. REHEAT CAPACITY MBH	BUILDING SUPPLY L.A.T. (db/wb)	NATURAL GAS FIRED HEAT		ELECTRICAL		MANUFACTURER				
	CFM	ESP	FAN HP	CFM	ESP	FAN HP	E.A.T. CAPACITY (db/wb) MBH	L.A.T. (db/wb)	E.A.T. CAPACITY (db/wb) MBH	L.A.T. (db/wb)		EFF. %	E.A.T. CAPACITY (db/wb) MBH	L.A.T. (db/wb)			E.A.T. (db)	L.A.T. (db)	MBH INPUT	VOLTS		PHASE	M.O.P (AMPS)		
VAU-5	4800	2.0"	5.0	4080	2.0"	5.0	95/78	191	80.5/67.7	20	296	55.1	78	80.5/67.7	311	45.3/45.2	147	71.8/57.4	55	101	300	480	3	90	TRANE-KCC HORIZON W/ SA&RA VFD.
VAU-6	7150	2.0"	10	7150	2.0"	7.5	95/78	280	80.7/67.9	20	434	54.5	78	80.7/67.9	458	46.3/45.8	168	74.5/57.9	55	116	600			125	
VAU-7	4400	2.0"	5.0	3740	2.0"	5.0	95/78	177	80.3/67.6	20	275	55.6	85	80.3/67.5	282	45.3/45.1	135	71.6/56.6	56	106	300			80	
VAU-8	6400	2.0"	7.5	5455	2.0"	5.0	95/78	256	80.5/67.7	20	396	55.2	84	80.5/67.7	411	45.8/45.3	168	74.9/57.9	55	124	600			100	
VAU-9	6400	2.0"	7.5	5455	2.0"	5.0	95/78	256	80.5/67.7	20	396	55.2	84	80.5/67.7	411	45.8/45.3	168	74.9/57.9	55	124	600			100	

- NOTE 1-BASIS OF DESIGN IS TRANE(KCC) OR ALTERNATE BID BY GREENHECK RVE (SEE BID FORM). ANY ADDITIONAL REQUIREMENTS ELECTRICALLY, STRUCTURALLY, DIMENSIONALLY OR OTHERWISE TO USE OTHER PRIOR APPROVED MANUFACTURERS ARE THE RESPONSIBILITY OF THIS CONTRACTOR.
- NOTE 2-UNIT SHALL BE PROVIDED WITH SINGLE POINT POWER, VARIABLE SPEED DRIVE BYPASS AND DRIVER COORDINATED WITH SIEMENS CONTROL SYSTEM. PROVIDE UNITS WITH AIRFLOW MONITORING STATIONS.
- NOTE 3-UNIT SHALL BE PROVIDED WITH 120V GFI CONVENIENCE OUTLET WITH IN-USE COVER PER NEC.
- NOTE 4-UNIT SHALL BE CAPABLE OF PROVIDING SUPPLY AIR CONDITIONS (DRY BULB AND WET BULB) AT DESIGN CONDITIONS DURING PART LOAD OPERATION WITHOUT THE USE OF AUXILIARY HEAT IN THE FORM OF GAS OR ELECTRIC REHEAT. PART LOAD SHALL BE ADDRESSED RUNNING A SEPARATE SIMULATION UTILIZING 68/68/64.3WB AS THE ENTERING OUTSIDE AIR CONDITION TO DEMONSTRATE PART LOAD PERFORMANCE. GAS AND/OR ELECTRIC STRIP REHEAT WILL NOT BE PERMITTED AS A FORM OF REHEAT TO ACHIEVE ACCEPTABLE DESIGN OUTSIDE AIR SUPPLY CONDITIONS DURING PART LOAD SITUATIONS.
- NOTE 5-UNIT SHALL BE PROVIDED WITH SEACOAST COATINGS FOR CONDENSER AND COOLING COILS.
- NOTE 6-CONTROLS CONTRACTOR SHALL PROVIDE CARBON DIOXIDE SENSORS IN THE RETURN AIR DUCT OF EACH VAU AND MODULATE UNIT RECIRCULATION AIR DAMPER TO MAINTAIN 1000 PPM CO2 LEVELS (ADJUSTABLE). CONTROLS CONTRACTOR SHALL INSTALL CARBON MONOXIDE SENSORS IN UNIT SUPPLY DUCT DOWNSTREAM OF GAS FIRED HEATER TO SHUT UNIT DOWN UPON SENSING OF PRODUCTS OF COMBUSTION.
- NOTE 7-SEE FIRE ALARM NOTE FOR UNITS DESIGNATED WITH ASTERISK "*".

MECHANICAL AND ELECTRICAL SCHEDULES AND DETAILS
NO SCALE

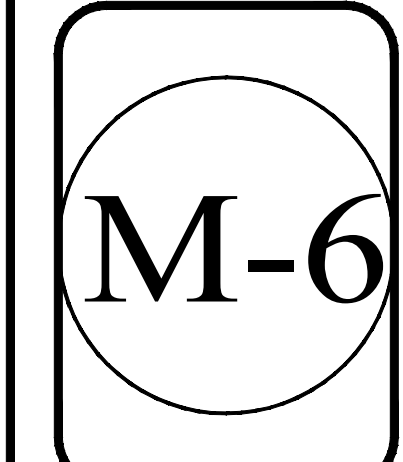


Owens and Associates, Inc., consulting engineers Mt. Pleasant, South Carolina

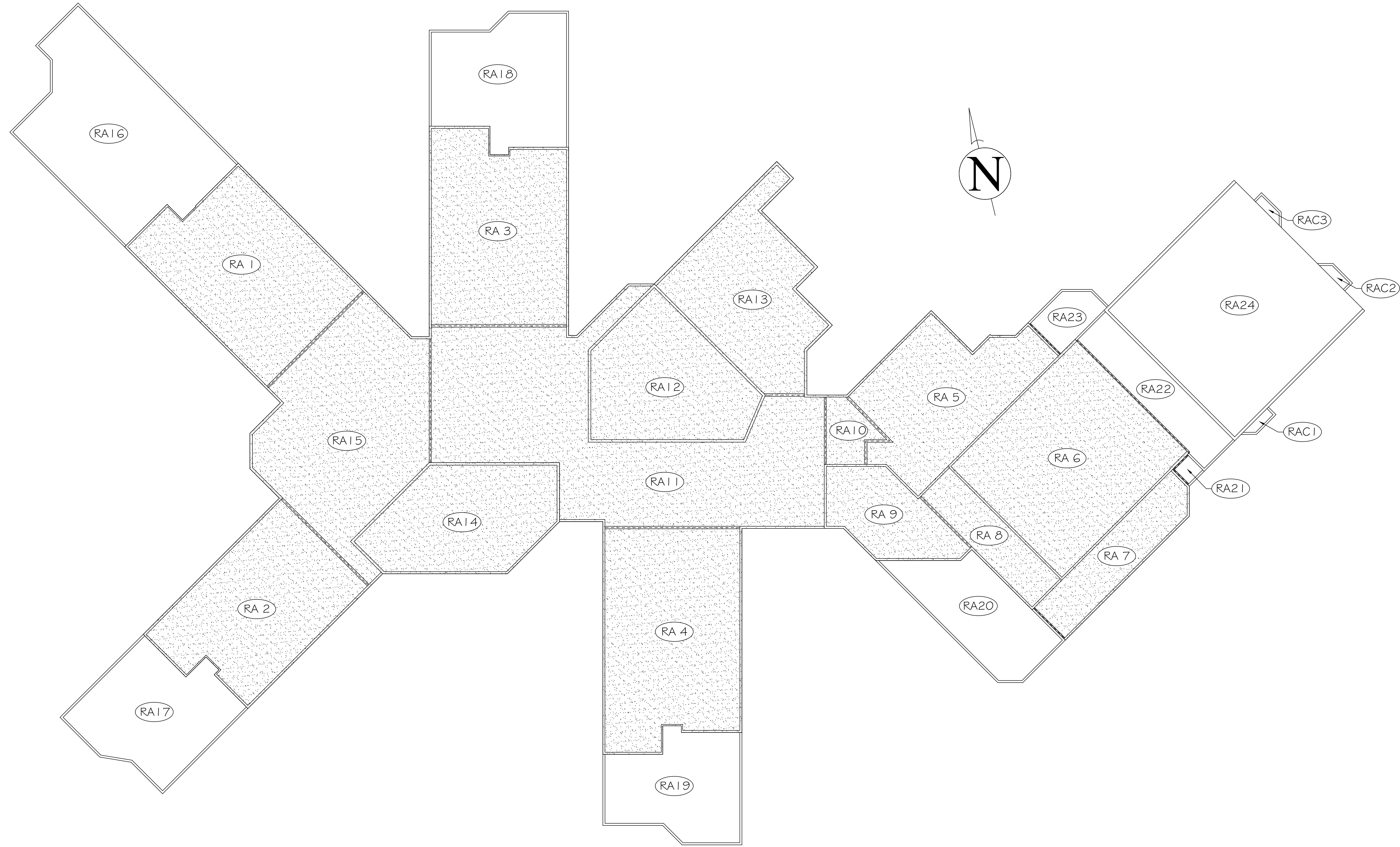
MECHANICAL AND ROOFING RENOVATIONS TO ST. JAMES MIDDLE SCHOOL

REVISIONS

project: 2110
date: 1-18-2022



Owens and Associates, Incorporated * Consulting Engineers * 1007 Lake Hunter Circle * Mt. Pleasant, South Carolina 29464 * Telephone: (843) 849-6457 * Facsimile: (843) 849-6551.

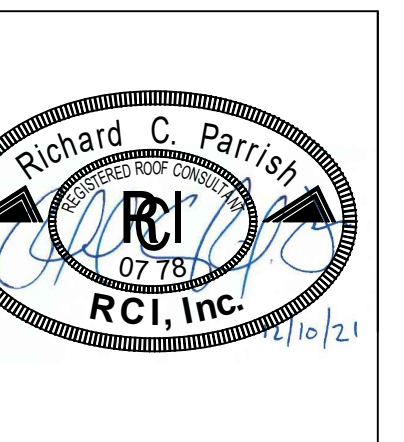


1 ST. JAMES MIDDLE SCHOOL KEY PLAN

LEGEND	
	= AREAS IN BASE BID
	= AREAS IN ALTERNATE BIDS 1 & 2
	= ROOF AREA DESIGNATIONS

SHEET TITLE: **ROOF KEY PLAN**
 PROJECT DESCRIPTION: ROOF AND HVAC REPLACEMENT
 PROJECT AT ST. JAMES MIDDLE SCHOOL
 CLIENT NAME: **HORRY COUNTY SCHOOL DISTRICT**

REVISIONS	REVISION	DATE	APPROVED



PF No. 21008.001.004
 DATE: 12/10/2021
 SCALE: NTS
 DRAWN BY: RCP
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SHEET
R1

PROJECT DATA

A. PROJECT DESIGNED IN ACCORDANCE WITH:
 1. INTERNATIONAL BUILDING CODE - 2018 EDITION
 2. INTERNATIONAL PLUMBING CODE - 2018 EDITION
 3. INTERNATIONAL FIRE CODE - 2018 EDITION
 4. INTERNATIONAL EXISTING BUILDING CODE - 2018 EDITION
 5. INTERNATIONAL ENERGY CONSERVATION CODE - 2009 EDITION
 6. NATIONAL FIRE PROTECTION ASSOCIATION 10 - 2018 EDITION

B. BASIC REVIEW INFORMATION
 1. EXISTING BUILDING IS A 1 & 2 STORY REINFORCED CONCRETE MASONRY UNIT (CMU) AND BRICK LOAD BEARING WALL CONSTRUCTION WITH STEEL BAR JOISTS SUPPORTING A METAL DECK (RAs 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, C1, C2 & C3) OR A CEMENTITIOUS WOOD FIBER ROOF DECK (RAs 6 & 24).
 2. AREA OF AFFECTED ROOF (RA): TOTAL AREA 140,514 SF
 BASE BID 40,726 SF + ALTERNATIVES 99,786 SF
 a. RA 1: 8,237 SF
 b. RA 2: 7,205 SF
 c. RA 3: 8,167 SF
 d. RA 4: 9,317 SF
 e. RA 5: 6,149 SF
 f. RA 6: 9,077 SF
 g. RA 7: 2,700 SF
 h. RA 8: 2,097 SF
 i. RA 9: 2,957 SF
 j. RA 10: 910 SF
 k. RA 11: 15,062 SF
 l. RA 12: 6,022 SF
 m. RA 13: 6,363 SF
 n. RA 14: 5,725 SF
 o. RA 15: 9,799 SF
 p. RA 16: 8,526 SF
 q. RA 17: 4,820 SF
 r. RA 18: 5,184 SF
 s. RA 19: 4,112 SF
 t. RA 20: 3,642 SF
 u. RA 21: 157 SF
 v. RA 22: 2,395 SF
 w. RA 23: 896 SF
 x. RA 24: 10,654 SF
 y. RA C1: 114 SF
 z. RA C2: 114 SF
 aa. RA C3: 114 SF

3. ROOF HEIGHT ABOVE GRADE:
 a. RA 1: 16'
 b. RA 2: 16'
 c. RA 3: 16'
 d. RA 4: 16'
 e. RA 5: 16'
 f. RA 6: 33'
 g. RA 7: 16'
 h. RA 8: 23'
 i. RA 9: 23'
 j. RA 10: 16'
 k. RA 11: 16'
 l. RA 12: 26'
 m. RA 13: 16'
 n. RA 14: 20'
 o. RA 15: 16'
 p. RA 16: 16'
 q. RA 17: 17'
 r. RA 18: 16'
 s. RA 19: 16'
 t. RA 20: 23'
 u. RA 21: 16'
 v. RA 22: 23'
 w. RA 23: 16'
 x. RA 24: 33'
 y. RA C1: 10'
 z. RA C2: 10'
 aa. RA C3: 10'

4. PRIMARY OCCUPANCY CLASS: GROUP "E" EDUCATIONAL OCCUPATION
 5. CLASS "A" ROOF COVERING

C. PROJECT IN FIRE DISTRICT: YES

D. STRUCTURAL INFORMATION:
 1. ROOF AREAS 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, C1, C2 & C3 DESIGN LOADS:
 a. ORIGINAL DEAD LOAD INCLUDES AGGREGATED SURFACED BUILT-UP ROOF, RIGID INSULATION & METAL ROOF DECK. ESTIMATED WEIGHT: 1.4lbs/SF
 b. PROPOSED DEAD LOAD INCLUDING 2 PLY MODIFIED BITUMEN & RIGID INSULATION MECHANICALLY ATTACHED TO THE METAL ROOF DECK. DESIGN WEIGHT: 9lbs/SF
 c. NET DEAD LOAD REDUCTION OF 5lbs/SF
 2. ROOF AREAS 6 & 24 DESIGN LOADS:
 a. ORIGINAL DEAD LOAD INCLUDES AGGREGATED SURFACED BUILT-UP ROOF, RIGID INSULATION & CEMENTITIOUS WOOD FIBER ROOF DECK. ESTIMATED WEIGHT: 1.7lbs/SF
 b. PROPOSED DEAD LOAD INCLUDING 2 PLY MODIFIED BITUMEN & RIGID INSULATION ADHERED TO THE EXISTING CEMENTITIOUS WOOD FIBER ROOF DECK. DESIGN WEIGHT: 1.2lbs/SF
 c. NET DEAD LOAD REDUCTION OF 5lbs/SF

BUILDING CODE ANALYSIS (FORM F3)			
PROJECT: Roof and HVAC Replacement Project at St. James Middle School DISTRICT: Horry County School District SUBMITTAL: <input type="checkbox"/> SCHEMATIC <input type="checkbox"/> DESIGN DEVELOPMENT <input checked="" type="checkbox"/> CONSTRUCTION DOCUMENT DATE: 12/10/2021 CODE & EDITION: 2018 IBC & 2009 IECC GUIDE EDITION: 2020 PLANNING & CONSTRUCTION GUIDE			
BASIC BUILDING CODE INFORMATION			
ROOF AREAS 1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 & 23	ROOF AREA G & 24		
CONSTRUCTION CLASSIFICATION TYPE (IBC 602)	TYPE II-A	TYPE II-A	
OCCUPANCY GROUP (indicate all) (IBC 302) (Note IBC 506.5)	E	E	
OCCUPANCY GROUP (indicate most restrictive) (IBC Table 503)	E	E	
Does building require Incidental Use Area Separation? (IBC 508.2.5)	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	
Does building have Accessory Occupancy (ies)? What percent of story is accessory occupancy? (IBC 508.2)	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes SF %	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes SF %	
Mixed Occupancy (IBC 508)	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	
Non separated (IBC 508.3)	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	
Separated (IBC 508.4) (IBC 506.5)	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	<input checked="" type="checkbox"/> no <input type="checkbox"/> yes	
OTHER FIRE PROTECTION SYSTEMS, DEVICES or FEATURES If the building has any special or notable fire protection or safety feature or hazard the designers should list them here, describe the performance characteristics and refer to locations in construction documents. (e.g. fire extinguishers, smoke-evacuation/control/compartments. Note IBC 414.1.3.)	NA	NA	
FIRE RESISTANCE RATING OF BUILDING ELEMENTS			
	ROOF AREAS 1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 & 23	ROOF AREA G & 24	
Roof Construction including supporting beams & joists (IBC Table 601)	As Required, Hrs	I HR	I HR
	As Designed, Hrs	I HR	I HR
	Testing Agency & Design No. (UL, FM, etc)	UL	UL
	Wall/Partition Key Code	P259	P253
STRUCTURAL DESIGN INFORMATION, BUILDING			
WIND LOADS	Analysis Procedure (ASCE 7 or IBC 1609.6)	ASCE 7-16	ASCE 7-16
	Basic Wind Speed, MPS (3 sec gust IBC Fig 1609)	V ₅₀ = 15G	V ₅₀ = 15G
	Exposure Category	CAT. B	CAT. B
	Risk Category	III	III
Internal Pressure Coefficient (ASCE 7)	GC _w =±0.18	GC _w =±0.18	
External Pressure Coefficient (ASCE 7)	FIELD _w = -0.9 FIELD _e = -1.7 PERIMETER _w = -2.3 CORNER _w = -3.2	FIELD _w = -0.9 FIELD _e = -1.7 PERIMETER _w = -2.3 CORNER _w = -3.2	
ENERGY INFORMATION			
INSULATION			
Roof	Continuous	21 R	23 R



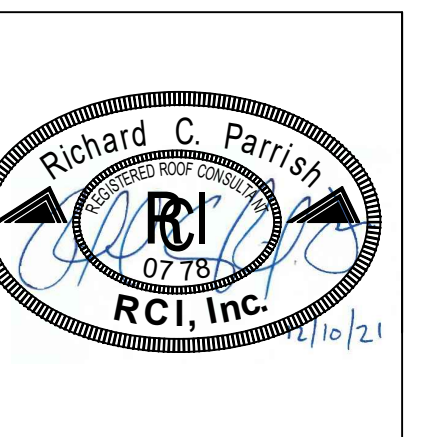
LIFE SAFETY PLAN
 ALL WORK IS TO BE COMPLETE WHILE
 THE BUILDING IS UNOCCUPIED.

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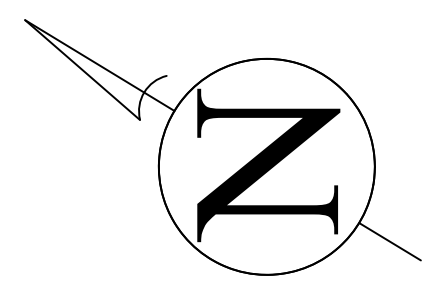
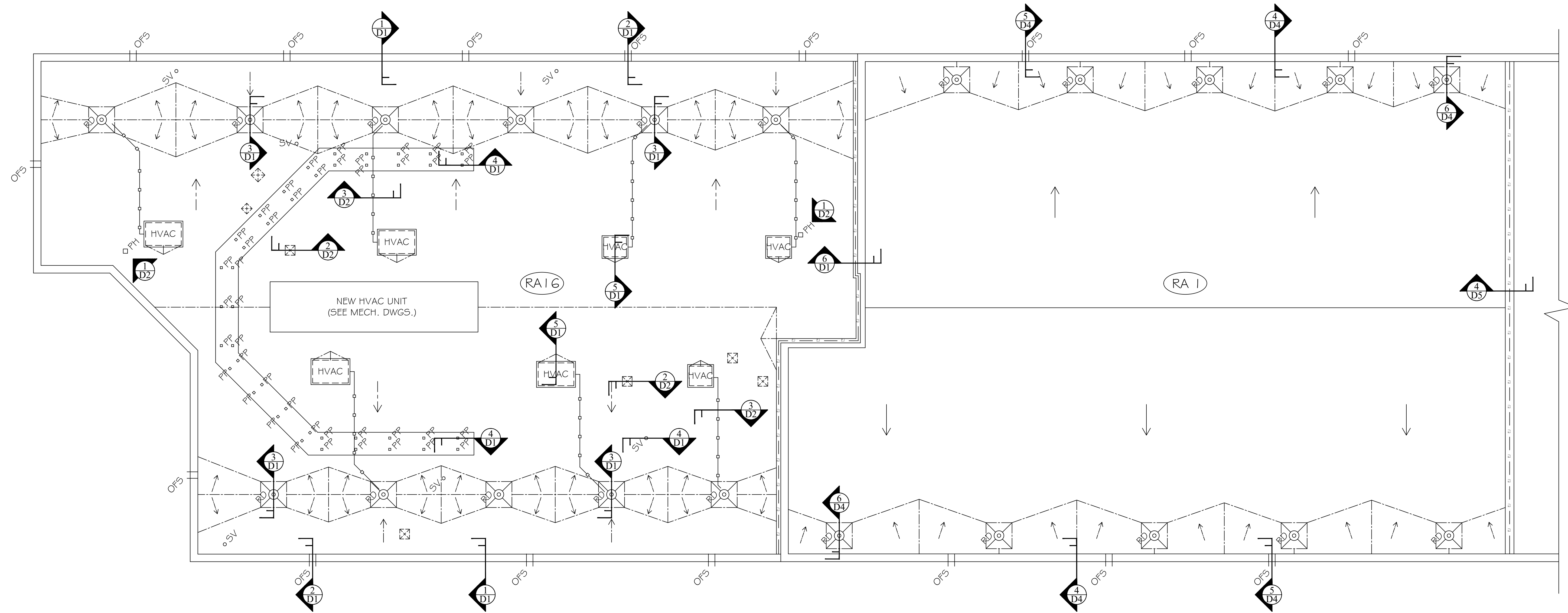
SHEET TITLE: **BUILDING CODE ANALYSIS**
 PROJECT DESCRIPTION: **ROOF AND HVAC REPLACEMENT PROJECT AT ST. JAMES MIDDLE SCHOOL**
 CLIENT NAME: **HORRY COUNTY SCHOOL DISTRICT**

REVISIONS	DATE	APPROVED



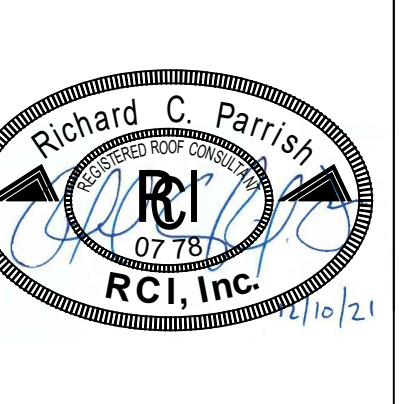
PF No. 21008.001.004
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SHEET
R2



SHEET TITLE: ROOF PLAN
PROJECT DESCRIPTION: ROOF AND HVAC REPLACEMENT
PROJECT AT: ST. JAMES MIDDLE SCHOOL
CLIENT NAME: Horry County School District

REVISIONS	REVISION	DATE	APPROVED



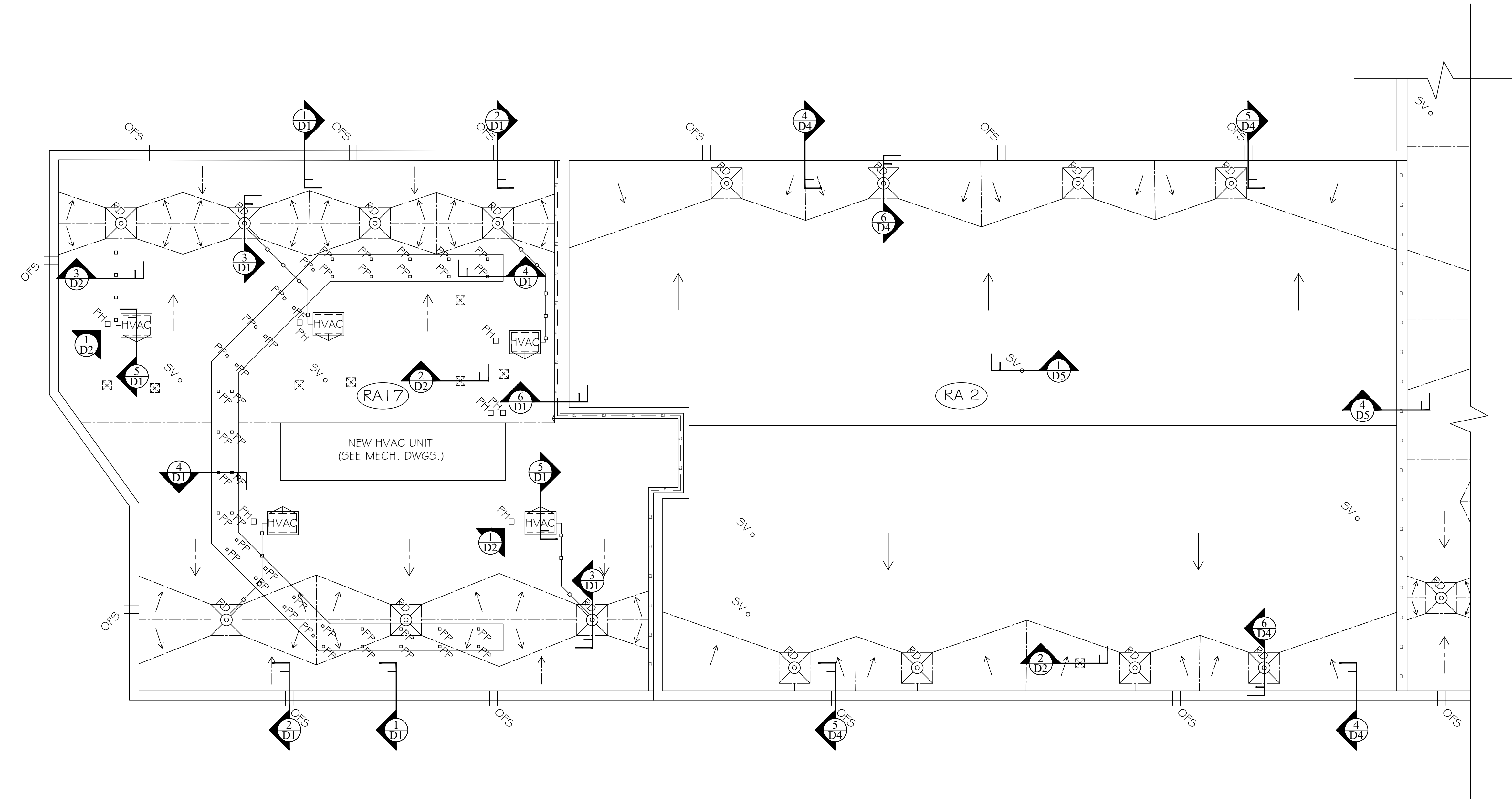
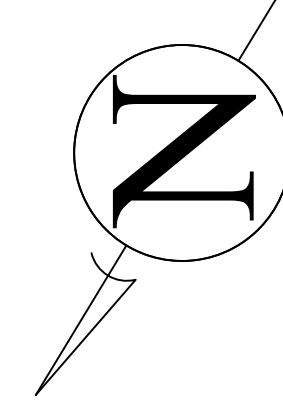
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SHEET
R3

1 ROOF AREAS 1 & 16

LEGEND

○ = AREAS IN CONTRACT	□ HVAC = CURB MOUNTED HVAC UNIT
RA # = ROOF AREA DESIGNATION	—○— = HVAC CONDENSATE DRAIN LINE
→ = SLOPE IN THE STRUCTURE	○ SV = SANITARY VENT
- - -> = SLOPE IN TAPERED INSULATION	○ P = PIPE PENETRATION
- - - = TAPERED CRICKETS & SADDLES	D PH = NEW PIPE HOUSING
⊗ = MAIN ROOF DRAIN	⊗ = ABANDONED GRAVITY VENT (TO BE REMOVED)
○ OS = OVERFLOW SCUPPER	
= EXPANSION JOINT	

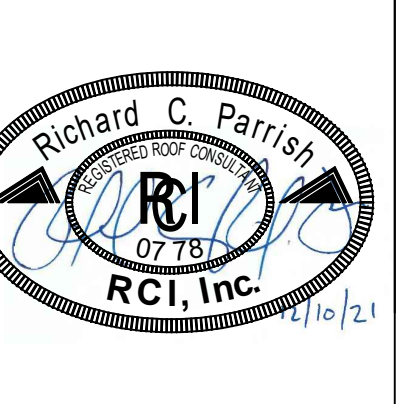


1 ROOF AREAS 2 & 17

LEGEND			
	= AREAS IN CONTRACT		= CURB MOUNTED HVAC UNIT
	= ROOF AREA DESIGNATION		= HVAC CONDENSATE DRAIN LINE
	= SLOPE IN THE STRUCTURE		= SANITARY VENT
	= SLOPE IN TAPERED INSULATION		= PIPE PENETRATION
	= TAPERED CRICKETS & SADDLES		= NEW PIPE HOUSING
	= MAIN ROOF DRAIN		= ABANDONED GRAVITY VENT (TO BE REMOVED)
	= OVERFLOW SCUPPER		
	= EXPANSION JOINT		

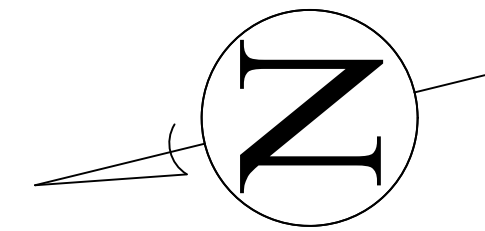
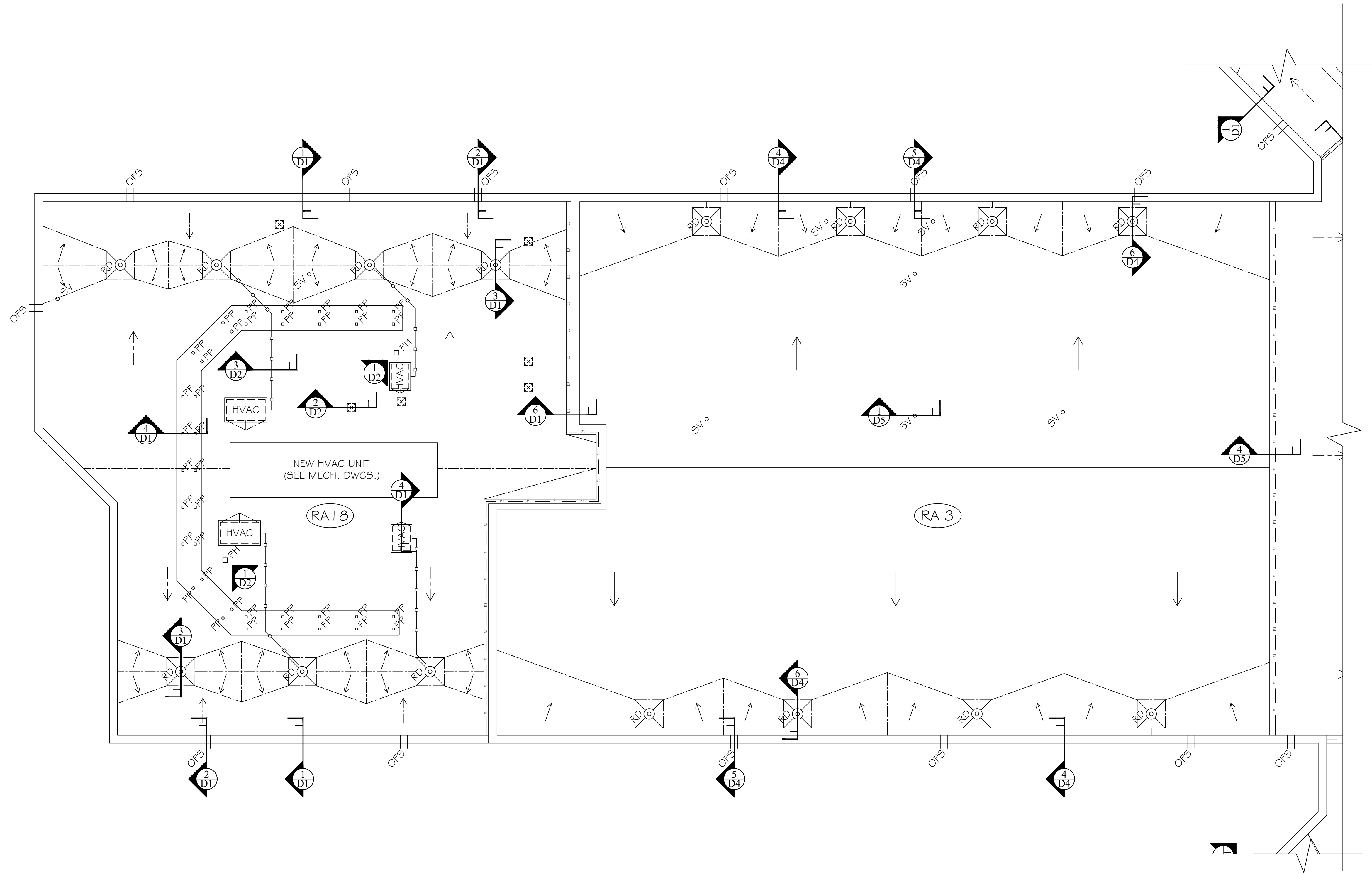
SHEET TITLE: **ROOF PLAN**
 PROJECT DESCRIPTION: **ROOF AND HVAC REPLACEMENT**
 PROJECT AT **ST. JAMES MIDDLE SCHOOL**
 CLIENT NAME: **HORRY COUNTY SCHOOL DISTRICT**

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SHEET
R4



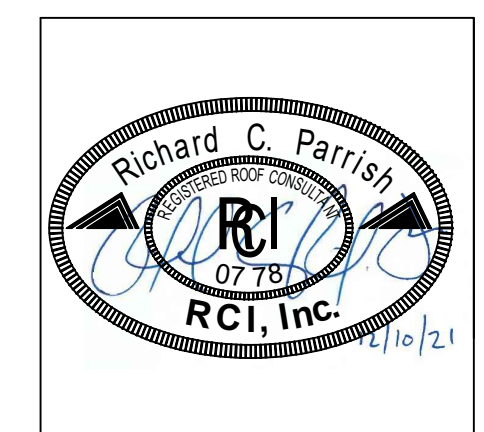
1 ROOF AREAS 3 & 18

LEGEND			
○	= AREAS IN CONTRACT		= CURB MOUNTED HVAC UNIT
○ RA #	= ROOF AREA DESIGNATION		= HVAC CONDENSATE DRAIN LINE
→	= SLOPE IN THE STRUCTURE		= SANITARY VENT
- - ->	= SLOPE IN TAPERED INSULATION		= PIPE PENETRATION
- - -	= TAPERED CRICKETS & SADDLES		= NEW PIPE HOUSING
	= MAIN ROOF DRAIN		= ABANDONED GRAVITY VENT (TO BE REMOVED)
	= OVERFLOW SCUPPER		
	= EXPANSION JOINT		

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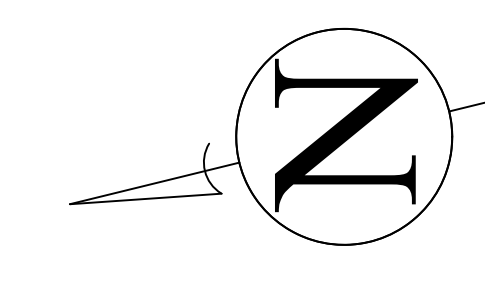
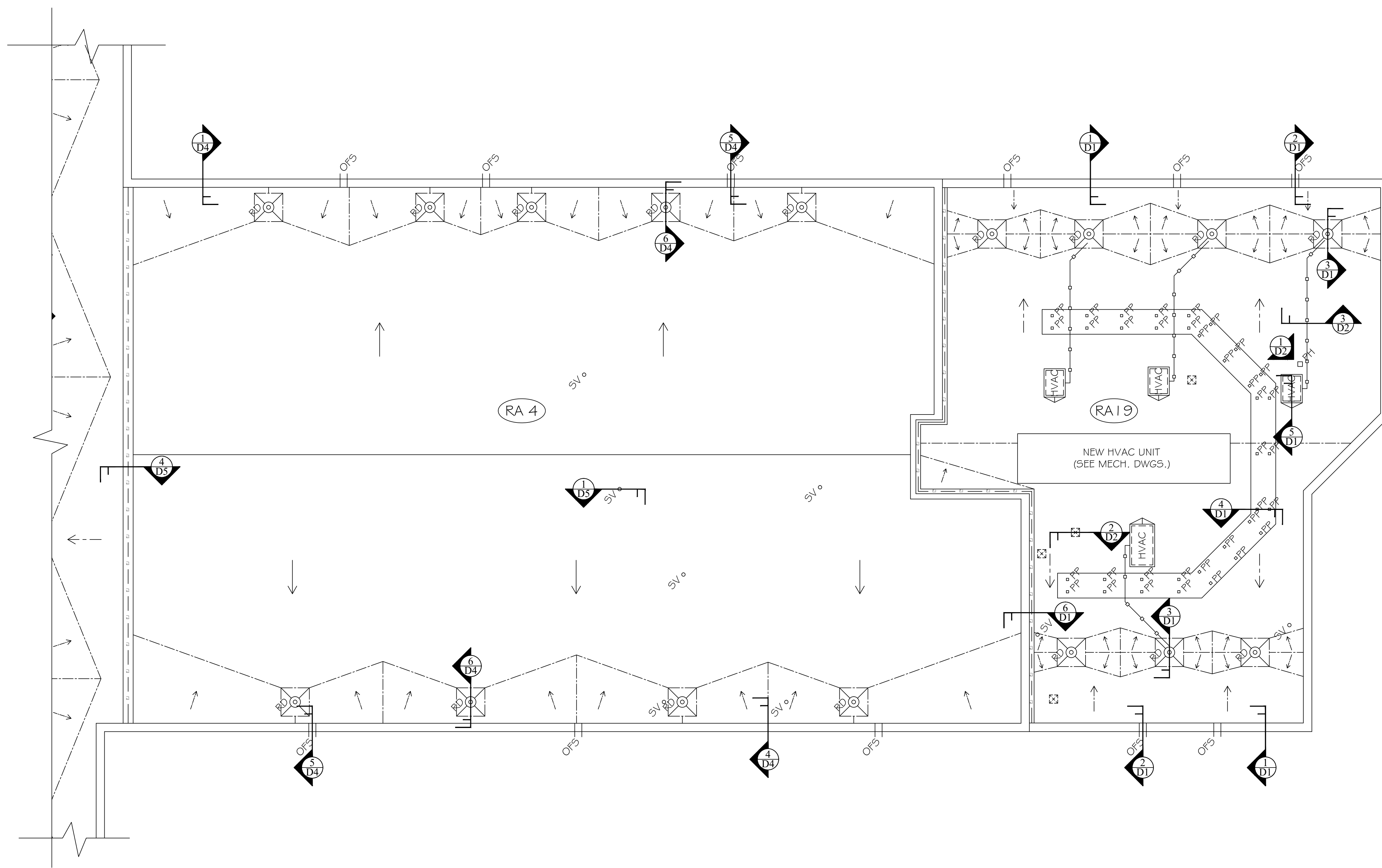
SHEET TITLE: **ROOF PLAN**
 PROJECT DESCRIPTION: **ROOF AND HVAC REPLACEMENT**
PROJECT AT ST. JAMES MIDDLE SCHOOL
 CLIENT NAME: **HORRY COUNTY SCHOOL DISTRICT**

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SHEET
R5



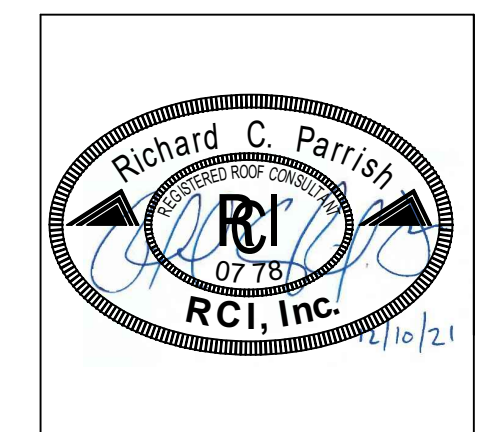
1 ROOF AREAS 4 & 19

LEGEND	
= AREAS IN CONTRACT	= CURB MOUNTED HVAC UNIT
= ROOF AREA DESIGNATION	= HVAC CONDENSATE DRAIN LINE
= SLOPE IN THE STRUCTURE	= SANITARY VENT
= SLOPE IN TAPERED INSULATION	= PIPE PENETRATION
= TAPERED CRICKETS & SADDLES	= NEW PIPE HOUSING
= MAIN ROOF DRAIN	= ABANDONED GRAVITY VENT (TO BE REMOVED)
= OVERFLOW SCUPPER	
= EXPANSION JOINT	

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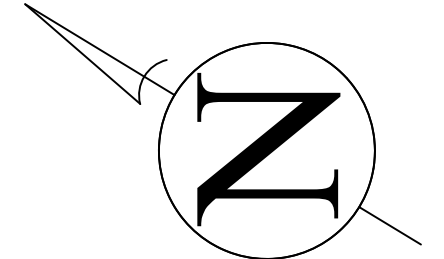
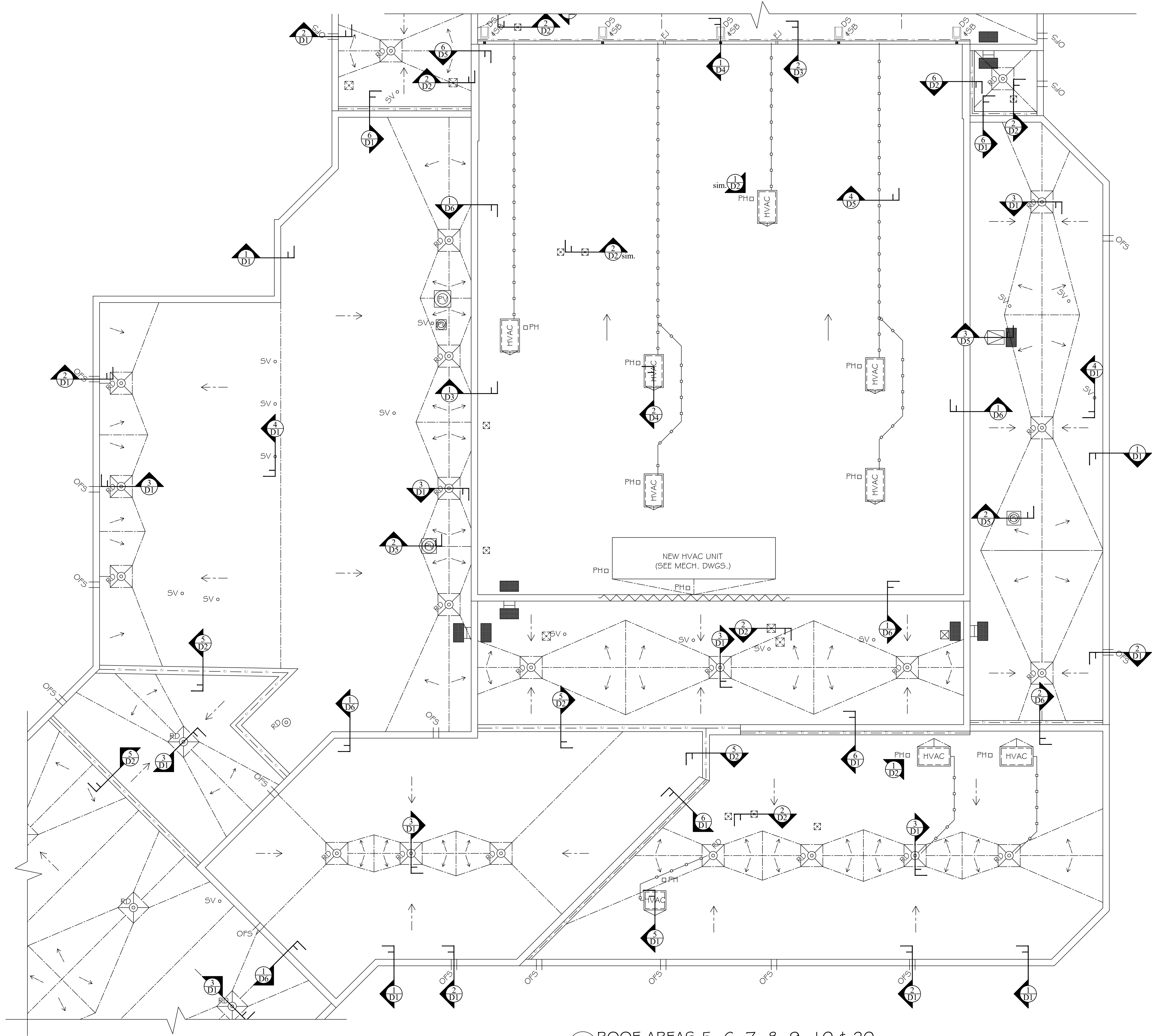
SHEET TITLE: **ROOF PLAN**
 PROJECT DESCRIPTION: **ROOF AND HVAC REPLACEMENT PROJECT AT ST. JAMES MIDDLE SCHOOL**
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R6

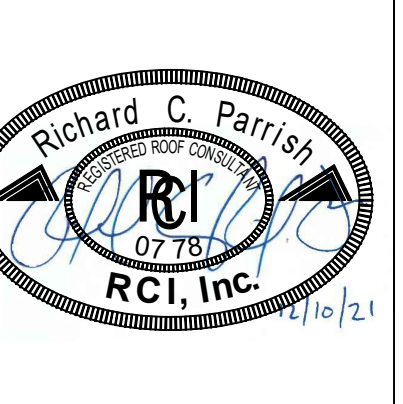


LEGEND	
	= AREAS IN CONTRACT
	= ROOF AREA DESIGNATION
	= SLOPE IN THE STRUCTURE
	= SLOPE IN TAPERED INSULATION
	= TAPERED CRICKETS & SADDLES
	= MAIN ROOF DRAIN
	= OVERFLOW SCUPPER
	= GUTTER AND DOWNSPOUT
	= GUTTER, DOWNSPOUT AND SPLASH BLOCK
	= GUTTER EXPANSION JOINT
	= EXPANSION JOINT
	= CURB MOUNTED HVAC UNIT
	= HVAC CONDENSATE DRAIN LINE
	= NEW WALL MOUNTED GUARD RAIL
	= POWER VENTILATOR
	= SANITARY VENT
	= WALL MOUNTED LADDER
	= ROOF HATCH
	= NEW WALKPAD
	= ABANDONED GRAVITY VENT (TO BE REMOVED)

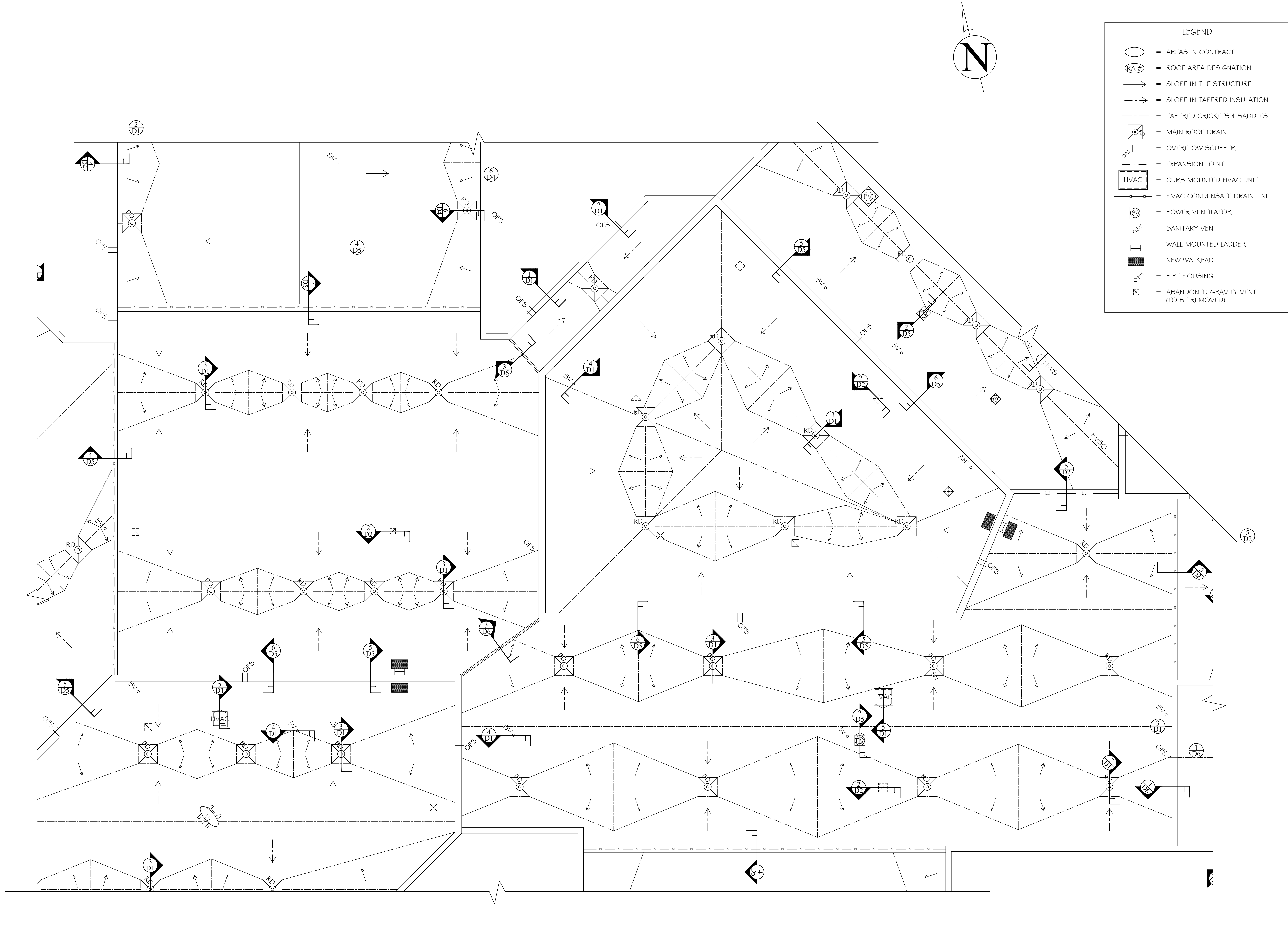
1 ROOF AREAS 5, 6, 7, 8, 9, 10 & 20

SHEET TITLE:	ROOF PLAN
PROJECT DESCRIPTION:	ROOF AND HVAC REPLACEMENT PROJECT AT ST. JAMES MIDDLE SCHOOL
CLIENT NAME:	HORRY COUNTY SCHOOL DISTRICT

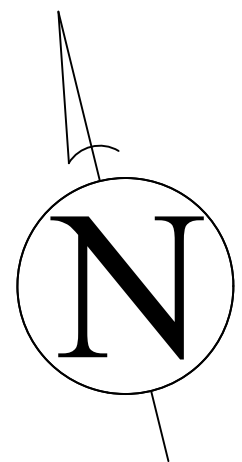
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- LEGEND**
- = AREAS IN CONTRACT
 - RA # = ROOF AREA DESIGNATION
 - = SLOPE IN THE STRUCTURE
 - - - → = SLOPE IN TAPERED INSULATION
 - - - = TAPERED CRICKETS & SADDLES
 - ⊠ = MAIN ROOF DRAIN
 - ⊠ = OVERFLOW SCUPPER
 - ⊠ = EXPANSION JOINT
 - ⊠ HVAC = CURB MOUNTED HVAC UNIT
 - ⊠ = HVAC CONDENSATE DRAIN LINE
 - ⊠ = POWER VENTILATOR
 - ⊠ = SANITARY VENT
 - ⊠ = WALL MOUNTED LADDER
 - = NEW WALKPAD
 - PH = PIPE HOUSING
 - ⊠ = ABANDONED GRAVITY VENT (TO BE REMOVED)



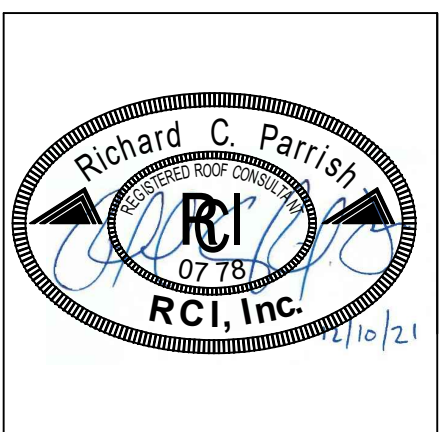
1 ROOF AREAS 11 & 12

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ROOF PLAN
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 PROJECT AT ST. JAMES MIDDLE SCHOOL
 CLIENT NAME: Horry County School District

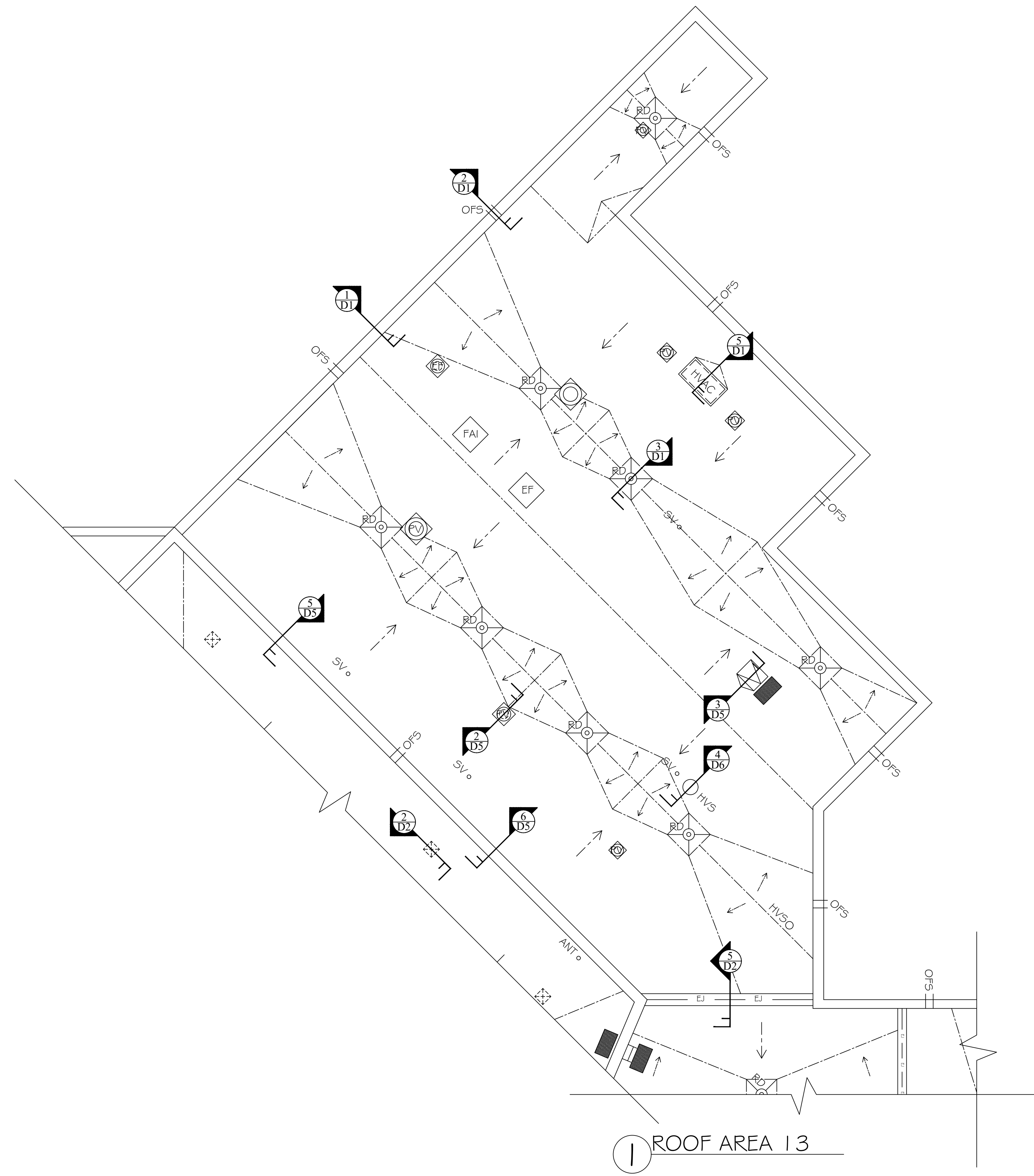
REVISIONS

REVISION	DATE	APPROVED



PF No. 21008.001.004
 DATE: 12/10/2021
 SCALE: NTS
 DRAWN BY: RCP
 CHECKED BY: JAW

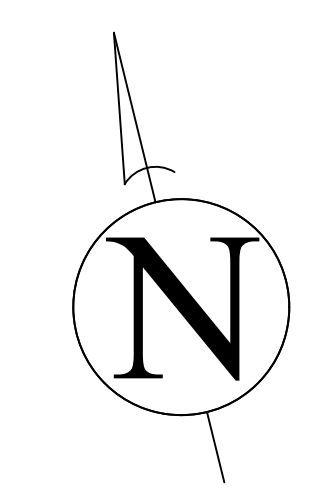
SHEET
R8



1 ROOF AREA 13

LEGEND

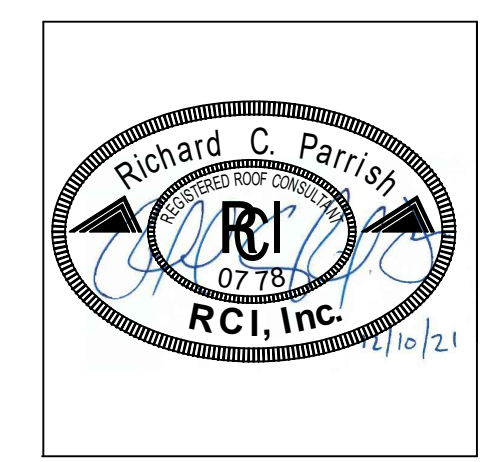
- = AREAS IN CONTRACT
- = ROOF AREA DESIGNATION
- = SLOPE IN THE STRUCTURE
- = SLOPE IN TAPERED INSULATION
- = TAPERED CRICKETS & SADDLES
- = MAIN ROOF DRAIN
- = OVERFLOW SCUPPER
- = EXPANSION JOINT
- = CURB MOUNTED HVAC UNIT
- = HVAC CONDENSATE DRAIN LINE
- = POWER VENTILATOR
- = FRESH AIR INTAKE
- = EXHAUST FAN
- = SANITARY VENT
- = HOT VENT STACK
- = ROOF HATCH
- = NEW WALKPAD
- = ABANDONED GRAVITY VENT (TO BE REMOVED)



Shepard & Associates, LLC
 3547 Dreher Shoals Road, Suite 6
 Irmo, South Carolina, 29063
 Phone: (803) 407-8284
 Fax: (803) 407-8206

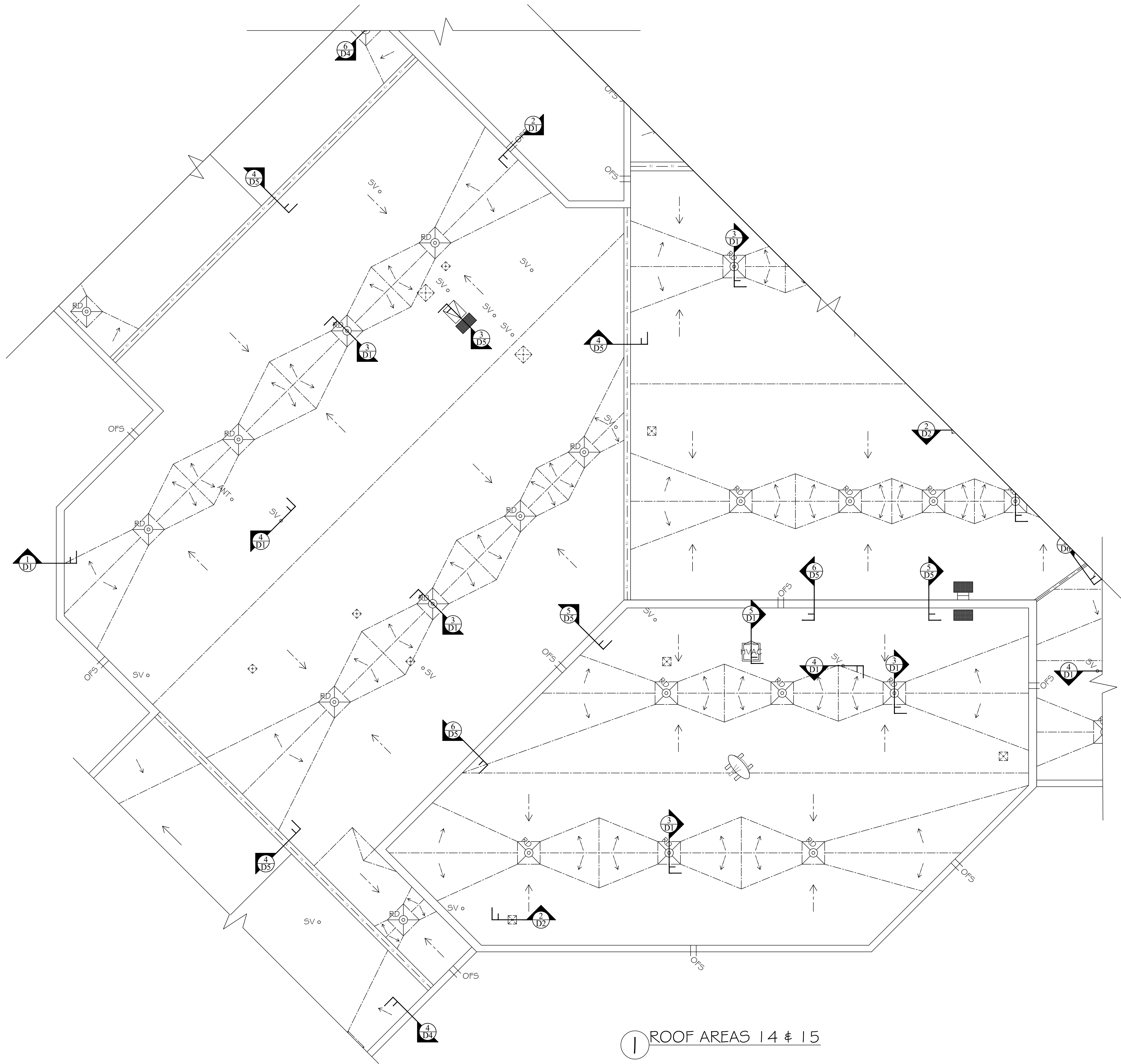
ROOF PLAN
 PROJECT DESCRIPTION: ROOF AND HVAC REPLACEMENT
 PROJECT AT ST. JAMES MIDDLE SCHOOL
 CLIENT NAME: Horry County School District

REVISIONS	DATE	APPROVED

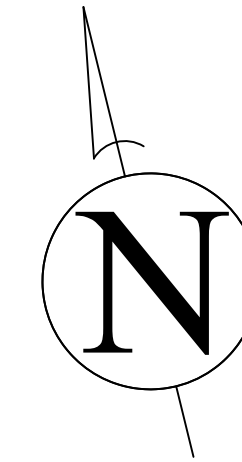


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SHEET
R9



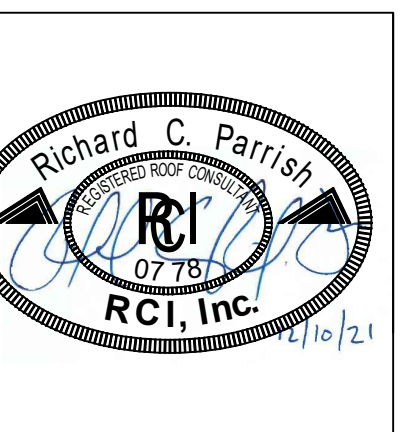
1 ROOF AREAS 14 & 15



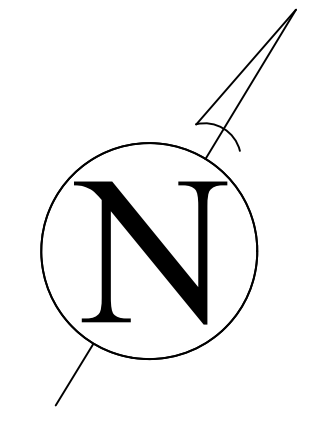
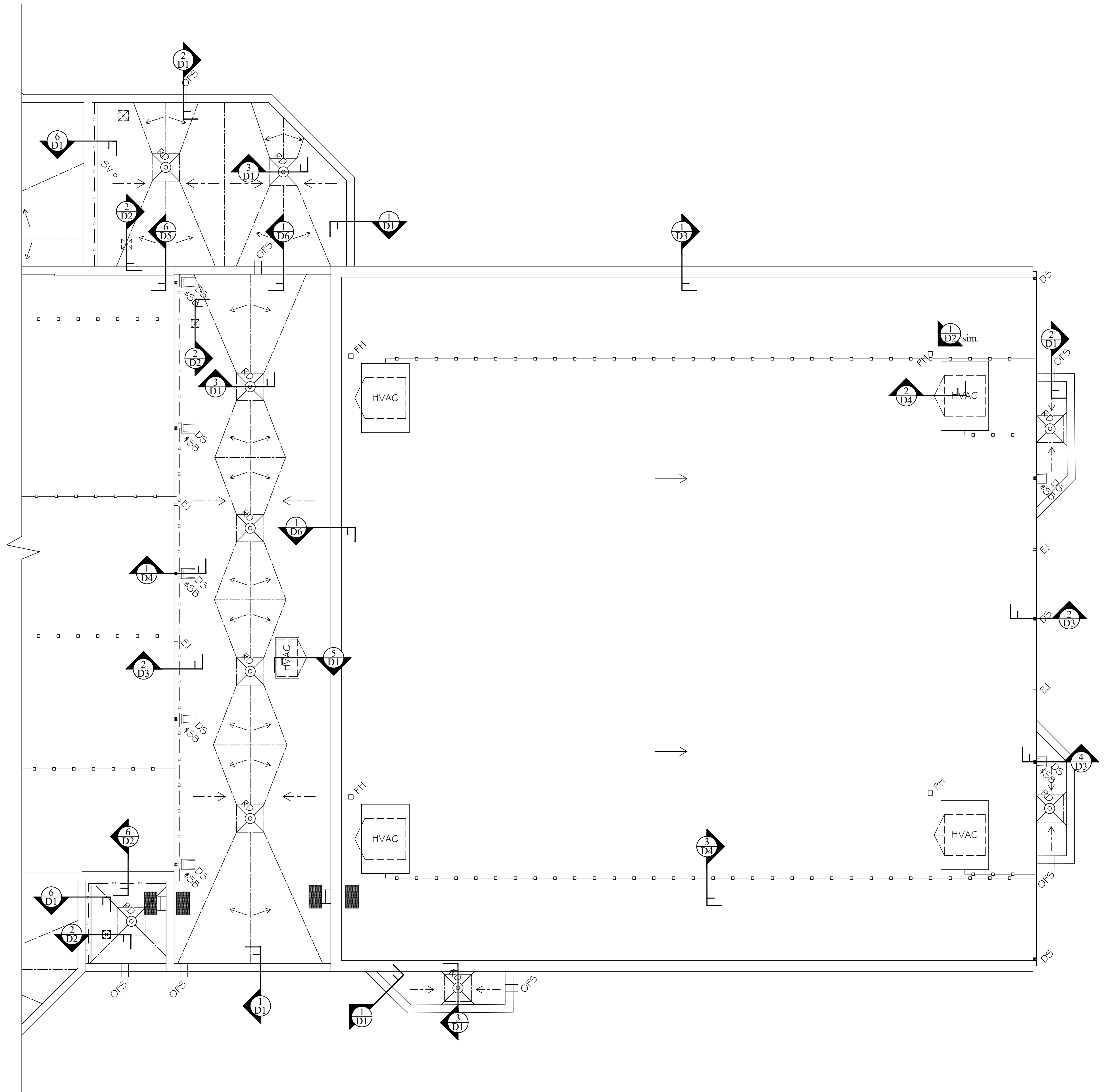
LEGEND	
	= AREAS IN CONTRACT
	= ROOF AREA DESIGNATION
	= SLOPE IN THE STRUCTURE
	= SLOPE IN TAPERED INSULATION
	= TAPERED CRICKETS & SADDLES
	= MAIN ROOF DRAIN
	= OVERFLOW SCUPPER
	= CONTROL JOINT
	= EXPANSION JOINT
	= CURB MOUNTED HVAC UNIT
	= HVAC CONDENSATE DRAIN LINE
	= POWER VENTILATOR
	= SANITARY VENT
	= WALL MOUNTED LADDER
	= ROOF HATCH
	= NEW WALKPAD
	= ABANDONED GRAVITY VENT (TO BE REMOVED)

SHEET TITLE:	ROOF PLAN
PROJECT DESCRIPTION:	ROOF AND HVAC REPLACEMENT PROJECT AT ST. JAMES MIDDLE SCHOOL
CLIENT NAME:	HORRY COUNTY SCHOOL DISTRICT

REVISIONS	REVISION	DATE	APPROVED



PF No.	21008.001.004
DATE:	12/10/2021
SCALE:	NTS
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LEGEND

- = AREAS IN CONTRACT
- = ROOF AREA DESIGNATION
- = SLOPE IN THE STRUCTURE
- = SLOPE IN TAPERED INSULATION
- = TAPERED CRICKETS & SADDLES
- = MAIN ROOF DRAIN
- = OVERFLOW SCUPPER
- = GUTTER AND DOWNSPOUT
- = GUTTER, DOWNSPOUT AND SPLASH BLOCK
- = GUTTER EXPANSION JOINT
- = EXPANSION JOINT
- = CURB MOUNTED HVAC UNIT
- = HVAC CONDENSATE DRAIN LINE
- = SANITARY VENT
- = WALL MOUNTED LADDER
- = NEW WALKPAD
- = PIPE HOUSING
- = ABANDONED GRAVITY VENT (TO BE REMOVED)

1 ROOF AREAS 21, 22, 23, 24, C1, C2 & C3

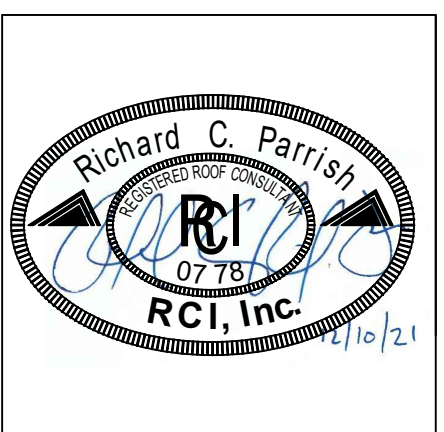
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PROJECT DESCRIPTION: **ROOF AND HVAC REPLACEMENT
 PROJECT AT ST. JAMES MIDDLE SCHOOL**

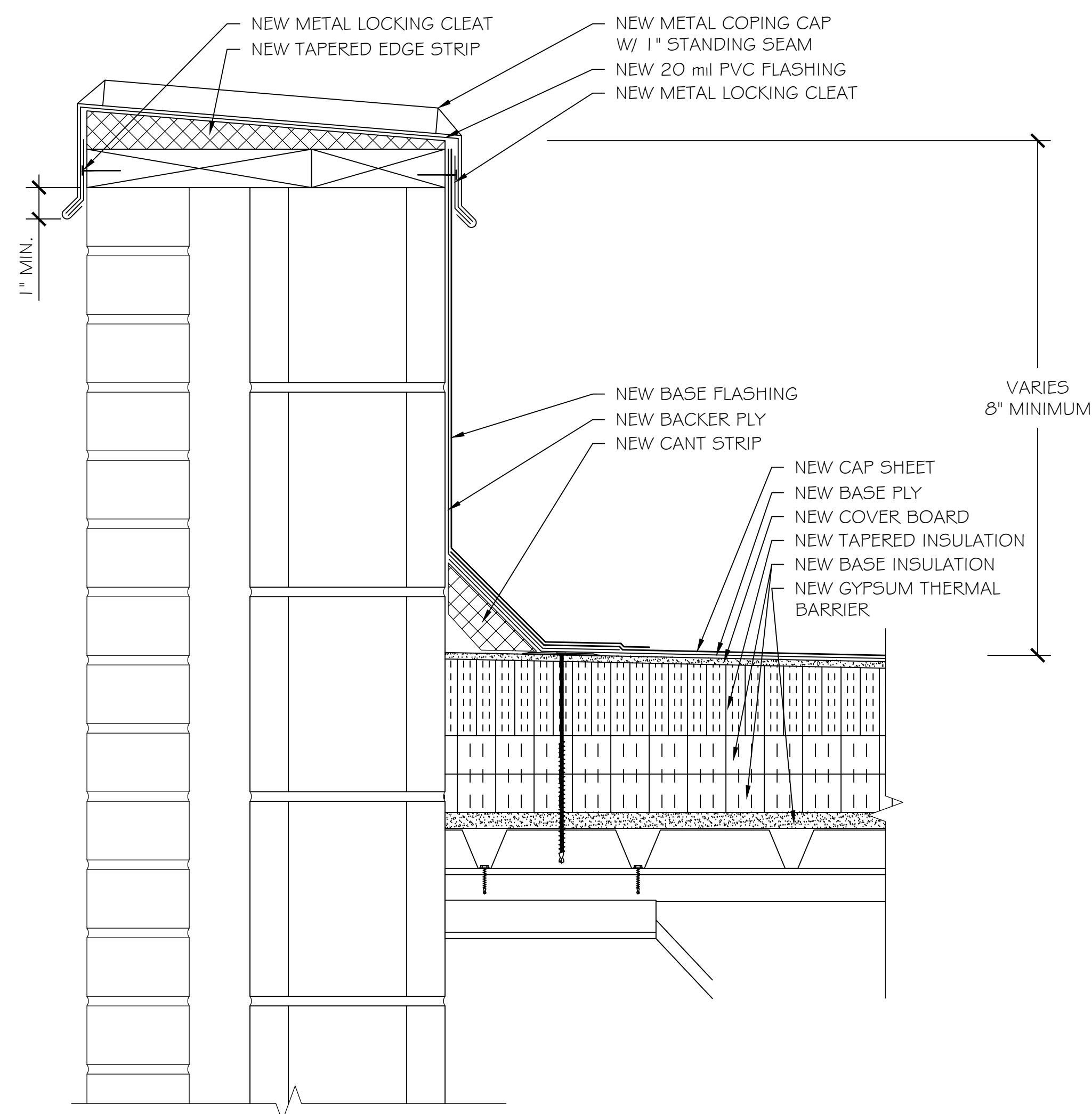
CLIENT NAME: **HORRY COUNTY SCHOOL DISTRICT**

REVISIONS

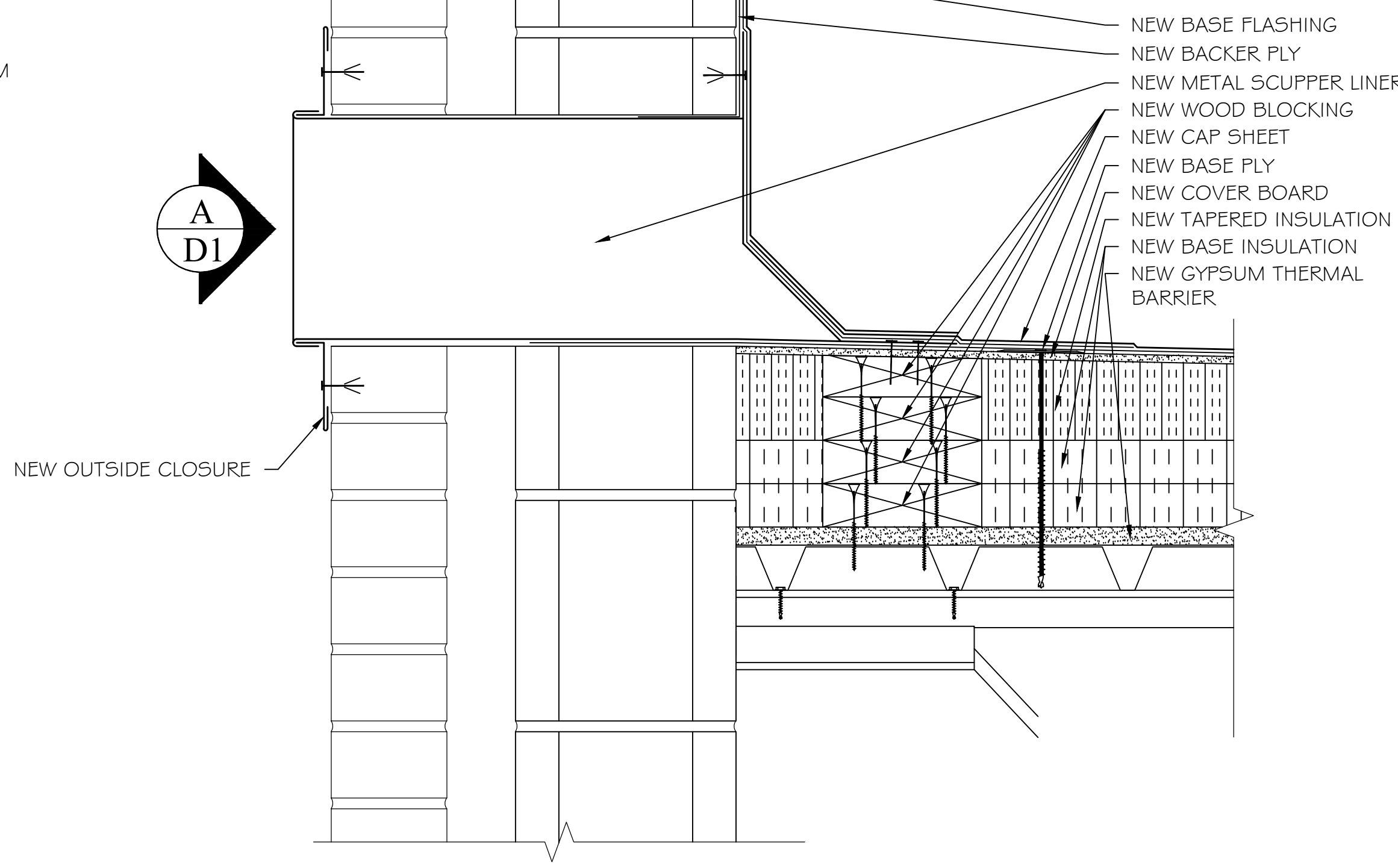
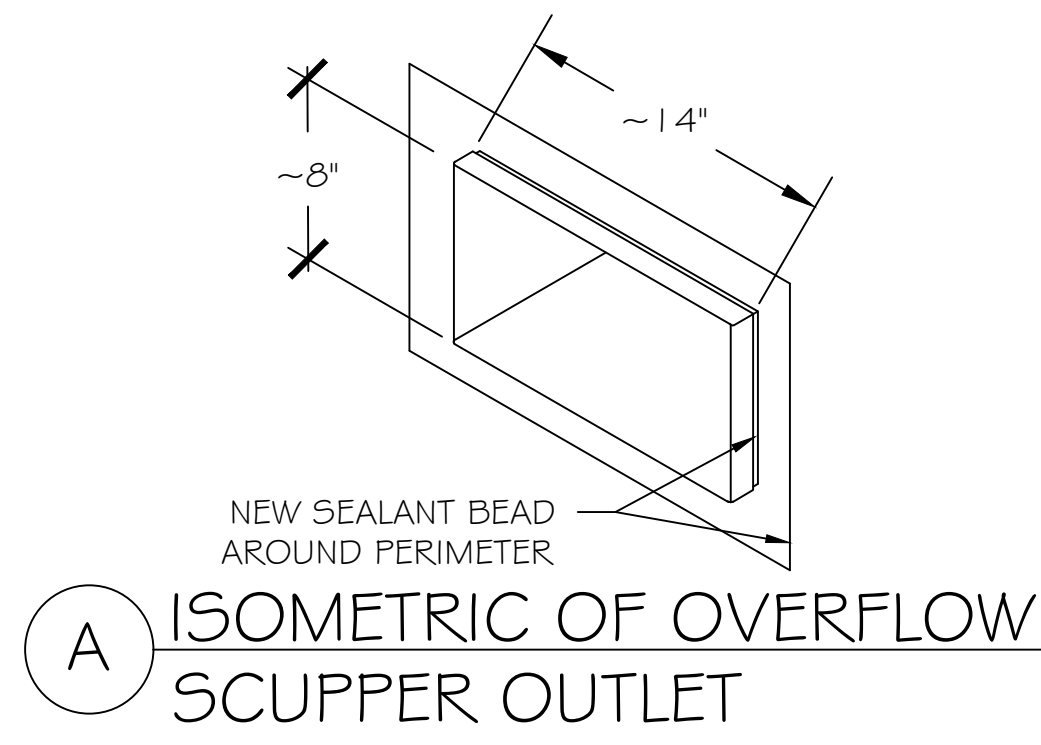
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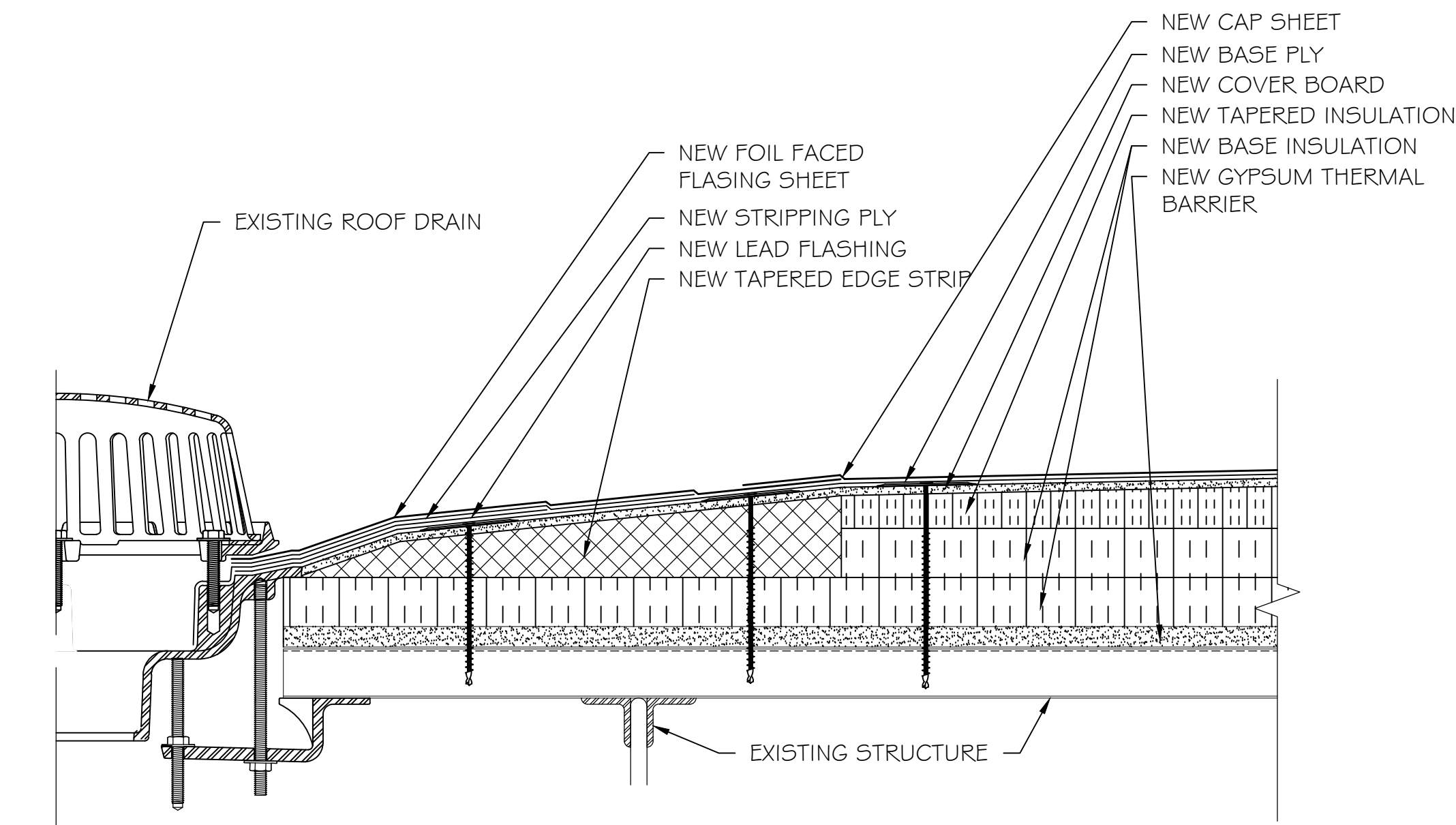
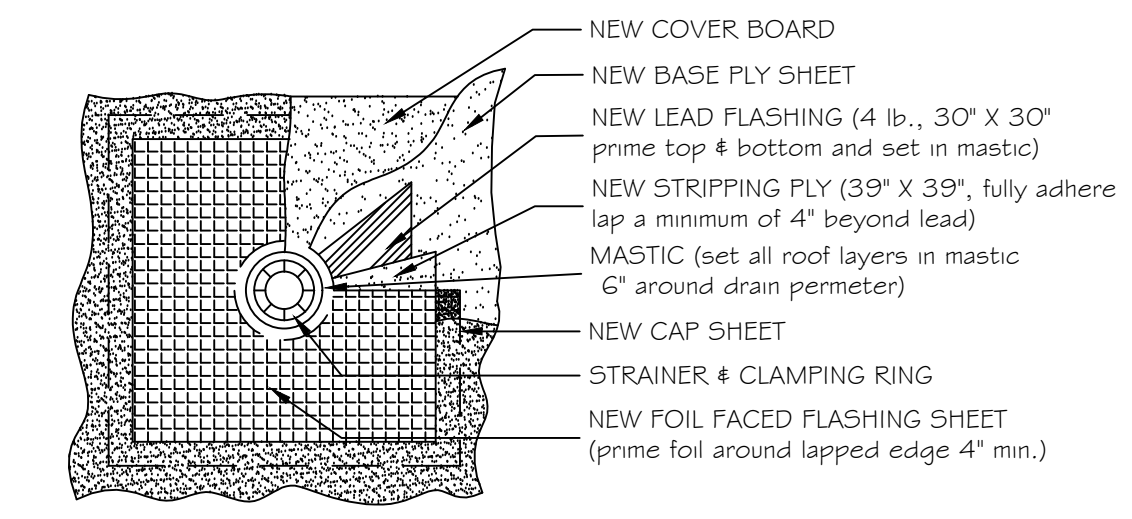
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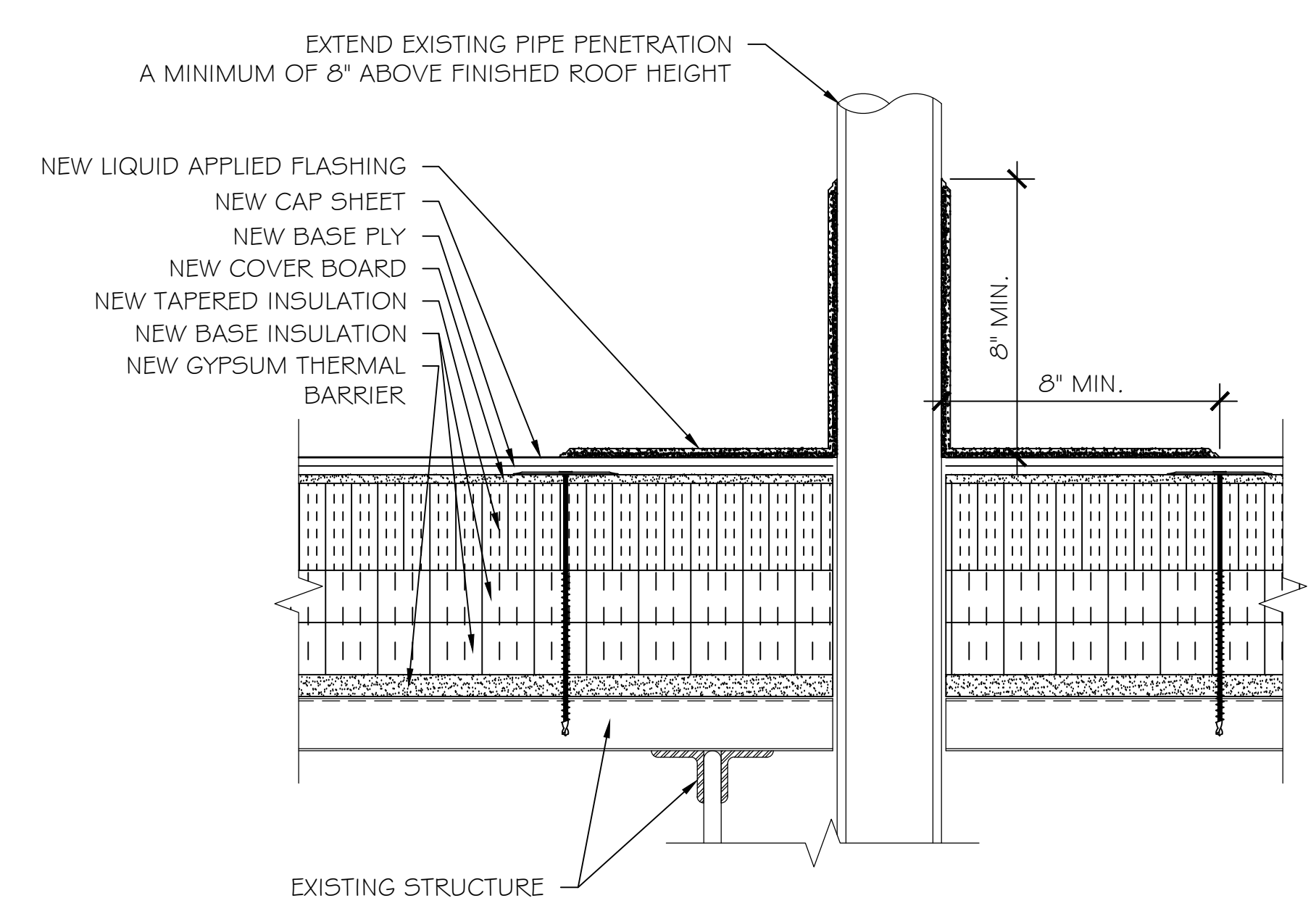
1 PARAPET WALL DETAIL



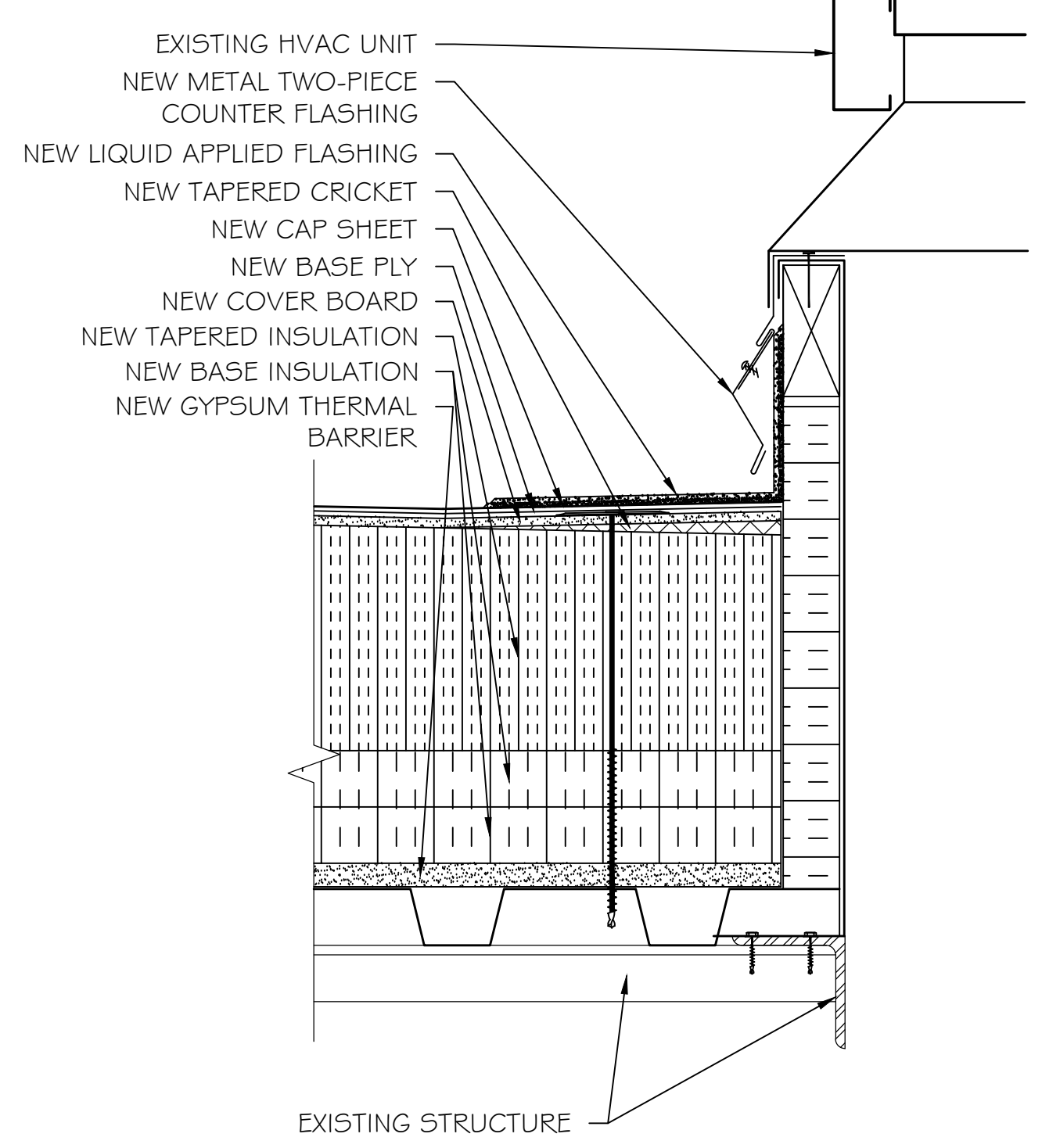
2 OVERFLOW SCUPPER DETAIL



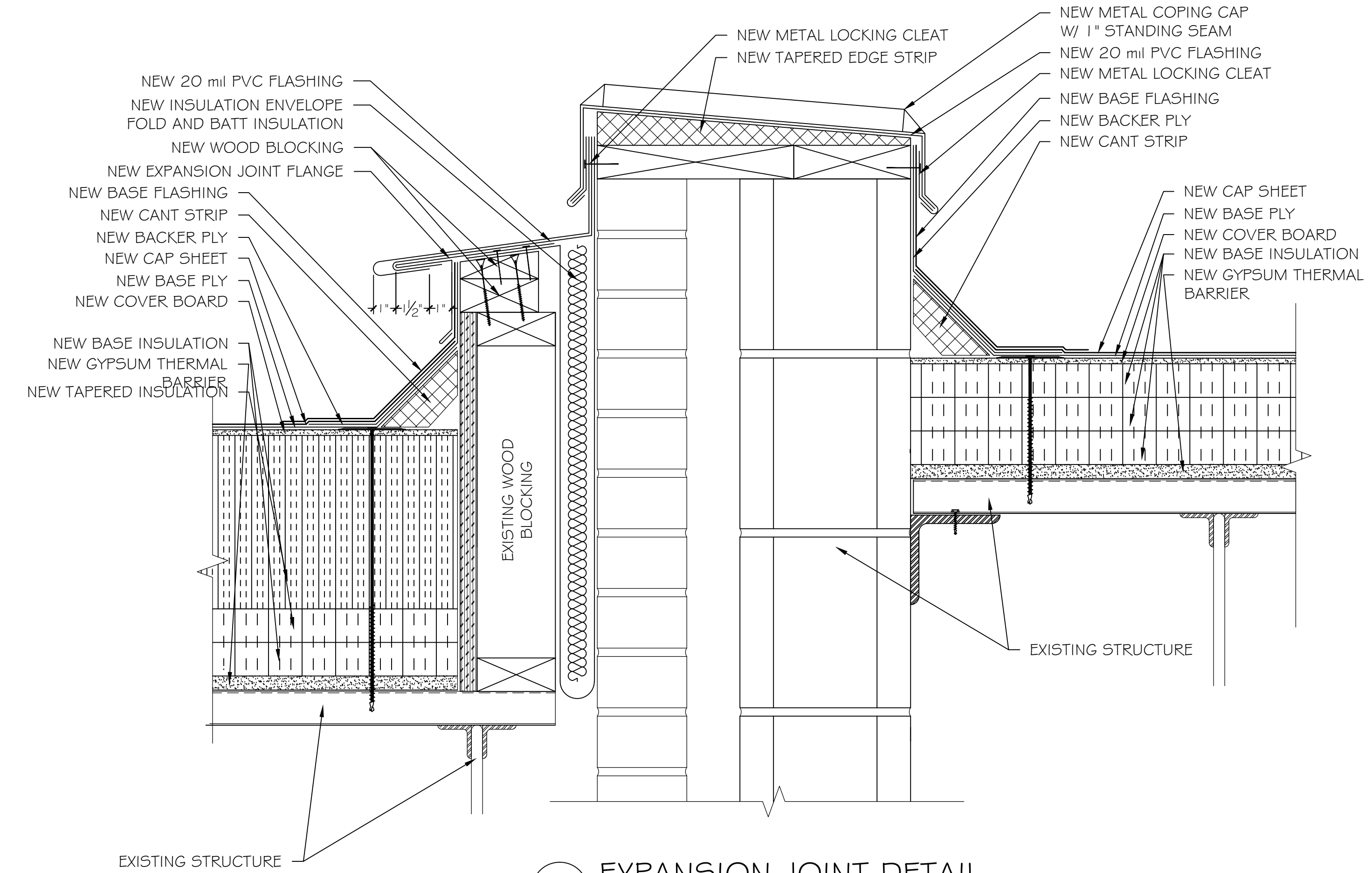
3 ROOF DRAIN DETAIL



4 PIPE PENETRATION DETAIL

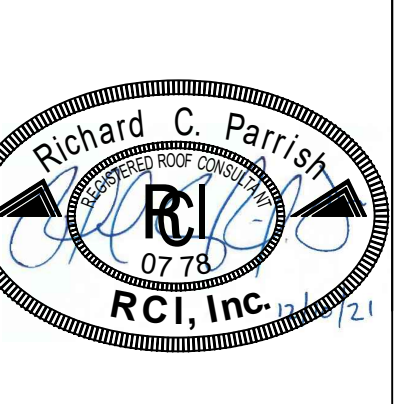


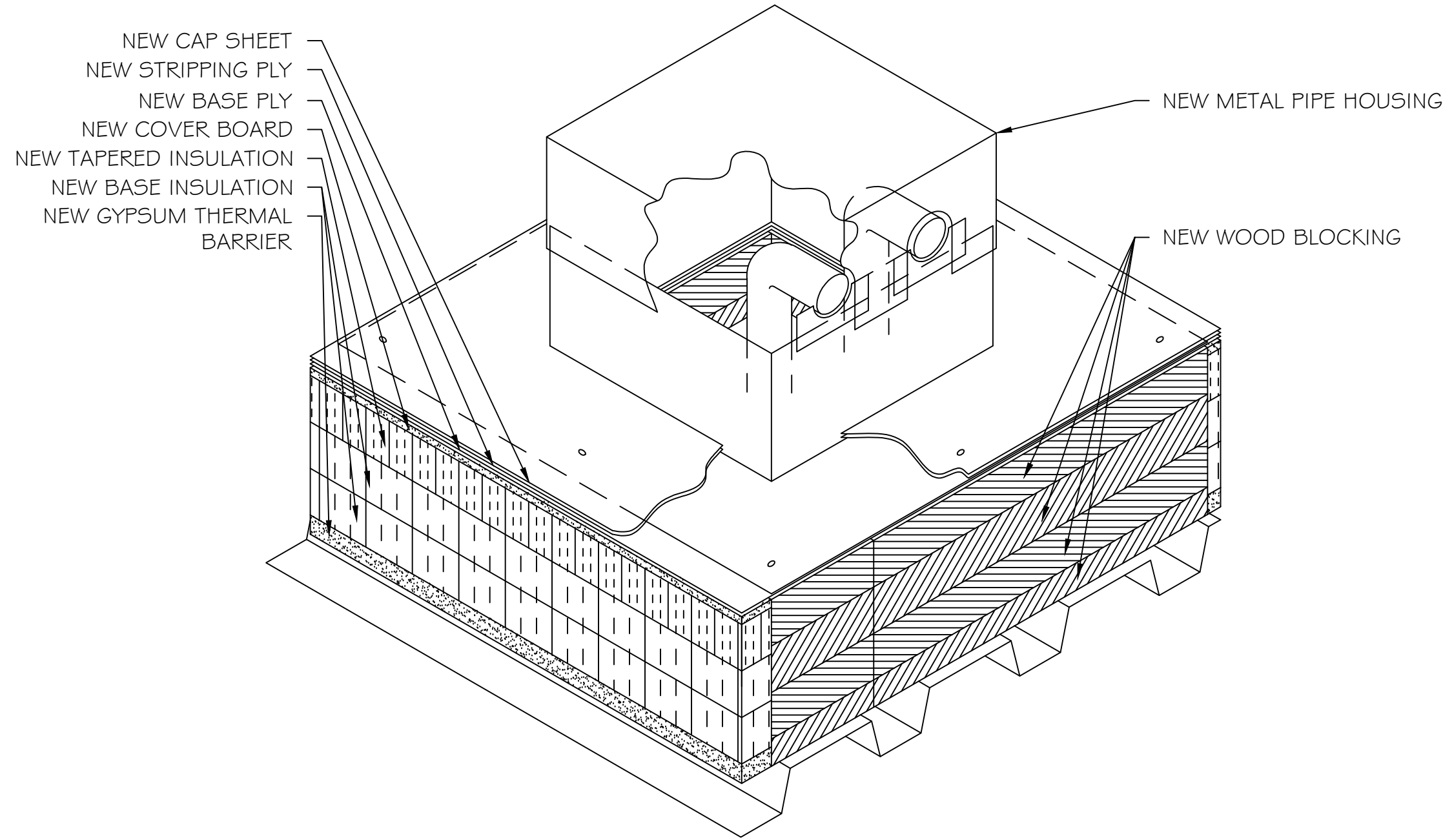
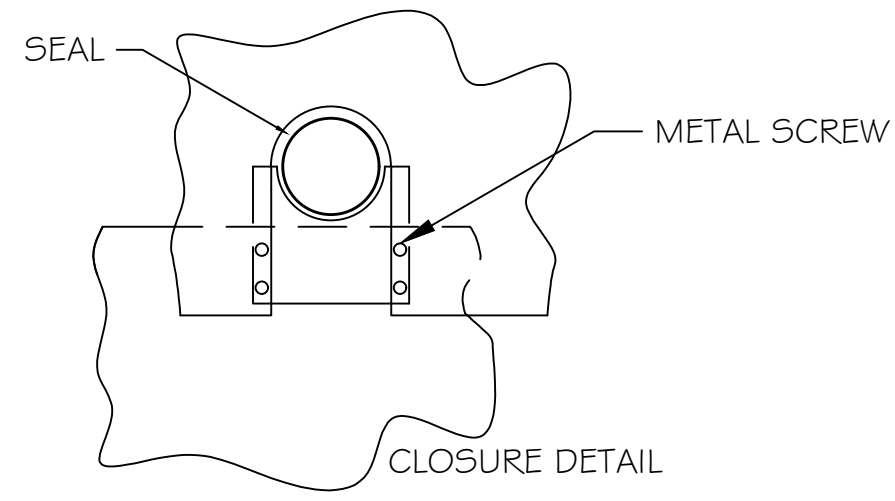
5 HVAC CURB DETAIL



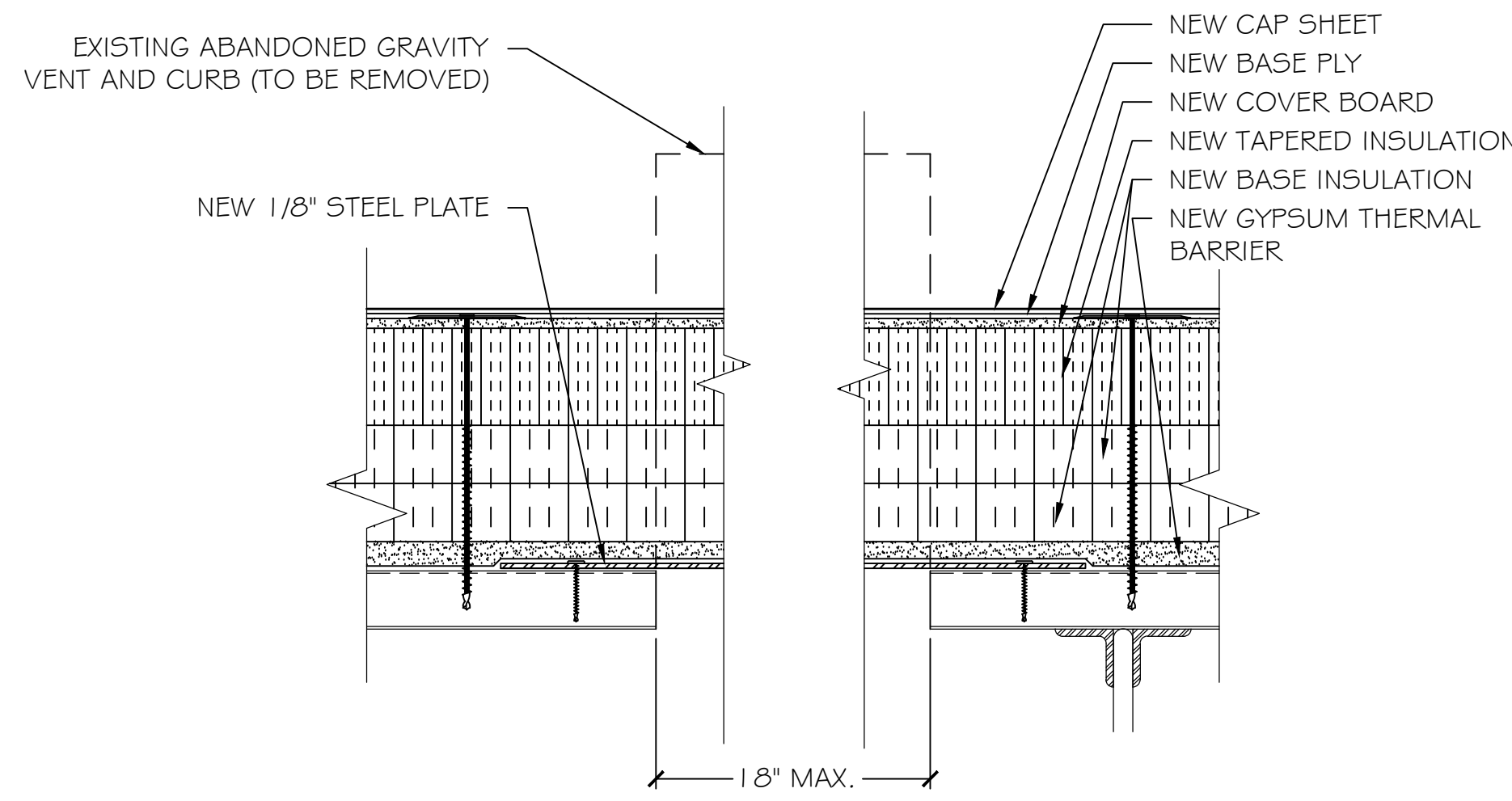
6 EXPANSION JOINT DETAIL

REVISIONS	DATE	APPROVED

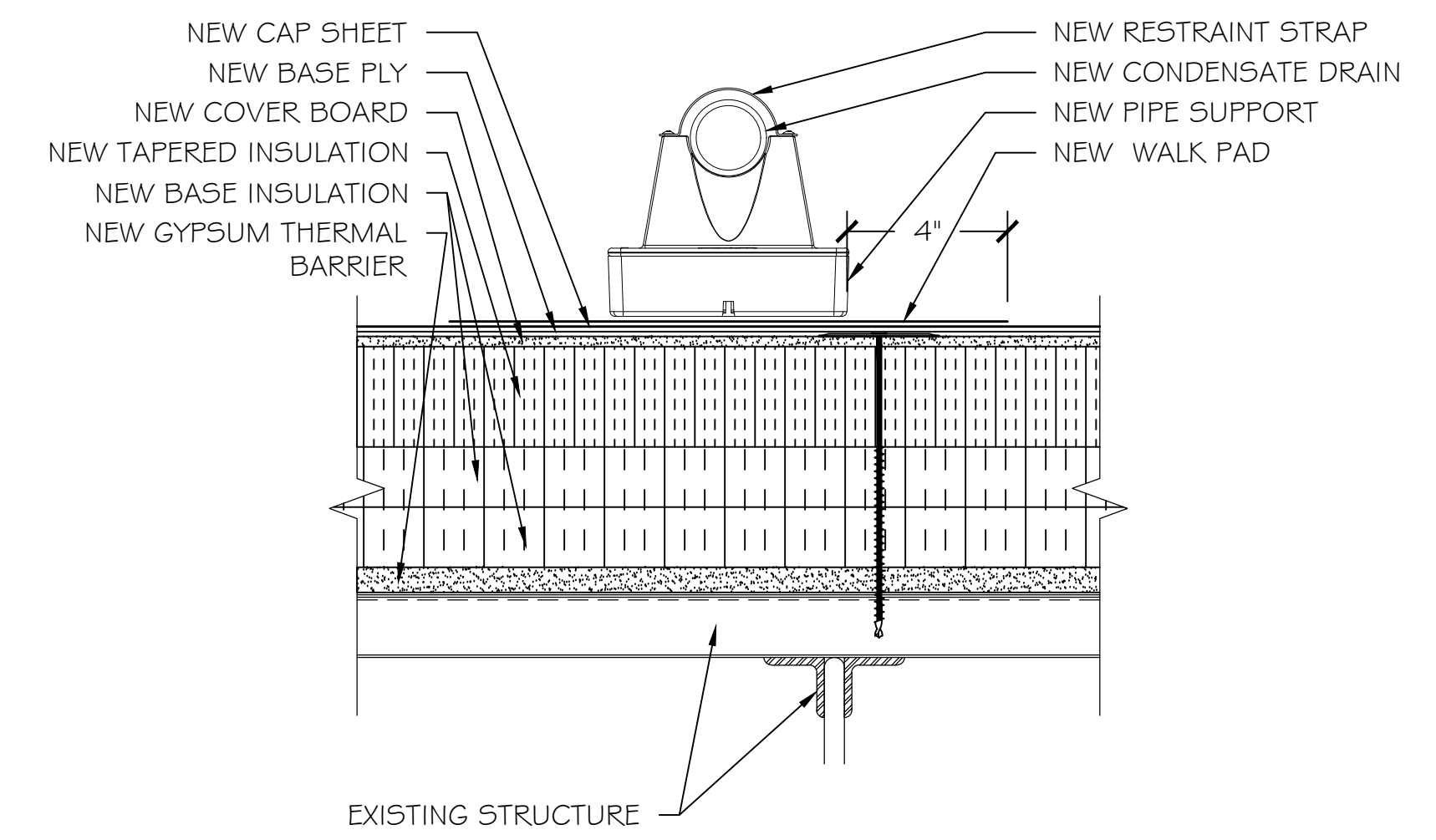




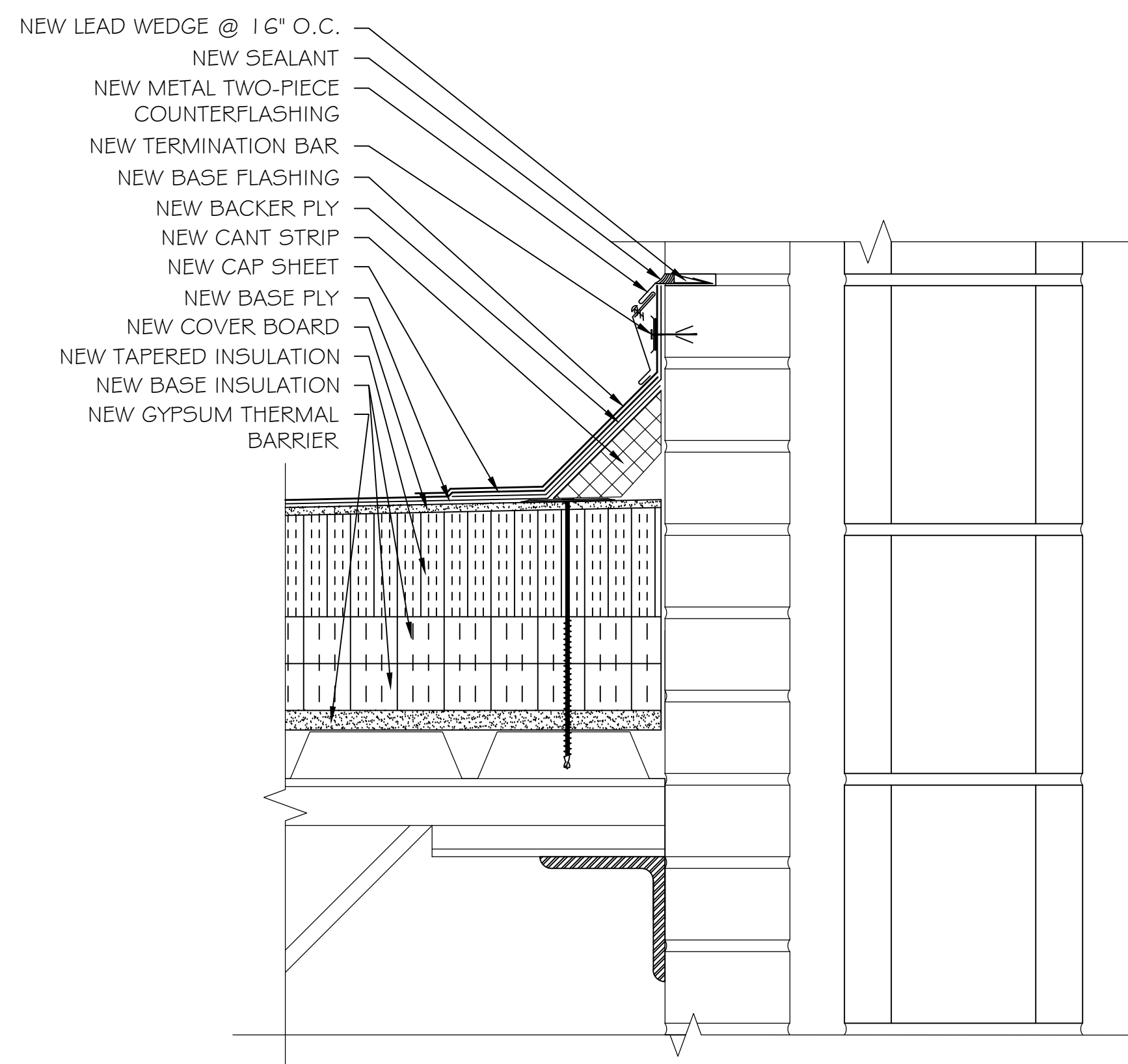
1 ROOF PENETRATION FLASHING, FLANGED PIPE HOUSING
CONTRACTOR TO ADJUST FOR ACTUAL PIPE PENETRATION COUNT



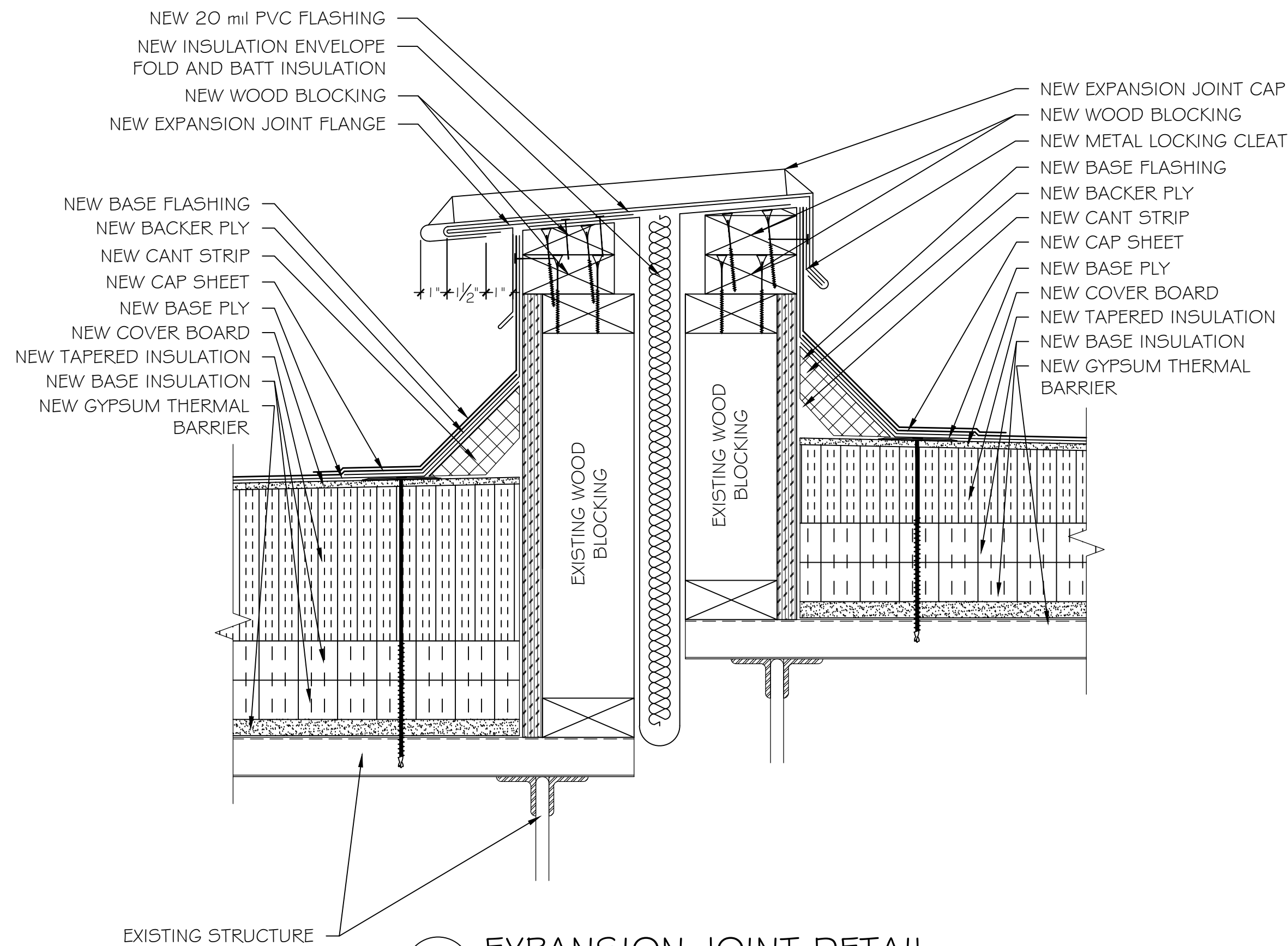
2 ABANDONED GRAVITY VENT DETAIL
AND DECK OPENINGS LESS THAN 1/8" WIDE



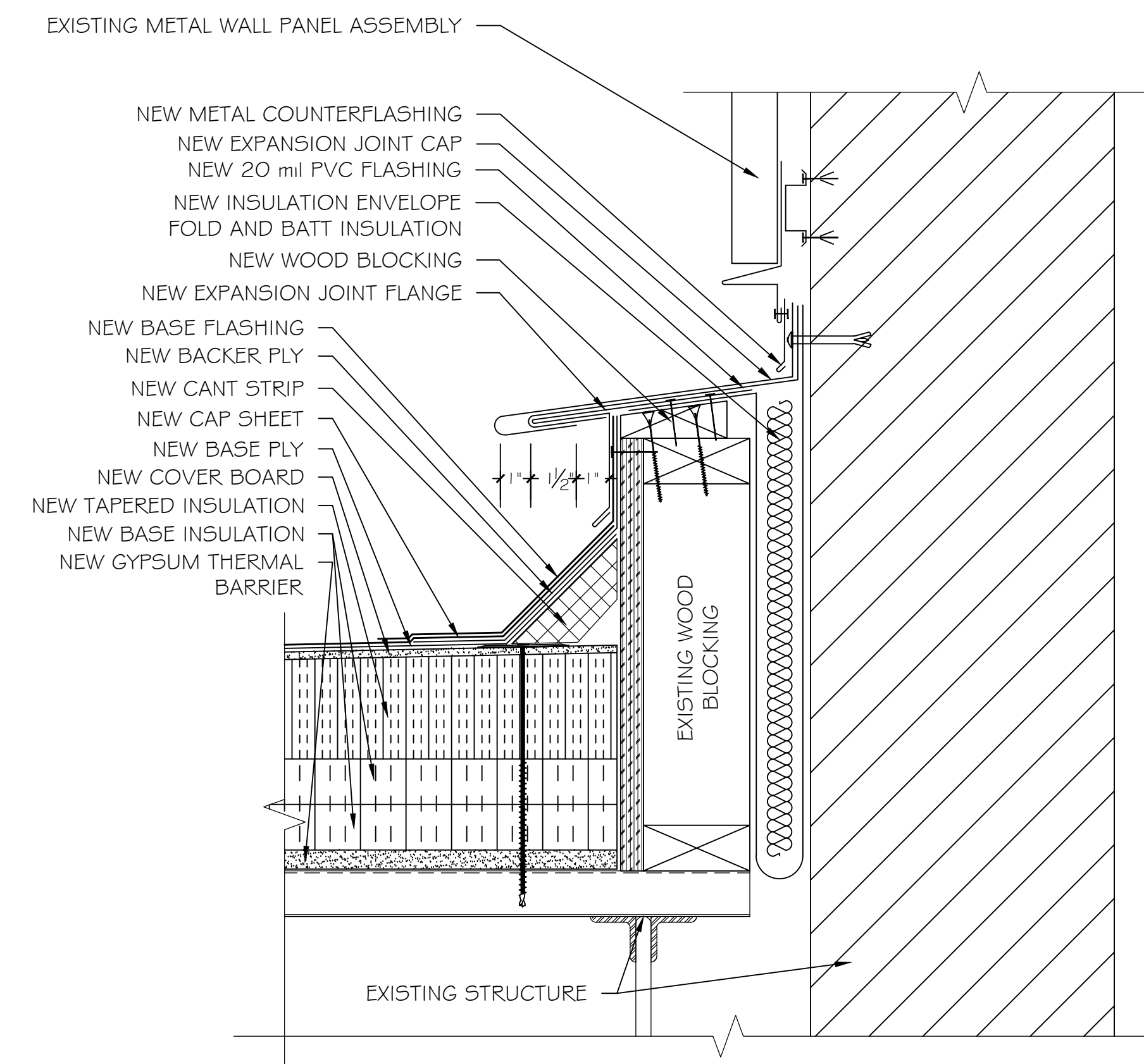
3 CONDENSATE DRAIN SUPPORT DETAIL



4 BASE FLASHING DETAIL

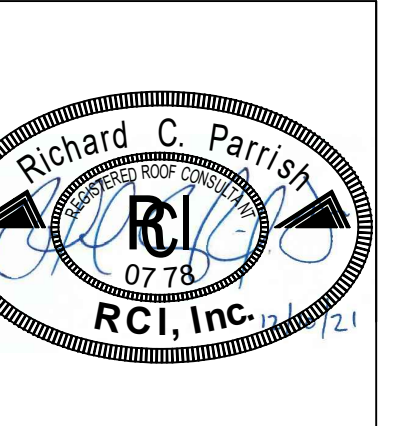


5 EXPANSION JOINT DETAIL

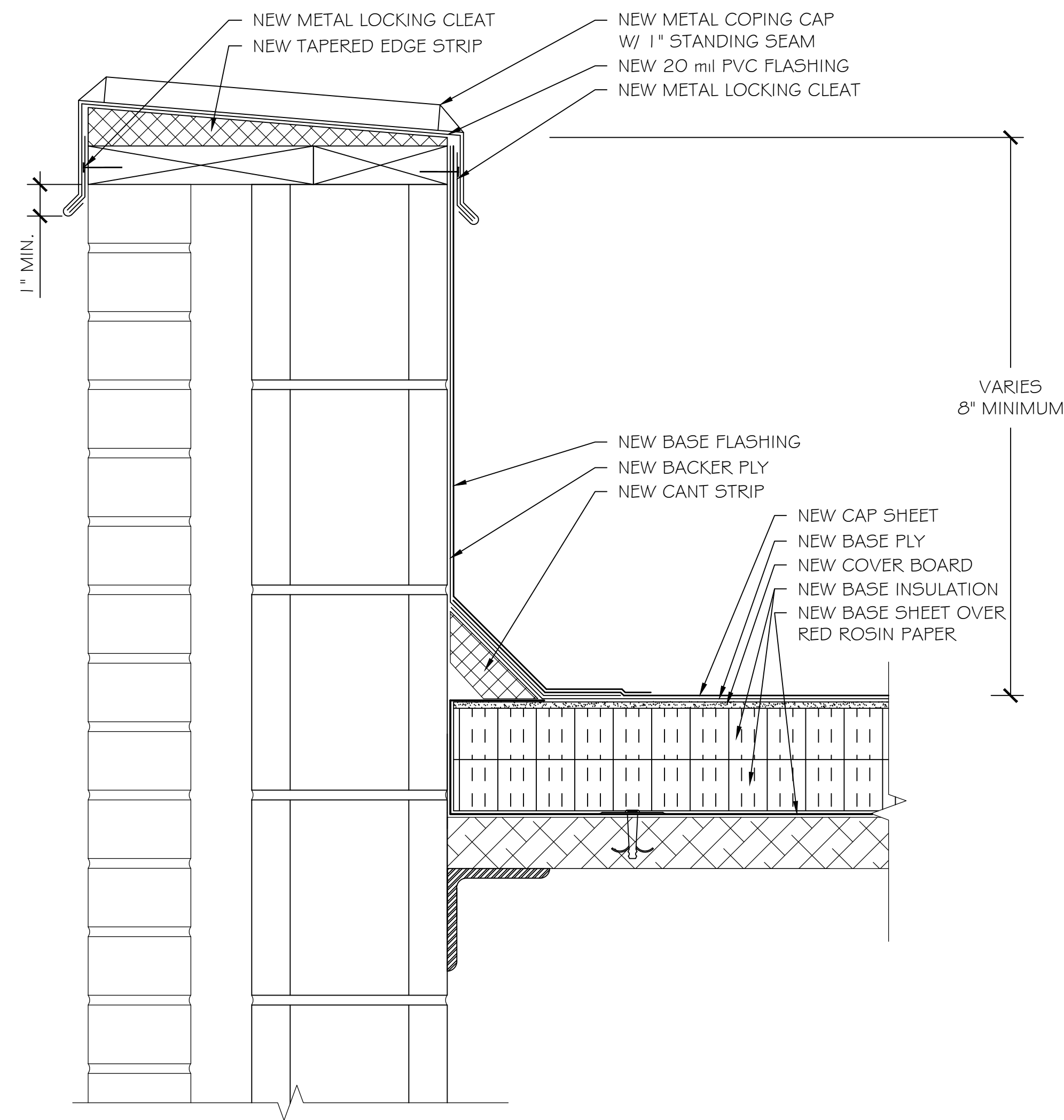


6 EXPANSION JOINT DETAIL

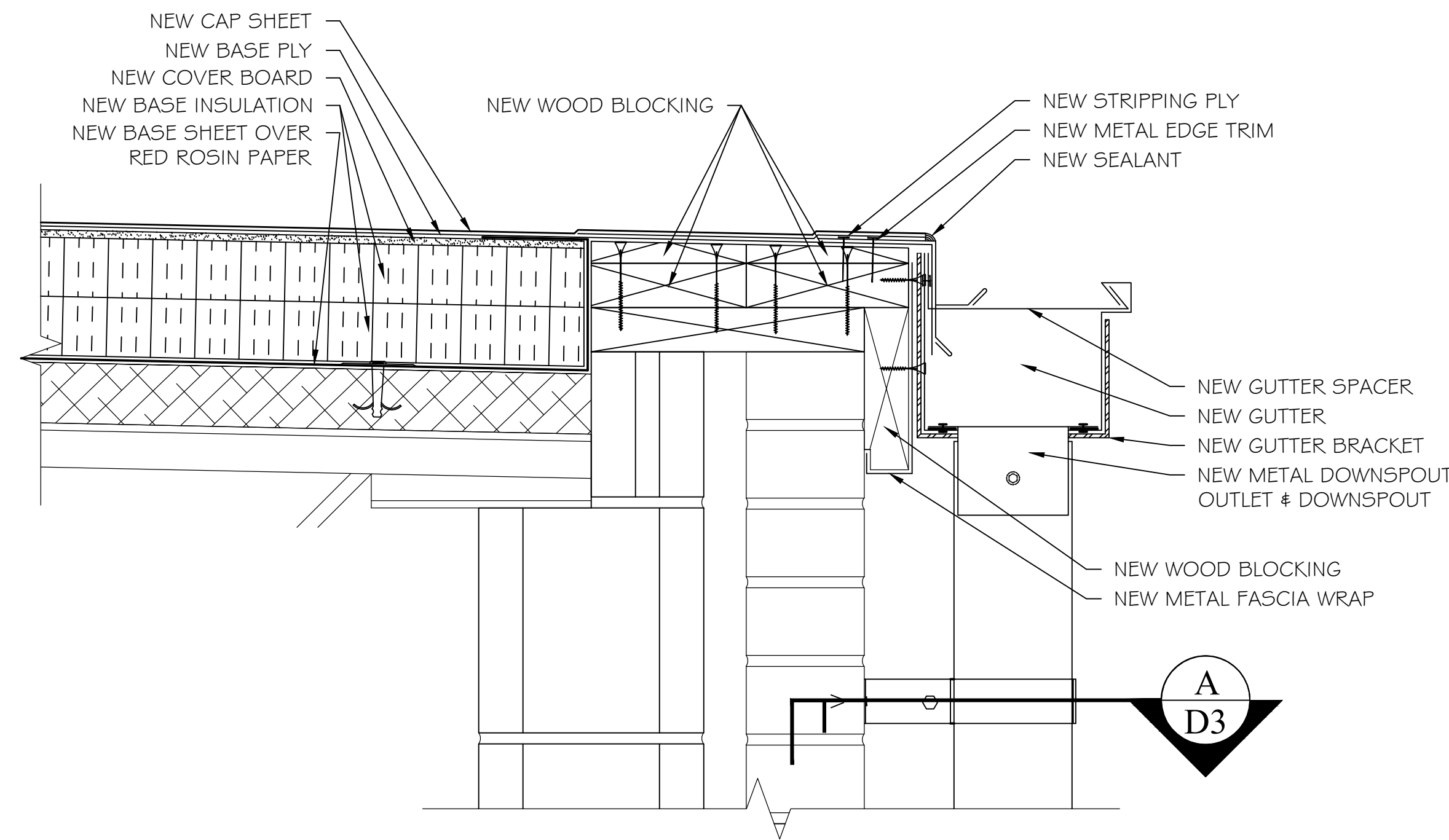
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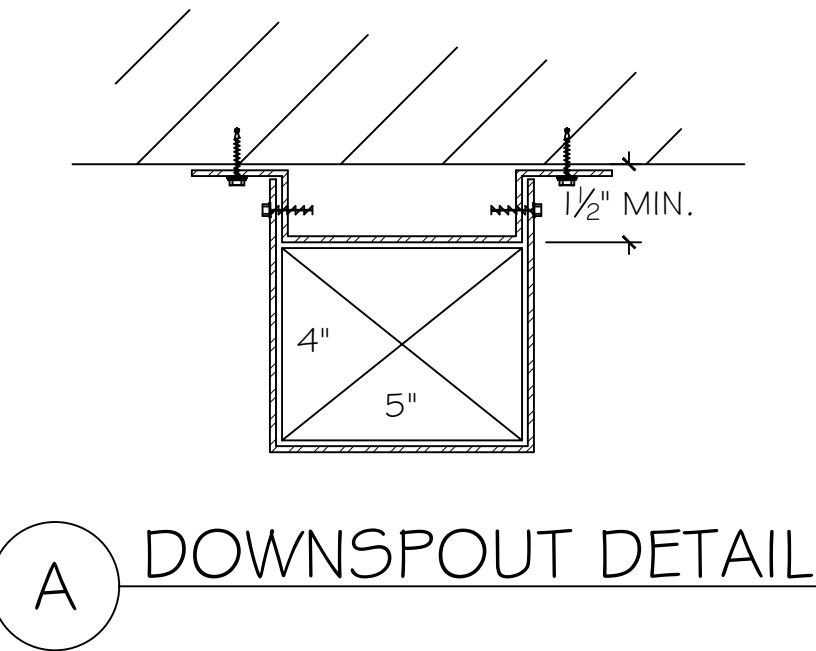
PF No. 21008.001.004
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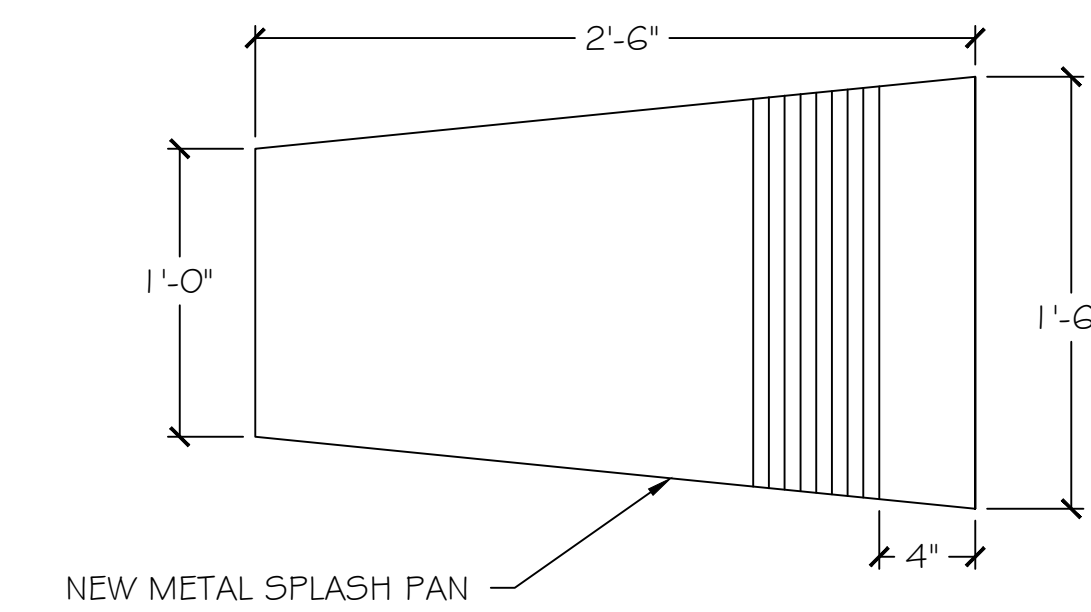
1 PARAPET WALL DETAIL



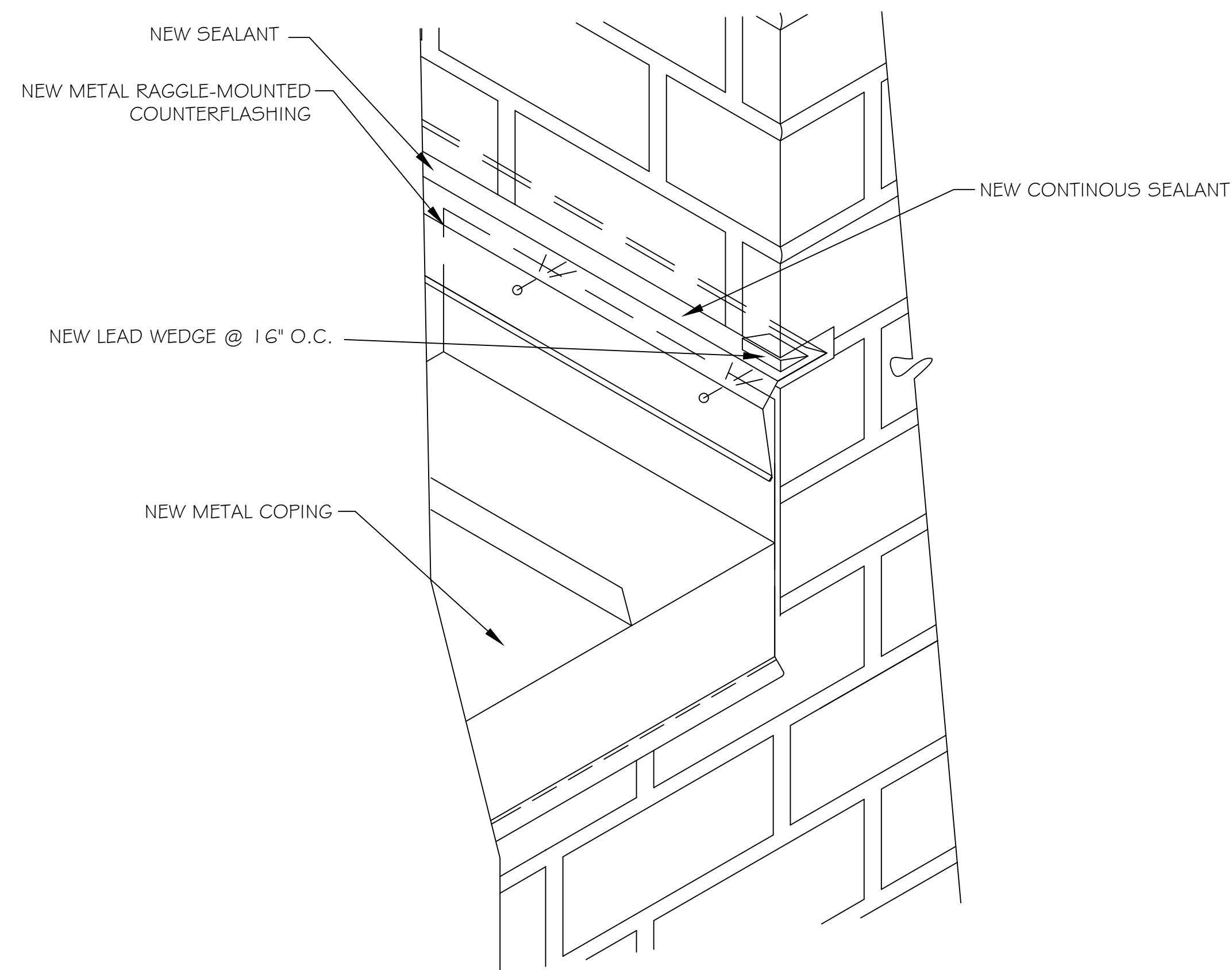
2 EAVE GUTTER DETAIL



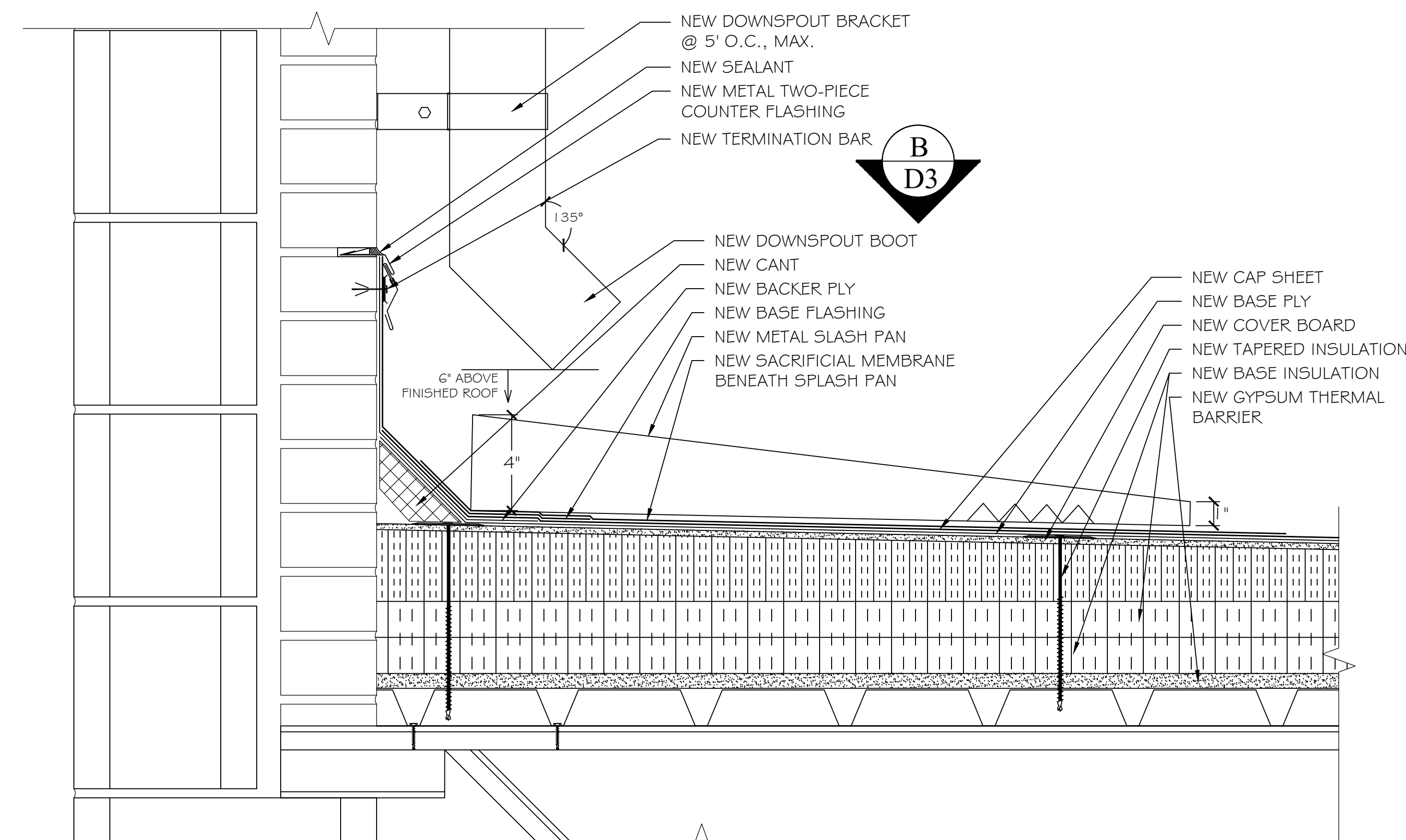
A DOWNSPOUT DETAIL



B SPLASH PAN PLAN

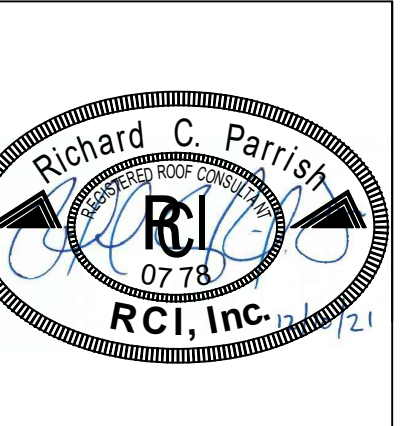


3 DETAIL AT COPING END, VERTICAL WALL



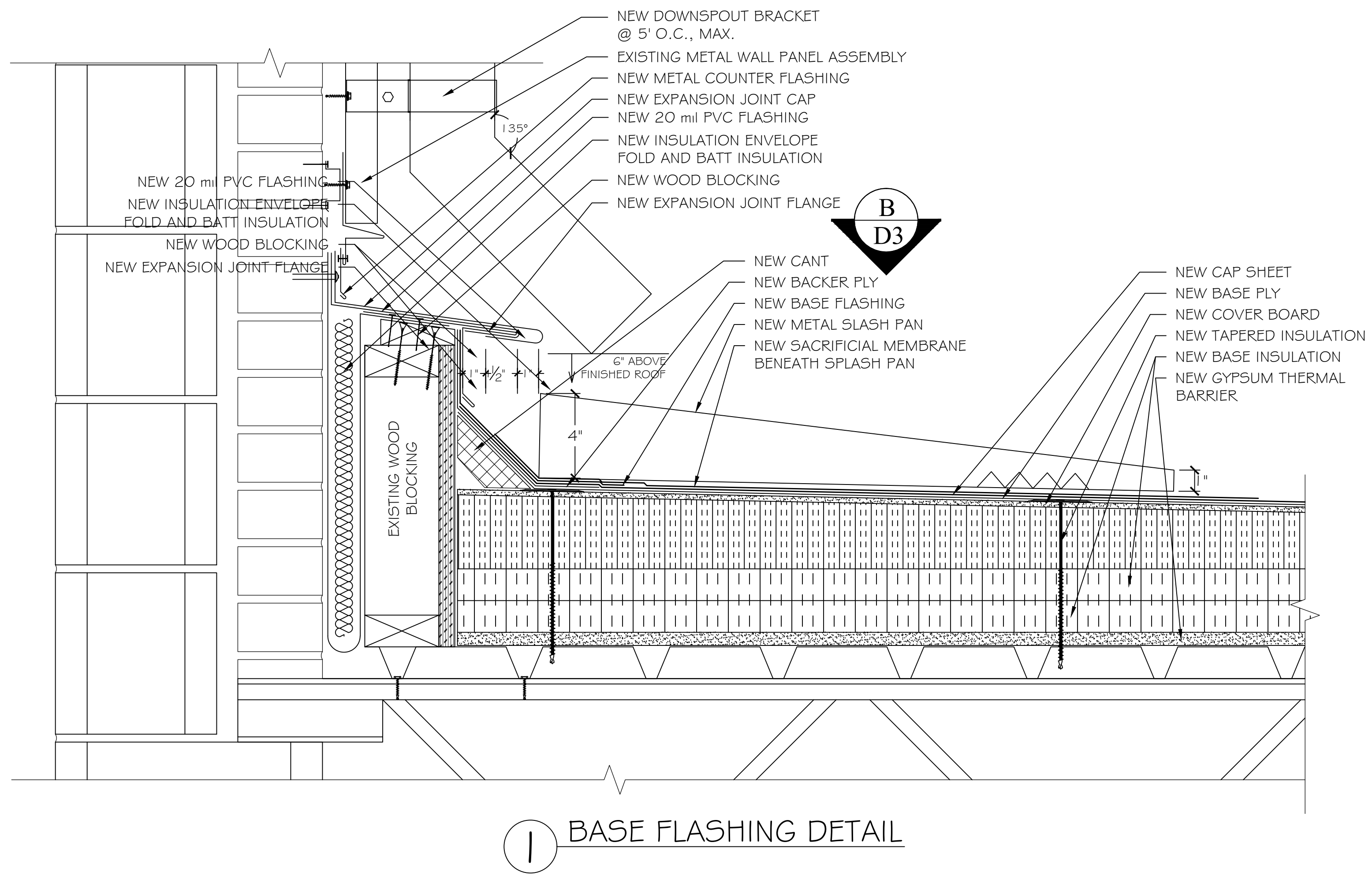
4 BASE FLASHING DETAIL

REVISIONS	DATE	APPROVED

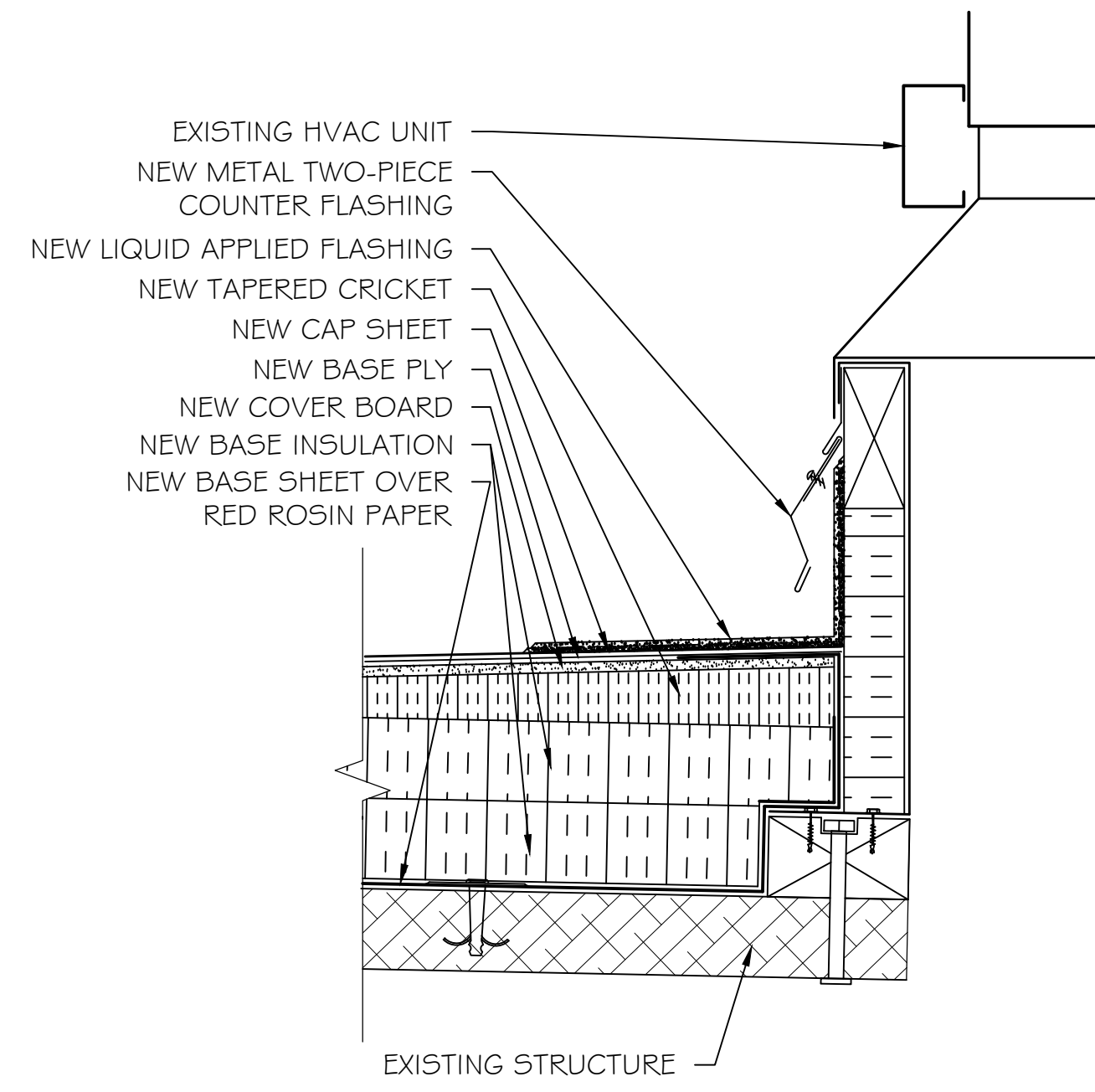


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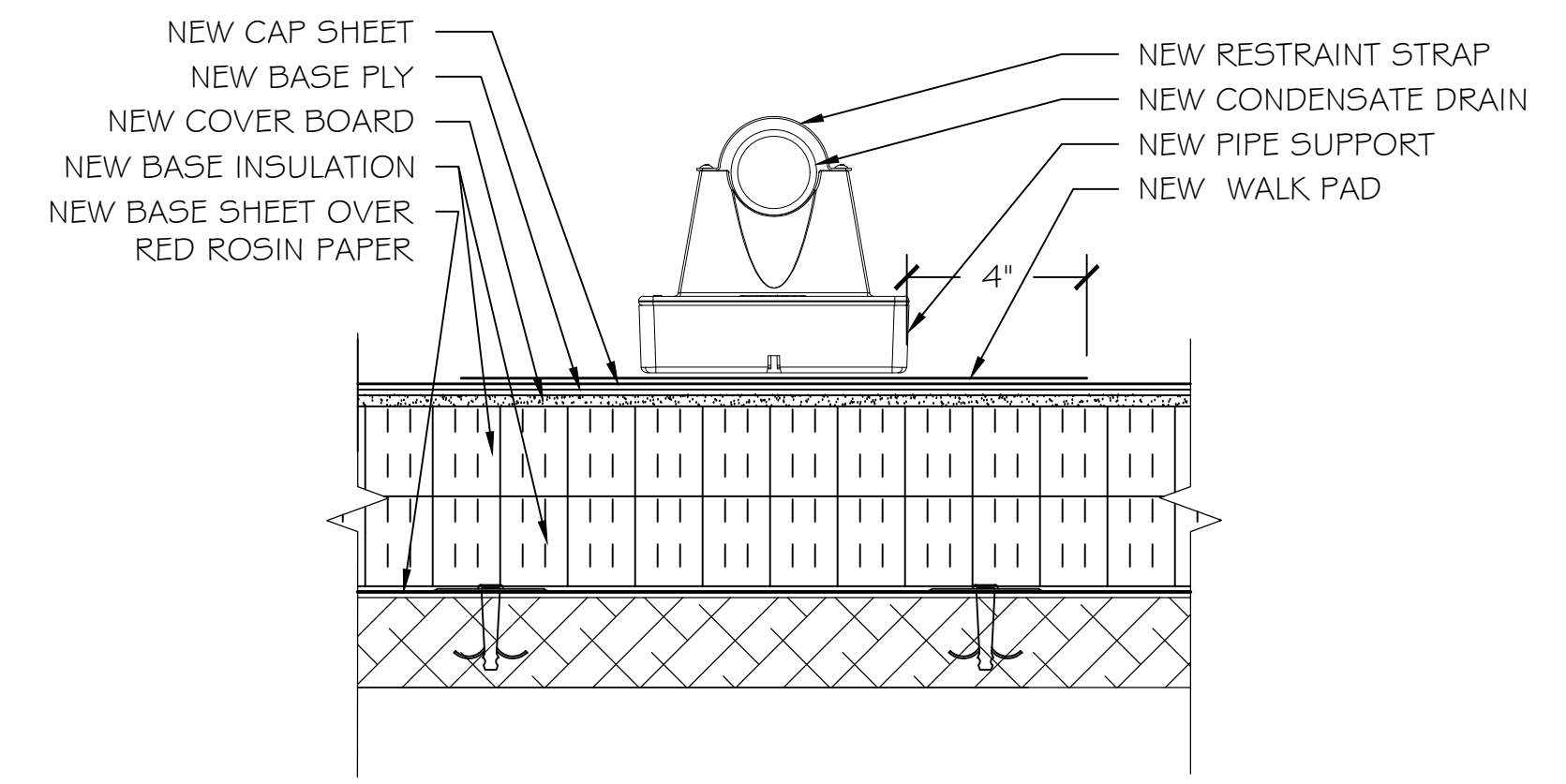
SHEET
D3



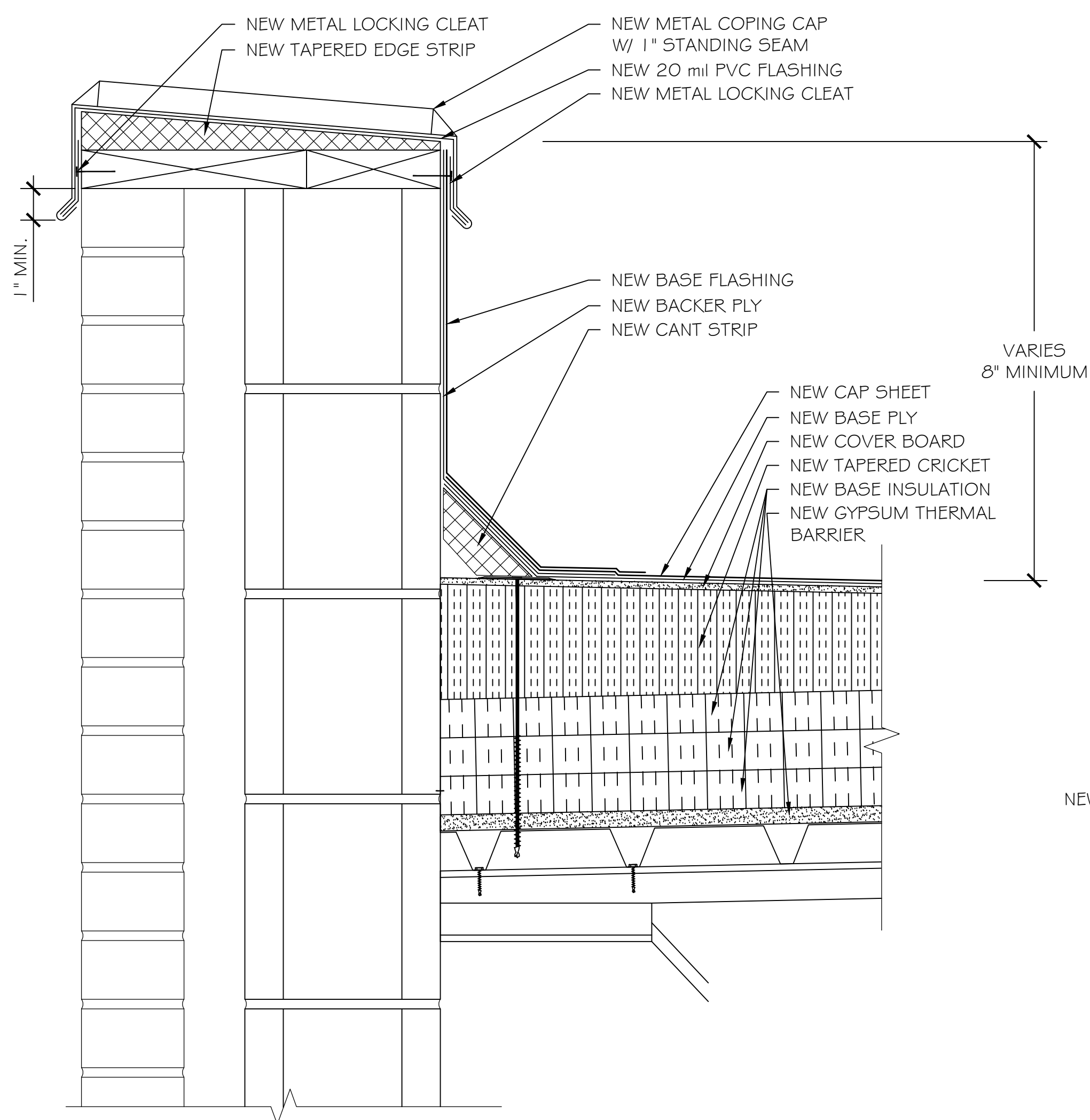
1 BASE FLASHING DETAIL



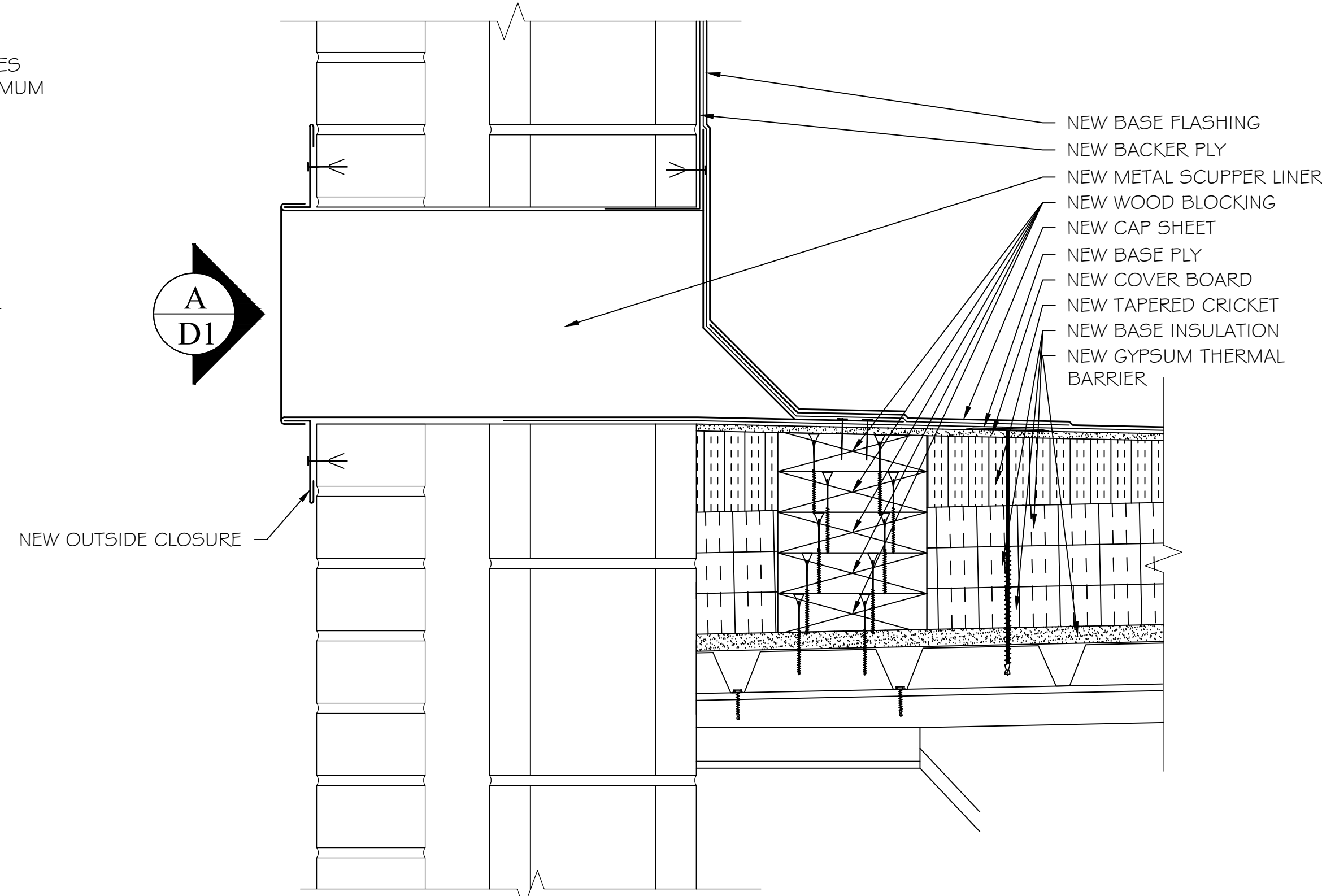
2 HVAC CURB DETAIL



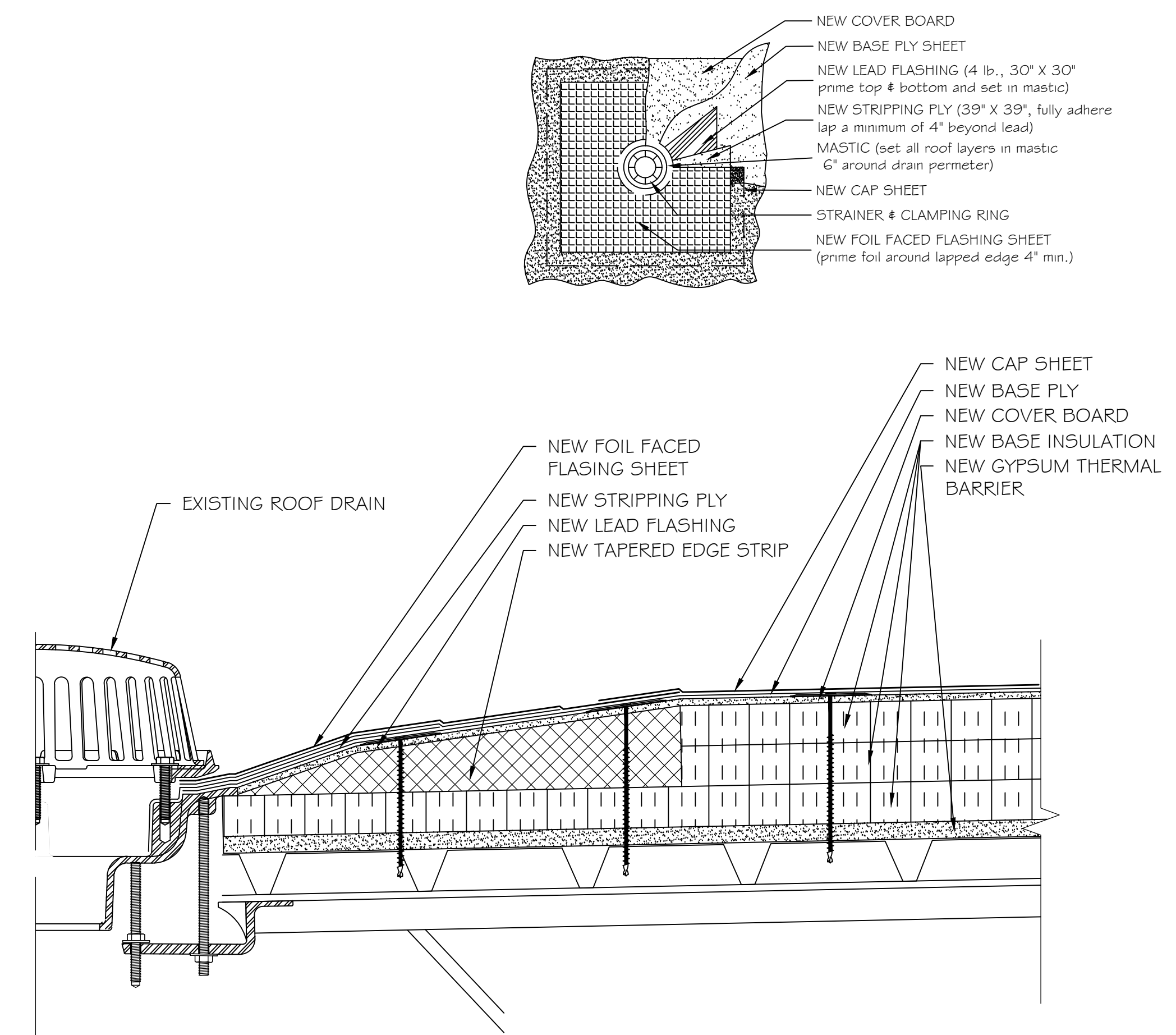
3 CONDENSATE DRAIN SUPPORT DETAIL



4 PARAPET WALL DETAIL

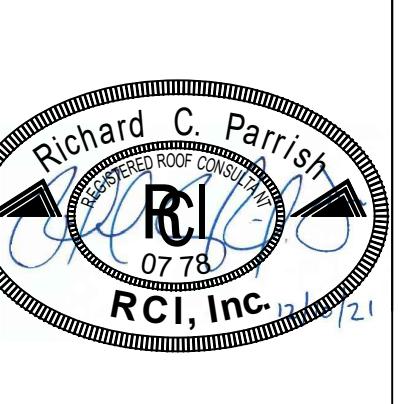


5 OVERFLOW SCUPPER DETAIL

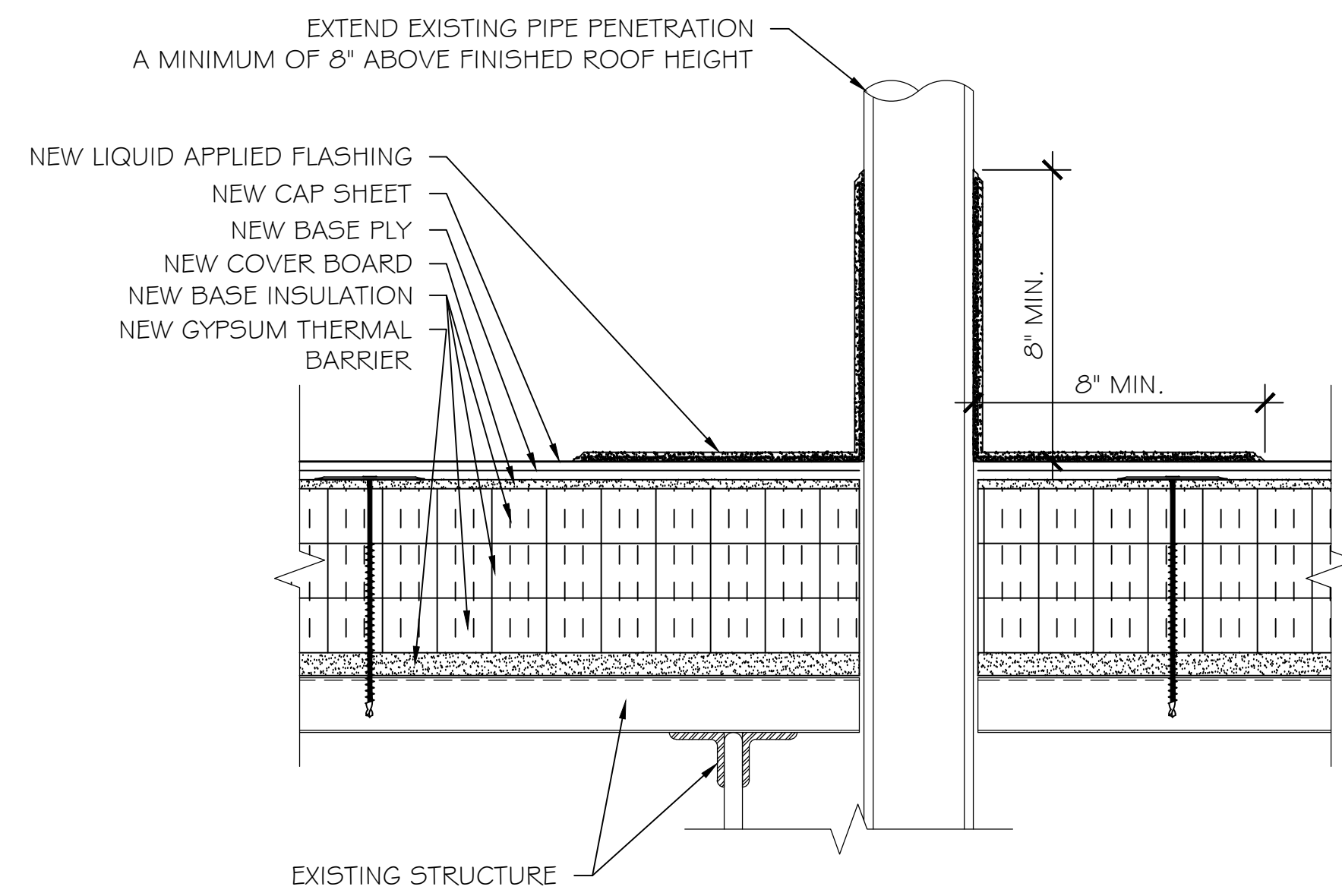


6 ROOF DRAIN DETAIL

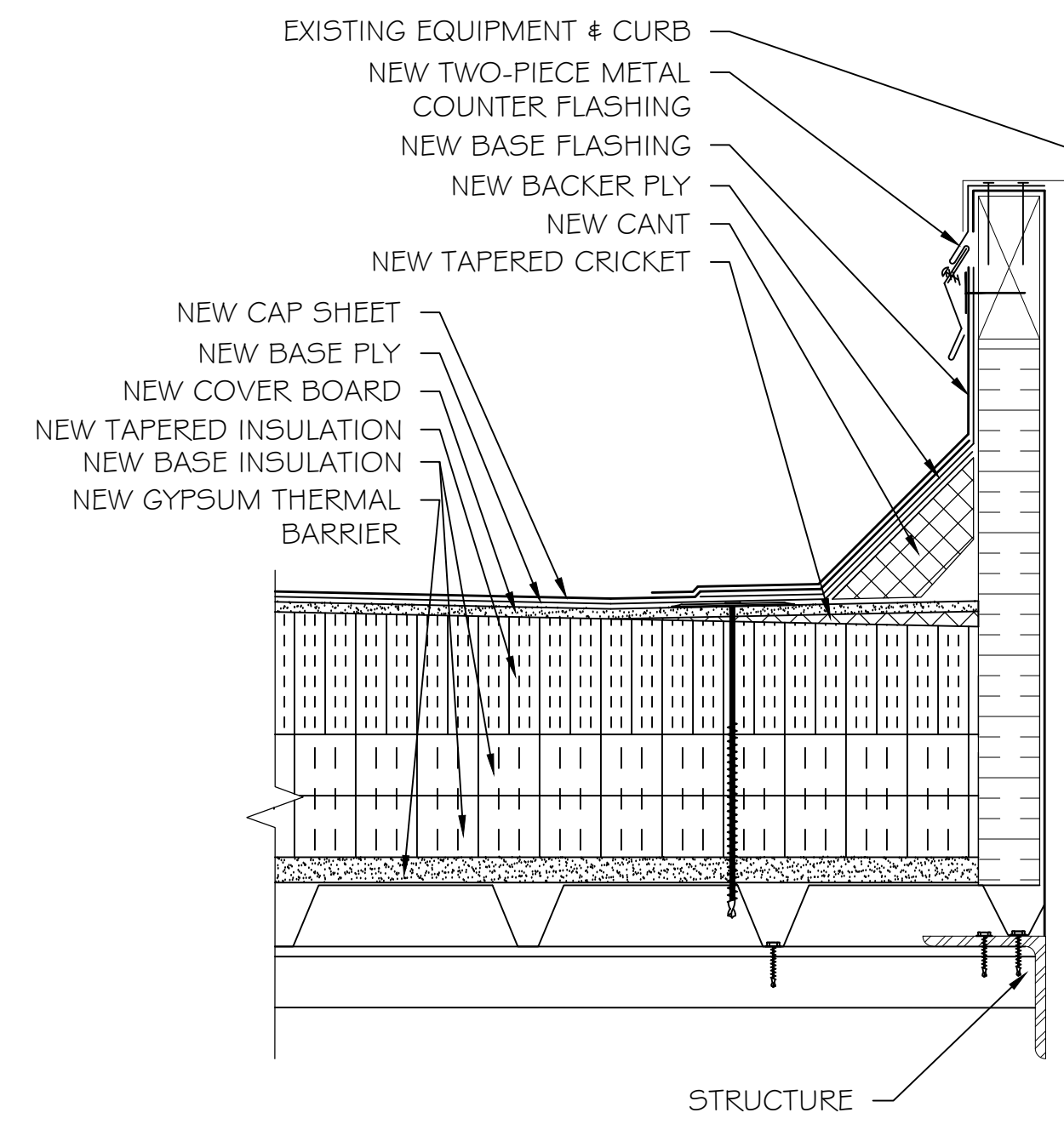
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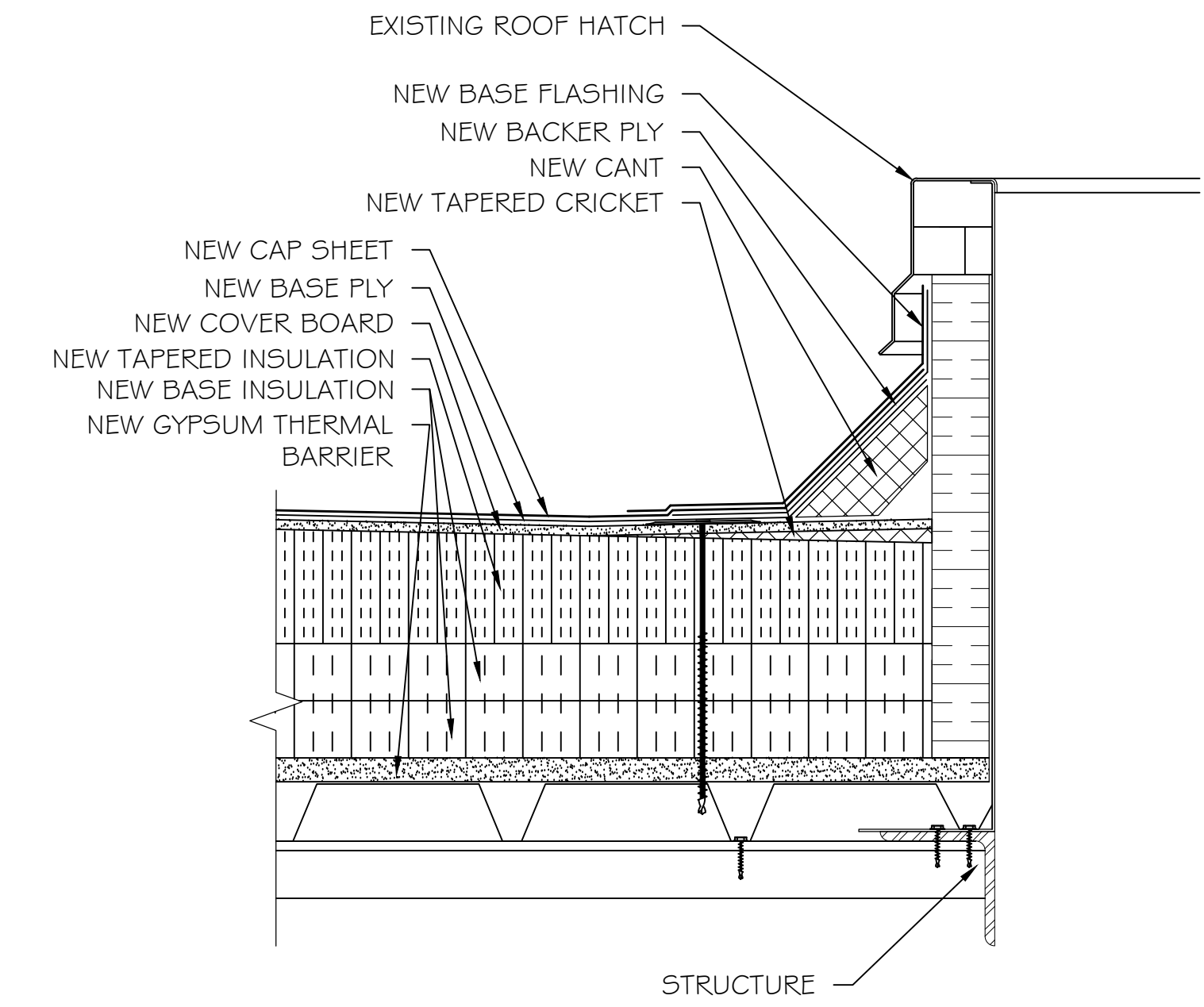
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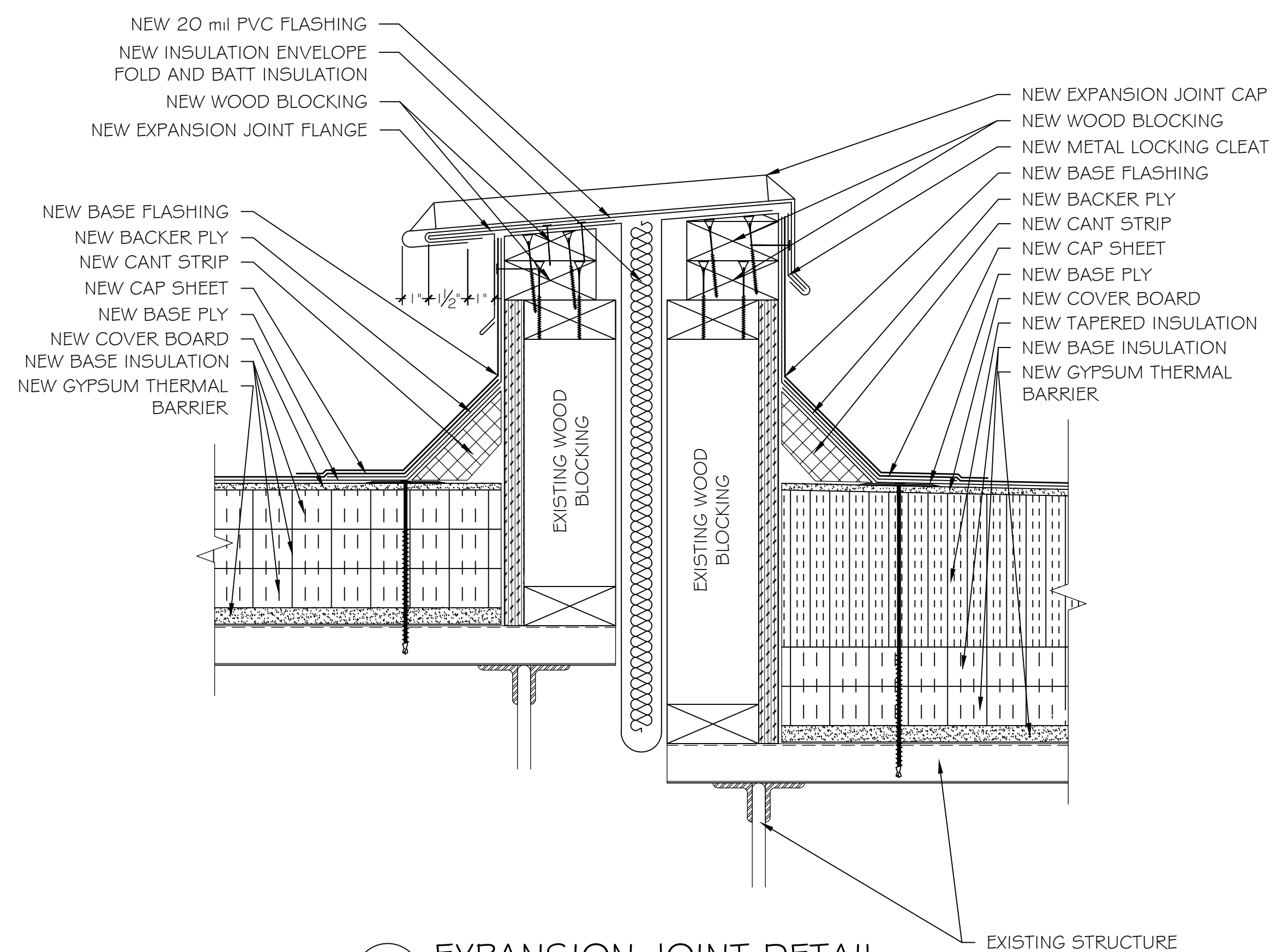
① PIPE PENETRATION DETAIL



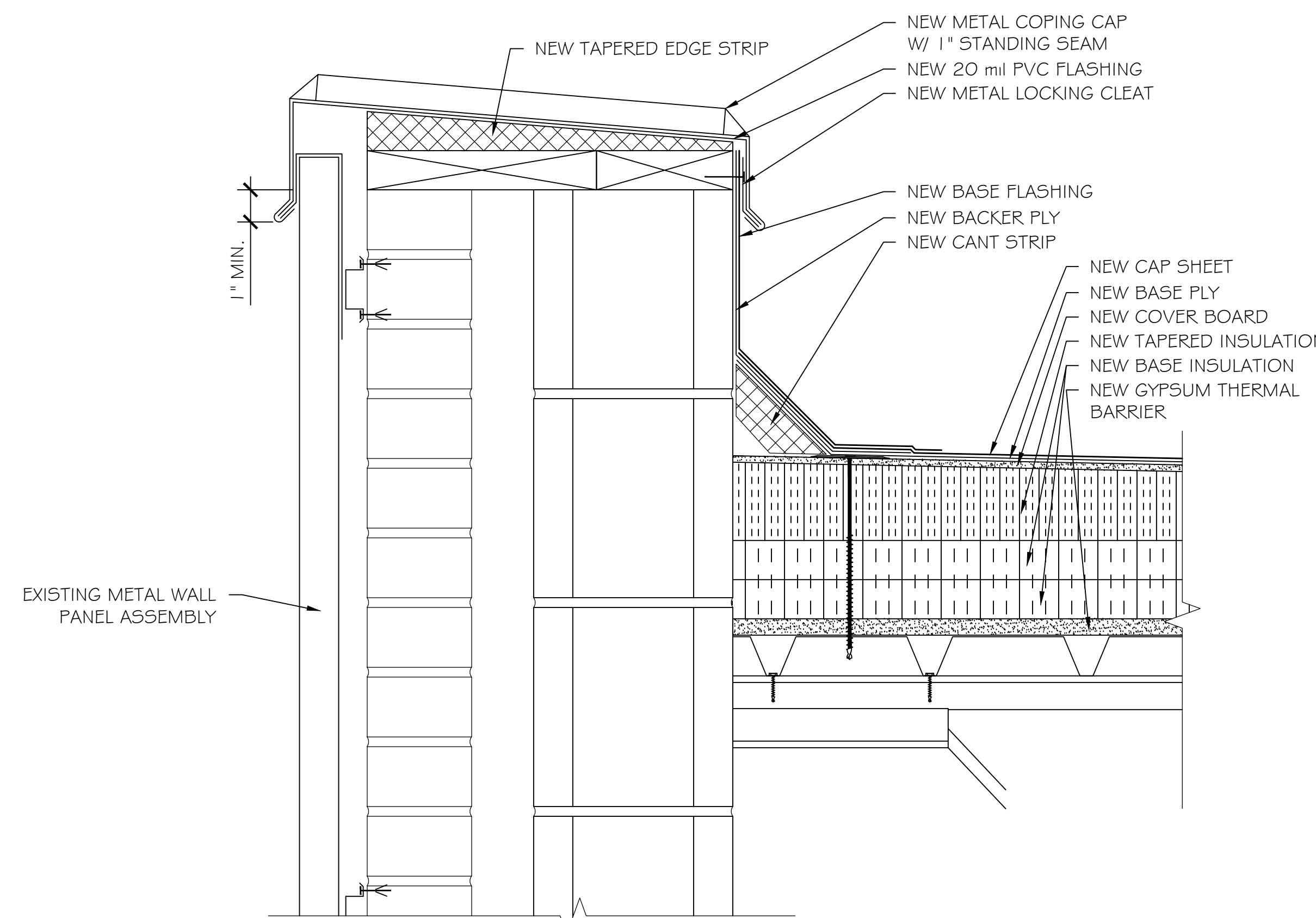
② EQUIPMENT CURB DETAIL



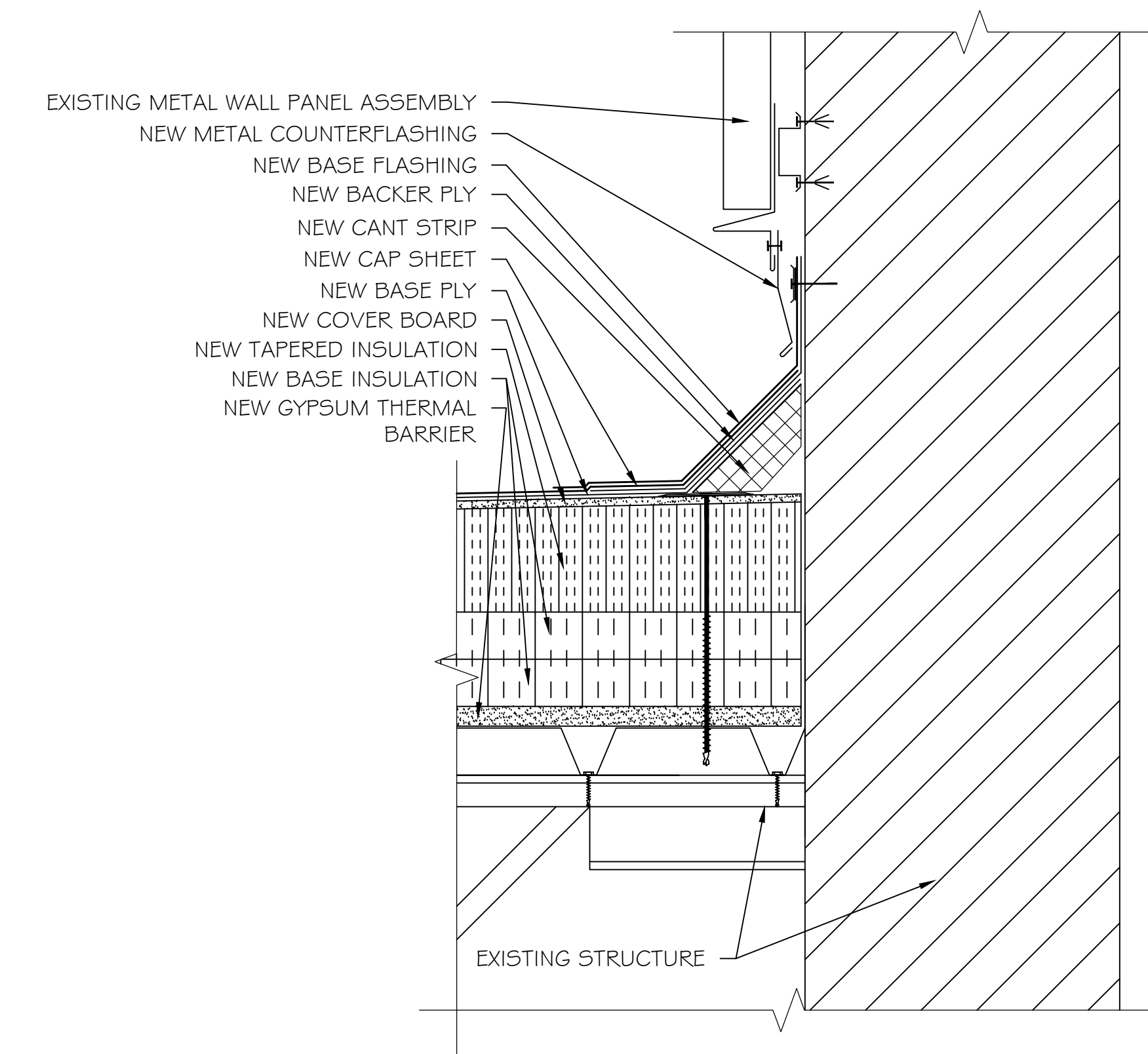
③ ROOF HATCH DETAIL



④ EXPANSION JOINT DETAIL

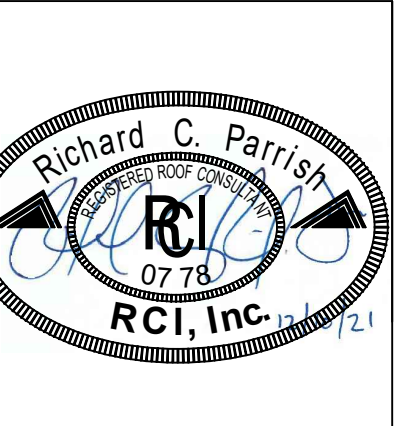


⑤ PARAPET WALL DETAIL



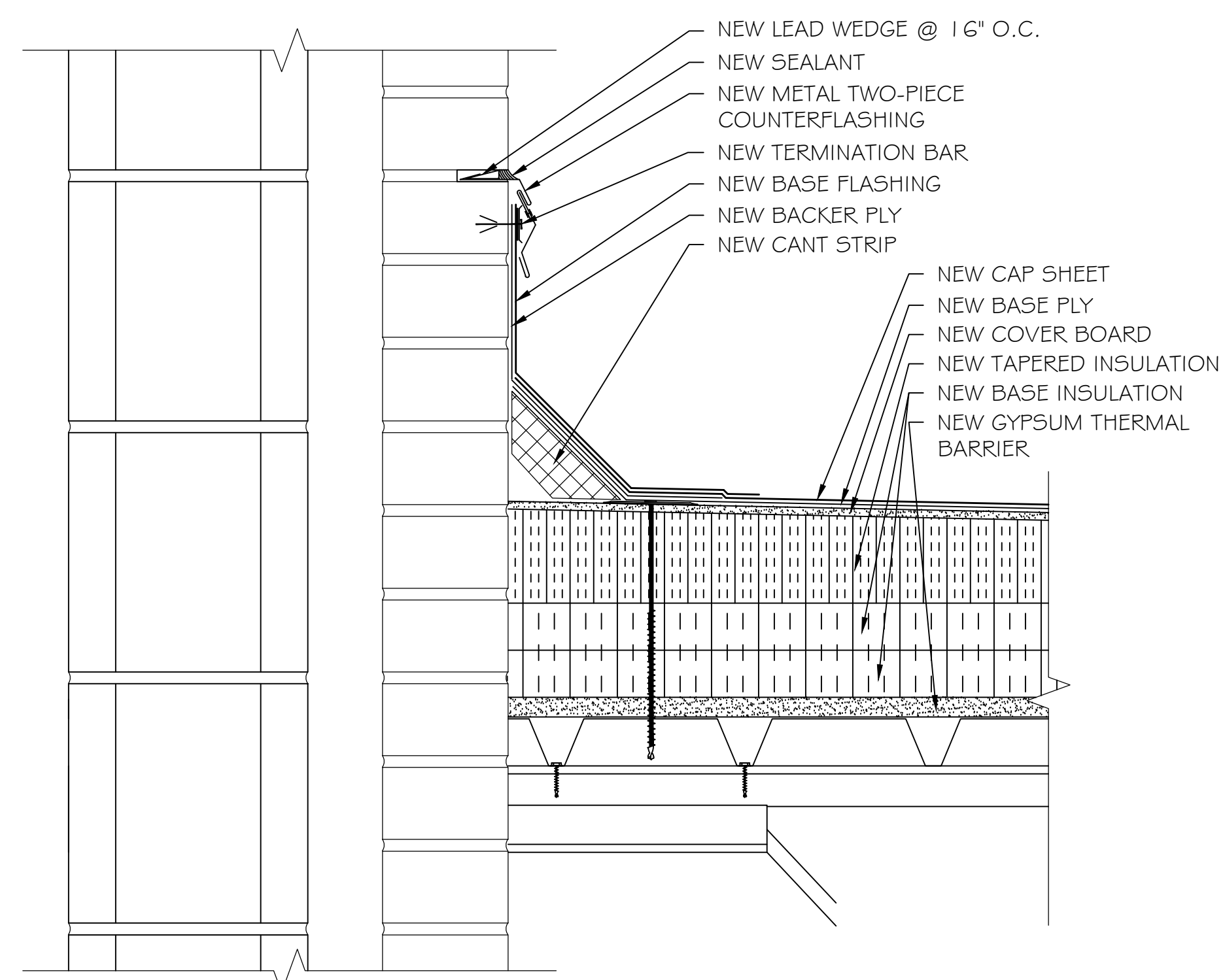
⑥ BASE FLASHING DETAIL

REVISIONS	DATE	APPROVED

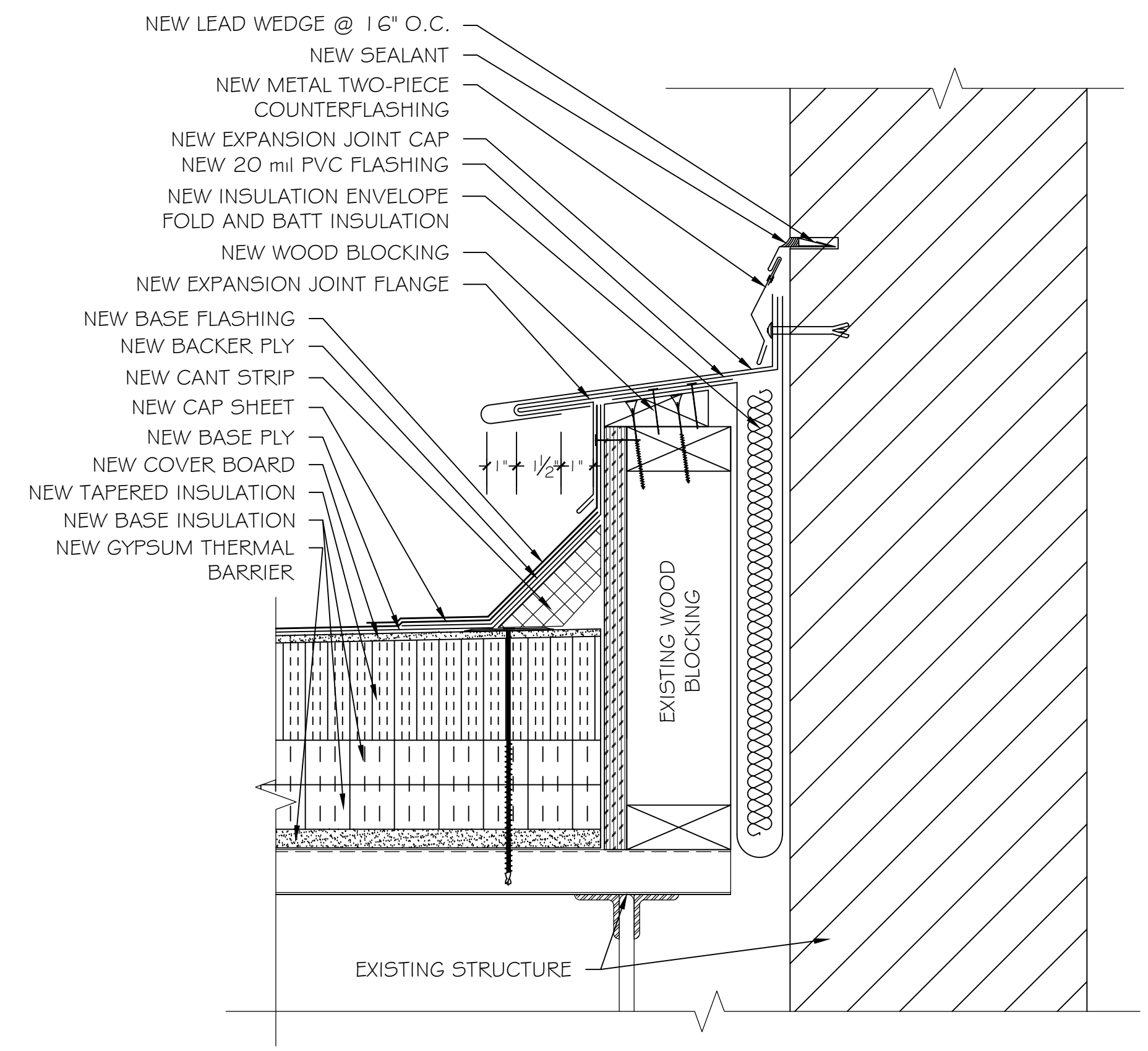


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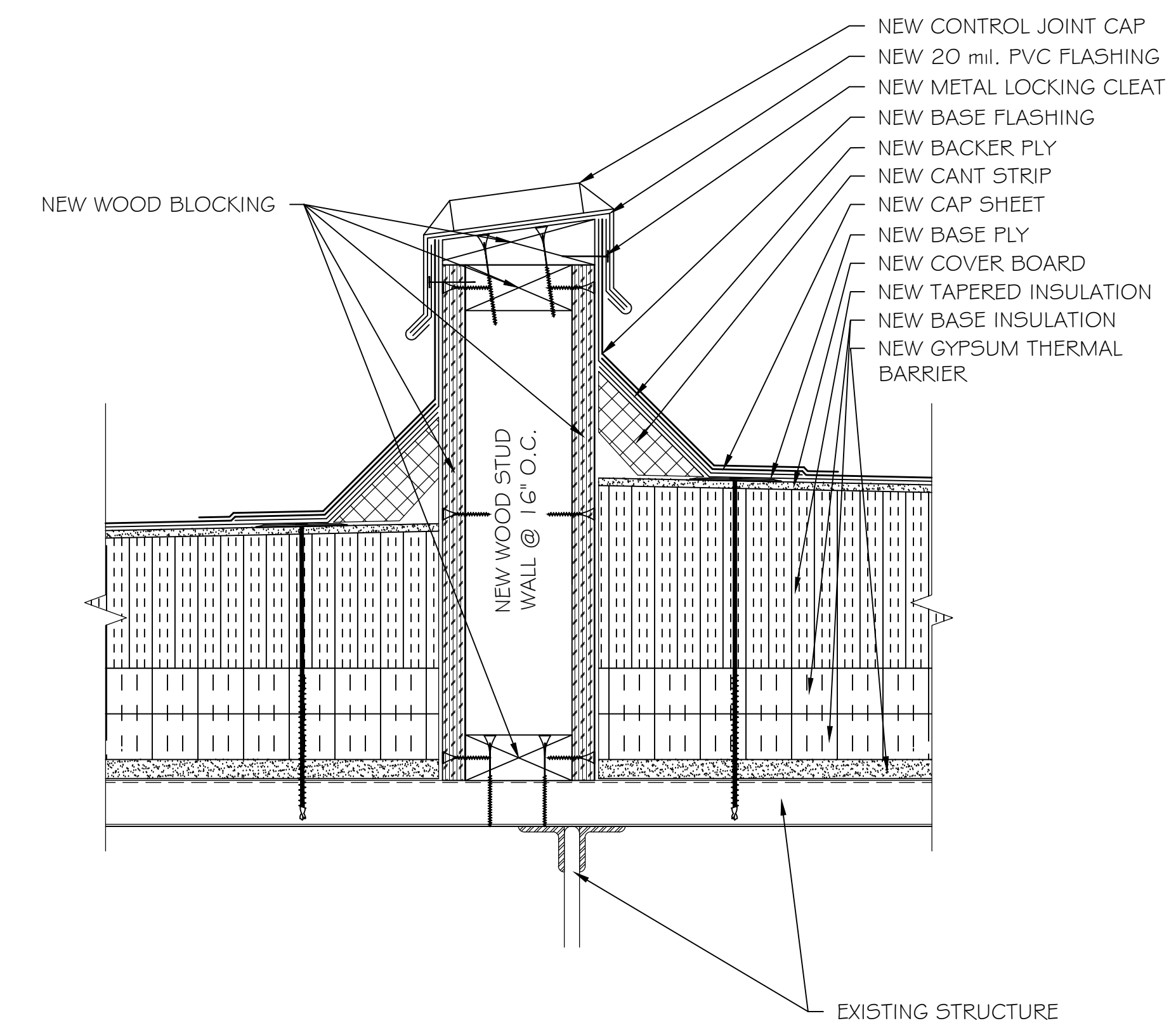
SHEET
D5



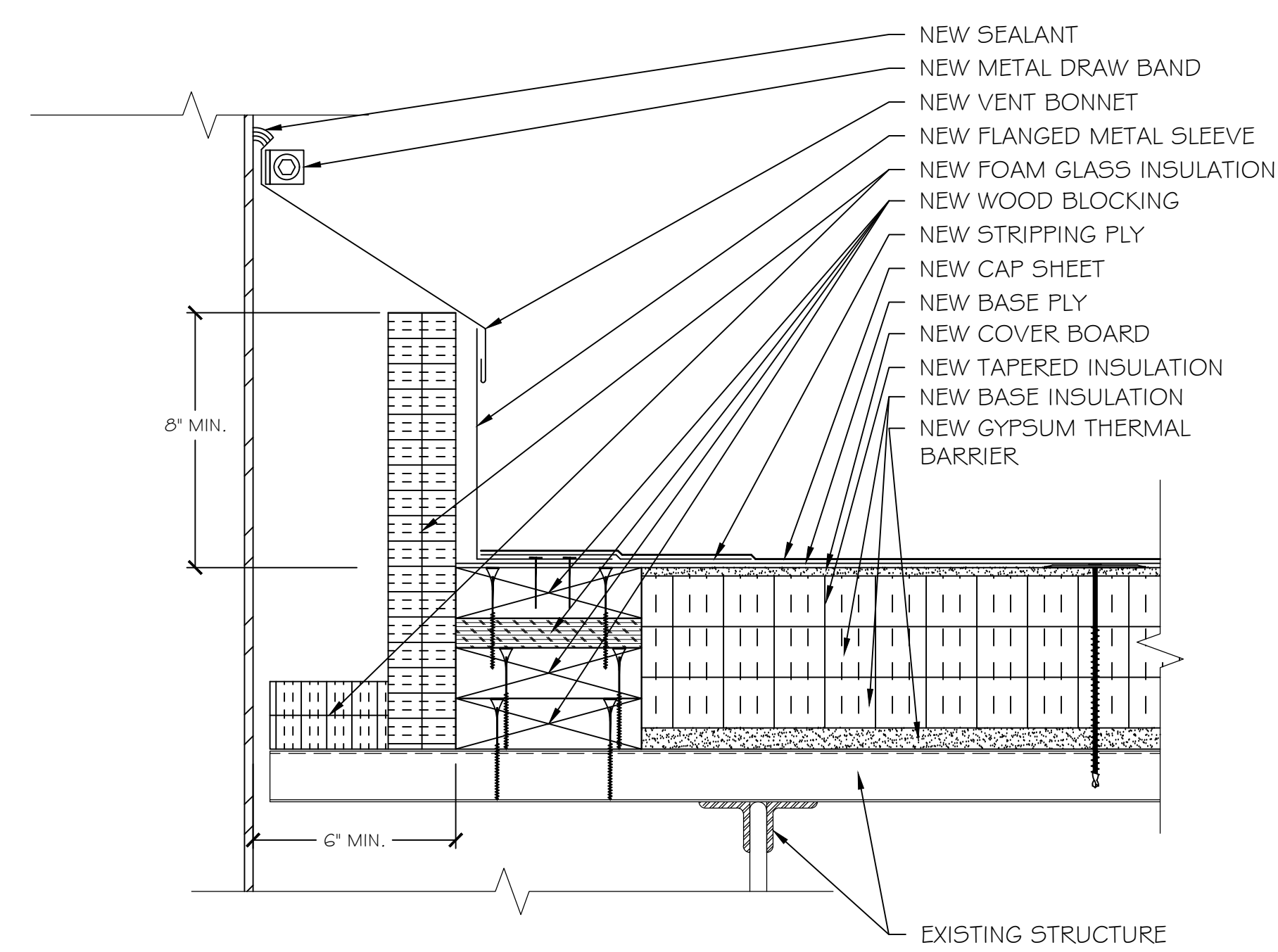
1 BASE FLASHING DETAIL



2 EXPANSION JOINT DETAIL

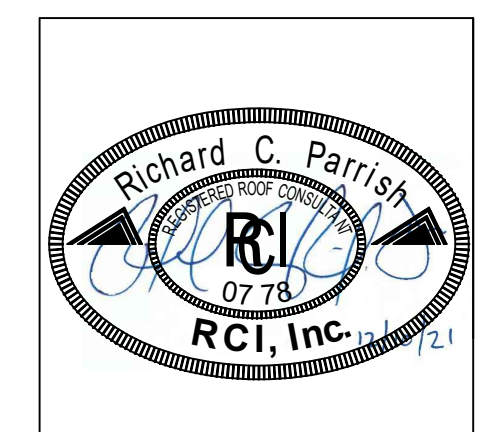


3 CONTROL JOINT DETAIL



4 HOT VENT STACK DETAIL

REVISIONS	DATE	APPROVED



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