UNIVERSITY OF NORTHERN COLORADO - JAMES A. MICHENER LIBRARY ROOFING PROJECT

2024-080M23 MICHENER LIBRARY ROOF REPLACEMENT - AMTECH PROJECT NO.: DEN.2023.001048

PROJECT:

JAMES A. MICHENER LIBRARY ROOFING PROJECT **1400 22ND STREET** GREELEY, CO 80631

OWNER:

UNIVERSITY OF NORTHERN COLORADO 501 WEST 20TH STREET, GREELEY, CO 80639

CONSULTANT:

AMTECH SOLUTIONS, INC.

1720 SOUTH BELLAIRE STREET, SUITE 1200 DENVER, COLORADO 80222 TEL: (303) 738-0823 WEBSITE: WWW.AMTECHSLS.COM



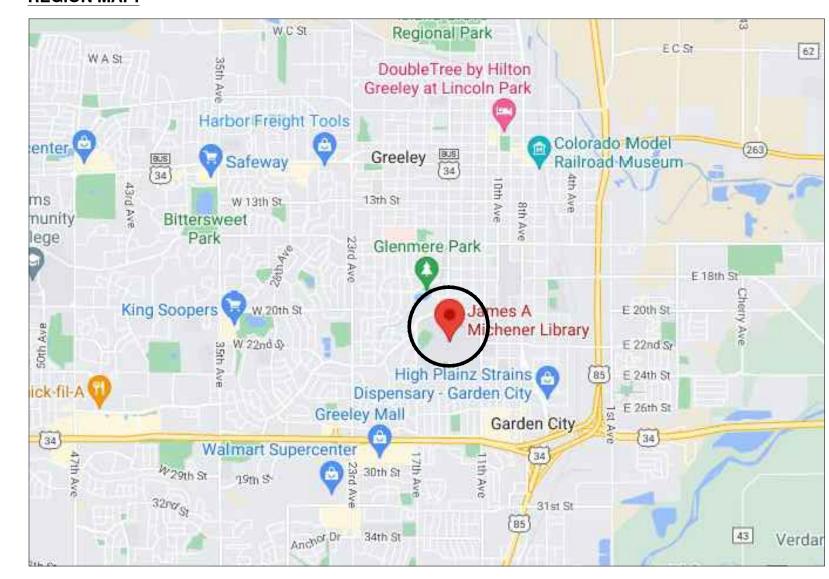
APPLICABLE DESIGN CODES:

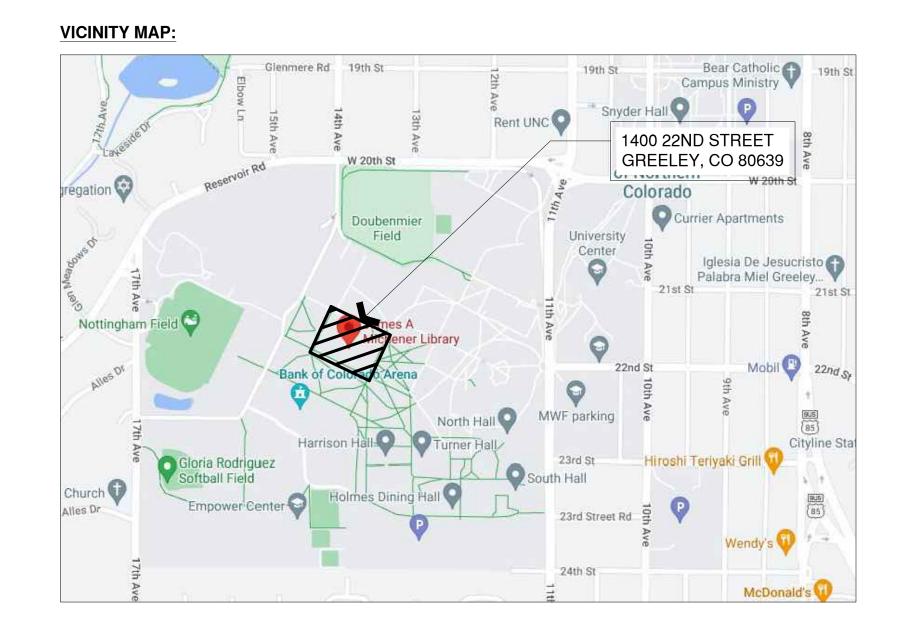
- 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC).
- 1.1. SECTION(S) 602.1 1.1.1. LEVEL 1 ALTERATION.
- 1.1. SECTION(S) 705.1, 705.2, 706.2, AND 706.3.2:
- 1.1.1. REROOFING GENERAL, ROOF REPLACEMENT DOWN TO ROOF DECK, STRUCTURAL ADDITION OF ROOF, AND ROOF DIAPHRAGMS IN HIGH WIND REGIONS
- 2. 2021 INTERNATIONAL BUILDING CODE (IBC). 2.1. SECTION(S) 1505.1:
 - 2.1.1. CLASSIFICATION OF THE ROOF: CLASS A.
- 2.2. SECTION(S) 1504.4 AND1504.6:
- 2.2.1. WIND AND EDGE METAL REQUIREMENTS. 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
- 3.1.1. REFER TO ROOFING SCOPE OF WORK NOTES ON SHEET R-101.
- 2021 INTERNATIONAL PLUMBING CODE (IPC).
- 2021 INTERNATIONAL FUEL AND GAS CODE (IFGC).
- 2021 INTERNATIONAL MECHANICAL CODE (IMC).
- 2023 INTERNATIONAL ELECTRIC CODE (NEC).
- AMERICAN NATIONAL STANDARDS INSTITUTE AND SINGLE-PLY ROOFING INDUSTRY (ANSI/SPRI): 8.1. ES-1 AND GT-1.

BUILDING DATA:

- 7.1. MASONRY AND CONCRETE FRAMING WITH CONCRETE DECKING.
- 8.1. GROUP B BUSINESS EDUCATIONAL OCCUPANCY FOR STUDENTS ABOVE GRADE **TWELVE** (12).
- 9. CLIMATE ZONE: 5B

REGION MAP:





SHEET INDEX:

• P0.03

- R-100 **COVER SHEET** • R-101 ROOF ASSEMBLIES AND SCOPE OF WORK NOTES • R-200 DESIGN NOTES AND FASTENING SCHEDULES • R-201 STAGING PLAN
- R-300 **ROOF PLAN**
- CONCRETE COATING ALTERNATES #2 & #3 PARTIAL SECTIONS • R-400
- **ROOFING DETAILS** • R-500
- R-501 **ROOFING DETAILS** • P0.01
- PLUMBING GENERAL INFORMATION • P0.02 PLUMBING SPECIFICATIONS
 - PLUMBING SPECIFICATIONS
- P2.03 LEVEL 1 AND MEZZ. PLUMBING PLANS LEVEL 2 PLUMBING PLAN P2.04
 - LEVEL 3 PLUMBING PLAN
- P2.05 • P2.06
 - ROOF LEVEL PLUMBING PLAN

- 1. FIRE SPRINKLED MONITORED ALARM
- CONSTRUCTION TYPE III-B NON-COMBUSTIBLE:
- OCCUPANCY CLASSIFICATION:

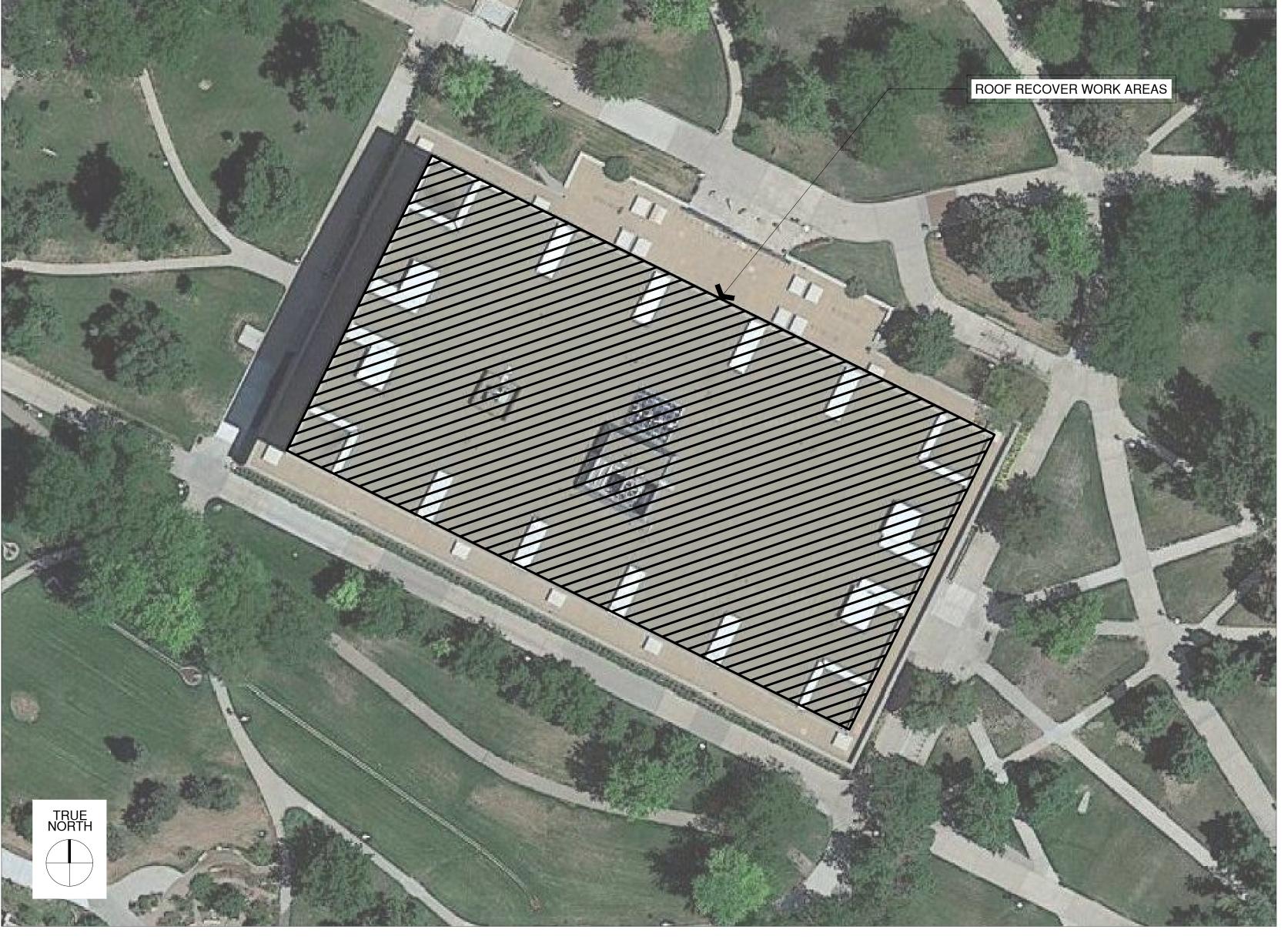
CODE EXCEPTIONS AND CLARIFICATIONS:

- 1. 2021 IEBC SECTION 705 REROOFING 705.1 GENERAL:
- 1.1. ROOF REPLACEMENT OR ROOF RECOVER OF EXISTING LOW-SLOPE ROOF COVERINGS SHALL NOT BE REQUIRED TO MEET THE MINIMUM DESIGN SLOPE REQUIREMENTS OF lambdaUNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) IN SECTION 1507 OF THE INTERNATIONAL BUILDING CODE FOR ROOFS THAT PROVIDE POSITIVE ROOF DRAINAGE.
- 1.2. RECOVERING OR REPLACING AN EXISTING ROOF COVERING SHALL NOT BE REQUIRED TO MEET THE REQUIREMENTS FOR SECONDARY (EMERGENCY OVERFLOW) DRAINS OR SCUPPERS IN SECTION 1502 OF THE INTERNATIONAL BUILDING CODE FOR ROOFS THAT PROVIDE FOR POSITIVE ROOF DRAINAGE. FOR THE PURPOSES OF THIS EXCEPTION, EXISTING SECONDARY DRAINAGE OR SCUPPER SYSTEM REQUIRED IN ACCORDANCE WITH THIS CODE SHALL NOT BE REMOVED UNLESS THEY ARE REPLACED BY SECONDARY DRAINS OR SUPPERS DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION 1502 OF THE INTERNATIONAL BUILDING CODE.

2. 2021 IEBC - SECTION 708 ENERGY CONSERVATION - 708.1 MINIMUM REQUIREMENTS:

- 2.1. LEVEL 1 ALTERATIONS TO EXISTING BUILDINGS OR STRUCTURES DO NOT REQUIRE THE ENTIRE BUILDING OR STRUCTURE TO COMPLY WITH THE ENERGY REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE OR INTERNATIONAL RESIDENTIAL CODE. THE ALTERATIONS SHALL CONFORM TO THE ENERGY REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE OR INTERNATIONAL RESIDENTIAL CODE AS THEY RELATE TO NEW CONSTRUCTION ONLY.
- 3. 2021 IECC CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY
- 3.1. SECTION C402 BUILDING ENVELOPE REQUIREMENTS SUBSECTION C402.2.1.1 TAPERED, ABOVE-DECK INSULATION BASED ON THICKNESS:
 - 3.1.1. WHERE USED AS A COMPONENT OF A ROOF/CEILING ASSEMBLY R-VALUE
 - CALCULATION, THE SLOPED ROOF INSULATION R-VALUE CONTRIBUTION TO THAT CALCULATION SHALL USE THE AVERAGE THICKNESS IN INCHES ALONG WITH THE MATERIAL R-VALUE-PER-INCH SOLELY FOR R-VALUE COMPLIANCE AS PRESCRIBED IN SECTION 402.1.3.
- 3.2. SECTION C402 BUILDING ENVELOPE REQUIREMENTS SUBSECTION C402.2.1.2 MINIMUM THICKNESS, LOWEST POINT:
 - 3.2.1. THE MINIMUM THICKNESS OF ABOVE-DECK ROOF INSULATION AT ITS LOWEST POINT, GUTTER EDGE, ROOF DRAIN OR SCUPPER, SHALL BE NOT LESS THAN 1-INCH.
- 4. 2021 INTERNATIONAL PLUMBING CODE
- 4.1. SECTION 1105 ROOF DRAINS
- 4.2. SECTION 1108.1 SECONDARY (EMERGENCY OVERFLOW) DRAINS OR SCUPPERS
 - 4.2.1. WHERE ROOF DRAINS ARE REQUIRED, SECONDARY (EMERGENCY OVERFLOW) ROOF DRAINS OR SCUPPERS SHALL BE PROVIDED WHERE THE ROOF PERIMETER CONSTRUCTION EXTENDS ABOVE THE ROOF IN SUCH A MANNER THAT WATER WILL BE ENTRAPPED IF THE PRIMARY DRAINS ALLOW BUILDUP FOR
- ANY REASON. 4.3. DESCRIPTION:
- 4.3.1. THE PIT ROOF (ROOF AREA C) WAS CONSTRUCTED WITHOUT A ROOF DRAIN AND CURRENTLY HAS A SUMP PUMP IN THE SOUTHWEST CORNER THAT PUMPS WATER ONTO THE ADJACENT MAIN ROOF AREA. THE SUMP PUMP HAS AN ALARM THAT IS INTEGRATED WITH THE BUILDING AUTOMATION SYSTEM TO ALERT FACILITY MAINTENANCE OF OPERATION FAILURES.
- 4.4. NEW PRIMARY AND OVERFLOW ROOF DRAINS WILL BE INSTALLED INTO THE CONCRETE PIT ROOF DECK AND SEPARATE DRAIN LINES WILL BE PIPED THROUGH THE INTERIOR OF THE BUILDING TO THE 2ND FLOOR AND OUT THROUGH AN EXTERIOR WALL TO DRAIN INTO A CONDUCTOR HEAD AND OPEN FACED DOWNSPOUT FOR THE PRIMARY LINE AND A DOWNSPOUT NOZZLE FOR THE OVERFLOW DRAIN LINE. RE: PLUMBING.

AERIAL MAP:

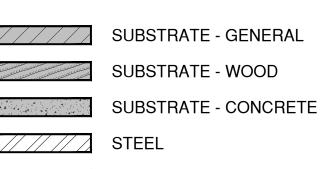


ABBREVIATIONS:

APVD.	APPROVED	MTL.	METAL	
CONT.	CONTINUOUS	MIN.	MINIMUM	
(E)	EXISTING	(N)	NEW	
(ETR)	EXISTING TO REMAIN	O.C.	ON CENTER	
EXP.	EXPANSION	PENE.	PENETRATION	
(FA)	FULLY ADHERED	REQ.	REQUIREMENT	
GA.	GAUGE	R.T.S.	REINFORCED TERMINATION STRIP	
GALV.	GALVANIZED	SHT.	SHEET	
GYP.	GYPSUM	SIM.	SIMILAR	
JT.	JOINT.	TYP.	TYPICAL	
MANU.	MANUFACTURER	U.O.N.	UNLESS OTHERWISE NOTED	
MAX.	MAXIMUM	V.I.F.	VERIFY IN FIELD	
(MA)	MECHANICALLY ATTACHED			

MATERIALS

2x BLOCKING
ADHESIVE/PRIMER
BACKER-ROD
BONDING ADHESIVE
GYPSUM BOARD
LOW-RISE FOAM
PLYWOOD
RIGID INSULATION



URETHANE SEALANT VAPOR RETARDER WATER CUT-OFF MASTIC

AMTECH SOLUTIONS 1720 South Bellaire Street, Suite 1200 Denver, Colorado 80222 (303) 738-0823 | www.amtechsls.com **COVER SHEET**

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ROOFING PROJECT

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DEN.2023.001048

09/2024

DJD

RKP & SAP

100% CONSTRUCTION DOCUMENTS

R-100

KEYPLAN LEGEND

PROJECT NO.

PLOT SCALE IS 30x42

ES-1 AND GT-1 AS REFERENCED IN THE APPLICABLE VERSION OF THE IBC

2. ALL SHEET METAL WORK MUST COMPLY WITH SMACNA AND ANSI/SPRI

THE WORK OF THIS CONTRACT SHALL BE COMPLETED IN ACCORDANCE

WITH THE ATTACHED DRAWINGS, DOCUMENTS AND SPECIFICATIONS. 4. ALL MATERIALS TO BE USED ON THIS PROJECT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED

SPECIFICATIONS FOR INSTALLATION. 5. CONTRACTOR(S) SHALL COORDINATE THE WORK OF THIS CONTRACT TO AVOID ANY INTERFERENCE WITH ADJOINING AREAS.

6. ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE

SUBMITTED TO AMTECH SOLUTIONS IN WRITING FOR APPROVAL CONTRACTOR SHALL EXERCISE EXTREME CARE NOT TO DAMAGE THE ADJACENT CONSTRUCTION OF THE BUILDING. ANY DAMAGE SHALL BE

CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE 8. CONTRACTOR SHALL PROVIDE ALL SAFE GUARDS, AS REQUIRED, TO PRECLUDE INJURY TO AMTECH SOLUTIONS, THE OWNER'S AND CONTRACTOR'S PERSONNEL, AND TO ALL OTHER PERSONS AT THE CONSTRUCTION SITE.

CONTRACTOR SHALL PERFORM ALL WORK AS INDICATED ON CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO: ROOFING AND ASSOCIATED CURB AND PARAPET WALL FLASHINGS AND MODIFICATIONS.

10. ALL SATELLITE RECEIVERS, ANTENNAS, EQUIPMENT SUPPORTS AND PENETRATIONS NOT UTILIZED ARE TO BE REMOVED AND DISCARDED AS DIRECTED BY THE OWNER AND AMTECH SOLUTIONS. ALL OPERATIONAL SATELLITE RECEIVERS. ANTENNAS. ETC. ARE TO BE REMOVED AND RE-INSTALLED USING MANUFACTURER APPROVED DETAILS AS DIRECTED BY AMTECH SOLUTIONS.

11. ANY EXISTING CABLES/CONDUITS LYING ON THE ROOF SHALL BE REMOVED AND/OR RE-INSTALLED AS DIRECTED BY THE OWNER AND AMTECH SOLUTIONS.

12. AVOID PENETRATION SEALER POCKETS AT ROOF PENETRATIONS (INSTALL ONLY WHERE REQUIRED AND APPROVED BY AMTECH SOLUTIONS).

13. WHERE EXISTING EXTERIOR LIGHTING AND ELECTRICAL EQUIPMENT INTERFERES WITH THE CONSTRUCTION OF THE NEW ROOF, FASCIAS, OR SOFFITS, SUCH FIXTURES SHALL BE REMOVED AND RE-INSTALLED TO THE SATISFACTION OF THE OWNER AND AMTECH SOLUTIONS.

14. CONTRACTOR SHALL EXTEND EXISTING HVAC ROOF TOP UNITS AND INTERIOR DUCTWORK THAT WILL BE DISTURBED DUE TO NEW WORK, INCLUDING BUT NOT LIMITED TO: CURBS, DUCTWORK, PIPING, ELECTRICAL, ETC. IN ORDER TO MAINTAIN AN 8-INCH MINIMUM FLASHING HEIGHT AS REQUIRED BY CODE, DUE TO INSTALLATION OF NEW ROOF

15. ALL ROOF PIPE VENTS AND OTHER ROOF PENETRATION(S) SHALL BE EXTENDED UP TO MAINTAIN AN 8-INCH MINIMUM FLASHING HEIGHT ABOVE NEW ROOF, AS REQUIRED BY CODE. EXTENSIONS SHALL BE OF LIKE MATERIALS AND WELDED IF METAL

16. ALL METAL FASCIA, COPINGS, LEADERS, SCUPPERS, GUTTERS, DOWNSPOUTS, ETC. ARE TO BE FACTORY PRE-FINISHED (COLOR TO BE SELECTED AND APPROVED BY OWNER).

17. ALL DIMENSIONS FOR ALL EXISTING CONSTRUCTION CONDITIONS ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED BY THE CONTRACTOR(S). 18. CONTRACTOR IS TO VERIFY LOCATION, COUNT AND SIZES OF ROOF

PENETRATIONS AND DRAINS PRIOR TO THE COMMENCEMENT OF WORK, 19. ALL NEW CONTINUOUS FLASHINGS ARE TO BE INSTALLED AT A 2. SKYLIGHT CURB FLASHINGS: CONSISTENT HEIGHT. MINIMUM FLASHING HEIGHTS ARE TO BE CALCULATED AT INSULATION HIGH POINTS

20. THE NEW ROOF SYSTEM AND PERFORMANCE IS TO ADHERE TO LOCAL BUILDING CODE AND DESIGN WIND SPEED REQUIREMENTS AS SPECIFIED. 21. REFER TO ACCOMPANYING SPECIFICATIONS FOR ADDITIONAL

INFORMATION 22. SPECIFICATIONS ARE TO TAKE PRECEDENCE OVER CONFLICTING INFORMATION ON DRAWINGS.

23. CONTRACTOR IS TO MAINTAIN PROPER DRAINAGE OF THE ROOF(S)

THROUGH ALL PHASES OF ROOF CONSTRUCTION. 24. ALL NAILERS ARE TO BE FLUSH WITH THE TOP OF ADJACENT

SUBSTRATES 25. MATERIALS TO BE USED WITHIN THE SCOPE OF WORK ITEMS BELOW ARE DEFINED WITHIN THE PROJECT SPECIFICATIONS AS BOTH THE BASIS OF DESIGN AND APPROVED MATERIAL EQUIVALENTS. FINAL SELECTION OF MATERIALS TO BE SELECTED BY THE AWARDED CONTRACTOR AND

APPROVED THROUGH THE SUBMITTAL PROCESS, PRIOR TO

ROOFING NOTES:

PLOT SCALE IS 30x42

CONSTRUCTION.

MATERIALS CAN BE STORED ON THE ROOF, SO LONG AS THEY ARE ON PALLETS/CRIBBING, COVERED WITH TARPS (NO PLASTIC) AND THE ROOF STRUCTURE IS NOT OVERLOADED.

2. MATERIALS STORED ON THE GROUND SHOULD BE SECURED IN A FENCED IN AREA OR IN A COVERED TRAILER TO ENSURE THEY ARE SECURE. ALL ONSITE STORAGE MUST FIRST BE REVIEWED AND APPROVED BY BOTH THE OWNER AND CONSULTANT.

3. ALL MATERIALS SHALL BE KEPT DRY FROM STANDING WATER, FALLING WATER, AND CONDENSATION WHEN ON THE GROUND AND ROOF. BONDING ADHESIVES, MASTICS, CAULKING, ETC. ARE TO BE STORED

BETWEEN 60 TO 80 DEGREES, AND NOT ALLOWED TO FREEZE.

5. THE CONTRACTOR IS TO TEAR-OFF, LAY-UP, AND COMPLETE DETAILS ON

ROOF AREAS BY THE END OF EACH WORKDAY. 6. ROOF DETAILING AND SHEET METAL INSTALLATION NEED TO FOLLOW

CLOSELY BEHIND THE ROOF MEMBRANE INSTALLATION. 7. NIGHT-SEALS ARE PARAMOUNT! CONTRACTOR IS REQUIRED TO TIE-IN THE NEW ROOF SYSTEM TO THE EXISTING ROOF, SUCH THAT NO WATER CAN MIGRATE INTO THE NEW ROOF ASSEMBLY AND/OR THE BUILDING.

8. THE AMBIENT TEMPERATURE REQUIREMENT FOR INSTALLATION IS 40 DEGREES AND RISING. CONTRACTOR IS REQUIRED TO PROTECT ALL NEWLY INSTALLED ROOF

MEMBRANES THAT THEY WILL WORK OVER WITH CLEAN TARPS AND **PLYWOOD** 10. ALL TRASH AND DEBRIS MUST BE REMOVED FROM THE ROOF

SURFACE/LEVEL AS WELL AS THE GROUNDS DAILY 11. CONTRACTOR TO REPLACE ANY MISSING/ BROKEN DRAIN STRAINERS

AND PARTS WITH NEW TO MATCH EXISTING. ALL DRAINS STRAINERS AND CLAMPING RINGS ARE TO BE CLEANED, PRIMED, AND PAINTED. 12. NEW $\frac{1}{2}$ -INCH (OR ONE SLOPE GREATER THAN EXISTING ROOF SLOPE)

CRICKETS MUST BE INSTALLED ON THE HIGH SIDE OF ALL CURBS AND PENETRATIONS WIDER THAN 24-INCHES. 13. NEW WALKWAY PADS ARE TO BE INSTALLED AS INDICATED ON THE ROOF PLANS AND AT ALL LADDERS, ROOF HATCHES/ACCESS, RTU ACCESS

SIDES OF SERVICEABLE MECHANICAL EQUIPMENT. NOT ALL WALK PADS ARE SHOWN. 13.1. DO NOT INSTALL WALK PADS IN A MANNER THAT WILL CREATE

PANELS, UNDER ALL SATELLITE SUPPORT SLEDS, AND AROUND ALL

WATER PONDING CONDITIONS. 13.2. WALK PADS SHALL NOT BE INSTALLED OVER MEMBRANE SEAMS

OR VALLEYS.

14. ALL INSULATION BOARD JOINTS SHALL BE $\frac{1}{8}$ " OR LESS IN WIDTH. FILL ALL UNEVEN OR OVERSIZED JOINTS.

15. MEMBRANE ADHESIVE APPLICATION MUST BE ALLOWED TO PROPERLY FLASH OFF BEFORE MATING. ENSURE ADHESIVE IS DRY TO THE POINT OF BEING TACKY, BUT NOT STRINGY TO THE TOUCH. DO NOT ALLOW ADHESIVE TO "DRY-OUT" COMPLETELY.

16. PROVIDE 4" LAP JOINTS FOR ALL SHEET METAL FLASHING RECEIVERS. 17. PROVIDE CURBS FOR ALL ROOF MOUNTED EQUIPMENT WITH A DECK

OPENING OF 12-INCHES OR GREATER. 18. ALL MEMBRANE SEAMS MUST BE STRIPPED-IN WITH A MINIMUM 6" WIDE SEMI-CURED COVER TAPE.

19. ALL INSIDE AND OUTSIDE CORNER DETAILING TO BE INSTALLED PER MANUFACTURER REQUIREMENTS.

ROOF REPLACEMENT NOTES:

THIS PROJECT IS FOR A FULL ROOF RECOVER OF THE EXISTING MICHENER LIBRARY ROOF SYSTEM AS DEFINED BY THE SCOPE OF WORK.

2. THE EXISTING ROOF SYSTEMS CONSISTS OF

2.1. A GRAVEL EMBEDDED FLOOD COAT OVER BUR ROOFING PLIES, PERLITE COVER BOARD, RIGID INSULATION, AND A FIBERGLASS BASE SHEET. ALL ROOFING LAYERS HAD BEEN SET IN ASPHALT OVER A LIGHTWEIGHT CONCRETE TOPPING SLAB, SLOPED TO DRAIN, OVER A FULL STRENGTH CONCRETE ROOF DECK.

2.2. APPROX. R-VALUE OF THE EXISTING ROOF ASSEMBLY: R-14.00. ALL IN SCOPE ROOF AREAS WILL BE REMOVED DOWN TO THE MOPPED ASPHALT OVER THE EXISTING LIGHTWEIGHT CONCRETE TO REMAIN IN PLACE. ALL LOOSE ASPHALT MATERIAL TO BE REMOVED AND DISPOSED. ALL EXISTING MODIFIED-BITUMEN FLASHINGS TO BE REMOVED AND DISPOSED. THE EXISTING TO REMAIN SUBSTRATE IS TO BE CLEANED AND PREPARED FOR THE INSTALLATION OF THE FOLLOWING NEW ROOF ASSEMBLY (TOP-DOWN):

3.1. ROOF RECOVER ASSEMBLY @ ROOF AREAS A AND B: 3.1.1. EXISTING GRAVEL EMBEDDED ASPHALT FLOOD COAT TO BE REMOVED (SWEPT OR SPUDDED) AND DISPOSED.

3.1.2. EXISTING BUILT-UP ROOFING PLIES TO BE CLEANED AND PRIMED WITH THE INSTALLATION OF THE FOLLOWING NEW MATERIALS (TOP TO BOTTOM): 3.1.2.1. NEW 0.060-INCH (60 MIL) NON-REINFORCED BLACK EPDM MEMBRANE - (FULLY ADHERED OVER)

3.1.2.2. ONE (1) LAYER OF NEW 3.0" COMPOSITE POLYISOCYANURATE INSULATION BOARD - 1/2-INCH HIGH DENSITY POLYISOCYANURATE COVER BOARD LAMINATED OVER A 2.5-INCH RIGID POLYISOCYANURATE INSULATION (48" X 48" BOARDS) - (SET IN NEW LOW RISE FOAM ADHESIVE OVER) 3.1.2.2.1. TOTAL THICKNESS: MIN. 3-INCHES AND R-16.9

3.1.2.3. THE RECENTLY SWEPT/SPUDDED, CLEANED, AND PRIMED BUR SUBSTRATE.

3.1.2.3.1. ROOFING CONTRACTOR TO SPUD/REMOVE THE EXISTING AGGREGATE EMBEDDED FLOOD COAT PER MANUFACTURER REQUIREMENTS 3.1.2.3.2. ROOF RECOVER SYSTEM TO MEET THE INSTALLATION REQUIREMENTS AS DESCRIBED AND OUTLINED WITHIN THE PROJECT

3.1.3. TOTAL THERMAL RESISTANCE VALUE (NEW ASSEMBLY + EXISTING ASSEMBLY):

3.2. ROOF RECOVER ASSEMBLY @ ROOF AREAS A1, A2, A3, AND A4:

DOCUMENTS.

3.2.1. EXISTING GRAVEL EMBEDDED ASPHALT FLOOD COAT TO BE REMOVED (SWEPT OR SPUDDED) AND DISPOSED

3.2.2. EXISTING BUILT-UP ROOFING PLIES TO BE CLEANED AND PRIMED WITH THE INSTALLATION OF THE FOLLOWING NEW MATERIALS (TOP TO BOTTOM): 3.2.2.1. NEW 0.060-INCH (60 MIL) NON-REINFORCED BLACK EPDM MEMBRANE - (FULLY ADHERED OVER)

3.2.2.2. ONE (1) LAYER OF NEW 1/2-INCH HIGH DENSITY POLYISOCYANURATE COVER BOARD (48" X 48" BOARDS) - (SET IN NEW LOW RISE FOAM ADHESIVE TOTAL THICKNESS: MIN. 3-INCHES AND R-16.9

3.2.2.3. NEW ½" PER FOOT SLOPED TAPERED POLYISOCYANURATE INSULATION (48" X 48" BOARDS) - (SET IN NEW LOW RISE FOAM ADHESIVE OVER) 3.2.2.4. THE RECENTLY SWEPT/SPUDDED, CLEANED, AND PRIMED BUR SUBSTRATE. 3.2.2.4.1. ROOFING CONTRACTOR TO SPUD/REMOVE THE EXISTING AGGREGATE EMBEDDED FLOOD COAT PER MANUFACTURER REQUIREMENTS

3.2.2.4.2. ROOF RECOVER SYSTEM TO MEET THE INSTALLATION REQUIREMENTS AS DESCRIBED AND OUTLINED WITHIN THE PROJECT DOCUMENTS.

3.2.3. TOTAL THERMAL RESISTANCE VALUE (NEW ASSEMBLY + EXISTING ASSEMBLY): R-30.9.

3.3. ROOF RECOVER ASSEMBLY @ ROOF AREA C:

3.3.1. EXISTING GRAVEL EMBEDDED ASPHALT FLOOD COAT TO BE REMOVED (SWEPT OR SPUDDED) AND DISPOSED

3.3.2. EXISTING ALUMINUM COATING OVER MODIFIED-BITUMEN MEMBRANE TO REMAIN. 3.3.2.1. REMOVE ALL EXISTING LOOSE/DELAMINATED COATING MATERIAL TO SOUND/SECURED COATINGS.

3.3.3. EXISTING TO REMAIN BUILT-UP ROOFING PLIES AND MODIFIED-BITUMEN CAP SHEET TO BE CLEANED AND PRIMED WITH THE INSTALLATION OF THE FOLLOWING NEW MATERIALS (TOP TO BOTTOM):

3.3.3.1. NEW 0.060-INCH (60 MIL) NON-REINFORCED BLACK EPDM MEMBRANE - (FULLY ADHERED OVER)

3.3.3.2. ONE (1) LAYER OF NEW 1/2-INCH HIGH DENSITY POLYISOCYANURATE COVER BOARD (48" X 48" BOARDS) - (SET IN NEW LOW RISE FOAM ADHESIVE

3.3.3.3. THE RECENTLY SWEPT/SPUDDED, CLEANED, AND PRIMED BUR AND MODIFIED-BITUMEN MEMBRANE SUBSTRATE. 3.3.3.3.1. ROOF RECOVER SYSTEM TO MEET THE INSTALLATION REQUIREMENTS AS DESCRIBED AND OUTLINED WITHIN THE PROJECT

3.3.3.4. TOTAL THERMAL RESISTANCE VALUE (NEW ASSEMBLY + EXISTING ASSEMBLY): R-30.9.

BASE BID PROJECT WARRANTY REQUIREMENTS:

4.1. LOW-SLOPE EPDM MEMBRANE - MANUFACTURER'S 20-YEAR NDL (NO DOLLAR LIMIT) WITH 1.0-INCH HAIL FOR 60-MIL FULLY ADHERED MEMBRANES, AND A 72-MPH

PERIMETER METALS - 20-YEAR NDL (NO DOLLAR LIMIT) WITH A 120-MPH WIND RIDER AND A 20-YEAR MINIMUM KYNAR FINISH WARRANTY.

4.3. CONTRACTOR - 2 YEAR WORKMANSHIP WARRANTY

MISCELLANEOUS SCOPE ITEMS:

THE FOUR (4) CORNERS OF THE MAIN ROOF - AREAS A1-A4 - SURROUNDED BY LARGE CONCRETE CURBS, WILL BE RECEIVING A 1/4-INCH TAPERED SYSTEM IN ADDITION TO THE FULL ROOF ASSEMBLY NOTED ABOVE. REFER TO THE ROOF PLAN ON R-300 FOR ADDITIONAL INFORMATION AND PROPOSED TAPERED SLOPE

2.1. THE EXISTING CONTINUOUS CHANNEL GAPS BETWEEN EACH SKYLIGHT DOME WILL HAVE THE EXISTING EPDM STRIPPING-PLIES REMOVED FOR INSTALLATION OF **NEW MATERIALS.**

2.2. EXISTING SUBSTRATE TO BE CLEANED, PRIMED, AND PREPARED FOR THE INSTALLATION OF A NEW LIQUID REINFORCED FLASHING PER THE DETAILS ON R-501. INSTALLATION OF NEW ROOF DRAIN BOWLS AND ASSOCIATED PIPING. FITTINGS. ACCESSORIES AND DOWNSPOUT. AND RELEASE NOZZLES FOR ONE PRIMARY DRAIN AND ONE OVERFLOW DRAIN IN THE PIT ROOF AREA C. THIS WORK WILL REQUIRE CORING THROUGH CONCRETE FLOOR AND WALL SLABS, GPR EFFORTS TO LOCATE STEEL

REINFORCING PRIOR TO DRILLING, AND INSTALLING PIPING THROUGH INTERIOR FINISHES. RE: PLUMBING

ALTERNATES 1. ADDITIVE ALTERNATE #1:

2. ADDITIVE ALTERNATE #2

1.1. IN LIEU OF THE PROPOSED 60-MIL EPDM MEMBRANE - SUPPLEMENT, FURNISH, AND INSTALL A NEW 90-MIL NON-REINFORCED BLACK EPDM MEMBRANE IN CONJUNCTION WITH THE PROJECT DOCUMENTS MEETING BOTH PROJECT DOCUMENT AND MANUFACTURER REQUIREMENTS FOR INSTALLATION AND DETAILING. 1.2. ADD ALT #1 PROJECT WARRANTY REQUIREMENTS:

1.2.1. LOW-SLOPE EPDM MEMBRANE - MANUFACTURER'S 20-YEAR NDL (NO DOLLAR LIMIT) WITH 2.0-INCH HAIL FOR 90-MIL FULLY ADHERED MEMBRANES, AND A

1.2.2. PERIMETER METALS - 20-YEAR NDL (NO DOLLAR LIMIT) WITH A 120-MPH WIND RIDER AND A 20-YEAR MINIMUM KYNAR FINISH WARRANTY

1.2.3. CONTRACTOR - 2 YEAR WORKMANSHIP WARRANTY.

2.1. REMOVING AND REPLACING EXISTING CONCRETE COATING - CONCRETE CURB AND CAP AND PARTIAL PARAPET WALL COATING SCOPE

2.1.1. DESCRIPTION: THE ELEVATED CONCRETE CURBS AND LOUVER VENT CAPS HAVE BEEN COATED WITH A COMBINATION OF SILICONE AND ACRYLIC COATINGS THAT ARE DAMAGED, DETERIORATED, AND FAILING THROUGHOUT. THE CONCRETE SUBSTRATE HAS ALSO DETERIORATED IN ISOLATED LOCATIONS. 2.1.2. SCOPE OF WORK

2.1.2.1. REMOVE EXISTING COATING AT ALL HORIZONTAL AND VERTICAL CONCRETE CURB AND CAP LOCATIONS TO BARE CONCRETE USING THE 2.1.2.2. REPAIR CONCRETE WITH PATCH MATERIAL TO PROVIDE A SMOOTH AND SOUND SUBSTRATE. ENSURE PATCH REPAIR HAS ADEQUATE TIME TO

CURE PRIOR TO APPLYING NEW COATING. 2.1.2.3. APPLY NEW SILICONE COATING PER MANUFACTURER AND PROJECT DOCUMENT REQUIREMENTS AT ALL HORIZONTAL AND VERTICAL CONCRETE CURB AND CAP LOCATIONS AND PARTIAL PARAPET WALL AREAS WITH EXISTING COATING ONLY (THIS EXCLUDES THE UNCOATED INTERIOR

VERTICAL WALLS AND HORIZONTAL FACES OF THE PARAPET WALLS' 2.1.2.4. NEW COATING TO APPLIED AFTER THE EPDM TERMINATION BAR, COUNTER FLASHING, AND SEALANT HAS BEEN INSTALLED TO PROVIDE DETAILING

THAT PROMOTES DRAINAGE ONTO THE ROOF. 2.1.2.5. WARRANTY: CONTRACTOR TO PROVIDE MAXIMUM MANUFACTURER MATERIAL WARRANTY FOR THE THICKNESS OF THE SELECTED COATING SYSTEM AND A MINIMUM 2-YEAR WORKMANSHIP WARRANTY IN ACCORDANCE WITH THE PROJECT DOCUMENTS

ADDITIVE ALTERNATE #3

3.1. APPLYING NEW CONCRETE COATING - PARAPET WALL TOP FACE AND INTERIOR WALL COATING SCOPE:

3.1.1. DESCRIPTION: MOST OF THE TOP AND INTERIOR VERTICAL WALL FACES OF THE CONCRETE PARAPET PERIMETER WALLS ARE UNCOATED. 3.1.2. SCOPE OF WORK

3.1.2.1. REPAIR UNCOATED CONCRETE WITH PATCH MATERIAL TO PROVIDE A SMOOTH AND SOUND SUBSTRATE. ENSURE PATCH REPAIR HAS ADEQUATE

TIME TO CURE PRIOR TO APPLYING NEW COATING. 3.1.2.2. APPLY NEW SILICONE COATING TO ALL UNCOATED CONCRETE ON THE FULL LENGTH OF ALL INTERIOR VERTICAL WALLS AND HORIZONTAL FACES

3.1.2.3. NEW COATING TO APPLIED AFTER THE EPDM TERMINATION BAR, COUNTER FLASHING, AND SEALANT HAS BEEN INSTALLED TO PROVIDE DETAILING THAT PROMOTES DRAINAGE ONTO THE ROOF

3.1.2.4. WARRANTY: CONTRACTOR TO PROVIDE MAXIMUM MANUFACTURER MATERIAL WARRANTY FOR THE THICKNESS OF THE SELECTED COATING SYSTEM AND A MINIMUM 2-YEAR WORKMANSHIP WARRANTY IN ACCORDANCE WITH THE PROJECT DOCUMENTS

ROOF ASSEMBLY NOTES:

GENERAL:

1.1. VERIFY THAT SUBSTRATES ARE DRY, CLEAN, SMOOTH AND FREE OF SHARP EDGES, BURRS, DEEP DEPRESSIONS, LOOSE MATERIAL, OIL, GREASE OR OTHER FOREIGN MATERIAL PRIOR TO INSTALLATION.

1.2. BEGINNING INSTALLATION MEANS ACCEPTANCE OF ALL EXISTING SURFACE CONDITIONS. NEATLY CUT AND FIT MATERIALS AROUND PENETRATIONS AND PROJECTIONS.

1.4. ONLY DRY MATERIALS ARE TO BE INSTALLED AND ONLY AS MUCH AS CAN BE COMPLETED AND DETAILED THE SAME DAY.

ALL MATERIAL THAT HAS BECOME WET DURING STORAGE WILL BE MARKED AND REMOVED FROM THE JOBSITE BY THE CONTRACTOR. 1.6. COORDINATE AND CONFIRM THAT MANUFACTURER'S ASSEMBLY MEETS OR EXCEEDS THE MINIMUM SPECIFIED ROOF ASSEMBLY RATING.

1.7. LISTED ATTACHMENT CRITERIA ARE MINIMUMS: ADDITIONAL OR ENHANCED ATTACHMENT REQUIRED BY MANUFACTURER'S IS TO BE PROVIDED AT NO ADDITIONAL COST.

BARE BACK EPDM MEMBRANES - NON-REINFORCED: 2.1.

MEMBRANE SHEET MUST BE LOOSELY LAID OUT AND ALLOWED TO RELAX FOR A MINIMUM OF 30-MINUTES PRIOR TO INSTALLATION. 2.2. BONDING ADHESIVES ARE TO BE APPLIED IN FULL COVERAGE, EVENLY, TO BOTH THE SUBSTRATE AND THE BACK OF THE MEMBRANE SHEET. ALLOW THE ADHESIVE TO DRY TO A POINT OF BEING TACKY, BUT NOT STRINGY TO THE TOUCH. DO NOT ALLOW ADHESIVE TO "DRYOUT" COMPLETELY.

THE MEMBRANE AND SUBSTRATE WILL BE DRY (NON-TACKY) TO THE FINGER TOUCH. 2.4. ENSURE SHEETS ARE INSTALLED WITH LAPS SHINGLED IN THE DIRECTION OF THE ROOF SLOPE DRAINAGE, TO PREVENT BACKWATER LAPS. 2.5. SHEET EDGES ARE TO BE LAPPED AT LEAST 3-INCHES. AS REQUIRED BY THE MANUFACTURER.

2.6. ALL HORIZONTAL AND VERTICAL MEMBRANE SEAMS ARE TO BE OVERLAID WITH A MANUFACTURER APPROVED. 6-INCH SEMI-CURED COVER TAPE.

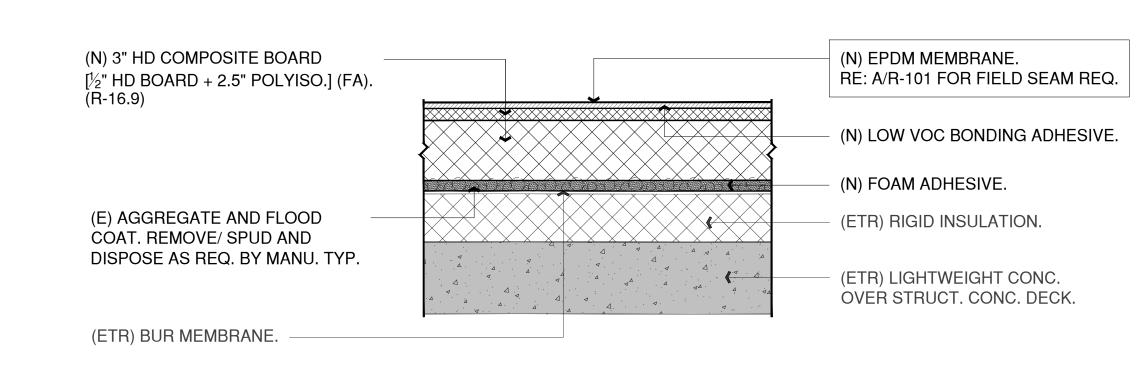
3. INSULATION BOARD: 3.1. BOARDS ARE TO BE INSTALLED WITH A MINIMUM 12-INCH MATERIAL STAGGER IN ALL DIRECTIONS.

GAPS BETWEEN BOARDS GREATER THAN $rac{1}{8}$ -INCH ARE NOT ALLOWED. FILL GAPS WITH ADDITIONAL MATERIAL OR LOW-RISE FOAM ADHESIVE. ALL COVER BOARDS INSTALLED IN FOAM ADHESIVE SHALL BE STEPPED INTO PLACE AND POSITIONED; WEIGHTED DOWN WITH FULL 5-GAL ADHESIVE PAILS (35# WEIGHT MINIMUM) UNTIL THE BEAD FOAM ADHESIVE HAS SET.

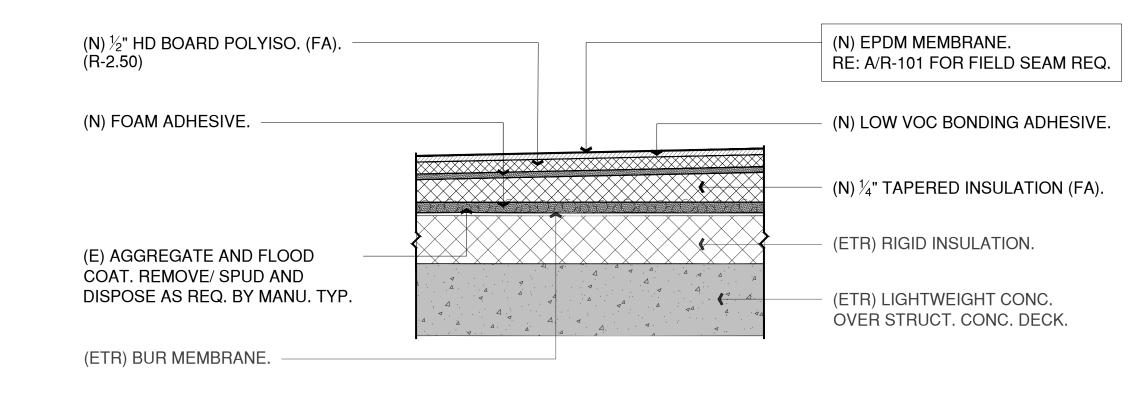
3.3.1. WEIGHTS ARE TO BE POSITIONED WITH ONE IN THE CENTER AND ONE ON EACH CORNER, SO THAT NO CUPPING OR LACK OF ADHESION OCCURS.

INSULATION THAT 'BOUNCES' OR DEPRESSES UNDER FOOT PRESSURE IS UNACCEPTABLE.

3.4. WEIGHTS ARE TO REMAIN IN PLACE ON THE COVER BOARDS FOR A MINIMUM OF 10 MINUTES.

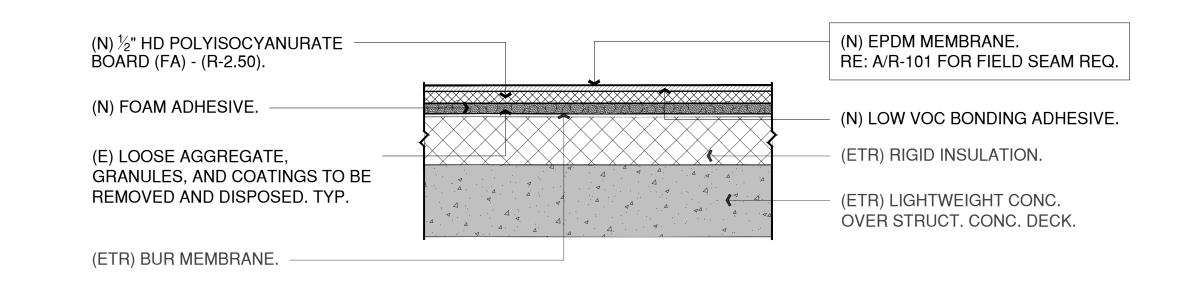


ROOF ASSEMBLY @ ROOF AREAS A AND B (TYPICAL) - [MAIN ROOF AND PENTHOUSE] NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



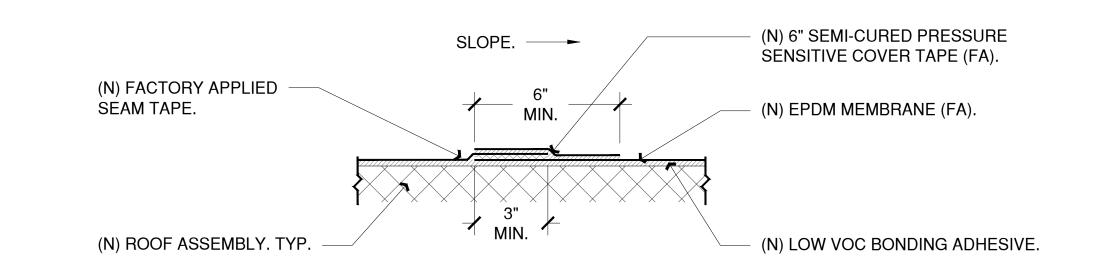
ROOF ASSEMBLY @ ROOF AREAS A1, A2, A3, AND A4 (TYPICAL) - [MAIN ROOF CORNERS]

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



ROOF ASSEMBLY @ ROOF AREA C (TYPICAL) - [PIT ROOF]

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



EPDM FIELD MEMBRANE SEAM OVERLAY (TYPICAL @ ALL SEAMS)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

ROOF DETAIL NOTES

PARAPET WALL/ ROOF EDGE FLASHINGS:

1.1. NEW MEMBRANES MUST EXTEND DOWN THE OUTSIDE FACE OF THE PARAPET WALL/ROOF EDGE A MINIMUM OF 2" PAST THE BOTTOM WOOD NAILER. 1.2. FULLY ADHERE MEMBRANE TO THE PARAPET EXTERIOR.

1.3. MINIMUM 12"X12" WIDE UNCURED EPDM PATCHES MUST BE INSTALLED AT ALL MEMBRANE SEAM ANGLE CHANGES **COUNTER FLASHINGS:** 2.1. ALL EXISTING SURFACE MOUNTED COUNTER FLASHING METALS AND ASSOCIATED FASTENERS/SEALANTS ARE TO BE REMOVED AND DISPOSED.

EXISTING REGLETS TO REMAIN IN PLACE ARE TO HAVE THEIR EXISTING SEALANTS RAKED OUT AND EXPOSED SURFACES CLEANED PRIOR TO INSTALLATION OF NEW TOOLED-IN SEALANT

2.3. EXISTING REGLETS TO BE DOUBLE-CUT AS NEEDED LEAVING 1" TO 2" OF EXISTING MATERIAL FOR NEW COUNTER FLASHING TIE-IN. 2.4. NEW SEALANTS TO BE TOOLED-IN, CREATING A WATER SHEDDING SURFACE.

2.5. ENSURE ALL WEEP HOLES REMAIN EXPOSED. INSTALL NEW LEAD WEDGES @ 8" O.C. MAX. FOR ALL REGLET COUNTER FLASHING CONDITIONS. TYP.

BEND COUNTER FLASHING METALS 90-DEGREES @ END LOCATIONS, TO MEET FLUSH WITH WALL SUBSTRATE AND SEAL WITH NEW URETHANE SEALANT. 3. ROOF DRAINS:

3.1. STANDARD DRAIN SUMPS ARE 8'-0" X 8'-0". WHERE APPLICABLE, REFER TO ROOF PLAN ON R-300 FOR ELONGATED DRAIN SUMPS THAT EXCEED THE MINIMUM DIMENSIONS.

3.2. REMOVE ALL LEAD AND OTHER FLASHINGS. 3.3. REMOVE THE EXISTING CLAMPING RING AND STRAINER TO ALLOW FOR THE NEW FLASHING INSTALLATION.

RAISE/LOWER EXISTING DRAIN BOWL AS NEEDED TO ACCOMMODATE NEW ROOF ROOF ASSEMBLY THICKNESS. 3.5. CONTRACTOR TO WATER TEST ALL PRIMARY AND OVERFLOW DRAINS PRIOR TO CONSTRUCTION TO ENSURE DRAINS HAVE PROPER FLOW AND NO BLOCKAGE. 3.6. ALL STRAINERS AND CLAMPING RINGS TO BE CLEANED, PRIMED AND PAINTED BEFORE REINSTALLATION, PER THE SPECIFICATION REQUIREMENTS.

3.7. ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF-MASTIC. 3.8. CUT THE MEMBRANE SO IT EXTENDS 1-INCH, FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.

3.9. FIELD SPLICES MUST BE LOCATED AT LEAST 6 INCHES OUTSIDE THE DRAIN SUMP.

3.10. MEMBRANE SEAMS SHALL NOT PASS THROUGH THE DRAIN SUMP.

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ROOF ASSEMBLIES AND SCOPE OF WORK NOTES

R-101

TABLE 1.0 - ROOF ASSEMBLY ATTACHMENT SCHEDULE:

ROOF MATERIAL	ATTACHMENT TYPE	ATTACHMENT MATERIAL	+ + + + + + + + + + + + + + + + + + +	ZONE 2 ATTACHMENT RATE	ZONE 3 ATTACHMENT RATE
MEMBRANE	ADHESIVE	BONDING ADHESIVE	FULL COVERAGE	FULL COVERAGE	FULL COVERAGE
INSULATION BOARDS	ADHESIVE	LOW RISE FOAM - CONTINUOUS RIBBONS (NOTE 1)	4" O.C.	4" O.C.	4" O.C.

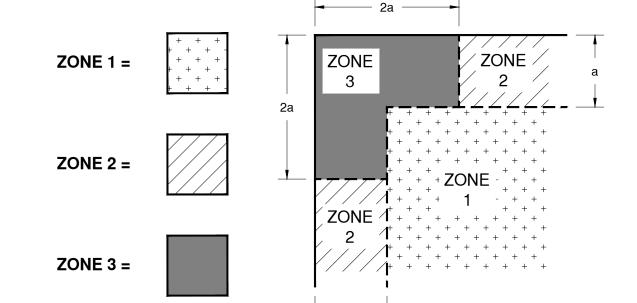
1. LOW-RISE FOAM BEADS ARE TO BE APPLIED WET WITH A MINIMUM THICKNESS OF $\frac{3}{4}$ -INCH. LOW-RISE FOAM MUST BE ALLOWED TO RISE AND DEVELOP STRING/BODY (APPROXIMATELY $1\frac{1}{2}$ - 2 MIN.). STRING TIME WILL VARY BASED ON ENVIRONMENTAL CONDITIONS LIKE TEMPERATURE AND HUMIDITY. DO NOT ÁLLOW THE ADHESIVE TO OVER-CURE PRIOR TO SETTING MATERIALS. DO NOT INSTALL MATERIALS IN WET BEADS.

DESIGN NOTES:

- 1. 2021 INTERNATIONAL BUILDING CODE.
- 2. 2021 INTERNATIONAL EXISTING BUILDING CODE CHAPTER 7 ALTERATION LEVEL 1 REMOVE AND REPLACE WITH LIKE.
- 2.1. SECTION 706.2 ADDITION OR REPLACEMENT OF ROOFING: 2.1.2. EXCEPTION 2: THE INCREASED DEAD LOAD IS DUE ENTIRELY TO THE ADDITION OF A SECOND LAYER OF ROOF COVERING WEIGHING 3 POUNDS PER SQUARE FOOT OR LESS OVER AN EXISTING SINGLE LAYER OF ROOF COVERING.
 - 2.1.1.1. ESTIMATED INCREASE OF DEAD LOAD DUE TO ROOF RECOVER:
 - 2.1.1.0.0.3. ROOF AREA C: 1.0 PSF.
 - 2.1.1.0.0.1. ROOF AREAS A AND B: 1.5 PSF. **ROOF AREAS A1-A4:** 2.1.1.0.0.2.

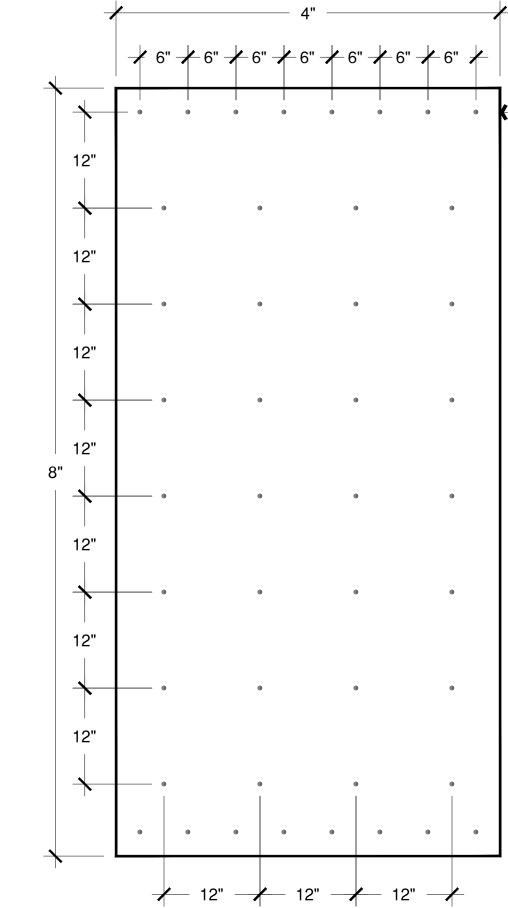
ASCE 7-16 - WIND DESIGN NOTES:

- 1. 3-SECOND PEAK GUST: 115 MPH
- 2. EXPOSURE: **ENCLOSED** CONFIGURATION: 4. RISK CATEGORY:
- ASCE 7-16 STRENGTH DESIGN VALUES:
- ALL ROOF AREAS: 70-FEET 1.1. DESIGN HEIGHT (h): 18.0-FEET 1.1.1. a: 1.2. ZONE 1 FIELD: -53.4 PSF -83.8 PSF 1.3. **ZONE 2 EDGE**:
- -114.2 PSF 1.4. ZONE 3 CORNER: 1.5. ZONE 4 WALL FIELD: -43.2 PSF 1.6. ZONE 5 WALL CORNER: -66.9 PSF



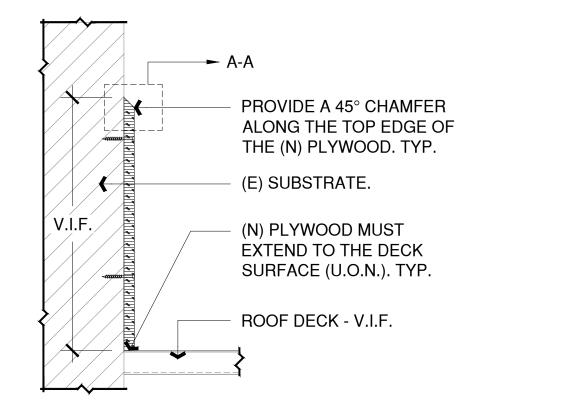
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PLYWOOD SHEATHING FASTENING ILLUSTRATION:



(N) MIN. $\frac{1}{2}$ " FIRE RETARDANT TREATED CDX PLYWOOD @ ALL VERTICAL SUBSTRATES. TYP.

PLYWOOD SHEATHING FASTENING SECTION @ VERTICAL SUBSTRATES:



(A-A) PLYWOOD SHEATHING SECTION @ TOP OF PARAPET WALLS:

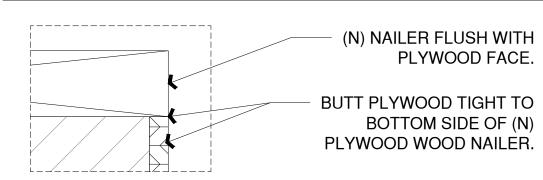
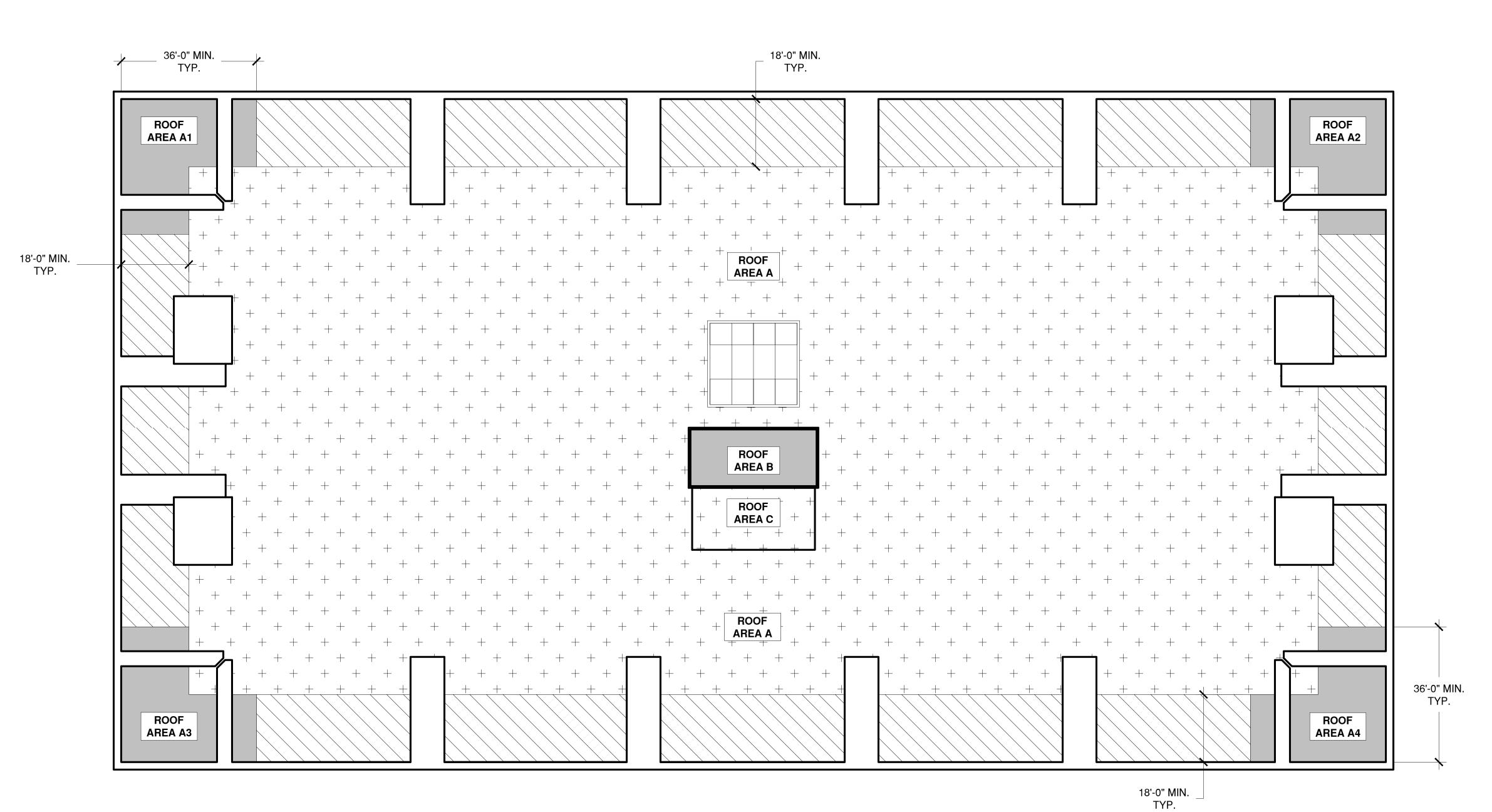


TABLE 2.0 - FASTENER SCHEDULE:

ELEMENT	SUBSTRATE	FASTENER	NUMBER AND SPACING	
	CONCRETE BLOCK OR MASONRY WALL	1/4" STAINLESS STEEL CONCRETE SCREWS	12" O.C. MAX. STAGGERED (NOTE 1) 1.0" PENET., MIN. PULL-OUT RESISTANCE OF 1,000 POUNDS	
WOOD NAILER/ BLOCKING	HORIZONTAL WOOD NAILER	#12 MIN. WOOD/STEEL SELF-DRILLING SCREWS	2 ROWS/12" O.C. EACH ROW, MIN. (NOTE 1) 3/4" PENET., MIN. PULLOUT RESISTANCE OF 100 POUNDS	
	VERTICAL WOOD NAILER	#12 MIN. WOOD/STEEL SELF-DRILLING SCREWS	2 ROWS/12" O.C. EACH ROW, MIN. (NOTE 1) 3/4" PENET., MIN. PULLOUT RESISTANCE OF 100 POUNDS	
WOOD DECK	WOOD DECKING	#15 CORROSION RESISTANT STEEL SCREWS	PER SPECIFICATIONS	
HOOK STRIP	WOOD	#8 WOOD SCREWS	6" O.C. MAX. (NOTE 1)	
(CLEAT METAL)	CONCRETE	3/16" STAINLESS STEEL NAIL-IN EXPANSION FASTENER	6" O.C. MAX. (NOTE 1)	
DRIP EDGE	WOOD	4D RING SHANK NAILS.	SEE HOOK STRIP 2 ROWS/3"-4" O.C. MAX. STAGGERED (NOTE 1)	
	WOOD	4D RING SHANK NAILS.	SEE HOOK STRIP 2 ROWS/3"-4" O.C. MAX. STAGGERED (NOTE 1	
GRAVEL STOP	CONCRETE BLOCK OR MASONRY WALL	OUTSIDE-CONTINUOUS HOOK STRIP, INSIDE EDGE GALVANIZED ROOFING NAILS	SEE HOOK STRIP 12" O.C. MAX. STAGGERED (NOTE 1)	
TERMINATION BAR	CONCRETE BLOCK OR MASONRY WALL	3/16" STAINLESS STEEL NAIL-IN EXPANSION FASTENERS	6" O.C. MAX. (NOTE 1)	
RTS/SEAM FASTENING	CONCRETE BLOCK OR MASONRY WALL	3/16" STAINLESS STEEL NAIL-IN EXPANSION FASTENERS	6" O.C. MAX. (NOTE 1)	
PLATES	PLYWOOD/STEEL STUDS	#15 CORROSION RESISTANT STEEL SCREWS		
METAL FLASHING RECEIVER	CONCRETE BLOCK OR MASONRY WALL	3/16" STAINLESS STEEL NAIL-IN EXPANSION FASTENERS	12" O.C. MAX. (NOTE 1)	
METAL COUNTER FLASHING	METAL FLASHING RECEIVER	#15 NEOPRENE WASHERED SELF-DRILLING SCREWS	8" O.C. MAX. (NOTE 1)	
PLYWOOD SHEATHING	METAL STUD FRAMING	#15 CORROSION RESISTANT STEEL SCREWS	6" O.C. MAX. @ EDGES AND 12" O.C. MAX. IN THE FIELD @ EACH STUD LOCATION (NOTE 1)	
(ILLUSTRATION ON R-200)	CONCRETE BLOCK OR MASONRY WALL	3/16" STAINLESS STEEL NAIL-IN EXPANSION FASTENERS		
METAL WALL	CONCRETE BLOCK OR MASONRY WALL	CLAD WALL WITH PLYWOOD PRIOR TO PANEL INSTALL	SEE PLYWOOD SHEATHING	
METAL WALL PANELS	PLYWOOD/STEEL STUDS	#10 CORROSION RESISTANT SELF-TAPPING TEK SCREWS	12" O.C. MAX. ALONG PANEL LEG (NOTE 1)	
WALL PANEL	CONCRETE BLOCK OR MASONRY WALL	CLAD WALL WITH PLYWOOD PRIOR TO PANEL INSTALL	SEE PLYWOOD SHEATHING	
CLOSURE METALS	PLYWOOD/STEEL STUDS	#10 CORROSION RESISTANT SELF-TAPPING TEK SCREWS	8" O.C. MAX. (NOTE 1)	
STEEL MECHANICAL CURB	WOOD	#12 METAL TO WOOD FASTENER	6" O.C. MAX. AROUND FULL CURB PERIMETER	



1. FASTENER FREQUENCY SHALL BE DOUBLED WITHIN 10 FEET OF CORNERS.



WIND ZONE ROOF PLAN

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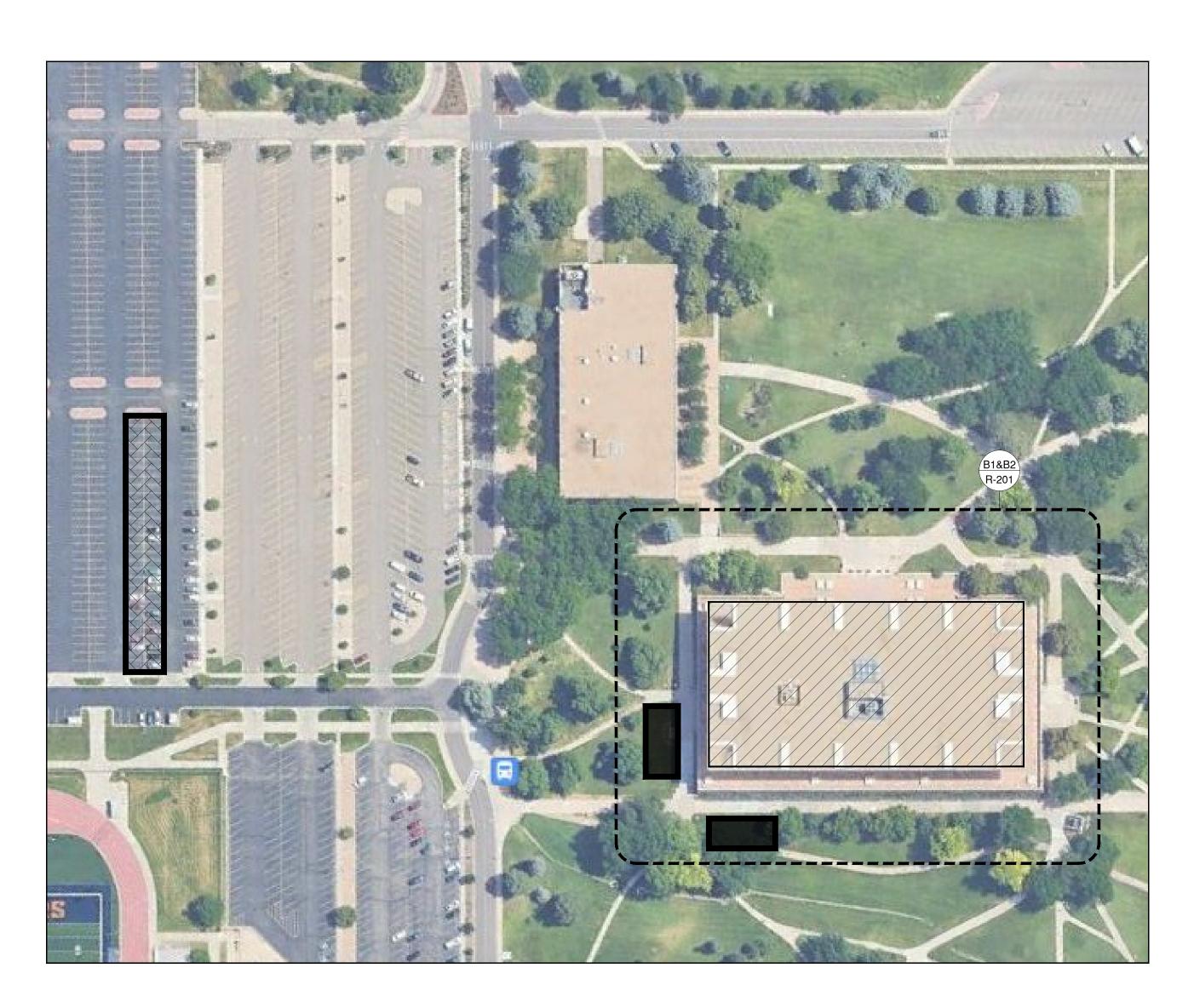
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DESIGN NOTES AND FASTENING SCHEDULES

R-200

PLOT SCALE IS 30x42



CONTRACTOR STAGING AND ACCESS LOCATION(S) PLAN

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

CONTRACTOR STAGING REQUIREMENTS

STAGING/PARKING.

CRANE AND GRAVEL TRUCK ACCESS



STAGING AND ACCESS NOTES:

- CONTRACTOR TO COORDINATE ALL STAGING, PARKING, CRANE, AND TRUCK ACCESS WITH
- CONTRACTOR TO PROTECT SUBSTRATE AND ADJACENT SURFACES FOR ALL ACCESS
- NO EQUIPMENT IS TO BE PLACED ON TOP OF PLAZA PAVERS.
- 4. CONTRACTOR TO PHOTO DOCUMENT ALL STAGING, PARKING, CRANE, AND TRUCK LOCATION
- CONDITIONS PRIOR TO THE START OF MOBILIZATION/ CONSTRUCTION
- MAX LOAD OVER TUNNELS: 250 PSF.
- ROOF TOP ACCESS BY EXTERIOR MEANS. INTERIOR ACCESS PER OWNER APPROVAL ONLY. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL BUILDING FIRE EGRESS EXIST, PATHS, AND LOCATIONS AS REQUIRED BY LOCAL AHJ.

STAIR TOWER SCAFFOLDING NOTES

GENERAL

- 1.1. EXTERIOR STAIR TOWER INSTALLATION AND PROJECT DURATION PERFORMANCE THROUGH PROJECT DURATION TO ADHERE TO THE REQUIREMENTS OF THE LOCAL AHJ, OSHA REGULATIONS, AND ANSI STANDARDS. 1.2. STAIR TOWER ERECTION, ASSEMBLY, AND SAFETY REGULATIONS ARE THE RESPONSIBILITY OF THE STAIR TOWER CONTRACTOR/ENGINEER AND SHALL BE
- DESIGNATED AS A DEFERRED SUBMITTAL AND DELEGATED DESIGN THROUGH THE ROOFING CONTRACTOR.
- 1.3. INSTALLATION PLAN, LOCATION, AND ASSEMBLY TO BE REVIEWED BY BOTH THE OWNER AND OWNER'S ROOFING CONSULTANT FOR REVIEW AND APPROVAL. PRIOR TO MOBILIZATION AND INSTALLATION.

2. PLANNING AND PREPARATION

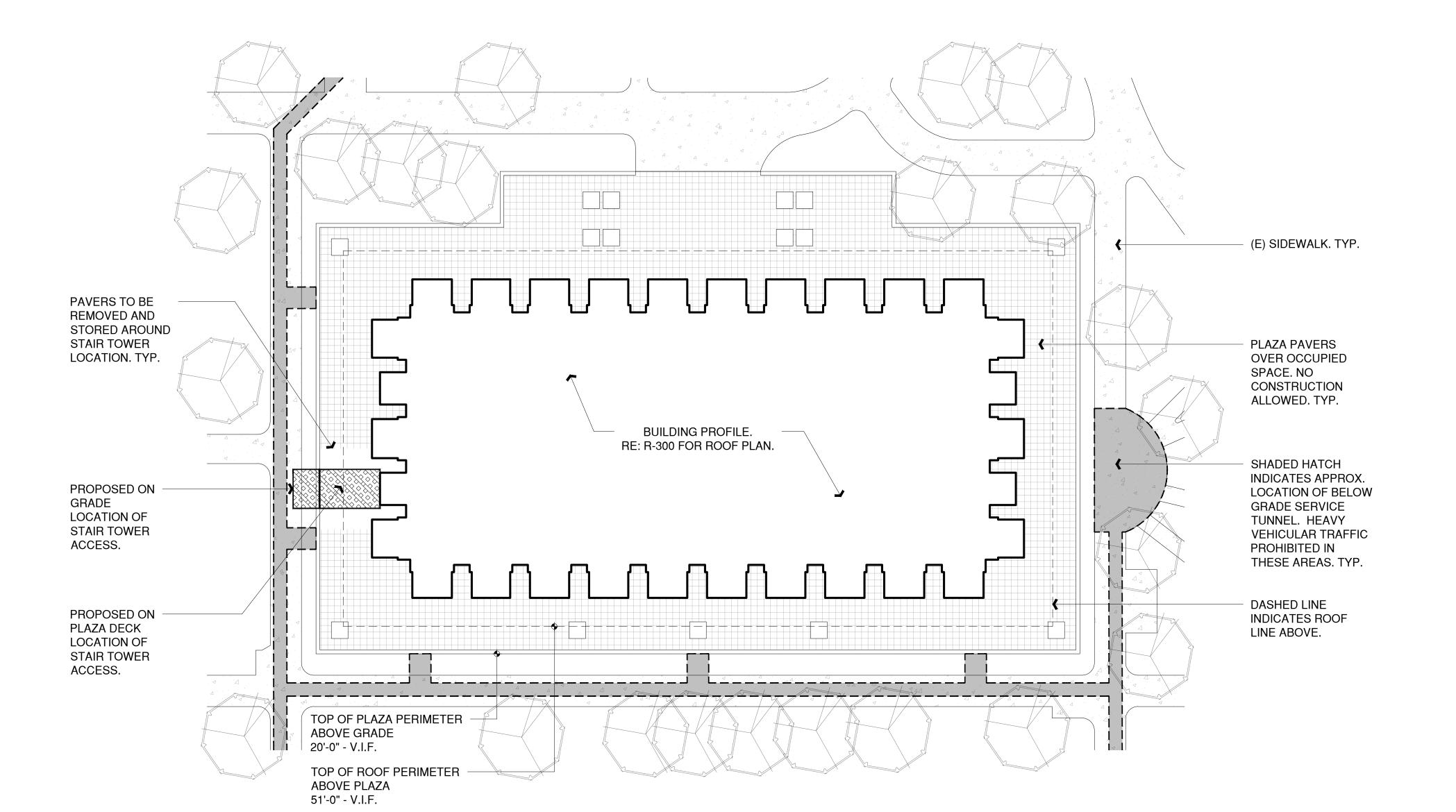
- 2.1. REFER TO STAGING PLAN B1 ON R-201 FOR PROPOSED INSTALLATION LOCATION.
- 2.2. CONTRACTOR TO COORDINATE WITH SCAFFOLDING CONTRACTOR/ENGINEER AND PROJECT TEAM TO CONDUCT A SITE ASSESSMENT TO DETERMINE THE SCAFFOLDING LOCATION AND HEIGHT REQUIREMENTS.
- 2.3. CONTRACTOR TO ENSURE COMPLIANCE WITH LOCAL REGULATIONS AND SAFETY STANDARDS AND ACQUIRE NECESSARY PERMITTING FOR SCAFFOLDING ERECTION.

TESTING 3.1. LOAD TESTING:

- 3.1.1. CONTRACTOR TO COORDINATE WITH SCAFFOLDING CONTRACTOR TO ENSURE LOAD TESTING IS PERFORMED ON THE BUILDING PRIOR TO INSTALLATION. 3.1.2. TESTING METHODS, DURATION, AND INSPECTIONS TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER AND SCAFFOLDING CONTRACTOR/ENGINEER.
- 3.2. ANCHOR TESTING:
- 3.2.1. PULL-OUT TESTING, EMBEDMENT DEPTH, AND TORQUE TESTING TO BE PERFORMED PRIOR TO STAIR TOWER INSTALLATION AND IN ACCORDANCE WITH MANUFACTURER AND SCAFFOLDING CONTRACTOR/ENGINEER. 3.3. VISUAL INSPECTION
- 3.3.1. CONDUCT A THOROUGH VISUAL INSPECTION OF ALL ANCHORS, CONNECTIONS, AND SCAFFOLD COMPONENTS TO CHECK FOR ANY SIGNS OF DAMAGE OR IMPROPER INSTALLATION.
- 3.4. ALIGNMENT AND PLUMBNESS: 3.4.1. ENSURE THAT VERTICAL POSTS ARE PLUMB AND THAT THE SCAFFOLD STRUCTURE IS CORRECTLY ALIGNED.
- 3.5. LOAD DISTRIBUTION CHECK THAT THE LOAD IS EVENLY DISTRIBUTED ACROSS THE SCAFFOLD BASE AND THAT THE ANCHORING POINTS ARE ADEQUATELY SUPPORTING THE LOAD.
- 3.6. MOVEMENT TESTING ENSURE THAT THERE IS NO EXCESSIVE MOVEMENT OR SWAYING OF THE SCAFFOLD UNDER LOAD CONDITIONS.
- 4. DOCUMENTATION AND REPORTING
- 4.1. RECORD KEEPING MAINTAIN DETAILED RECORDS OF ALL TESTING PROCEDURES, RESULTS, AND INSPECTIONS. 4.2. REPORTING - PROVIDE REPORTS ON TEST RESULTS AND ANY CORRECTIVE ACTIONS TAKEN TO RELEVANT STAKEHOLDERS OR REGULATORY BODIES AS
- 5. MATERIAL AND EQUIPMENT CHECK 5.1. SCAFFOLDING CONTRACTOR/ENGINEER TO VERIFY THAT ALL SCAFFOLDING COMPONENTS (TOWERS, STAIRS, PLATFORMS, GUARDRAILS, ETC.) ARE IN GOOD
- 5.2. CHECK FOR ANY MISSING OR DAMAGED PARTS
- 6. FOUNDATION SETUP
- 6.1. THE UNIVERSITY OF NORTHERN COLORADO (UNC) HAS INDICATED THAT A PORTION OF THE PAVER PLAZA TERRACE CAN BE UTILIZED FOR STAIR TOWER PLACEMENT AND PARTIAL SUPPORT. 6.1.1. PAVERS AND ASSOCIATED PEDESTALS MUST BE REMOVED AND STORED ONSITE WITH AMPLE PROTECTION TO ENSURE DAMAGES DO NOT OCCUR TO THE
- PAVERS THROUGH THE CONSTRUCTION DURATION UNTIL THEY CAN BE REINSTALLED. 6.2. STAIR TOWER BASE PLATE SUPPORTS CAN BE SET ON THE THE ABOVE DECK (BELOW PLAZA PAVERS) MONOLITHIC WATERPROOFING MEMBRANE.
- 6.2.1. CONTRACTOR TO DOCUMENT THE EXISTING MEMBRANE CONDITIONS PRIOR TO INSTALLATION OF THE NEW STAIR TOWER.
- 6.2.2. THE MEMBRANE AND ADJACENT AREAS MUST BE PROTECTED DURING THE FULL DURATION OF CONSTRUCTION.
- 6.2.3. ANY DAMAGES THAT OCCUR DURING CONSTRUCTION TO THE MEMBRANE, PAVERS, AND ADJACENT AREAS, ARE THE SOLE RESPONSIBILITY OF THE ROOFING CONTRACTOR AND THEIR SUBCONTRACTORS TO BRING THESE AREAS THAT HAVE BEEN COMPROMISED BACK TO PRE-CONSTRUCTION CONDITIONS.
- 6.2.4. CONTRACTORS MUST RESTORE THE BUILDING FACADE TO ITS ORIGINAL CONDITION WHERE SCAFFOLDING IS ANCHORED. ANCHORS SHOULD BE DISCREETLY PLACED IN INCONSPICUOUS AREAS, SUCH AS FACADE CLADDING JOINTS OR MORTAL LINES, TO MINIMIZE VISIBLE REPAIRS AND PRESERVE THE FACADES APPEARANCE AFTER THE SCAFFOLDING IS REMOVED.
- 7. TRAINING AND ACCESS

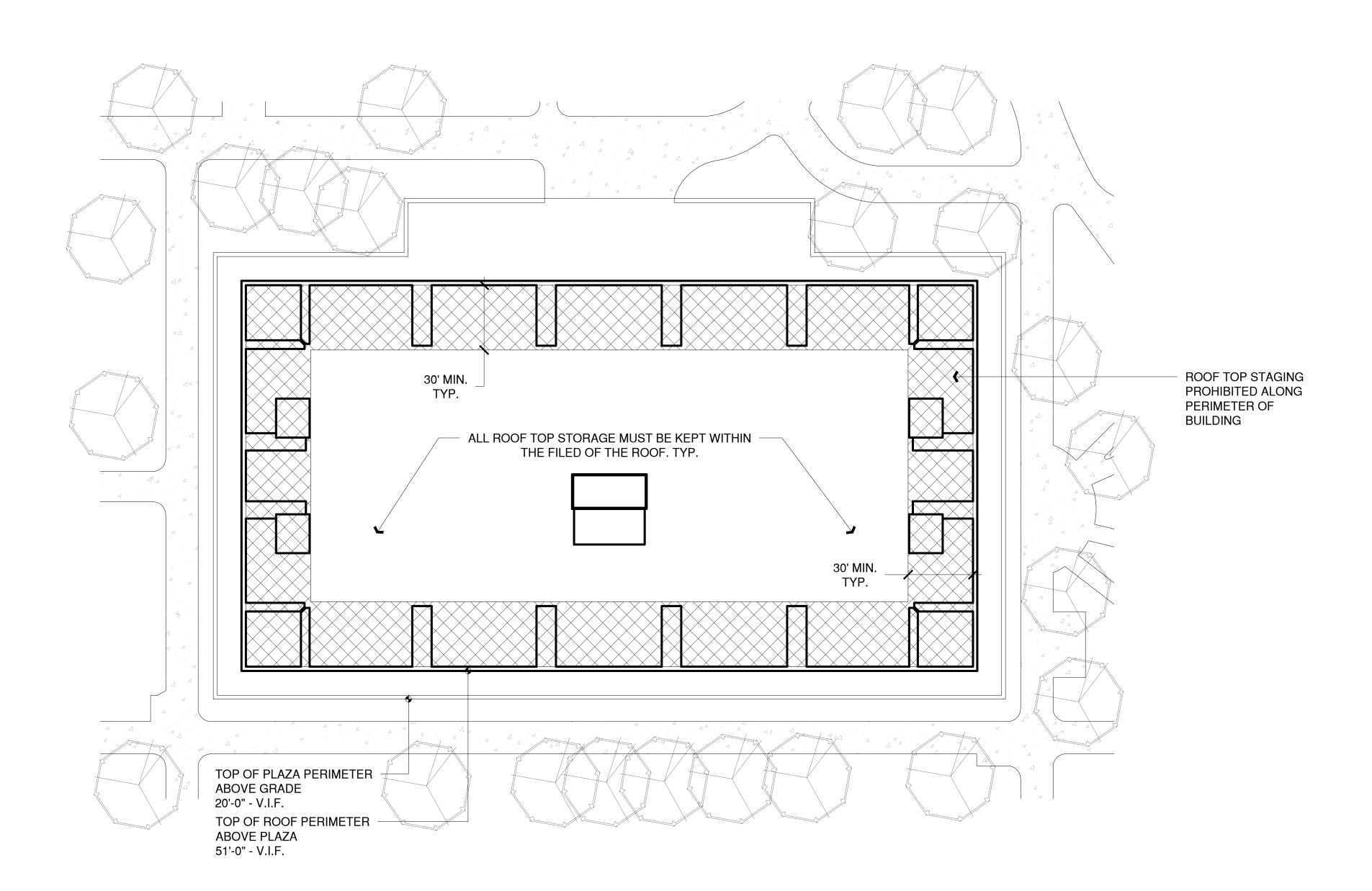
PLOT SCALE IS 30x42

- 7.1. ENSURE THAT ALL PERSONNEL USING THE SCAFFOLD ARE TRAINED IN ITS PROPER USE.
- 7.2. PROVIDE SAFETY BRIEFINGS AND ENSURE THAT PERSONAL PROTECTIVE EQUIPMENT (PPE) IS USED. 8. REGULAR INSPECTIONS
- 8.1. CONDUCT REGULAR INSPECTIONS DURING THE PROJECT TO ENSURE CONTINUED SAFETY AND COMPLIANCE. 8.2. ADDRESS ANY ISSUES OR ADJUSTMENTS NEEDED PROMPTLY.



CONTRACTOR STAGING AND ACCESS LOCATION(S) PLAN **B**1

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (SCALE: 1/32" = 1'-0")

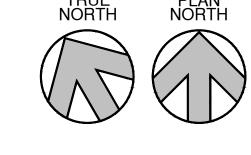


ROOF TOP STAGING PLAN

100% CONSTRUCTION DOCUMENTS

UNIVERSITY OF

EYPLAN LEGEND



UNIVERSITY OF NORTHERN COLORADO 501 WEST 20TH STREET GREELEY, CO 80639

JAMES A. MICHENER LIBRARY ROOFING PROJECT

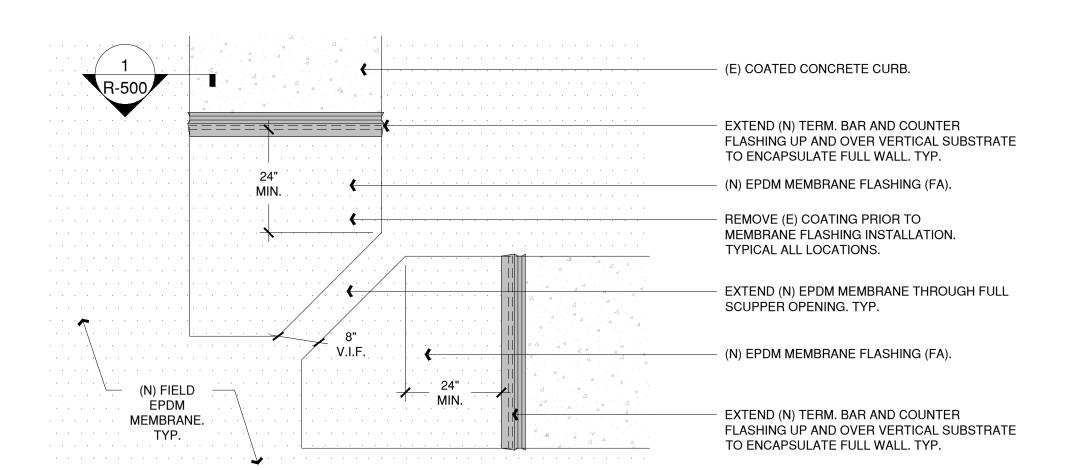
PROJECT NO. DEN.2023.001048 09/2024 DRAWN BY DJD CHECKED BY RKP & SAP DATE REVISION

1400 22ND STREET

GREELEY, CO 80631

AMTECH SOLUTIONS 1720 South Bellaire Street, Suite 1200 Denver, Colorado 80222 (303) 738-0823 | www.amtechsls.com CONTRACTOR STAGING PLAN

R-201



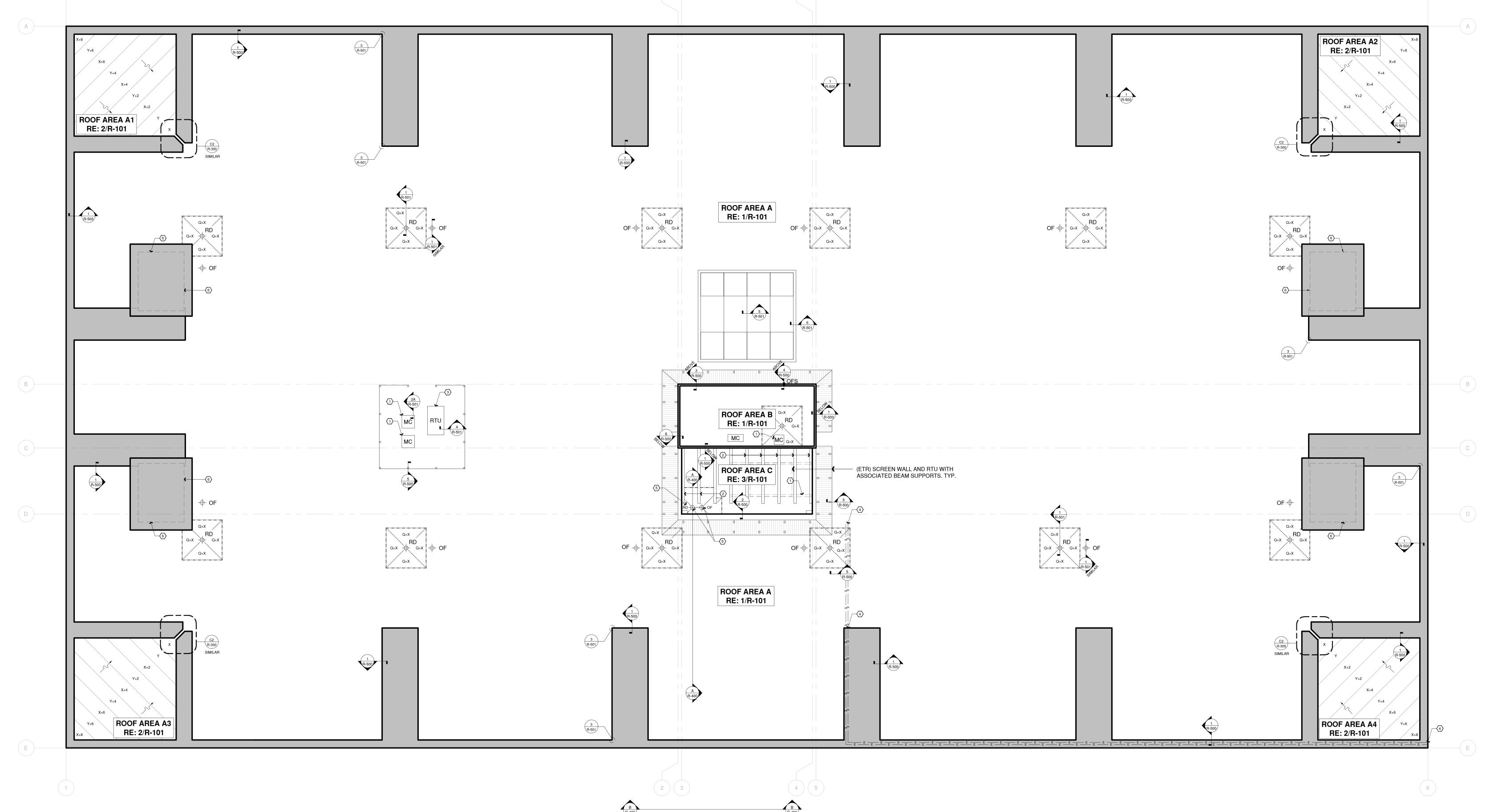
RAISED CURB THRU-WALL CHANNEL FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

KEYNOTES:

- 1. EXISTING SHEET METAL CURB CAPS AND STEEL BEAMS: 1.1. CLEAN/GRIND METAL OF ALL CONTAMINATES TO BARE STEEL. TREAT AREAS OF STEEL FOUND TO HAVE SIGNS OF RUSTING WITH RUST INHIBITING COATING.
- 1.3. INSTALL A NEW LIQUID REINFORCED FLASHING OVER ALLL HORIZONTAL AND VERTICAL SURFACES OF THE EXISTING SHEET METAL AND STEEL BEAMS PER MANUFACTURER INSTALLATION REQUIREMENTS.
- 2. EXISTING PIT ROOF CURB SHEET METAL CAPS TO BE REMOVED WITH THE INSTALLATION OF NEW EPDM UP AND OVER, TO FULLY ENCAPSULATE ALL CURBS. TYPICAL.
- 3. EXISTING ROOF TOP UNIT TO BE RAISED AS NECESSARY TO MEET THE MINIMUM 8-INCH FLASHING REQUIREMENTS. EXTEND ALL DUCT WORK AND ELECTRICAL AS REQUIRED.
- 4. CONTRACTOR TO COORDINATE WITH OWNER REGARDING ALL WALL MOUNTED ELECTRICAL UNITS, CAMERAS, AND UNISTRUT SUPPORTS WHERE INTERFERENCE WITH ROOFING WORK MAY OCCUR. ELECTRICAL TO ONLY BE REMOVED AND REINSTALLED
- 5. CONTRACTOR TO COORDINATE WITH OWNER REGARDING REMOVAL AND DISPOSAL OF THE EXISTING PIT ROOF SUMP PUMP.

- 6. CONTRACTOR TO ENSURE EXISTING TO REMAIN LOUVERS ARE NOT COVERED BY NEW ROOFING MATERIALS, TYPICAL.
- 7. EXISTING BALLASTED/FREESTANDING EQUIPMENT TO BE DISCONNECTED, STORED, AND REINSTALLED BY CONTRACTOR PER OWNER DIRECTION. COORDINATE WITH OWNER PRIOR TO ANY WORK AROUND UNIT.
- CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ABANDONED CURB/PENETRATION REMOVAL. ALL ABANDONED CURBS MARKED FOR REMOVAL WILL NEED TO HAVE THE ROOF DECK OPENINGS PATCHED AND REPAIRED WITH NEW ROOFING INSTALLED OVER THESE LOCATIONS. OVERLAY DECK WITH NEW MINIMUM 3'X3' 16-GA. SHEET METAL FLAT STOCK FOR OPENINGS THAT ARE 2'X2' OR LESS. FASTEN NEW FLAT STOCK SHEET METAL AT 6-INCHES ON CENTER AT 3-INCHES FROM THE EDGE OF THE DECK OPENING. TYPICAL.
- INSTALL NEW PRIMARY AND OVERFLOW ROOF DRAINS, SUMPS, AND ACCESSORIES. RE: PLUMBING AND DETAIL 1 ON R-501 FOR SIM. DRAINAGE FLASHING CONDITIONS. DESIGN INTENT IS TO INSTALL NEW DRAINS IN DIFFERENT CELL OF THE CONCRETE SLAB.

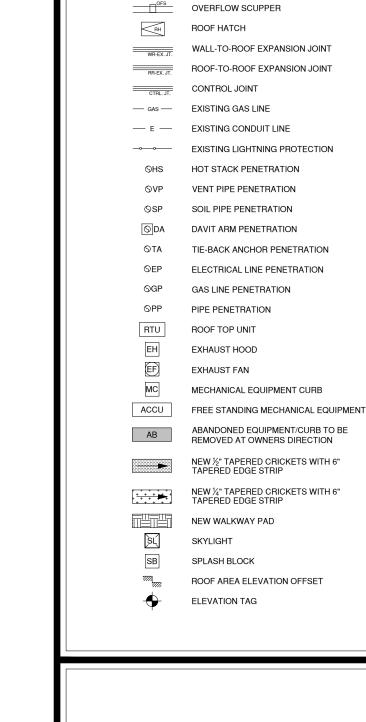


CONTRACTOR TO REMOVE ONLY AS MUCH ROOFING PER DAY AS THEY ARE ABLE TO MAKE WATERTIGHT AND SECURE AT THE END OF THEIR WORK DAY. ANY DAMAGE CAUSED BY WEATHER OR OTHER ELEMENTS AS A RESULT OF UNFINISHED ROOFING WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL REPLACE/REPAIR ALL INTERIOR AND EXTERIOR DAMAGE, RESULTING FROM UNFINISHED/UNPROTECTED ROOF CONSTRUCTION AT THEIR OWN EXPENSE.

ALL CONDITIONS OR PENETRATIONS MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS AND MEASUREMENTS. DETAIL CALL OUTS AND KEY NOTES MAY ONLY BE REFERENCED ONCE ON THE DRAWINGS. ONCE A PARTICULAR CALL OUT OR KEY NOTE HAS BEEN REFERENCED OR INDICATED BY LEGEND, IT MAY NOT BE REFERENCED AGAIN ON THE DRAWINGS, BUT ITS USE SHALL BE TYPICAL.

CONSTRUCTION. GRID LINES ARE FOR REFERNCE ONLY.

ROOF TAPER PLANS ARE PRELIMINARY. ROOFING CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND COORDINATE WITH ROOF MEMBRANE MANUFACTURER AND/ OR SUPPLIER FOR FINAL DRAINAGE TAPER PLANS TO BE REVIEWED AND APPROVED BY AMTECH PRIOR TO



100% CONSTRUCTION DOCUMENTS

SECTION AND DETAIL REFERENCE

NOT IN CONTRACT

ROOFING KEY NOTE

→ STRUCTURAL ROOF SLOPE

—

√

¼" TAPERED ROOF SLOPE

VALLEY LINE

→RD PRIMARY ROOF DRAIN

______ THRU-WALL ROOF DRAIN

EXHAUST HOOD EXHAUST FAN

NEW WALKWAY PAD

MECHANICAL EQUIPMENT CURB

REMOVED AT OWNERS DIRECTION

THRU-WALL SCUPPER

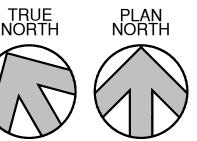
⇒^{OF} OVERFLOW ROOF DRAIN

— — RIDGE LINE

ROOFING DETAIL NUMBER

ROOFING PAGE NUMBER





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ROOF PLAN

R-300

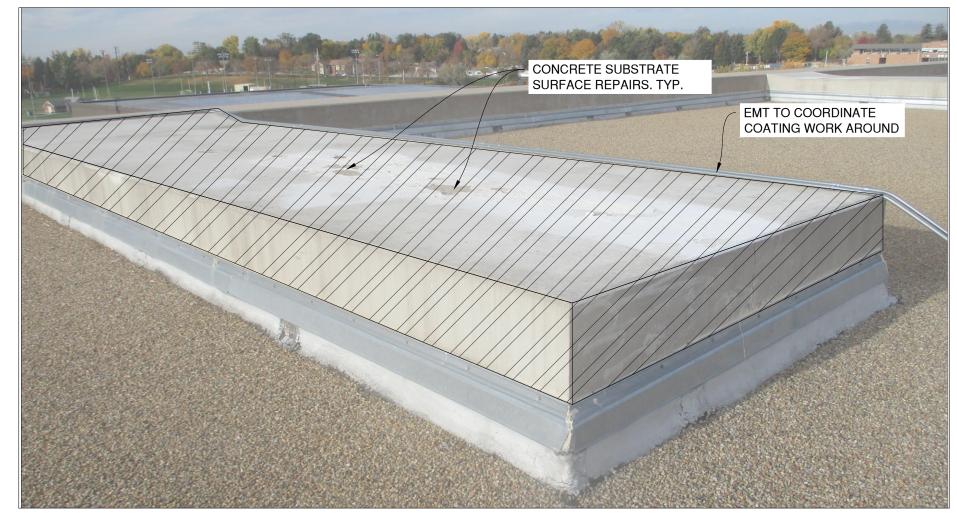
CONCRETE COATING KEYNOTES:

- 1. AT RAISED CURB THRU-WALL CHANNEL FLASHING, TERMINATE COATING AT TERMINATION BAR THAT WILL EXTEND UP AND OVER THE VERTICAL SUBSTRATE OF THE WALL TO ENCAPSULATE FULL WALL. TYPICAL ALL LOCATIONS. RE: C2/R-300.
- 2. COORDINATE TEMPORARY REMOVAL, STORAGE, AND REINSTALLATION OF THE ELECTRICAL CONDUITS WITH UNC TO COMPLETE CONCRETE COATING WORK. TYPICAL ALL LOCATIONS.
- 3. NEW COATING TO BE APPLIED AFTER THE EPDM TERMINATION BAR, COUNTER FLASHING, AND SEALANT HAS BEEN INSTALLED TO PROVIDE DETAILING THAT PROMOTES DRAINAGE ONT THE ROOF. TYPICAL AT ALL LOCATIONS.

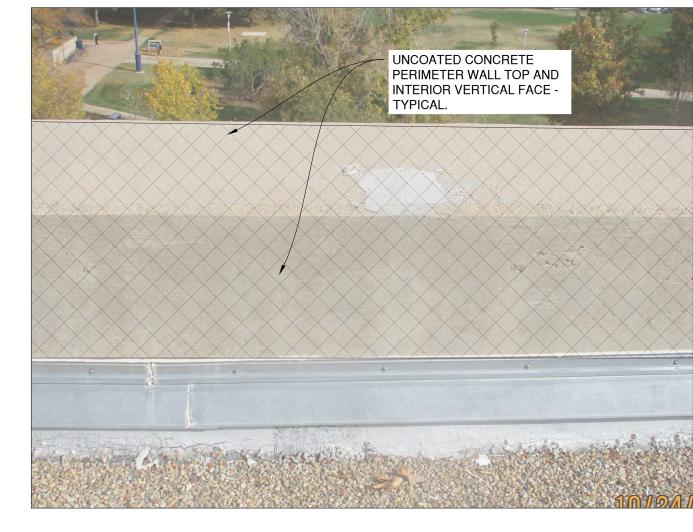
LEGEND:

(E) CONCRETE COATING AREAS (INCLUDING INTERIOR VERTICAL WALL FACES TO TOP OF (E) ROOF TERMINATION - NOT SHOWN) TO REMOVE COATING AND APPLY SILICONE COATING SYSTEM (ADDITIVE ALTERNATE #2).

(N) SILICONE COATING APPLIED AT EXPOSED CONCRETE PARAPET WALLS THAT ARE NOT CURRENTLY COATED (INCLUDING INTERIOR VERTICAL WALL FACES TO NEW ROOF TERMINATION - NOT SHOWN) (ADDITIVE ALTERNATE #3).



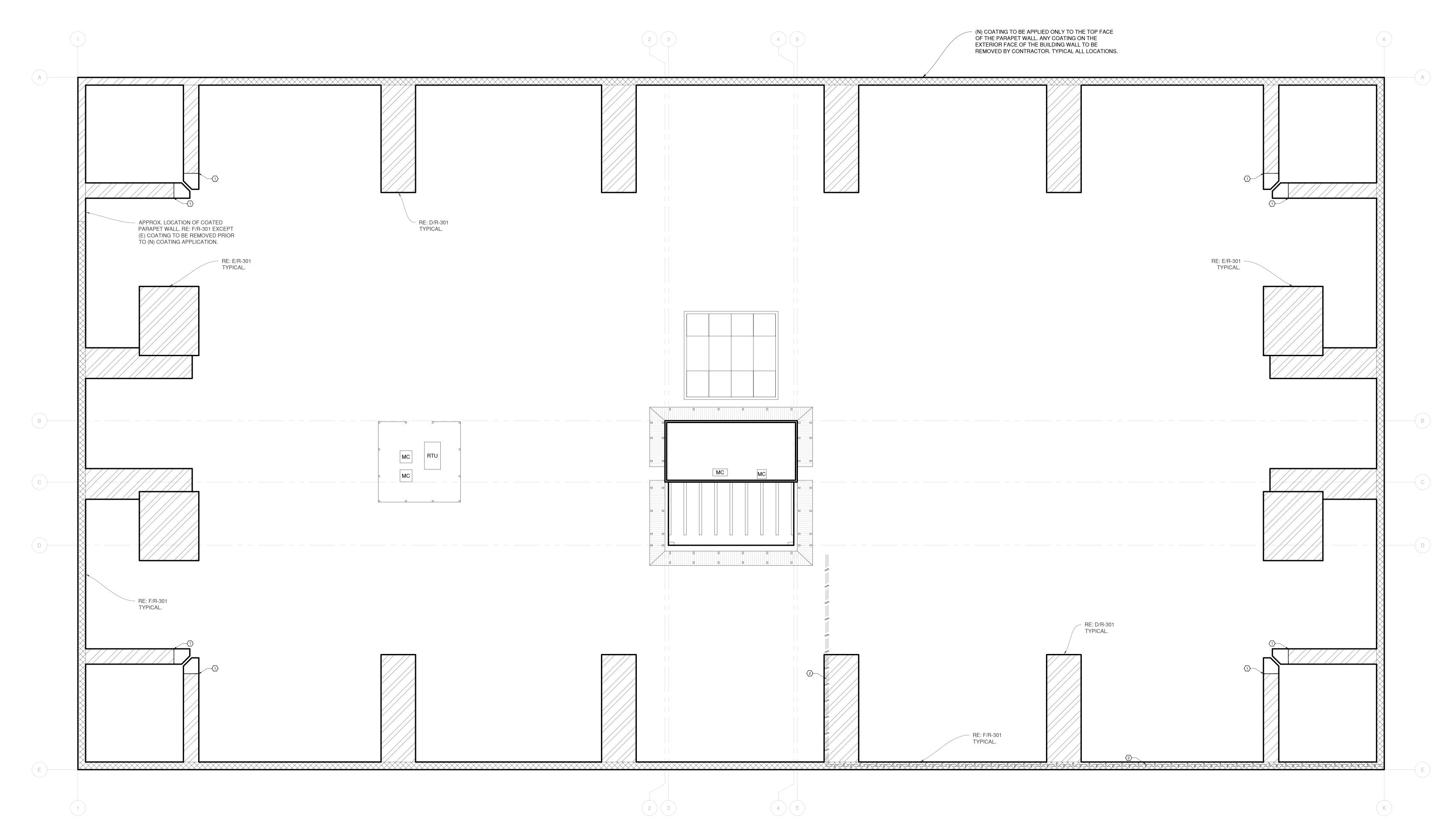




COATED CONCRETE CURB - TYPICAL NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

COATED CONCRETE LOUVER VENT CAP & CURB - TYPICAL NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

F UNCOATED PARAPET WALL - TYPICAL NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

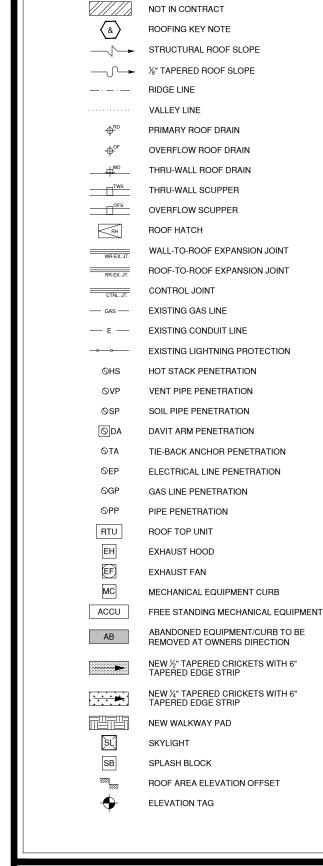


CONTRACTOR TO ENSURE ALL WORK AREAS ARE WATERTIGHT AND SECURE AT THE END OF THEIR WORK DAY. ANY DAMAGE CAUSED BY WEATHER OR OTHER ELEMENTS AS A RESULT OF UNFINISHED WORK WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL REPLACE/REPAIR ALL INTERIOR AND EXTERIOR DAMAGE, RESULTING FROM UNFINISHED/UNPROTECTED ROOF

ALL CONDITIONS OR PENETRATIONS MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS AND MEASUREMENTS.

BEEN REFERENCED OR INDICATED BY LEGEND, IT MAY NOT BE REFERENCED AGAIN ON THE DRAWINGS, BUT ITS USE SHALL BE TYPICAL. 4. GRID LINES ARE FOR REFERNCE ONLY.

CONSTRUCTION AT THEIR OWN EXPENSE. DETAIL CALL OUTS AND KEY NOTES MAY ONLY BE REFERENCED ONCE ON THE DRAWINGS. ONCE A PARTICULAR CALL OUT OR KEY NOTE HAS



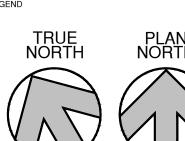
100% CONSTRUCTION DOCUMENTS

SECTION AND DETAIL REFERENCE

ROOFING DETAIL NUMBER

ROOFING PAGE NUMBER





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ROOF PLAN - CONCRETE COATING ALTERNATES #2 & #3

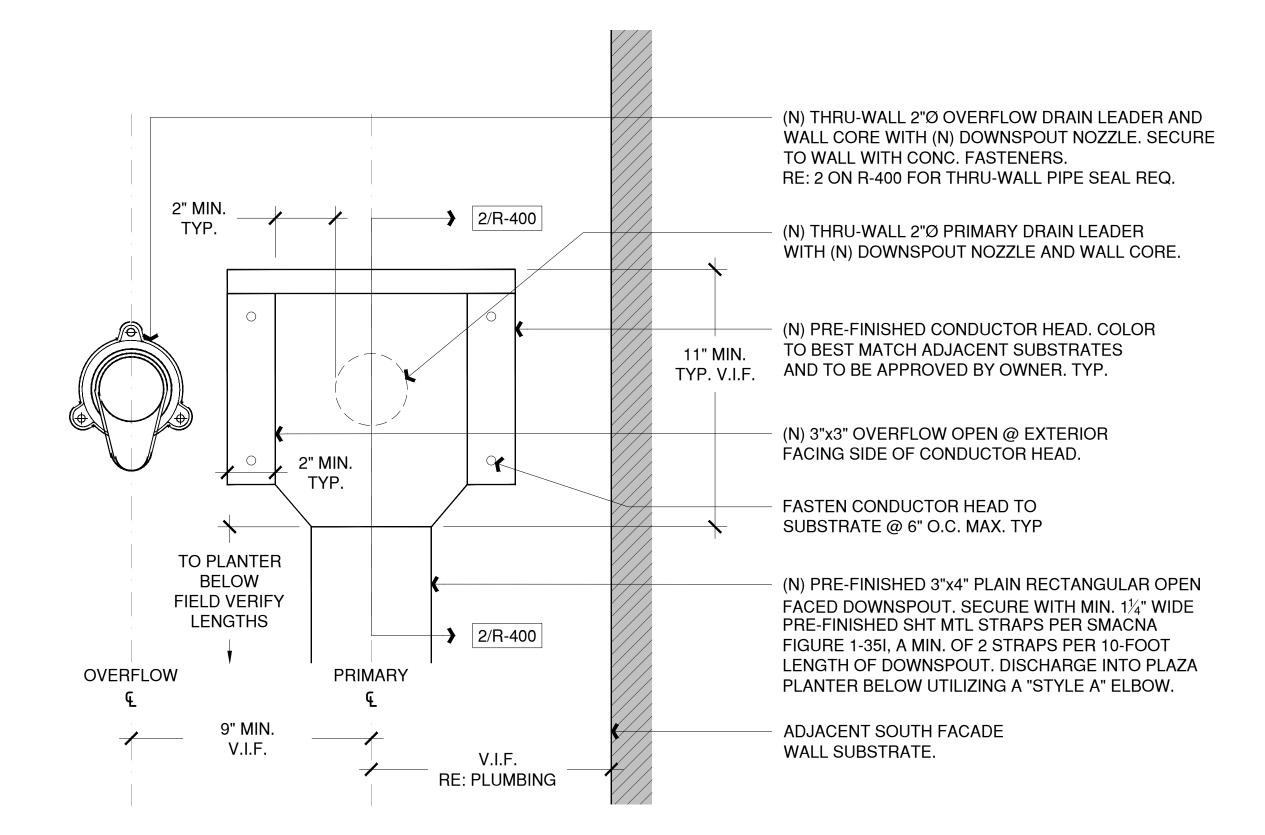
SHEET NO. R-301

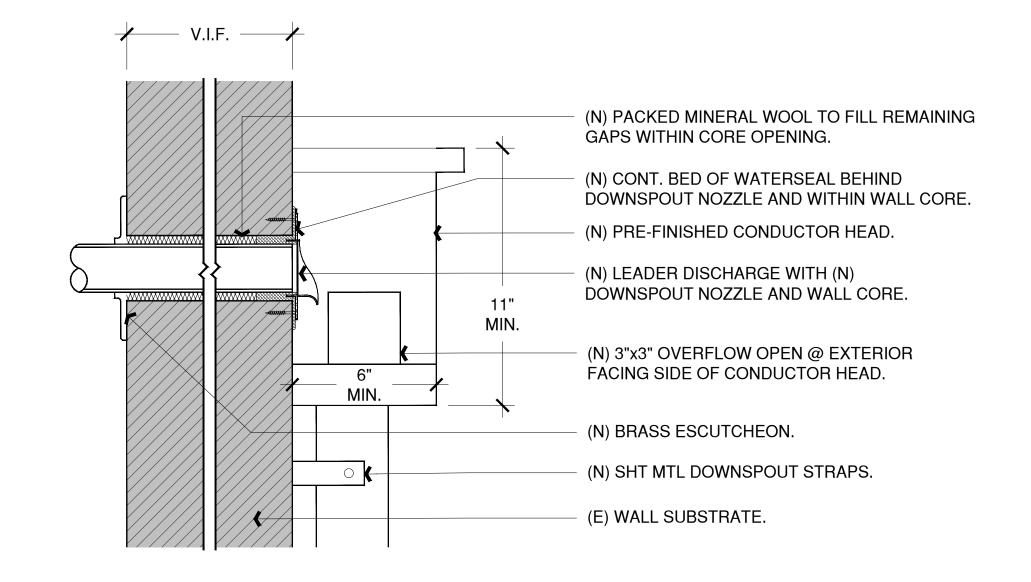
ROOF PLAN - CONCRETE COATING NOTES

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF ACCESS FOR PLUMBING MODIFICATIONS AT INTERIOR AREAS AND PROTECTION OF OWNER'S ASSETS (E.G. LIBRARY STACKS). ALL INTERIOR FINISHES TO BE RETURNED TO PRE-CONSTRUCTION CONDITION AS APPROVED BY UNC.
- 2. CONTRACTOR TO TAKE EXTREME CARE TO PROTECT ADJACENT CONSTRUCTION AND SYSTEMS (E.G. STRUCTURAL CONCRETE, GLAZING, MEP, FIRE AND LIFE SAFETY) DURING PLUMBING MODIFICATIONS AND INSTALLATION. ANY DAMAGE TO ADJACENT CONSTRUCTION SYSTEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AT NO ADDITIONAL COST TO THE OWNER.
- 3. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ALL INTERIOR FINISHES AT THE PLUMBING PIPE PENETRATIONS OF INTERIOR WALLS AND PLENUM SPACES INCLUDING BUT NOT LIMITED TO GYPSUM/PLASTER AND PAINT REPAIRS ONCE PLUMBING MODIFICATIONS HAVE BEEN COMPLETED..
- 4. REFER TO PROJECT SPECIFICATIONS FOR CONDUCTOR HEAD AND DOWNSPOUT MATERIALS AND INSTALLATION REQUIREMENTS.
- 5. NEW EXTERIOR WALL MOUNTED CONDUCTOR HEAD AND OPEN FACE DOWNSPOUTS TO BEST MATCH EXISTING ADJACENT METAL OR SUBSTRATE COLORS. ALL COLORS TO BE SELECTED AND APPROVED BY OWNER.
- 6. INSTALL NEW SPLASH BLOCKS PER SPECIFICATION REQUIREMENTS AT EXTERIOR DOWNSPOUT DISCHARGE LOCATIONS.
- 7. CONCRETE PENETRATION REQUIREMENTS:
- 7.1. LOCATE & AVOID ALL IMBEDDED CONCRETE STEEL REINFORCEMENT OR STRUCTURAL MEMBERS PRIOR TO ANY CUTTING OR CORING. NO FLOOR, WALL, OR FOUNDATION/GRADE BEAM PENETRATIONS MAY BE INSTALLED WITHOUT PRIOR REVIEW AND APPROVAL OF THE ENGINEER.
- 7.2. PROVIDE THE LOCATIONS OF THE PROPOSED PENETRATIONS TO THE ENGINEER TO REVIEW AND ASSESS WHETHER FURTHER STRUCTURAL EVALUATION IS REQUIRED.
- 7.3. PRIOR TO PENETRATING A FLOOR OR WALL, SCAN THE EXISTING STRUCTURE WITH A PACOMETER, GROUND PENETRATING RADAR (GPR) OR OTHER SUITABLE METHOD TO LOCATE EXISTING IMBEDDED CONCRETE STEEL REINFORCEMENT IN THE VICINITY OF THE PROPOSED OPENING. IDENTIFY THE PROPOSED LOCATION OF THE PENETRATION TO DETERMINE IF THE PROPOSED LOCATION IS ACCEPTABLE OR IF THE PENETRATION WILL NEED TO BE SHIFTED TO CLEAR CRITICAL REINFORCING OR STRUCTURAL MEMBERS.
- 7.4. THE CUTTING OF ANY EXISTING REINFORCEMENT IS NOT ACCEPTABLE WITHOUT REVIEW AND APPROVAL BY A STRUCTURAL ENGINEER. INDISCRIMINATELY CUTTING THROUGH REINFORCING TO INSTALL PENETRATIONS WITHOUT PRIOR STRUCTURAL CONSIDERATION IS NOT ACCEPTABLE AS IT COULD CAUSE STRUCTURAL FAILURE OF THE FLOOR, ROOF OR WALL.
- 8. VERIFY NEW ROOF DRAINS AND DRAIN PIPING ARE CLEAR OF DEBRIS, OPEN AND FUNCTIONAL, THAT PIPING IS PROPERLY CONNECTED AND SEALED TO DRAIN BOWLS AND ALL DRAIN COMPONENTS ARE IN SERVICEABLE CONDITION.
- 9. ALL NEW ROOF DRAINS ARE TO BE WATER TESTED FOR POTENTIAL LEAKS/BLOCKAGES AFTER INSTALLATION. ALL FINDINGS SHALL BE DOCUMENTED AND REPORTED TO THE OWNER AND OWNER'S CONSULTANT. ANY LEAKS/BLOCKAGES WILL FALL UNDER THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY PARTS AS NECESSARY AT NO EXPENSE TO THE OWNER. RE: PLUMBING.



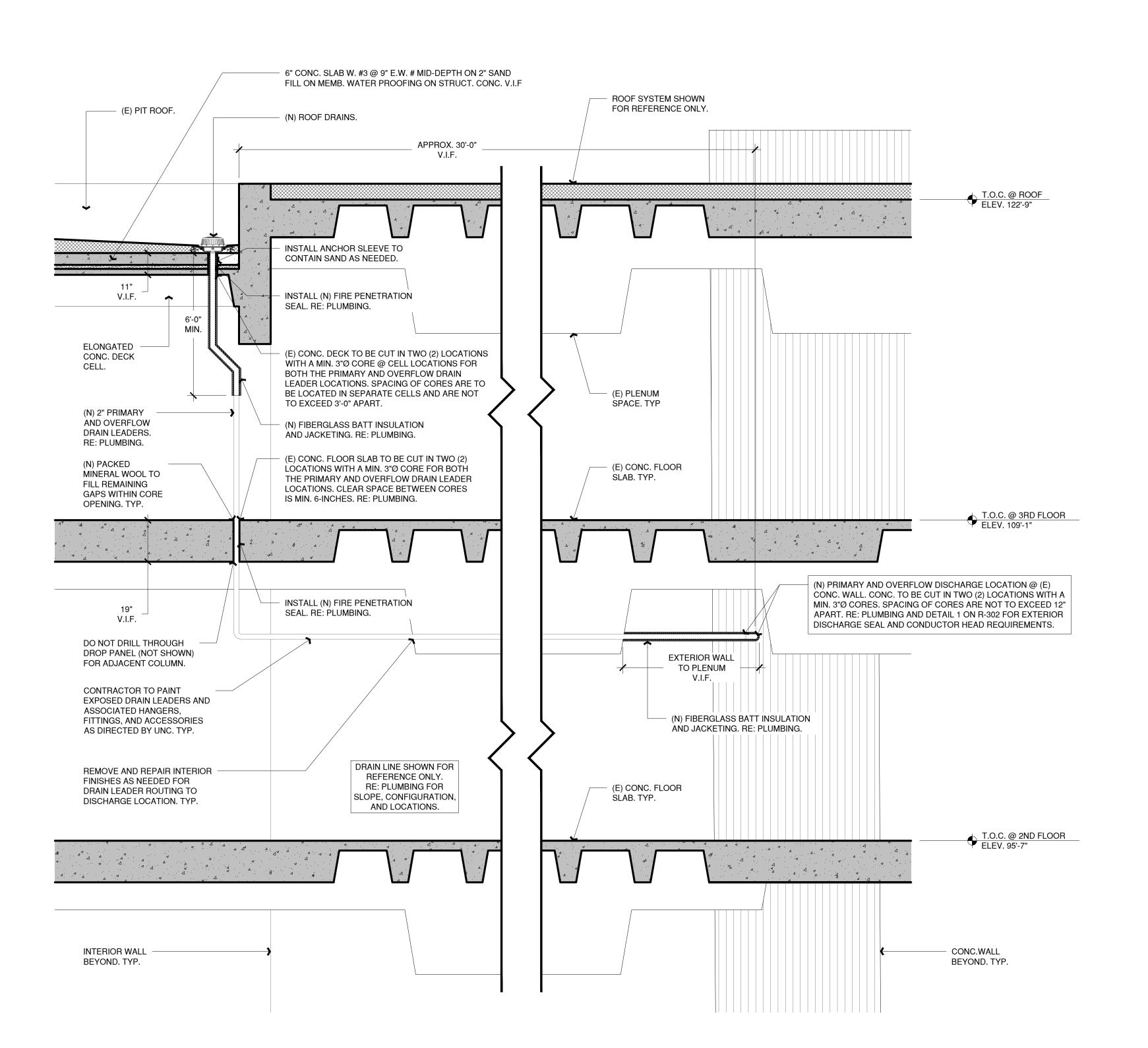


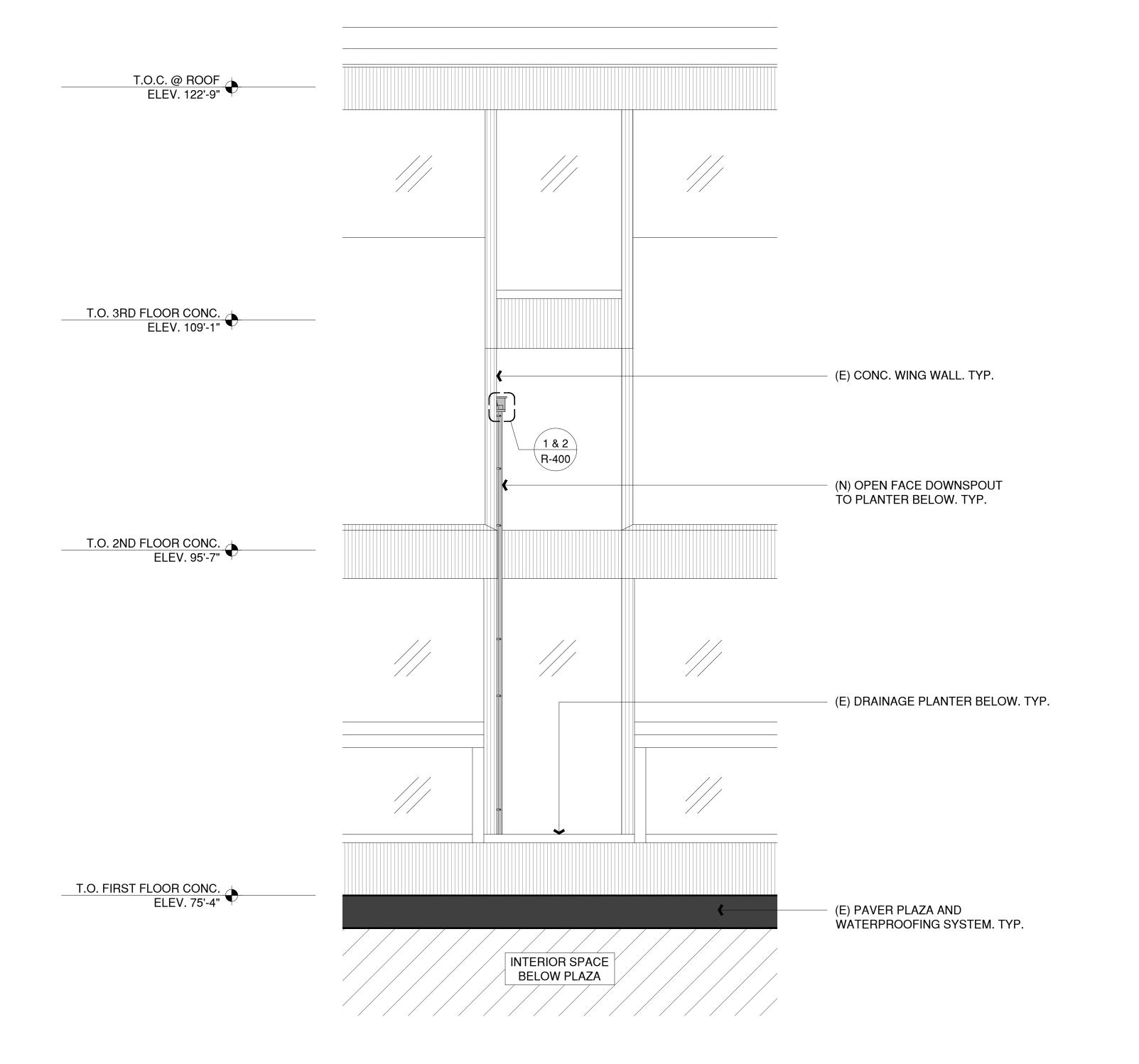
EXTERIOR WALL MOUNTED CONDUCTOR HEAD AND LAMBS TONGUE @ NEW PIT DRAIN DISCHARGE LOCATION

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)





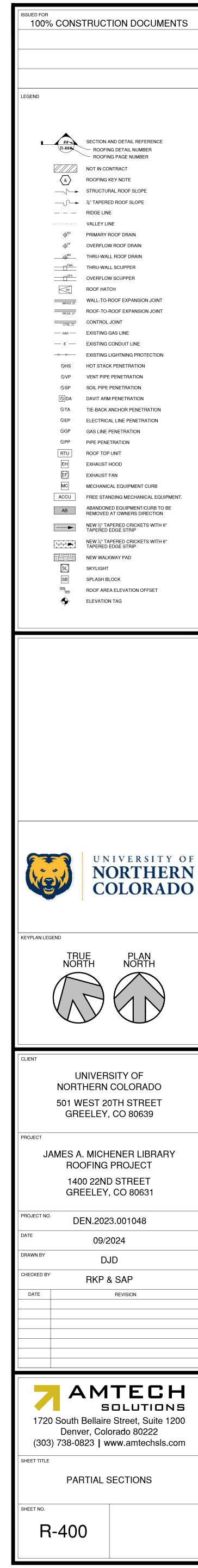
PARTIAL SOUTH ELEVATION @ NEW DOWNSPOUT NOZZLE, OVERFLOW, AND DOWNSPOUT LOCATION

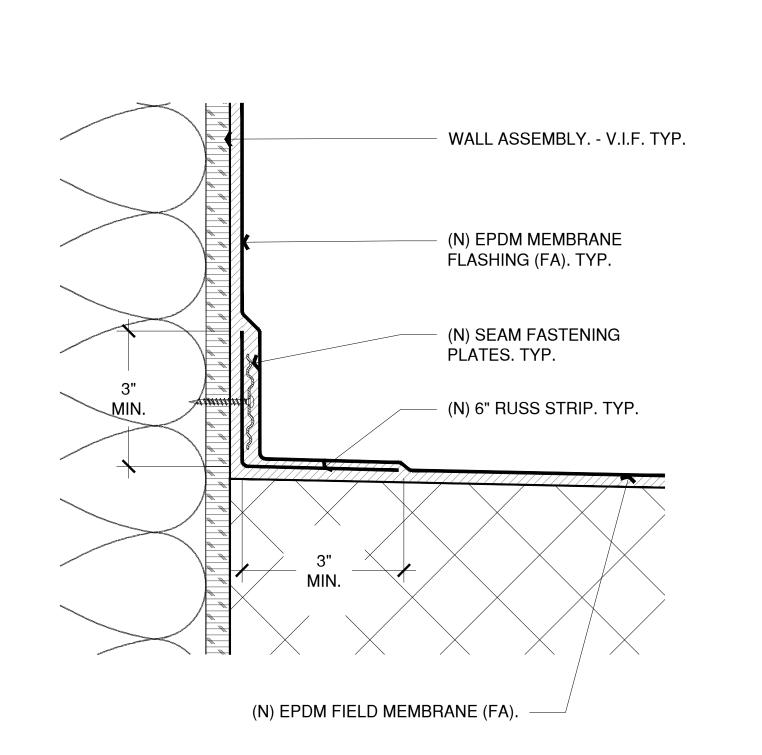


NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



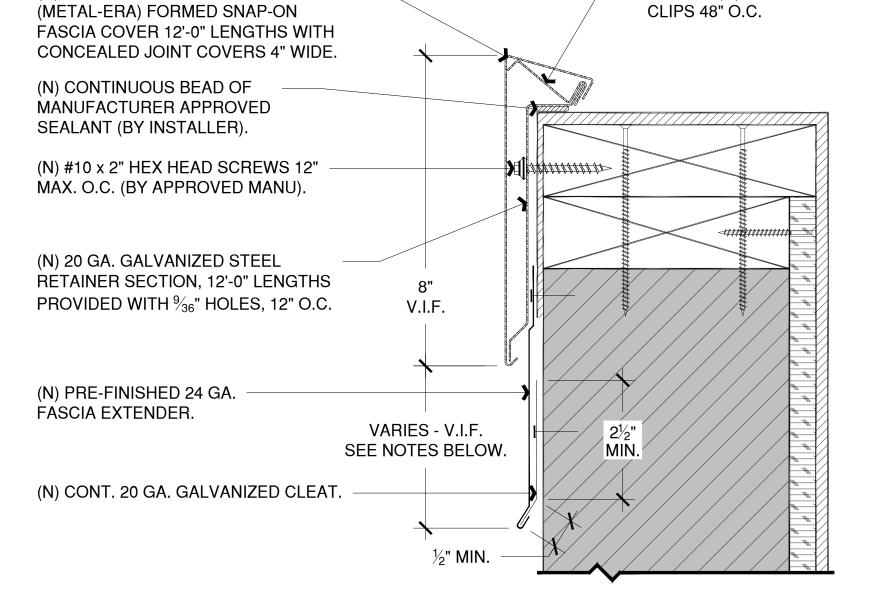
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EPDM BASE FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



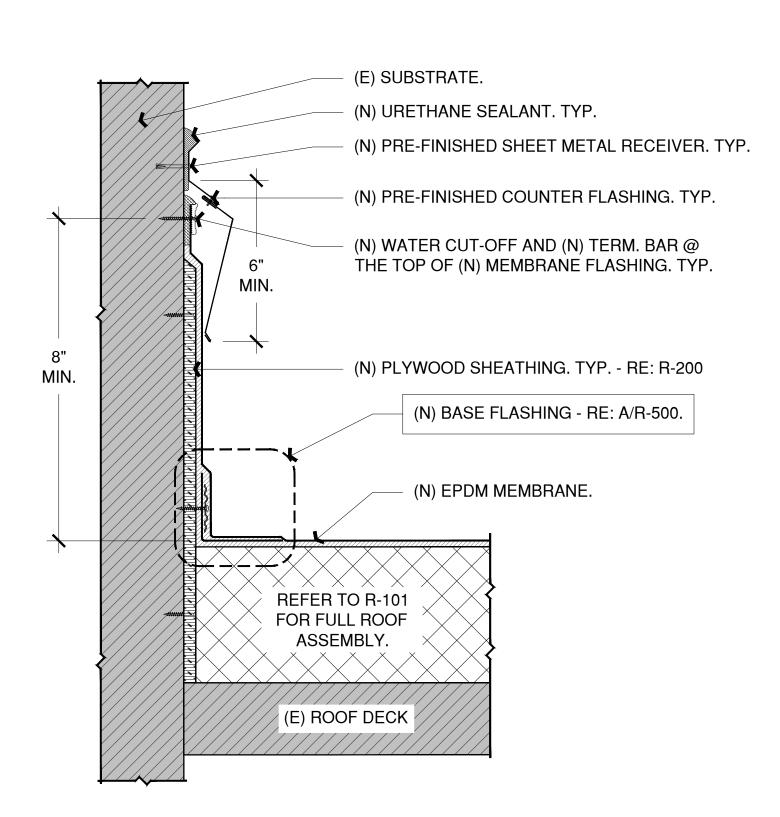
(N) PRE-MANUFACTURED 24 GA.

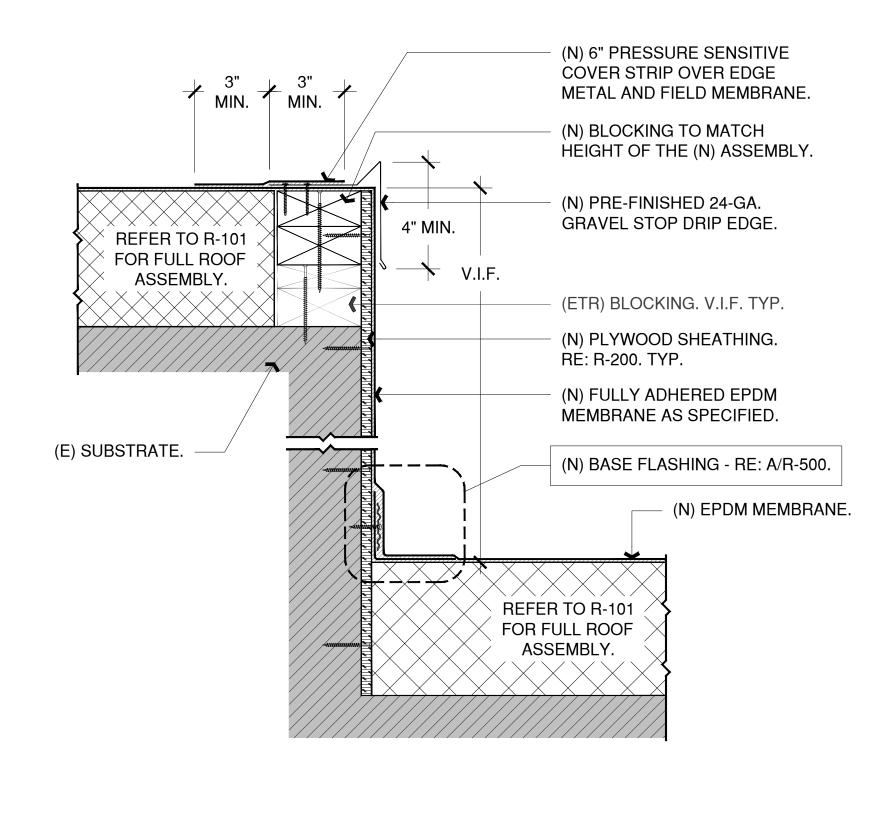
- ADDITIONAL FASCIA EXTENDER PIECES MAY BE NECESSARY TO COVER EXISTING PAINT/SUN LINES AND/OR THE BOTTOM NAILER.
- ADDITIONAL PIECES THAT NEED TO EXCEED 8" IN HEIGHT ARE TO UTILIZE A MINIMUM $\frac{1}{2}$ " x $\frac{1}{2}$ " HALF-DIAMOND BREAK AT THE MID POINT. CREATE EXTENDED FASCIA METALS WITH EQUAL SPACING BETWEEN MULTIPLE TIERS AND/OR BREAKS.



INSTALL (N) SPRING

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



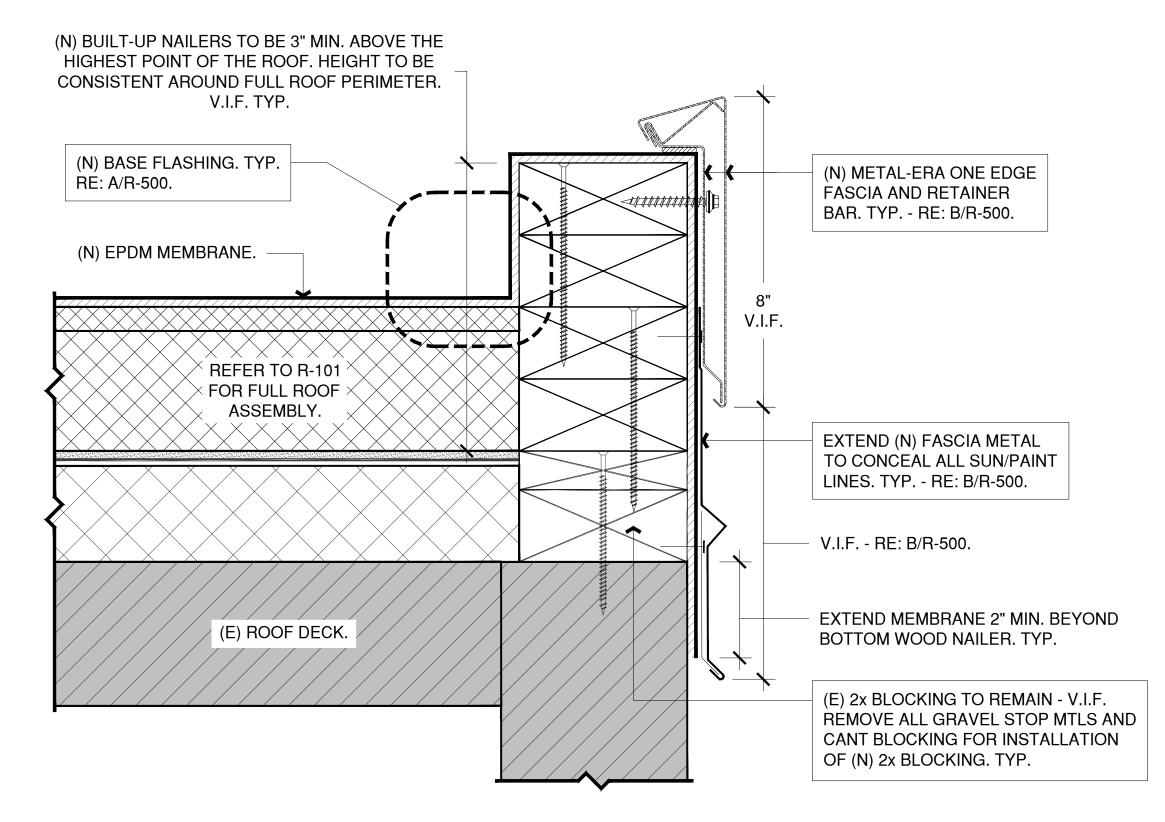


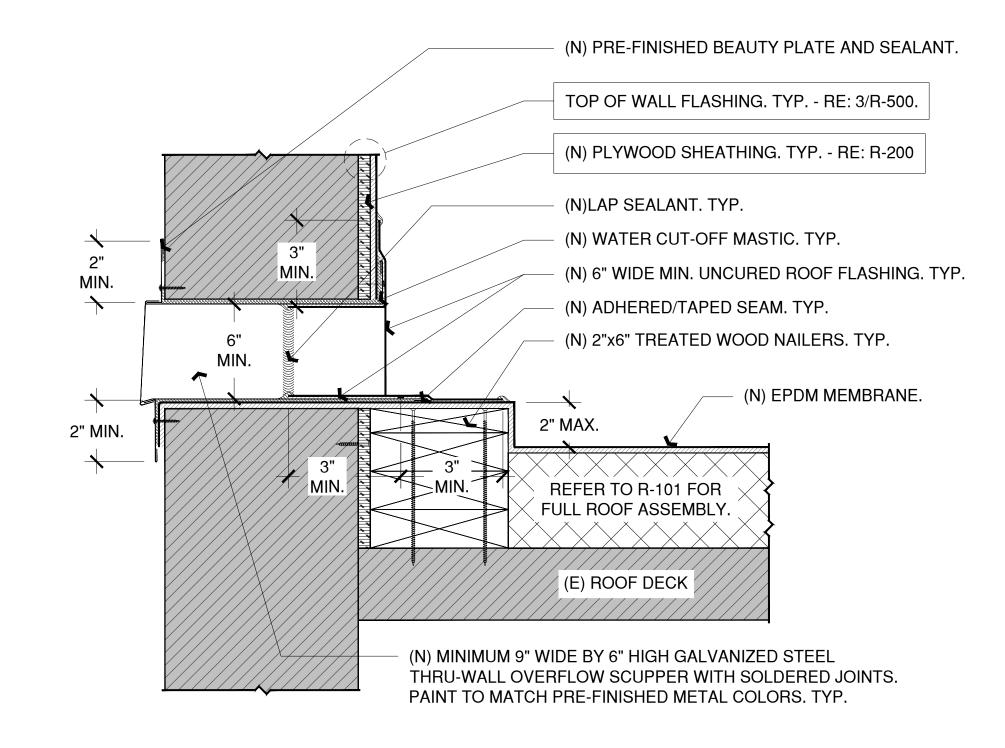
SURFACE MOUNTED COUNTER FLASHING (TYPICAL)

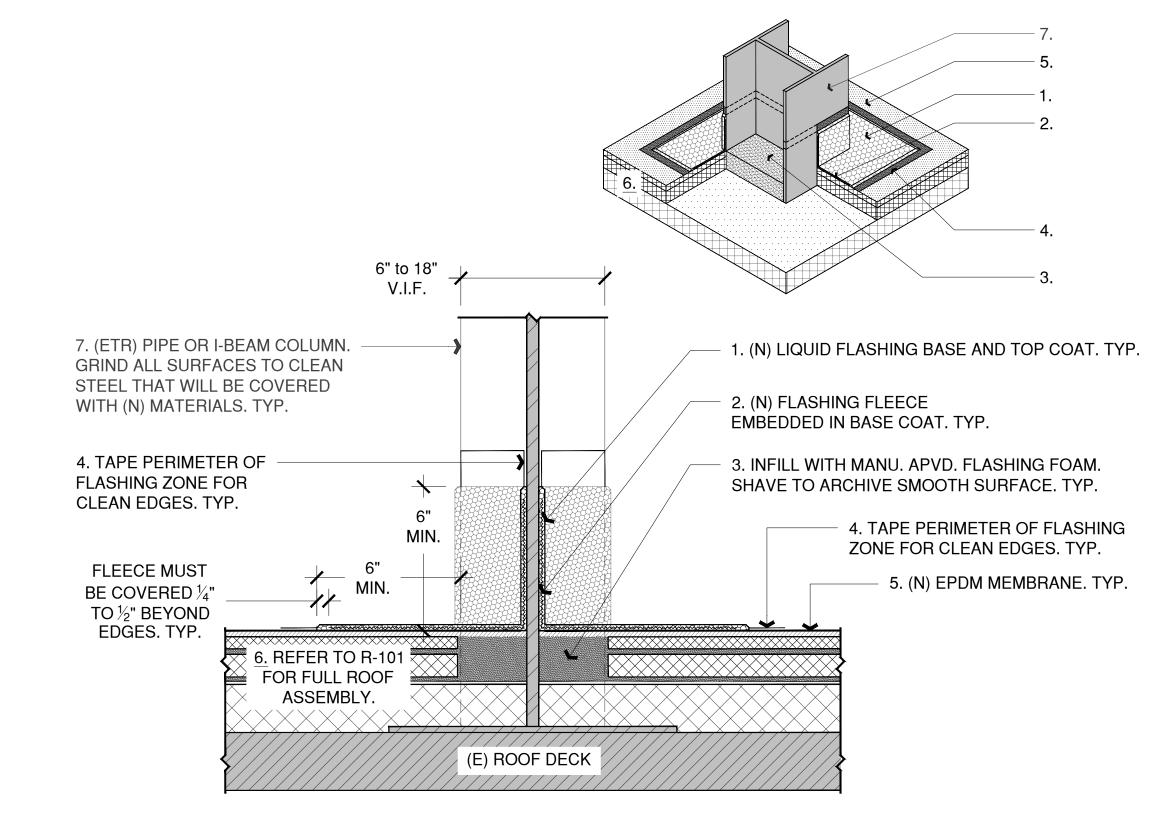
NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)





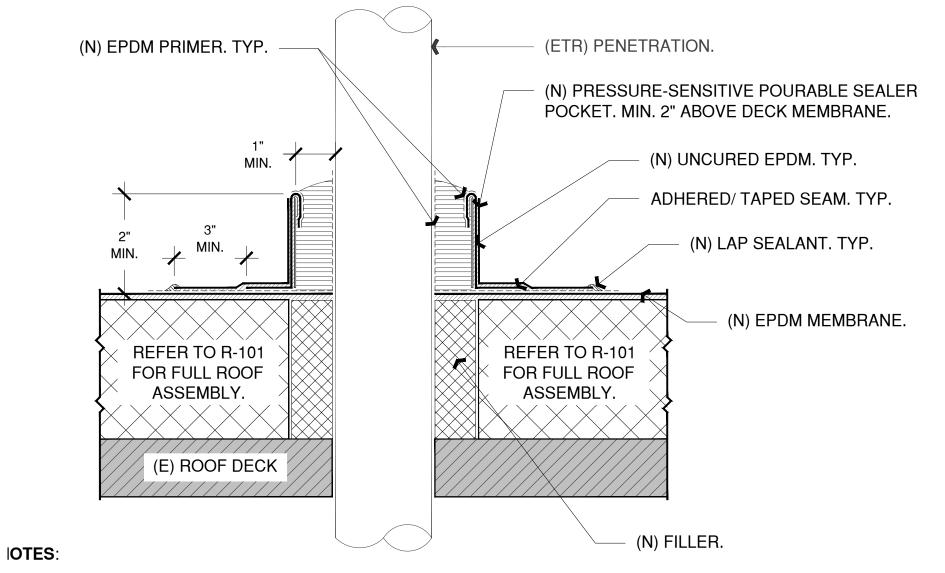


PENTHOUSE EDGE METAL FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

OVERFLOW SCUPPER FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



USE THIS DETAIL WHEN THE TYPICAL PENETRATION FLASHING DETAIL REQUIRING 8" MIN. VERTICAL FLASHING THE MAXIMUM ALLOWABLE SURFACE TEMPERATURE OF THE PENETRATION SHALL NOT EXCEED 180° F (82° C). ALL DEBRIS (PAINT, RUST, LEAD, OTHER FLASHINGS, ETC.) MUST BE REMOVED FROM THE PENETRATION.

PRIOR TO APPLYING POURABLE SEALER. POURABLE SEALER MUST COMPLETELY FILL POURABLE SEALER POCKET TO PREVENT PONDING OF WATER. POURABLE SEALER MUST CONTACT PRIMED PRESSURE-SENSITIVE ELASTOFORM FLASHING AND DECK MEMBRANE.

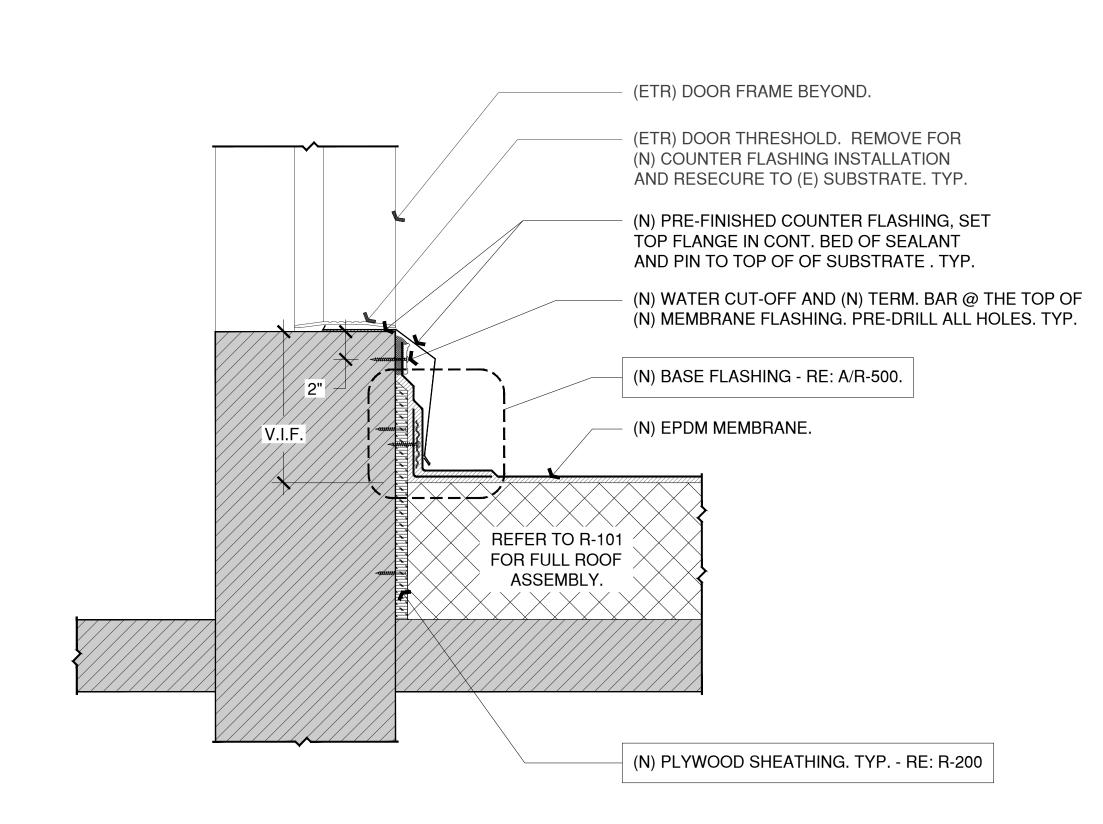
PENETRATIONS, MEMBRANE, FLASHING AND METAL, (INSIDE POCKET) MUST BE PRIMED WITH EPDM PRIMER

POURABLE SEALER FLASHING (TYPICAL)

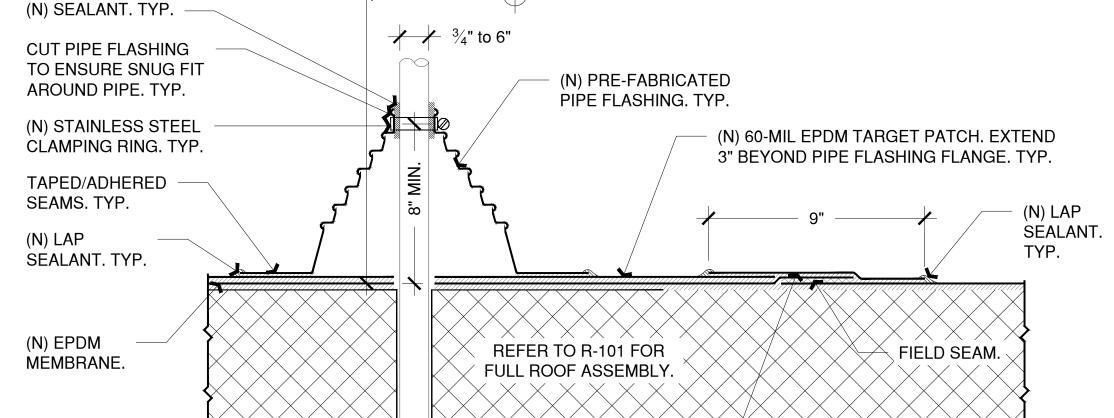
NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

LIQUID REINFORCED FIELD PENETRATION FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

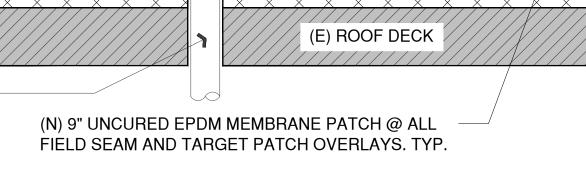






1. (N) 60-MIL TARGET PATCH MUST BE INSTALLED @ ALL PRE-FABRICATED PIPE PENETRATION LOCATIONS. TYP.

↑ 12"MIN. CUT OFF IF REQUIRED



PRE-MOLDED PENETRATION FLASHING (TYPICAL) 6 NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

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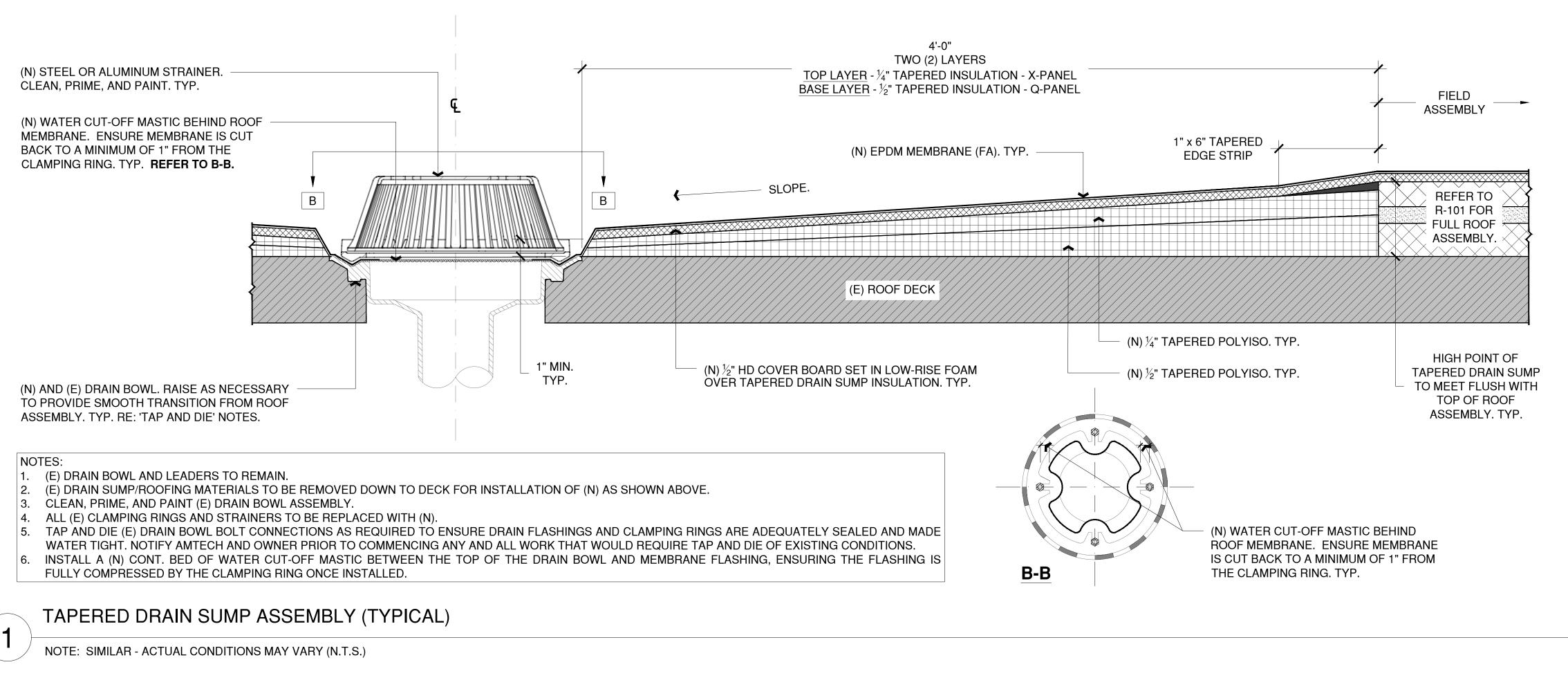
PROJECT NO. DEN.2023.001048 09/2024 DJD CHECKED BY RKP & SAP REVISION

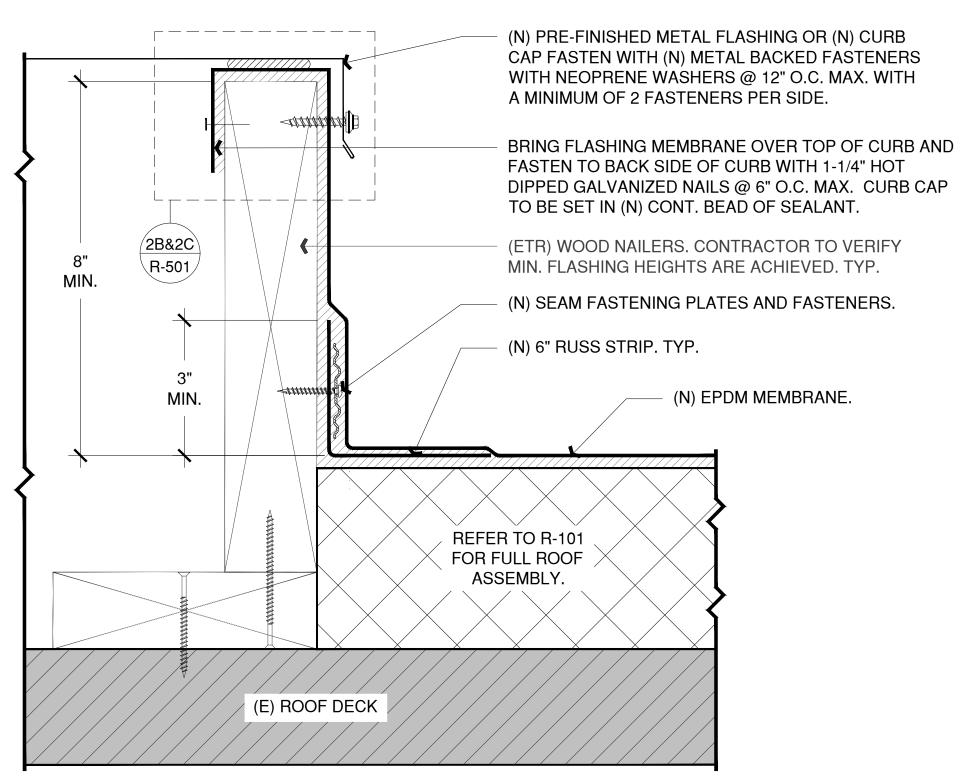
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R-500

PLOT SCALE IS 30x42

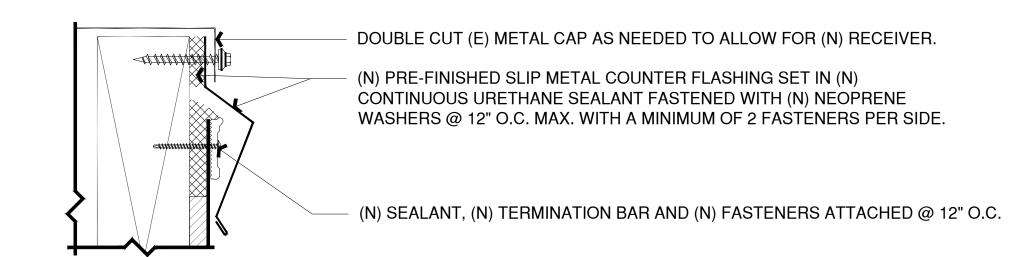
(ETR) PENETRATION.





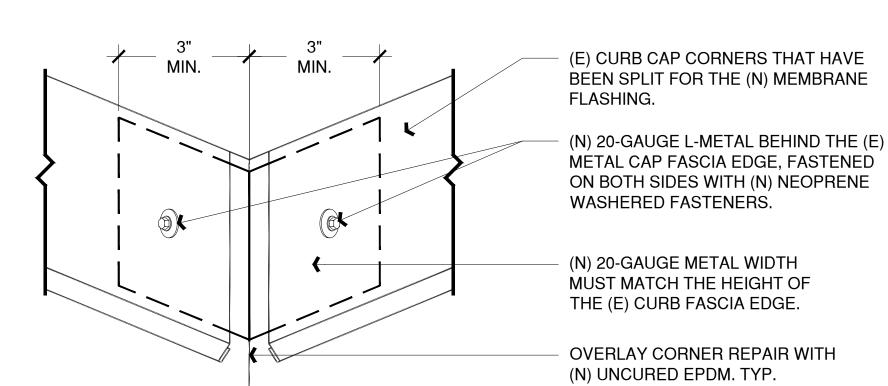
MECHANICAL CURB FLASHING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



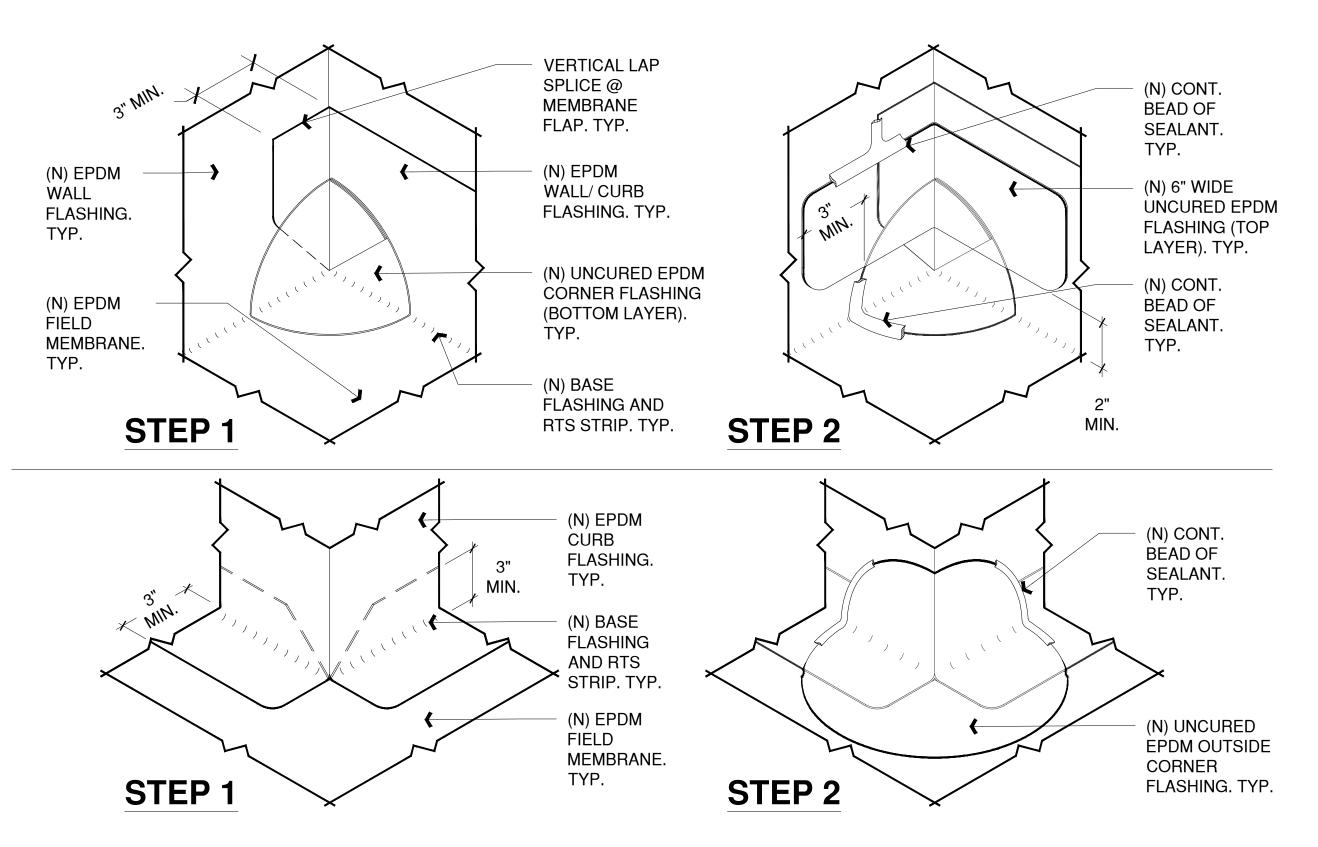
ALTERNATE CURB FLASHING

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



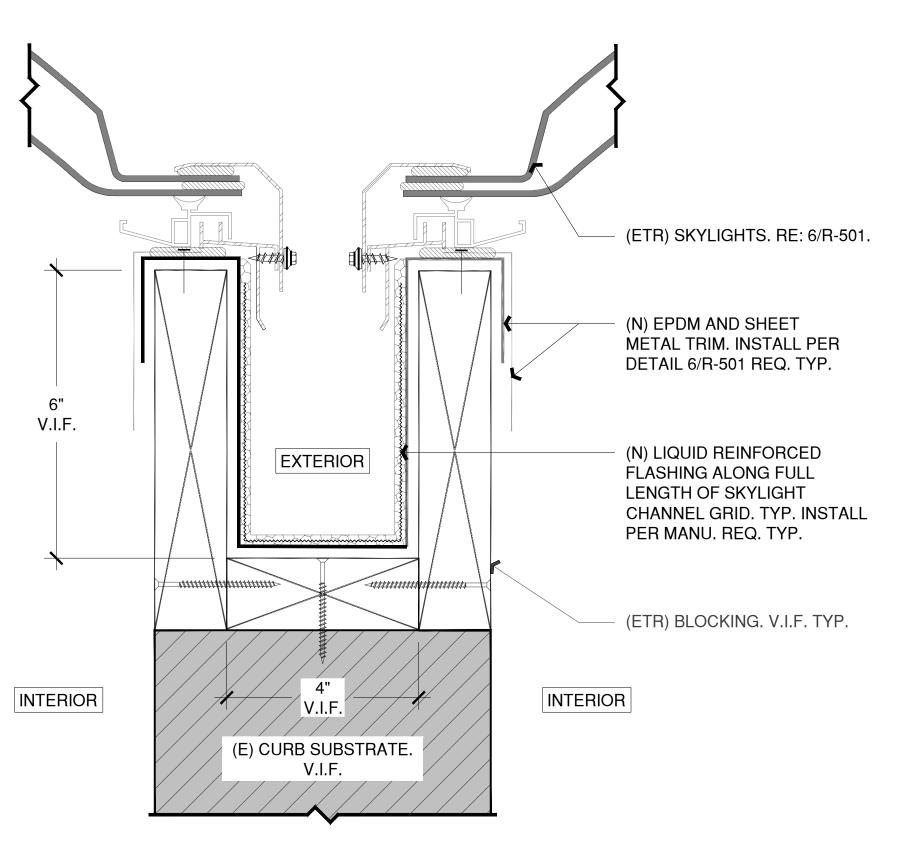
EXISTING CURB CAP CORNER REPAIR (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



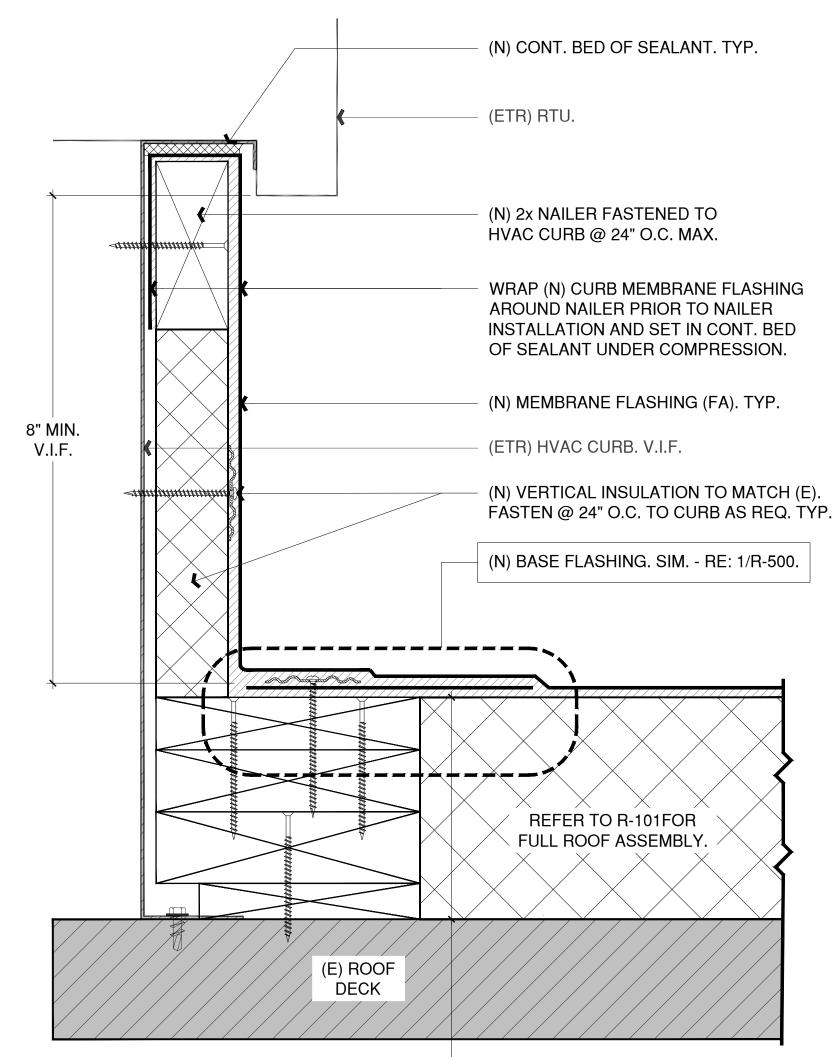
EPDM INSIDE AND OUTSIDE CORNER DETAILING (TYPICAL)

NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)



SKYLIGHT CHANNEL GRID FLASHING (TYPICAL) NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

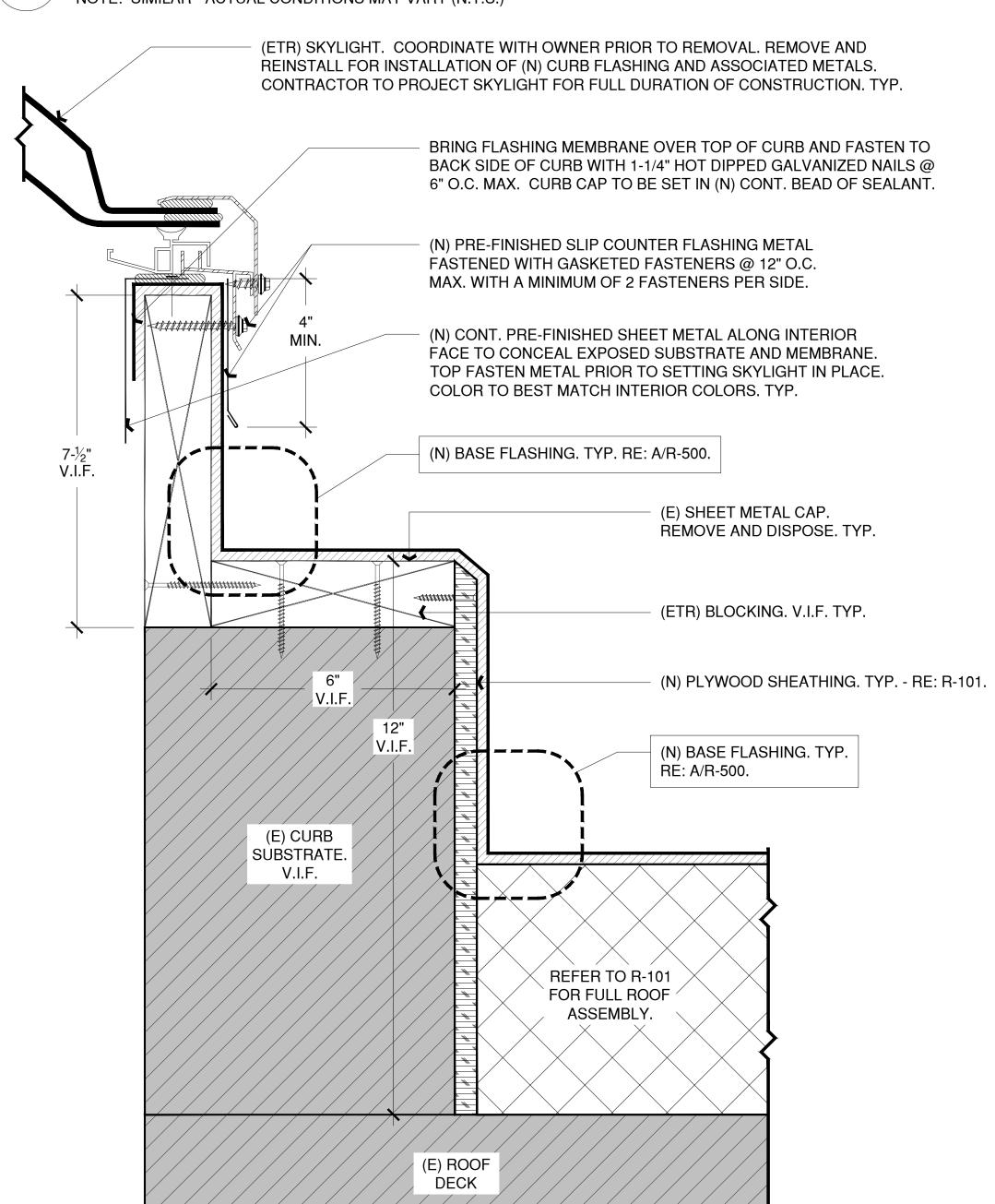
SKYLIGHT CURB FLASHING (TYPICAL) NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)

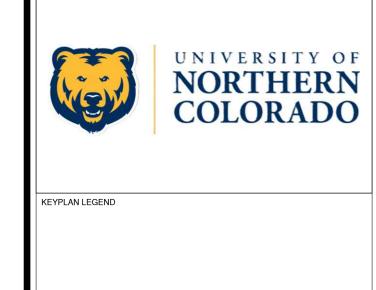


(N) BUILT-UP NAILERS TO MATCH HEIGHT OF THE (N) ROOF ASSEMBLY.



NOTE: SIMILAR - ACTUAL CONDITIONS MAY VARY (N.T.S.)





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R-501

PLOT SCALE IS 30x42