

NOTICE TO CONTRACTOR  
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED  
Limited building only review  
Permit holder responsible for full compliance with the code

02/24/2021



# BETCO

## MY STORAGE UNIT LILLINGTON, NORTH CAROLINA

### SUBMITTED TO :

MY STORAGE UNIT, LLC.  
ATTN: JOE GARDNER  
116 TYSINGER ROAD  
LILLINGTON, NORTH CAROLINA 27546  
PHONE: (910) 891-9600

**WIND LOAD DESIGN DATA:**  
ULTIMATE DESIGN WIND SPEED ( $V_{ULT}$ ): 110 MPH  
NOMINAL DESIGN WIND SPEED ( $V_{ASD}$ ): 86 MPH  
RISK CATEGORY: I  
WIND EXPOSURE: B  
INTERNAL PRESSURE COEFFICIENT:  $\pm 0.18$

**SNOW LOAD DESIGN DATA:**  
GROUND SNOW LOAD ( $P_g$ ): 15 PSF  
FLAT-ROOF SNOW LOAD ( $P_f$ ): 12.1 PSF  
SNOW EXPOSURE FACTOR ( $C_e$ ): 1.2  
SNOW LOAD IMPORTANCE FACTOR ( $I$ ): 0.8  
THERMAL FACTOR ( $C_t$ ): 1.2

**EARTHQUAKE LOAD DESIGN DATA:**  
- RISK CATEGORY: I  
- SEISMIC IMPORTANCE FACTOR ( $I$ ): 1.0  
- SEISMIC DESIGN CATEGORY: C  
- ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE (ASCE 7-10 SECTION 12.8)  
- BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT FRAMED WALLS WITH STEEL SHEAR PANELS  
- SITE CLASS: D  
- DESIGN BASE SHEAR: BUILDING "1": 0.700K  
BUILDING "2": 0.364K  
- RESPONSE MODIFICATION FACTOR ( $R$ ): 7.0  
- SEISMIC RESPONSE COEFFICIENT ( $C_s$ ): 0.028  
- MAPPED SPECTRAL RESPONSE ACCELERATION ( $S_g$ ): 18.3% G  
( $S_1$ ): 8.6% G  
- SPECTRAL RESPONSE COEFFICIENTS ( $S_{m1}$ ): 19.5% G  
( $S_{m2}$ ): 13.8% G

### BUILDING DATA :

**BUILDING DESCRIPTION :**  
SINGLE STORY METAL BUILDINGS BOLTED TO CONCRETE SLAB FOUNDATIONS.

**BUILDING SIZE :**  
BUILDING "1" 20' x 250' = 5,000 sq. ft. 8'-6" EAVE HEIGHT  
BUILDING "2" 20' x 130' = 2,600 sq. ft. 8'-6" EAVE HEIGHT  
TOTAL = 7,600 sq. ft.

**PARKING DATA :**  
SEE SITE PLAN BY OTHERS

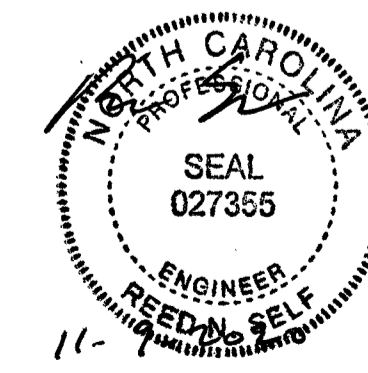
**BUILDING CODE :**  
THE 2018 NORTH CAROLINA BUILDING CODE

**DESIGN CRITERIA :**  
THESE BUILDINGS HAVE BEEN DESIGNED TO CONFORM TO THE STRUCTURAL REQUIREMENTS OF THE 2018 NORTH CAROLINA BUILDING CODE, WITH CURRENT REVISIONS.  
THESE BUILDINGS HAVE BEEN DESIGNED FOR THE FOLLOWING LIVE LOADINGS IN ADDITION TO THE DEAD LOADINGS :

ROOF LIVE LOADING : 20 psf  
FLOOR LIVE LOADING: 125 psf  
USE GROUP: S-1  
TYPE OF CONSTRUCTION: II-B

IT IS THE RESPONSIBILITY OF THE BUYER/OWNER TO VERIFY THE FIREWALL, LIVE LOAD AND WIND LOAD REQUIREMENTS WITH THE LOCAL CODE AUTHORITY.

PROJECT NUMBER :  
NC20251



NOTE: DETAIL LABELS CONTAINED WITHIN THIS SET OF PLANS MAY REFERENCE THE ERECTION DRAWINGS MARKED IN THIS SCHEDULE.  
EXAMPLE: DETAIL A/900 REFERS TO DETAIL "A" LOCATED ON ERC900X

ERECTION DRAWINGS				
ERC010X	ERC200X	ERC420X	ERC619X	ERC752X
ERC016X	ERC201X	ERC500X	ERC620X	ERC753X
ERC100X	ERC202X	ERC505X	ERC621X	ERC754X
ERC105X	ERC203X	ERC506X	ERC622X	ERC800X
ERC106X	ERC204X	ERC515X	ERC623X	ERC900X
ERC110X	ERC206X	ERC600X	ERC624X	ERC901X
ERC112X	ERC207X	ERC601X	ERC625X	ERC902X
ERC115X	ERC208X	ERC602X	ERC626X	ERC903X
ERC120X	ERC209X	ERC603X	ERC630X	ERC904X
ERC130X	ERC250X	ERC604X	ERC631X	ERC905X
ERC150X	ERC250XFHP	ERC605X	ERC652X	ERC907X
ERC151X	ERC251X	ERC606X	ERC700X	ERC908X
ERC152X	ERC251XFHP	ERC607X	ERC710X	ERC910X
ERC153X	ERC252X	ERC608X	ERC711X	ERC911X
ERC154X	ERC251XFHP	ERC609X	ERC712X	ERC912X
ERC155X	ERC253X	ERC610X	ERC713X	ERC913X
ERC175X	ERC254X	ERC611X	ERC720X	ERC914X
ERC176X	ERC255X	ERC612X	ERC725X	ERC915X
ERC177X	ERC256X	ERC613X	ERC730X	ERC916X
ERC178X	ERC257X	ERC614X	ERC731X	ERC917X
ERC179X	ERC258X	ERC615X	ERC731XFHP	ERC918X
ERC180X	ERC302X	ERC616X	ERC732X	ERC919X
ERC181X	ERC302X(IN)	ERC617X	ERC732XFHP	
ERC182X	ERC410XFL	ERC618X	ERC750X	
ERC183X	ERC411X	ERC618XALT	ERC751X	

SCHEDULE OF DRAWINGS	
DRAWING NO.	DESCRIPTION
CS1	COVER SHEET
CS2	BUILDING NOTES
CS3	APPENDIX B
S1	ELEVATIONS & NOTES
S2	FLOOR PLAN, CROSS SECTION, & NOTES
S3	FLOOR PLAN, DETAILS & NOTES
F1	FOUNDATION PLAN, DETAILS & NOTES
F2	FOUNDATION PLAN, DETAILS & NOTES

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228 Commerce Blvd.  
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Limited Engineering License # D-0140

**GENERAL NOTES:**

1. CONCRETE FOUNDATIONS AND FLOOR SLABS ARE TO BE SUPPLIED AND INSTALLED BY OTHERS. WEDGE ANCHORS FOR INTERIOR AND EXTERIOR FOOTINGS SUPPLIED AND INSTALLED BY BETCO.
2. EXTERIOR OPENINGS, NOT DESIGNATED AS DOOR LOCATIONS, TO BE COMPLETED USING EXTERIOR WALL PANELS FURNISHED BY BETCO.
3. USE DOW 191 SILICONE CAULK AND 1/2" WIDE BUTYL RUBBER TAPE SEALANT FOR ROOF INSTALLATION. USE DOW 199 SILICONE CAULK AT DOWNSPOUT TO GUTTER JOINT.
4. INTERIOR PARTITIONS PERPENDICULAR TO ROOF BEAMS MUST BE COMPLETED BEFORE ROOF PANELS ARE INSTALLED. USE PARTITION FRAMING TO PLUMB AND SQUARE COLUMNS AND HEADER SECTIONS. CHECK BUILDING WIDTH AT TOP OF COLUMNS PRIOR TO ROOF INSTALLATION.
5. THOROUGHLY SUEEP ROOF PANELS FOLLOWING INSTALLATION TO REMOVE METAL DRILLINGS.
6. THIS DESIGN IS BASED ON USING ONLY METAL BUILDING COMPONENTS WHICH ARE PROPRIETARY TO BETCO. FURTHER, THE PROFESSIONAL ENGINEER'S SEAL IS INVALID UNLESS ONLY BETCO METAL BUILDING COMPONENTS ARE UTILIZED.
7. METAL STUDS (IF APPLICABLE) MAY REQUIRE FIELD CUTTING DEPENDING UPON THE EAVE HEIGHT OF THE STRUCTURE.
8. UNIT SIZES SHOWN ARE NOMINAL. ACTUAL CLEAR DIMENSIONS INSIDE UNITS MAY VARY ACCORDING TO FINAL DESIGN OF COMPONENTS.
9. THESE DRAWINGS ARE THE PROPERTY OF BETCO, INC. AND MAY NOT BE USED OR REPRODUCED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN CONSENT OF BETCO, INC.
10. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.
11. THE GENERAL CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL SLEEVES, PADS, DEPRESSIONS, OPENINGS, ETC. AS REQUIRED BY THE VARIOUS TRADES.

**FOUNDATIONS:**

1. THE FOUNDATION DESIGN IS BASED ON A PRESUMED ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF. NOTIFY ENGINEER IF SITE CONDITIONS DIFFER FROM DESIGN ASSUMPTIONS SPECIFIED.
2. IF FOOTING ELEVATIONS SHOWN OCCUR IN A DISTURBED, UNSTABLE OR UNSUITABLE SOIL, THE ENGINEER SHALL BE NOTIFIED.
3. TOP OF FOOTING ELEVATIONS ARE SHOWN ON THE DRAWINGS ARE TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD IN ACCORDANCE WITH THE GUIDE LINES SET FORTH IN THE DRAWINGS AND SPECIFICATIONS.
4. FILL MATERIAL SHALL BE FREE OF ROOTS, WOOD OR OTHER ORGANIC MATERIAL AND COMPLY WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT. MATERIALS USED FOR FILL UNDER FOOTINGS AND WITHIN BUILDING LIMITS SHALL BE TESTED AND APPROVED FOR THE USE BY THE GEOTECHNICAL TESTING AGENCY.
5. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.
6. FOUNDATION WALLS RETAINING EARTH SHALL BE BRACED AGAINST BACK FILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE.
7. FOUNDATION WALLS OR GRADE BEAMS HAVING EARTH PLACED ON EACH SIDE SHALL HAVE BOTH FILLED SIMULTANEOUSLY TO MAINTAIN A COMMON ELEVATION.
8. DO NOT PLACE CONCRETE IN ANY EXCAVATION CONTAINING ICE, FROST, FROZEN GROUND OR FREE WATER. FROZEN SUB GRADES MUST BE THAWED AND RECOMPACTED PRIOR TO PLACING CONCRETE.
9. EARTH FORMED FOOTINGS SHALL CONFORM TO THE SHAPE, LINES, AND DIMENSIONS AS SHOWN ON THE FOUNDATION PLAN. ALL WATER SHALL BE REMOVED BEFORE DEPOSITING CONCRETE.
10. BEFORE PLACING CONCRETE, ALL EMBEDDED ITEMS SHALL BE PROPERLY LOCATED, ACCURATELY POSITIONED, AND MAINTAINED SECURELY IN PLACE.
11. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION, AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
12. PERIMETER FOUNDATION MUST NOT EXCEED 1/4" ELEVATION VARIATION ALONG ANY 50' DISTANCE OF BUILDING LENGTH.
13. PERIMETER FOUNDATION TO EXTEND BELOW FROST LINE. VERIFY REQUIRED DEPTH WITH LOCAL BUILDING OFFICIALS PRIOR TO PROCEEDING WITH FOUNDATION WORK AND NOTIFY ENGINEER OF DEVIATION FROM DRAWING.
14. THE AMERICAN CONCRETE INSTITUTE DOES NOT RECOGNIZE FIBERMESH AS A SUBSTITUTE FOR WIRE MESH REINFORCED CONCRETE WHEN SUBJECTED TO TENSILE STRESSES.
15. SAW CUT CONTROL JOINTS IN SLAB SURFACE AT APPROXIMATELY 10'-0" INTERVALS... OFFSET CUTS 2'-6" MINIMUM FROM INTERIOR COLUMN LINES.

**REINFORCING STEEL:**

1. REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60 (Fy=60,000 PSI).
2. FIELD BENDING OF CONCRETE REINFORCING STEEL IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
3. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 309-66 'ACI DETAILING MANUAL-1994' AND THE 'CRSI MANUAL OF STANDARD PRACTICE', LATEST EDITION.
4. PLACE REINFORCEMENT AND TIES IN GROUT SPACES PRIOR TO GROUTING.
5. CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE UNLESS NOTED OTHERWISE:
 

A. FOOTING AND GRADE BEAMS IN GROUND CONTACT	3 INCHES
B. BEAMS AND COLUMNS	2 INCHES
C. SLABS, WALLS, AND JOISTS	3/4" INCH - NOT EXPOSED TO EARTH, LIQUID OR WEATHER
D. SLABS ON GRADE	2 INCHES FROM TOP
E. FORMED SURFACES IN GROUND CONTACT	2 INCHES
6. DEVELOPMENT LENGTHS AND LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-14 CHAPTER 12 AND AS INDICATED ON THE DRAWINGS. WHERE SPLICES ARE NOT CALLED OUT ON THE DRAWINGS, USE CLASS 'B' BUT IN NO CASE SHALL ANY SPLICE BE LESS THAN 12 INCHES FOR BARS AS INDICATED BELOW. THE BASIC DEVELOPMENT LENGTH SHALL BE MULTIPLIED BY THE FACTORS AS INDICATED FOR TENSION OR COMPRESSION AND THEN ROUNDED UP TO THE NEAREST WHOLE INCH. THE FACTORS INDICATED BELOW ARE CUMULATIVE FOR EACH OF THE CONDITIONS APPLICABLE.
7. WELDED WIRE MAT/FABRIC SHALL CONFORM TO ASTM A184 AND A185 RESPECTIVELY AND BE LAPPED 1'-0" AT ALL SPLICES.
8. ALL REINFORCING TERMINATING AT THE TOPS OF COLUMNS AND PILASTERS SHALL BE HOOKED UNLESS OTHERWISE NOTED.
9. SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI DETAILING MANUAL (309-66) SHOWING BAR SCHEDULES, STRIP SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT OF CONCRETE REINFORCEMENT. INCLUDE SPECIAL REINFORCEMENT REQUIRED AT OPENINGS THROUGH CONCRETE STRUCTURES. INCLUDE ALL ACCESSORIES SPECIFIED/REQUIRED TO SUPPORT REINFORCING.
10. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION. DRAWINGS SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH THE OTHER TRADES.
11. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER AND TESTING AGENCY A MINIMUM OF 48 HOURS PRIOR TO ALL CONCRETE POURS IN ORDER TO PERMIT REINFORCING STEEL REVIEW AS REQUIRED BY THE INSPECTION SCHEDULE.
12. REINFORCING IN ALL CONTINUOUS STRIP FOOTINGS SHALL HAVE CORNER BARS OR DOUELS PROVIDED AT ALL CORNERS AND INTERSECTIONS.

**CONSTRUCTION AND SAFETY:**

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.
3. MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
4. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE DRAWINGS OF OTHER CONSULTANTS AND TRADES. THE CONTRACTOR SHALL COORDINATE THE VARIOUS REQUIREMENTS.
5. NO OPENINGS NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.
7. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER, CLEARLY AND EXPLICITLY IN WRITING, OF ANY DEVIATION OR SUBSTITUTION OF REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS BY VIRTUE OF THE STRUCTURAL ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS CLEARLY AND EXPLICITLY INFORMED THE STRUCTURAL ENGINEER IN WRITING OF ANY DEVIATIONS OR SUBSTITUTIONS AT TIME OF SUBMISSION, AND THE STRUCTURAL ENGINEER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATIONS OR SUBSTITUTIONS.
9. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DRAWINGS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE AFFECTED WORK MAY PROCEED.
10. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY THE EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.
11. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT SHOP FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.
12. DO NOT SCALE THESE DRAWINGS, USE THE DIMENSIONS SHOWN.

**CONCRETE:**

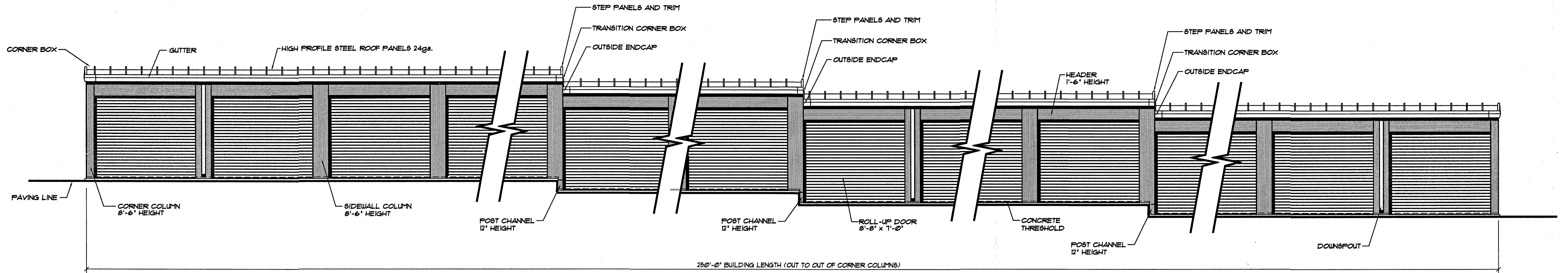
1. SUBMIT WRITTEN REPORTS OF EACH PROPOSED CONCRETE DESIGN MIX NOT LESS THAN 15 DAYS PRIOR TO THE START OF WORK. DESIGN MIXES PREPARED MORE THAN TWELVE (12) MONTHS PRIOR TO THE DATE THE SUBMITTAL ARE NOT PERMITTED.
  2. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14).
  3. ALL CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING AGENCY FOR STANDARD PARAMETERS (SLUMP, COMPRESSIVE STRENGTH, ETC.) TWO COPIES OF ALL REPORTS SHALL BE SUBMITTED TO THE ENGINEER/ARCHITECT.
  4. ALL NORMAL WEIGHT CONCRETE SHALL HAVE ASTM C-33 AGGREGATE WITH MAXIMUM UNIT WEIGHT OF 150 PCF. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI AT 28 DAYS, MINIMUM FOR FOUNDATIONS AND SLABS ON GRADE. ALL CONCRETE FOR FLOOR SLABS ON METAL DECK FORMS SHALL BE NORMAL WEIGHT CONCRETE WITH COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
  5. MIX DESIGNS, INCLUDING WATER/CEMENT RATIOS AND SLUMPS, SHALL BE PREPARED IN ACCORDANCE WITH MOST CURRENT ACI 309 CHAPTER 3, EXCEPT WHERE NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS. CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR AT CONTRACTOR'S OPTION, ASTM C 955 TYPE II WHERE FLY ASH IS PERMITTED. NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C 33 AGGREGATE WITH MAXIMUM UNIT WEIGHT OF 150 PCF AND LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C 330 AGGREGATE. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE.
- AGGREGATE SIZES SHALL BE:
- |  |                     |
|--|---------------------|
| I. FORMED CONCRETE ELEMENTS, UNO.          | #1 STONE (3/4" MAX) |
| II. GRADE SLABS AND EARTH FORMED ELEMENTS. | #1 STONE (1" MAX)   |
| III. COARSE MASONRY GROUT REQUIRED         | #1 STONE (3/4" MAX) |
| IV. FINE MASONRY GROUT REQUIRED            | #5 STONE (3/8" MAX) |
6. WATER REDUCING ADMIXTURE SHALL BE USED IN ALL CONCRETE.
  7. AIR ENTRAINING ADMIXTURE IN ACCORDANCE WITH ACI 301-84 TABLE 3.4.1 SHALL BE USED IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING DURING CONSTRUCTION OR SERVICE CONDITIONS.
  8. WATER/CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ANY CONCRETE SUBJECTED TO FREEZING/THAWING.
  9. ALL PUMPED CONCRETE SHALL HAVE A WATER/CEMENT RATIO LESS THAN 0.45 AND SHALL CONTAIN A HIGH RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER).
  10. IN NO CASE SHALL A WATER/CEMENT RATIO EXCEED THE FOLLOWING:
 

I. ALL FOUNDATION CONCRETE fc 3000 psi	0.55 MAX W/C RATIO
II. EXTERIOR PAVING CONCRETE fc 3500 psi	0.50 MAX W/C RATIO
III. ALL EXPOSED CURBS, FIERS, ETC. fc 3500 psi	0.45 MAX W/C RATIO
III. SLABS ON GRADE fc 3000 psi	0.45 MAX W/C RATIO
  11. LIQUID MEMBRANE CURING COMPOUND WITH A MINIMUM 30% SOLIDS CONTENT SHALL BE APPLIED WITHIN TWO (2) HOURS AFTER COMPLETION OF FINISHING TO ALL CONCRETE FLATWORK AND WALLS, UNO, OTHER THAN FOOTINGS AND GRADE BEAMS.
  12. FLOORS IN AREAS RECEIVING QUARRY TILE, CERAMIC TILE AND LIQUID FLOOR HARDENER SHALL BE CURED WITH DISSIPATING LIQUID MEMBRANE CURING COMPOUND OR WET CURED BY USE OF MOISTURE RETAINING COVER. DISSIPATING CURING COMPOUND SHALL BE THOROUGHLY BROOURED AND WASHED OFF PRIOR TO APPLICATION OF FLOOR FINISH.
  13. USE A NON-CORROSIVE, NON-CHLORIDE ACCELERATING ADMIXTURE IN CONCRETE EXPOSED TO TEMPERATURES BELOW 40 DEGREES. UNIFORMLY HEAT THE WATER AND AGGREGATES TO A TEMPERATURE OF NOT LESS THAN 50 DEGREES. PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 306.
  14. ALL CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE UNLESS THEIR ELIMINATION IS APPROVED BY THE STRUCTURAL ENGINEER.
  15. REINFORCING IN ALL ABUTTING CONCRETE, INCLUDING FOOTINGS, SHALL BE CONTINUOUS THROUGH OR AROUND ALL CORNERS OR INTERSECTIONS. DOUELS OR SPLICES SHALL BE EQUAL IN SIZE AND SPACING TO THE REINFORCING IN THE ABUTTING MEMBERS.
  16. REFER TO ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIPS, REGLETS, WASHES, MASONRY ANCHORS, BRICK LEDGE ELEVATIONS, SLAB DEPRESSIONS AND MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.
  17. FORMS FOR ROUND COLUMNS SHALL BE ONE PIECE FIBERGLASS FORM TO PRODUCE SMOOTH FINISH ON EXPOSED COLUMNS.
  18. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF ACI 301.
  19. BASE PLATES, ANCHOR RODS, SUPPORT ANGLES AND OTHER STEEL EXPOSED TO EARTH OR GRANULAR FILL SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE.
  20. FINISHING TOLERANCE SHALL BE WITHIN CLASS B IN ACCORDANCE WITH ACI 301 AND CONSIDERATION SHALL BE GIVEN TO SEQUENCING OF CONCRETE PLACEMENT TO FACILITATE CONTROL OF FINISH ELEVATIONS.
  21. NON-SHRINK GROUT SHALL BE PRE-MIXED, NON-CORROSIVE, NON-METALLIC, NON-STAINING CONTAINING SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AND WATER REDUCING AGENTS. PRODUCTS SHALL ONLY REQUIRE THE ADDITION OF WATER. MINIMUM COMPRESSIVE STRENGTH SHALL BE 8000 PSI AFTER ONE DAY AND 10000 PSI AFTER 28 DAYS. GROUT SHALL BE FREE OF GAS PRODUCING OR AIR RELEASING AND OXIDIZING AGENTS AND CONTAIN NO CORROSIVE IRON, ALUMINUM OR GYPSUM.
  22. PROVIDE CONCRETE GROUT - NOT MORTAR - FOR REINFORCING MASONRY LINTEL AND BOND BEAMS WHERE INDICATED ON DRAWINGS OR AS SCHEDULED.
  23. TOLERANCE FOR ANCHOR RODS AND OTHER EMBEDDED ITEMS SHALL BE PER THE AISI CODE OF STANDARD PRACTICE SECTION 13.
  24. UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT ALL COLUMN, WALL, SLAB, OR BEAM EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.

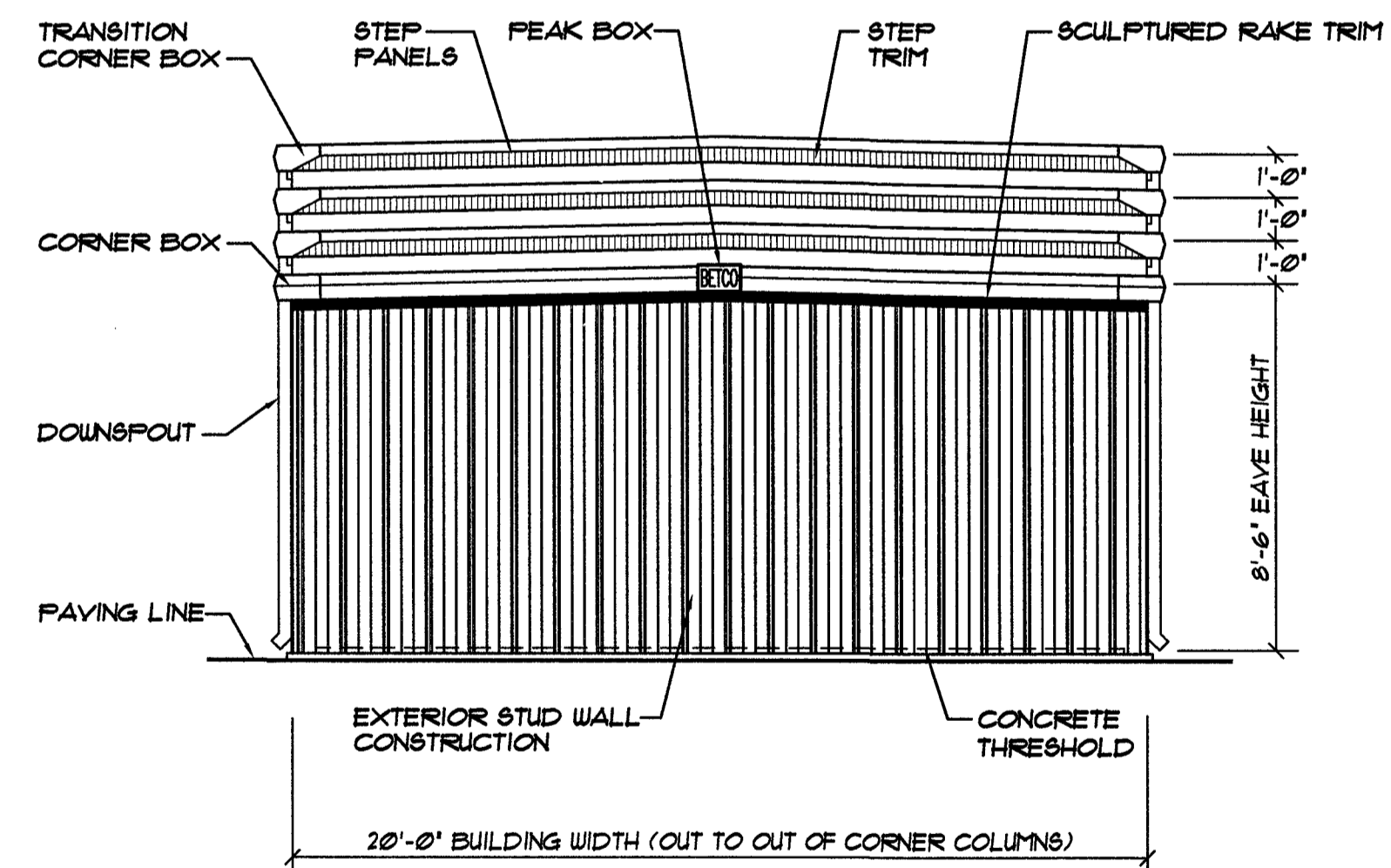
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Statesville, NC 28625  
Limited Engineering License # D-0140

	DATE:	11/05/20	<p>228 COMMERCE BLVD. STATESVILLE, NC 28625 (800) 654-7813</p>	PROJECT NAME:	MY STORAGE UNIT		
	DRAWN BY:	K. MACLAY		PROJECT ADDRESS:	LILLINGTON, NORTH CAROLINA		
	SCALE:	AS NOTED		OWNER:	MY STORAGE UNIT, LLC.	PROJECT NO.:	NC20251
	APPROVED BY:			SHEET TITLE:	BUILDING NOTES	DRAWING NUMBER:	CS2 of 3
REVISIONS		DATE	BY				





**A** SIDEWALL ELEVATION... BUILDING "1"  
 S1 SCALE: 1/4" = 1'-0"

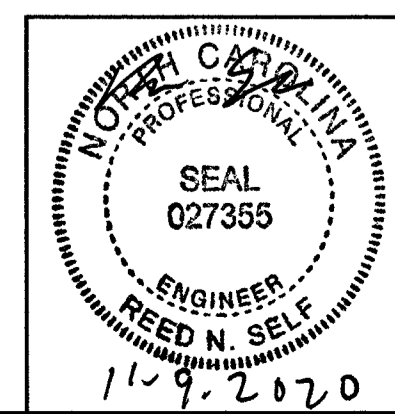


**B** ENDWALL ELEVATION... BUILDING "1"  
 S1 SCALE: 1/4" = 1'-0"

NOTE: SEE OWNER FOR BUILDING ORIENTATION ON SITE

NOTE: DOWNSPOUTS LOCATIONS SHOWN FOR ELEVATION PURPOSE ONLY. REFER TO FLOOR PLAN SHEETS FOR LOCATIONS

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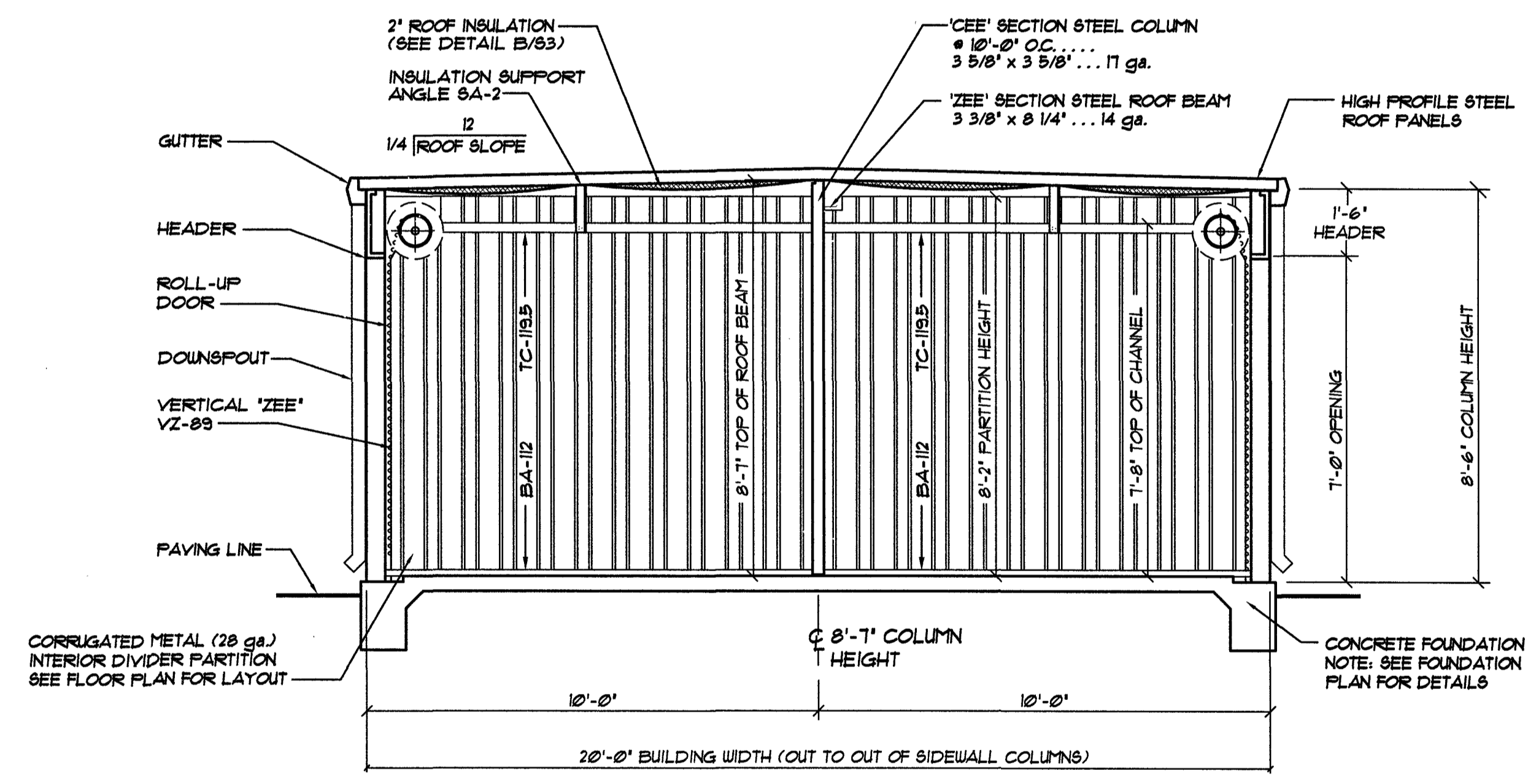
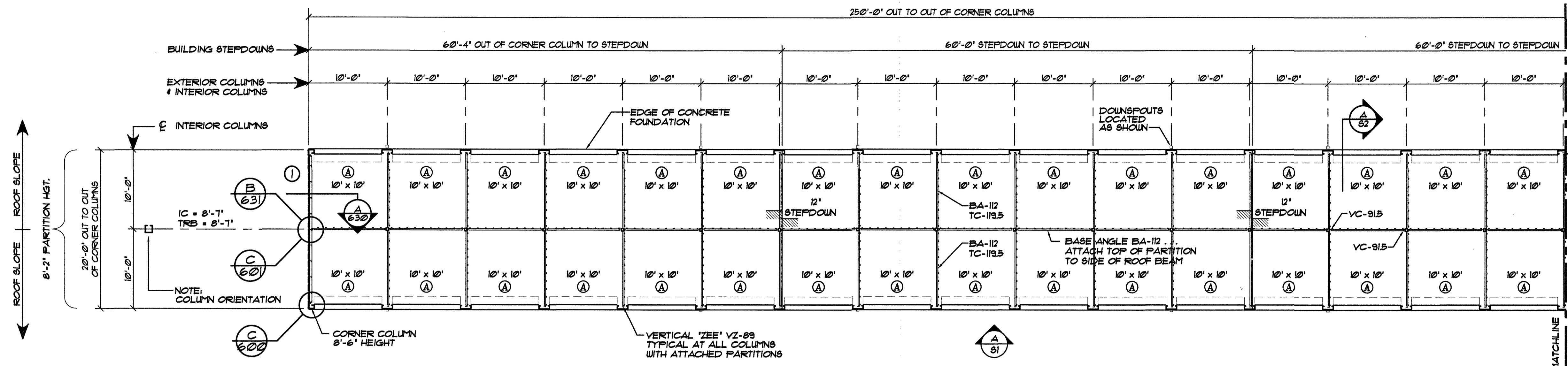


REVISIONS	DATE	BY

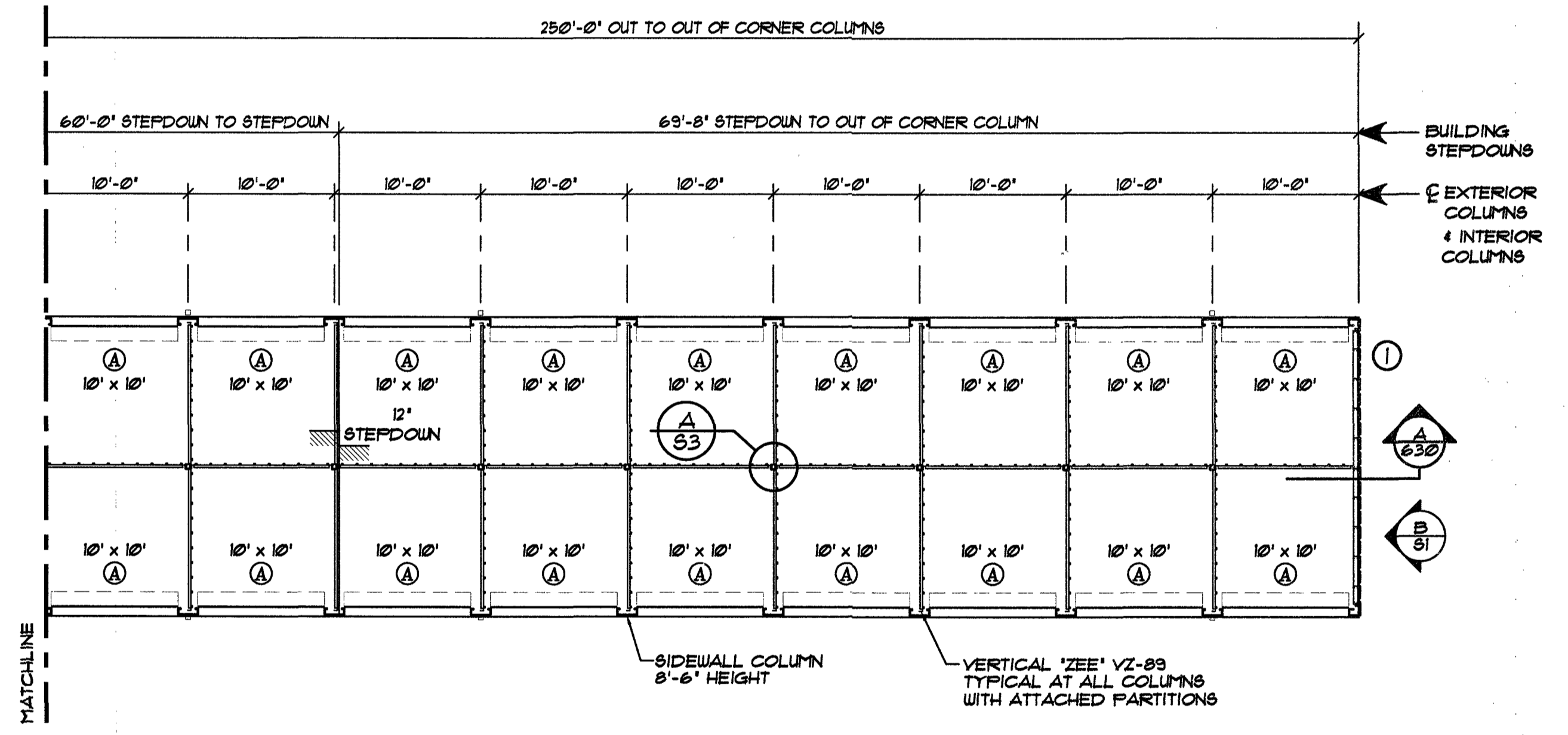
DATE: 11/05/20  
 DRAWN BY: K. MACLAY  
 SCALE: AS NOTED  
 APPROVED BY: REED N. SELF  
 11.9.2020



PROJECT NAME: MY STORAGE UNIT  
 PROJECT ADDRESS: LILLINGTON, NORTH CAROLINA  
 OWNER: MY STORAGE UNIT, LLC.  
 SHEET TITLE: ELEVATIONS & NOTES BUILDING "1"  
 PROJECT NO.: NC20251  
 DRAWING NUMBER: S1 of 3



**A** 20'-0" WIDE CROSS SECTION  
BUILDINGS "1" & "2"  
SCALE: 3/8" = 1'-0"



**FLOOR PLAN... BUILDING "2"**  
SCALE: 1" = 10'-0"

NOTE: BUILDING "1" IS PROVIDED W/ (6) ADJUSTABLE CONTROL JOINT COLUMNS. 8'-6" HEIGHT

STUDWALL LEGEND		BUILDING "1"
EXTERIOR STUDWALL		
DESCRIPTION	UNINSULATED	
① EXTERIOR STUDWALL CONSTRUCTION AT FLAT SLAB (BLOCK @ MID-HGT.)	40 L.F.	
NOTE #1: SEE ERC810X FOR COMPLETE STUDWALL CONSTRUCTION DETAILS.		

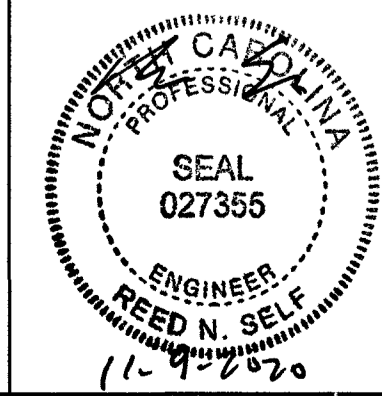
BETCO, Inc.  
228 Commerce Blvd.  
Statesville, NC 28625  
Limited Engineering License # D-0140

NOTE: ... SEE OWNER FOR BUILDING ORIENTATION ON SITE

NOTE: BLOCK ALL LOAD-BEARING INTERIOR & EXTERIOR STUDWALLS AS SHOWN IN DETAIL A OF ERC831X

DOOR SCHEDULE		
ID	DOOR SIZE	TYPE
①	8'-8" x 7'-0"	EXTERIOR ROLL-UP

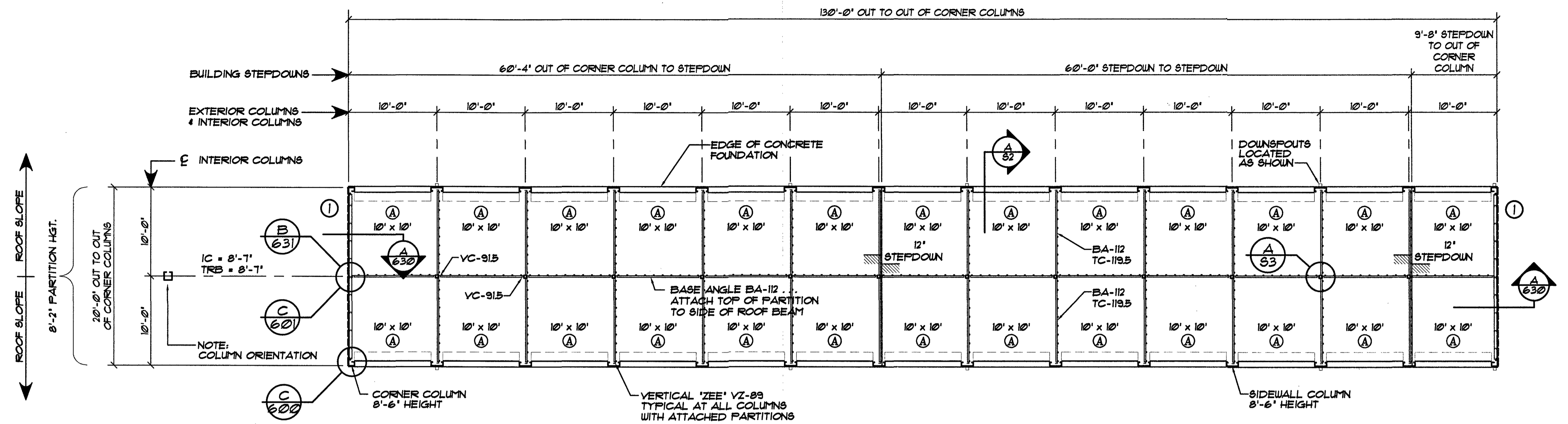
NOTE: UNIT SIZES SHOWN ARE NOMINAL. ACTUAL CLEAR DIMENSIONS INSIDE UNITS MAY VARY ACCORDING TO FINAL DESIGN OF COMPONENTS.



REVISIONS	DATE	BY

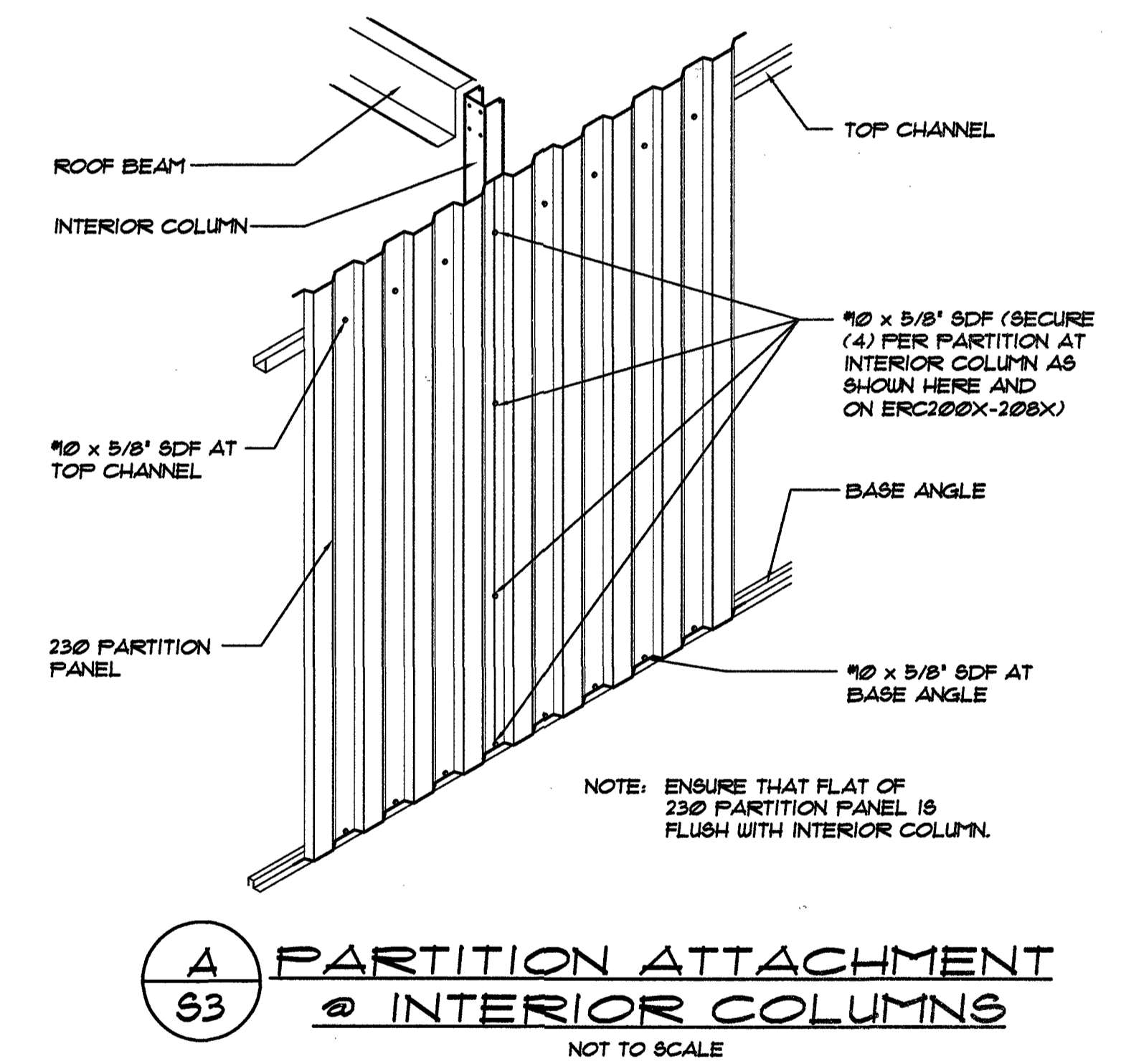
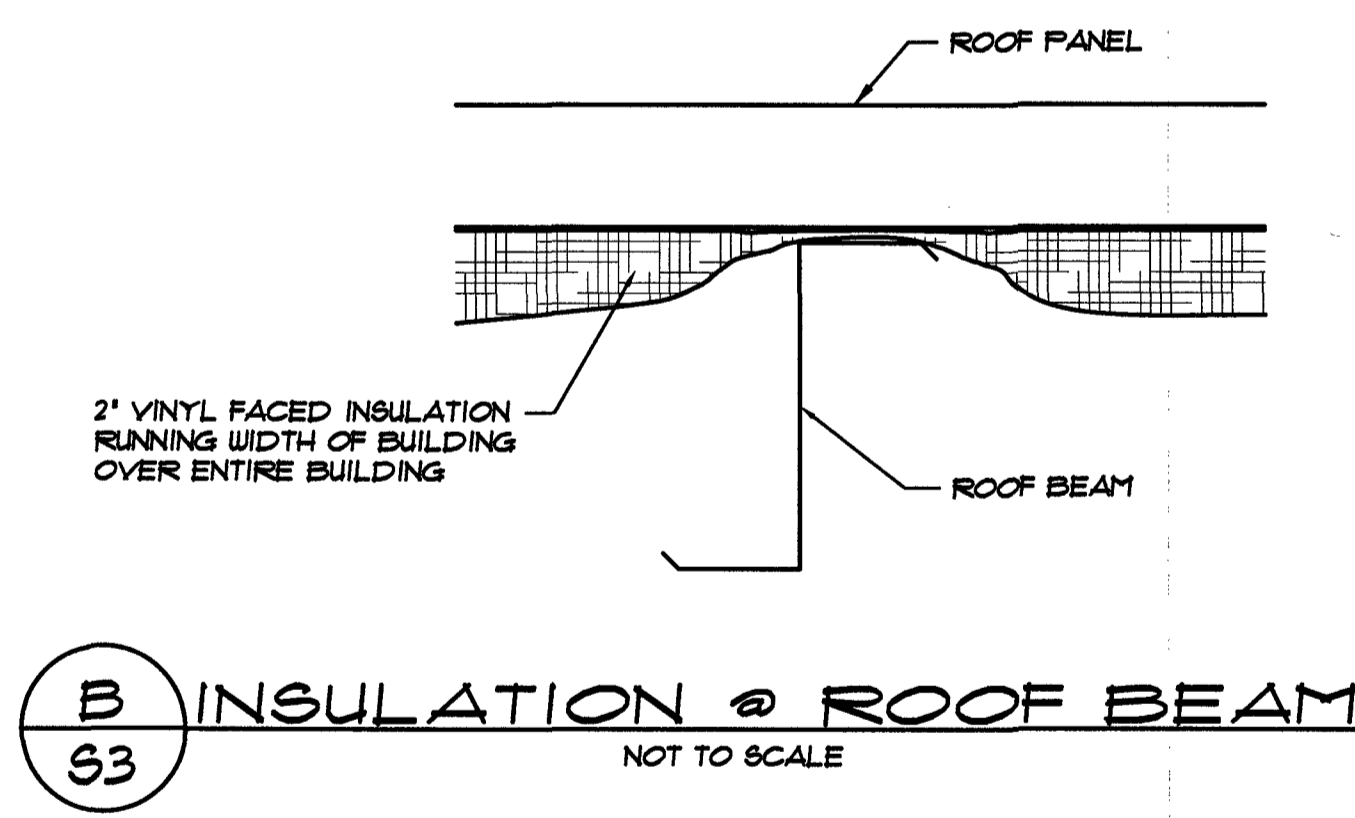
DATE: 11/05/20  
DRAWN BY: K. MACLAY  
SCALE: AS NOTED  
APPROVED BY:   
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800) 654-7813

PROJECT NAME: MY STORAGE UNIT  
PROJECT ADDRESS: LILLINGTON, NORTH CAROLINA  
OWNER: MY STORAGE UNIT, LLC.  
PROJECT NO.: NC20251  
SHEET TITLE: FLOOR PLAN, CROSS SECTION & NOTES - BUILDING "1"  
DRAWING NUMBER: S2 OF 3



**FLOOR PLAN . . . BUILDING "2"**  
SCALE: 1" = 10'-0"

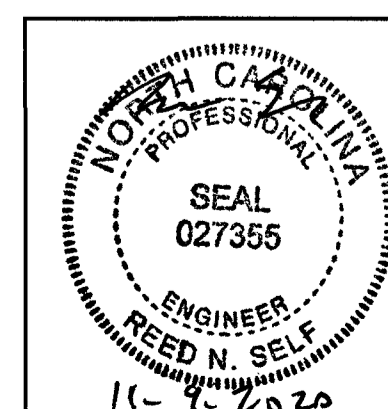
NOTE: BUILDING "2" IS PROVIDED W/(2) ADJUSTABLE CONTROL JOINT COLUMNS. 8'-6" HEIGHT



STUDWALL LEGEND		BUILDING "2"
EXTERIOR STUDWALL		
DESCRIPTION	UNINSULATED	
① EXTERIOR STUDWALL CONSTRUCTION AT FLAT SLAB (BLOCK @ MID-HGT.)		40 L.F.
NOTE #1: SEE ERC610X FOR COMPLETE STUDWALL CONSTRUCTION DETAILS.		

DOOR SCHEDULE		
ID	DOOR SIZE	TYPE
(A)	8'-8" x 7'-0"	EXTERIOR ROLL-UP

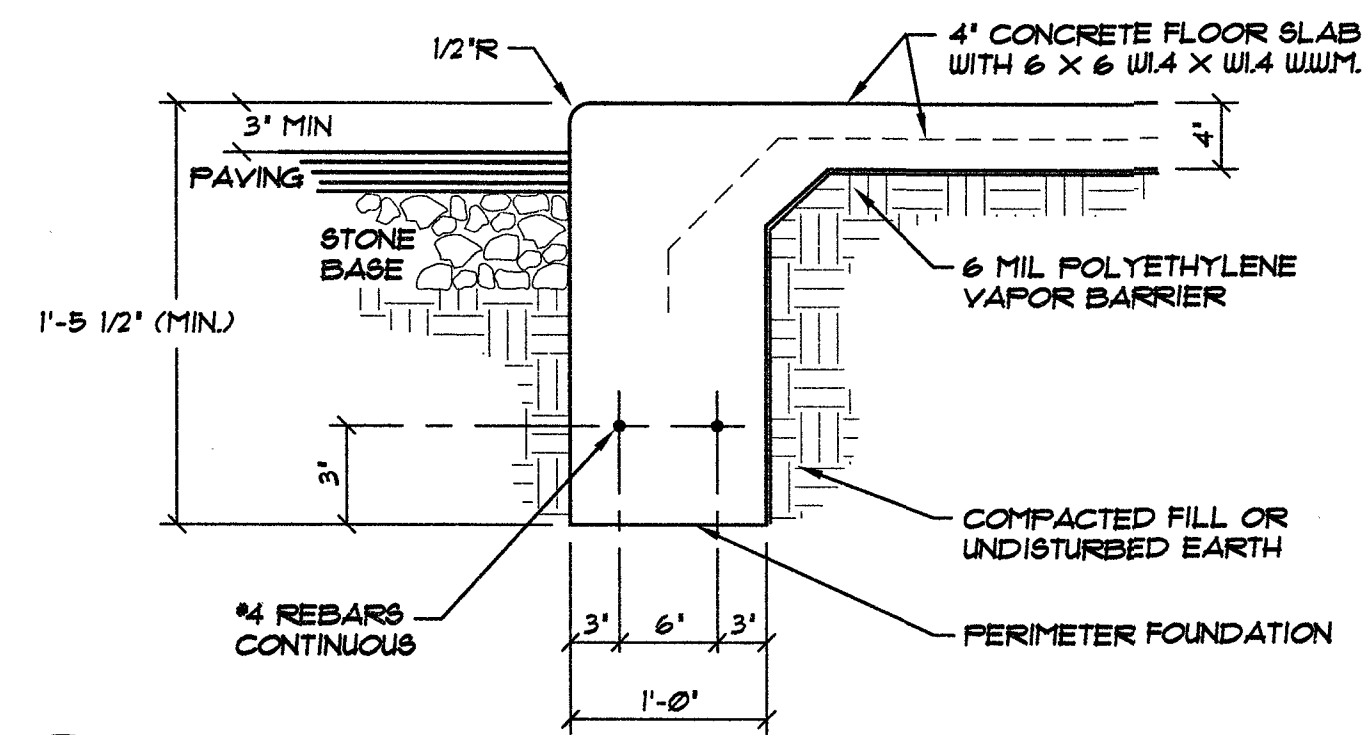
BETCO, Inc.  
228 Commerce Blvd.  
Statesville, NC 28625  
Limited Engineering License # D-0140



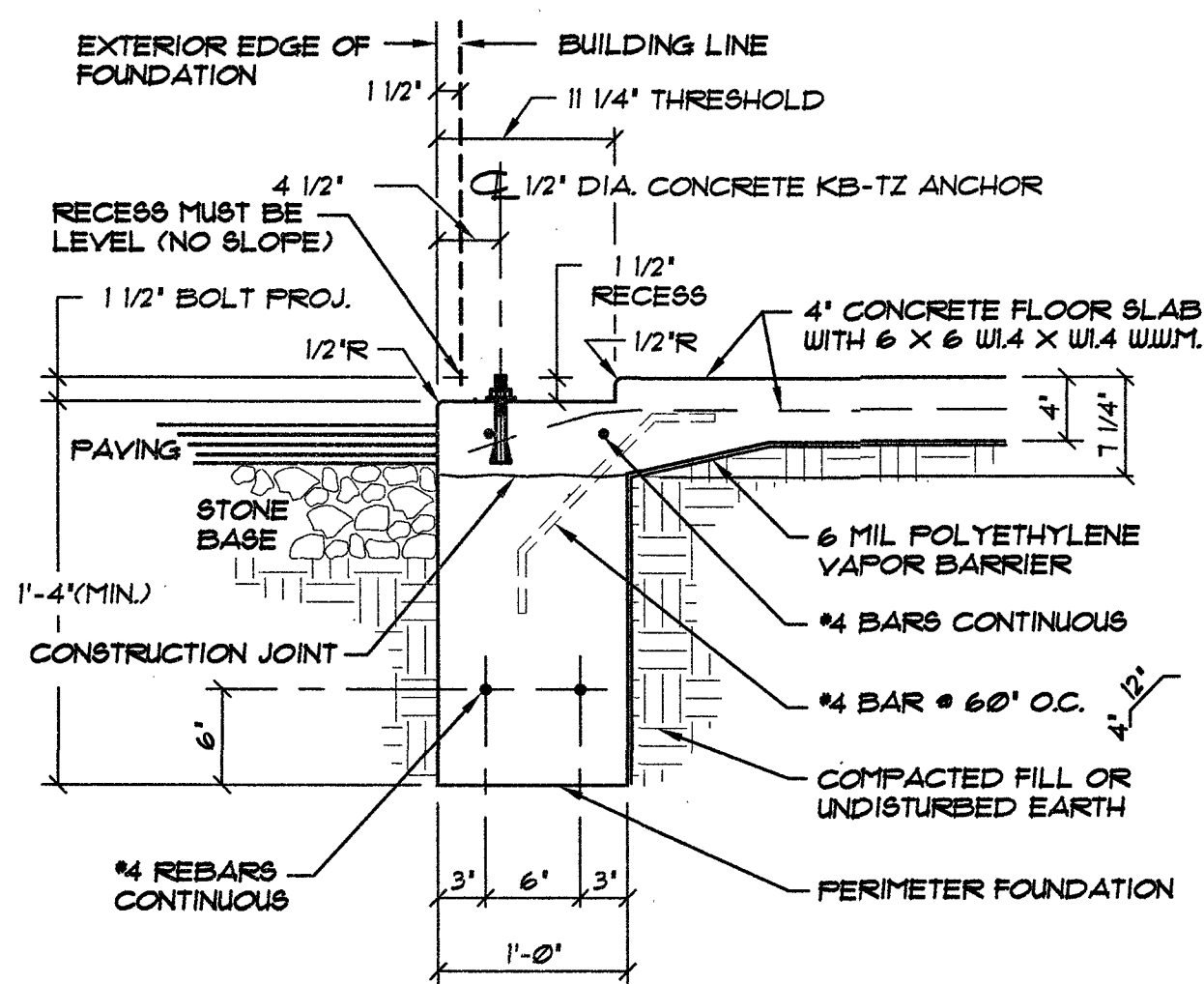
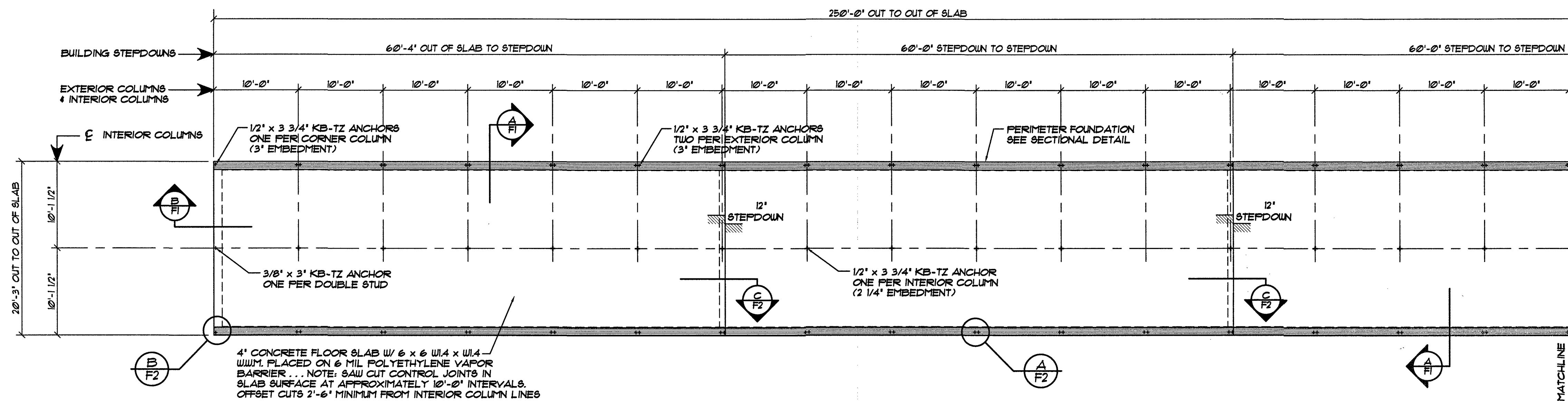
DATE:	11/05/20
DRAWN BY:	K. MACLAY
SCALE:	AS NOTED
APPROVED BY:	
REVISIONS	DATE BY

**BETCO**  
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800) 654-7813

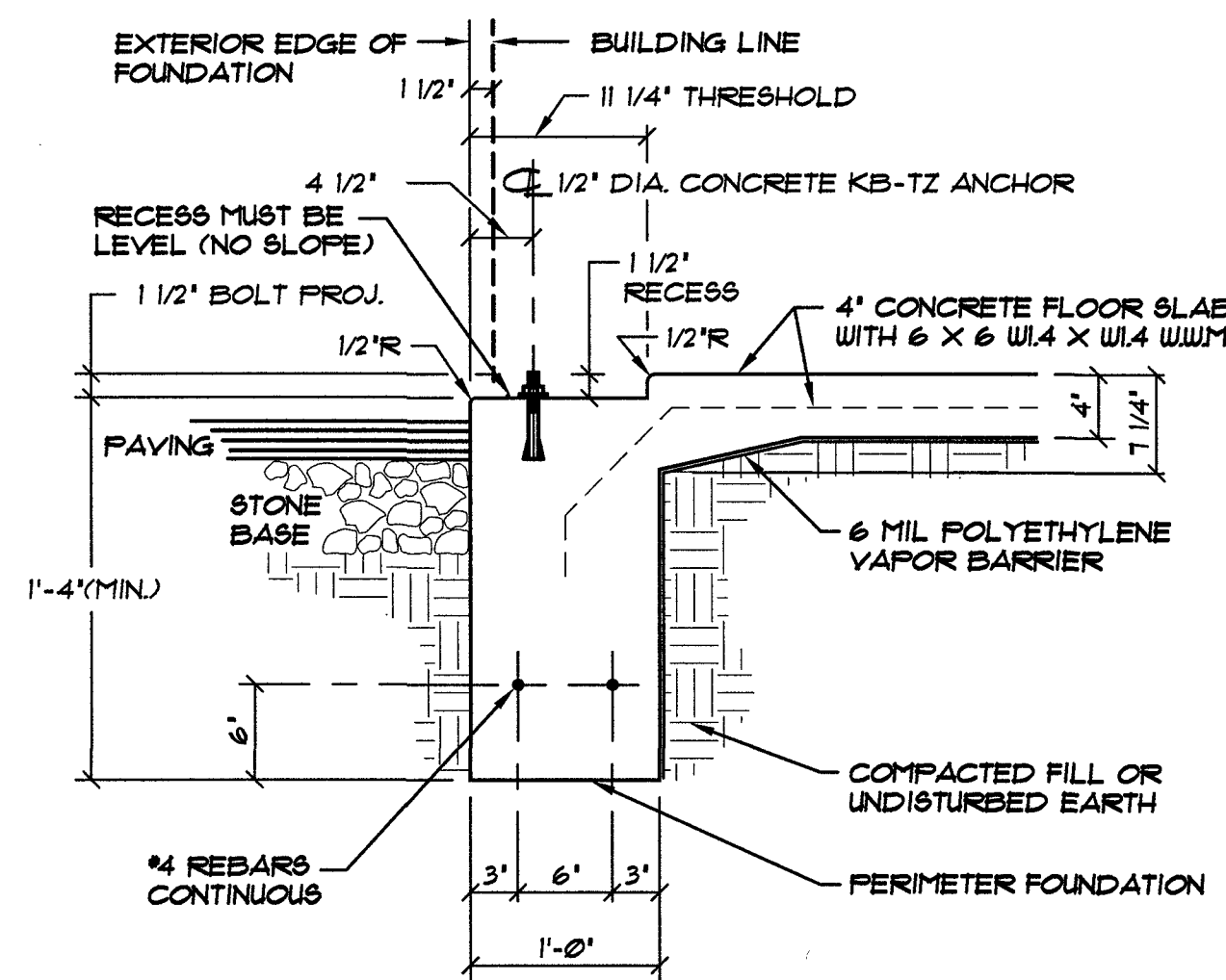
PROJECT NAME:	MY STORAGE UNIT	PROJECT NO.:	NC20251
PROJECT ADDRESS:	LILLINGTON, NORTH CAROLINA	OWNER:	MY STORAGE UNIT, LLC.
SHEET TITLE:	FLOOR PLAN, DETAILS & NOTES BUILDING "2"	DRAWING NUMBER:	S3 of 3



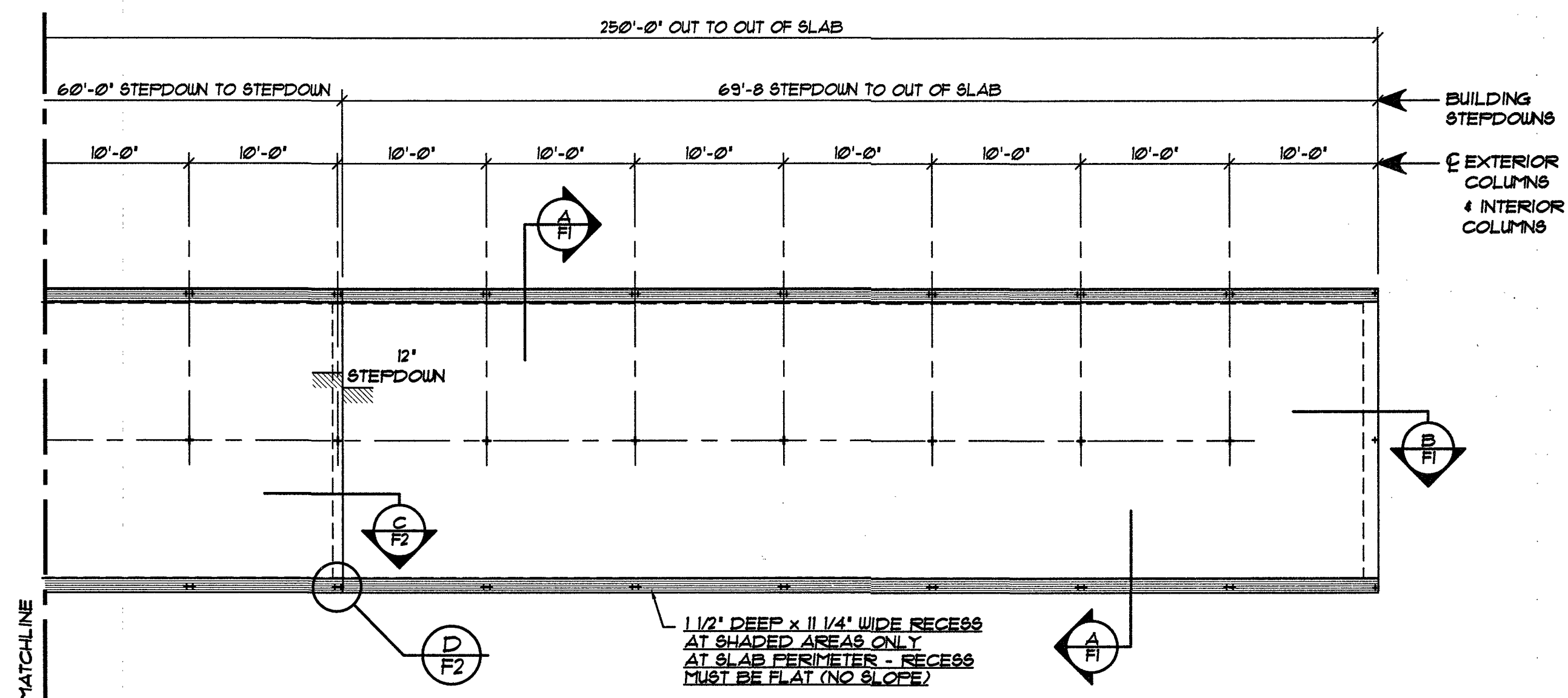
**B** PERIMETER FOUNDATION SECTION AT EXTERIOR STUDWALL (MONOLITHIC CONCRETE PLACEMENT) NOT TO SCALE



**A** ALTERNATE PERIMETER FOUNDATION SECTION (TWO STAGE CONCRETE PLACEMENT) NOT TO SCALE



**A** TYPICAL PERIMETER FOUNDATION SECTION (MONOLITHIC CONCRETE PLACEMENT) NOT TO SCALE



**FOUNDATION PLAN... BUILDING "1"**  
SCALE: 1/8" = 1'-0"

SAW CUT CONTROL JOINTS IN SLAB SURFACE AT APPROXIMATELY 10'-0" INTERVALS... OFFSET CUTS 2'-6" MINIMUM FROM INTERIOR COLUMN LINES.

**ACI 318 - TABLE 4.2.1 EXPOSURE CATEGORIES AND CLASSES**

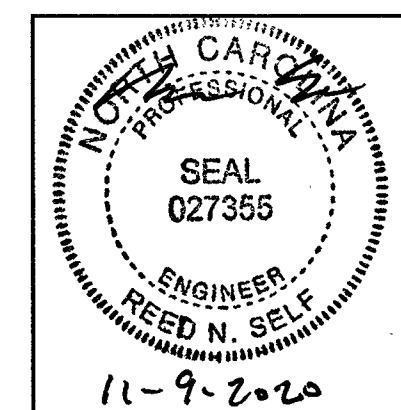
CATEGORY	SEVERITY	CLASS	CONDITION	
F FREEZING AND THAWING	NOT APPLICABLE	F0	CONCRETE NOT EXPOSED TO FREEZING-AND-THAWING CYCLES	
S SULFATE	NOT APPLICABLE	S0	WATER-SOLUBLE SULFATE (SO <sub>4</sub> ) IN SOIL, PERCENT BY WEIGHT	DISSOLVED SULFATE (SO <sub>4</sub> ) IN WATER, ppm
			SO <sub>4</sub> < 0.10	SO <sub>4</sub> < 150
P REQUIRING LOW PERMEABILITY	NOT APPLICABLE	P0	IN CONTACT WITH WATER WHERE LOW PERMEABILITY IS NOT REQUIRED	
C CORROSION PROTECTION OF REINFORCEMENT	MODERATE	C1	CONCRETE EXPOSED TO MOISTURE BUT NOT TO EXTERNAL SOURCES OF CHLORIDES	

NOTE: ABOVE REPRESENTS "ASSUMED" CONDITIONS BY ENGINEER. IF CONTRACTOR KNOWS OR HAS REASON TO BELIEVE OTHERWISE, ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CONSTRUCTION. REFERENCE ACI 318 - TABLE 4.3.1 FOR REQUIREMENTS FOR CONCRETE BY EXPOSURE CLASS.

NOTE: ... SEE OWNER FOR BUILDING ORIENTATION ON SITE

NOTE: KB-TZ ANCHORS ARE PROVIDED BY BETCO. EMBEDDED ANCHOR BOLTS IN SLAB ARE NOT REQUIRED BY BUYER.

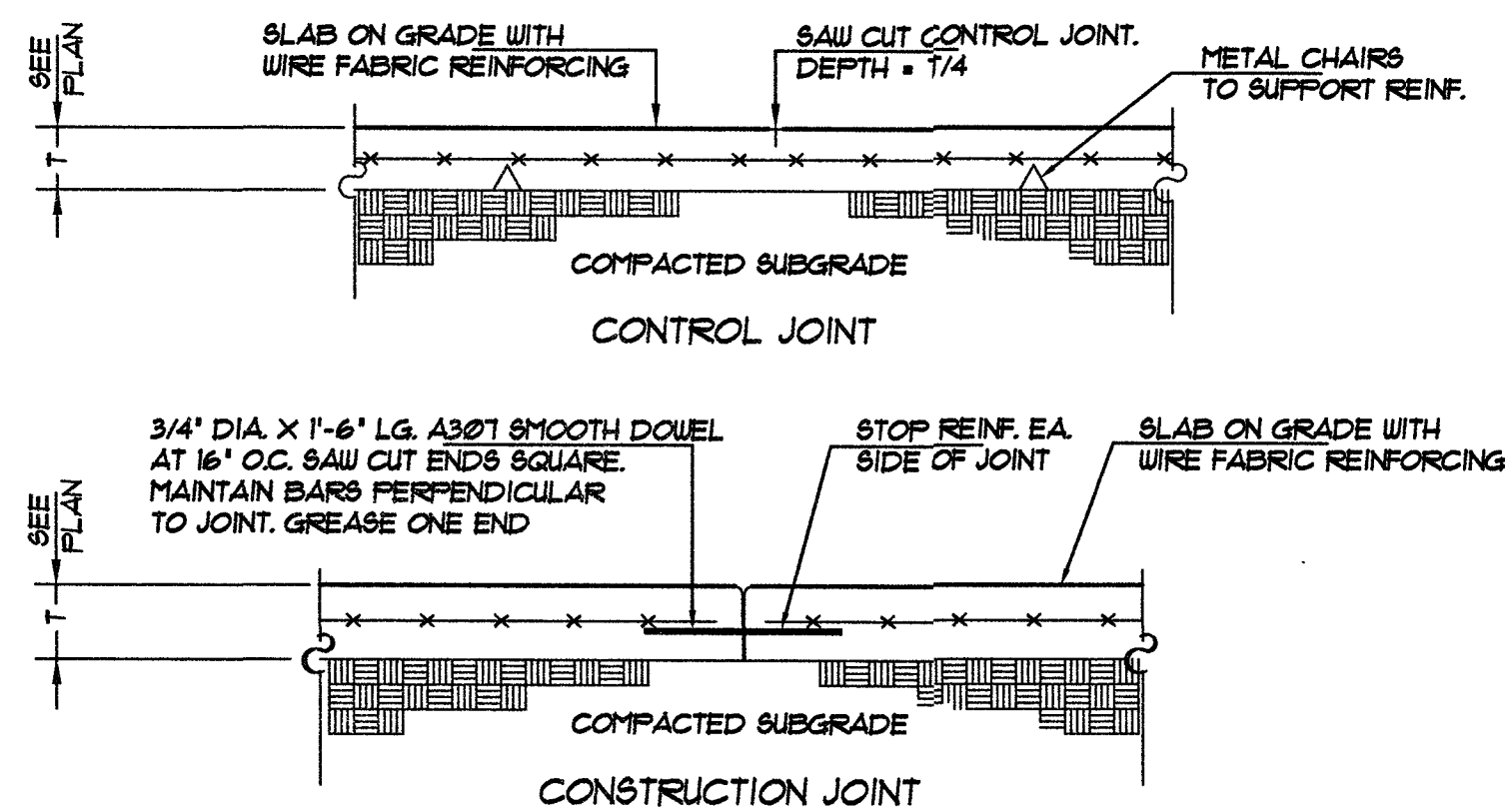
**NOTE TO OWNER / CONTRACTOR:**  
DO NOT CUT SAW JOINTS ALONG COLUMN LINES. DOING SO WILL REDUCE THE STRUCTURAL CAPACITY OF THE BUILDING ANCHORAGE TO THE CONCRETE AND MAY RESULT IN ADDITIONAL MATERIAL AND LABOR CHARGES. SAW CUTS MUST BE OFFSET 2'-6" MINIMUM FROM COLUMN LINES.



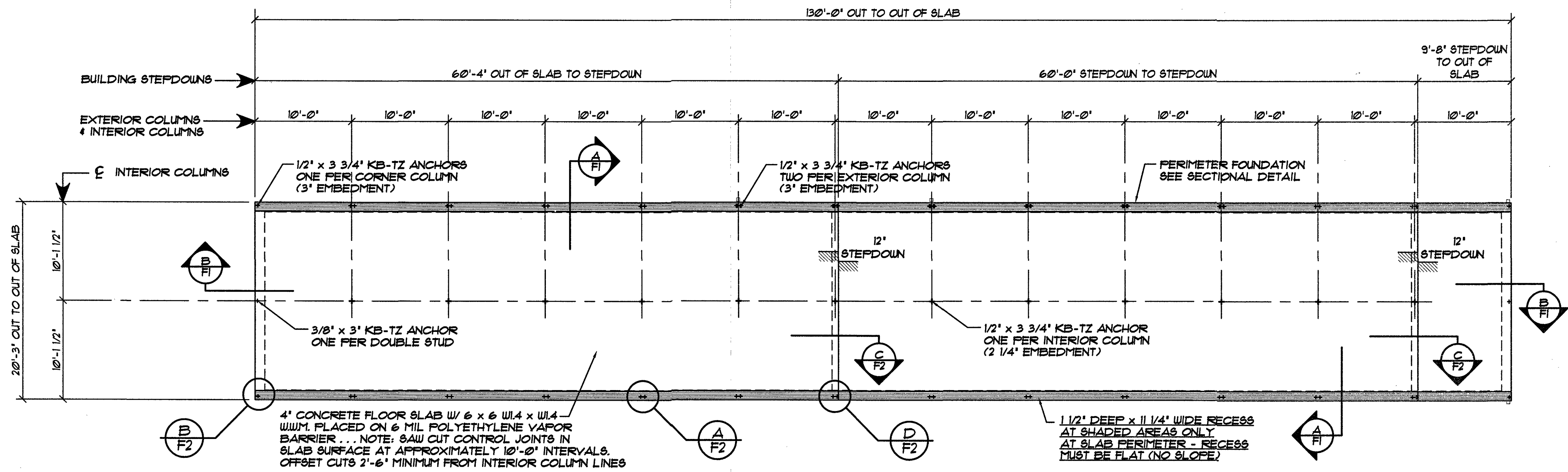
REVISIONS	DATE	BY

**BETCO**  
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800) 654-7813

PROJECT NAME: <b>MY STORAGE UNIT</b>	PROJECT NO.: NC20251
PROJECT ADDRESS: LILLINGTON, NORTH CAROLINA	OWNER: MY STORAGE UNIT, LLC.
SHEET TITLE: FOUNDATION PLAN, DETAILS & NOTES BUILDING "1"	DRAWING NUMBER: F1 of 2

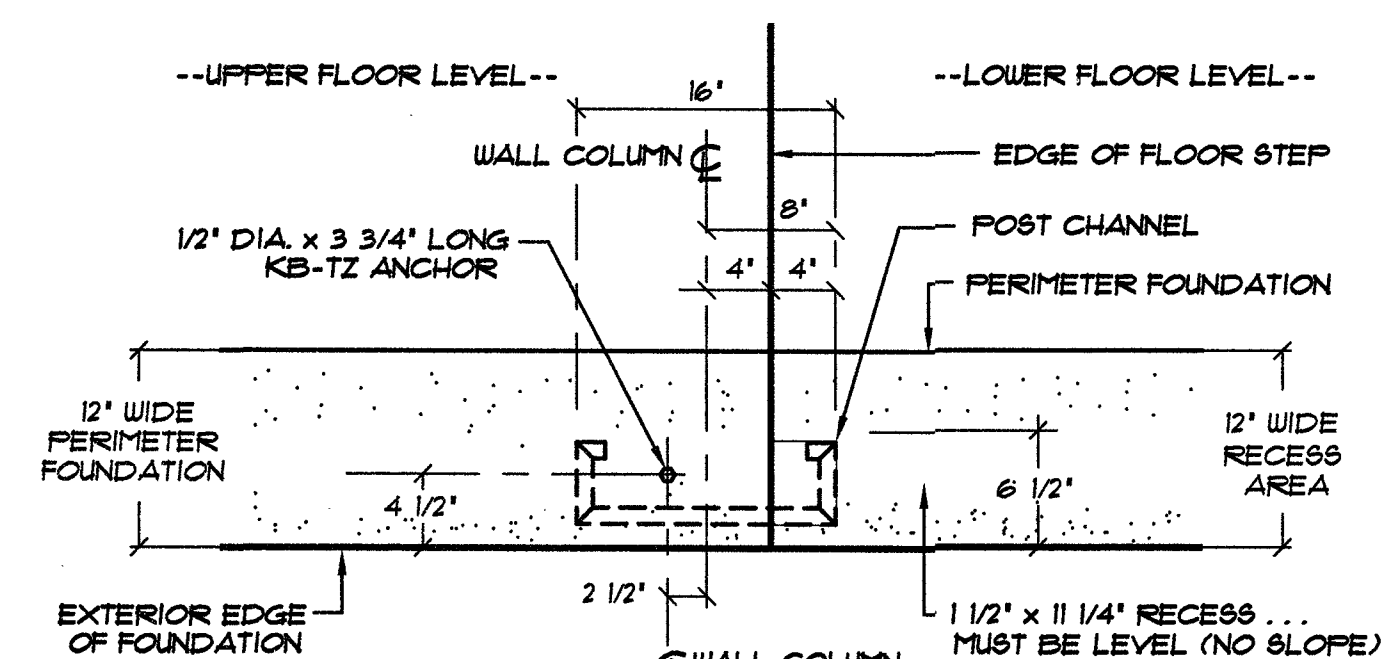


**E CONTROL JOINT & CONSTRUCTION JOINT IN CONCRETE SLAB**  
NOT TO SCALE

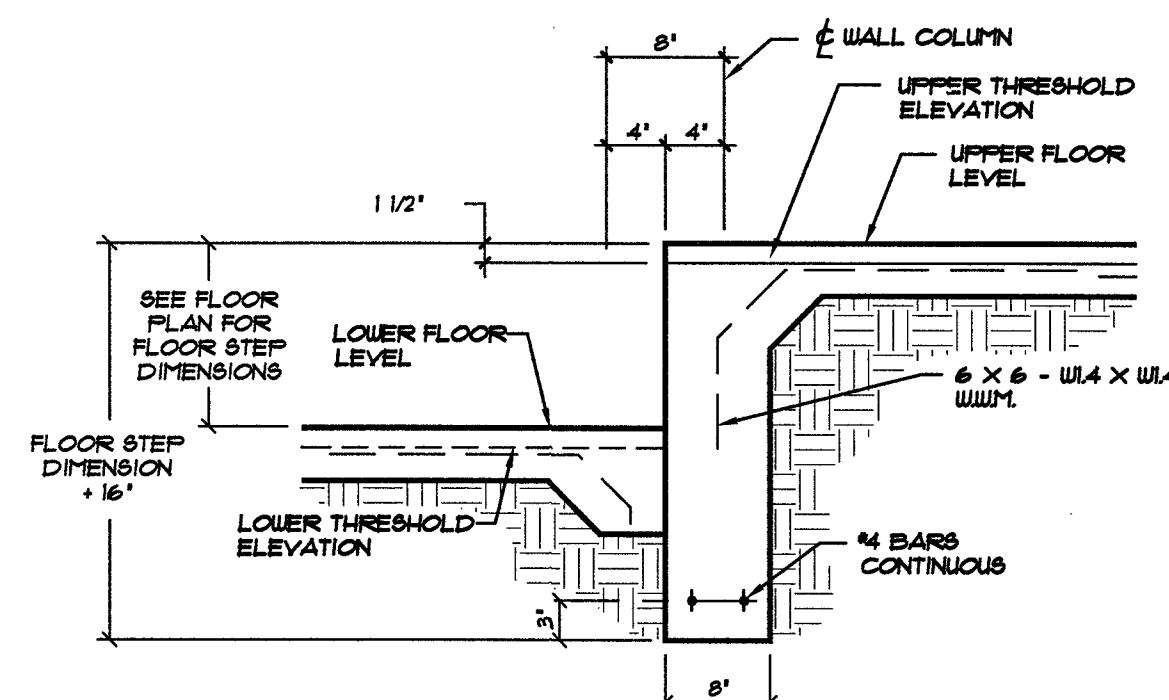


**FOUNDATION PLAN... BUILDING "2"**

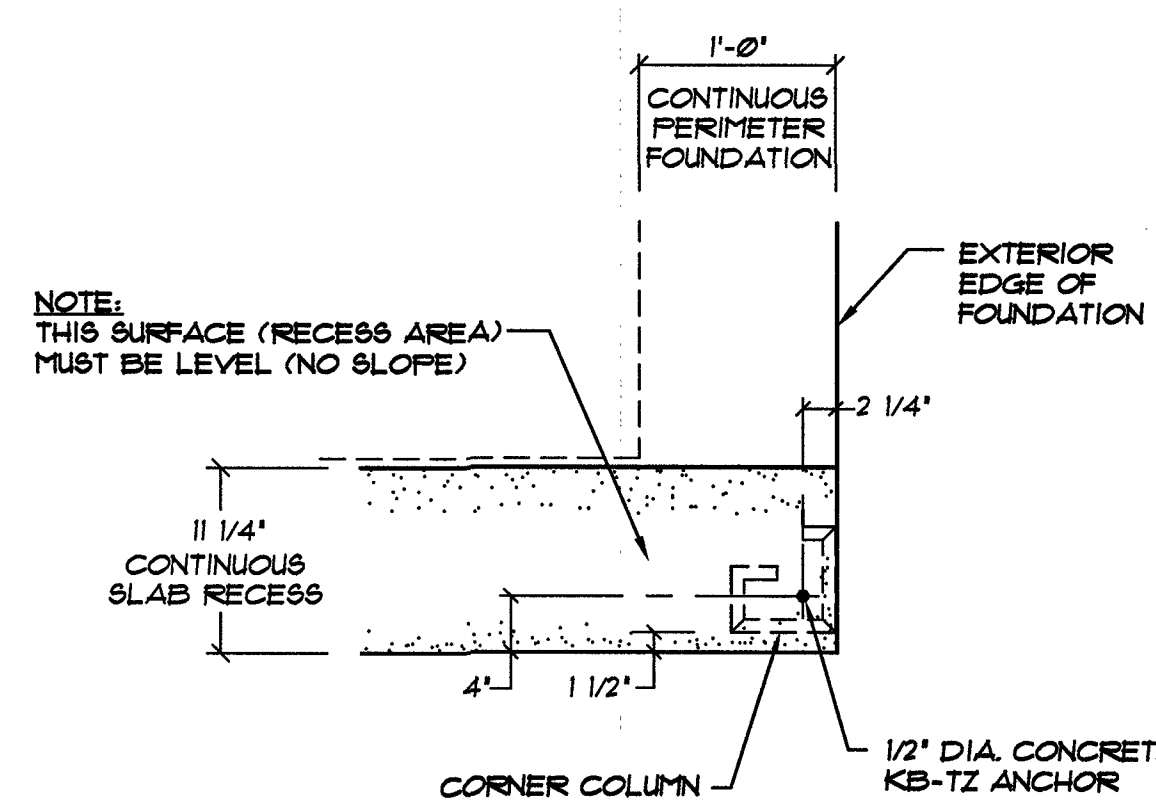
SAW CUT CONTROL JOINTS IN SLAB SURFACE AT APPROXIMATELY 10'-0" INTERVALS... OFFSET CUTS 2'-6" MINIMUM FROM INTERIOR COLUMN LINES.



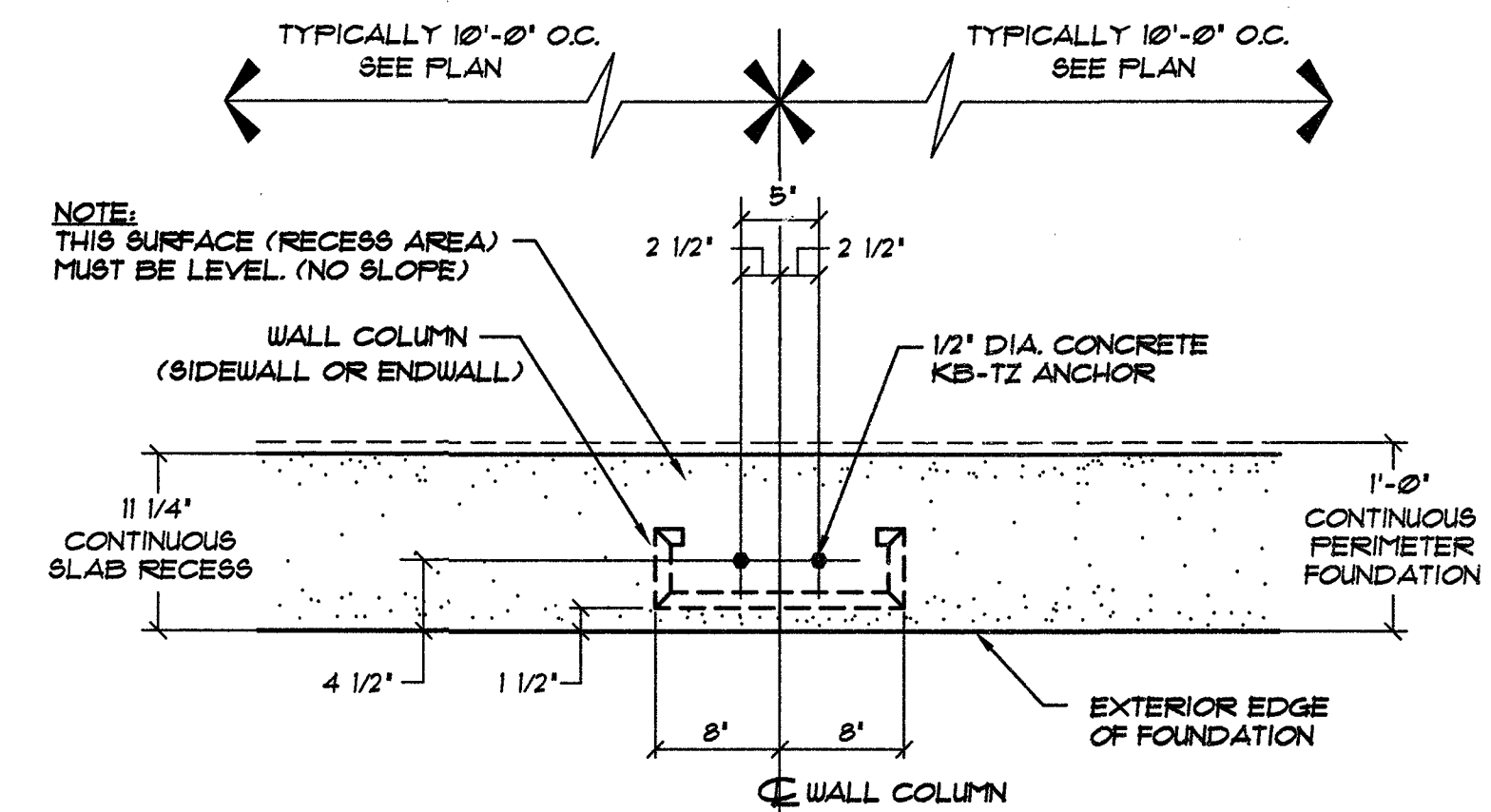
**D FLOOR STEPDOWN @ WALL COLUMN**  
NOT TO SCALE



**C FOUNDATION SECTION @ FLOOR STEP**  
NOT TO SCALE



**B CORNER WEDGE ANCHORS AT STUD WALL**  
NOT TO SCALE

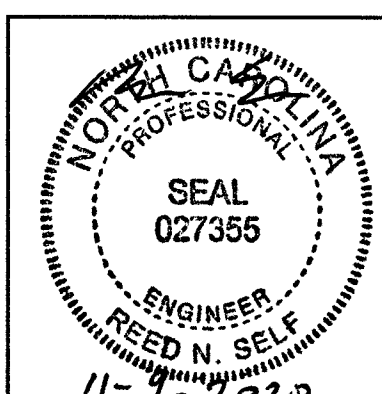


**A TYPICAL WALL COLUMN WEDGE ANCHORS**  
NOT TO SCALE

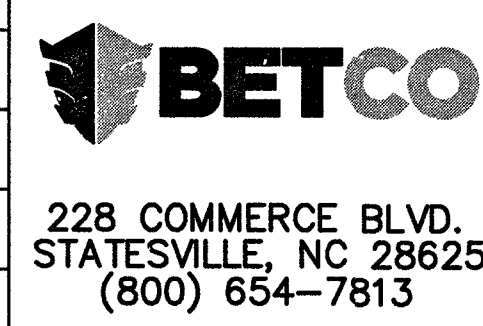
NOTE: KB-TZ ANCHORS ARE PROVIDED BY BETCO. EMBEDDED ANCHOR BOLTS IN SLAB ARE NOT REQUIRED BY BUYER.

NOTE: ... SEE OWNER FOR BUILDING ORIENTATION ON SITE

**NOTE TO OWNER / CONTRACTOR:**  
DO NOT CUT SAW JOINTS ALONG COLUMN LINES. DOING SO WILL REDUCE THE STRUCTURAL CAPACITY OF THE BUILDING ANCHORAGE TO THE CONCRETE AND MAY RESULT IN ADDITIONAL MATERIAL AND LABOR CHARGES. SAW CUTS MUST BE OFFSET 2'-6" MINIMUM FROM COLUMN LINES.



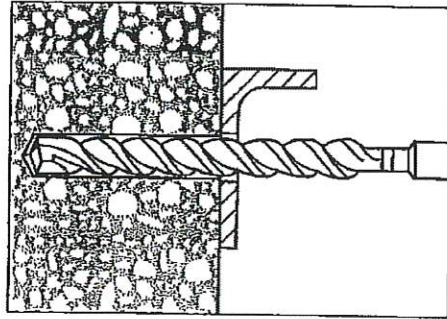
DATE:	11/05/20
DRAWN BY:	K. MACLAY
SCALE:	AS NOTED
APPROVED BY:	
REVISIONS:	
DATE:	BY:



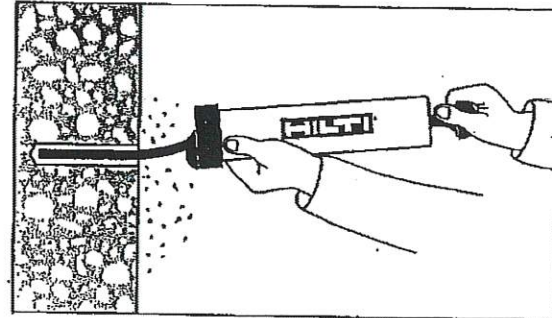
PROJECT NAME:	MY STORAGE UNIT
PROJECT ADDRESS:	LILLINGTON, NORTH CAROLINA
OWNER:	MY STORAGE UNIT, LLC.
PROJECT NO.:	NC20251
SHEET TITLE:	F FOUNDATION PLAN, DETAILS & NOTES BUILDING "2"
DRAWING NUMBER:	F2 of 2



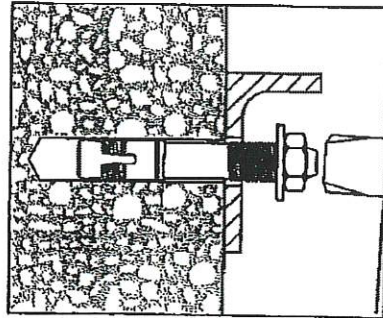
### Kwik Bolt 3 Expansion Anchor Installation Instructions



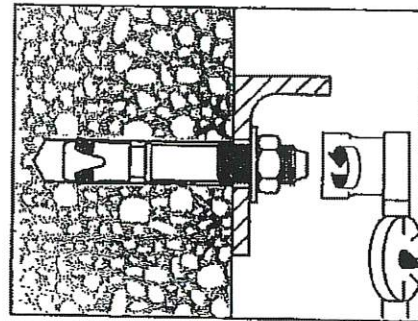
1. Hammer drill a hole to the same nominal diameter as the Kwik Bolt 3. The hole depth must exceed the anchor embedment by at least one diameter. The fixture may be used as a drilling template to ensure proper anchor location.



2. Clean hole.



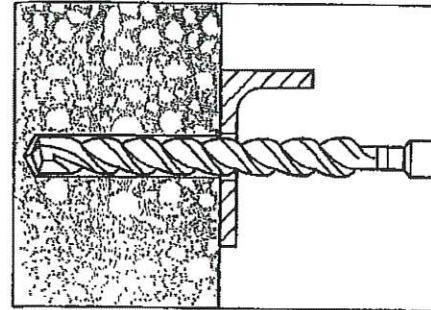
3. Drive the Kwik Bolt 3 into the hole using a hammer. The anchor must be driven until at least six threads are below the surface of the fixture.



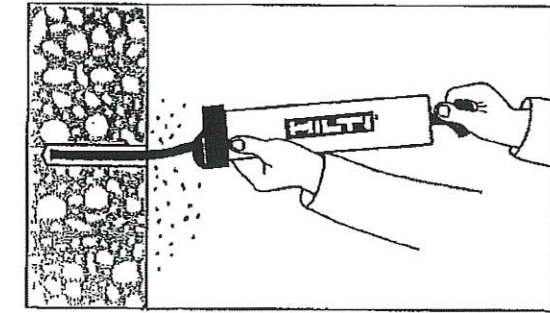
4. Tighten the nut to the recommended installation torque.

DESIGN INFORMATION	Units	Nominal Anchor Diameter				
		1/4	3/8	1/2	5/8	3/4
Installation torque	ft*lb	4	20	40	60	110
	(Nm)	(5)	(27)	(54)	(81)	(149)

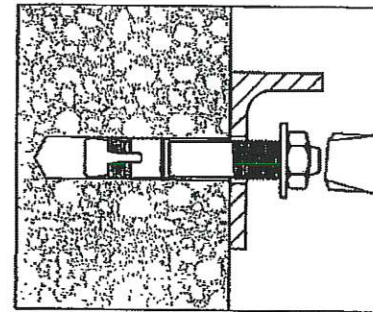
### Kwik Bolt TZ Anchor Installation Instructions into normal-weight and lightweight concrete



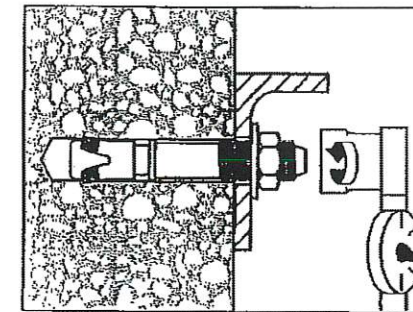
1. Hammer drill a hole to the same nominal diameter as the Kwik Bolt TZ. The hole depth must exceed the anchor embedment by at least 1/4 inch. The fixture may be used as a drilling template to ensure proper anchor location.



2. Clean hole.



3. Drive the Kwik Bolt TZ into the hole using a hammer. The anchor must be driven until at least 4 threads are below the surface of the fixture.



4. Tighten the nut to the recommended installation torque.

SETTING INFORMATION	Units	Nominal anchor diameter (in.)			
		3/8	1/2	5/8	3/4
Installation torque	(ft-lb)	25	40	60	110
	(Nm)	(34)	(54)	(81)	(149)

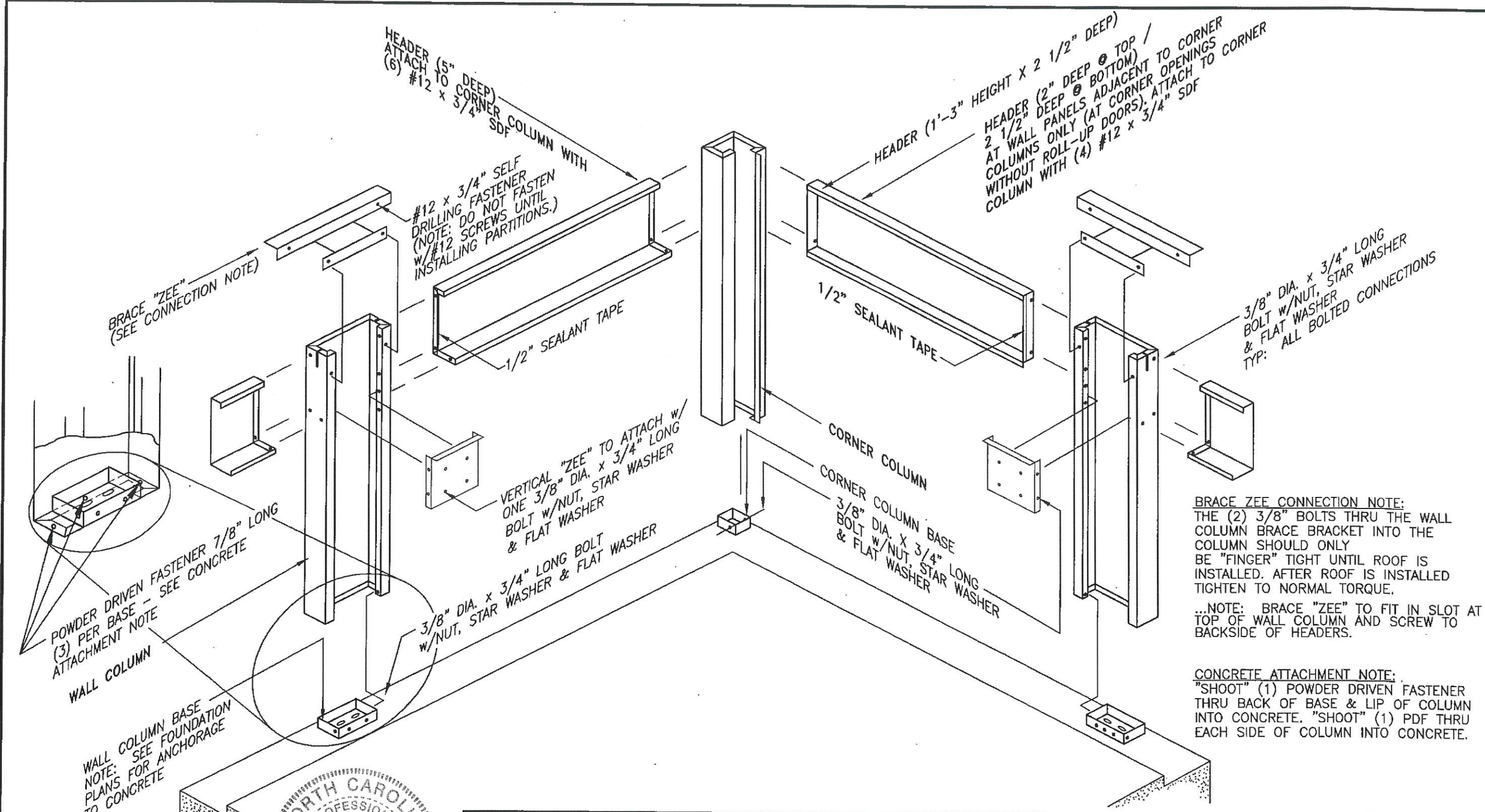


REVISIONS	DATE	BY



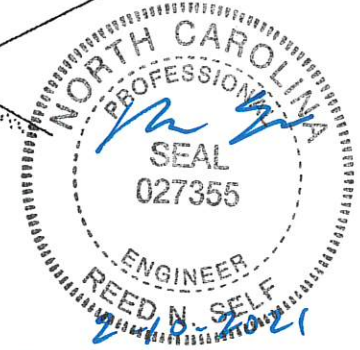
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800)654-7813

SHEET TITLE: <b>Kwik Bolt Anchor Installation Instructions</b>		
DRAWN BY: BDL	APPROVED BY:	DRAWING NUMBER: <b>ERC016X</b>
SCALE: NTS	DATE: 11/8/2011	



**BRACE ZEE CONNECTION NOTE:**  
 THE (2) 3/8" BOLTS THRU THE WALL COLUMN BRACE BRACKET INTO THE COLUMN SHOULD ONLY BE "FINGER" TIGHT UNTIL ROOF IS INSTALLED. AFTER ROOF IS INSTALLED TIGHTEN TO NORMAL TORQUE.  
 ...NOTE: BRACE "ZEE" TO FIT IN SLOT AT TOP OF WALL COLUMN AND SCREW TO BACKSIDE OF HEADERS.

**CONCRETE ATTACHMENT NOTE:**  
 "SHOOT" (1) POWDER DRIVEN FASTENER THRU BACK OF BASE & LIP OF COLUMN INTO CONCRETE. "SHOOT" (1) PDF THRU EACH SIDE OF COLUMN INTO CONCRETE.



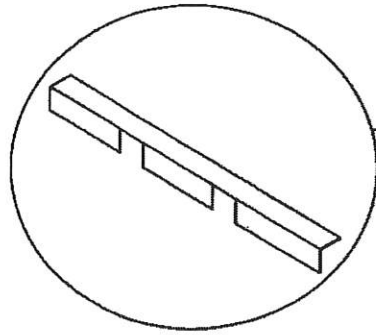
REVISIONS	DATE	BY

**BETCO**  
 228 COMMERCE BLVD.  
 STATESVILLE, NC 28625  
 (800)654-7813

SHEET TITLE: <b>PERIMETER WALL ASSEMBLY</b> All Eave Heights		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER:
SCALE: NTS	DATE: 6/17/94	<b>ERC100X</b>

CONTROL JOINT BRACE (S20139)  
 ATTACH TO HEADERS w/(2)  
 #12 x 7/8" SDF AT EACH HEADER  
 (TOTAL OF 4 SCREWS)  
 ..FIELD NOTCH IF NECESSARY TO FIT OVER  
 CONTROL JOINT COLUMN...SEE ISOMETRIC  
 VIEW BELOW...NOTE: LOCATION OF NOTCHES  
 TO BE DETERMINED FROM WIDTH OF C.J. COLUMN

CONTROL JOINT COLUMN (HALF)



CONTROL JOINT COLUMN (HALF)

C.J. COLUMN EXPANSION TRIM

#10 x 5/8" SDF (PP) (8) EACH SIDE

SLAB RECESS

HEADER

1/8" PDF (2) EA. SIDE

#12 x 7/8" SDF

FIELD CUT ANGLE SA-2 FOR  
 VERTICAL 'ZEE' ATTACHMENT  
 AT WALL COLUMNS... POSITION  
 ACCORDING TO 'VZ' LENGTH  
 FASTEN TO C.J. COLUMN w/(2)  
 #12 x 7/8" SDF EA. END...

CONTROL JOINT COLUMN (HALF)

FIELD CUT ANGLE SA-2 FOR  
 VERTICAL 'ZEE' ATTACHMENT  
 AT BASE OF COLUMN...  
 'SHOOT' TO FOUNDATION  
 w/(2) 1/8" PDF...

#12 x 7/8" SDF  
 (4) PER ANGLE

SEALANT TAPE  
 1/8" thick x 1/2" wide

C.J.C. EXPANSION TRIM  
 #10 x 5/8" SDF (PP)  
 (4) EACH SIDE

CONTROL JOINT BRACE  
 FOR ROOF PAN  
 ATTACHMENT AT TOP OF  
 COLUMN... FASTEN TO  
 HEADER WITH #12 x 7/8"  
 SDF EACH END  
 (SEE ISOMETRIC VIEW)

3/8" DIA. x 3/4" LG. BOLT,  
 NUT, FLAT WASHER &  
 STAR WASHER

CONTROL JOINT COLUMN (HALF)

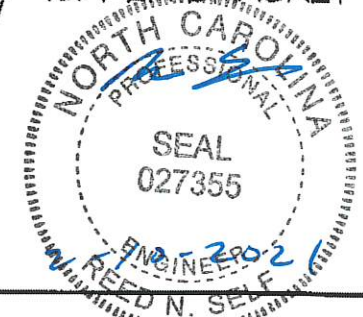
C.J.C. EXPANSION TRIM  
 BRACKET... (2) REQUIRED...  
 (1) AT 1/3 OF COLUMN HGT.  
 & (1) AT 2/3 OF COLUMN HGT.

#12 x 7/8" SDF  
 (2) PER BRACKET

1/2" DIA. x 3 3/4" LG.  
 WEDGE ANCHOR

NOTE: ADJUSTABLE 'CONTROL JOINT COLUMNS'  
 (C.J.C.'s) ARE TO BE USED IN LIEU OF  
 SIDEWALL COLUMNS IN LOCATIONS OPPOSING  
 EACH OTHER (WHERE APPLICABLE).  
 THE C.J.C.'s ALLOW YOU TO LENGTHEN OR  
 SHORTEN THE OVERALL LENGTH OF THE  
 BLDG. BY UP TO 2'. THIS GIVES YOU THE  
 ABILITY TO MAKE ADJUSTMENTS FOR A  
 SLAB THAT IS NOT EXACTLY THE  
 DIMENSIONS SPECIFIED.

DO NOT INSTALL WEDGE ANCHORS  
 IN C.J.C. LOCATIONS UNTIL COLUMNS ARE IN  
 PLACE & ADJUSTED AS REQUIRED.



REVISIONS	DATE	BY
④ ADDED SDF'S TO CJC TRIM	11/15/05	JCM
③ CHANGED W/A LENGTH TO 3 3/4'	4/30/03	RSG
② GENERAL REVISIONS	1/22/99	JAB
① GENERAL REVISIONS	3-8-99	FOX



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 (800)654-7813

SHEET TITLE:

CONTROL JOINT COLUMN  
 AND TRIM INSTALLATION

DRAWN BY:  
 K.D.W.

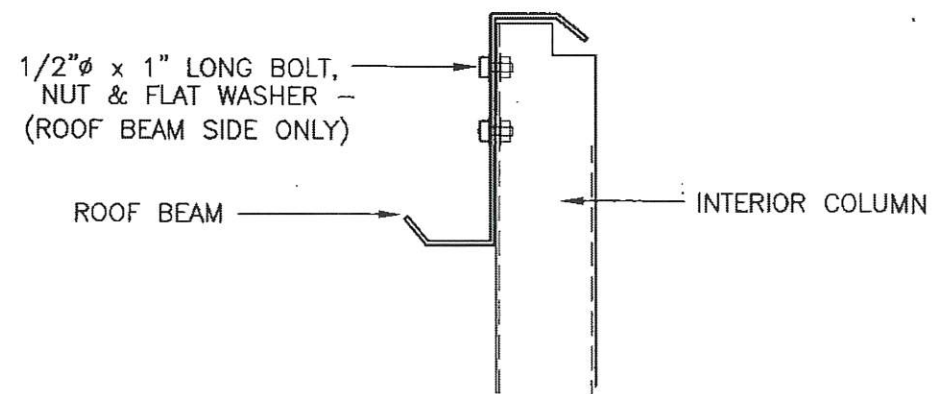
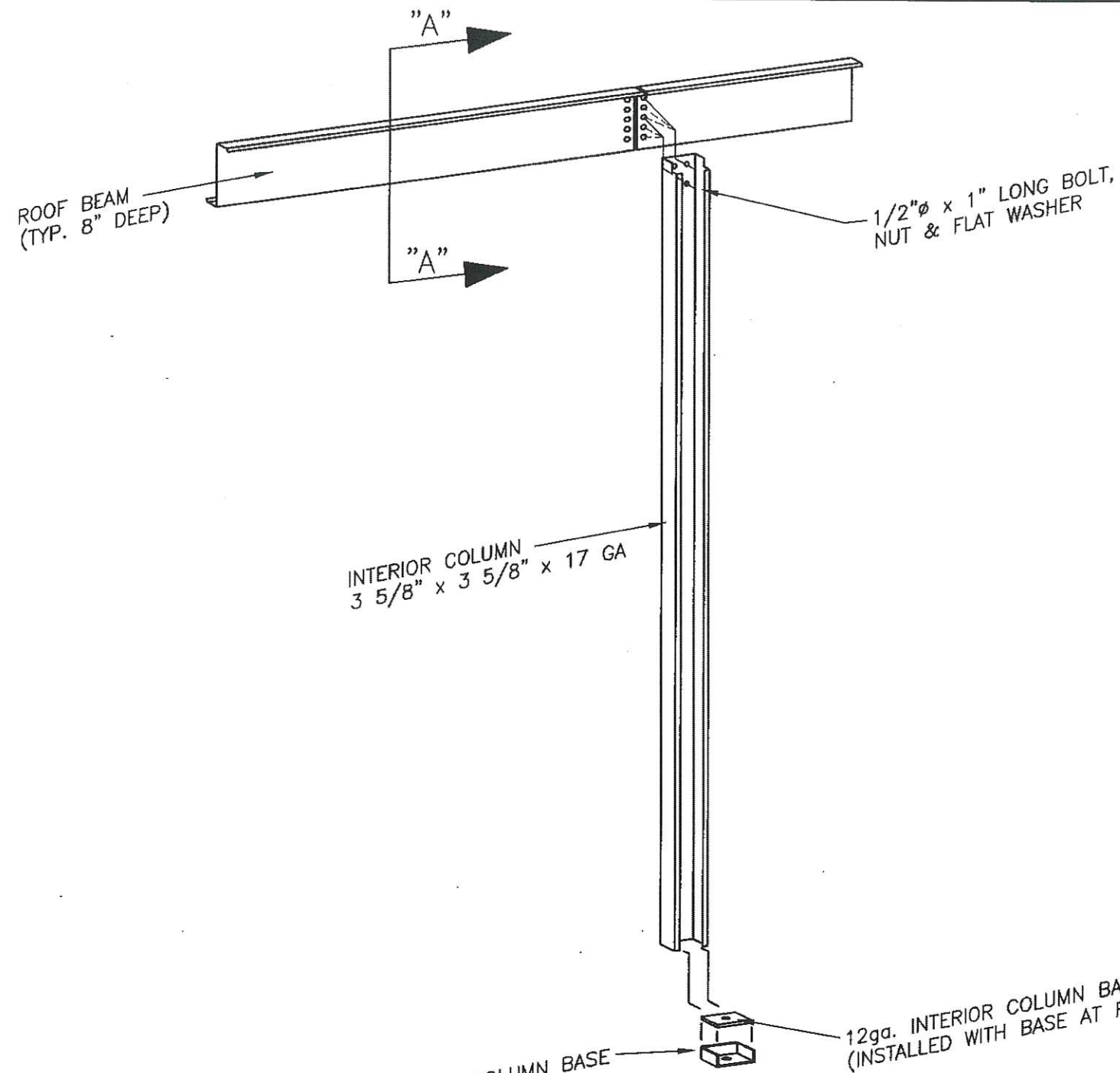
APPROVED BY:

DRAWING NUMBER:

SCALE:  
 NTS

DATE:  
 8/1/94

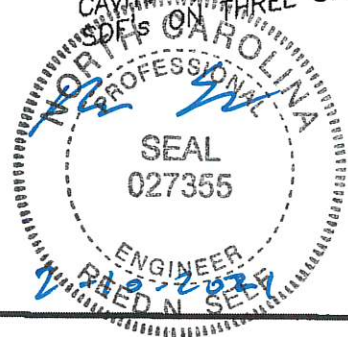
ERC105X



SECTION  
"A" - "A"

NOTE: SEE BUILDING CROSS SECTION FOR COLUMN HEIGHT & ROOF BEAM HGT. ABOVE FINISHED FLOOR

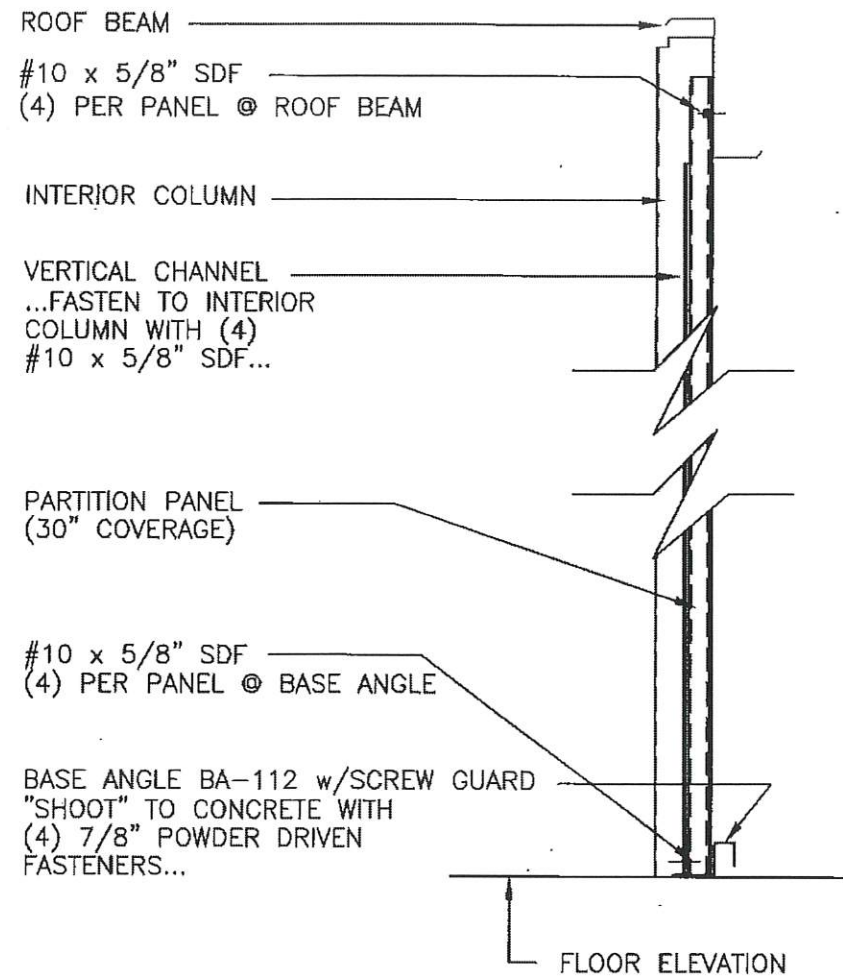
12ga. INTERIOR COLUMN BASE  
(BASE TO BE FACTORY  
INSTALLED INSIDE COLUMN  
CAVITY w/ (2) #12 x 7/8"  
SPCLs ON THREE SIDES.)



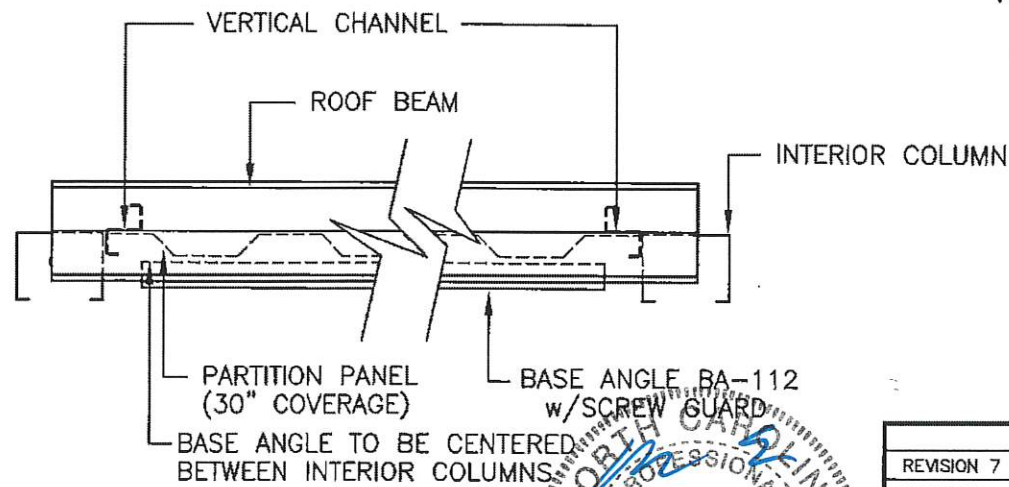
REVISIONS	DATE	BY
3	8-29-02	BAM
2	3-16-99	FOX
1	3-9-99	FOX

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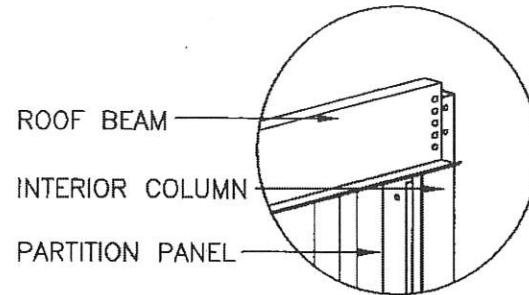
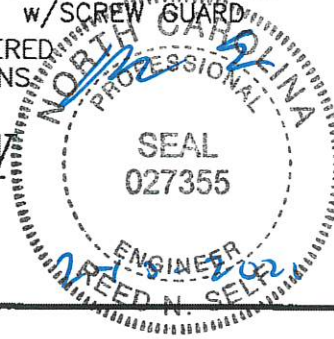
SHEET TITLE: <i>Interior Column Installation All Heights</i>		
DRAWN BY: J POPE	APPROVED BY:	DRAWING NUMBER: ERC110X
SCALE: NTS	DATE: 1/30/98	



**SECTION A-A**



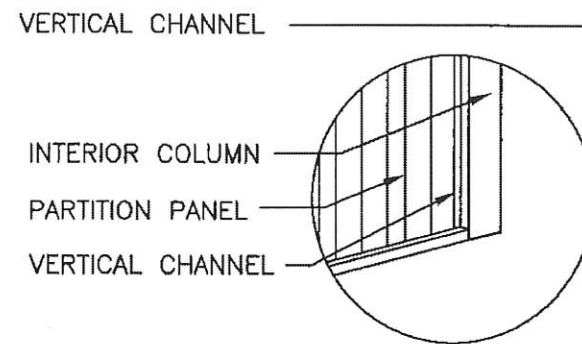
**PLAN VIEW**



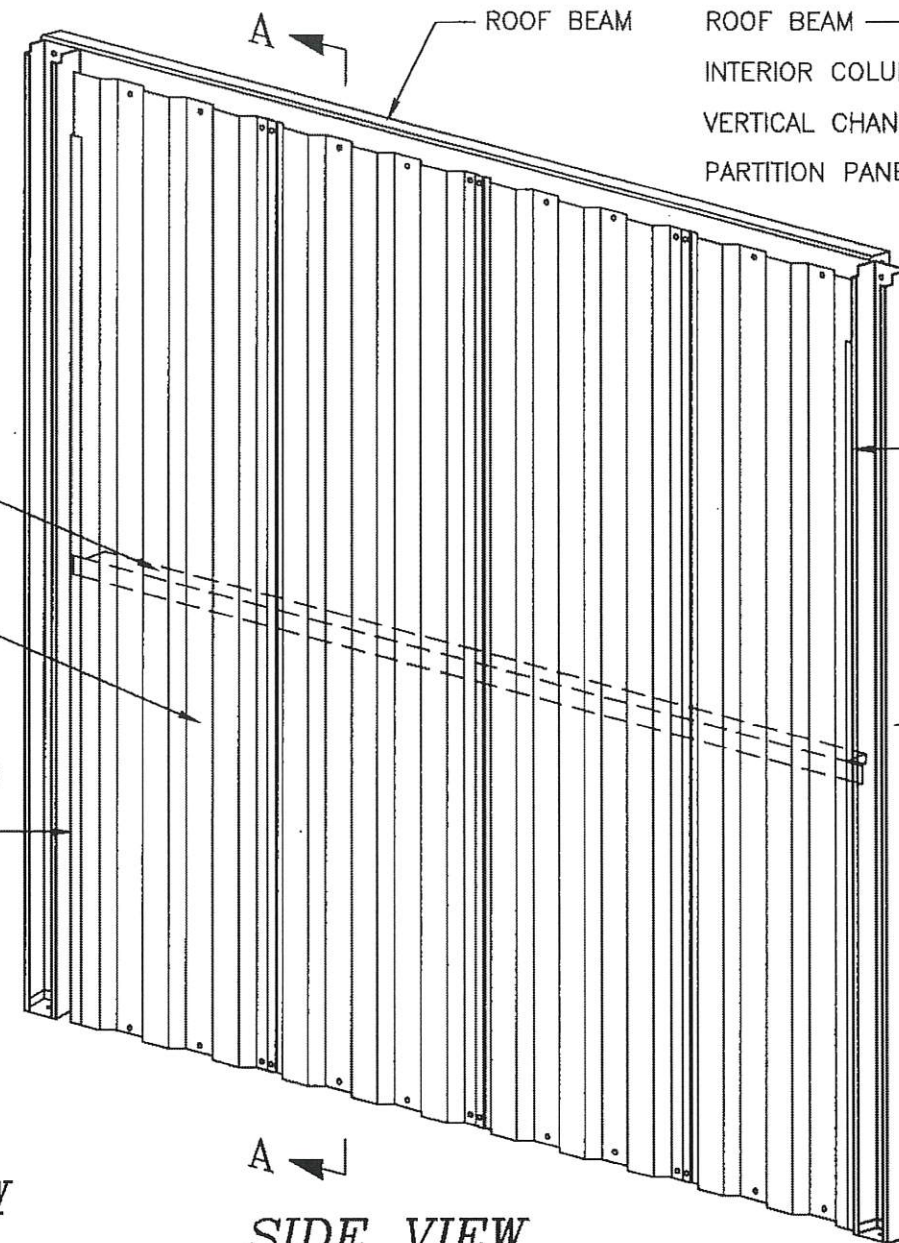
**OPPOSITE VIEW  
THIS CORNER**

(NOTE: INSTALL A TOP CHANNEL AT 4-6" A.F.F. ONLY WHEN PANEL HEIGHT IS 9'-0" OR MORE.) (INSTALL FLANGES DOWN)

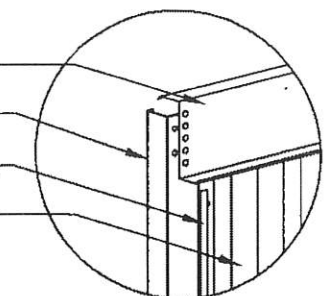
PARTITION PANEL (30" COVERAGE) FASTEN TO ROOF BEAM AND BASE ANGLE w/(4) #10 x 5/8" SDF EACH...(1) PER PAN SECTION AND (1) EACH SIDE OF LAP JOINT... FASTEN TO VERTICAL FRAMING w/(4) #10 x 5/8" SDF EACH - (SEE NOTE)



**OPPOSITE VIEW  
THIS CORNER**

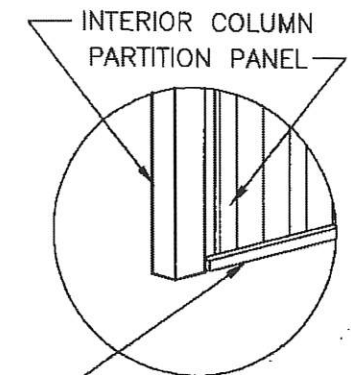


**SIDE VIEW**



**OPPOSITE VIEW  
THIS CORNER**

VERTICAL CHANNEL FASTEN TO INTERIOR COLUMN WITH (4) #10 x 5/8" SDF (SEE NOTE)



**OPPOSITE VIEW  
THIS CORNER**

NOTE: THE FOUR (4) FASTENERS FOR ATTACHING PARTITION PANELS TO INTERIOR COLUMNS ARE INSTALLED AT THE TOP, BOTTOM AND AT THE 1/3 POINTS NOT TO EXCEED A 3'-0" VERTICAL SPACING BETWEEN FASTENERS.

BASE ANGLE BA-112 w/SCREW GUARD

REVISIONS	DATE	BY
REVISION 7	3/17/04	JCM
REVISION 6	8/29/02	BAM
REVISION 5	2/7/02	BDL
REVISION 4	3/30/01	TLR
REVISION 3	3-24-99	FOX
REVISION 2	6/23/98	CJG
REVISION 1	6/4/98	KLH

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SHEET TITLE: <b>Partition - Interior Column to Interior Column</b>		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER: ERC201X
SCALE: NTS	DATE: 6/20/94	

BRACE "ZEE"  
 ...FASTEN TO WALL COLUMN w/(1)  
 3/8"φ x 3/4" BOLT, NUT, STAR  
 WASHER & FLAT WASHER EACH  
 FLANGE...FASTEN TO HEADER w/(1)  
 #12 x 7/8" SDF...

TOP CHANNEL TC-119.5  
 SECURE TO TOP OF DOOR  
 MOUNTING PLATE w/(1)  
 #10 x 5/8" SDF...FASTEN TO INT.  
 COLUMN w/(2) #10 x 5/8" SDF...

#10 x 5/8" SDF  
 (4) PER PANEL @ TOP CHANNEL

DOOR MOUNTING PLATE  
 ...FASTEN TO WALL COLUMN w/(2)  
 3/8"φ x 3/4" BOLT, NUT, STAR  
 WASHER & FLAT WASHER EACH FLANGE

VERTICAL "ZEE"  
 ...FASTEN TO WALL COLUMN BASE  
 AND TO DOOR MOUNTING BRACKET  
 w/(1) 3/8"φ x 3/4" BOLT, NUT, STAR  
 WASHER & FLAT WASHER EACH END...

WALL COLUMN

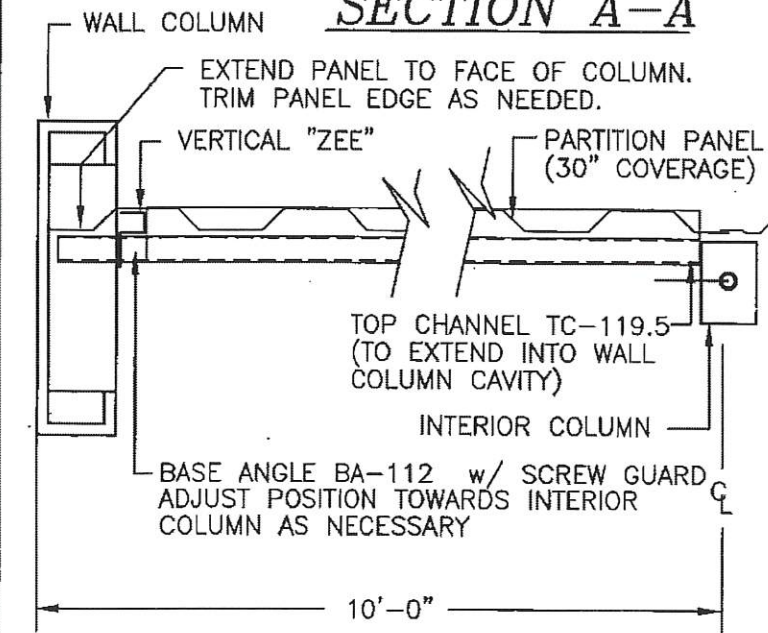
PARTITION PANEL  
 (30" COVERAGE)

#10 x 5/8" SDF  
 (4) PER PANEL @ BASE ANGLE

BASE ANGLE BA-112 w/SCREW GUARD  
 "SHOOT" TO FOUNDATION  
 w/(4) 7/8" POWDER  
 DRIVEN FASTENERS...

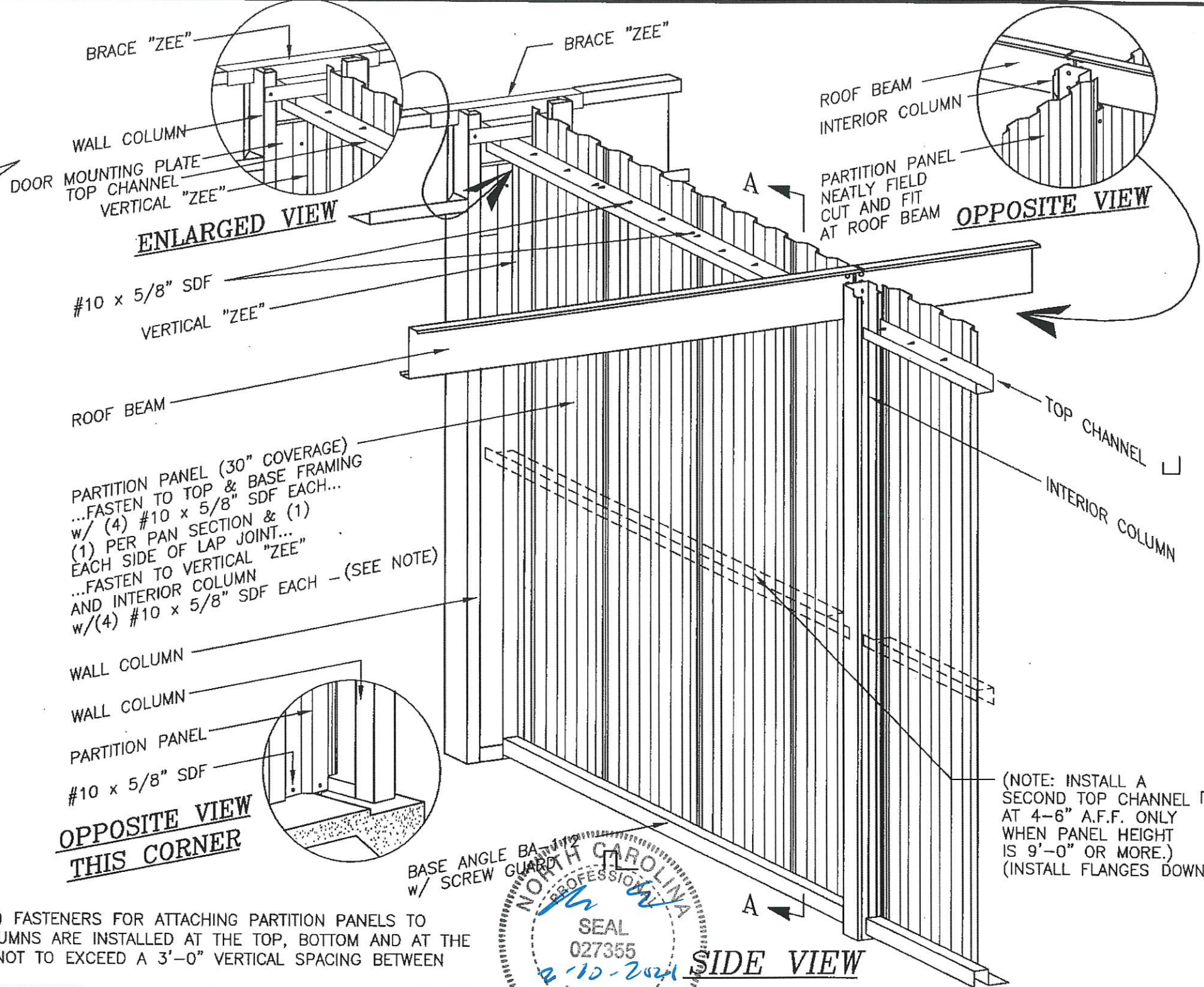
FLOOR ELEVATION  
 THRESHOLD ELEVATION

**SECTION A-A**



**PLAN VIEW**

NOTE:  
 THE FOUR (4) FASTENERS FOR ATTACHING PARTITION PANELS TO  
 INTERIOR COLUMNS ARE INSTALLED AT THE TOP, BOTTOM AND AT THE  
 1/3 POINTS NOT TO EXCEED A 3'-0" VERTICAL SPACING BETWEEN  
 FASTENERS.



**OPPOSITE VIEW  
 THIS CORNER**

**OPPOSITE VIEW**

**SIDE VIEW**

PARTITION PANEL (30" COVERAGE)  
 ...FASTEN TO TOP & BASE FRAMING  
 w/ (4) #10 x 5/8" SDF EACH...  
 (1) PER PAN SECTION & (1)  
 EACH SIDE OF LAP JOINT...  
 ...FASTEN TO VERTICAL "ZEE"  
 AND INTERIOR COLUMN  
 w/(4) #10 x 5/8" SDF EACH -- (SEE NOTE)

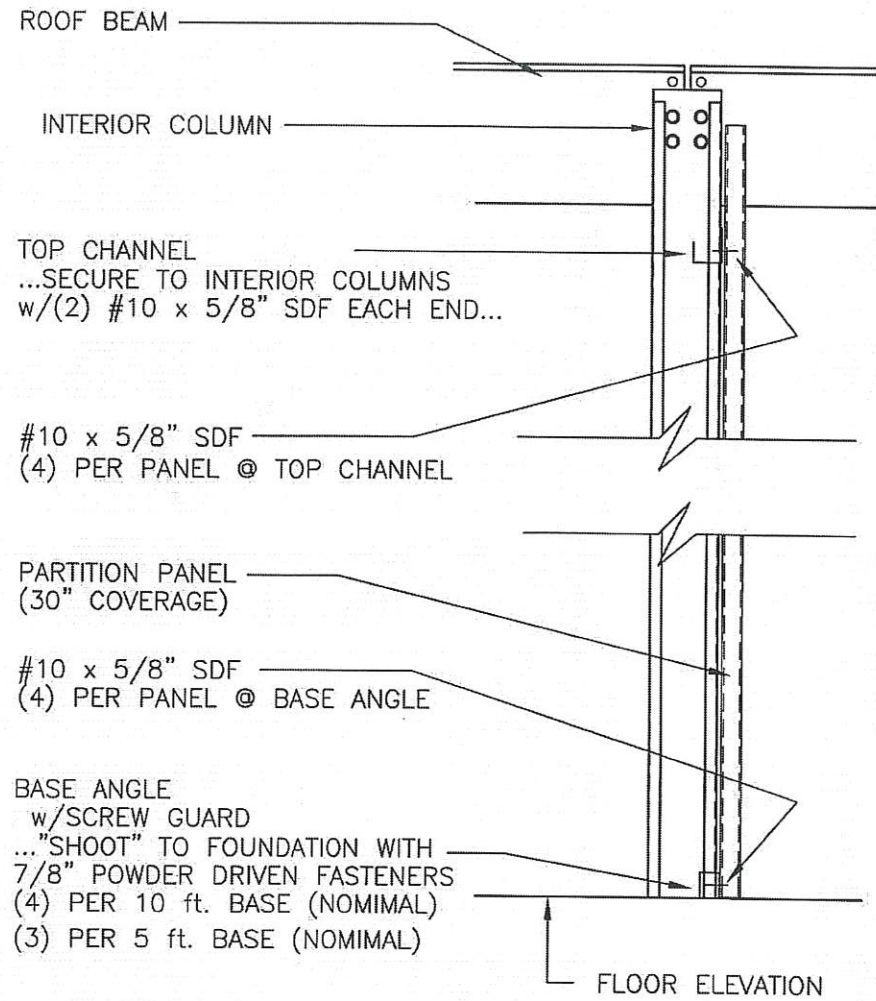
(NOTE: INSTALL A  
 SECOND TOP CHANNEL  
 AT 4-6" A.F.F. ONLY  
 WHEN PANEL HEIGHT  
 IS 9'-0" OR MORE.)  
 (INSTALL FLANGES DOWN)



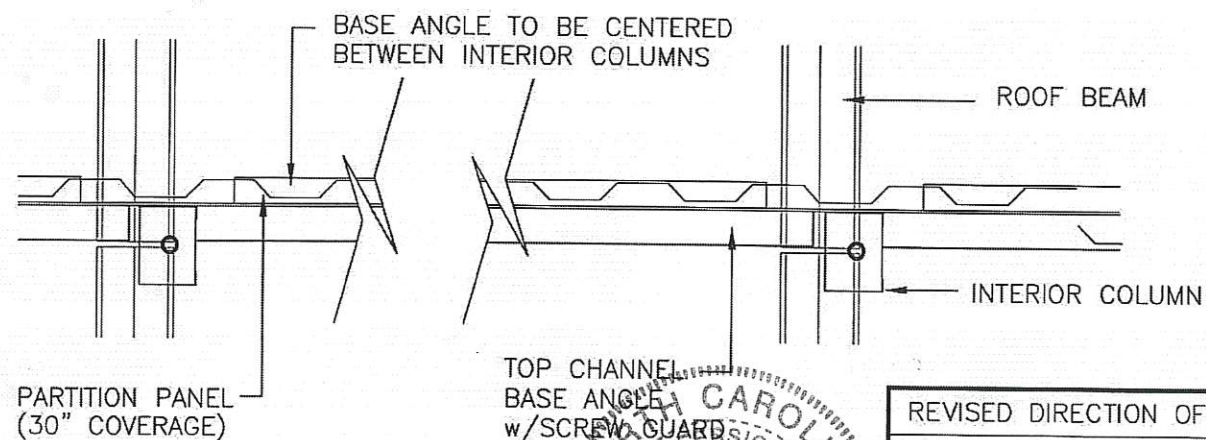
REVISIONS	DATE	BY
REVISED DIRECTION OF MID TOP CHANNEL	3/17/04	JCM
REVISED INTERIOR COLUMNS	8/29/02	BAM
ADDED TOP CHANNEL AT PANELS OVER 9'-0"	2/7/02	BOL
ADDED NOTE FOR INTERIOR COLUMNS	4/2/01	TLR
GENERAL REVISIONS	4/12/99	CWM

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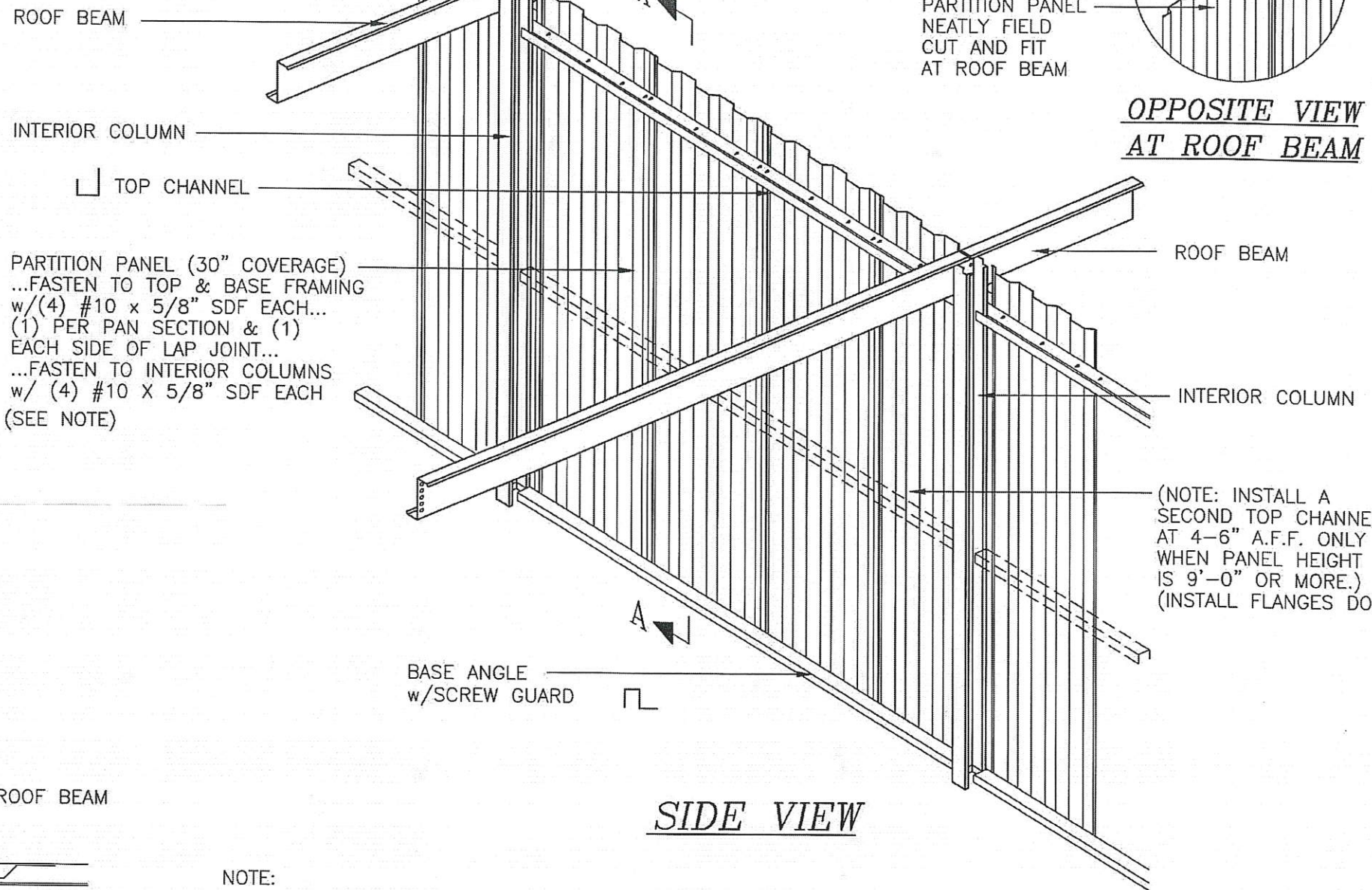
SHEET TITLE: <b>Partition - Sidewall Column  to Interior Column - 10' span</b>		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER: ERC202X
SCALE: NTS	DATE: 6/20/94	



**SECTION A-A**



**PLAN VIEW**



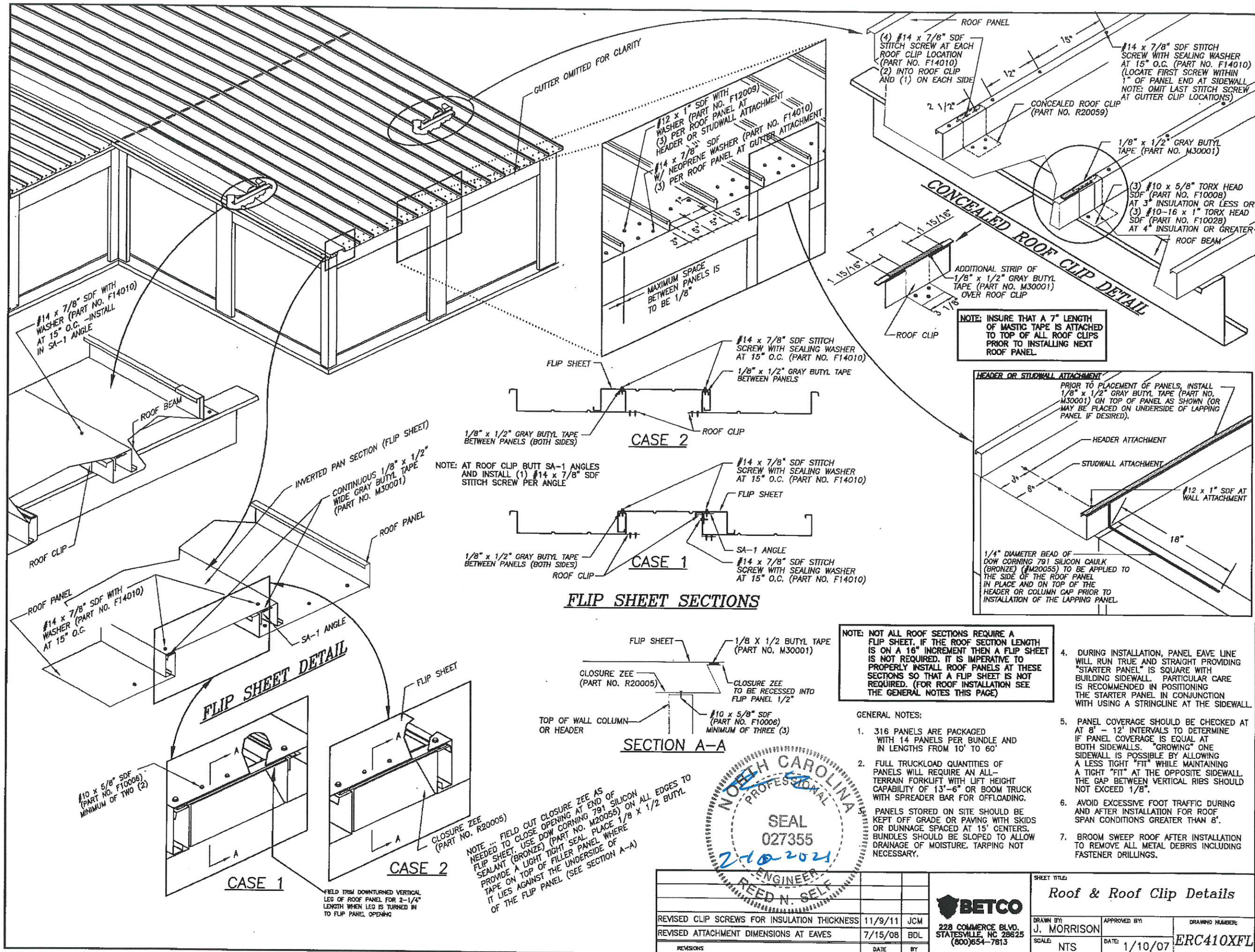
NOTE:  
THE FOUR (4) FASTENERS FOR ATTACHING PARTITION PANELS TO  
INTERIOR COLUMNS ARE INSTALLED AT THE TOP, BOTTOM AND AT THE  
1/3 POINTS NOT TO EXCEED A 3'-0" VERTICAL SPACING BETWEEN  
FASTENERS.

REVISIONS	DATE	BY
REVISED DIRECTION OF MID TOP CHANNEL	3/17/04	JCM
REVISED INTERIOR COLUMNS	8/29/02	BAM
ADDED TOP CHANNEL AT PANELS OVER 9'-0"	2/7/02	BDL
ADDED NOTE FOR INTERIOR COLUMNS	4/2/01	TLR
GENERAL REVISIONS	5/7/99	CJG



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SHEET TITLE: <b>Partition - Interior Column to Interior Column (all eave heights)</b>		
DRAWN BY: J POPE	APPROVED BY:	DRAWING NUMBER: ERC203X
SCALE: NTS	DATE: 6/22/98	



#14 x 7/8" SDF WITH WASHER (PART NO. F14010) AT 15" O.C. - INSTALL IN SA-1 ANGLE

#14 x 7/8" SDF WITH WASHER (PART NO. F14010) AT 15" O.C.

#10 x 5/8" SDF (PART NO. F10006) MINIMUM OF TWO (2)

GUTTER OMITTED FOR CLARITY

#12 x 1" SDF WITH WASHER (PART NO. F12009) (3) PER ROOF PANEL AT HEADER OR STUDWALL ATTACHMENT  
#14 x 7/8" SDF NEOPRENE WASHER (PART NO. F14010) (3) PER ROOF PANEL AT GUTTER ATTACHMENT

MAXIMUM SPACE BETWEEN PANELS IS TO BE 1/8"

(4) #14 x 7/8" SDF STITCH SCREW WITH SEALING WASHER (PART NO. F14010) (2) INTO ROOF CLIP AND (1) ON EACH SIDE

#14 x 7/8" SDF STITCH SCREW WITH SEALING WASHER AT 15" O.C. (PART NO. F14010) (LOCATE FIRST SCREW WITHIN 1" OF PANEL END AT SIDEWALL. NOTE: OMIT LAST STITCH SCREW AT GUTTER CLIP LOCATIONS)

1/8" x 1/2" GRAY BUTYL TAPE (PART NO. M30001)

(3) #10 x 5/8" TORX HEAD SDF (PART NO. F10008) AT 3" INSULATION OR LESS OR (3) #10-16 x 1" TORX HEAD SDF (PART NO. F10028) AT 4" INSULATION OR GREATER

ADDITIONAL STRIP OF 1/8" x 1/2" GRAY BUTYL TAPE (PART NO. M30001) OVER ROOF CLIP

NOTE: INSURE THAT A 7" LENGTH OF MASTIC TAPE IS ATTACHED TO TOP OF ALL ROOF CLIPS PRIOR TO INSTALLING NEXT ROOF PANEL.

PRIOR TO PLACEMENT OF PANELS, INSTALL 1/8" x 1/2" GRAY BUTYL TAPE (PART NO. M30001) ON TOP OF PANEL AS SHOWN (OR MAY BE PLACED ON UNDERSIDE OF LAPPING PANEL IF DESIRED).

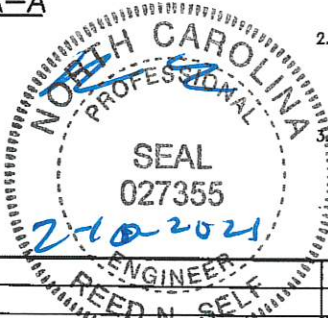
1/4" DIAMETER BEAD OF DOW CORNING 791 SILICON CAULK (BRONZE) (#M20055) TO BE APPLIED TO THE SIDE OF THE ROOF PANEL IN PLACE AND ON TOP OF THE HEADER OR COLUMN CAP PRIOR TO INSTALLATION OF THE LAPPING PANEL.

NOTE: AT ROOF CLIP BUTT SA-1 ANGLES AND INSTALL (1) #14 x 7/8" SDF STITCH SCREW PER ANGLE

NOTE: NOT ALL ROOF SECTIONS REQUIRE A FLIP SHEET. IF THE ROOF SECTION LENGTH IS ON A 16" INCREMENT THEN A FLIP SHEET IS NOT REQUIRED. IT IS IMPERATIVE TO PROPERLY INSTALL ROOF PANELS AT THESE SECTIONS SO THAT A FLIP SHEET IS NOT REQUIRED. (FOR ROOF INSTALLATION SEE THE GENERAL NOTES THIS PAGE)

- GENERAL NOTES:
- 316 PANELS ARE PACKAGED WITH 14 PANELS PER BUNDLE AND IN LENGTHS FROM 10' TO 60'
  - FULL TRUCKLOAD QUANTITIES OF PANELS WILL REQUIRE AN ALL-TERRAIN FORKLIFT WITH LIFT HEIGHT CAPABILITY OF 13'-6" OR BOOM TRUCK WITH SPREADER BAR FOR OFFLOADING. PANELS STORED ON SITE SHOULD BE KEPT OFF GRADE OR PAVING WITH SKIDS OR DUNNAGE SPACED AT 15' CENTERS. BUNDLES SHOULD BE SLOPED TO ALLOW DRAINAGE OF MOISTURE. TARPING NOT NECESSARY.
  - DURING INSTALLATION, PANEL EAVE LINE WILL RUN TRUE AND STRAIGHT PROVIDING "STARTER PANEL" IS SQUARE WITH BUILDING SIDEWALL. PARTICULAR CARE IS RECOMMENDED IN POSITIONING THE STARTER PANEL IN CONJUNCTION WITH USING A STRINGLINE AT THE SIDEWALL.
  - PANEL COVERAGE SHOULD BE CHECKED AT 8' - 12' INTERVALS TO DETERMINE IF PANEL COVERAGE IS EQUAL AT BOTH SIDEWALLS. "GROWING" ONE SIDEWALL IS POSSIBLE BY ALLOWING A LESS TIGHT "FIT" WHILE MAINTAINING A TIGHT "FIT" AT THE OPPOSITE SIDEWALL. THE GAP BETWEEN VERTICAL RIBS SHOULD NOT EXCEED 1/8".
  - AVOID EXCESSIVE FOOT TRAFFIC DURING AND AFTER INSTALLATION FOR ROOF SPAN CONDITIONS GREATER THAN 8'.
  - BROOM SWEEP ROOF AFTER INSTALLATION TO REMOVE ALL METAL DEBRIS INCLUDING FASTENER DRILLINGS.

NOTE: FIELD OUT CLOSURE ZEE AS NEEDED TO CLOSE OPENING AT END OF FLIP SHEET. USE DOW CORNING 791 SILICON SEALANT (BRONZE) (PART NO. M20055) ON ALL EDGES TO PROVIDE A LIGHT TIGHT SEAL. PLACE 1/8" x 1/2" BUTYL TAPE ON TOP OF FILLER PANEL WHERE IT LIES AGAINST THE UNDERSIDE OF THE FLIP PANEL (SEE SECTION A-A)



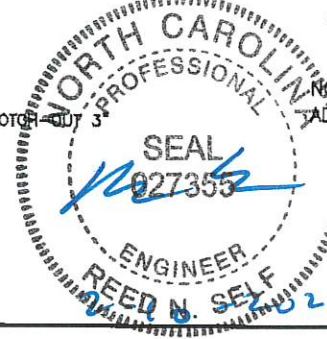
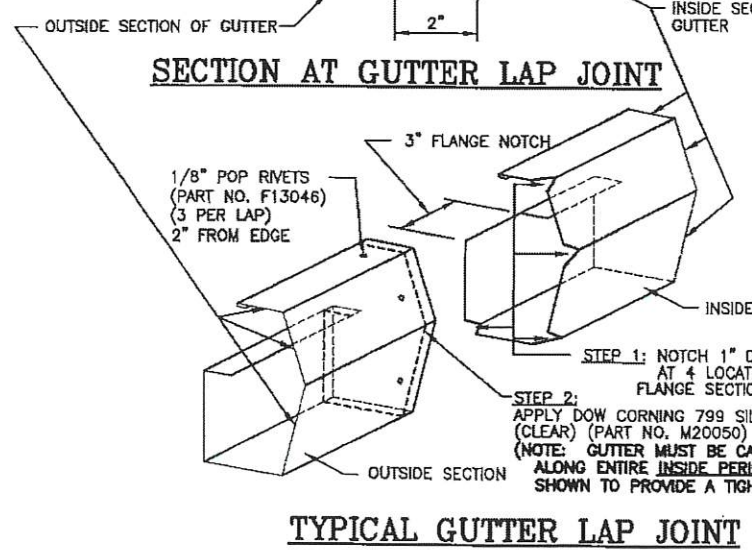
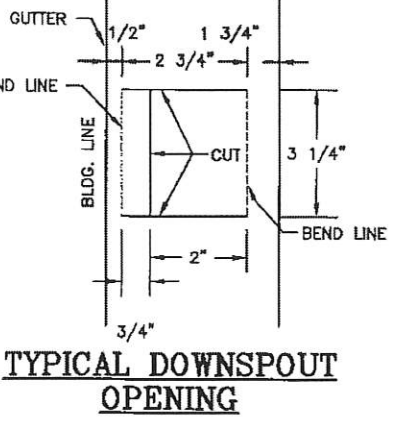
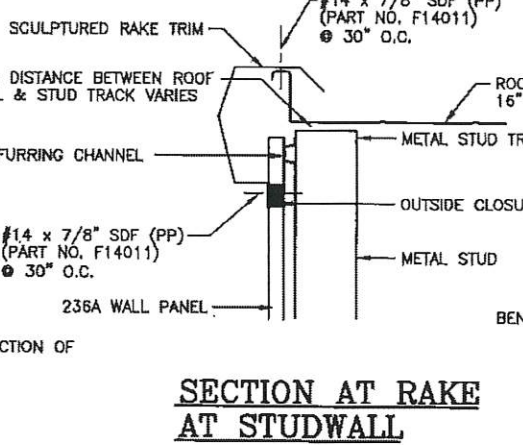
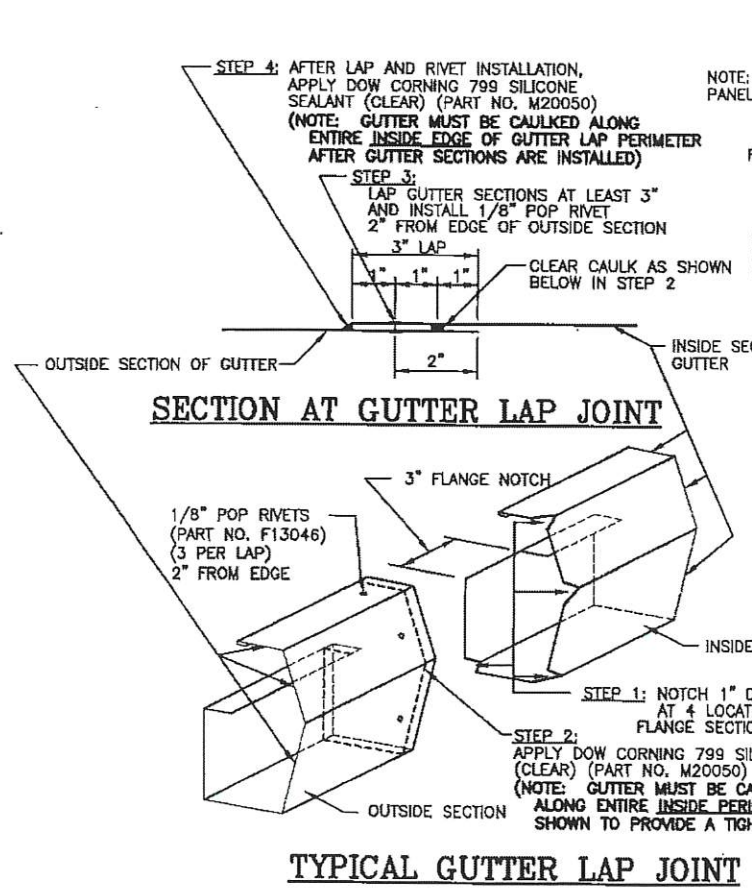
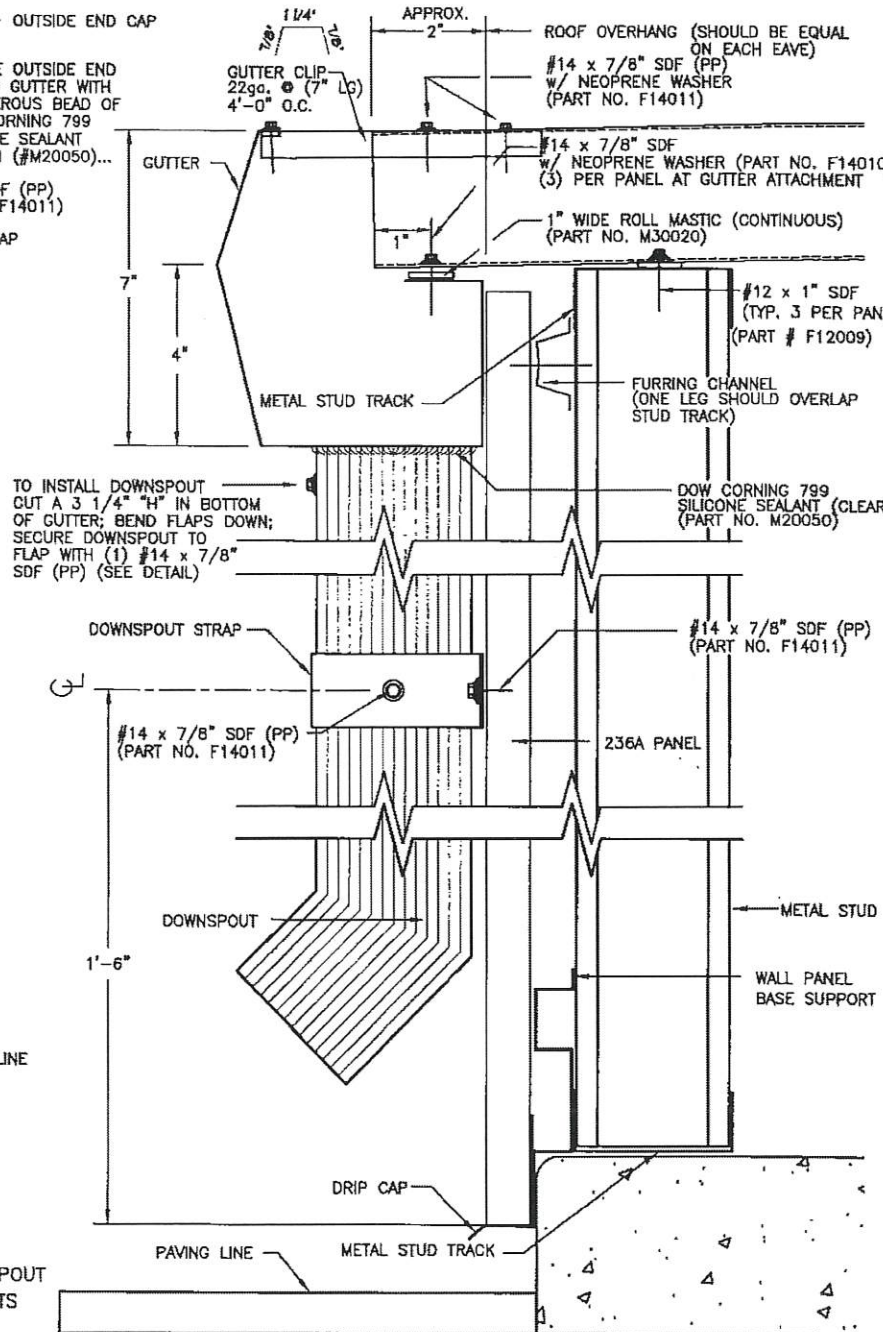
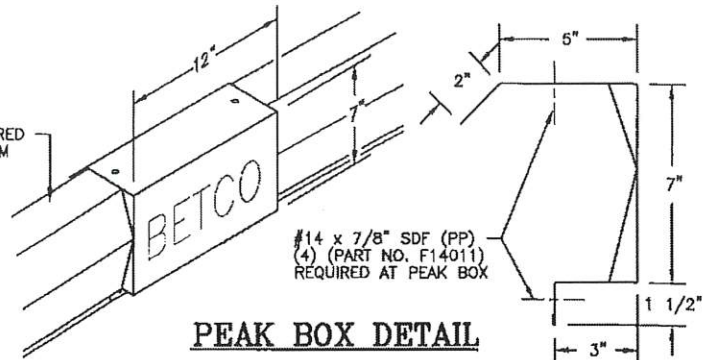
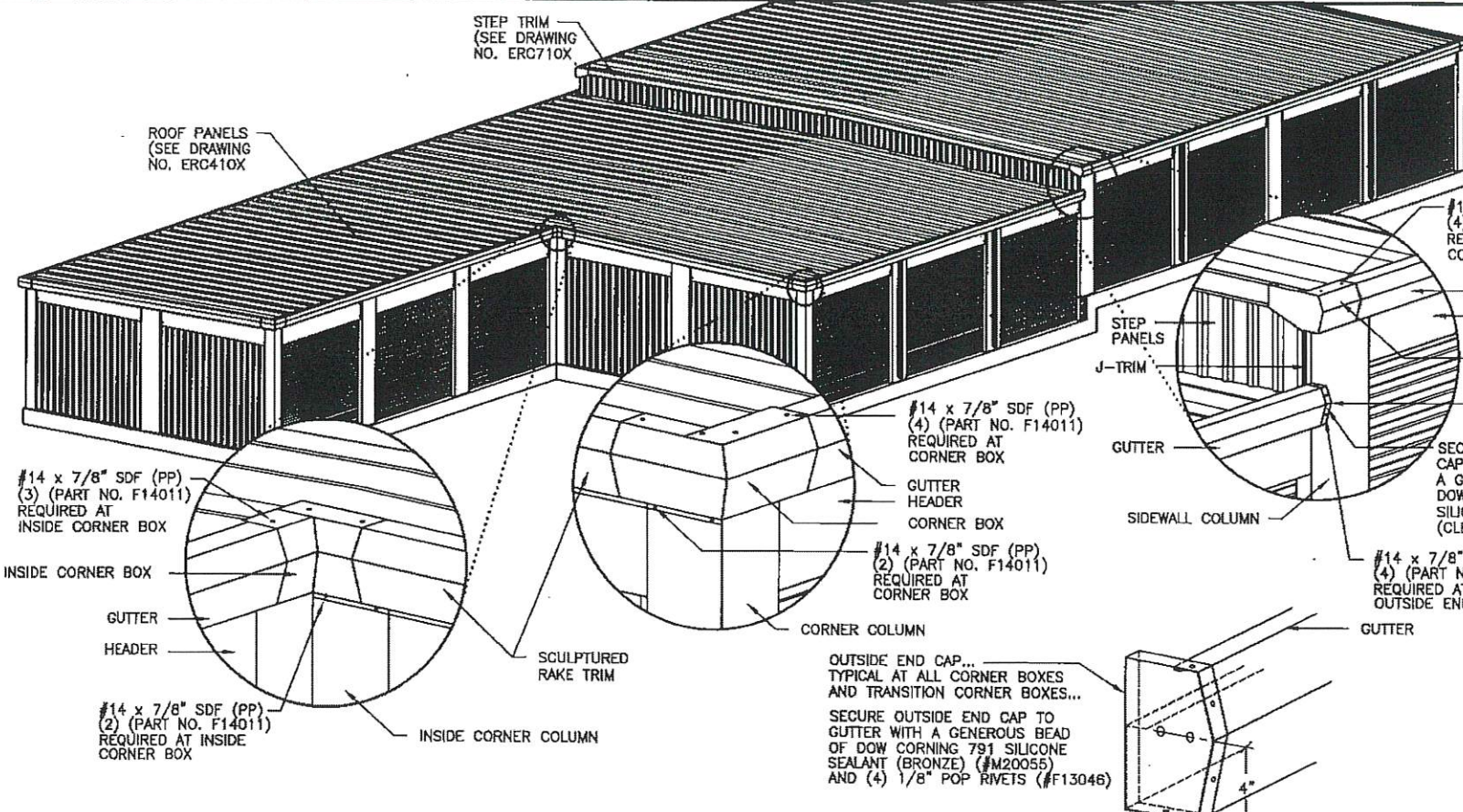
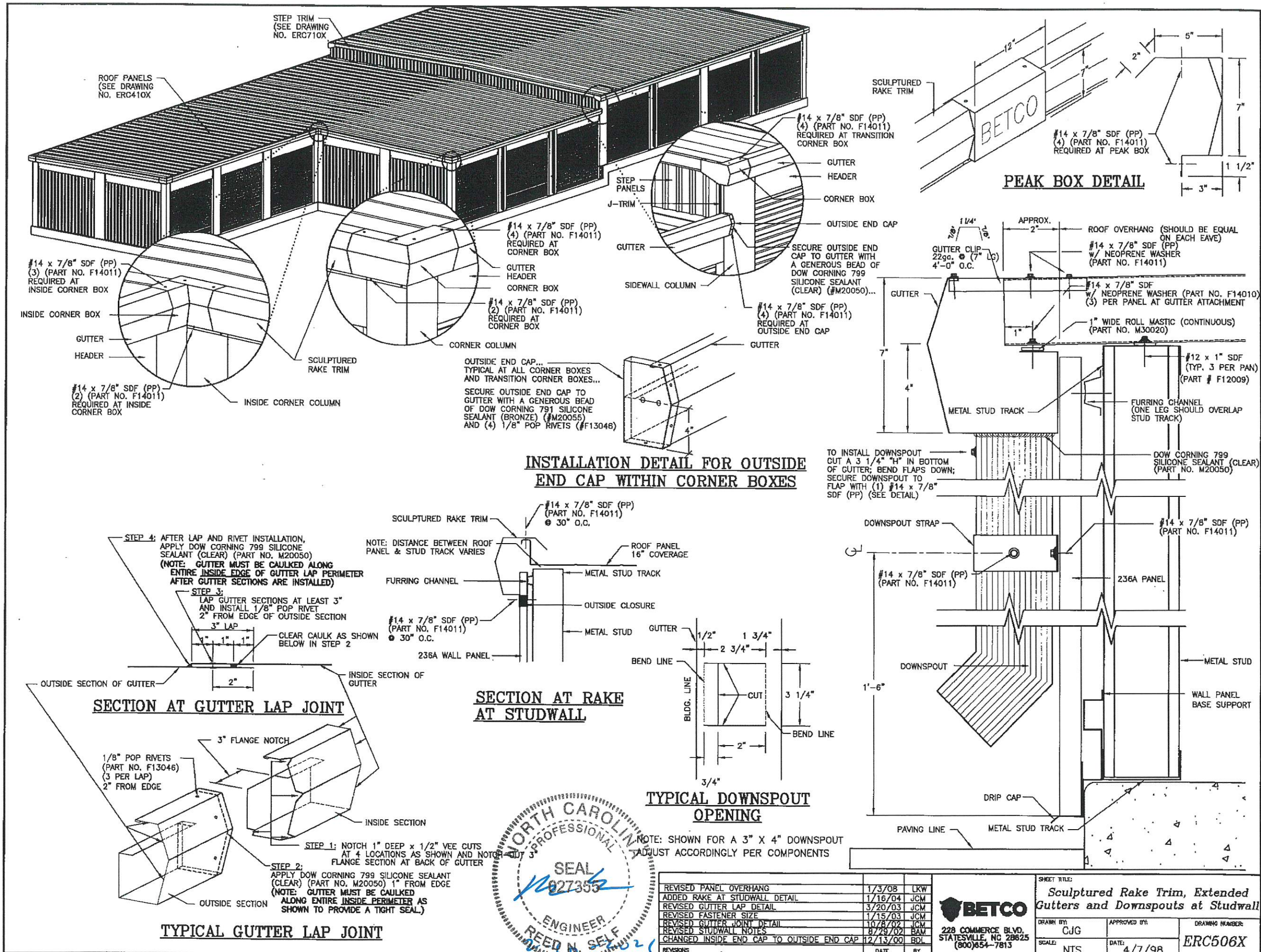
REVISIONS	DATE	BY
REVISED CLIP SCREWS FOR INSULATION THICKNESS	11/9/11	JCM
REVISED ATTACHMENT DIMENSIONS AT EAVES	7/15/08	BDL

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SHEET TITLE		
Roof & Roof Clip Details		
DRAWN BY:	APPROVED BY:	DRAWING NUMBER:
J. MORRISON		ERC410XFL
SCALE:	DATE:	
NTS	1/10/07	







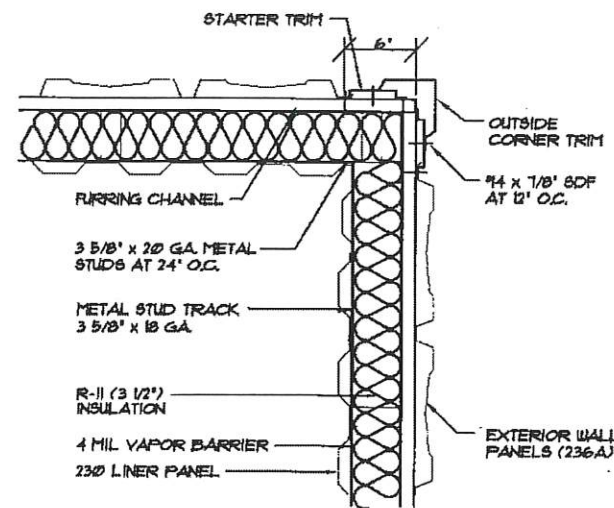
NOTE: SHOWN FOR A 3\"/>

REVISED PANEL OVERHANG	1/3/08	LKW
ADDED RAKE AT STUDWALL DETAIL	1/16/04	JCM
REVISED GUTTER LAP DETAIL	3/20/03	JCM
REVISED FASTENER SIZE	1/15/03	JCM
REVISED GUTTER JOINT DETAIL	10/8/02	JCM
REVISED STUDWALL NOTES	8/29/02	BAM
CHANGED INSIDE END CAP TO OUTSIDE END CAP	12/13/00	BDL
REVISIONS	DATE	BY

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SHEET TITLE:  
**Sculptured Rake Trim, Extended Gutters and Downspouts at Studwall**

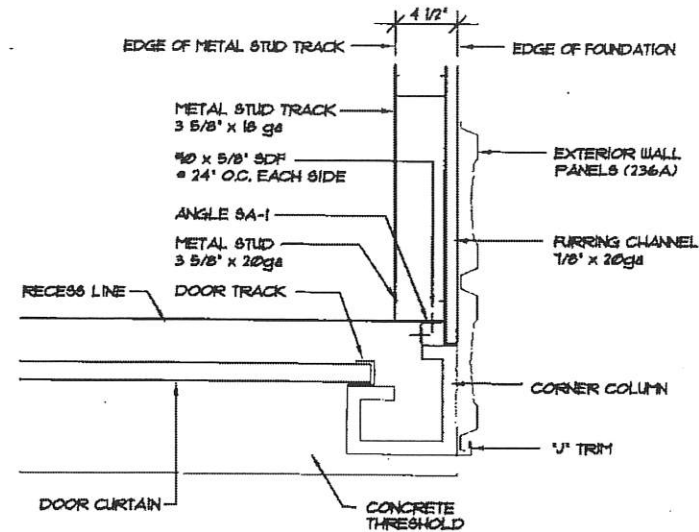
DRAWN BY: CJG      APPROVED BY:      DRAWING NUMBER: ERC506X  
 SCALE: NTS      DATE: 4/7/98



**INSULATED STUDWALL CORNER DETAIL**

(A)  
ERC600

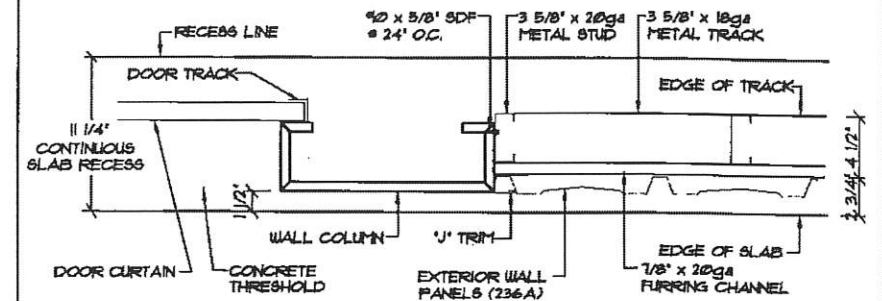
NOT TO SCALE



**STUDWALL CONSTRUCTION @ CORNER COLUMN**

(C)  
ERC600

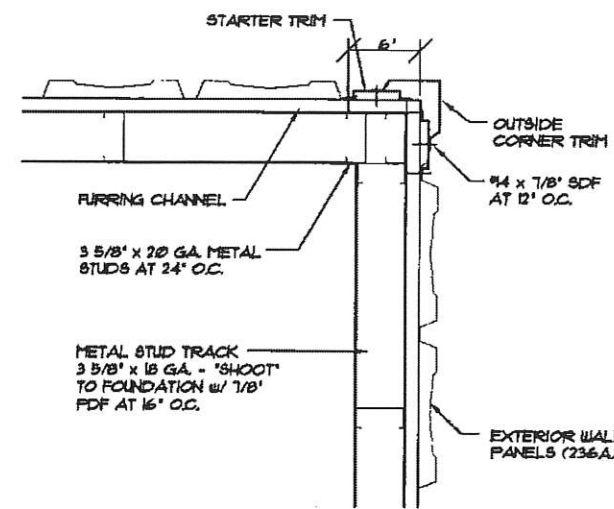
NOT TO SCALE



**STUDWALL CONSTRUCTION @ WALL COLUMN IN RECESS**

(E)  
ERC600

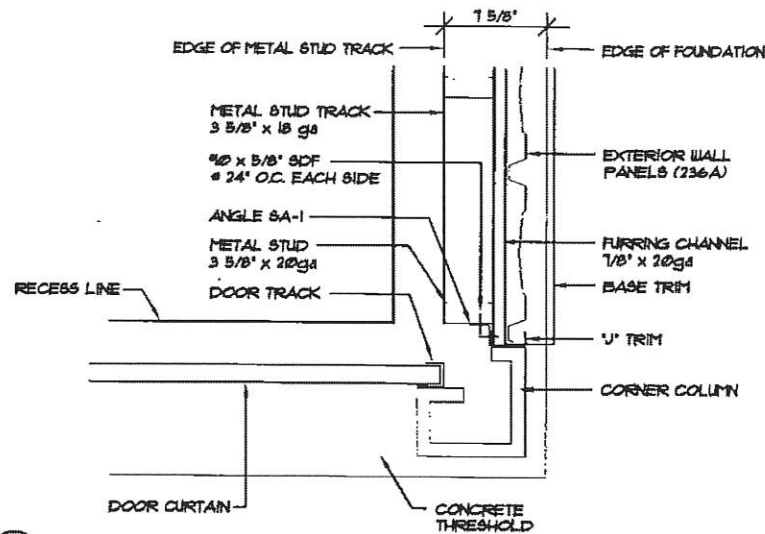
NOT TO SCALE



**UNINSULATED STUDWALL CORNER DETAIL**

(B)  
ERC600

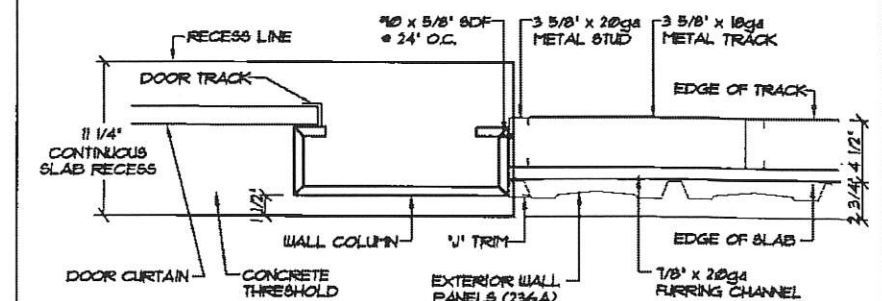
NOT TO SCALE



**STUDWALL CONSTRUCTION @ CORNER COLUMN W/ THRESHOLD**

(D)  
ERC600

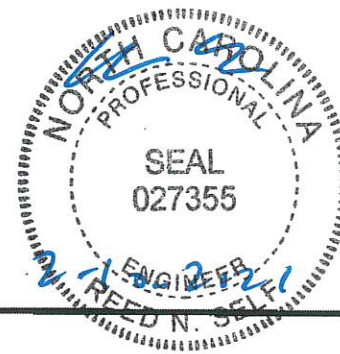
NOT TO SCALE



**STUDWALL CONSTRUCTION @ WALL COLUMN**

(F)  
ERC600

NOT TO SCALE

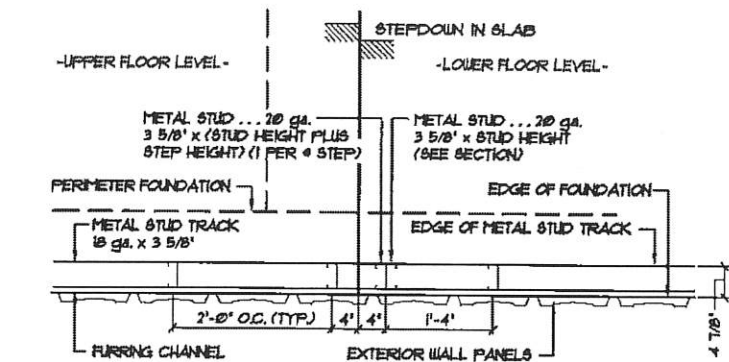


REVISIONS	DATE	BY
▲ REVISED STUD SIZE	8/29/02	BAM

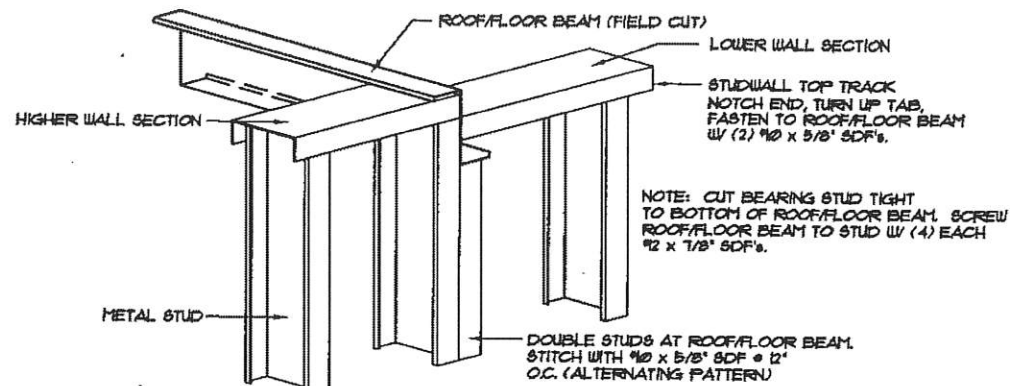


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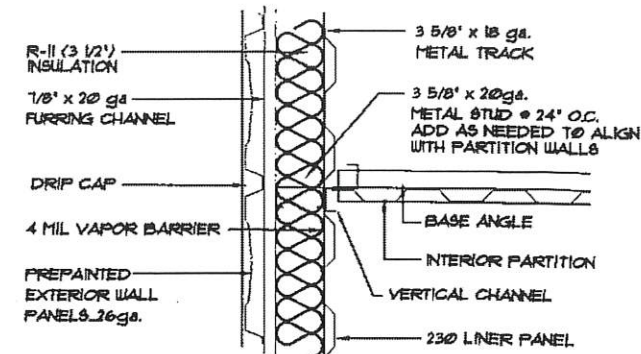
SHEET TITLE: <b>Studwall Details</b>		
DRAWN BY: CJG	APPROVED BY:	DRAWING NUMBER: ERC600X
SCALE: NTS	DATE: 4/14/00	



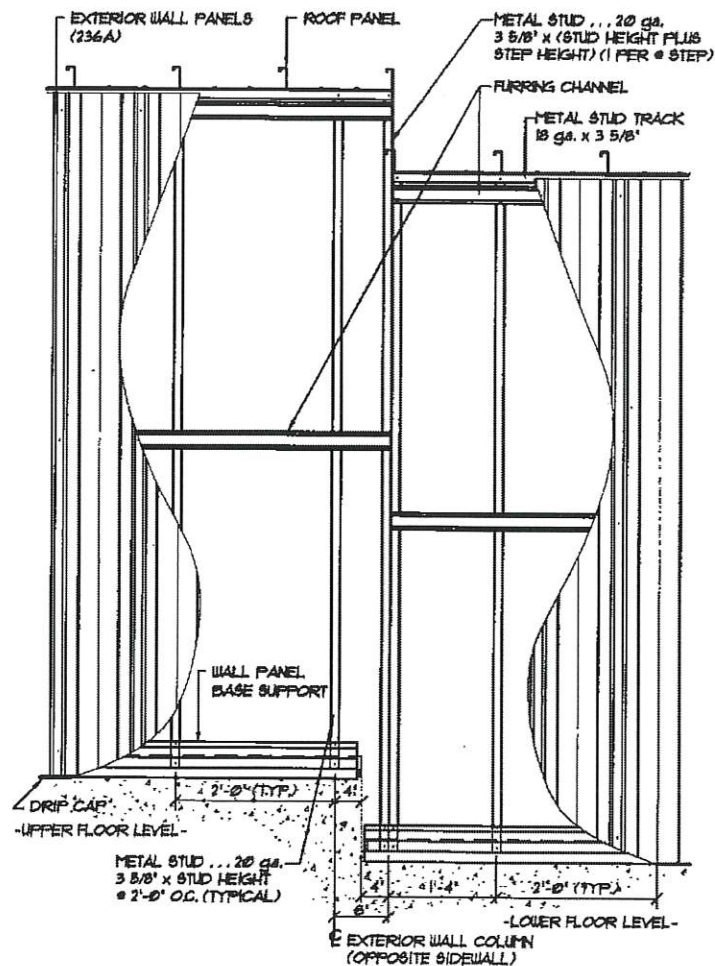
**(A) PLAN VIEW OF STUDWALL @ FLOOR STEPDOWN**  
NOT TO SCALE



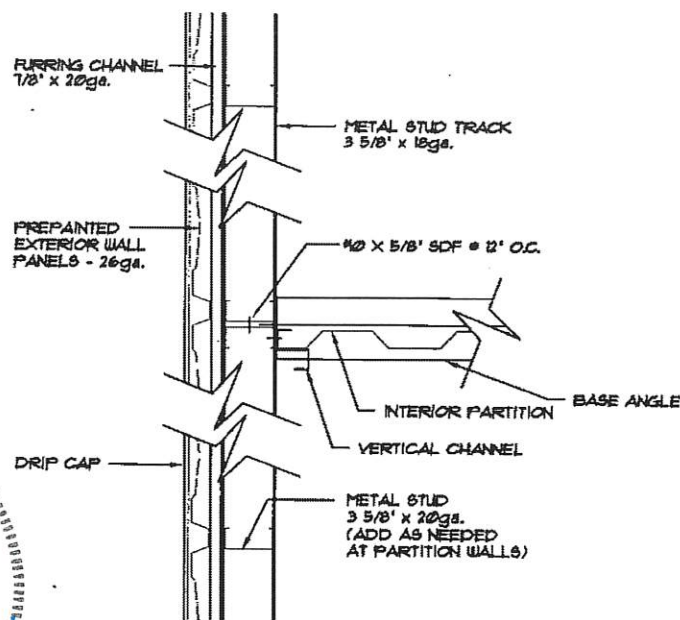
**(C) ROOF/FLOOR BEAM @ STUDWALL**  
NOT TO SCALE



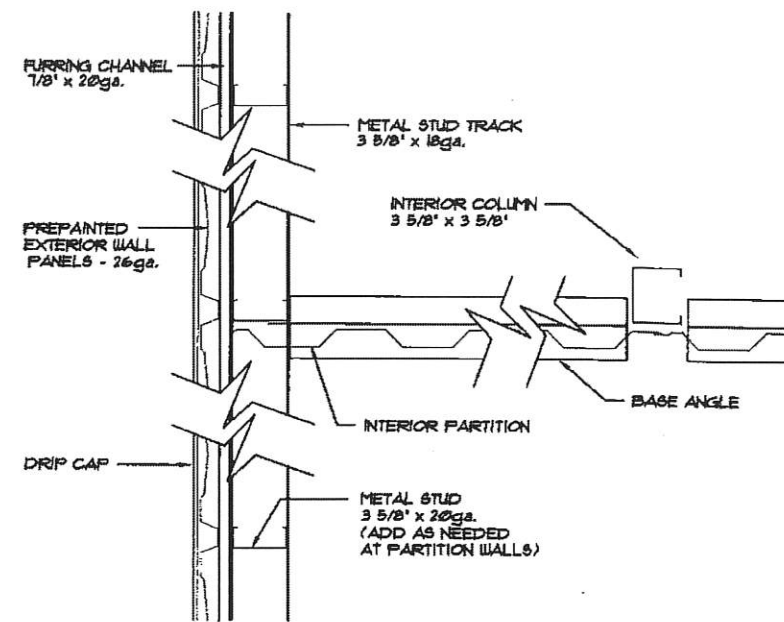
**(E) PARTITION INSTALLATION AT INSULATED EXTERIOR STUDWALL**  
NOT TO SCALE



**(B) ELEVATION @ STUDWALL AND STEPDOWN**  
NOT TO SCALE



**(D) PARTITION INSTALLATION UNDER ROOF BEAM**  
NOT TO SCALE



**(F) PARTITION INSTALLATION AT STUDWALL**  
NOT TO SCALE

REVISIONS	DATE	BY
3	5/1/03	JCM
2	4/17/03	JCM
1	8/29/02	BAM

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SHEET TITLE: <b>Studwall Details</b>		
DRAWN BY: CJG	APPROVED BY:	DRAWING NUMBER: ERC601X
SCALE: NTS	DATE: 4/14/00	

① **EXTERIOR STUDWALL CONSTRUCTION • FLAT SLAB:**  
(SEE ERC630X)  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
-2 OR 3 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-WALL PANEL BASE SUPPORT  
-DRIP CAP (#T60120)  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
\*230 LINER PANELS @ INTERIOR (ATTACH EACH PANEL  
TO BASE & TOP TRACK WITH 4 EACH #10 x 5/8" SDF's)  
\*J-TRIM @ TOP OF LINER PANELS  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

② **EXTERIOR STUDWALL CONSTRUCTION • RECESS:**  
(SEE ERC630X)  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
-3 OR 4 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-BASE TRIM (#T60593)  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
\*230 LINER PANELS @ INTERIOR (ATTACH EACH PANEL  
TO BASE & TOP TRACK WITH 4 EACH #10 x 5/8" SDF's)  
\*J-TRIM @ TOP OF LINER PANELS  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

③ **INSULATED LOAD BEARING STUDWALL:**  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
-3 1/2" THICK FIBERGLASS INSULATION  
-4 MIL POLYETHYLENE VAPOR BARRIER  
-230 LINER PANELS (EACH SIDE-ATTACH EACH PANEL TO  
TOP & BASE TRACK WITH 4 EACH #10 x 5/8" SDF's)  
-J-TRIM @ TOP OF LINER PANELS  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

④ **INSULATED NON-LOAD BEARING STUDWALL:**  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 20ga.  
(ATTACH BASE TRACK TO CONCRETE FLOOR SLAB  
WITH 7/8" PDF's @ 24" O.C.)  
-3 1/2" THICK FIBERGLASS INSULATION  
-4 MIL POLYETHYLENE VAPOR BARRIER  
-230 LINER PANELS (EACH SIDE-ATTACH EACH PANEL TO  
TOP & BASE TRACK WITH 4 EACH #10 x 5/8" SDF's)  
-J-TRIM @ TOP OF LINER PANELS  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

⑤ **EXTERIOR STUDWALL CONSTRUCTION • HVAC**  
**INSET/ALCOVE: (ERC 603X & 604X)**  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
-3 OR 4 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-DRIP CAP (#T50032)  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
\*230 LINER PANELS @ INTERIOR (ATTACH EACH PANEL  
TO BASE & TOP TRACK WITH 4 EACH #10 x 5/8" SDF's)  
\*J-TRIM @ TOP OF LINER PANELS  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

⑥ **FIRE RESISTANT PARTITION . . . 1 HOUR RATED**  
**UL • U465 . . . (NON-LOAD BEARING)**  
ONE HOUR FIREWALL CONSTRUCTION:  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga.  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 20ga  
(TOP TRACK MUST FOLLOW SLOPE OF ROOF DECK)  
(SECURE BOTTOM TRACK W/ 7/8" PDF'S AT 24" O.C.)  
-5/8" GYPSUM BOARD (X-RATED) EACH SIDE IT MUST  
BE PLACED SUCH THAT ALL JOINTS ARE VERTICAL.  
-GYPSUM BOARD SHALL BE ATTACHED TO STUDS, FLOOR  
AND CEILING TRACK USING TYPE "S" SELF-TAPPING SCREWS  
ALONG EDGES OF BOARD SPACED 8" O.C. AND 12" O.C. IN THE FIELD.  
-VINYL OR CASE-IN, DRY OR PRE-MIXED JOINT COMPOUND APPLIED IN  
TWO COATS TO JOINTS SCREW-HEADS. PERFORATED PAPER TAPE, 2"  
WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

⑦ **FIRE RESISTANT PARTITION . . . 1 HOUR RATED**  
**UL • U425 . . . (LOAD BEARING)**  
ONE HOUR FIREWALL CONSTRUCTION:  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga.  
-3 5/8" CONTINUOUS FLOOR & CEILING TRACK - 18ga - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
(TOP TRACK MUST FOLLOW SLOPE OF ROOF DECK)  
-5/8" GYPSUM BOARD (X-RATED) EACH SIDE IT MUST  
BE PLACED SUCH THAT ALL JOINTS ARE VERTICAL.  
-GYPSUM BOARD SHALL BE ATTACHED TO STUDS,  
FLOOR AND CEILING TRACK USING TYPE "S"  
SELF-TAPPING SCREWS ALONG EDGES OF BOARD  
SPACED 8" O.C. AND 12" O.C. IN THE FIELD.  
-VINYL OR CASE-IN, DRY OR PRE-MIXED JOINT  
COMPOUND APPLIED IN TWO COATS TO JOINTS  
SCREW-HEADS. PERFORATED PAPER TAPE, 2" WIDE,  
EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL  
JOINTS.  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

⑧ **EXTERIOR FIRE RESISTANT PARTITION . . .**  
**-UL • U423 . . . (1 HOUR RATED) (LOAD BEARING)**  
ONE HOUR FIREWALL CONSTRUCTION:  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga.  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
(TOP TRACK MUST FOLLOW SLOPE OF ROOF DECK)  
-2 OR 3 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-WALL PANEL BASE SUPPORT  
-DRIP CAP (#T60120)  
-1 LAYER 5/8" GYPSUM BOARD (X-RATED) EACH SIDE IT MUST  
BE PLACED SUCH THAT ALL JOINTS ARE VERTICAL.  
-GYPSUM BOARD SHALL BE ATTACHED TO STUDS,  
FLOOR AND CEILING TRACK USING TYPE "S"  
SELF-TAPPING SCREWS ALONG EDGES OF BOARD  
SPACED 8" O.C. AND 12" O.C. IN THE FIELD.  
-VINYL OR CASE-IN, DRY OR PRE-MIXED JOINT  
COMPOUND APPLIED IN TWO COATS TO JOINTS  
SCREW-HEADS. PERFORATED PAPER TAPE, 2" WIDE,  
EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL  
JOINTS.  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

⑨ **EXTERIOR FIRE RESISTANT PARTITIONS • RECESS:**  
**UL • U423 . . . (1 HOUR RATED) (LOAD BEARING)**  
ONE HOUR FIREWALL CONSTRUCTION:  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga.  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
(TOP TRACK MUST FOLLOW SLOPE OF ROOF DECK)  
-3 OR 4 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-DRIP CAP (#T60593)  
-1 LAYER 5/8" GYPSUM BOARD (X-RATED) EACH SIDE IT MUST  
BE PLACED SUCH THAT ALL JOINTS ARE VERTICAL.  
-GYPSUM BOARD SHALL BE ATTACHED TO STUDS, FLOOR  
AND CEILING TRACK USING TYPE "S" SELF-TAPPING SCREWS  
ALONG EDGES OF BOARD SPACED 8" O.C. AND 12" O.C. IN THE FIELD.  
-VINYL OR CASE-IN, DRY OR PRE-MIXED JOINT COMPOUND APPLIED IN  
TWO COATS TO JOINTS SCREW-HEADS. PERFORATED PAPER TAPE, 2"  
WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

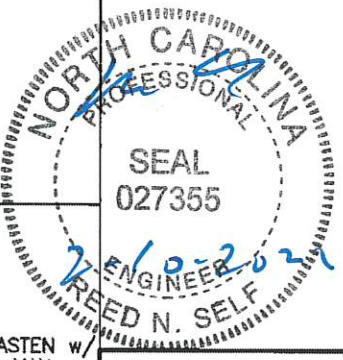
⑩ **EXTERIOR FIRE RESISTANT PARTITION • HVAC: INSET/ALCOVE**  
**UL • U423 . . . (1 HOUR RATED) (LOAD BEARING) (ERC 603X & 604X)**  
ONE HOUR FIREWALL CONSTRUCTION:  
-3 5/8" METAL STUDS @ 24" O.C. - 20ga.  
-3 5/8" CONTINUOUS FLOOR AND CEILING TRACK - 18ga. - FASTEN w/  
3/8" x 3" WEDGE ANCHOR (2" MIN. EMBEDDMENT) @ 30" O.C. MAX  
(TOP TRACK MUST FOLLOW SLOPE OF ROOF DECK)  
-3 OR 4 ROWS CONTINUOUS 20ga. FURRING CHANNELS (NOTE #2)  
-PRE-PAINTED EXTERIOR 236A WALL PANELS  
-DRIP CAP (#T50032)  
-1 LAYER 5/8" GYPSUM BOARD (X-RATED) EACH SIDE IT MUST  
BE PLACED SUCH THAT ALL JOINTS ARE VERTICAL.  
-GYPSUM BOARD SHALL BE ATTACHED TO STUDS, FLOOR  
AND CEILING TRACK USING TYPE "S" SELF-TAPPING SCREWS  
ALONG EDGES OF BOARD SPACED 8" O.C. AND 12" O.C. IN THE FIELD.  
-VINYL OR CASE-IN, DRY OR PRE-MIXED JOINT COMPOUND APPLIED IN  
TWO COATS TO JOINTS SCREW-HEADS. PERFORATED PAPER TAPE, 2"  
WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.  
\*3 1/2" THICK FIBERGLASS INSULATION  
\*4 MIL POLYETHYLENE VAPOR BARRIER  
-SEE NOTE #4 FOR GENERAL STUDWALL CONSTRUCTION NOTES.

**NOTE #1:** INTENTIONALLY BLANK.

**NOTE #2:** AS PER WALL CONSTRUCTION NOTES, EXTERIOR STUDWALLS  
ARE CONSTRUCTED WITH "X" OR "Y" ROWS OF FURRING  
CHANNELS IF WALL IS LESS THAN 9'-10 1/2" HGT. A.F.F.,  
CONSTRUCT WITH "X" ROWS; OTHERWISE USE "Y".

**NOTE #3:** "\*" ON THIS SHEET, REFERS TO THE ADDITIONAL MATERIALS  
REQUIRED FOR INSULATION OF WALL SYSTEM.  
NOT ALL WALLS ARE INSULATED. VERIFY WITH FLOOR PLANS.  
INSTALL INSULATION & RELATED MATERIALS ONLY IN WALLS  
DESIGNATED WITH AN "\*" BESIDE THE DETAIL NUMBER ON  
THE FLOOR PLAN.

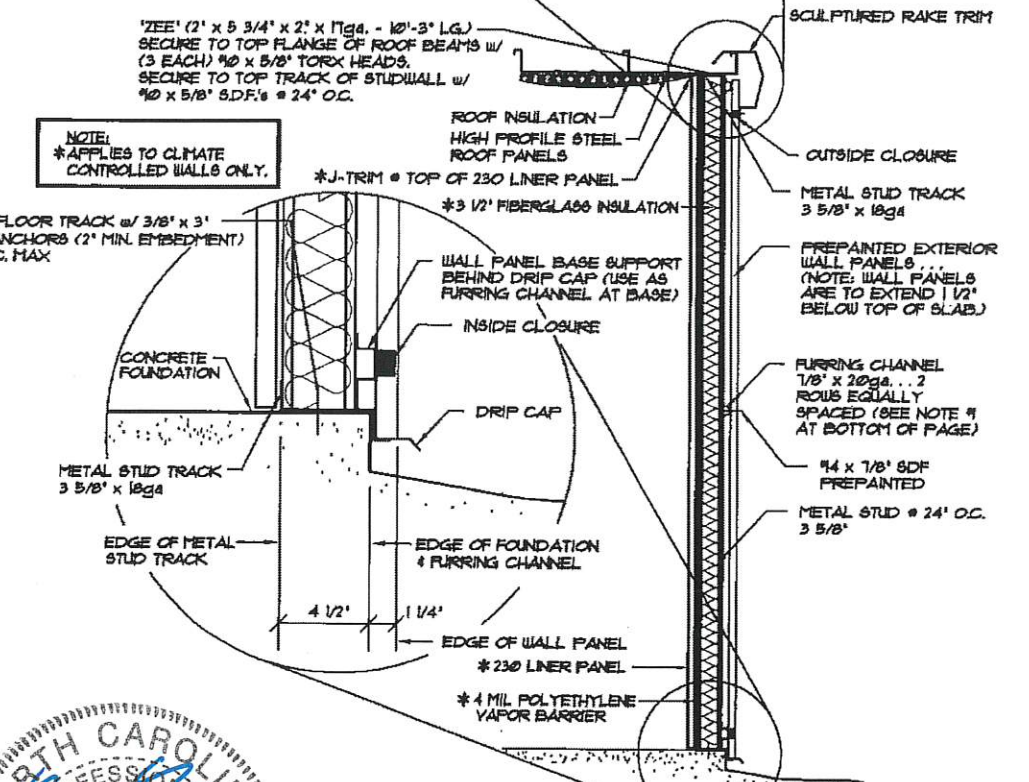
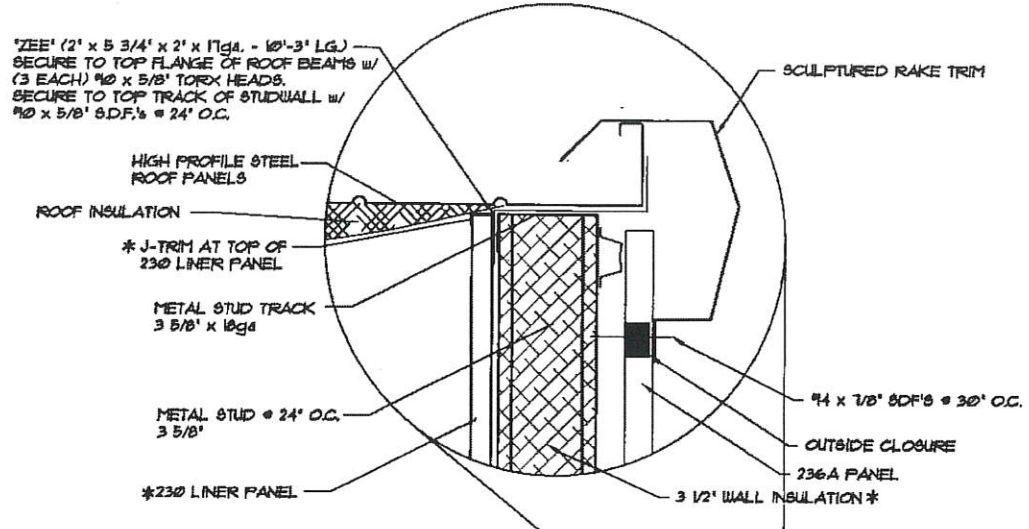
**NOTE #4:** GENERAL STUDWALL CONSTRUCTION:  
A) - ATTACH STUDS WITH #10 x 5/8" SDF'S EACH SIDE  
OF TRACK (4 PER STUD).  
B) - WALLS MUST EXTEND FROM FLOOR TO ROOF DECK  
AND INTO WALL COLUMN CAVITY.  
C) - TOP TRACK MUST FOLLOW SLOPE OF ROOF LINE.



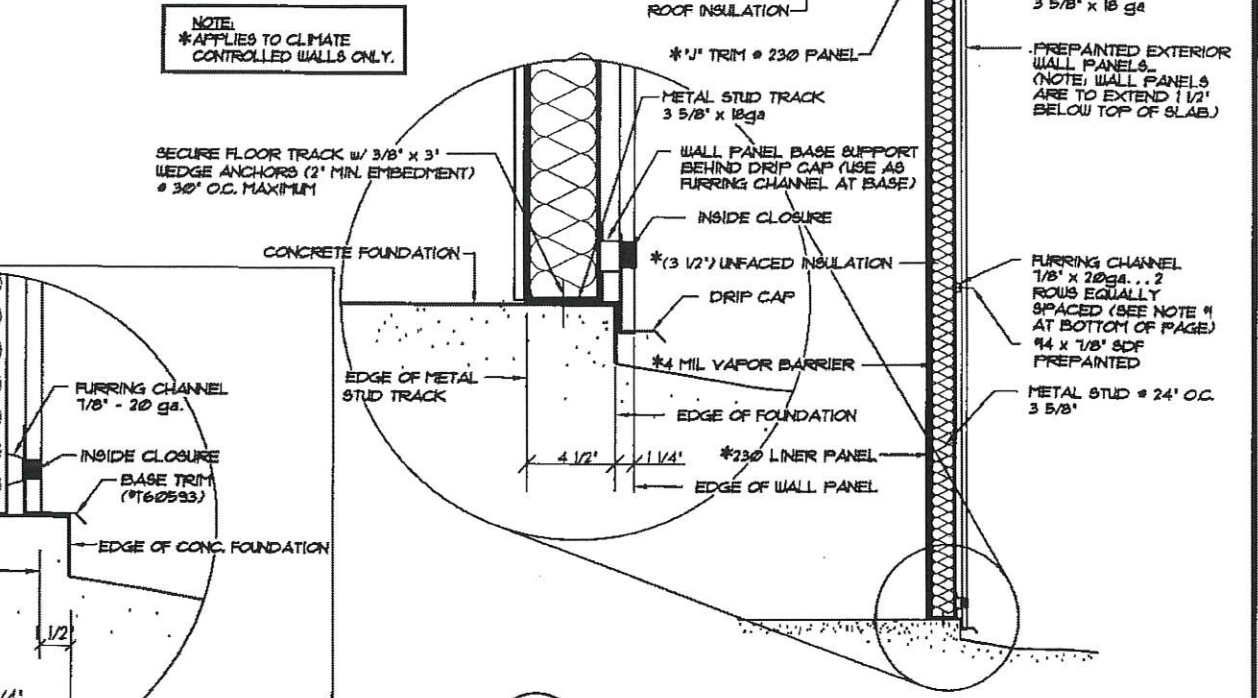
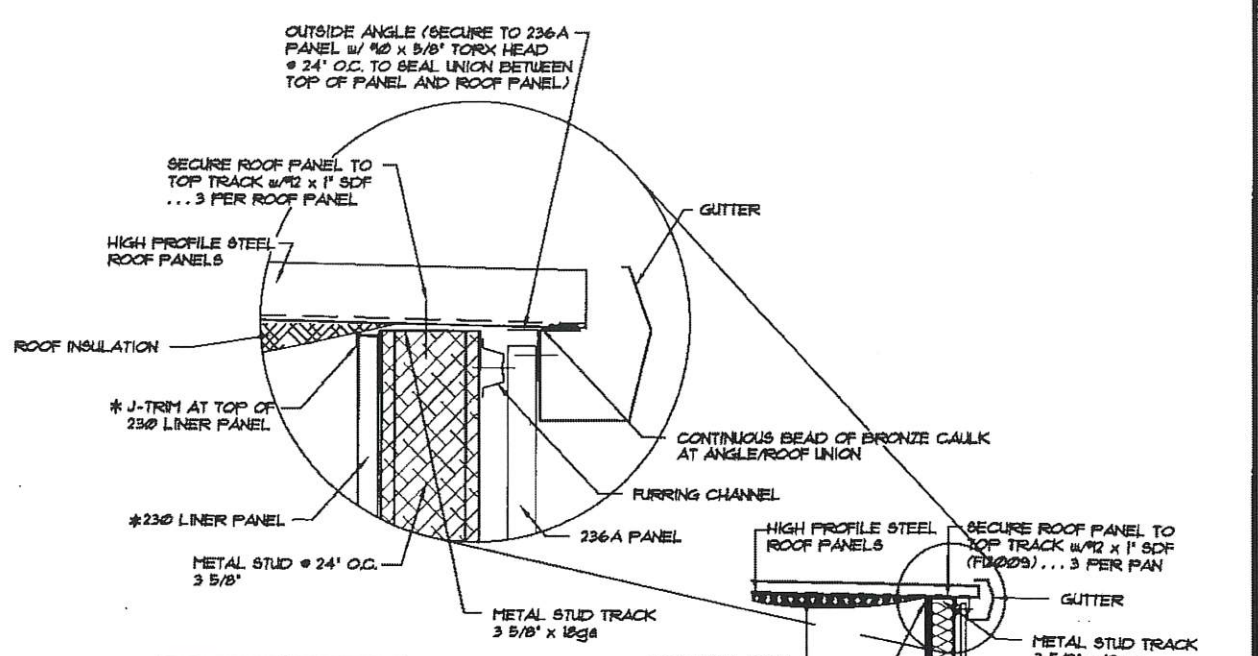
REVISIONS	DATE	BY
REVISED STUD TRACK FASTENERS TO CONCRETE	9/24/10	JCM
REVISED STUD TRACK FASTENERS	1/12/04	JCM
REVISED STUD SIZE	8/29/02	BAM
REVISE LAYERS, GYPSUM BOARD THICKNESS & UL ON NOTES #8, 9, 10	11/16/01	JRB
ADDED ERC 620X & 621X TO NOTE #10	08/28/01	JCM
CHANGED 5/8" TO (2 LAYERS 1/2")	02/21/01	DSF

**BETCO**  
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800)654-7813

SHEET TITLE: <b>Studwall Notes</b>		
DRAWN BY: RS	APPROVED BY:	DRAWING NUMBER: ERC610X
SCALE: NTS	DATE: 11/02/00	



**A** SECTION AT EXTERIOR STUDWALL ENDWALL  
NOT TO SCALE



**B** SECTION AT EXTERIOR STUDWALL SIDEWALL  
NOT TO SCALE

BASE CONDITION FOR STUDWALL IN RECESS



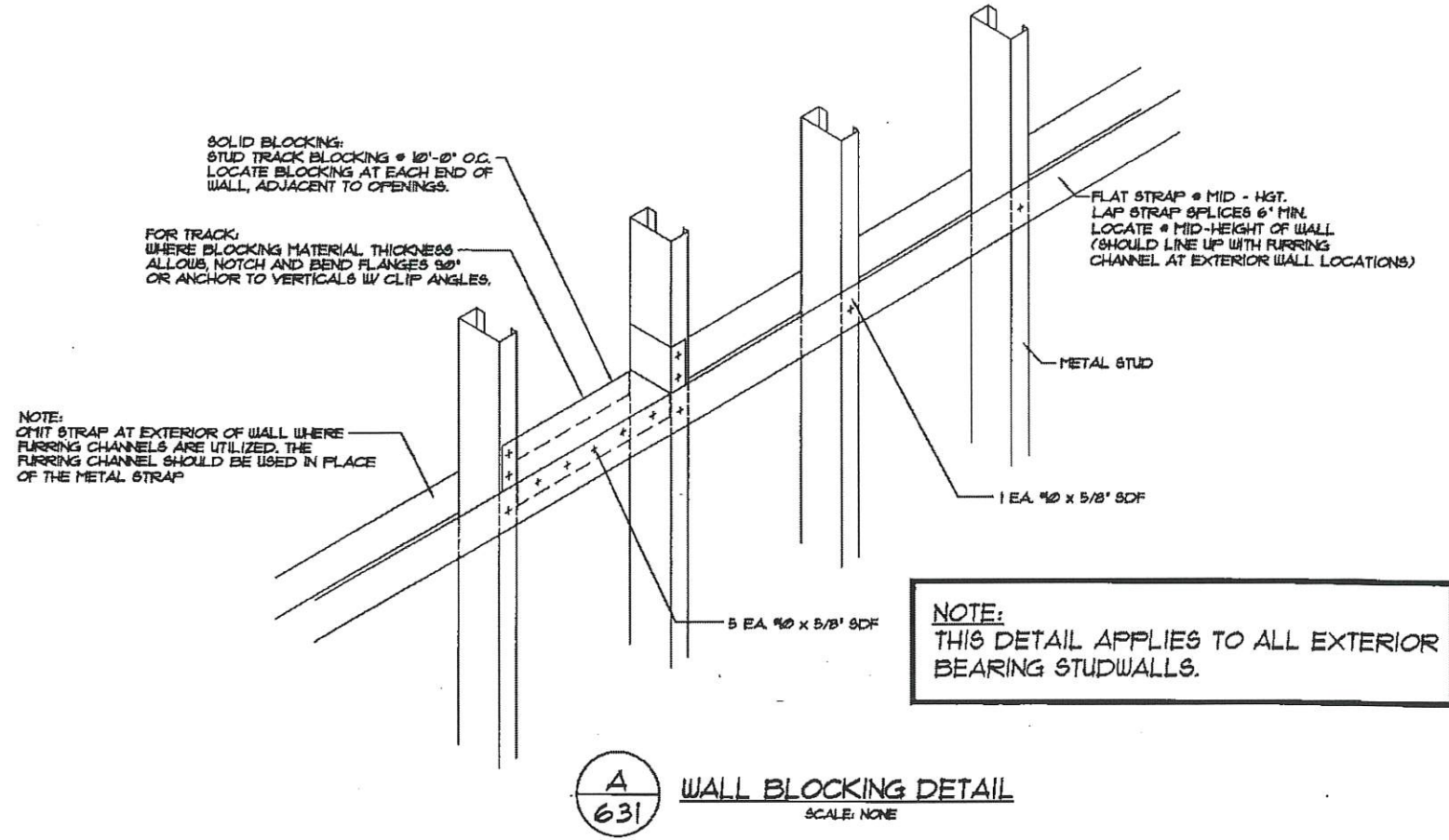
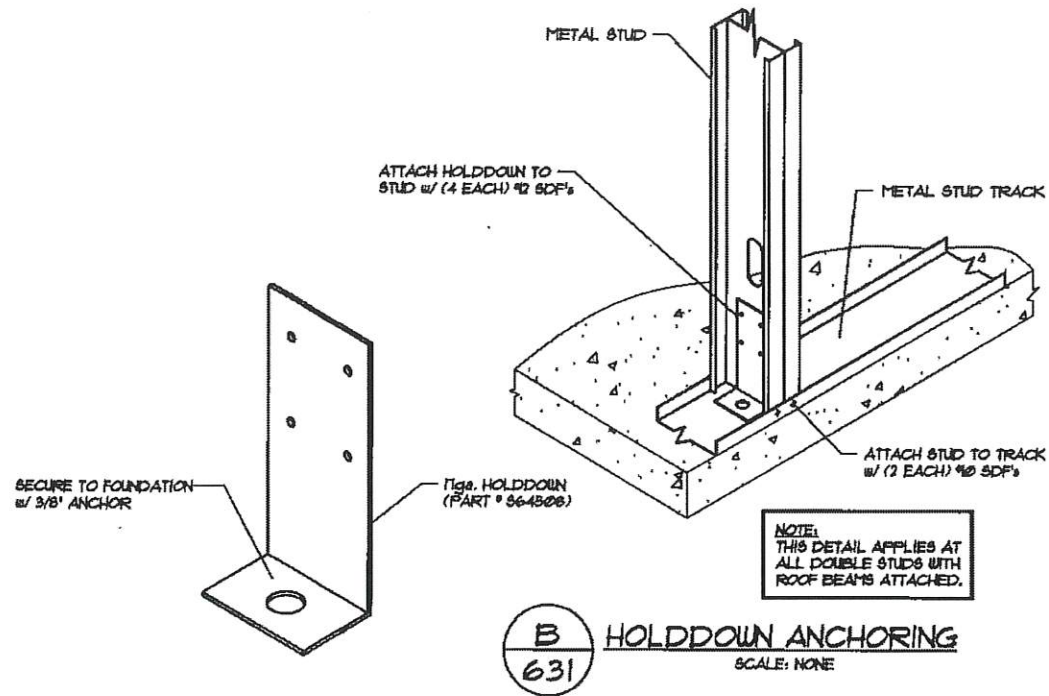
NOTE #1: IF STUDWALL IS GREATER THAN OR EQUAL TO 9'-10 1/2" HGT. 2 EQUALLY SPACED ROWS OF INTERMEDIATE FURRING CHANNELS ARE REQUIRED BETWEEN BASE AND TOP OF STUDWALL.

NOTE #2: NOT ALL BUILDINGS HAVE ROOF INSULATION, CHECK CROSS SECTION FOR INSULATION.

REVISIONS	DATE	BY

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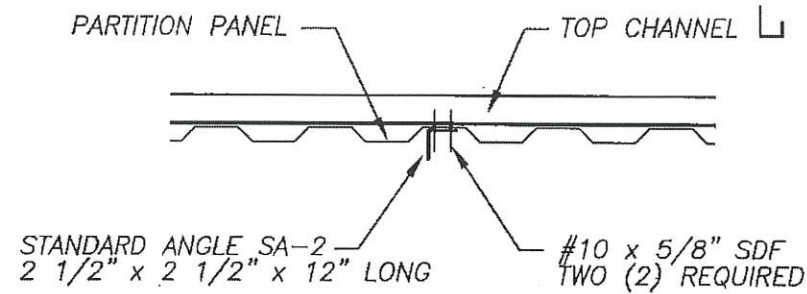
SHEET TITLE: <b>Studwall Sections</b>		
DRAWN BY: JCM	APPROVED BY:	DRAWING NUMBER: ERC630X
SCALE: NTS	DATE: 11/8/11	



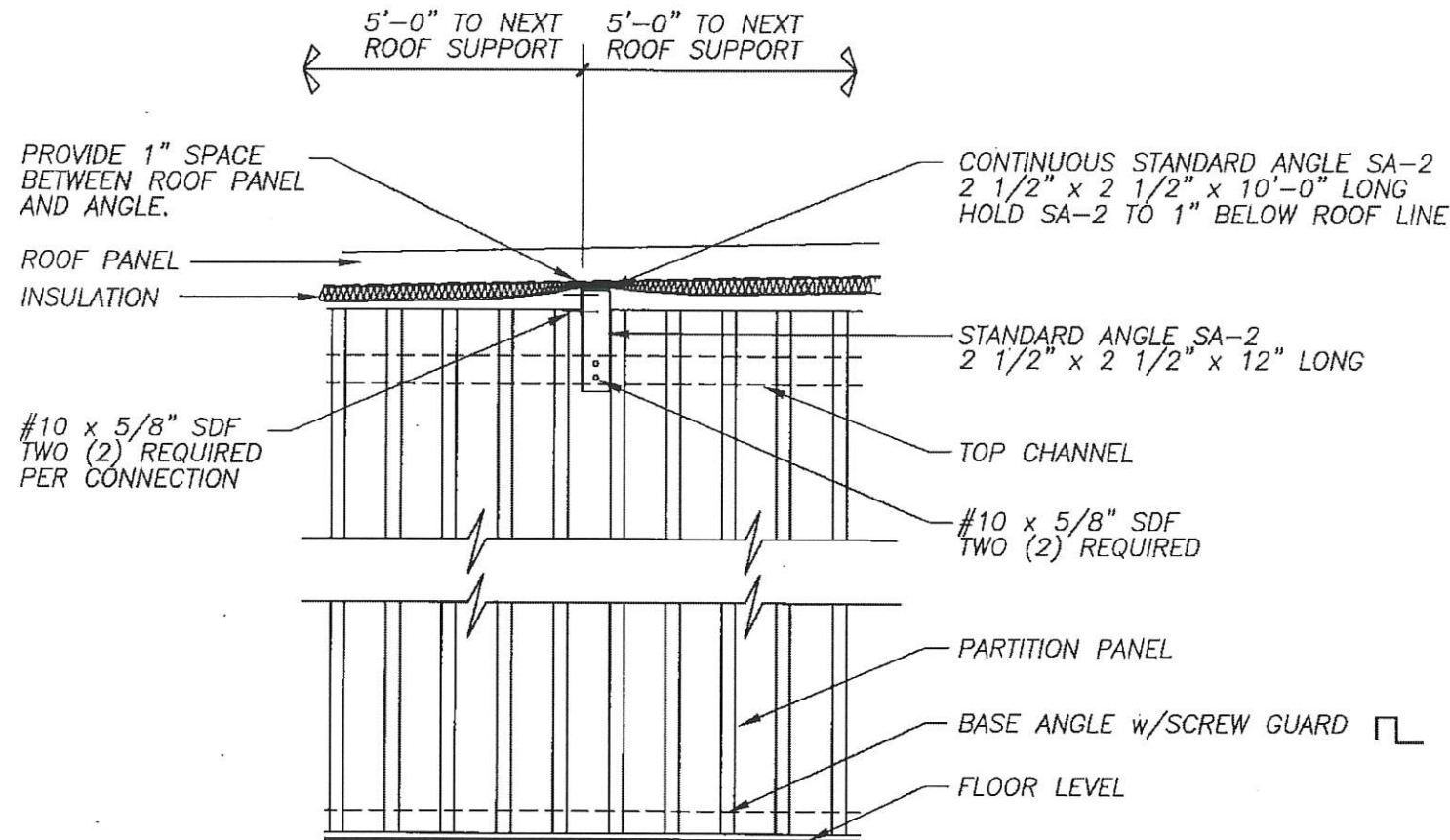
REVISIONS	DATE	BY

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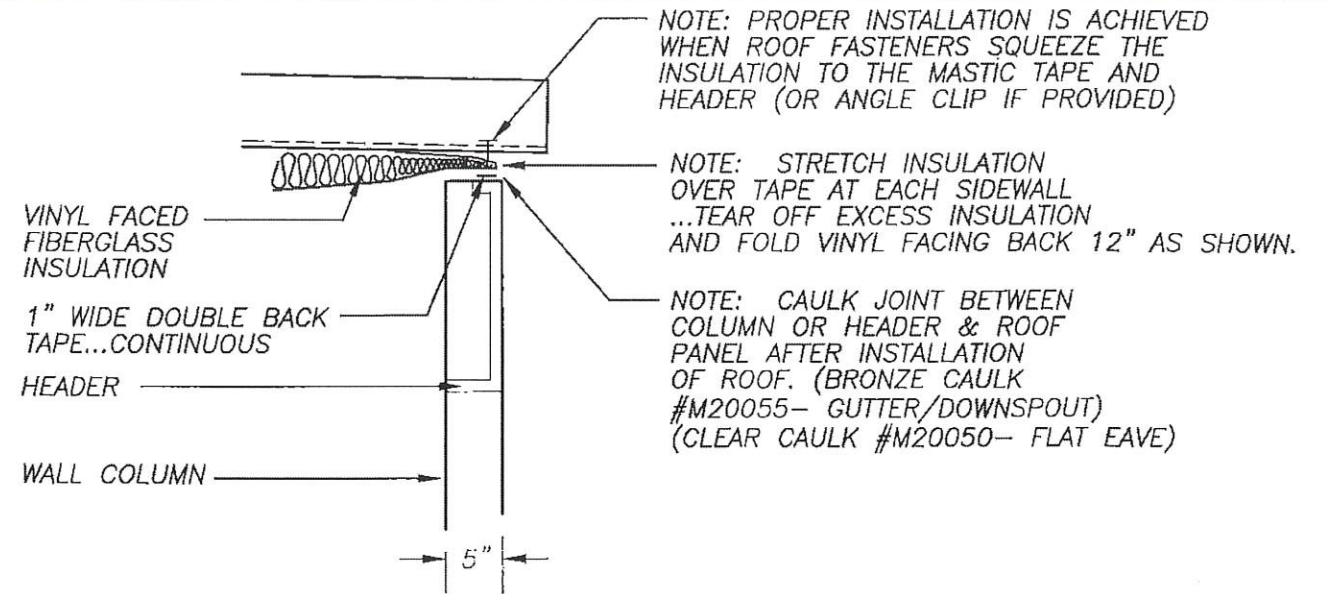
SHEET TITLE: <b>Studwall Details</b>		
DRAWN BY: JCM	APPROVED BY:	DRAWING NUMBER: ERC631X
SCALE: NTS	DATE: 11/8/11	



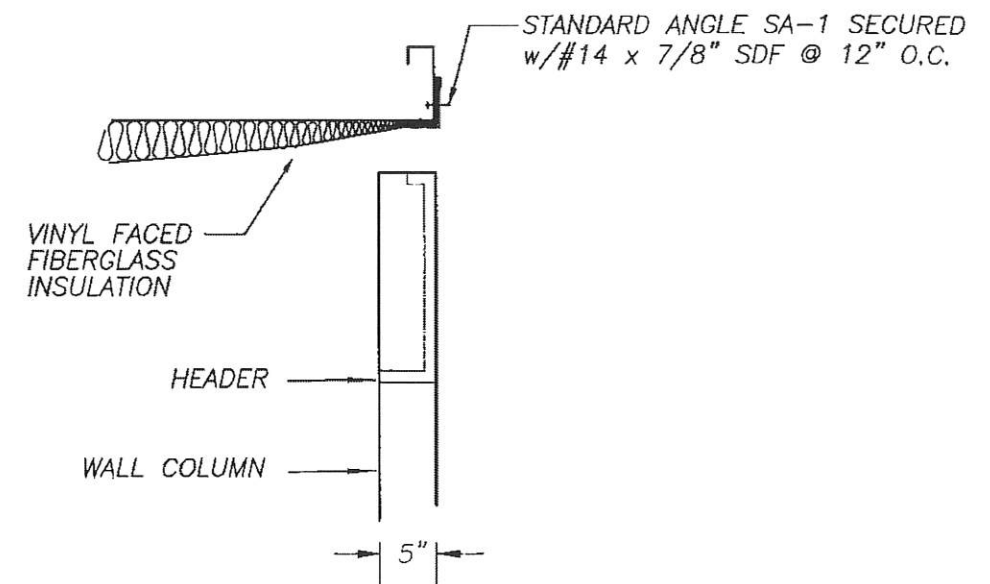
**PLAN VIEW**



**ELEVATION AT INTERMEDIATE INSULATION SUPPORT**



**INSULATION INSTALLATION @ SIDEWALL**



**INSULATION INSTALLATION AT END WALL**

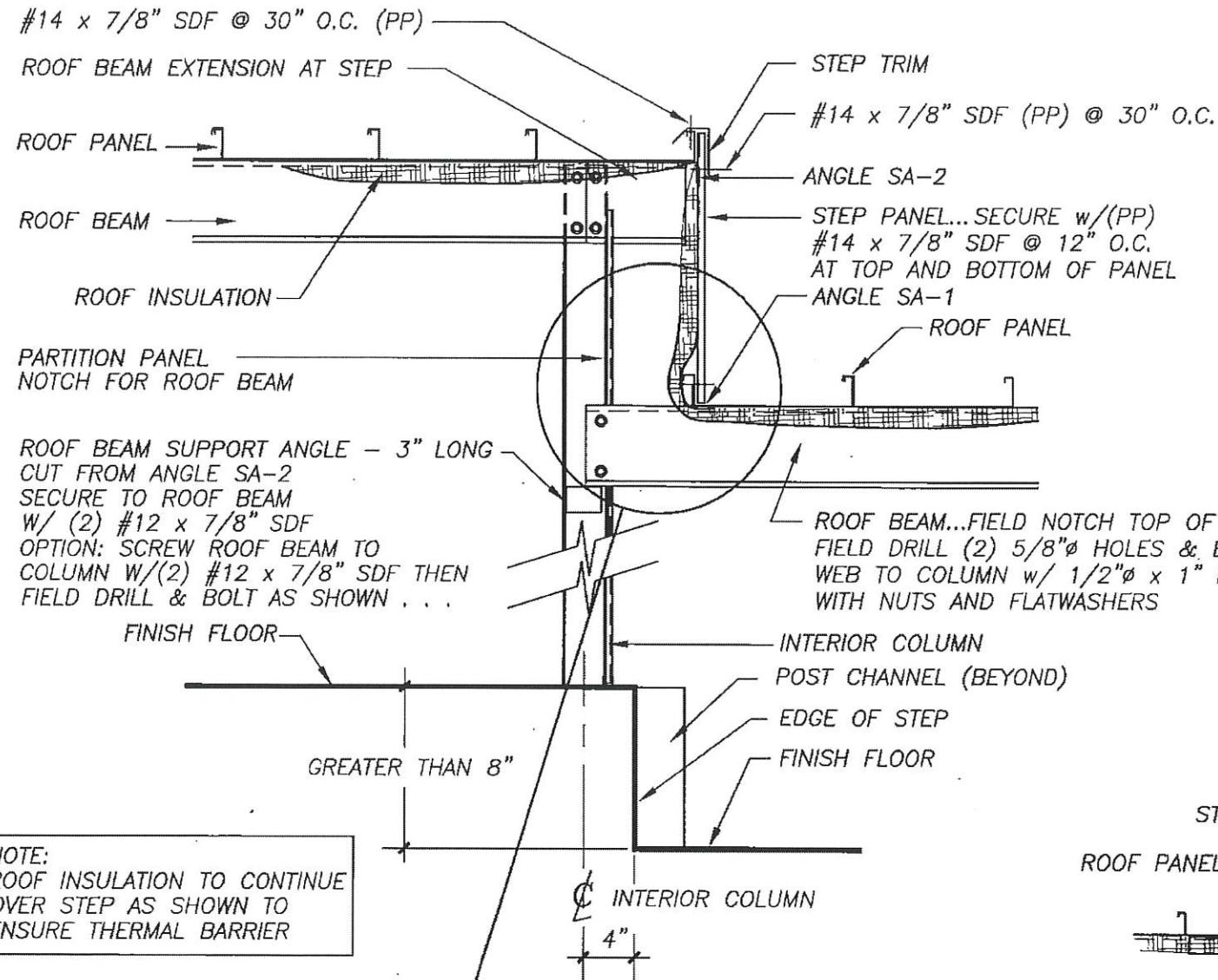


REVISIONS	DATE	BY
3	4/17/03	JCM
2	1/14/03	BAM
1	3-8-99	FOX

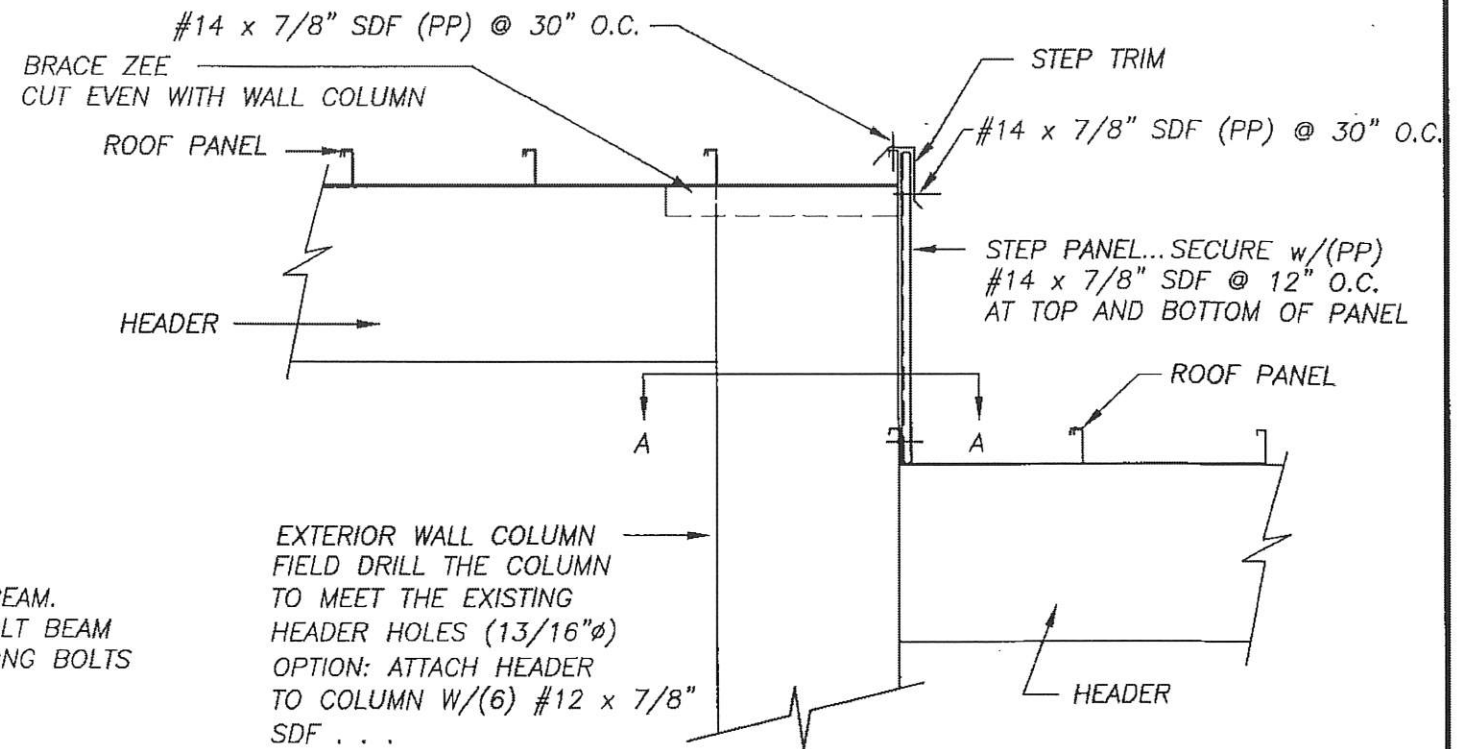
**BETCO**  
 228 COMMERCE BLVD.  
 STATESVILLE, NC 28625  
 (800)654-7813

SHEET TITLE: <b>Insulation installation</b>		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER: <b>ERC700X</b>
SCALE: NTS	DATE: 6-27-94	

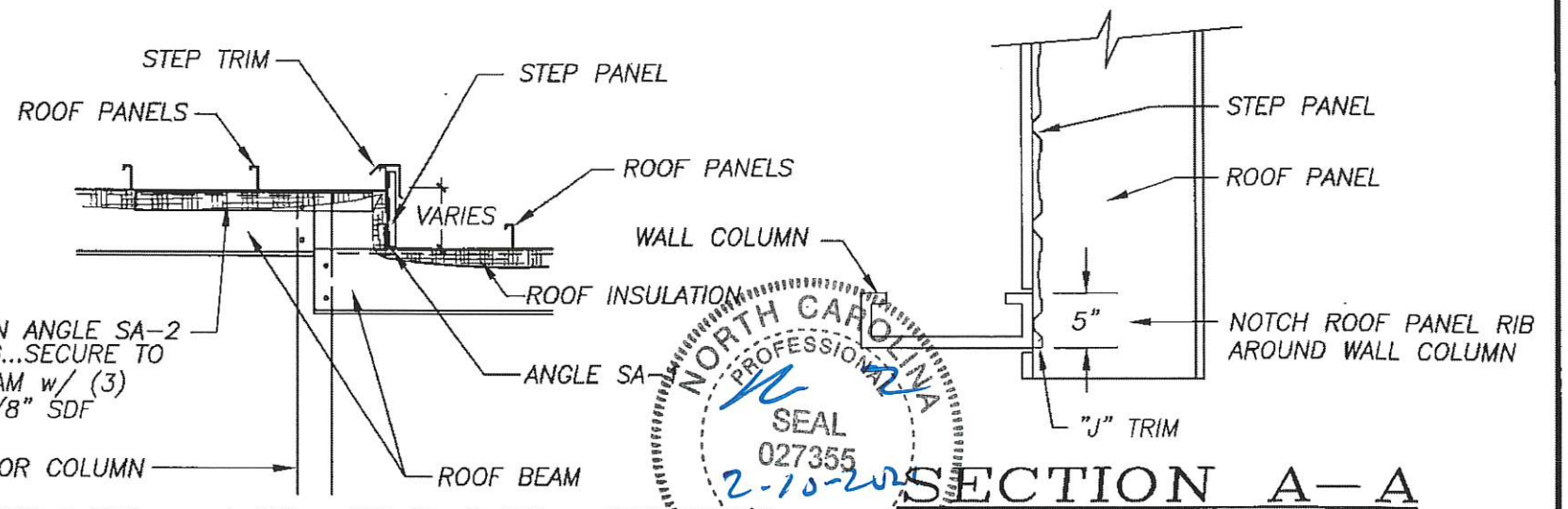




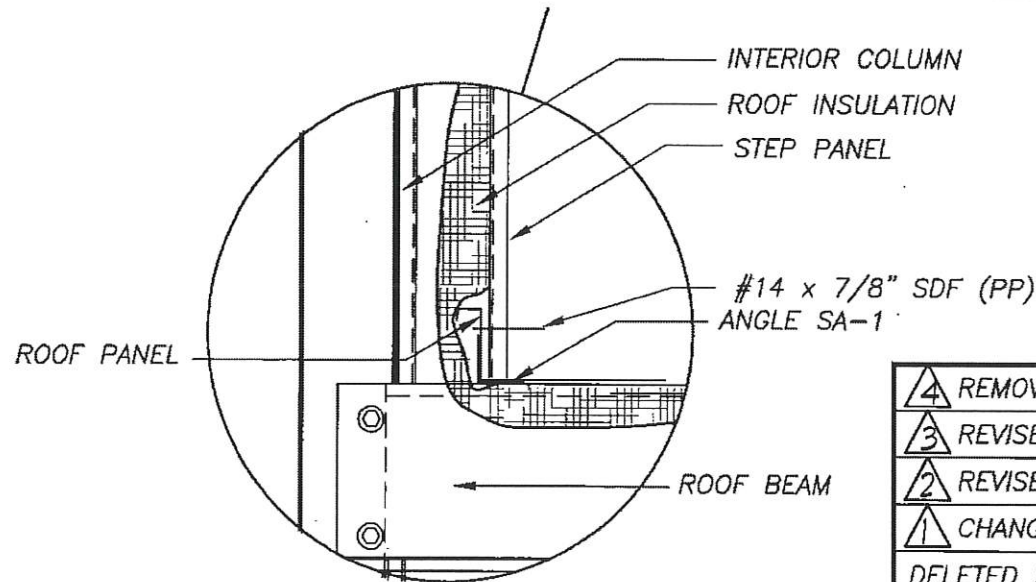
**TYPICAL STEPDOWN SECTION**



**TYPICAL STEPDOWN ELEVATION**



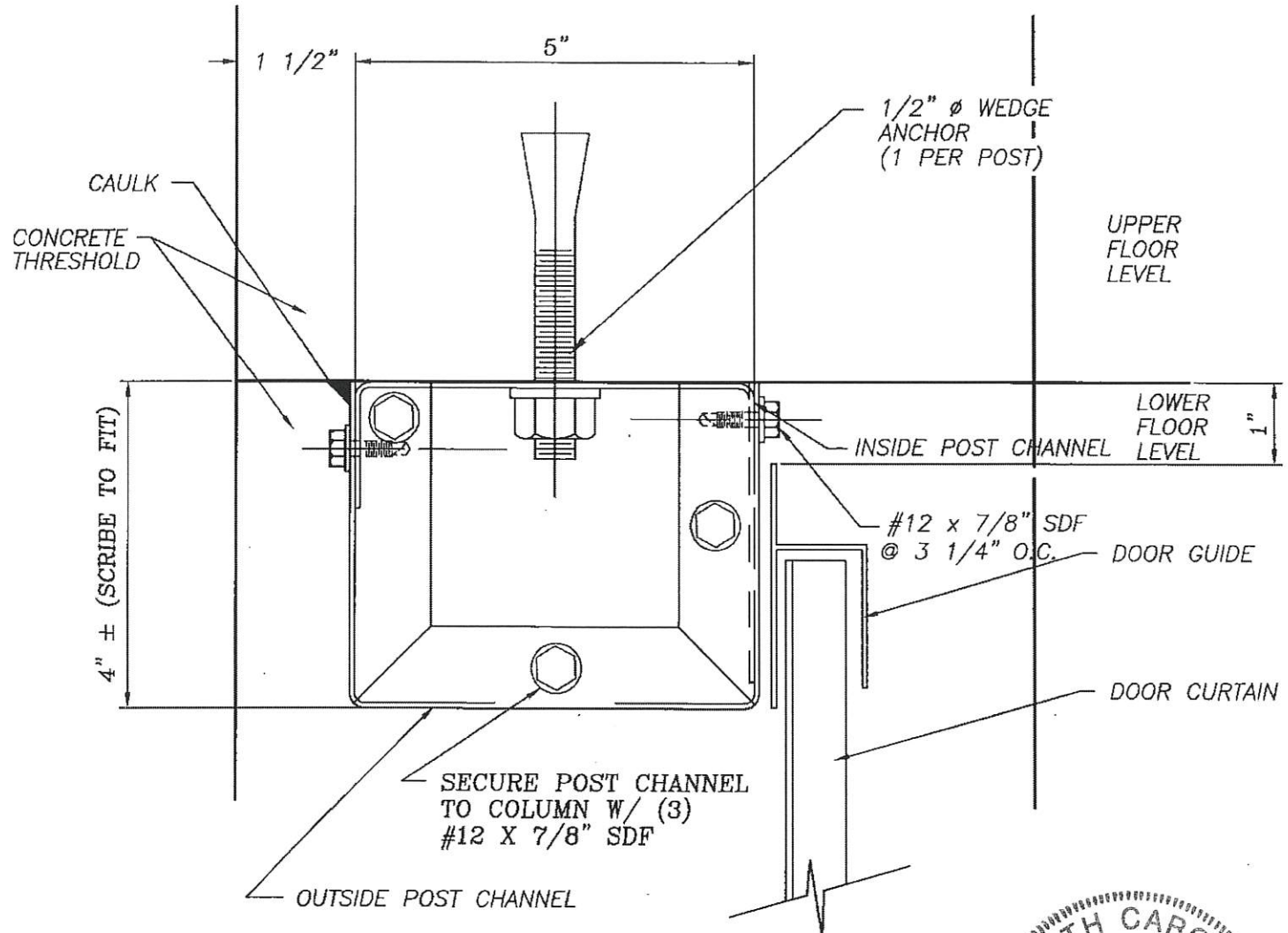
**DETAIL AT ROOF STEP  
8" OR LESS**



4	REMOVED FLIPSHEET NOTE	2/16/04	JCM
3	REVISED FASTENER SIZE	1/15/03	JCM
2	REVISED INSULATION TYPE	8/29/02	BAM
1	CHANGED 8" STEP TO 236A PANEL AND DELETED SA-1 AT TYPICAL STEP DOWN SECTION	10-9-01	SBJ
	REVISIONS	DATE	BY

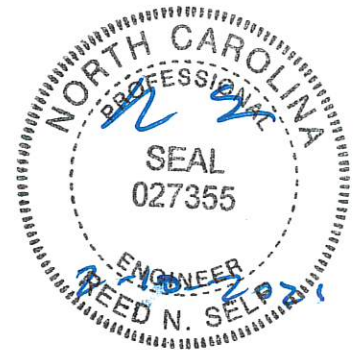
**BETCO**  
228 COMMERCE BLVD.  
STATESVILLE, NC 28625  
(800)654-7813

SHEET TITLE: <b>STEPDOWN SECTIONS W/ INSULATION (Roof and Floor)</b>		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER: ERC711X
SCALE: NTS	DATE: 6-29-94	

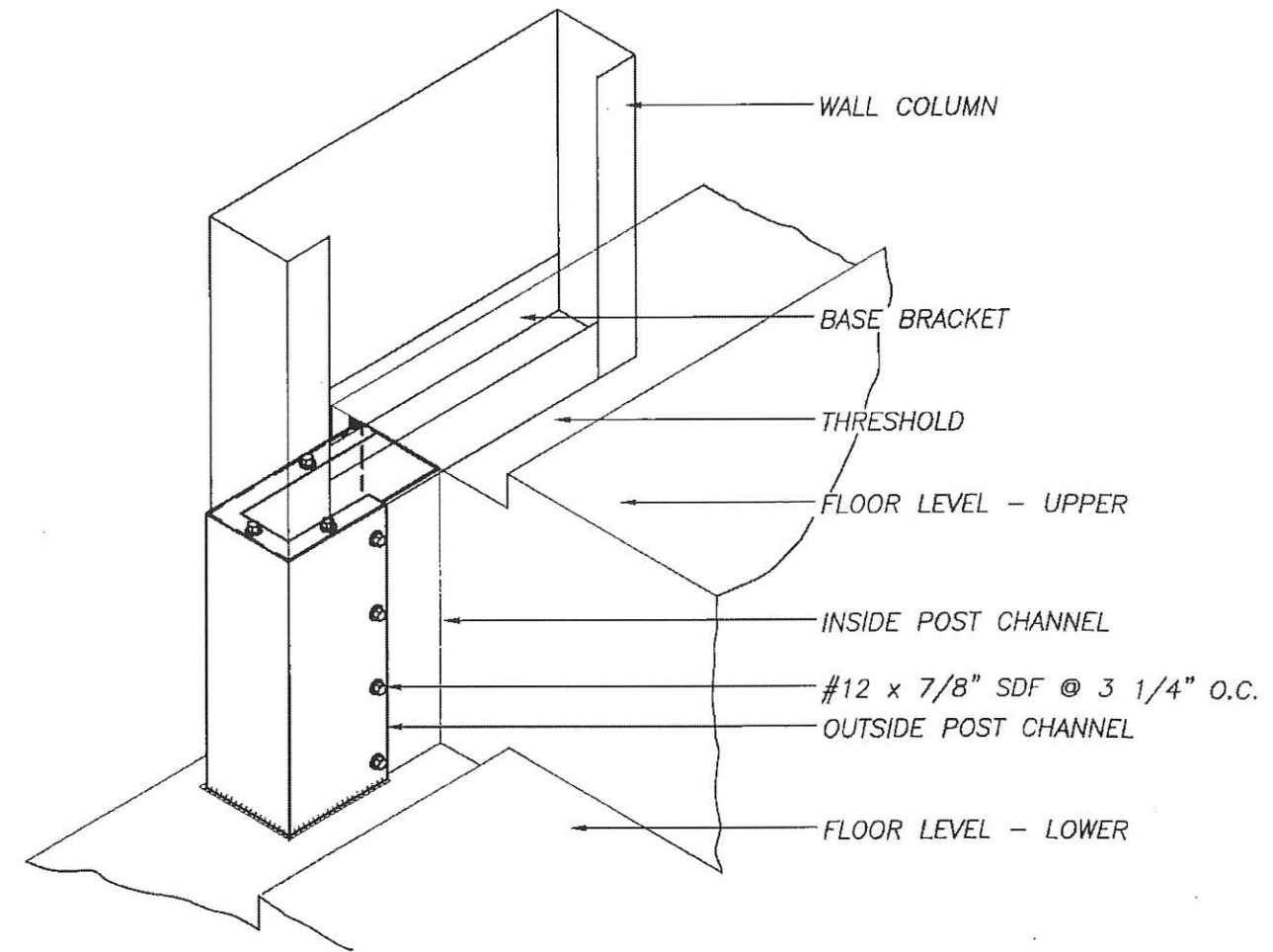


**PLAN VIEW @ POST CHANNEL**

NOTE: POST CHANNEL CAN BE ATTACHED TO EXTERIOR WALL COLUMN AFTER FITTING POST CHANNEL TO CONCRETE AND BEFORE WALL COLUMN IS BOLTED INTO PLACE TO LESSEN THE DIFFICULTY OF INSTALLING #12 SCREWS.



**NOTE:** SCRIBE OUTSIDE POST CHANNEL (9" LEG) TO FIT AGAINST CONCRETE. THEN APPLY CAULK OVER SEAM TO SEAL CUT EDGES. TRIM BOTTOM AS NEEDED. CAULK AROUND BOTTOM TO SEAL CUT EDGE. FASTEN W/(4) PREPAINTED #14 X 7/8" SDF SCREWS @ 3 1/4" O.C. ON OUTSIDE FACE OF OUTSIDE POST CHANNEL. FASTEN OUTSIDE POST CHANNEL TO WALL COLUMN W/ (3) #12 X 7/8" S.D.F.



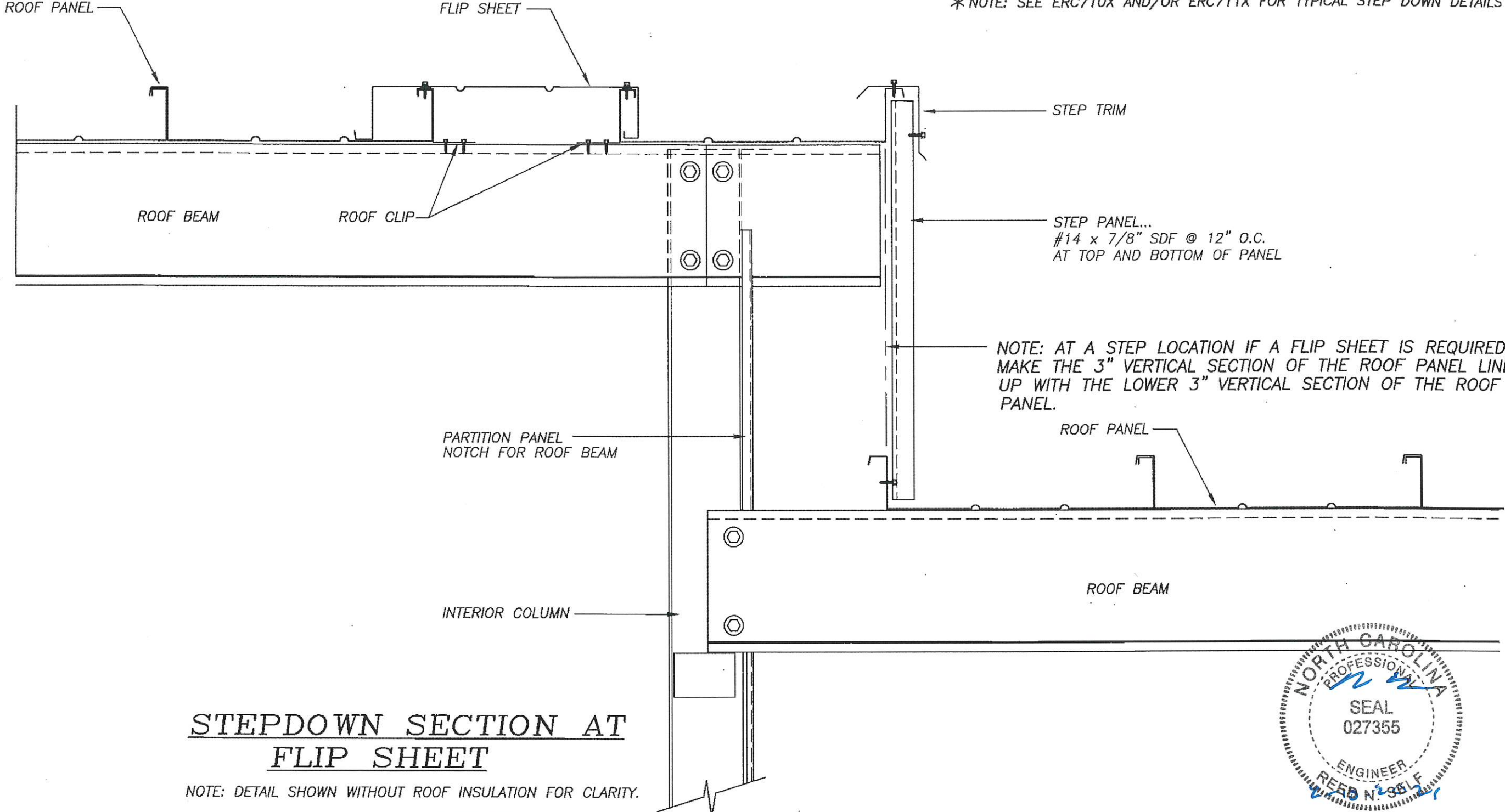
**POST CHANNEL DETAIL AT FLOOR STEP**

REVISIONS	DATE	BY
2	1/15/03	JCM
1	3-8-99	FOX

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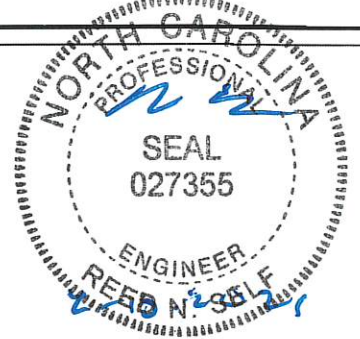
SHEET TITLE: <b>Post Channel Details</b>		
DRAWN BY: J Pope	APPROVED BY:	DRAWING NUMBER: ERC712X
SCALE: NTS	DATE: 6-28-94	

\*NOTE: SEE ERC710X AND/OR ERC711X FOR TYPICAL STEP DOWN DETAILS



**STEPDOWN SECTION AT  
FLIP SHEET**

NOTE: DETAIL SHOWN WITHOUT ROOF INSULATION FOR CLARITY.



REVISIONS	DATE	BY

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STATESVILLE, NC 28625  
(800)654-7813

SHEET TITLE: <b>STEPDOWN SECTION AT ROOF FLIP SHEET</b>		
DRAWN BY: JENKINS	APPROVED BY:	DRAWING NUMBER: <b>ERC713X</b>
SCALE: NTS	DATE: 10-10-01	