

9/6/2019



HAYDEN CLASSROOM
WILLIAMS SCOTSMAN
495 WEST JEFFERSON AVENUE
HAYDEN, CO 81639

ABBREVIATIONS

A	
A/E	ARCHITECT/ENGINEER
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B	
BLDG	BUILDING
BOT	BOTTOM
C	
CLR	CLEAR OR CLEARANCE
CMU	CONCRETE MASONRY UNIT
CNC	CONCRETE
CONT	CONTINUOUS
CL	CENTER LINE
D	
DIA	DIAMETER
E	
EQ	EQUAL
EA	EACH
EOC	EDGE OF CONCRETE
F	
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
H	
HOR	HORIZONTAL
L	
LONG	LONGITUDINAL
M	
MIN	MINIMUM
O	
O.C.	OF CENTER
O.H.	OPPOSITE HAND
P	
PAF	POWDER ACTUATED FASTENER
R	
RE: REINF	REFER TO REINFORCING (-ED,-MENT)
T	
TOP	TOP OF PILASTER
TRANS	TRANSVERSE
TYP	TYPICAL
TOF	TOP OF CONCRETE FOOTING
TOS	TOP OF STEEL
TOW	TOP OF CONCRETE WALL
U	
UON	UNLESS OTHERWISE NOTED
V	
VERT	VERTICAL

GENERAL REQUIREMENTS:

- A. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.
- B. DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
- C. DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY ENGINEER OF CONFLICTS REGARDING APPLICABILITY OF "TYPICAL DETAILS".
- D. THE STRUCTURAL CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE SUBCONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL MEASURES REQUIRED TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION; INCLUDING BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING OF RETAINING WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED.
- E. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.
- F. KEEP OPEN EXCAVATIONS AROUND BUILDING PERIMETER DRY. BACKFILL AGAINST FOUNDATIONS AND GRADE BEAMS AS SOON AS PRACTICAL. PUMP WATER OUT OF OPEN EXCAVATIONS IF FLOODED PRIOR TO BACKFILLING.

STEEL REINFORCING NOTES:

- A. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING AND ACCESSORIES IN ACCORDANCE WITH ACI 315 AND ACI 318.
- B. PROVIDE NEW BILLET STEEL REINFORCING BARS IN ACCORDANCE WITH ASTM A 615, GRADE 60.
- C. COORDINATE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR BOLTS. SET ANCHOR BOLTS WITH A TEMPLATE. SECURELY ATTACH EMBED ITEMS TO FORMWORK OR REINFORCING.
- D. PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT. PROVIDE STANDARD 90-DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS OTHERWISE NOTED. STAGGER SPLICES UNLESS SPECIFICALLY NOTED.
- E. MAINTAIN THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL UNLESS OTHERWISE NOTED:
 - 1. CONCRETE CAST AGAINST EARTH - 3 INCHES
 - 2. CONCRETE EXPOSED TO WEATHER
 - a. NO. 6 AND LARGER - 2 INCHES
 - b. NO. 5 AND SMALLER - 1-1/2 INCHES
- F. DO NOT WELD OR BEND REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY STRUCTURAL ENGINEER.
- G. WHERE REQUIRED, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF MAIN REINFORCING.
- H. PROVIDE BAR SUPPORT ACCESSORIES IN ACCORDANCE WITH THE LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. SUPPORT BEAM REINFORCING ON BEAM BOLSTERS SPACED NOT MORE THAN 4 FEET ON CENTER.

CONCRETE NOTES:

- A. PROVIDE CONCRETE AS SHOWN BELOW. PROVIDE BATCH MIXING, TRANSPORTATION, PLACING AND CURING OF CONCRETE IN ACCORDANCE WITH RECOMMENDATIONS OF ACI 301, ACI 318 AND ASTM C94. USE TYPE I OR II PORTLAND CEMENT UNLESS OTHERWISE NOTED.
 - 1. NORMAL WEIGHT (150 PCF), F_c = 4,000 PSI CONCRETE AT 28 DAYS
 - a. ALL CONCRETE
- B. CHAMFER EXPOSED EDGES 3/4 INCH FOR HOUSE KEEPING PAD.
- C. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS PRIOR TO POURING NEW CONCRETE.
- D. PROVIDE CONCRETE MIXES DESIGNED BY A QUALIFIED TESTING LABORATORY FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.
- E. MAXIMUM NOMINAL AGGREGATE UNIFORMLY GRADED AND AS FOLLOWS:
 - 1. NOMINAL MAXIMUM AGGREGATE SIZE OF 1 INCH.
 - 2. A COMBINED SIEVE ANALYSIS MUST INDICATE A WELL GRADED AGGREGATE FROM COARSEST TO FINEST WITH NOT MORE THAN 18 PERCENT AND NOT LESS THAN 8 PERCENT RETAINED ON AN INDIVIDUAL SIEVE. EXCEPT THAT LESS THAN 8 PERCENT MAY BE RETAINED ON COARSEST SIEVE AND ON NO. 50 (0.3MM) SIEVE, AND LESS THAN 8 PERCENT MAY BE RETAINED ON SIEVES FINER THAN NO. 50 (0.3MM).
 - 3. PROVIDE SAND THAT IS AT LEAST 50 PERCENT NATURAL SAND.
- F. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45
- G. AIR CONTENT: 6 PERCENT, PLUS OR MINUS 1.5 PERCENT AT POINT OF DELIVERY FOR 1 INCH NOMINAL MAXIMUM AGGREGATE SIZE
- H. ADMIXTURES ASTM C494
 - TYPE A. WATER REDUCING
 - TYPE B. RETARDING
 - TYPE C. ACCELERATING
 - TYPE D. WATER-REDUCING AND RETARDING
 - TYPE E. WATER-REDUCING AND ACCELERATING ADMIXTURE.
 - TYPE F. HIGH RANGE WATER REDUCER (HRWR) SUPERPLASTICIZERS
 - DO NOT USE CALCIUM CHLORIDE ADMIXTURES.
- I. SUBMIT PRODUCT DATA FOR ADMIXTURES USED IN CONCRETE.

FOUNDATION NOTES:

- A. MAINTAIN SUBGRADE AND FILL MOISTURE CONTENT UNTIL FOUNDATIONS ARE PLACED.
- B. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
- C. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.
- D. KEEP OPEN EXCAVATIONS AROUND BUILDING PERIMETER DRY. BACKFILL AGAINST FOUNDATIONS AND GRADE BEAMS AS SOON AS PRACTICAL. PUMP WATER OUT OF OPEN EXCAVATIONS IF FLOODED PRIOR TO BACKFILL.

SPECIAL INSPECTION NOTES:

SPECIAL INSPECTION SHALL MEET THE REQUIREMENTS OF IBC SECTION 1705.

- 1. THE SPECIAL INSPECTOR(S) SHALL:
 - A. OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DRAWING AND SPECIFICATIONS.
 - B. FURNISH INSPECTION REPORTS TO THE ENGINEER OF RECORD AND BUILDING DEPARTMENT. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF NOT CORRECTED TO THE ENGINEER AND THE BUILDING DEPARTMENT.
 - C. SUBMIT TO THE ENGINEER OF RECORD AND THE BUILDING DEPARTMENT A SIGNED FINAL REPORT STATING THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.
- 2. SPECIAL INSPECTION NOTES:
 - A. CONTINUOUS SPECIAL INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS SPECIFICALLY NOTED BELOW.
 - B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE SPECIAL INSPECTOR(S) WITH ADVANCE NOTICE, NO LESS THAN ONE WORKING DAY, OF THE INITIATION OF ANY WORK REQUIRED TO HAVE SPECIAL INSPECTIONS. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION WILL BE SUBJECT TO REMOVAL.
- 3. TYPES OF WORK REQUIRING SPECIAL INSPECTION ARE:
 - A. CONCRETE CONSTRUCTION AS REQUIRED BY IBC SECTION 1705.3 AND TABLE 1705.3, EXCEPT AS ALLOWED IN IBC SECTION 1705.3:
 - 1. PERIODIC INSPECTION OF REINFORCING STEEL MATERIAL AND PLACEMENT.
 - 2. PERIODIC INSPECTION FOR VERIFICATION OF PROPER USE OF REQUIRED MIX DESIGN, MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES
 - 3. DURING PREPARATION OF REQUIRED STRENGTH TEST SPECIMENS AND PLACEMENT OF CONCRETE FOR PROPER APPLICATION OF TECHNIQUES.
 - B. SPECIAL INSPECTION FOR EXISTING SITE CONDITIONS, DURING SITE PREPARATION AND FILL PLACEMENT, TO ENSURE LOAD-BEARING REQUIREMENTS IN COMPLIANCE WITH IBC SECTION 1705.6 EXCEPT AS ALLOWED IN IBC SECTION 1705.6.

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DATE: 9/06/19
REP: SVEN LOUIS
ASSET #:
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ABBREVIATIONS & STRUCTURAL GENERAL NOTES

S-001

9/6/2019



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FOUNDATION PLAN AND SECTIONS

S-101

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FOUNDATION NOTES:

- FOUNDATION REVIEW AND INSPECTION IS TO BE PERFORMED BY THE LOCAL OFFICIAL HAVING JURISDICTION.
- POSITIVE DRAINAGE UNDER UNIT.
- UNIT MAY BE SHIMMED AS REQUIRED BETWEEN TOP OF PIER AND MODULAR UNIT FRAME. FLAT METAL, WOOD OR ABS SHIMS CAN BE USED. WEDGE SHIMS SHALL BE USED IN PAIR.
- DIMENSIONS SHALL BE FIELD VERIFIED.
- FINISHED FLOOR ELEVATION FFE = 100'-0" IS FOR REFERENCE ONLY.
- TIE-DOWN STRAPS TO BE 1-1/4" x .035" TYPE-1, FINISH B, GRADE 1 ZINC COATED STEEL CONFORMING WITH ASTM D3953-91. TIE DOWN STRAPS HARDWARE SHALL HAVE 3150# MINIMUM WORKING CAPACITY AND YIELD STRESS OF 109 KSI.
- UNDERGROUND UTILITY LOCATIONS ARE THE RESPONSIBILITY OF OTHERS. ALL UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED PRIOR TO ANY EXCAVATION. PROVIDE VENTILATION AS REQUIRED PER CODE ONE SQUARE FOOT PER EACH 150 SQUARE FEET OF CRAWL SPACE AREA.
- PROVIDE MINIMUM CRAWL SPACE ACCESS DOOR UNDER UNIT. OF 18" x 24".
- ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 2500 PSF.
- PROVIDE CONCRETE MASONRY UNITS (CMU) OF NORMAL WEIGHT (125 PCF MINIMUM), CONFORMING TO THE LATEST EDITION OF ASTM C 90.
- MINUTE MAN PRODUCT SHALL BE INSTALLED PER MANUFACTURER SPECIFICATION.
- DOUBLE CMU DRY STACK SHALL NOT EXCEED 48" IN HEIGHT WITHOUT SURFACE CEMENT BONDING.
- PX INDICATES PIER MARK. REFER TO SCHEDULE ON SHEET S-101.
- BX INDICATES CONCRETE BEAM MARK. REFER TO SCHEDULE ON SHEET S-101.
- REFER TO SHEET S-001 FOR STRUCTURAL GENERAL NOTES.

LEGEND:

- ⊗ INDICATES MINUTE MAN ROCK CROSS DRIVE ANCHOR LOCATIONS. END ARROW INDICATE ANCHOR LOCATION.
- ⊠ INDICATES 8" DOUBLE CMU DRY STACK
- INDICATES 8" DOUBLE SOLID CMU DRY STACK

DESIGN LOAD:

BUILDING CODE: IBC 2015
 ROOF LIVE LOAD = 20 PSF
 FLOOR LIVE LOAD = 50 PSF
 FLOOR DEAD LOAD = 10 PSF
 ROOF DEAD LOAD = 10 PSF
 EXTERIOR WALL DEAD LOAD = 60 PLF

WIND SPEED

V = 115 MPH (ULTIMATE)
 V = 89 MPH (ASD)
 EXPOSURE C
 INTERNAL PRESSURE COEFFICIENT GCp1 = ± .18

SEISMIC LOADS:

RISK CATEGORY - II
 MAPPED SPECTRAL RESPONSE ACCELERATIONS - Ss = 0.271, S1 = 0.075
 SITE CLASS - D
 SPECTRAL RESPONSE COEFFICIENT - Sds = .286 Sd1 = 0.120
 SEISMIC DESIGN CATEGORY B
 BASIC FORCE RESISTING SYSTEM - LIGHT FRAMED WOOD WALL SHEATHED WITH WOOD
 STRUCTURAL PANEL RATED FOR SHEAR RESISTANCE
 ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE PROCEDURE
 RESPONSE MODIFICATION FACTOR - R = 6.5
 SEISMIC RESPONSE COEFFICIENT - Cs = .0440
 DESIGN BASE SHEAR - V = 2.6 K

SNOW LOAD:

GROUND SNOW LOAD Pg = 87 PSF
 EXPOSURE FACTOR Ce = 1.00
 THERMAL FACTOR Ct = 1.1
 IMPORTANCE FACTOR Is = 1.00
 ROOF SNOW LOAD P1 = 23.1 PSF

ABS PAD NOTES:

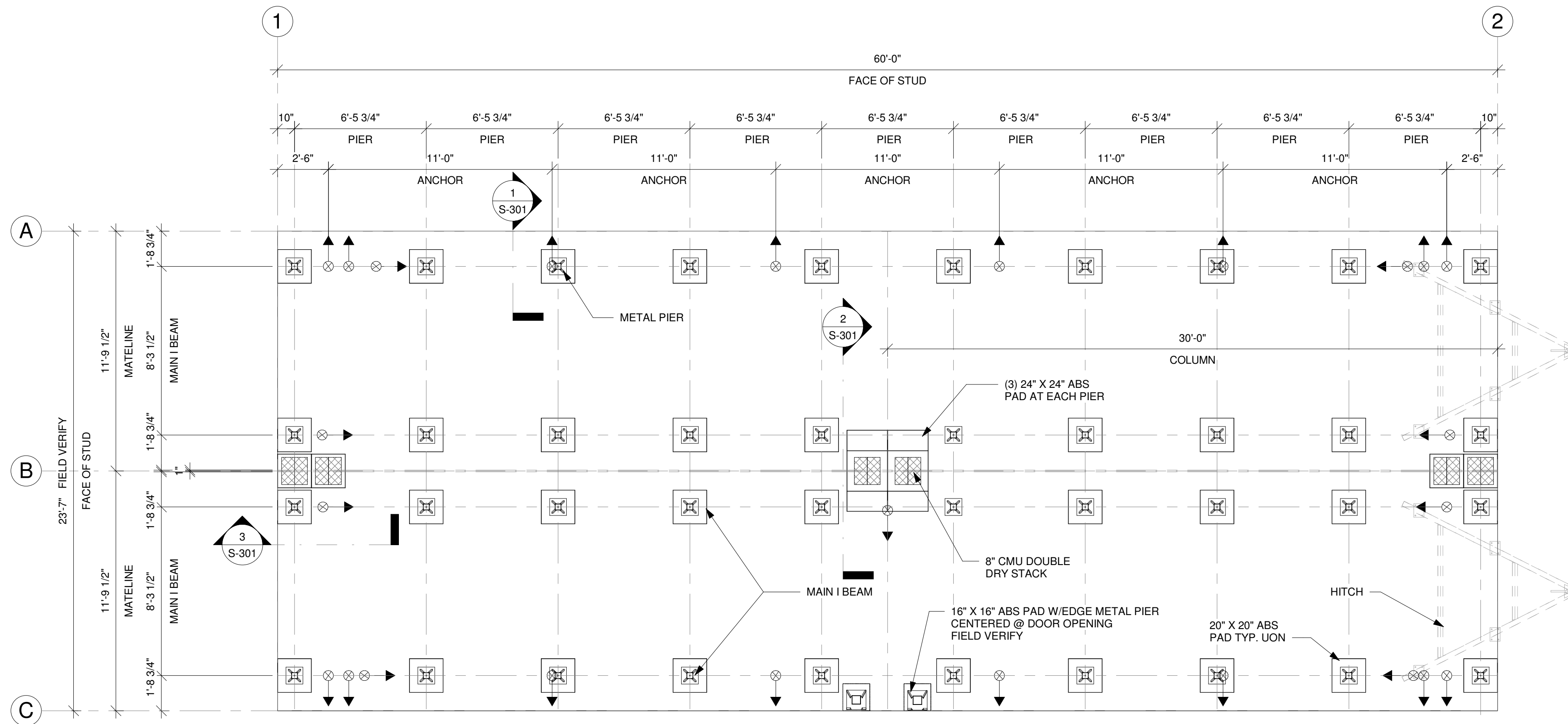
- CLEAR ALL VEGETATION AND DEBRIS FROM THE AREA WHERE THE ABS PAD ARE TO BE PLACED.
- GROUND UNDER ABS PAD SHALL BE LEVELED AND EVENLY COMPACTED.
- PLACE ABS PAD WITH GRID SIDE UP, SMOOTH SIDE DOWN.

BEAM SCHEDULE

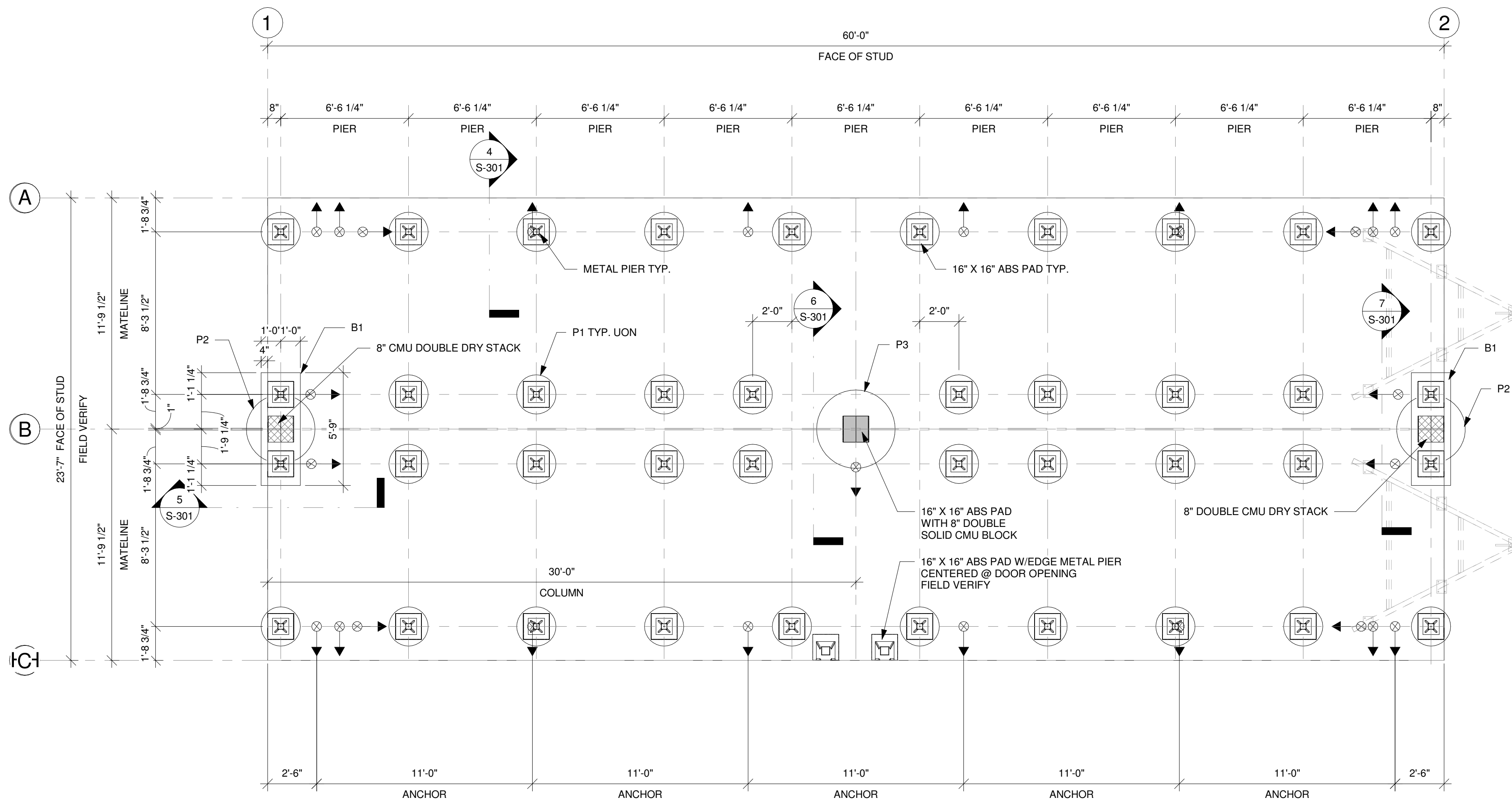
BEAM MARK	BEAM SIZE W X H X L	STEEL REINFORCEMENT
B1	2'-0" X 0'-10" X 5'-9"	(3) #4 LONGITUDINAL TOP & BOT W/ #3 STIRRUP @ 12" O.C.

PIER SCHEDULE

PIER MARK	PIER DIA.	VERT. REINF.	HOR. REINF.
P1	24"	(8) #5	#3@ 10 O.C
P2	42"	(16) #6	#3@ 12 O.C
P3	48"	(22) #6	#3@ 12 O.C



1 FOUNDATION PLAN ABS PAD OPTION
1/4" = 1'-0"



2 FOUNDATION PLAN CONCRETE PIER OPTION
1/4" = 1'-0"

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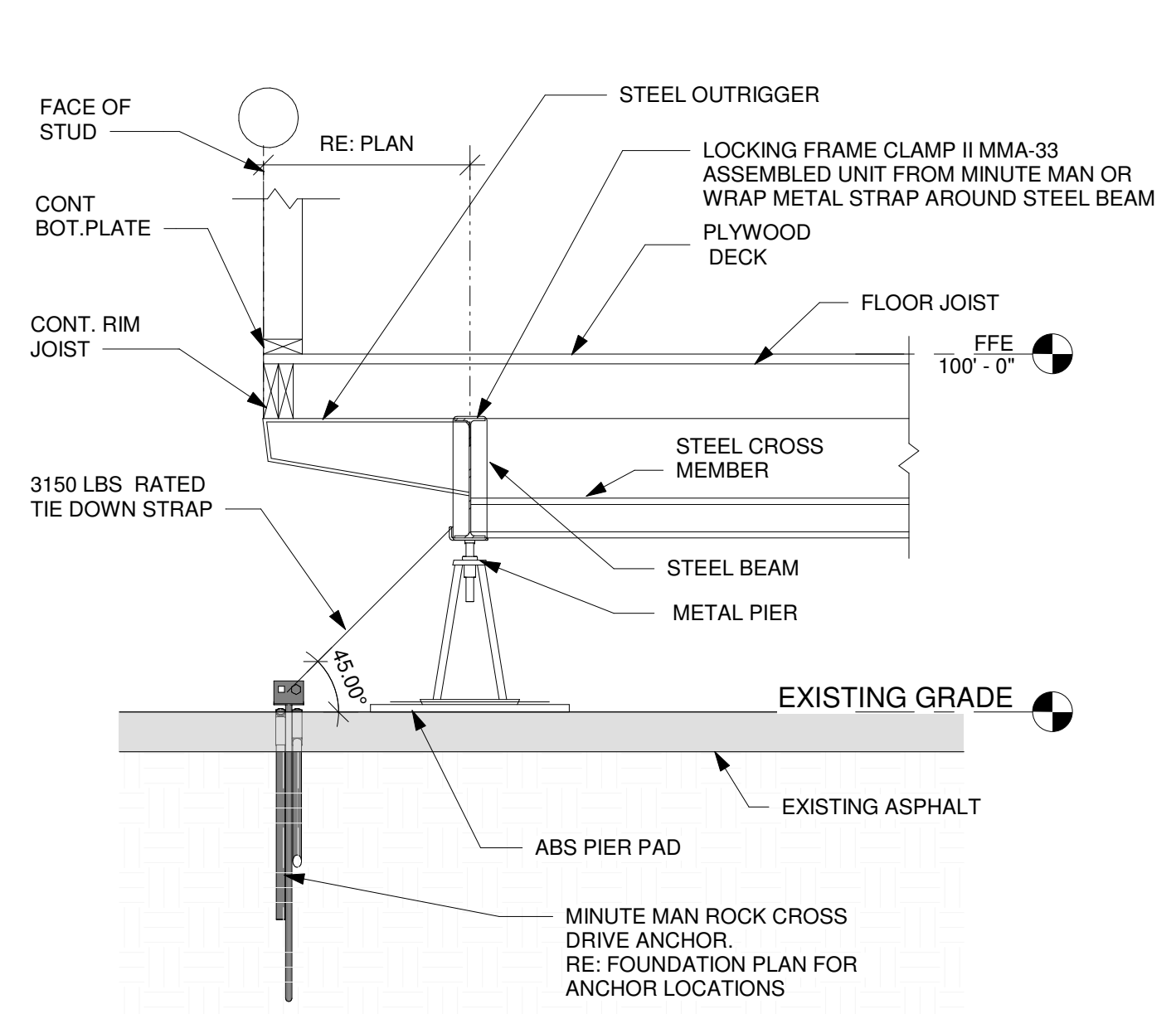
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FOUNDATION SECTIONS

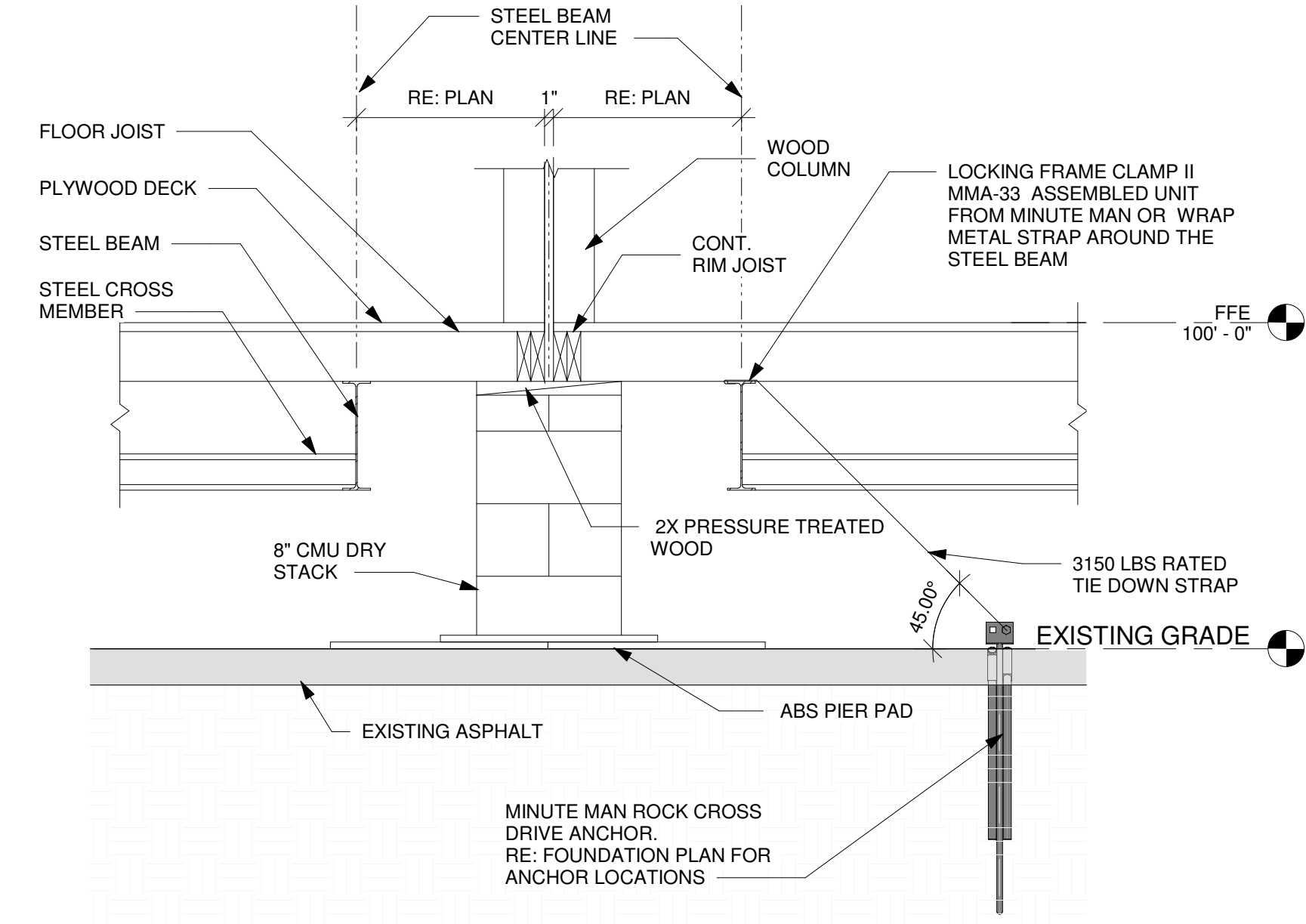
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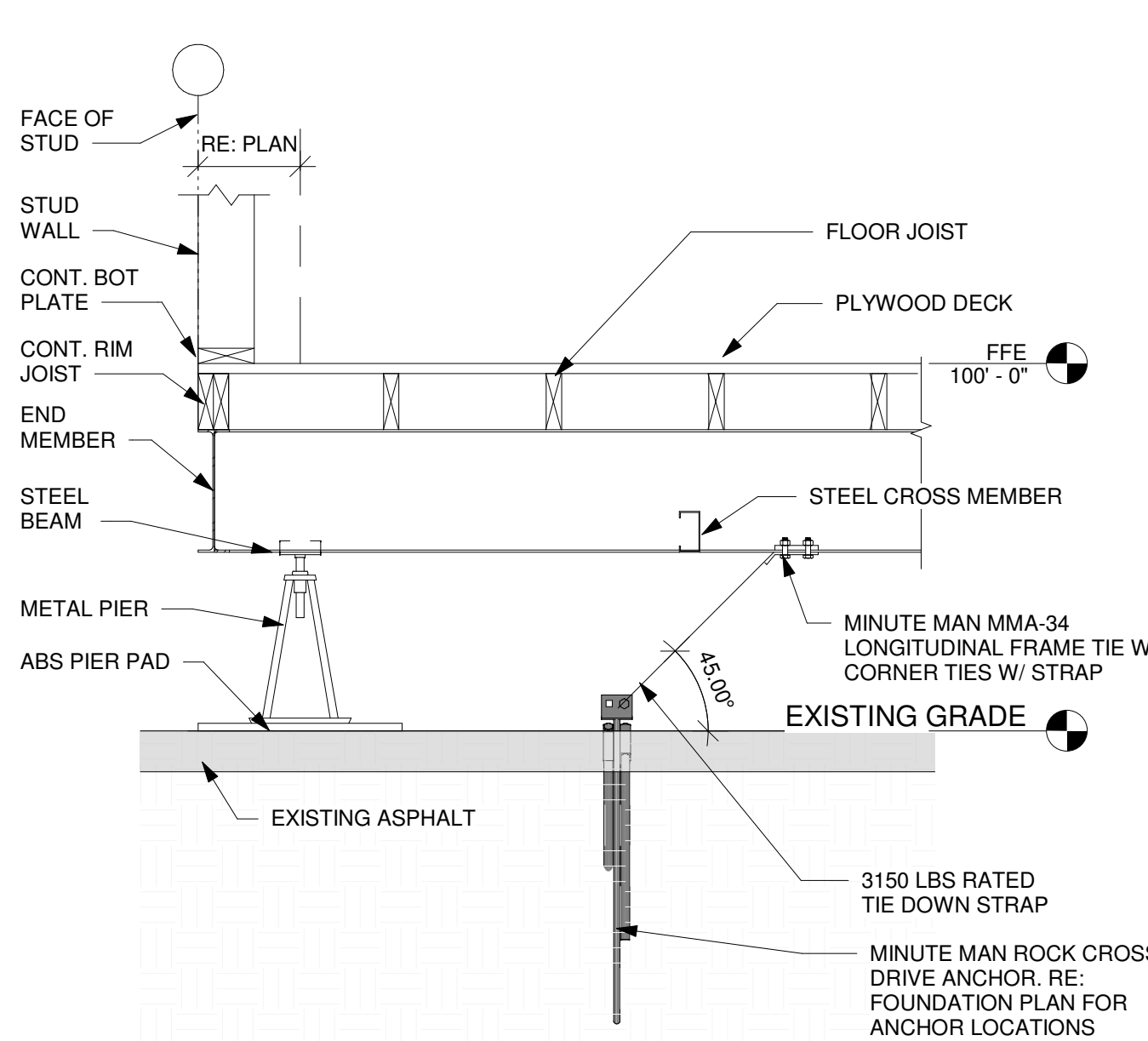
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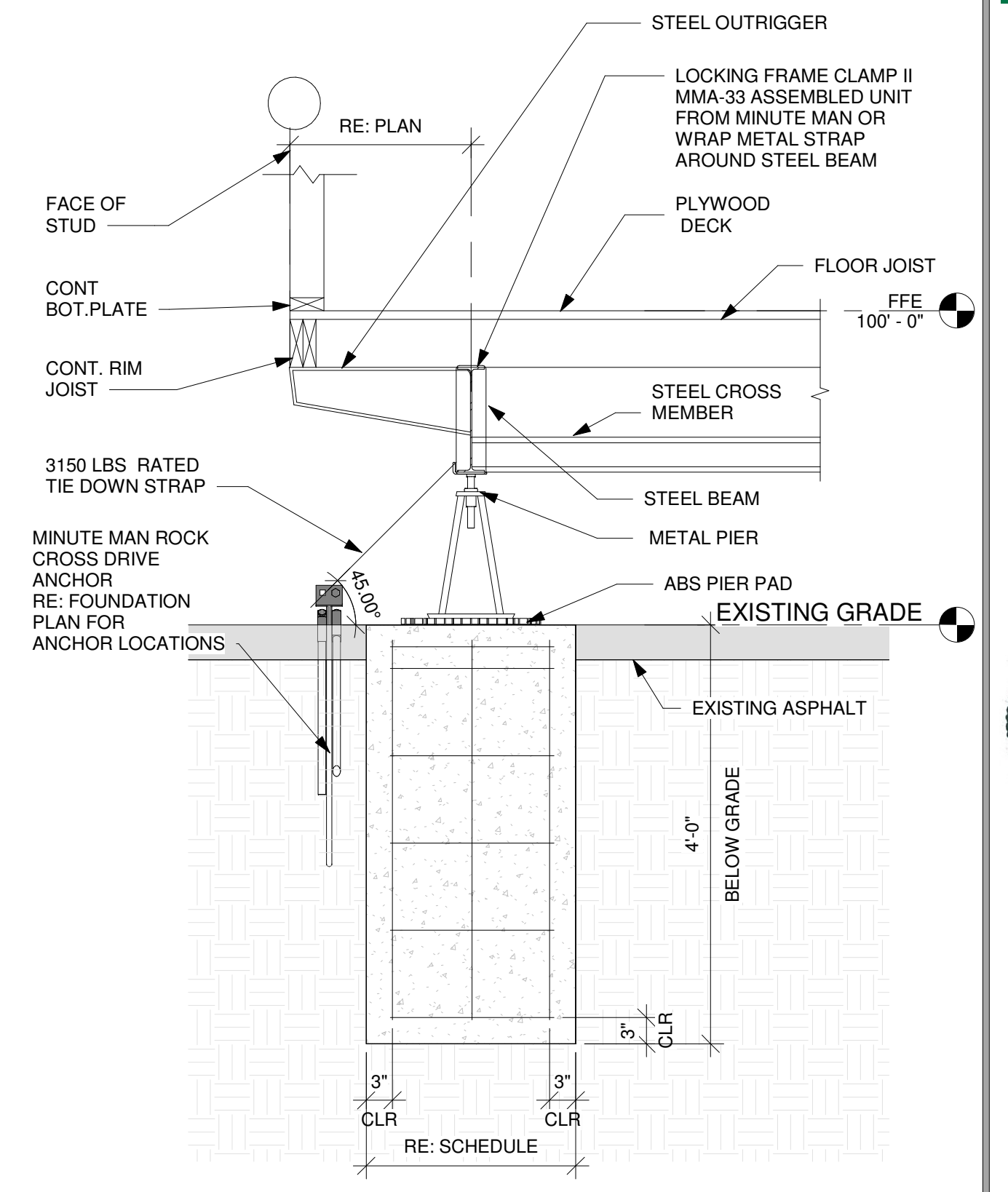
1 OUTRIGGER SECTION
3/4" = 1'-0"



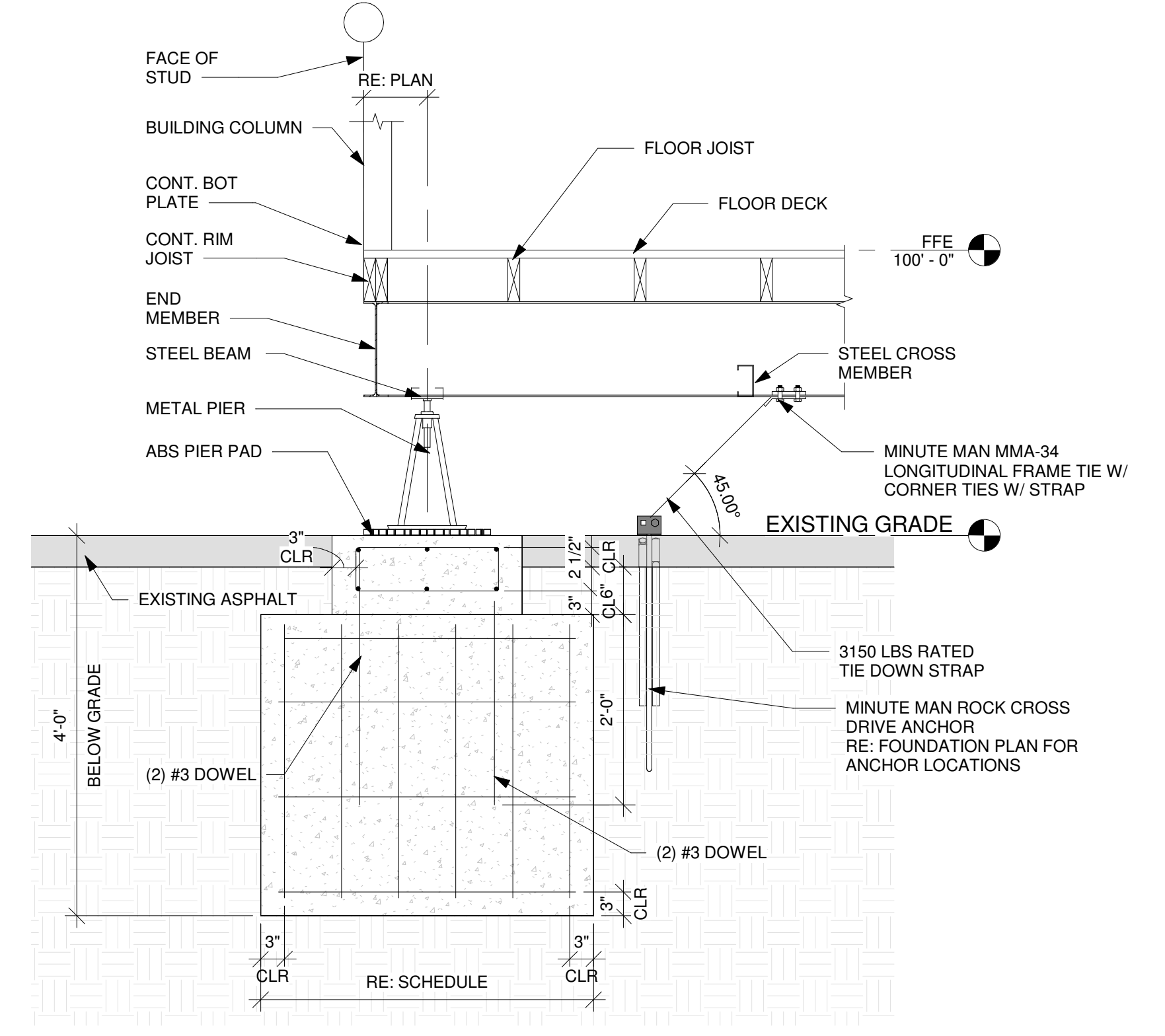
2 MATELINE SECTION
3/4" = 1'-0"



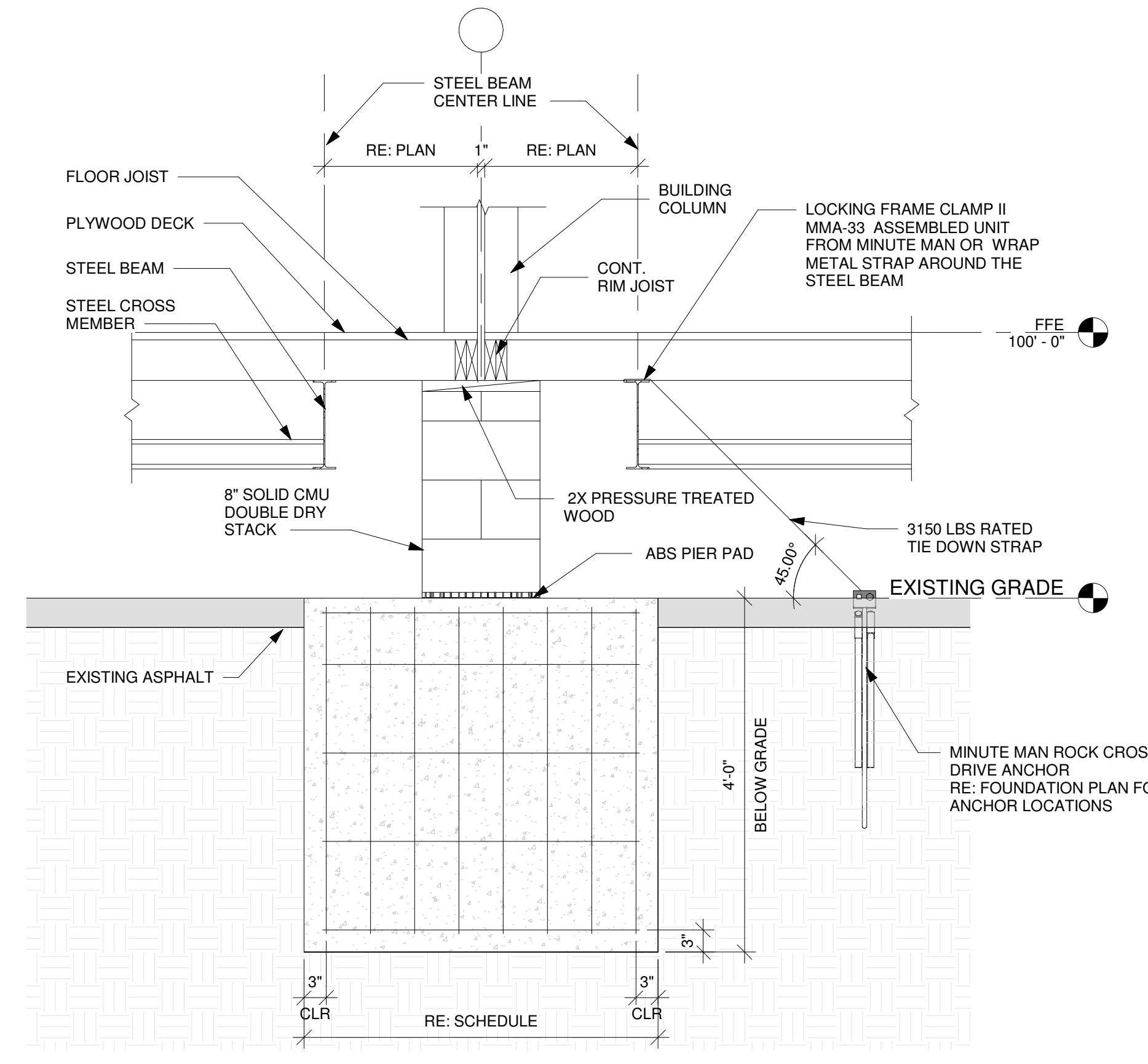
3 END WALL SECTION
3/4" = 1'-0"



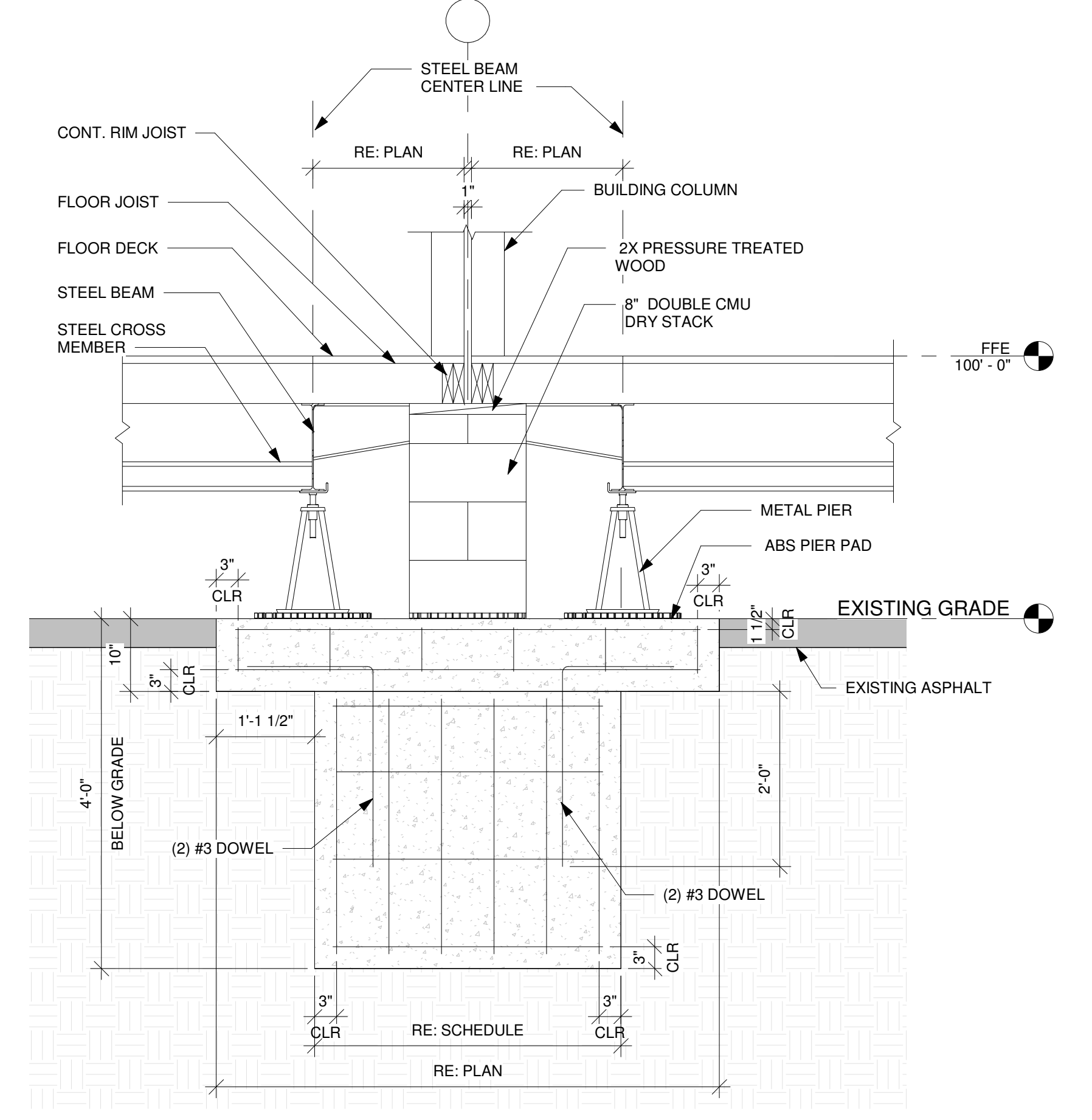
4 OUTRIGGER PIER SECTION
3/4" = 1'-0"



5 END WALL PIER SECTION
3/4" = 1'-0"



6 MATELINE COLUMN PIER SECTION
3/4" = 1'-0"



7 END PIER SECTION
3/4" = 1'-0"