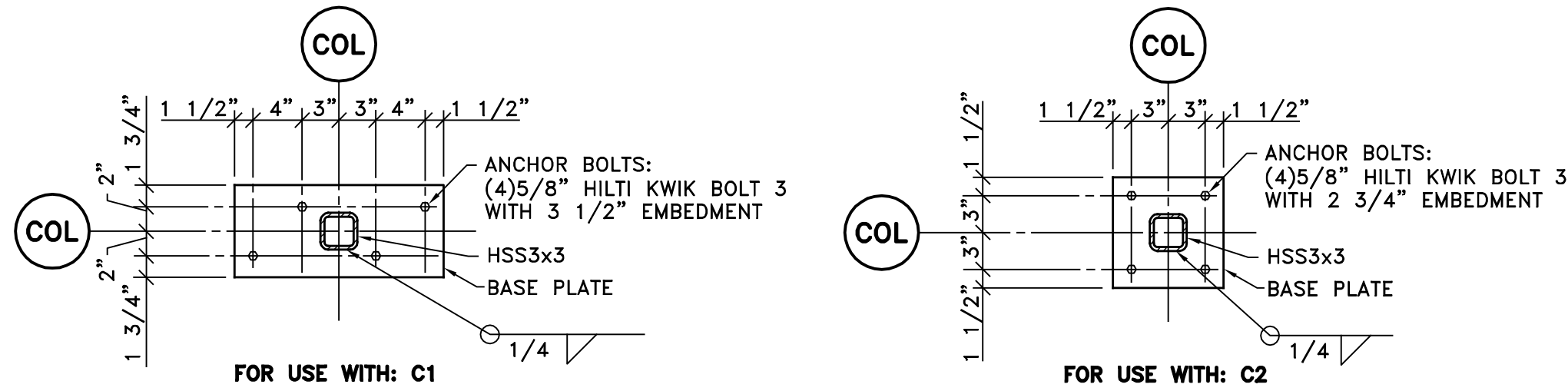
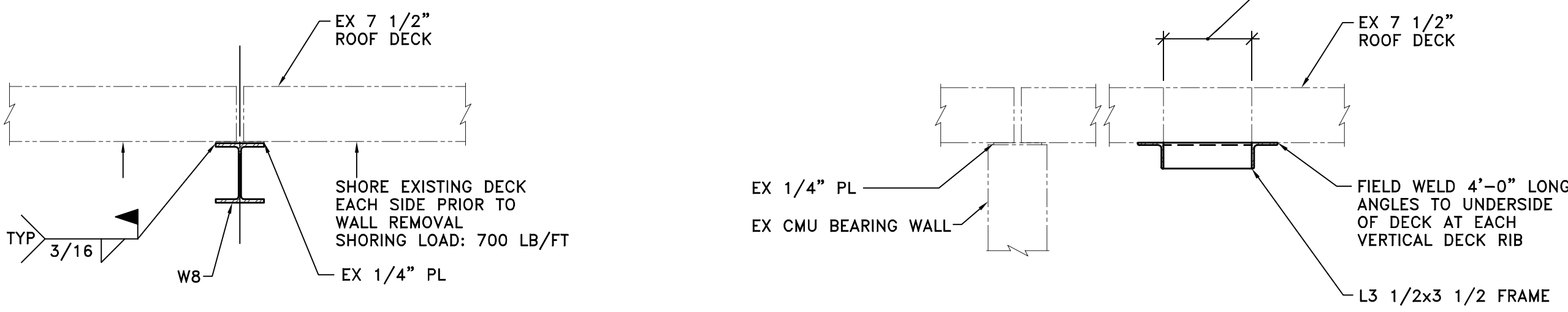


1 2 3 4 5 6 7 8 9 10

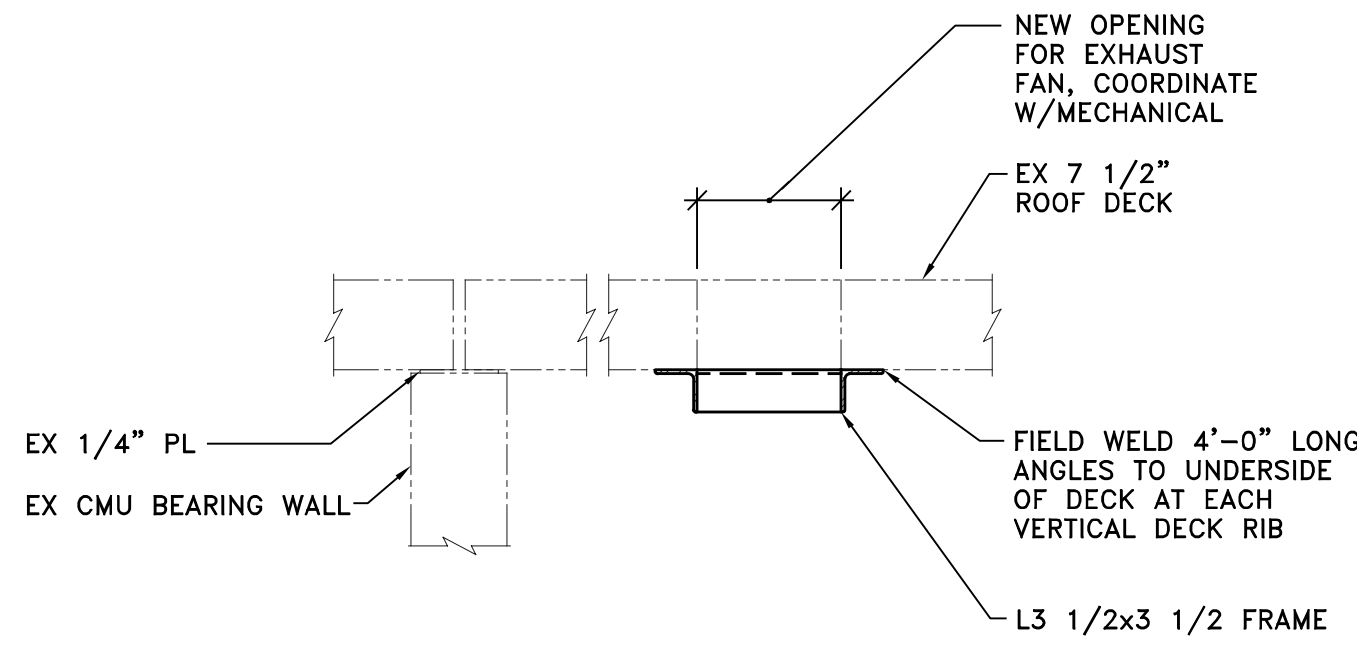
A



**1 ANCHOR ROD PLAN**  
S1.01 1" = 1'-0" 2013-9002A1.dwg



**2 NEW BEAM AT EXISTING**  
S1.01 3/4" = 1'-0" 2013-9002A2.dwg



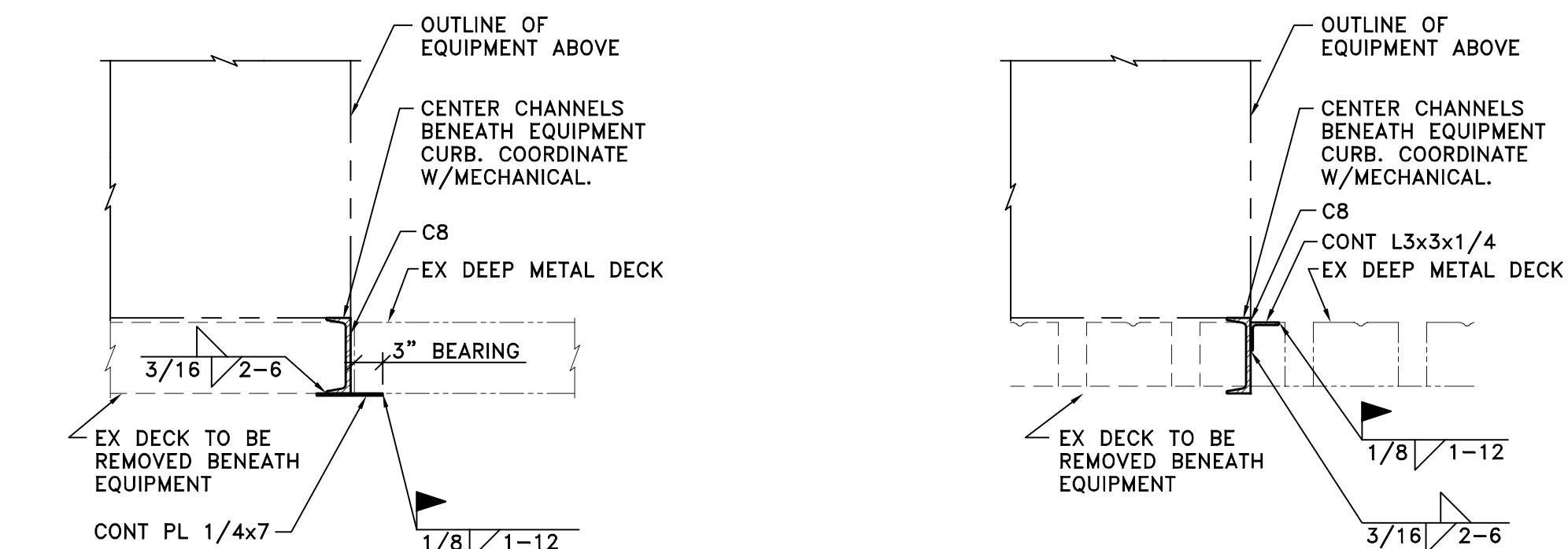
**3 ROOF OPENING**  
S1.01 3/4" = 1'-0" 2013-9002A3.dwg

STEEL LINTEL SCHEDULE <span>Fy=36 KSI</span>			
MARK	CLEAR SPAN	SIZE	BEARING EA. END
L1	4'-0"	L3 1/2x2 1/2x1/4 SLV	4"
L2	5'-0"	L3 1/2x3x1/4 SLV	6"
L3	6'-0"	L3 1/2x3 1/2x1/4	6"
L4	7'-0"	L4x3 1/2x1/4 LLV	6"
L5	8'-0"	L5x3 1/2x1/4 LLV	8"
L6	9'-0"	L6x3 1/2x 3/8 LLV	8"

LINTELS SCHEDULED FOR SINGLE 4" OF WALL THICKNESS. PROVIDE 2 FOR 8" WALL, 3 FOR 10" WALL W/ 3" HORIZ. LEGS & 3 FOR 12" WALL.

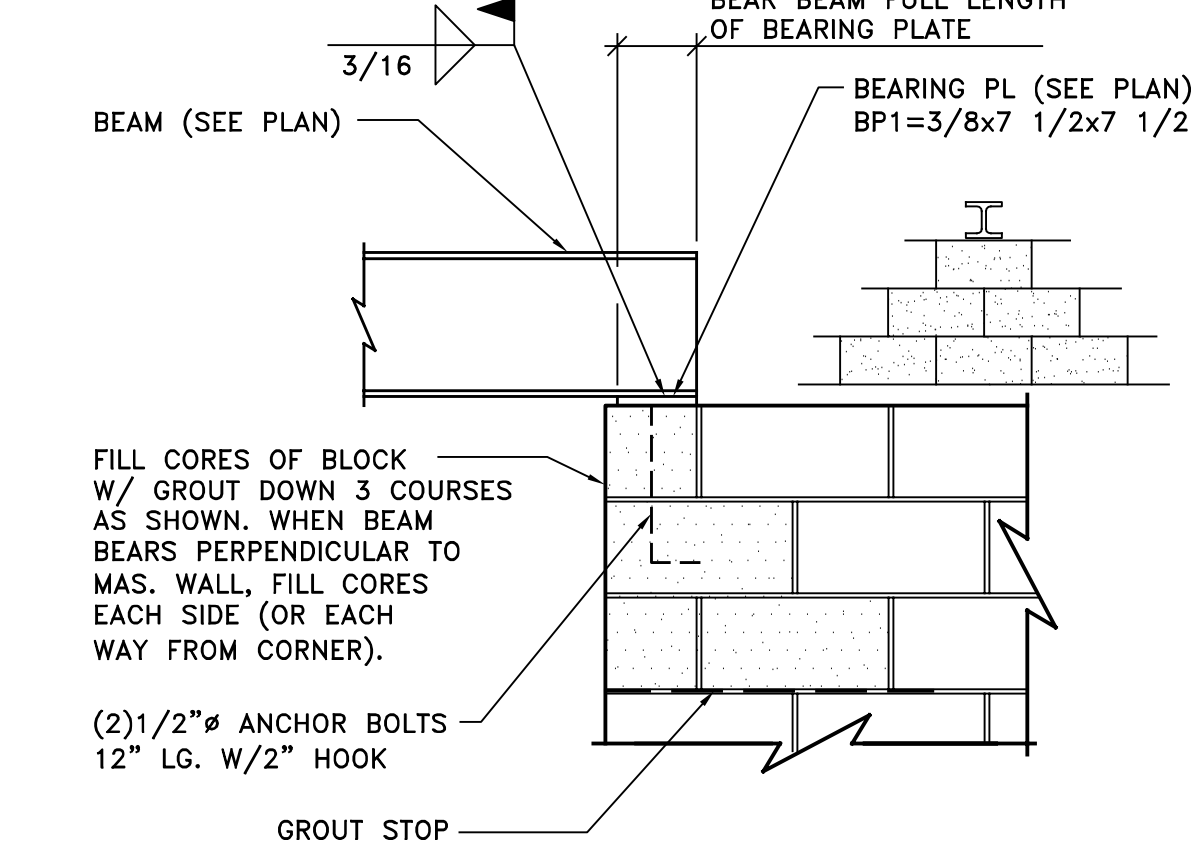
NOTE: 1. GROUT BELOW LINTEL BEARING 3 COURSES  
2. BEARING LENGTH IS OVER CMU OR COMPOSITE BRICK / BLOCK. DO NOT BEAR ON BRICK VENEER.  
3. PROVIDE STEEL LINTELS AT ALL MASONRY WALL OPENINGS, INCLUDING MECHANICAL AND ELECTRICAL GREATER THAN 8" WIDE. SEE LINTEL SCHEDULE.

B

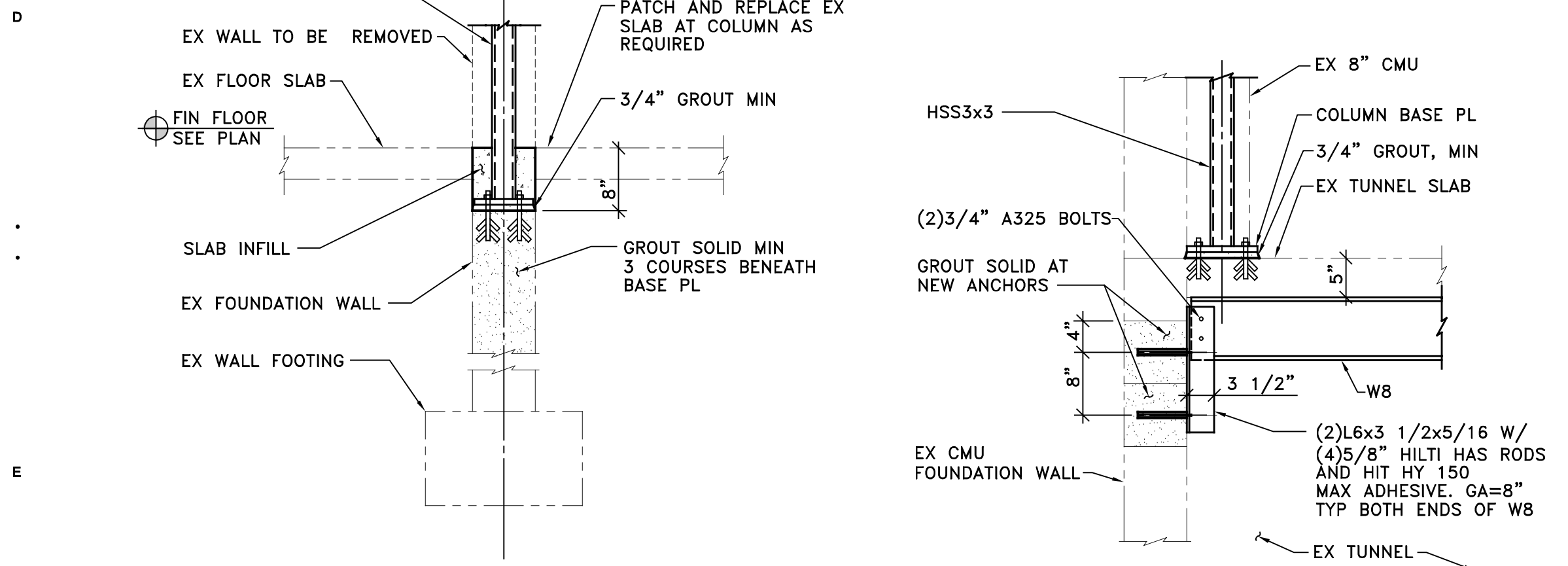


**4 EQUIPMENT SUPPORT EDGE**  
S1.01 3/4"=1'-0" 2008-9005B6.dwg

**5 EQUIPMENT SUPPORT EDGE**  
S1.01 3/4"=1'-0" 2013-9002A5.dwg

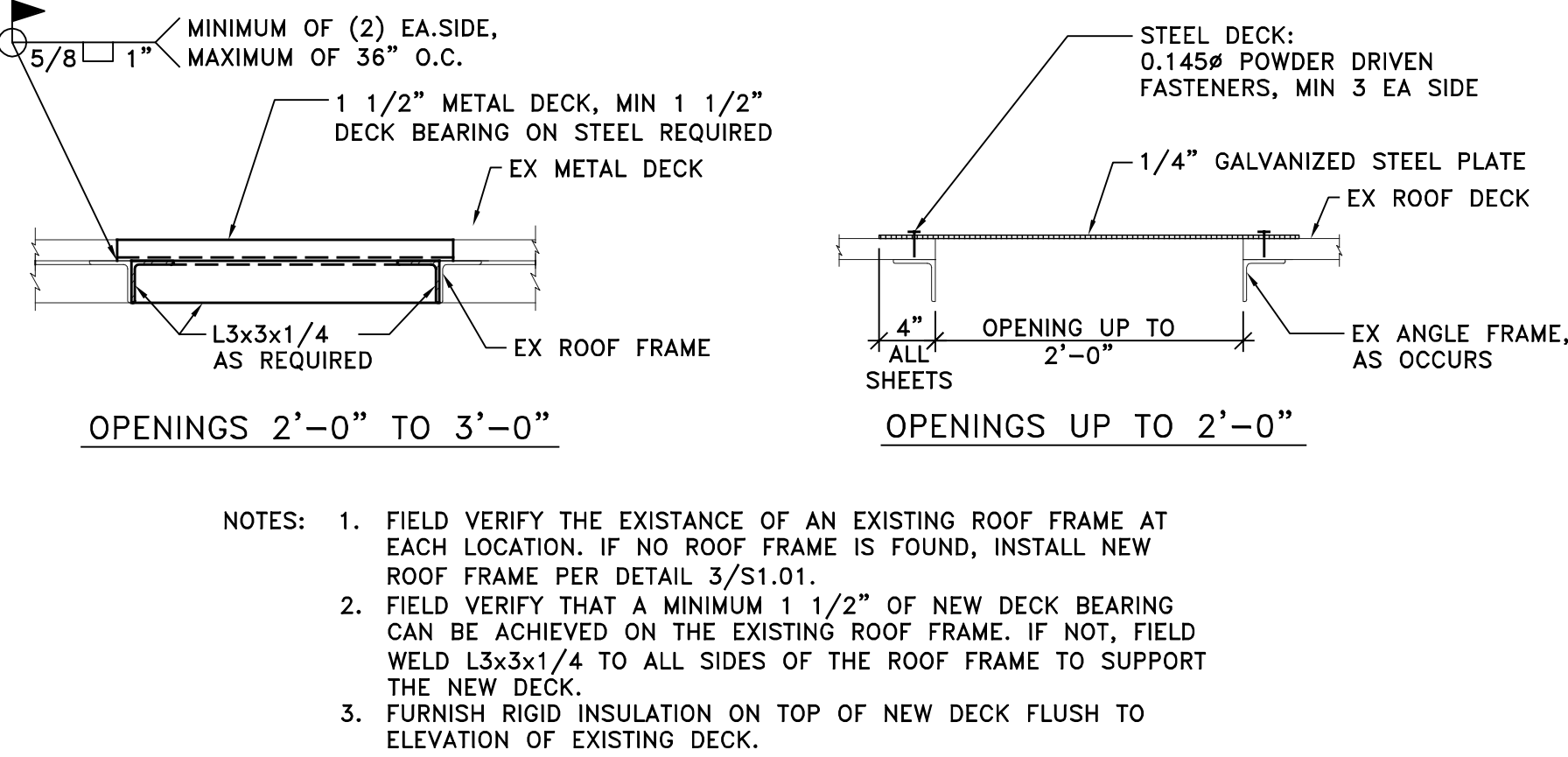


**6 BEAM BEARING**  
S1.01 3/4"=1'-0" 2013-9002A6.dwg

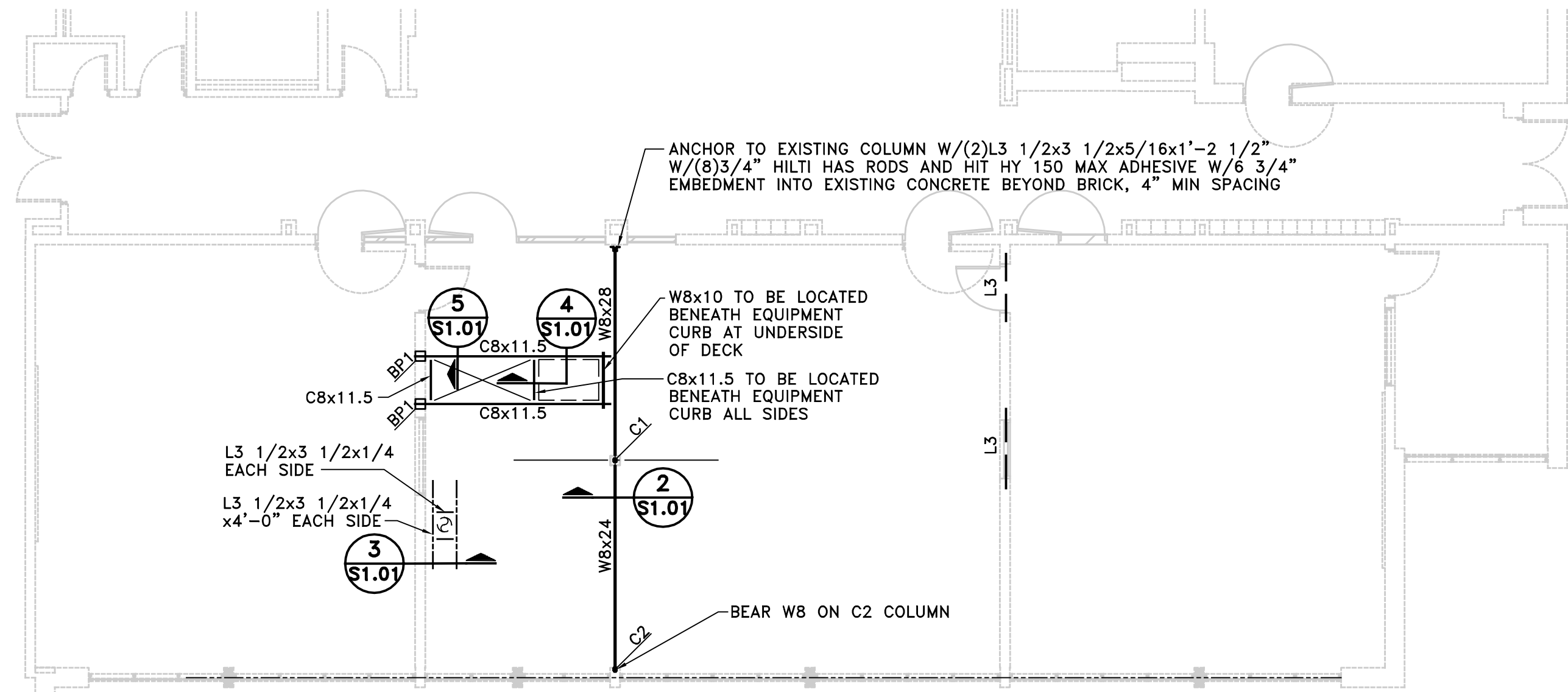


**7 COLUMN ON EX FOUNDATION**  
S1.01 3/4"=1'-0" 2008-9005A8.dwg

**8 NEW FRAMING AT TUNNEL**  
S1.01 3/4"=1'-0" 2013-9002A8.dwg



**9 ROOF INFILL**  
S1.01 1"=1'-0" 2008-9005B3.DWG



**FRAMING PLAN**  
1/8"=1'-0"

**LEGEND**

- C1 - HSS 3x3x5/16 COLUMN W/1/4" CAP PL AND 1" BASE PL - SEE DETAIL 1/S1.01  
C2 - HSS 3x3x5/16 COLUMN W/1/2" CAP PL AND 3/4" BASE PL - SEE DETAIL 1/S1.01  
L1 - STEEL LINTEL - SEE SCHEDULE THIS SHEET  
BP1 - BEARING PLATE - SEE DETAIL 6/S1.01

F

**GENERAL**

- VERIFY DIMENSIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT.
- VERIFY OPENINGS IN THE FRAMING PLANS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
- DESIGN LOADS
  - DESIGNED IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2009.
  - ROOF SNOW LOAD: GROUND SNOW LOAD PG = 20 PSF  
FLAT ROOF SNOW LOAD, PF = 22 PSF  
SNOW EXPOSURE FACTOR, CE = 1.0  
SNOW LOAD IMPORTANCE FACTOR, I = 1.1  
THERMAL FACTOR, CT = 1.0
  - WIND LOADS: BASIC WIND SPEED, V = 80 MPH  
WIND LOAD IMPORTANCE FACTOR, I = 1.15  
WIND EXPOSURE, B  
INTERNAL PRESSURE COEFFICIENT, GC PI = ± 0.18
- WALL COMPONENTS AND CLADDING:

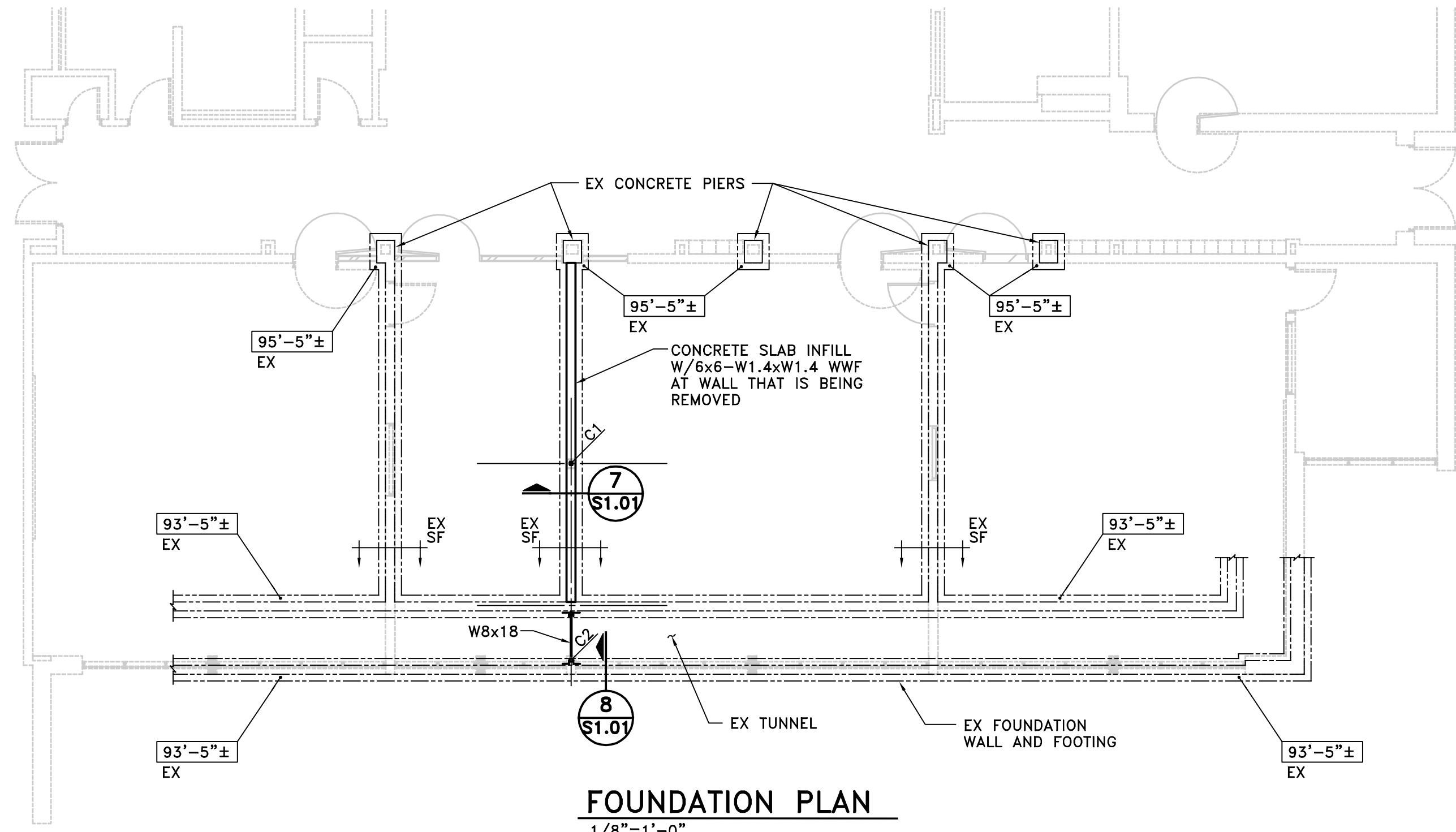
EFFECTIVE WIND AREA (FT2)	POSITIVE PRESSURE (PSF)	NEGATIVE PRESSURE (PSF)
-END ZONE		
10	16.8	22.4
20	16.0	20.9
50	15.0	19.0
100	14.3	17.4
-INTERIOR ZONE		
10	16.8	18.2
20	16.0	17.4
50	15.0	16.5
100	14.3	15.6
- EARTHQUAKE DESIGN DATA:
  - SEISMIC USE GROUP, II
  - SEISMIC IMPORTANCE FACTOR, I = 1.25
  - SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.132, SD1 = 0.073
  - SITE CLASS D
  - BASIC SEISMIC - FORCE - RESISTING SYSTEM: SHEAR WALL
  - SEISMIC DESIGN CATEGORY, A
- SPECIAL INSPECTIONS:
  - SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE 2009.
  - SPECIAL INSPECTION REPORTS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND CONTRACTOR. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR, AND IF NOT CORRECTED, SHALL BE REPORTED TO BUILDING OFFICIAL, OWNER, ARCHITECT, AND STRUCTURAL ENGINEER.
  - THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
  - THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS: (REFER TO THE BUILDING CODE AND SPECIFICATIONS FOR DETAILED INSPECTION REQUIREMENTS).
    - STEEL CONSTRUCTION.
    - MASONRY CONSTRUCTION.

**MASONRY NOTES**

- WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530 SPECIFICATIONS.
- MORTAR: ASTM C270, TYPE M BELOW GRADE, TYPE M OR S ABOVE GRADE, TYPE N FOR NON-LOAD BEARING ABOVE GRADE.
- GROUT: ASTM C476, F'C=3000 PSI, TESTED PER ASTM C1019.
- REINFORCING BARS SHALL BE ASTM A-615, GRADE 60, LAP MINIMUM 40 BAR DIAMETERS FOR #5 BARS AND SMALLER, LAP MINIMUM 52 BAR DIAMETERS FOR BARS LARGER THAN #5 UNLESS NOTED OTHERWISE.
- HORIZONTAL WALL REINFORCING: AS SPECIFIED.
- CONCRETE MASONRY UNITS: ASTM C-90, GRADE N, TWO CORE TYPE FOR REINFORCED MASONRY.
- VERTICAL WALL REINFORCING: 1 - #4 EACH SIDE OF MASONRY OPENINGS, CONTROL JOINTS AND AS SHOWN, IN GROUT FILLED BLOCK CORES.
- VERTICAL BAR REINFORCING: PLACE ACCURATELY AND MECHANICALLY HOLD IN POSITION WHILE GROUTING. GROUTING SHALL BE DONE IN LIFTS NOT EXCEEDING 4'-0" AND MECHANICALLY CONSOLIDATED IN PLACE; CONSOLIDATION BY RODDING NOT ACCEPTABLE.
- PROVIDE COMPLETELY GROUTED UNITS:
  - UNDER CAST-IN-PLACE CONCRETE FLOOR BEARING
  - UNDER BRICK VENEER BEARING
  - UNDER ANY CHANGE OF WALL THICKNESS, I.E.: 8" ON TOP OF 12"
  - UNDER STEEL JOIST OR BEAM BEARING
- PROVIDE LINTELS FOR OPENINGS IN MASONRY WALLS OVER 8" WIDE. SEE SCHEDULE.
- TEMPORARY WALL BRACING IS THE CONTRACTORS RESPONSIBILITY. CONFORM TO APPLICABLE CODES AND STANDARDS.

**STRUCTURAL STEEL**

- STRUCTURAL STEEL: FABRICATED AND ERECTED PER THE AISC MANUAL OF STEEL CONSTRUCTION.  
W-BEAMS: ASTM A-992 GR. 50.  
STEEL TUBES: ASTM A-500 GRADE B.  
STEEL PIPE: ASTM A53, TYPE E, GRADE B.  
ALL OTHER SHAPES: ASTM A-36.
- ANCHOR RODS: 36 KSI, ASTM F-1554.
- WELDS: E70XX ELECTRODES PER AWS D1.1, STRUCTURAL WELDING CODE.
- BOLTED CONNECTIONS: 3/4" DIAMETER A-325 BOLTS UNLESS NOTED. DESIGNED FOR BEARING CONNECTIONS, TIGHTENED TO SNUG TIGHT CRITERIA UNLESS NOTED OTHERWISE.
- STEEL PRIMER: RUST INHIBITING ALKYD INDUSTRIAL PRIMER, 1.5 MIL DRY FILM THICKNESS.
- BEAM CONNECTIONS DESIGNED TO SUPPORT ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY PER AISC. WHEREVER POSSIBLE, EXTEND CONNECTIONS FULL DEPTH OF BEAM.
- SHEAR TAB CONNECTIONS TO STEEL BEAMS ARE NOT ACCEPTABLE.
- BEAM BEARING PLATES ARE TO BE LOCATED ON CENTER OF WALL UNLESS NOTED OTHERWISE. BEAR BEAM FULL LENGTH OF BEARING PLATES.
- PROVIDE FITTED STIFFENER PLATES EACH SIDE FOR ALL CONDITIONS WHERE BEAMS BEAR ON COLUMNS, BEAMS BEAR ON BEAMS, BEAMS HANG FROM BEAMS, OR COLUMNS BEAR ON BEAMS. STIFFENER PLATES MINIMUM 1/4" THICK.



**FOUNDATION PLAN**  
1/8"=1'-0"

**LEGEND**

- C1 - HSS 3x3x5/16 COLUMN W/1/4" CAP PL AND 1" BASE PL - SEE DETAIL 1/S1.01  
C2 - HSS 3x3x5/16 COLUMN W/1/2" CAP PL AND 3/4" BASE PL - SEE DETAIL 1/S1.01  
0'-0" - BOTTOM OF FOOTING ELEVATION

**WIHi Science Lab Remodel**

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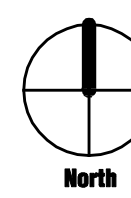
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ENGINEER

under the laws of the State of Michigan

Dwight Reckinger  
Registration Number 31688 Date 7/28/05

Description	Revisions	Date	Rev

Cover: 134003  
Date: 4/4/2013  
Drawn: GKT  
Check: LEP



**PLANS, DETAILS AND NOTES**

Scale:

**S1.01**