

GENERAL

1. VERIFY DIMENSIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT.

2. VERIFY OPENINGS IN THE FRAMING PLANS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

3. ALL WORK SHALL CONFORM TO MICHIGAN BUILDING CODE 2021.

4. DESIGN LOADS

a. DESIGNED IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2021.

b. ROOF SNOW LOAD:

GROUND SNOW LOAD PG = 30 PSF

FLAT ROOF SNOW LOAD, PF = 23 PSF

SNOW EXPOSURE FACTOR, CE = 1.0

SNOW LOAD IMPORTANCE FACTOR, I = 1.1

THERMAL FACTOR, CT = 1.0

DRIFTED SNOW LOAD, SEE DIAGRAM THIS SHEET

c. SECOND FLOOR LIVE LOAD:

STORAGE - LIGHT 125 PSF

d. WIND LOADS:

BASIC WIND SPEED V_{ULT} = 114 MPH

V_{ASD} = 88 MPH

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	22	-29	
20	21	-27	
50	20	-25	
100	19	-23	
-INTERIOR ZONE			
10	22	-24	
20	21	-23	
50	20	-21	
100	19	-20	

e. EARTHQUAKE DESIGN DATA:

SEISMIC USE GROUP, II

SEISMIC IMPORTANCE FACTOR, I = 1.25

SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.076, SD1 = 0.064

SITE CLASS D

BASIC SEISMIC - FORCE - RESISTING SYSTEM: SHEAR WALL

SEISMIC DESIGN CATEGORY, A

5. SPECIAL INSPECTIONS:

a. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE 2021 SECTION 1700.

b. THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS: (REFER TO THE BUILDING CODE AND SPECIFICATIONS FOR DETAILED INSPECTION REQUIREMENTS).

1. PREPARED FILL.

2. CONCRETE CONSTRUCTION.

3. MASONRY CONSTRUCTION.

FOUNDATION NOTES

1. FOUNDATIONS ARE DESIGNED BASED ON SOIL BEARING OF 2500 PSF. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATION NOTED, ENLARGE OR LOWER FOOTINGS AT THE DIRECTION OF THE ARCHITECT/ENGINEER.
2. PLACE STRUCTURAL BACKFILL MEETING OR EXCEEDING MDOT CLASS II IN LAYERS NOT EXCEEDING 9" LOOSE THICKNESS. COMPACT EACH LAYER TO AT LEAST 95% OF THE MAXIMUM DENSITY PER ASTM D-1557. COMPACTING BY FLOODING IS NOT PERMITTED.
3. CENTER FOOTINGS UNDER WALL LOCATION AND COLUMNS UNLESS NOTED.
4. EARTH FORMS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED.
5. THE CONTRACTOR SHALL HAND EXCAVATE A MINIMUM OF 6" BELOW BOTTOM FOOTING ELEVATIONS AND IMMEDIATELY PLACE COMPACTED MSHDOT 21AA DENSE GRADED AGGREGATE UP TO THE BOTTOM OF FOOTING ELEVATION. THIS LAYER OF AGGREGATE SHALL EXTEND A MINIMUM OF 12" BEYOND THE EDGE OF THE FOOTINGS IN ALL DIRECTIONS.
6. DISTURBANCE OF THE FOUNDATION BEARING SOILS SHALL BE AVOIDED.
7. EXISTING FOUNDATIONS OR FLOOR SLAB ENCOUNTERED DURING SITE GRADINGS AND EXCAVATION SHALL BE REMOVED TO A DEPTH OF TWO (2) FEET BELOW NEW CONSTRUCTION. REPLACE WITH STRUCTURAL BACKFILL.
8. PROVIDE BOND BREAK MATERIAL BETWEEN ALL GRADE SLABS AND VERTICAL SURFACES.
9. BACKFILL AND EXCAVATION PER SPECIFICATIONS.

CONCRETE NOTES

1. ACI BUILDING CODE (318); MANUAL OF STANDARD PRACTICE FOR DETAILING (315) FOR THE MIXING, FABRICATION AND PLACEMENT OF CONCRETE, REINFORCING STEEL, AND ACCESSORIES.
2. CONCRETE STRENGTH - (STANDARD) WEIGHT CONCRETE: $F'C$ = (3000 MINIMUM) PSI
FOOTINGS, WALLS, PIERS:
CONCRETE FILL ON (COMPOSITE) (FORM)
(PRECAST CONCRETE) DECK: $F'C$ = (3500 MINIMUM) PSI
CONCRETE SLABS ON GRADE: $F'C$ = (3500 MINIMUM) PSI
EXTERIOR CONCRETE SLABS EXPOSED TO DE-ICING: $F'C$ = (4500 MINIMUM) PSI
3. REINFORCING - BARS: ASTM A-615 GRADE 60
WELDED WIRE FABRIC: ASTM A-1064
4. CONCRETE SLABS ON GRADE REINFORCING: 6x6 - W1.4xW1.4 WWF UNLESS NOTED. LOCATED IN THE UPPER 1/3 OF SLAB THICKNESS.
5. PROVIDE SAWCUT CONTROL JOINTS AT APPROXIMATELY 15' ON CENTER EACH WAY IN SLABS ON GRADE, SEE DETAILS. LOCATE JOINTS UNDER PARTITIONS WHENEVER POSSIBLE. CONSTRUCTION JOINTS AT CONTRACTOR'S OPTION.
6. DEPRESS SLABS AS REQUIRED FOR FLOOR FINISHES, SEE ARCHITECT.
7. SLOPE FLOORS AS REQUIRED TO FLOOR DRAINS, SEE ARCHITECT.
8. FORM ALL CONCRETE.
10. EXPOSED EDGES OF CONCRETE BEAMS, COLUMNS, ETC. SHALL BE CHAMFERED 3/4".
11. PROVIDE CORNER BARS FOR ALL CONTIGUOUS CORNERS.
12. WATER/CEMENT RATIO LIMITS:

$F'C$ = 3000 PSI	0.68 NON-AIR ENTRAINED, 0.50 AIR ENTRAINED
$F'C$ = 3500 PSI	0.62 NON-AIR ENTRAINED, 0.50 AIR-ENTRAINED
$F'C$ = 4500 PSI	0.4 AIR-ENTRAINED
13. SLUMP LIMITS:

3" FOR FOUNDATIONS, 4" FOR SLABS AND WALLS
14. PROVIDE AIR ENTRAINED CONCRETE FOR EXTERIOR EXPOSURES.
15. CONTRACTOR TO SUBMIT SIZE AND LAYOUT OF CONCRETE WALL SLEEVES, OPENINGS, ETC. FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
16. WALL FOOTING REINFORCING LAP LENGTH: MINIMUM 27", 21" IF LAPS STAGGERED.
17. CONCRETE SHALL HAVE CURED TO GAIN 75% OF DESIGN CONCRETE STRENGTH BEFORE APPLYING ANY LOADS.

MASONRY NOTES

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530 SPECIFICATIONS.
2. MORTAR: ASTM C270, TYPE M BELOW GRADE, TYPE M OR S ABOVE GRADE, TYPE N FOR NON-LOAD BEARING ABOVE GRADE.
3. GROUT: ASTM C476, $F'C$ =2000 PSI, TESTED PER ASTM C1019.
4. 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.
5. HORIZONTAL WALL REINFORCING: PER ASTM A-82, 9 GA. HOT DIPPED GALVANIZED PER ASTM A-153 (1.5 OZ PER SF.), LADDER TYPE, EQUAL TO DUR-A-WAL. BED JOINTS AT 16" O.C. AND AT 1ST AND 2ND BED JOINTS AT BOTTOM OF WALL, TOP OF WALL, ABOVE LINTELS AND BELOW SILLS. REINFORCING CONTINUOUS EXCEPT AT VERTICAL CONTROL JOINTS. SIDE RODS LAPPED A MINIMUM OF 6" AT SPLICES. PROVIDE PREFABRICATED CORNERS AND TEES.
6. CONCRETE MASONRY UNITS: ASTM C-90, GRADE N, TWO CORE TYPE FOR REINFORCED MASONRY. DESIGN BASED ON $F'm$ = 1500 PSI.
7. VERTICAL WALL REINFORCING: 1 - #4 EACH SIDE OF MASONRY OPENINGS, CONTROL JOINTS AND AS SHOWN, IN GROUT FILLED BLOCK CORES.
8. 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.
9. PROVIDE COMPLETELY GROUTED UNITS:

a. UNDER ANY CHANGE OF WALL THICKNESS, I.E.: 8" ON TOP OF 12"

b. UNDER STEEL JOIST OR BEAM BEARING.
10. PROVIDE LINTELS FOR OPENINGS IN MASONRY WALLS OVER 8" WIDE. SEE SCHEDULE.
11. BLOCK CONTROL JOINTS SHALL BE "MICHIGAN" TYPE UNLESS NOTED OTHERWISE. HORIZONTAL REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS.
12. TEMPORARY WALL BRACING IS THE CONTRACTORS RESPONSIBILITY. CONFORM TO APPLICABLE CODES AND STANDARDS.
13. ANCHOR CONTINUOUS WOOD BLOCKING TO MASONRY WITH MINIMUM 1/2" ANCHOR RODS 8" LONG PLUS 2" HOOK AT 32" O.C. UNLESS NOTED OTHERWISE.

WOOD FRAMING

1. DIMENSIONAL FRAMING MATERIAL SHALL BEAR THE GRADE MARK OF AN ALSC APPROVED AGENCY, KILN DRIED, AND HAVE THE FOLLOWING MINIMUM STRESS GRADE:

2x4 STUD WALLS: SPRUCE-PINE-FIR, CONSTRUCTION GRADE OR BETTER.

2x6 AND LARGER: HEM-FIR #2 OR BETTER.
2. ANCHOR CONTINUOUS BLOCKING TO MASONRY WITH MINIMUM 1/2" ANCHOR BOLTS 8" LONG PLUS 2" HOOK AT 32" O.C. UNLESS NOTED OTHERWISE.
3. ROOF RAFTERS ANCHORED TO CONTINUOUS PLATES WITH ONE SIMPSON H3 ANCHOR UNLESS NOTED OTHERWISE.
4. WOOD TO BE IN CONTACT WITH CONCRETE, MASONRY, OR GRADE SHALL BE PRESSURE TREATED.

PLYWOOD SHEATHING

1. PLYWOOD FOR ROOF DECK SHALL BE 3/4" THICK APA RATED SHEATHING, (24/16).
1. PLYWOOD FOR WALLS SHALL BE 1/2" THICK APA RATED SHEATHING.
1. PLYWOOD FOR FLOORS SHALL BE 3/4" THICK APA RATED SHEATHING.
2. ROOF SHEATHING FASTENED WITH 8D COMMON NAILS AT 6" O.C. AT PANEL EDGES AND INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE. PROVIDE MINIMUM 2X6 BLOCKING AT VALLEY AND HIP LINES FOR UNSUPPORTED EDGES AS REQUIRED.
3. PANELS SHALL BE LAID IN A STAGGERED PATTERN, CONTINUOUS OVER TWO SPANS.

STRUCTURAL COMPOSITE LUMBER

1. LAMINATED VENEER LUMBER (LVL):

FB	= 2,600 PSI (BOTH TENSION & COMPRESSION)
FC (PERPENDICULAR)	= 750 PSI
FC (PARALLEL)	= 2,310 PSI
FV	= 285 PSI
E	= 1.9x10 ⁶ PSI

FOOTING SCHEDULE				
MARK	SIZE	DEPTH	REINFORCING	REMARKS
F1	1'-4" CONT	1'-0"	(2) #5 CONT	

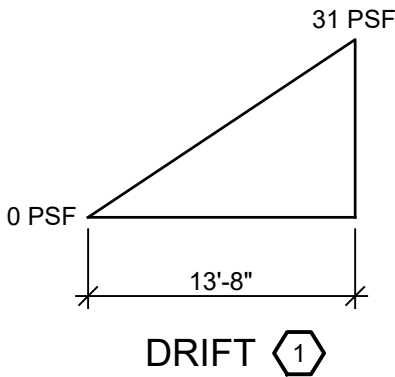
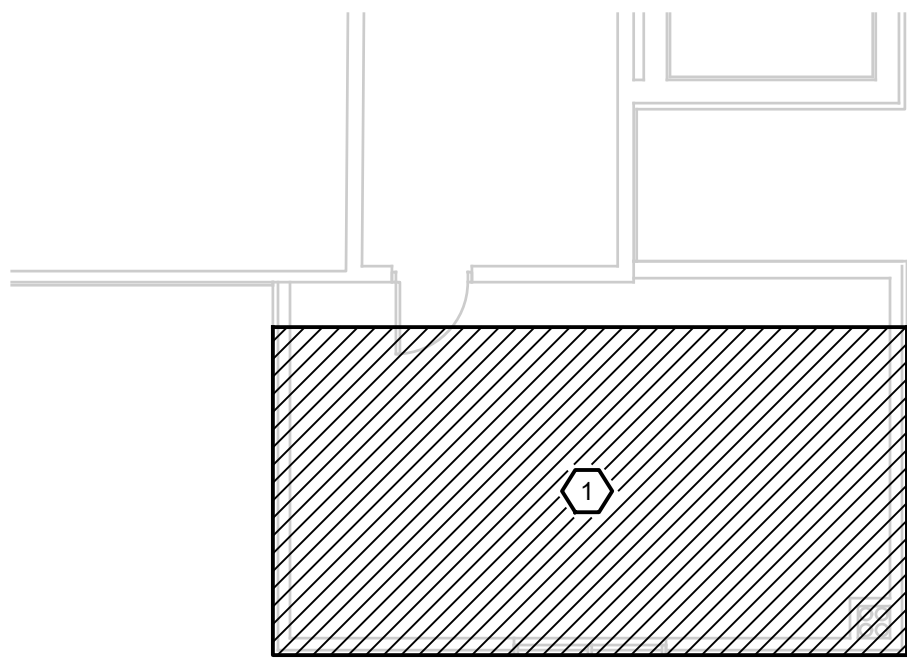
STEEL LINTEL SCHEDULE			
MARK	CLEAR SPAN	SIZE	BEARING EACH END
L1	4'-0"	L3 1/2x2 1/2x1/4 SLV	4"
L2	5'-0"	L3 1/2x3x1/4 SLV	6"
L3	6'-0"	L3 1/2x3 1/2x1/4	6"
L4	7'-0"	L4x3 1/2x1/4 LLV	6"
L5	8'-0"	L5x3 1/2x1/4 LLV	8"
L6	9'-0"	L6x3 1/2x 3/8 LLV	8"
<div><div><div>⬇️ BOTTOM OF PLATE ⬇️ SEE ARCH DWGS</div><div>L7</div></div></div>		<div><div><div><div></div><div></div><div></div></div><div>LINTELS SCHEDULED FOR SINGLE 4" OF WALL THICKNESS. PROVIDE 2 FOR 8" WALL, 3 FOR 10" WALL, 3" HORIZONTAL LEGS AND 3 FOR 12" WALL.</div></div></div>	
L7	W8x18 + PL 1/4x0'-7 1/2"		8"

NOTE: 1. GROUT BELOW LINTEL BEARING 3 COURSES

HEADER SCHEDULE		
MARK	SIZE	MIN BEARING
H1	(3) 2x8	(2) STUDS

MASONRY WALL REINFORCING SCHEDULE			
MARK	SIZE	SPACING	REMARKS
MW1	#4	48" O.C.	VERTICAL REINFORCING FROM TOP OF FOOTING TO TOP OF WALL.

NOTES: 1. REINFORCING SHALL BE CENTERED AND GROUTED SOLID IN CMU UNLESS NOTED OTHERWISE.



SNOW DRIFTING LOAD DIAGRAM

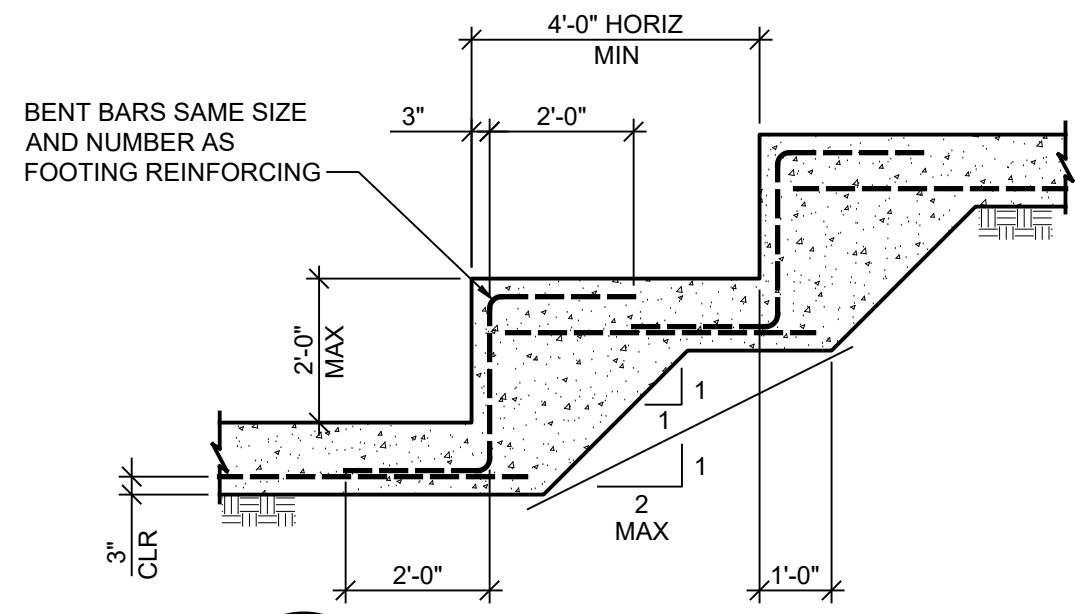
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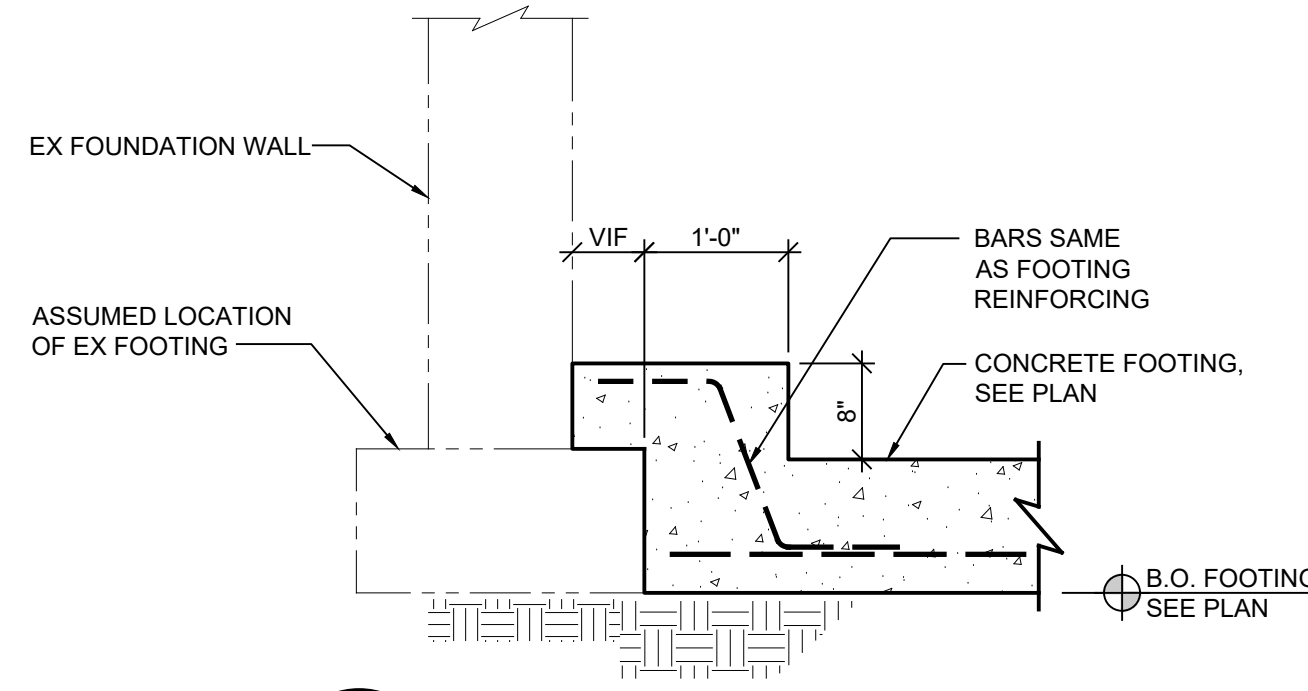
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S2.1

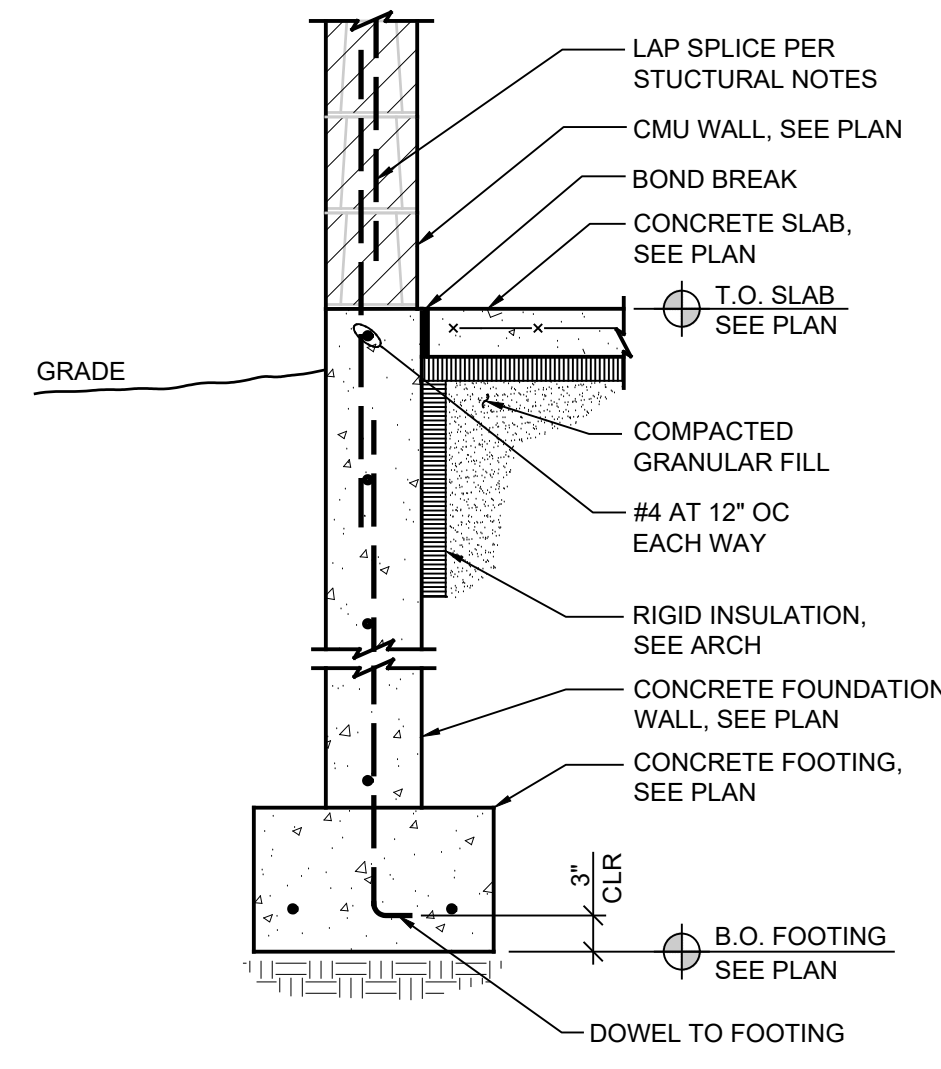
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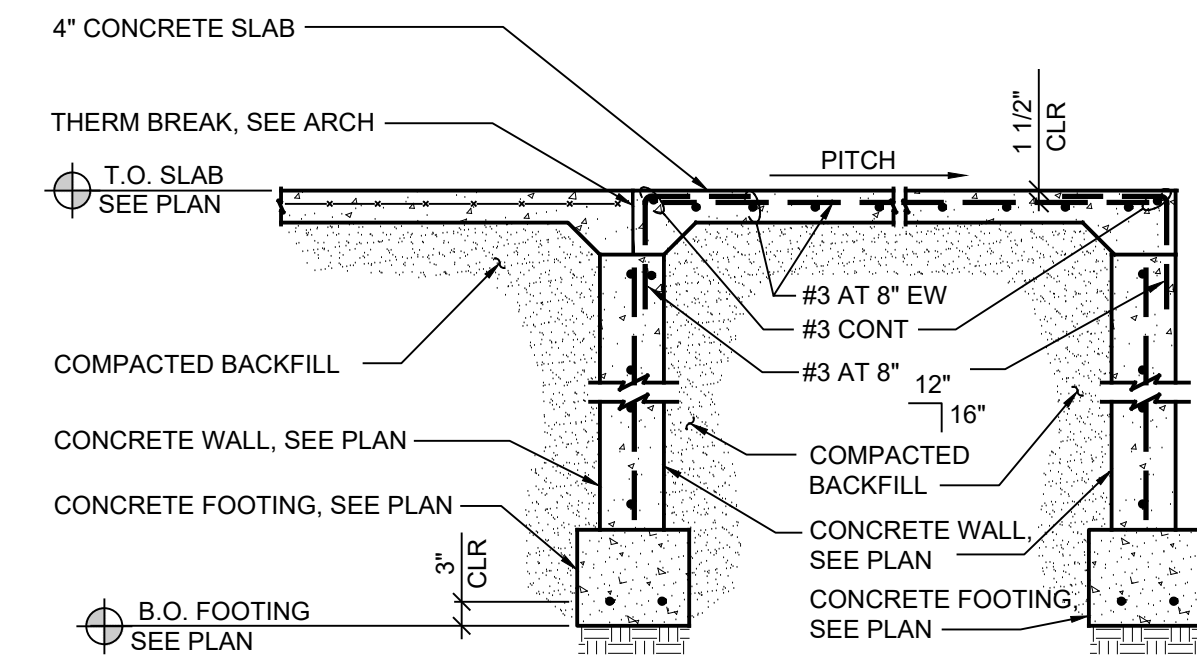
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S3.1 STEP FOOTING
3/8"=1'-0"



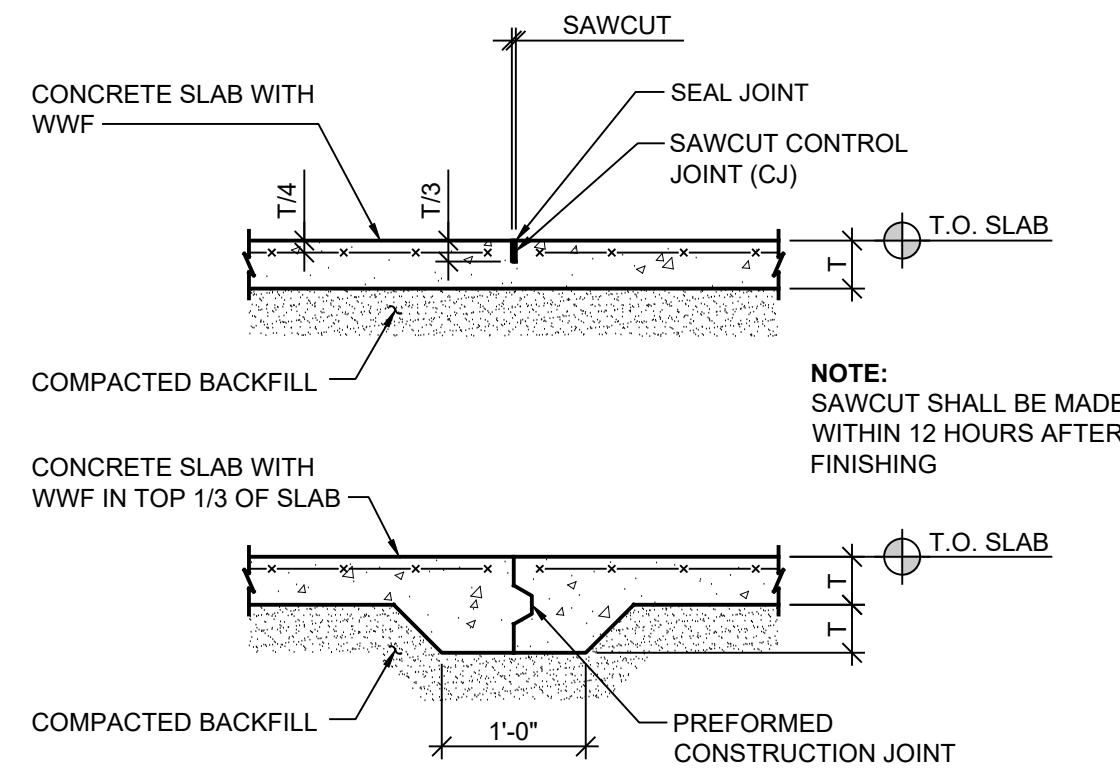
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S3.1 NEW FOOTING AT EXISTING
3/4"=1'-0"



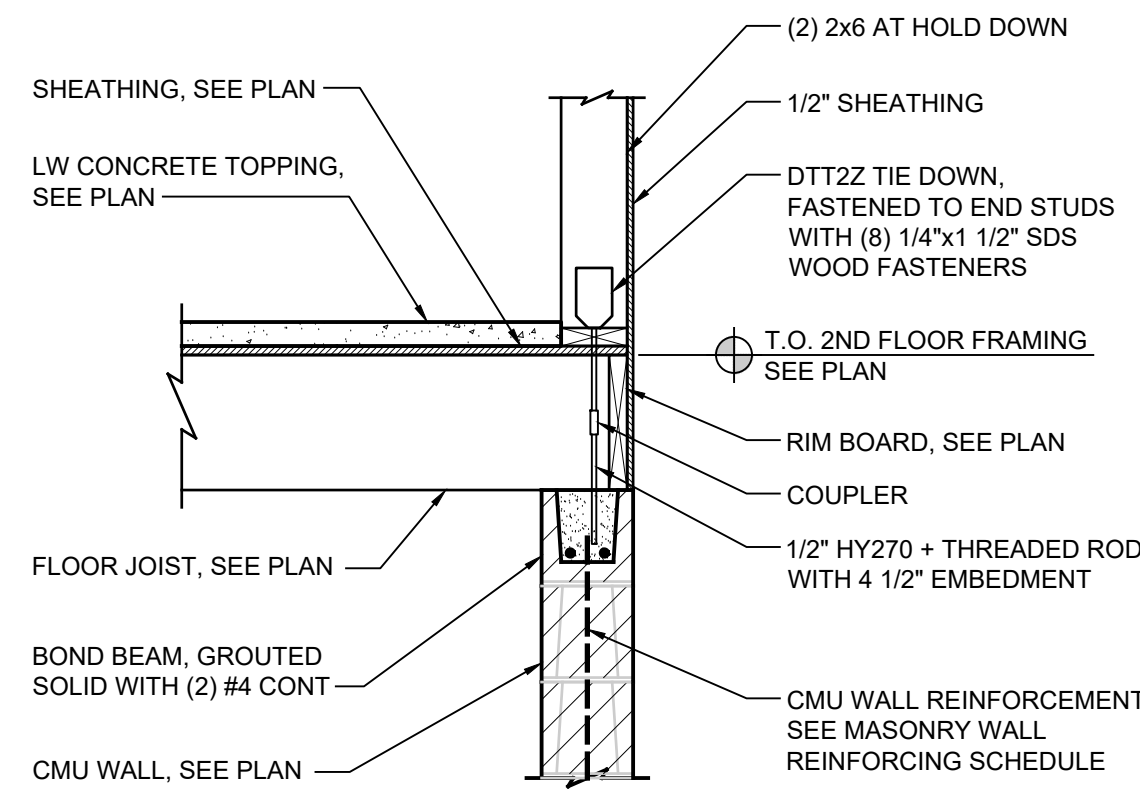
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S3.1 EXTERIOR WALL FOOTING
3/4"=1'-0"



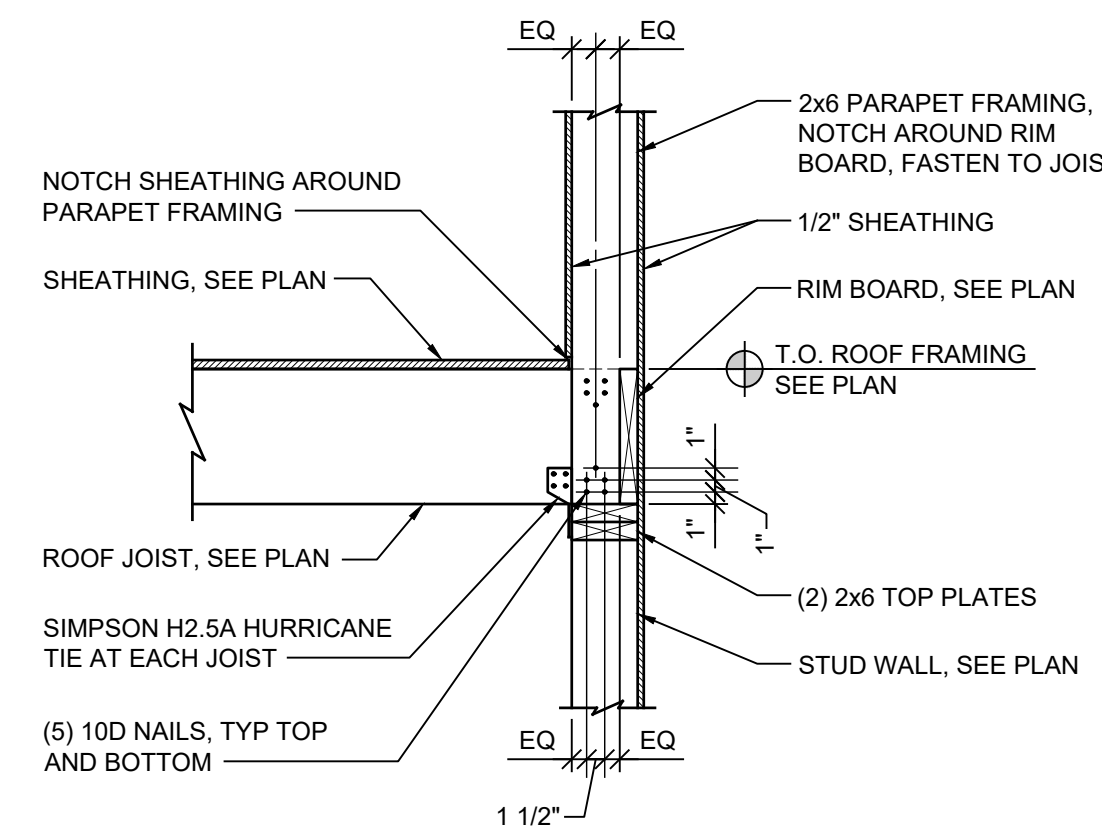
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S3.1 ENTRY SLAB
1/2"=1'-0"



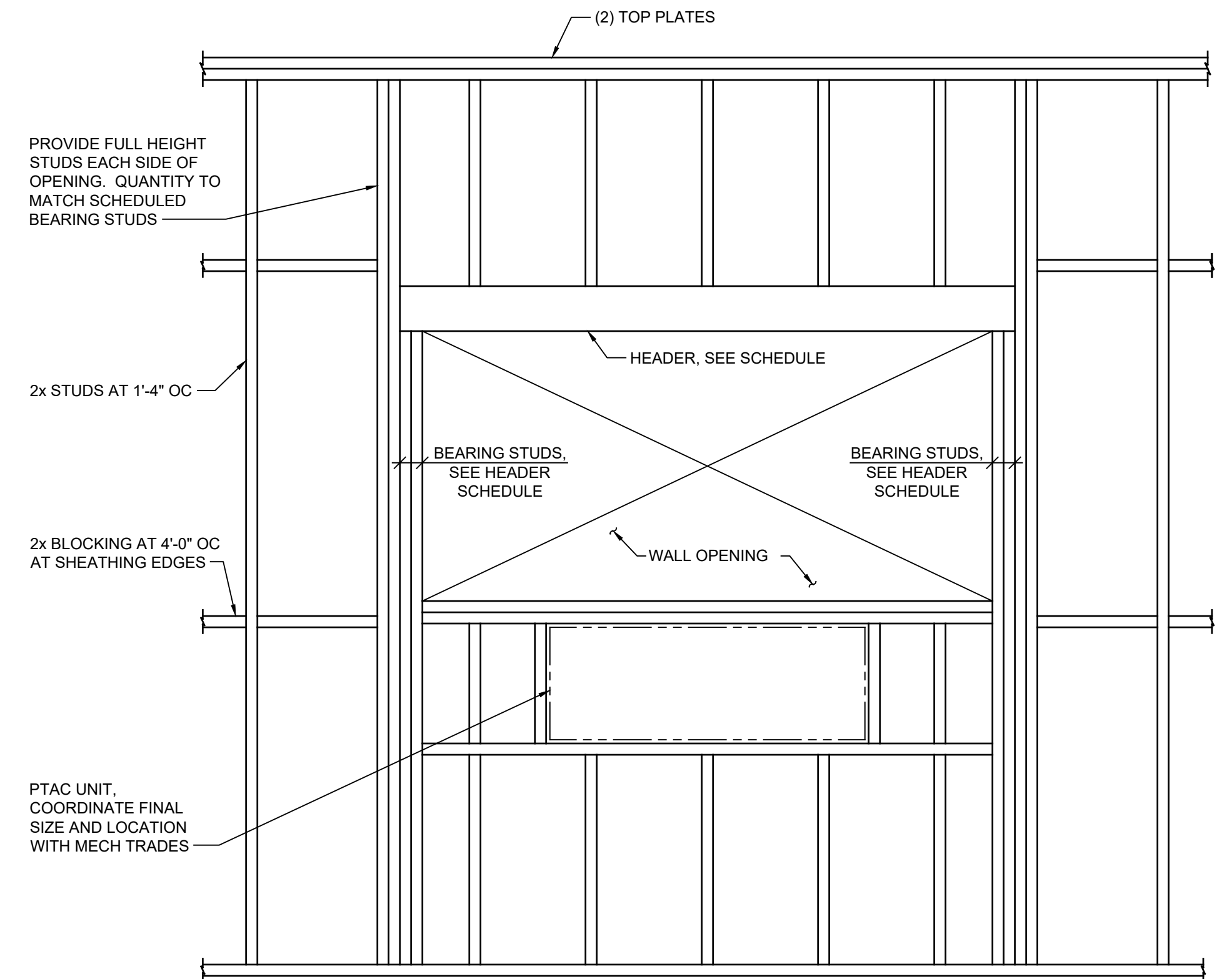
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S3.1 CONTROL/CONSTRUCTION JOINTS
3/4"=1'-0"



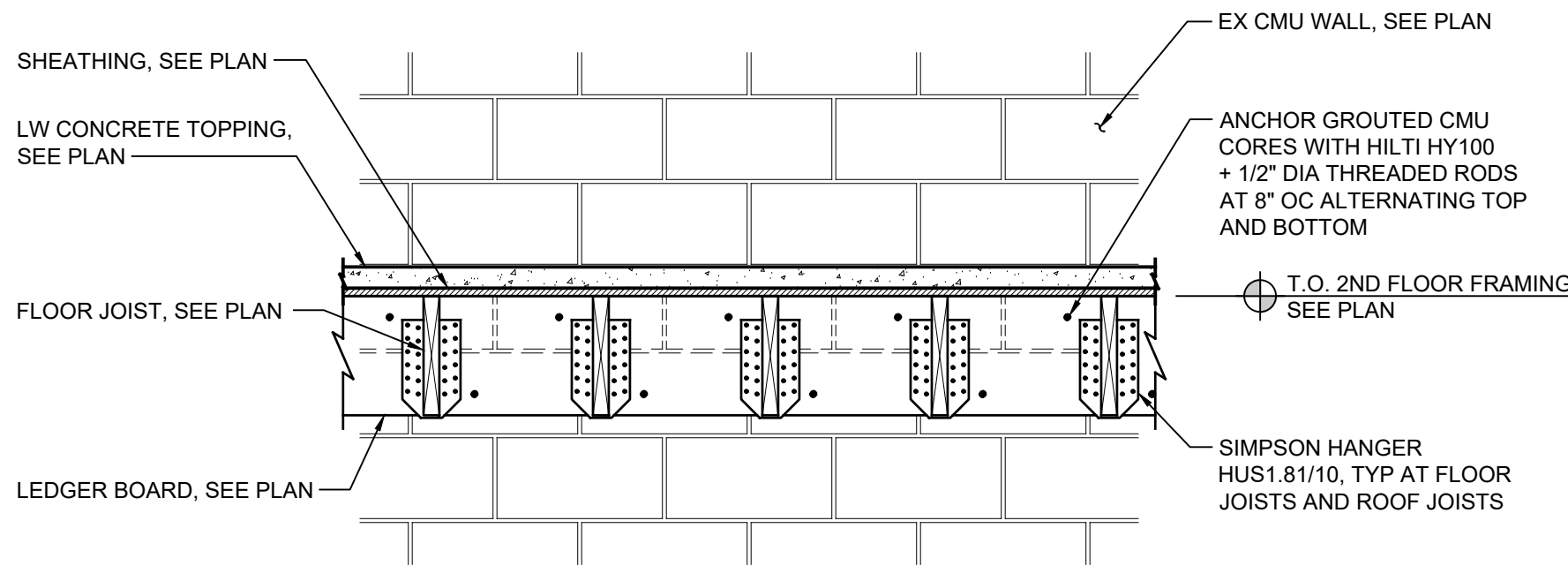
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S3.1 SECOND FLOOR FRAMING AT HOLD DOWN
3/4"=1'-0"



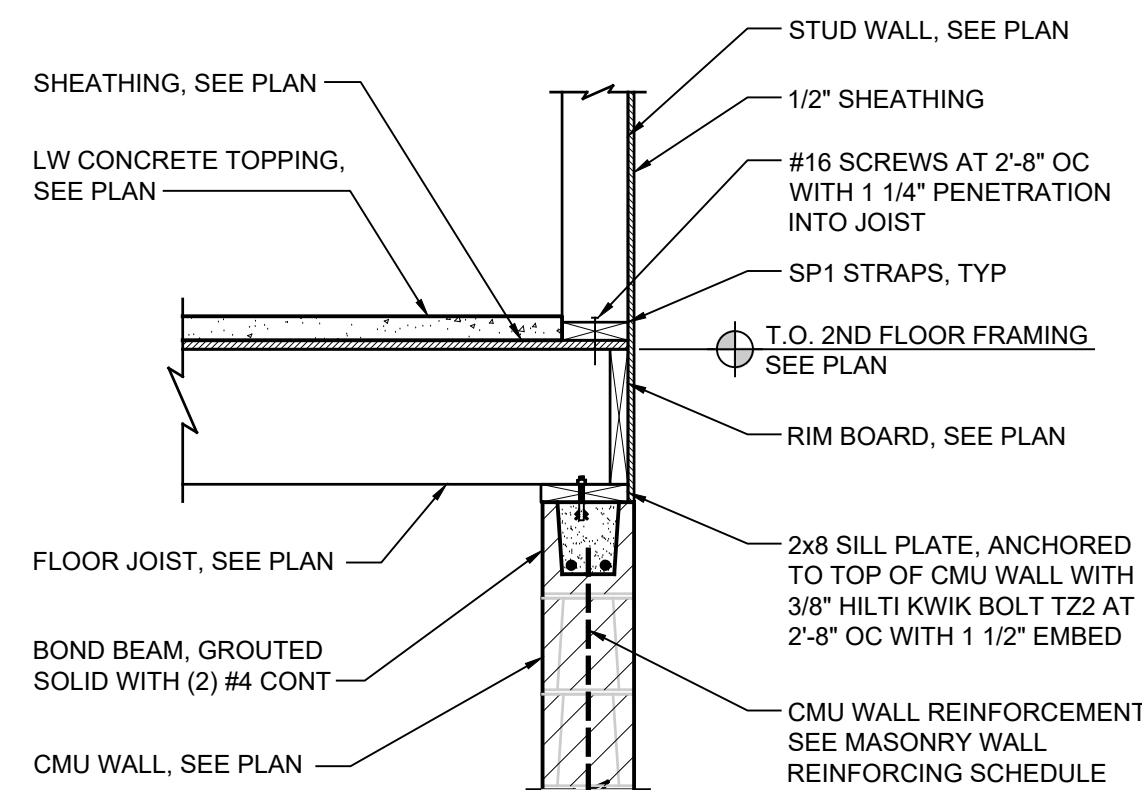
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S3.1 ROOF FRAMING
3/4"=1'-0"



8
S3.1 TYPICAL BEARING WALL CONSTRUCTION AT OPENINGS
3/4"=1'-0"



9
S3.1 JOIST SUPPORT AT EXISTING CMU WALL
3/4"=1'-0"



10
S3.1 SECOND FLOOR FRAMING - INTERMEDIATE
3/4"=1'-0"