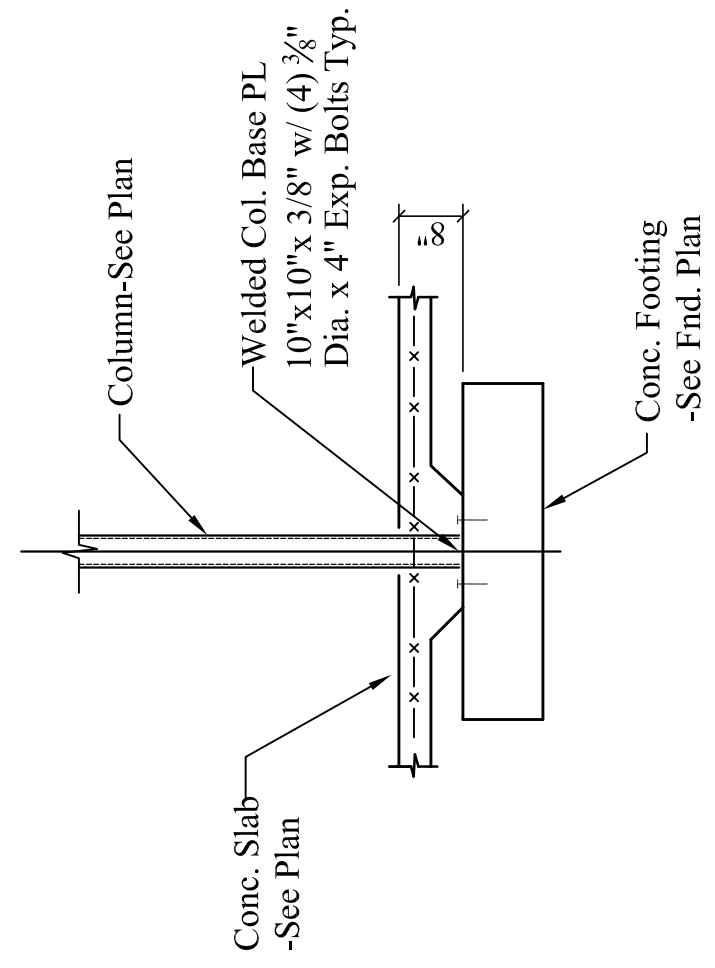


DESIGNED BY:	Larry A. Wichroski, P.E.
DRAWN BY:	LAW
JOB #:	06616
DATE:	12-16-2016

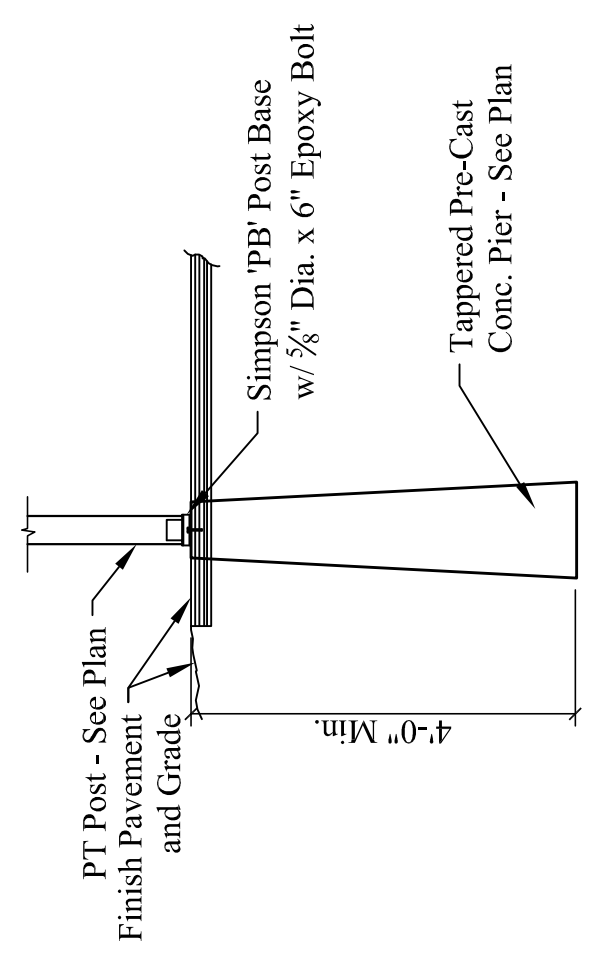
REVISIONS	
SHEET:	S1 of 4

STRUCTURAL NOTES:

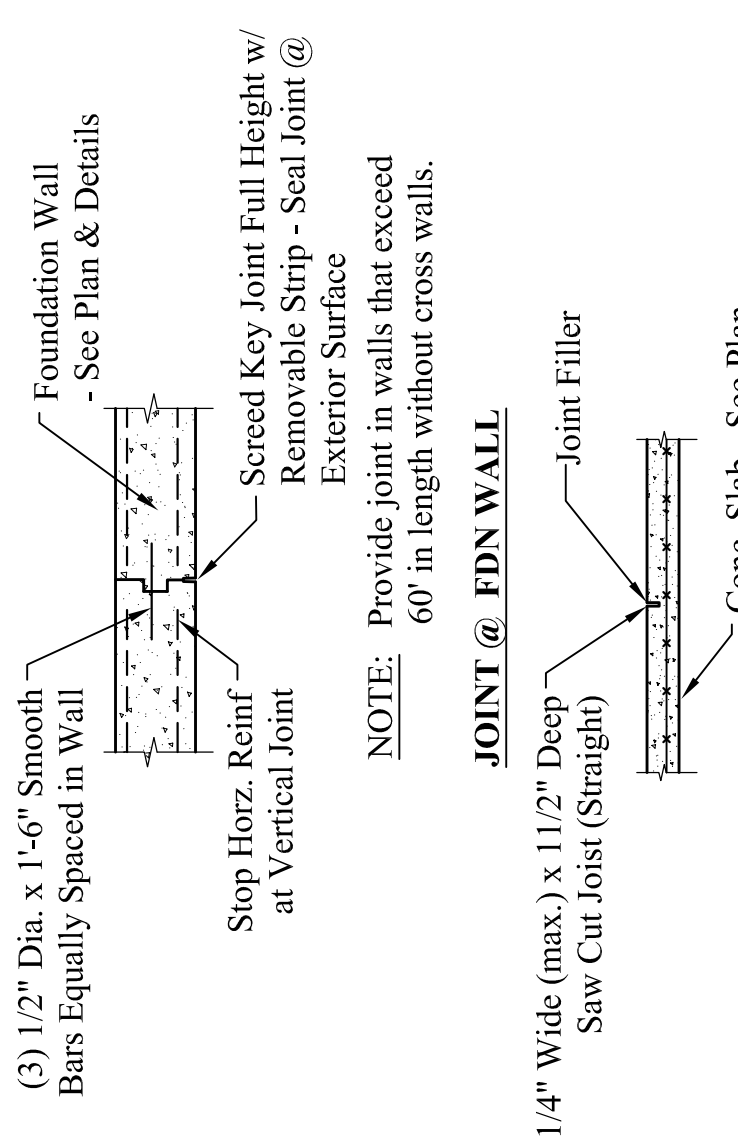
- CODE:** Comply with the 2012 International Residential Building Code.
- DESIGN LOADS:**
 Dead Loads: Roof = 15.0 psf, Floor = 10.0 psf
 Live Loads: Roof = 45.0 psf (Plus Drift), 1st Floor = 40.0 psf, 2nd Floor = 40.0 psf, 3rd Floor = 30.0 psf
 Wind Load: Building = 31.0 psf
- FOUNDATIONS:**
- Bear footings on firm, undisturbed dense native soil at 4", 0" minimum below lowest adjacent finish or natural grade, which ever is lower. Step footings to achieve these depths as required. If stone ledge is encountered place footing directly on ledge where exists.
 - Assumed soil bearing pressure = 2,000 psf.
 - Use firm, dry bearing material. Dowel to stone ledge as detailed.
 - Engineer shall be notified if stone ledge or marine clay is found during excavation.
 - Place concrete slab over a 15 mil vapor barrier (taped and sealed at all joints) and locate over stone fill and drainage piping required by civil drawings.
 - Install 4" dia. perforated drain tile (rotate perforations to top of pipe) on exterior and interior of footing perimeter. Wrap all drain tile in filter fabric and encase with 3/4" crushed stone around entire pipe. Create a positive drain to atmosphere or dry well. Provide drainage away from structure. Provide (2) slabs through slabs for exterior and interior drainage. See civil drawings for details. Contractor shall be responsible for any additional drainage requirements, such as sump pump etc.
 - All foundation wall exteriors shall be coated with damp proofing per manufacturer's spec. Damp proofing shall not be visible above final grade.
 - See architectural drawings for additional information not shown.
- CONCRETE:**
- Concrete regular weight (144 pcf) with Type II cement per ASTM C150, aggregate per ASTM C33, and potable water. No fly-ash permitted in floor slab. Aggregate size = 1" maximum for footings and slab. Minimum compressive strength = 3000 psi for foundations and slab on grade and 4,000 psi for exterior slabs and sidewalks.
 - Saw cuts for floor slab control joints (CJ) shall be made as soon as the slab can support the weight of the saw, with a minimum of 12" from the edge of the slab and 12" from the center of the footing.
 - Pitch all garage floor slabs 1/4" ft. toward over head door.
- REINFORCING:**
- ASTM A 615-S1, Grade 60 except #2 and #3 bars ASTM A615-S1, Grade 40.
 - Lap splices in concrete: #2 bar diameters.
 - Provide bent corner reinforcing to match and lap with horizontal reinforcing at corners and intersections of walls.
 - Reinforcing shall be placed with 3" clearance at all surfaces.
- STEEL:**
- Roof sections and plates: ASTM A-36, Fy = 36 ksi.
 - Steel Lally Columns: ASTM A513, Fy = 23.5 ksi; 16 gage need filled w/ 3,000 psi concrete.
 - Structural Tees: ASTM A513, Fy = 23.5 ksi; 16 gage need filled w/ 3,000 psi concrete.
 - Bolts and plate anchors: ASTM A 307
 - Submit shop drawings. Fabricate after Engineers review.
- WOOD:**
- General:
 - Each piece of lumber shall be "S.DRY" and bear the grade stamp of a grading rules agency approved by the American Lumber Standards Committee.
 - Double up studs at joints and under beams.
 - Do not notch or drill joists, beams or load bearing studs without approval.
 - Connections:
 - Nail roof plywood with 8d common at 6" o.c. at all edges and boundary members and 10" o.c. at intermediate supports.
 - Connect all framing members and nail with 8d common at 6" o.c. at all plywood edges and boundary members and 10" o.c. at intermediate supports.
 - Nail CDX wall plywood with 10d common nails at 6" o.c. at all edges and boundary members and 12" o.c. at intermediate supports.
 - Nail Advantech R-6 wall sheathing with 0.131" Dia. x 3" common nails at 2' o.c. along all panel edges and 6" o.c. along intermediate supports.
 - Structural:
 - 2x4 dim 2, 3, 14 joists: Spruce Pine Fir No. 2 with Fb (repetitive) = 1,200 p.s.i.
 - 2x4 dim 2, 3, 14 posts: Spruce Pine Fir No. 2 with Fb (repetitive) = 1,200 p.s.i.
 - Studs: Spruce Pine Fir No. 2 with Fb (repetitive) = 1,200 p.s.i.; Beams: Fb = 2,800 psi, Fv = 285 psi, E = 2,000 ksi
 - Laminated Veneer Lumber (LVL): Posts: Fb = 2,400 psi, Fv = 190 psi, E = 1,800 ksi
 - Plywood:
 - Roof Sheathing: C-D INT-APA (PSI-94) with exterior glue; 5/8", with Identification Index 48/24. Lay up over 2x4 dim 2, 3, 14 joists. Stagger joints. Seal all joints with 1/4" thick caulk. Seal all joints over a minimum of two spans with a minimum width of 1'-0" unless blocking is provided at all joints.
 - Sub-flooring: C-D INT-APA (PSI-94) with exterior glue; 3/4" with Identification Index 48/24. Lay up with face grain perpendicular to supports. Stagger joints. Each plywood piece to be continuous over a minimum of two spans with a minimum width of 1'-0" unless blocking is provided at all joints.
 - Wall Sheathing: C-D INT-APA (PSI-71) with exterior glue; 1/2" CDX with Identification Index 24/0. All panel edges backed with 2" nominal or wider framing.
 - Optional: Advantech R-6 Zip System, 7/16" OSB sheathing with 1" of foam. All panel edges backed with 2" nominal or wider framing.



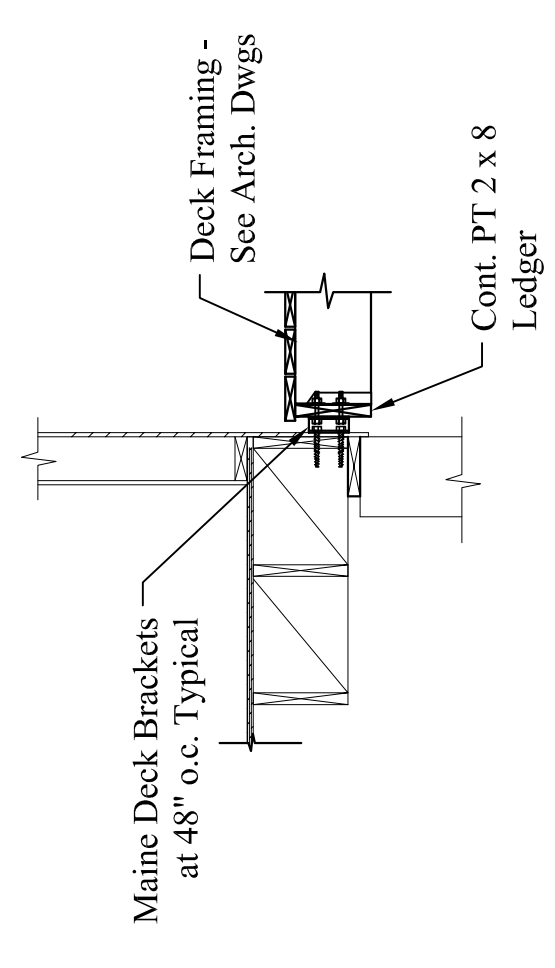
3 INTERIOR COLUMN FOOTING
Scale: 1/2" = 1'-0"



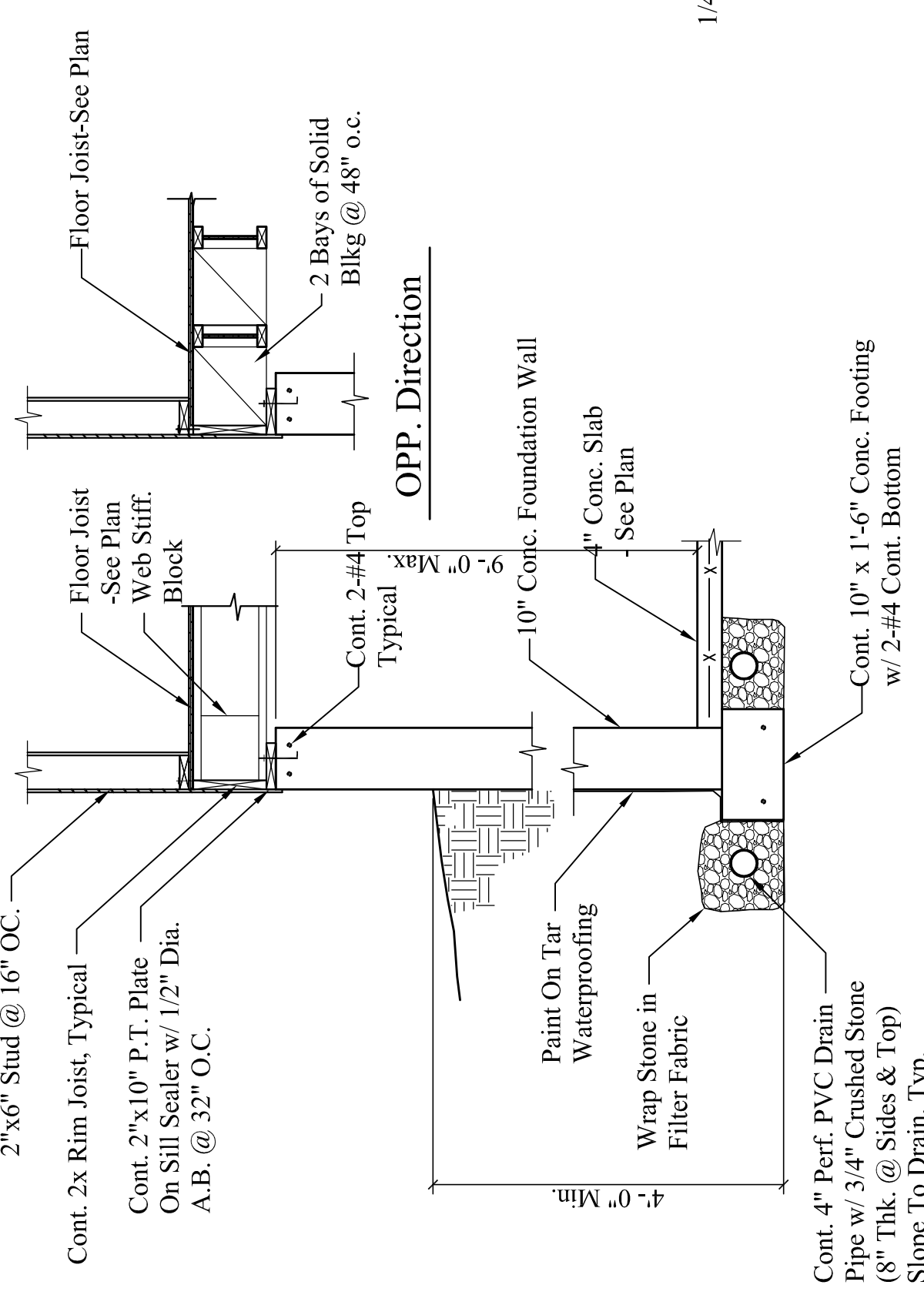
6 POST CONN. @ CONC. PIER
Scale: 1/2" = 1'-0"



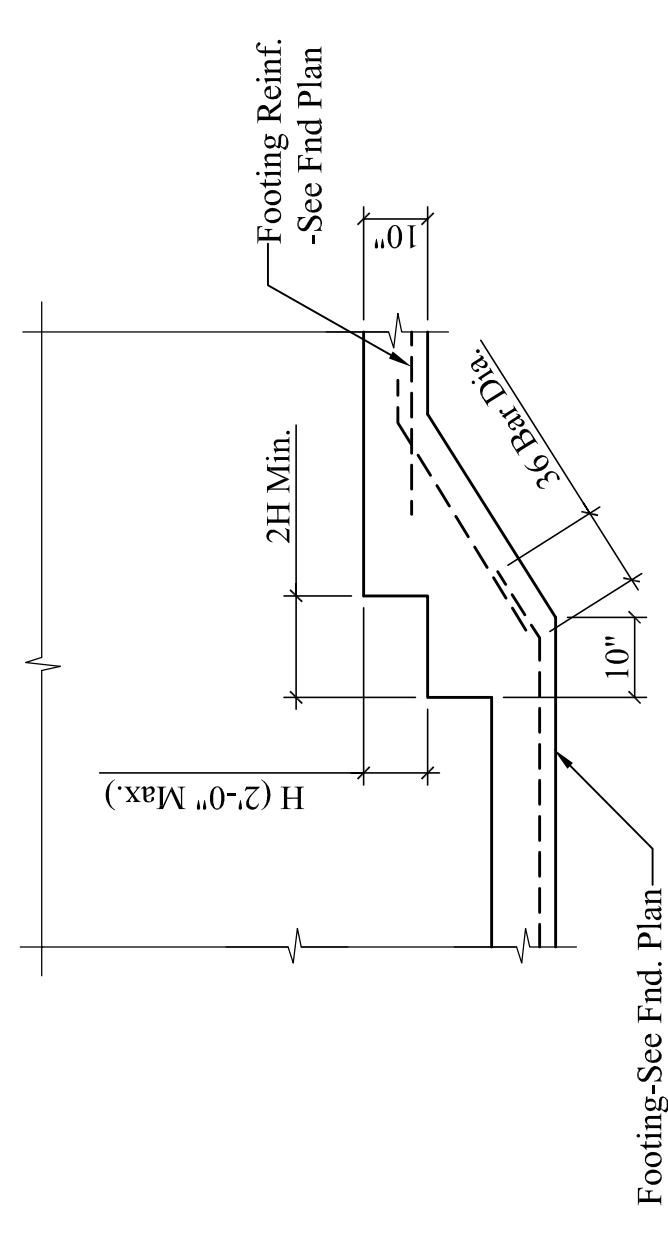
2 TYP. FLOOR & WALL JOINTS
Scale: 1/2" = 1'-0"



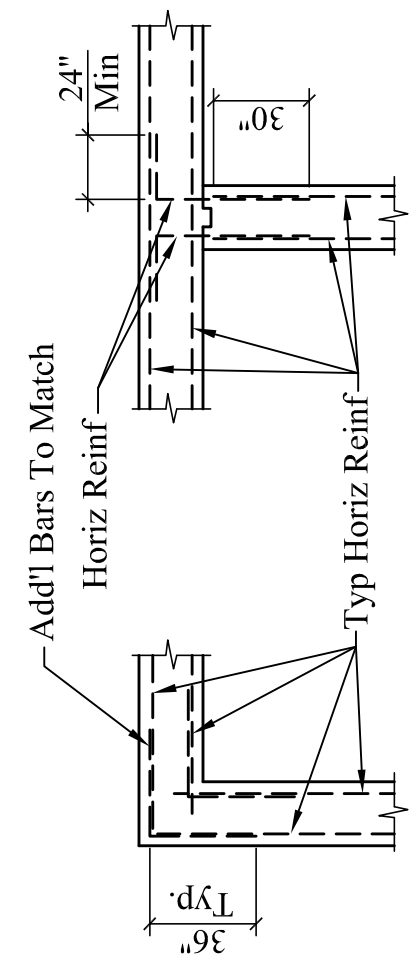
5 DECK FRMG @ FOUNDATION
Scale: 1/2" = 1'-0"



1 BASEMENT FDN. WALL
Scale: 1/2" = 1'-0"



4 TYP STEP FOOTING DETAIL
Scale: 1/2" = 1'-0"



7 TYP. WALL REINF. @ CORNER
Scale: 1/2" = 1'-0"

NOTES:
1. See Details For Wall Reinf Size And Spacing