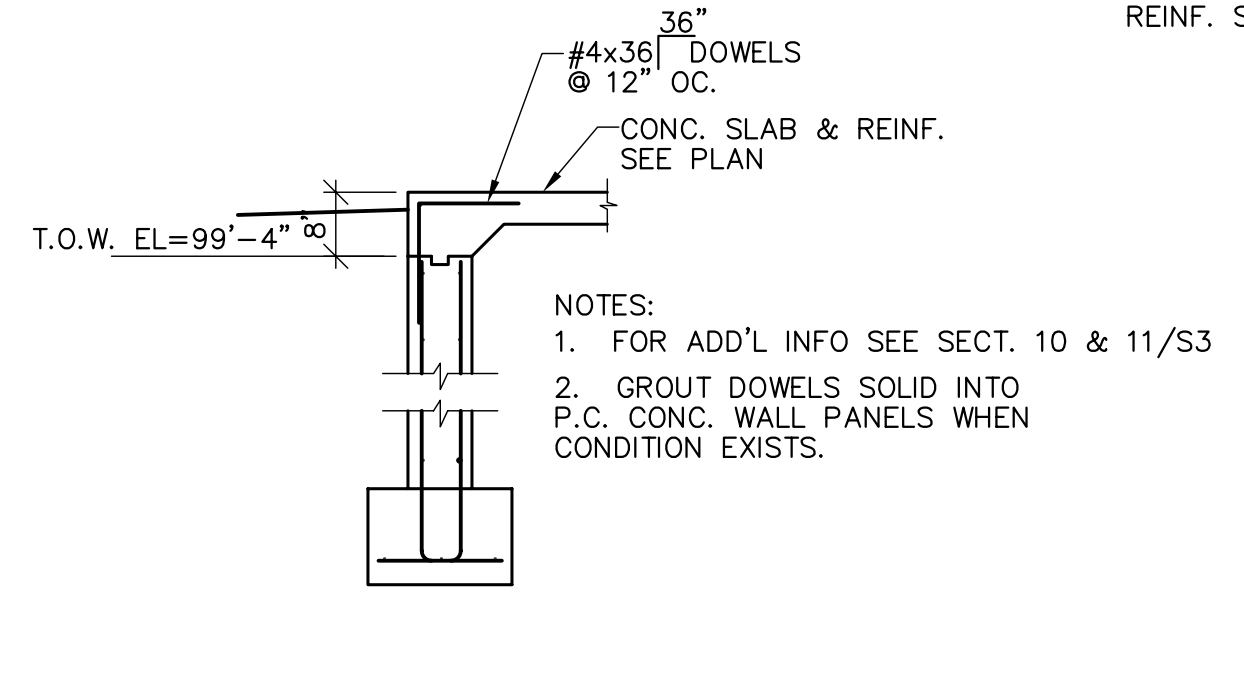
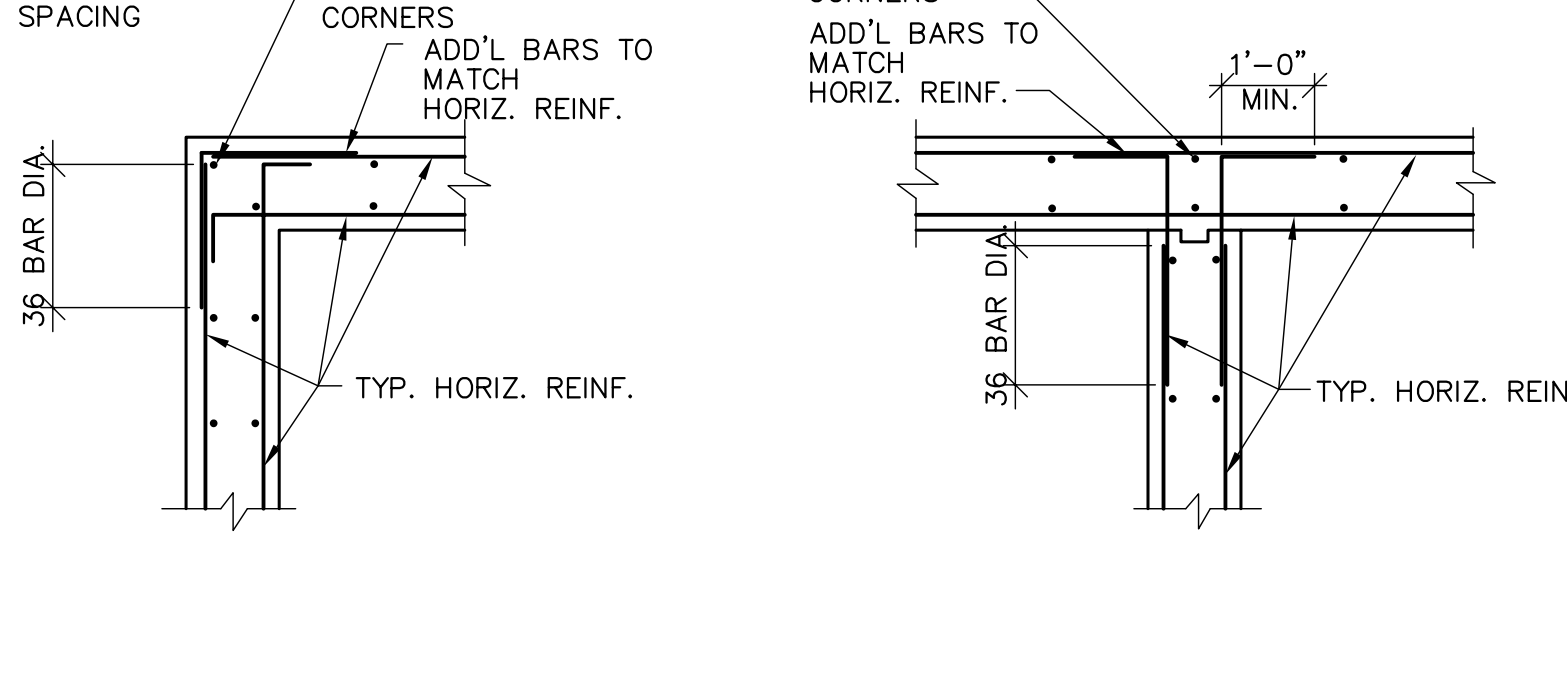


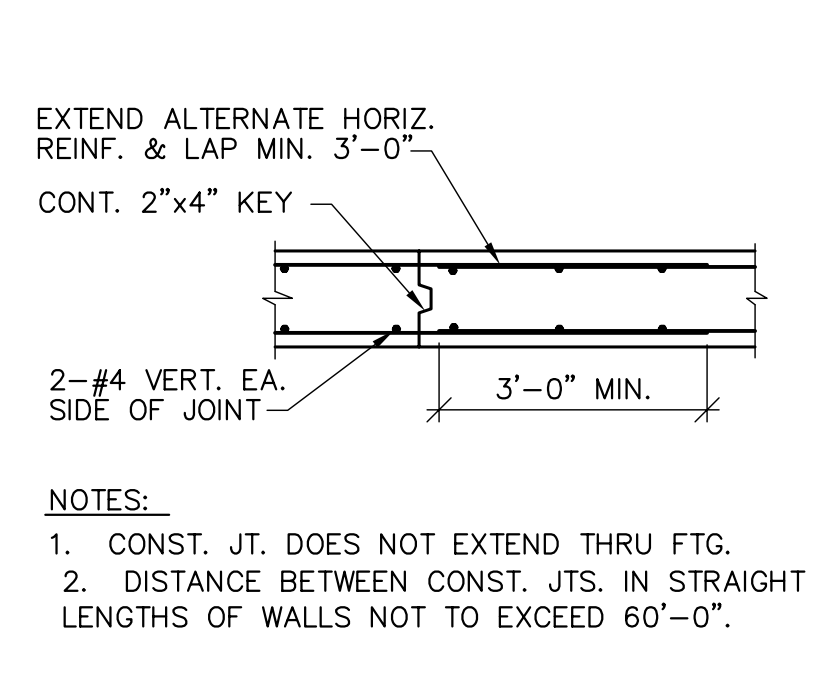
10 TYP. STEP IN WALL FOOTING  
S1 1/2" = 1'-0"



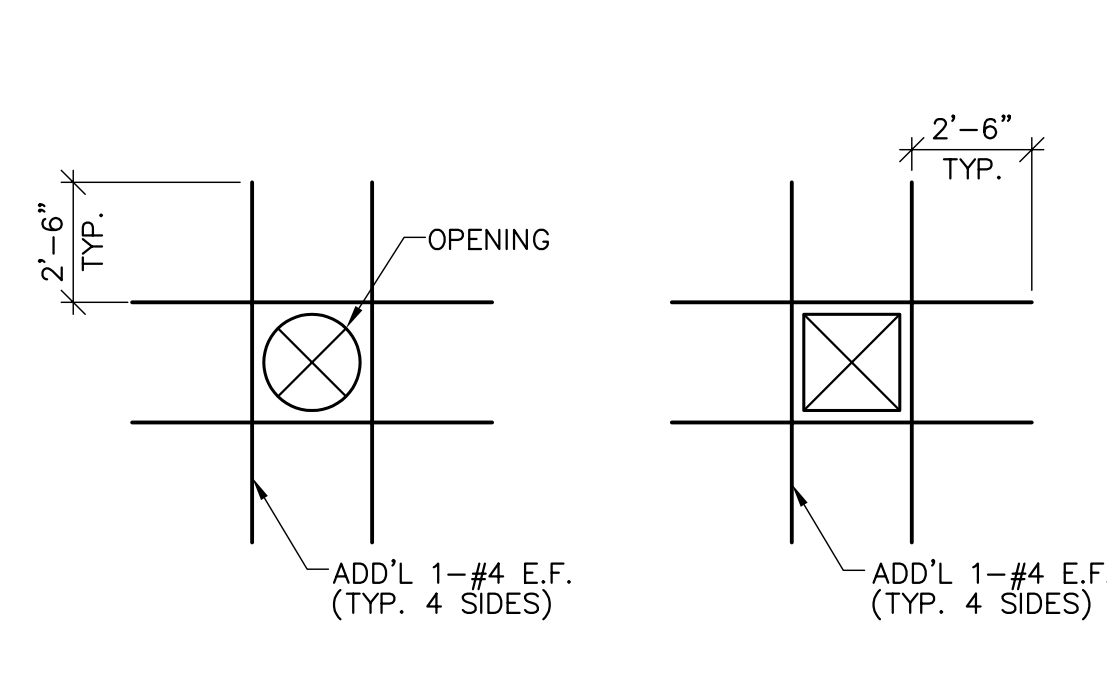
11 TYP. SLAB DETAILS @ DOORS  
S1 1/2" = 1'-0"



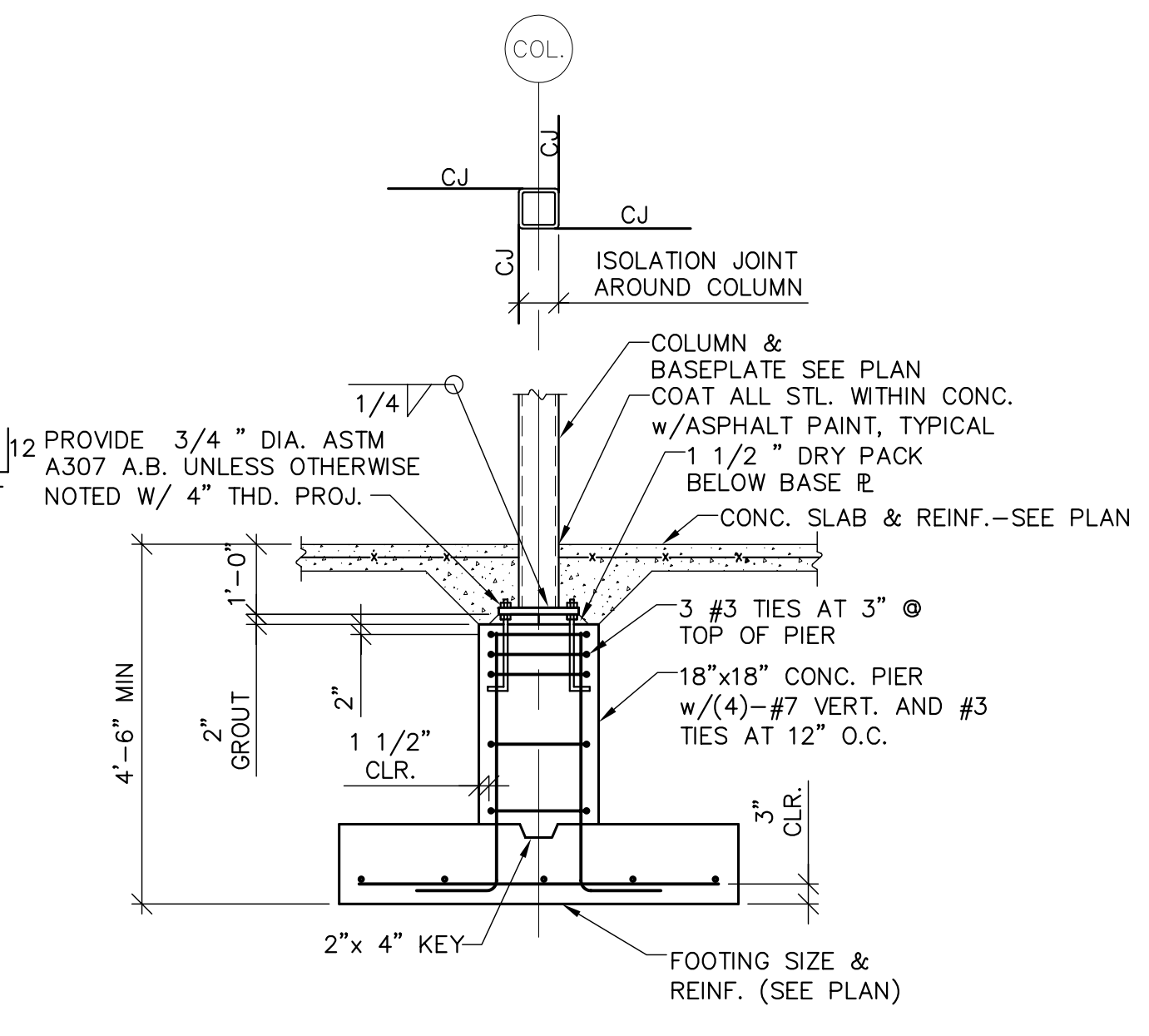
12 TYP. CONC. WALL @ CORNERS  
S1 1/2" = 1'-0"



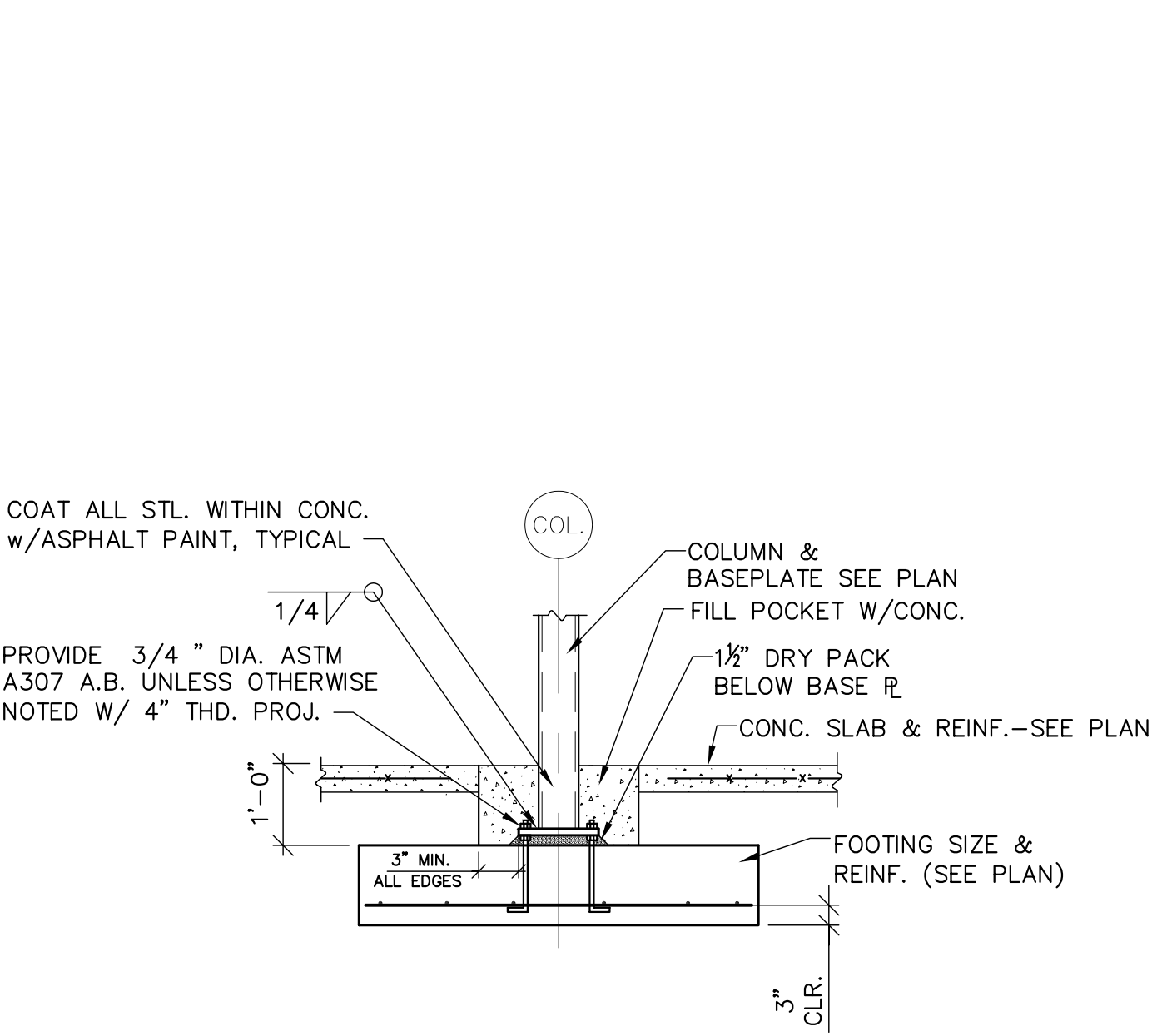
13 TYP. CONSTR. JOINT IN CONC. WALL  
S1 1/2" = 1'-0"



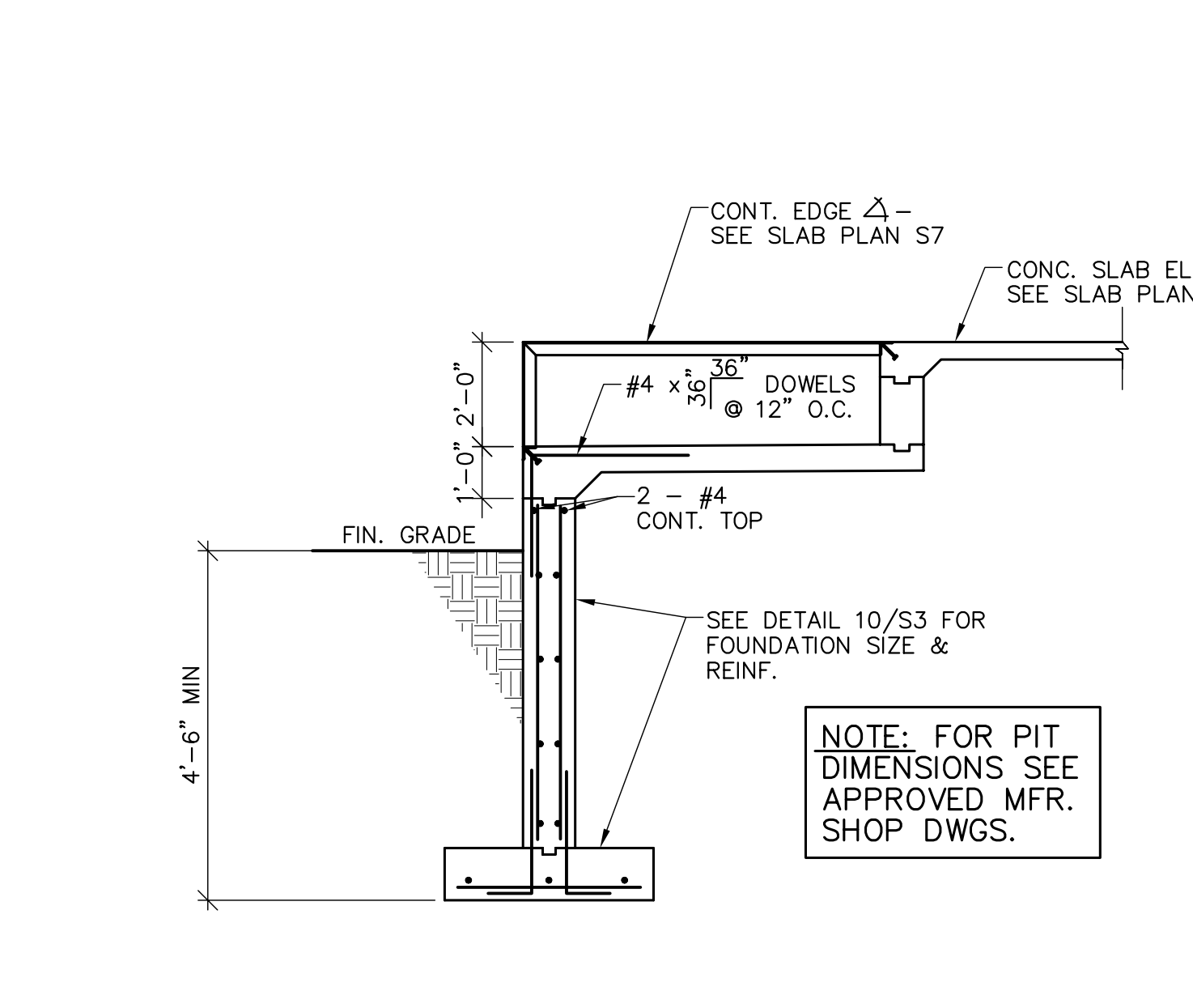
14 TYP. OPNG. IN CONC. WALL OR SLAB  
S1 1/2" = 1'-0"



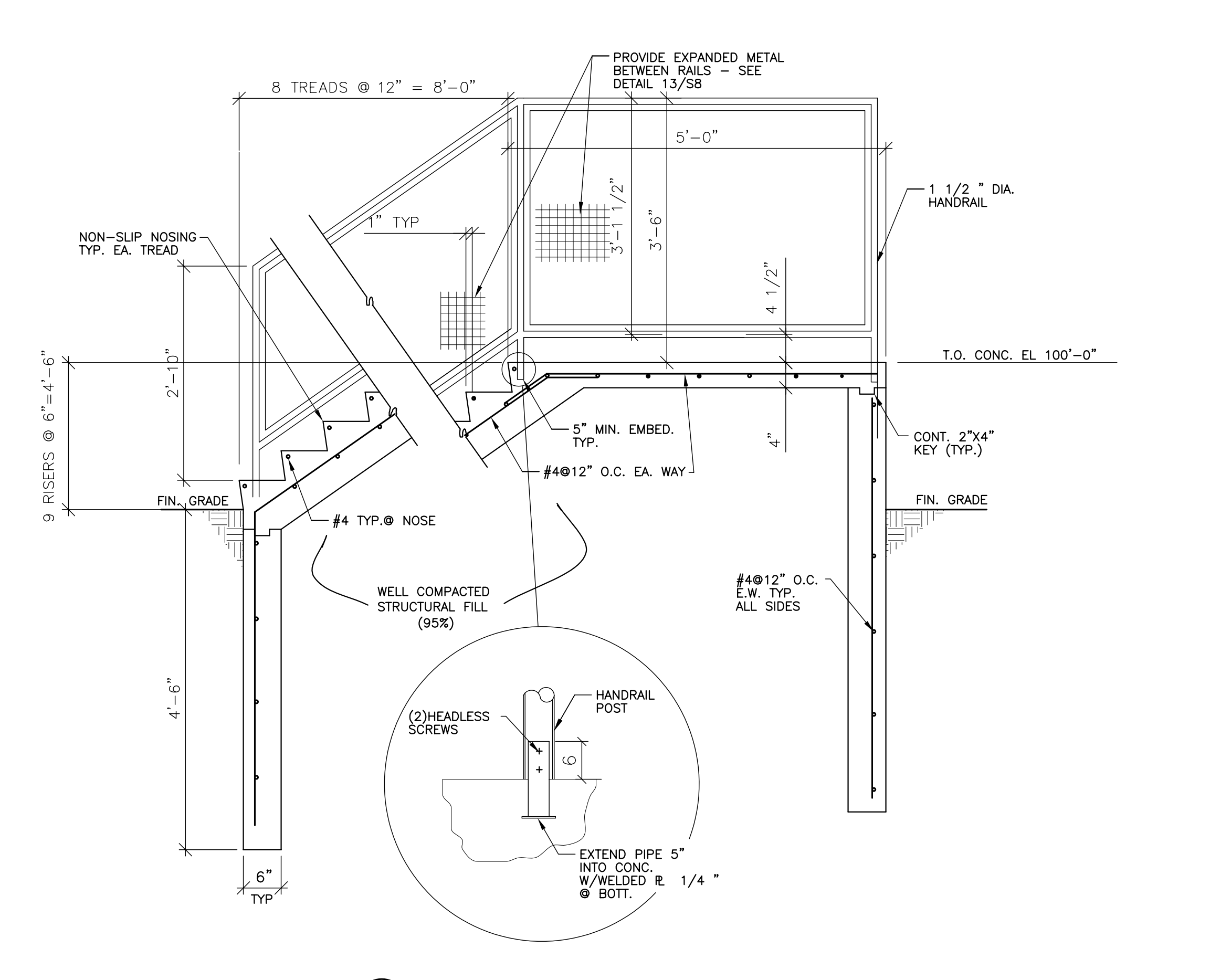
ALTERNATE #1



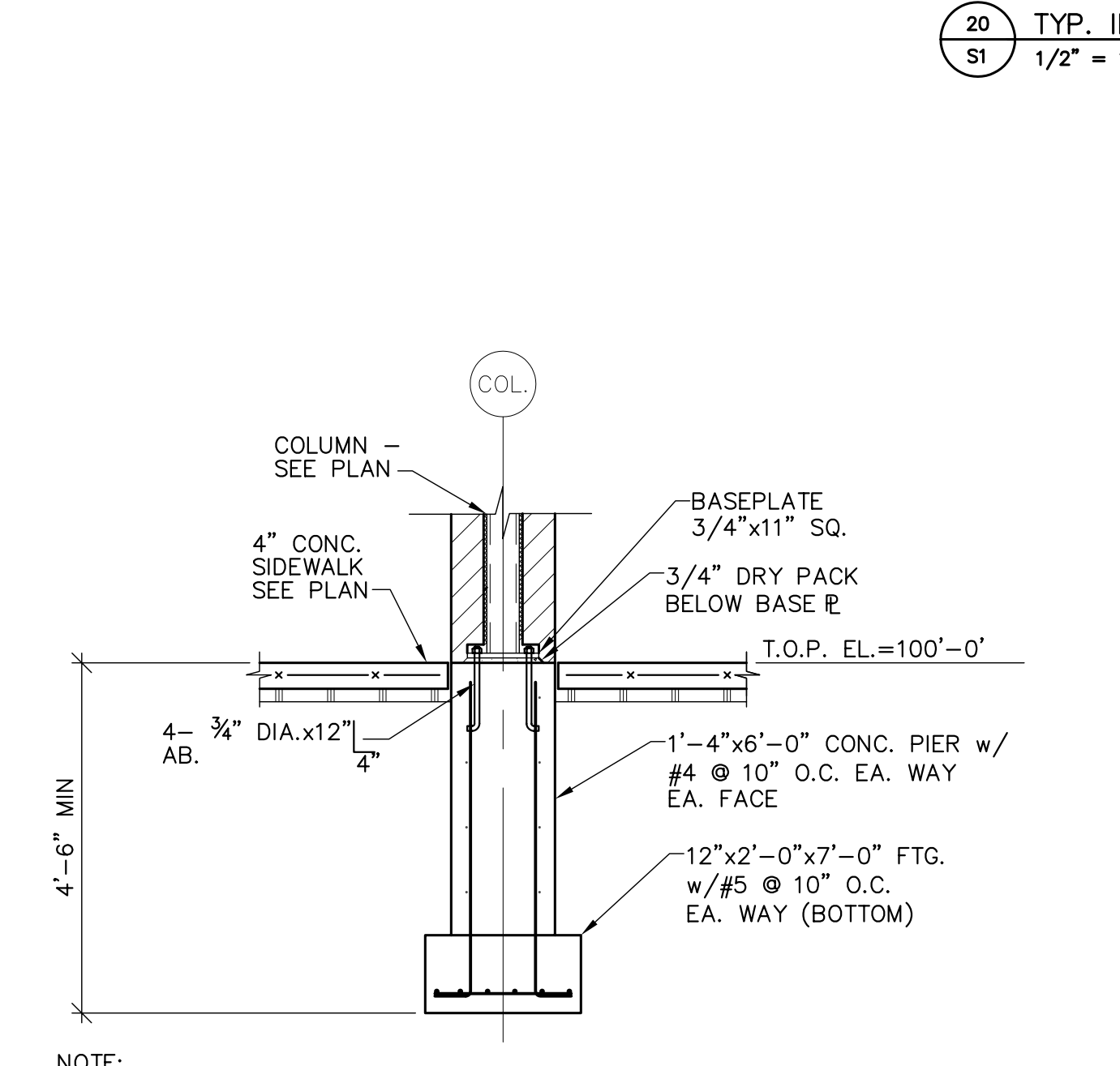
BASE BID



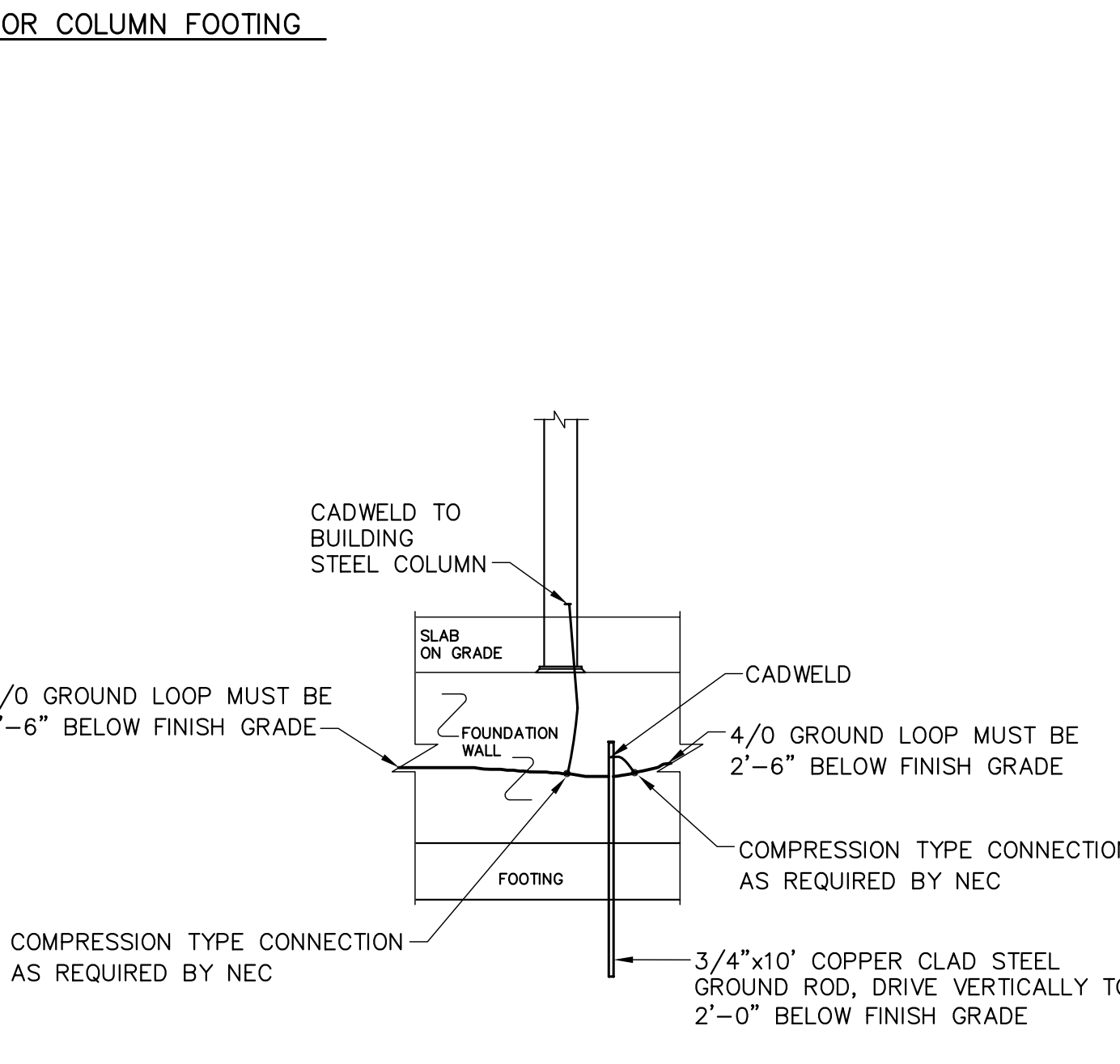
17 DOCK LEVELER PIT DETAIL  
S2 1/2" = 1'-0"



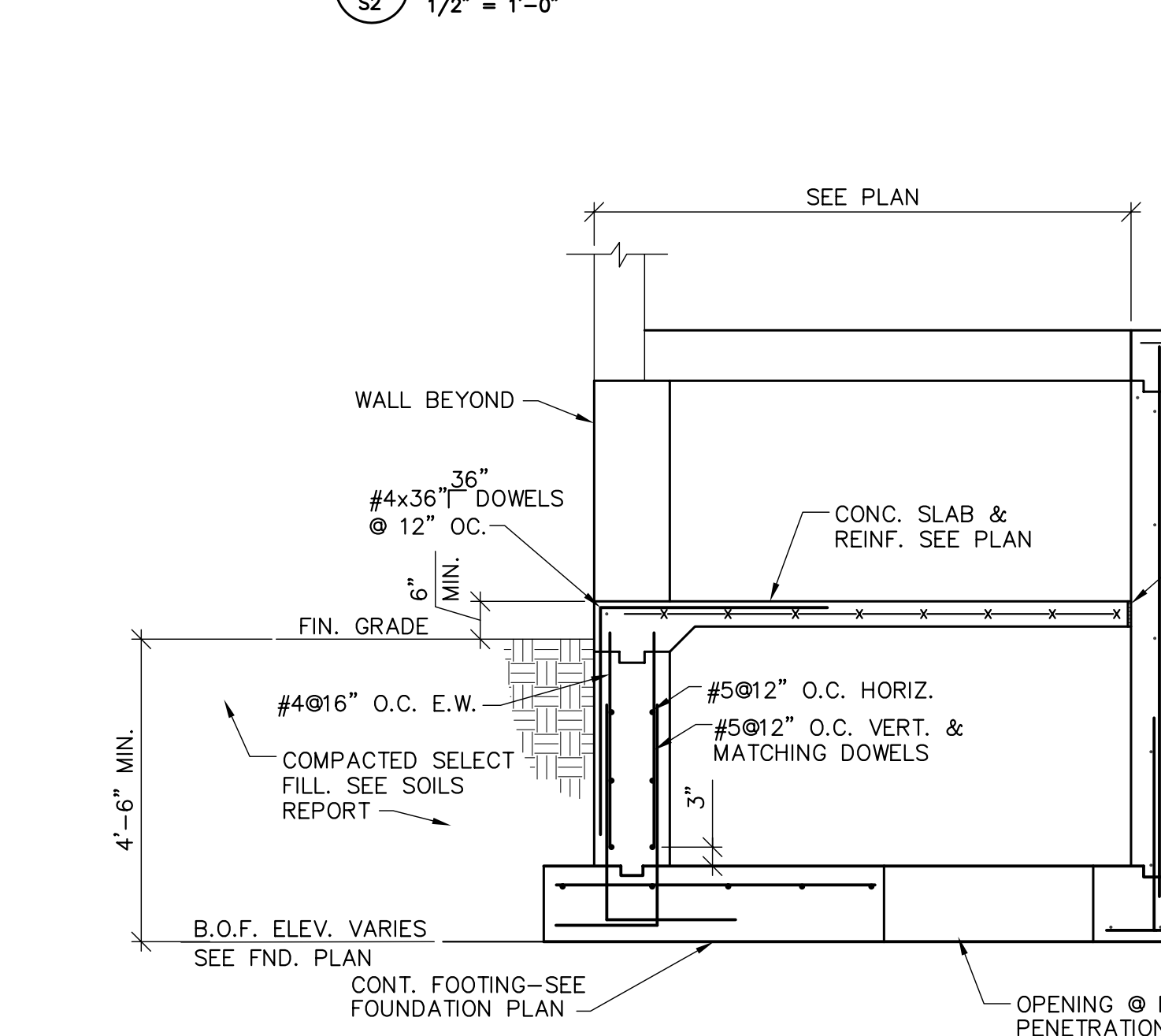
18 EXIT STAIR SECTION  
S1 3/4" = 1'-0"



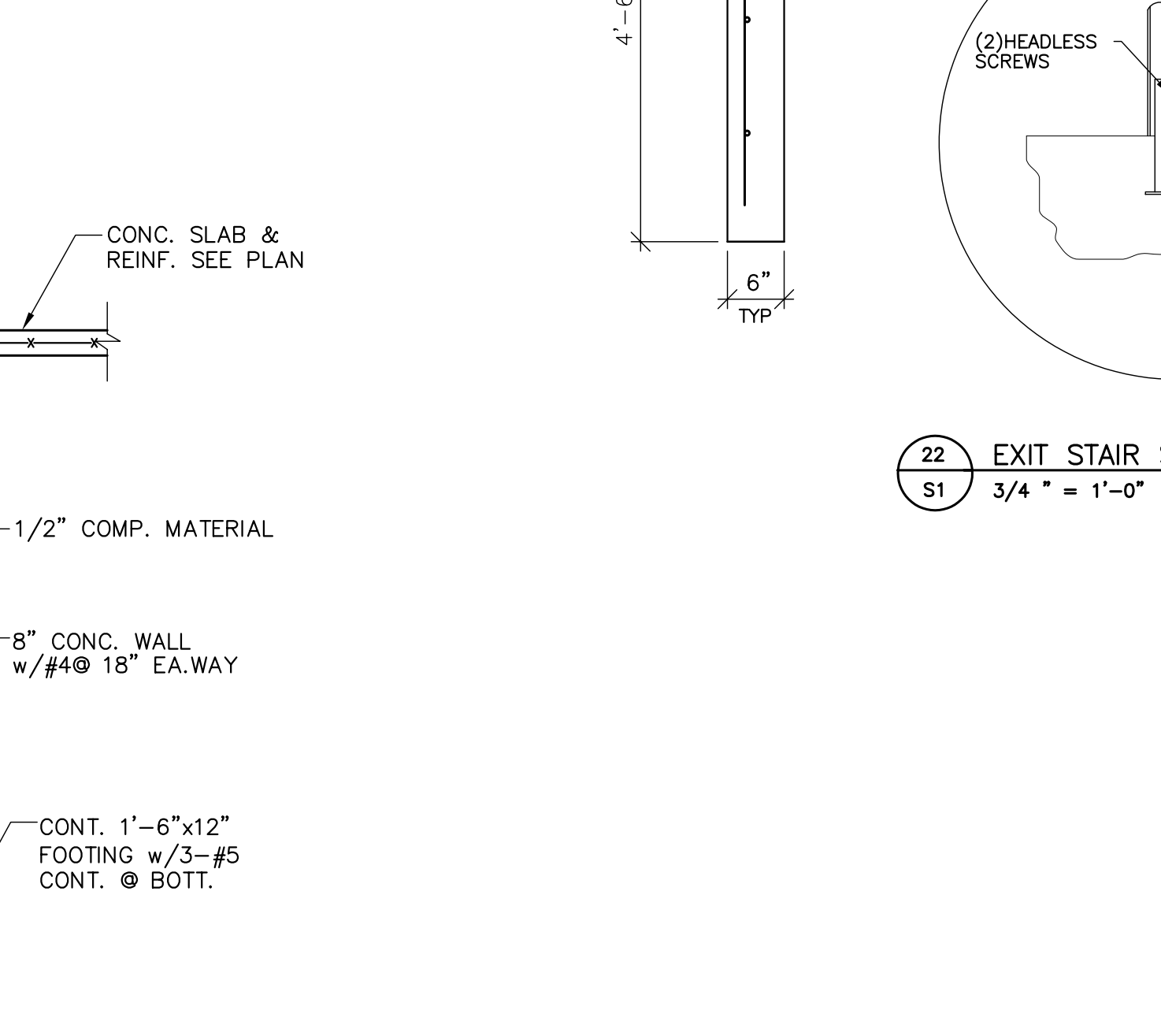
19 MASONRY PIER FOUNDATION  
S1 1/2" = 1'-0"



20 TYP. INTERIOR COLUMN FOOTING  
S1 1/2" = 1'-0"



21 TYPICAL GROUNDING DETAIL  
S1 NTS



22 SECTION TRHU SPRINKLER RM.  
S1 1/2" = 1'-0"

GENERAL STRUCTURAL NOTES

- FOUNDATIONS**
- No concrete shall be placed in water or on frozen ground. Footing excavation shall be kept dry as recommended by the Geotechnical Report.
  - All foundations shall bear on undisturbed native soils or compacted structural fill at 4'-4" minimum below lowest adjacent finish or natural grade whichever is lower (see soils report).
  - All backfill under or adjacent to any portion of the building shall be compacted to 95% lifts. See specifications.
  - Foundations were designed in accordance with "Geotechnical Engineering Report" by Hasey Alorich, Inc. File No. 06053-004 dated March 2003. Maximum allowable soil bearing pressure used in design: 3,000 psf.
  - All floor slabs shall be supported by a minimum of 8 inches of compacted structural fill as recommended by the Geotechnical Report.
- CONCRETE**
- All concrete work shall conform to the requirements of the specifications, the latest editions of the ACI Building Code (ACI 318 and ACI 301).
  - All concrete for footings, foundations and interior slabs shall attain 3,000 psi minimum compressive strength at 28 days age. All concrete for exterior sidewalks and exterior slabs shall attain 4000 psi minimum compressive strength at 28 days age. Use 1" stone in all concrete.
  - At least 48 hours shall elapse before depositing of new concrete against previously placed concrete.
  - See cuts for floor slab control joints shall be made as soon as the slab can support the weight of the new, but not more than 12 hours after placing concrete.
  - Provide isolation joints where slabs on grade abut vertical faces. These joints shall be formed with preformed joint filler 1/2" thick for interior slabs. Seal the top of all joints with a non-croaking sealant.
  - All holes or sawn joints shall be filled with a non-croaking sealant where concrete floor is exposed.
  - Submit concrete mix designs for review.
  - Maximum slump = 4"
  - Maximum freepour of any concrete 6'-0"
  - Drypack (non-shrink grout) shall be one-part cement and 2-1/2 parts sand with just enough water to hydrate cement and form a ball showing moisture on the surface when squeezed. It shall be tamped in tight to maximum density obtainable. Minimum 28 day strength to be 5000 psi.
- REINFORCING**
- All detailing, fabrication and erection of reinforcing bars shall comply with the current ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI 315) and the current edition of the CRSI manual of standard practice.
  - Concrete cover for steel reinforcing bars shall be as follows, unless otherwise noted:  
Unformed concrete placed against earth 3"  
Formed concrete exposed to weather and earth 2"  
Formed concrete not exposed to weather or earth 1"

- All reinforcing bars shall conform to ASTM A615, Grade 60 (FY = 60,000 PSI) and placed per ACI 318 and CRSI standards.
  - All W.W.F. (welded wire fabric) shall conform to A-185 and shall be lapped one full mesh, plus 2 inches at ends and sides, staggered and wired together. W.W.F. in slabs-on-grade shall be positioned within the top third of the slab.
  - All bars in concrete walls shall be continuous around corners or corner bars of equal size and spacing shall be provided. Bars shall be hooked at discontinuous ends.
  - Use lap splices in concrete 3/8 bar diameters. Lap splices in masonry 40 bar diameters.
  - Provide bent corner reinforcing to match and lap with horizontal reinforcing at corners at intersections of walls at footings.
  - All reinforcing shall be inspected and approved by the Engineer or his designate before concrete is placed.
  - Dowel all vertical reinforcing to foundations.
  - Securely tie all reinforcing and embedded items in position before placing concrete or grout.
  - Submit placing drawings per A.C.I., Detailing Manual (ACI 315-80). Fabricate after Engineer's review. Include elevations showing reinforcing steel at all concrete and masonry walls and footings.
- STRUCTURAL STEEL**
- This structure is a non-self-supporting steel frame as defined in the ASCE Code of Standard Practice. The structure is designed to be self-supporting and stable after the building is fully complete. The contractor shall be responsible to determine erection procedures and sequences to assure the safety of the structure until completion in accordance with the ASCE Code of Standard Practice. This includes installation of temporary shoring, bracing, guys or tie-downs as necessary. Such items shall remain the property of the contractor after completion of the project.
  - Latest issue of the American Institute of Steel Construction (AISC) Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings apply.
  - All structural steel shall conform to ASTM A36, FY = 36 ksi.
  - All structural tubing shall conform to ASTM A500, FY = 46 ksi.
  - All column anchor bolts shall conform to ASTM A307, unless noted.
  - All welds shall be made with class E-70 series electrodes or submerged ARC welding. All welders shall hold valid certificates and have current experience in the type of weld called for.
  - Shop connections shall be welded or bolted. The minimum shop weld shall be a 3/16" flat. Bolts shall be ASTM A-325 unless otherwise detailed.
  - Submit shop drawings. Fabricate after Engineer's review.

- STEEL ROOF DECKING (NON COMPOSITE)**
- Material, design, manufacture, and installation shall be equivalent to that furnished by a member of the Steel Deck Institute.
  - The roof deck shall be a minimum 22 gauge, maximum 1 1/2" deep, primed type "B" with minimum Sx = 186 in, minimum I = 169 in and provide a diaphragm shear capacity of 225 plf.
  - Provide shoring as required to support construction loads.
  - Provide all necessary details, such as filters, splice plates, and bulk heads.
  - Submit shop drawings showing the erection procedure and welding pattern, the I.C.B.O. report number, the vertical load and diaphragm shear capacity furnished, deck shoring requirements, and the U.L. number. Fabricate after engineer's review.
- COLD-FORMED (LIGHT-GAGE) STRUCTURAL STEEL**
- All detailing, fabrication and erection of cold-formed steel shall comply with current AISI specifications.
  - All steel 18 Ga. and lighter shall be commercial quality steel ASTM A611 Grade C with a minimum yield point of 33,000 PSI. All steel 16 Ga. and heavier shall conform to ASTM A570 Grade D, with a minimum yield point of 50,000 PSI.
  - All steel shall receive one shop coat of primer paint, or be electro or hot-dipped galvanized steel.
  - All field abrasions to members from field welding shall be touched up with zinc-rich paint.
  - All track butt joints, track must be anchored to a common structural element.
  - Studs shall be seated squarely in track with stud flanges abutting track flanges. Studs shall be plumbed, aligned and squarely attached to flanges or top and bottom track.
  - Splices in axially loaded studs shall not be permitted.
  - Studs shall be so positioned that studs align above and below floor and roof framing.
  - All connections shall be per manuf. recommendations. Connect all studs to tracks w/ 2-#6 self tapping screws minimum top and bottom.
- JOISTS (2" FLANGES)**
- 6"x18 Ga - A = 0.58 in<sup>2</sup>, Sx = 1.32 in<sup>3</sup>, Ix = 5.29 in<sup>4</sup>  
 6"x16 Ga - A = 0.73 in<sup>2</sup>, Sx = 1.66 in<sup>3</sup>, Ix = 6.66 in<sup>4</sup>  
 6"x18 Ga - A = 0.49 in<sup>2</sup>, Sx = 0.89 in<sup>3</sup>, Ix = 2.67 in<sup>4</sup>
- STUDS (1.5/8" FLANGES)**
- 6"x20 Ga - A = 0.42 in<sup>2</sup>, Sx = 0.76 in<sup>3</sup>, Ix = 3.59 in<sup>4</sup>  
 6"x22 Ga - A = 0.20 in<sup>2</sup>, Sx = 0.34 in<sup>3</sup>, Ix = 1.22 in<sup>4</sup>  
 6"x20 Ga - A = 0.34 in<sup>2</sup>, Sx = 0.59 in<sup>3</sup>, Ix = 1.79 in<sup>4</sup>

- CONCRETE MASONRY CONSTRUCTION**
- Header brick units: 1000 psi minimum compressive strength.
  - Lay units in running bond. Corners shall have a standard bond by overlapping units.
  - Mortar: ASTM C270, type S.
  - See Architectural Drawings for expansion and control joints. Locate at 30' maximum.
  - Provide ladder type #9 joint reinforcing at 16" vertical spacing in veneer.
  - Lintels - Veneer
    - Unless otherwise noted or shown, provide the following angle lintels over openings:  
 Opening Width      Angles      Bearing Each End  
 0' to 6'-0"      3 x 5 x 1/4"      6"  
 6'-1" to 8'-0"      5 x 5 x 1/2"      8"  
 8'-1" to 12'-0"      5 x 5 x 1/2"      8"
  - Masonry laid in temperatures of the outside air below 40 degrees Fahrenheit shall be protected in accordance with the provisions of the IMAWC Recommended Practices and Guide Specifications for Cold Weather Masonry.

- MISCELLANEOUS**
- The contractor shall field verify all dimensions and elevations for existing and new construction prior to fabrication.
  - The contractor shall brace and shore as required to protect building components until design level strength is reached to prevent damage or collapse due to wind or construction loads.
  - Any modification or alteration of these construction documents or changes in construction from the intent of these documents by the contractor without written approval of the engineer shall remove all professional and liable responsibility on the part of the engineer.
  - Consult the Architectural, Mechanical and Electrical Drawings for verification of location and dimensions of chases, inserts, openings, sleeves, washes, reveals, depressions and other project requirements.
  - All equipment penetrations to be verified by Contractor.
  - Notify Architect/Engineer immediately if conditions not covered by these drawings are exposed during construction.
  - Do not scale from drawings.
  - Sections and details shown shall be considered typical for all similar conditions.
- DESIGN LOADS**
- DESIGN CODES : 2000 International Building Code  
 ANSI/ASCE 7-98 Minimum Design Loads for Buildings and other Structures
- LIVE LOADS:**
- Ground Floor: (Slab on grade) 100.0 psf.  
 Roof: Roof Snow (Drift in addition) 55.0 psf.  
 Mezzanine: 80.0 psf.
- DEAD LOADS:**
- Roof (includes 7.0 psf service loading) 25.0 psf.  
 Mezzanine: 50.0 psf.
- Lateral Loads:**
- Wind: Basic Wind Speed Exposure C 90.0 mph.  
 Basic Velocity Pressure 28.0 psf Min.
- Earthquake: Seismic Shear = V = .033W
- REFERENCE ELEVATION**
- Design drawing elevation 100'-0 equals actual grade elevation 478.00 ft.

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**Hamford Food & Drug**  
**RIVERSIDE STREET**  
**PORTLAND, MAINE**

**FOUNDATION DETAILS AND GENERAL NOTES**

PROJECT TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_

SEE PLAN: \_\_\_\_\_  
 JCM: \_\_\_\_\_  
 KWH: \_\_\_\_\_  
 WPF/ALD: \_\_\_\_\_  
 LAY: \_\_\_\_\_  
 11 JUN 2004  
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**S1**

proj no. \_\_\_\_\_