

KEY NOTES

XXXX

Table with columns: REV. DATE, BY, DESCRIPTION

GENERAL NOTES AND TYP. DETAILS

Table with columns: DATE, AS SHOWN, PROJECT NO., 04321.00, CHECKED BY, JSS, DRAWN BY, FF, CHECKED BY, AJ, DATE, 6/3/2005

GENERAL NOTES

- 1. Design Criteria: 2001 California Building Code... Wind Loads: 70 mph, Exposure C... Seismic Loads: Seismic Zone 4, I = 1.5, Soil Profile Type = S<sub>u</sub>...
2. In preparing the plans, the source of information was based on existing drawings...
3. Building dimensions shown are for general reference only...
4. Drawings shall NOT be scaled. All dimensions and fit shall be determined and verified...
5. Details not fully or specifically shown shall be of same nature as other similar conditions...
6. (E) denotes existing construction, (N) denotes new construction...
7. Elevations on plans and details "x" are to heights above finished floor elevation...
8. Coordination of Mechanical, plumbing, electrical, and site utility systems with the structural system is the responsibility of the General Contractor...
9. Verify weights and locations of mechanical units with Mechanical Engineer prior to placement...
10. Shoring and bracing design, materials and installation shall be provided by the General Contractor...
11. Special Inspections for the following items are required per California Building Code, Section 1701A, the Specifications and the T&I List (if it applies):
A. Welding
B. Expansion Anchors
C. Adhesive Anchors
D. Concrete Reinforcing
E. CMU Rebar & Grouting

STRUCTURAL SPECIFICATIONS

- Concrete Construction
1. Concrete shall be hard rock concrete (5 sack cement per cu yd min.) and meet the following minimum ultimate compressive strengths at 28 days:
Table with columns: Location, Min. Strength, Aggregate Size, Slump, Tolerance
2. Concrete mix design and testing shall meet the requirements of Section 1903A, 1905A and 1701A of the 2001 CBC...
3. Reinforcing steel shall conform to ASTM A-615, Grade 60 for #5 and larger bars and Grade 40 for #4 and all dowels and ties...
4. Welded wire fabric shall conform with ASTM A-185, and shall be lapped 12" minimum.
5. Slabs, beams, walls and other concrete shall be kept continuously wet for 48 hours after placement...
Structural Steel
1. Steel Grades:
WF Shapes & Plates: ASTM A-572 Gr 50 w/ req. per AISC Technical Bulletin #3, dated March 1997 (A-392 for WF)
C and L Shapes: ASTM A-36
Pipes: ASTM A-53 Grade B f<sub>y</sub>=35ksi (36ksi effective)
Round HHS: ASTM A-500 Grade B f<sub>y</sub>=42ksi
Square and Rectangular HHS: ASTM A-500 Grade B f<sub>y</sub>=46ksi
Machine Bolts: ASTM A-307 (MB)
High Strength Bolts: ASTM A-325 (HSS)
2. Workmanship and details shall conform to the AISC specifications and the UBC unless noted otherwise.
3. Bolt holes shall be 1/16" larger in diameter than the bolt.
4. Welding electrodes shall meet AWS requirements and electrodes shall be E70XX for shielded metal arc, E7XX-E9XX for submerged arc (shop welds only), E70S-X for gas metal arc and E7XT-XX for flux core (unless noted otherwise).
5. All structural welds shall be inspected and certified by a qualified testing agency. Certification shall be submitted to the Architect and the Building Department.
6. Temporary shoring and bracing shall be used and shall be adequate for all loads to which it may be subjected. Leave temporary bracing and shoring in place as long as may be required for safety, and until final framing construction is completed.
7. Drilled expansion concrete bolts are Simpson Wedge All, Hilti Kwik Bolt II, or ITW/Ramset Tru-Bolt.

Concrete Masonry Construction

- 1. Concrete masonry units shall be Grade N. Units to be double open end where possible and single open end otherwise. All cells to be grouted solid.
2. Grout shall be 2,000 PSI minimum in 28 days and shall have 7 sacks of cement per cu yd minimum. Add one lb. Sika Grout Aid per sack of cement up to 6lbs. Maximum per cubic yard.
3. Mortar shall be Type M or S proportioned per the 2001 CBC, Chapter 21.
4. Reinforcing steel shall be bent and lapped at all corners and intersections. The minimum lap splice shall be 18" UNO. All steel shall be positioned and tied prior to grouting.
5. Grout shall be placed in 32" lifts maximum without clean outs. Maximum lift is 8'-0" with clean outs. Grout for each pour shall be stopped 1-1/2" below the top of the last course of block. All grout to be thoroughly consolidated by vibrating immediately after placing.
6. F'm = 1,500 psi minimum

Expansion Anchor in 3000 PSI Concrete

- 1. INSTALL DRILLED EXPANSION ANCHORS PER MFR'S & ICBO INSTRUCTIONS. TESTING LAB TO TEST PER TITLE 24, SECTION 1923A.3.5 AND IR 19-1.
2. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR.
3. ACCEPTABLE ADHESIVE FOR ABOVE VALUES ARE: SIMPSON WEDGE-ALL (ICBO# 363); IIR MARKET TRUBOLT, ICBO# 1372; AND HILTI KWIK BOLT II, ICBO# 4627.
4. INSPECTOR VERIFIED INSTALLATION TORQUE OF ALL ANCHORS PER IR 19-1 IS AN ACCEPTABLE ALTERNATE TO TENSION TESTING PER NOTE 1.
5. VALUES FOR SHEAR AND TENSION SHOWN ARE FULL MAXIMUM VALUES BASED ON 14 DIAMETERS EDGE DISTANCE EACH WAY AND 12 DIAMETERS SPACING EACH WAY MINIMUM. SEE STANDARD CALCULATION FOR INTERPOLATION OF VALUES DOWN FOR A MINIMUM EDGE DISTANCE AND SPACING OF 7 DIAMETERS.

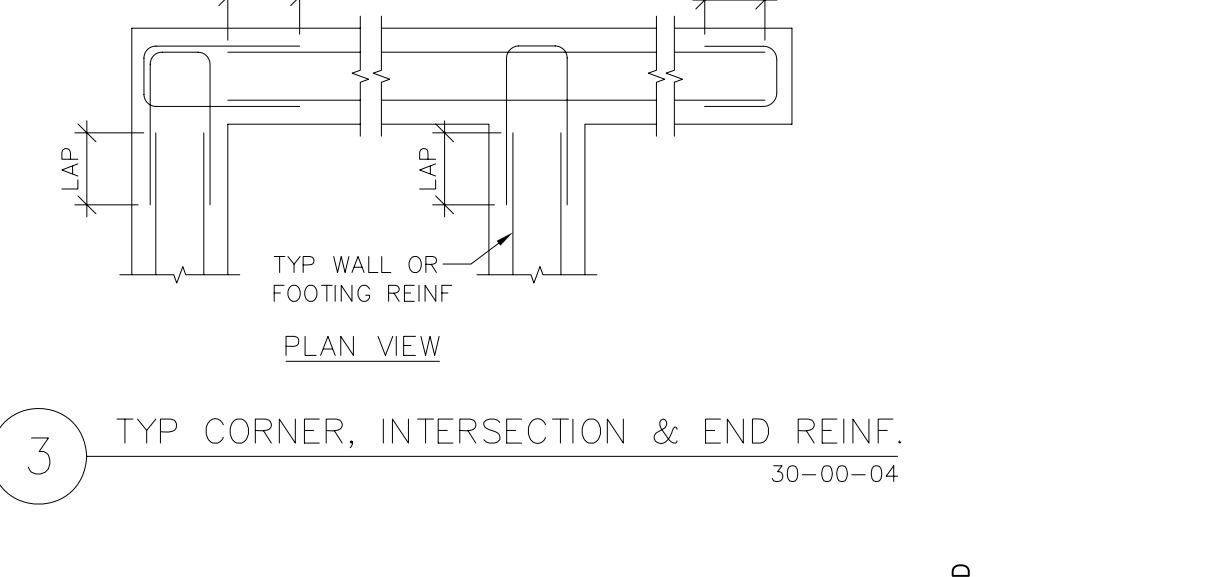
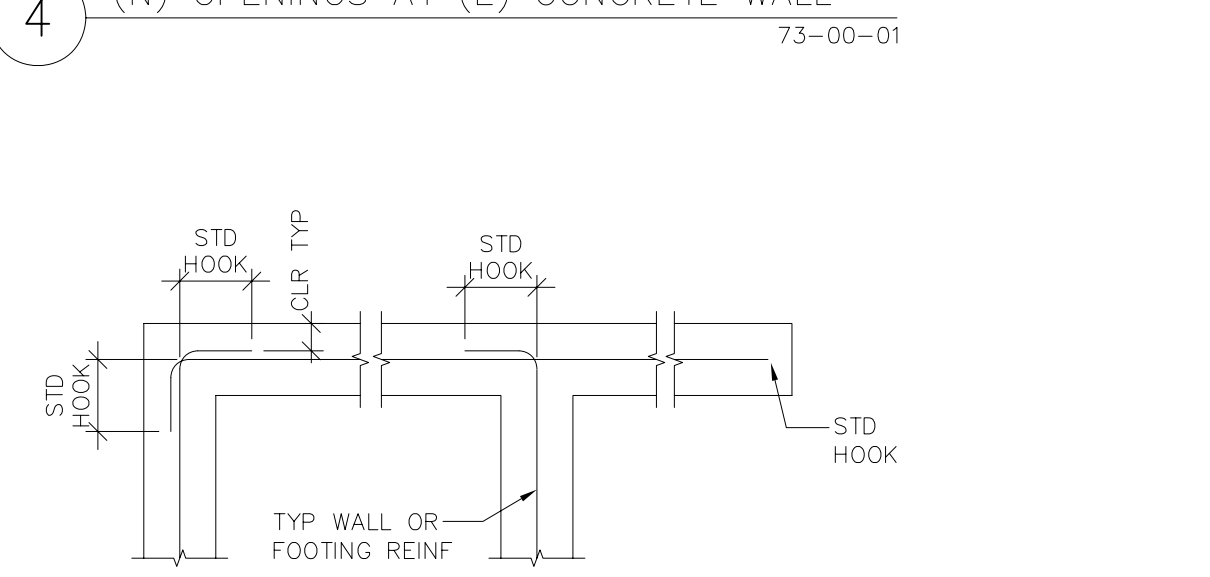
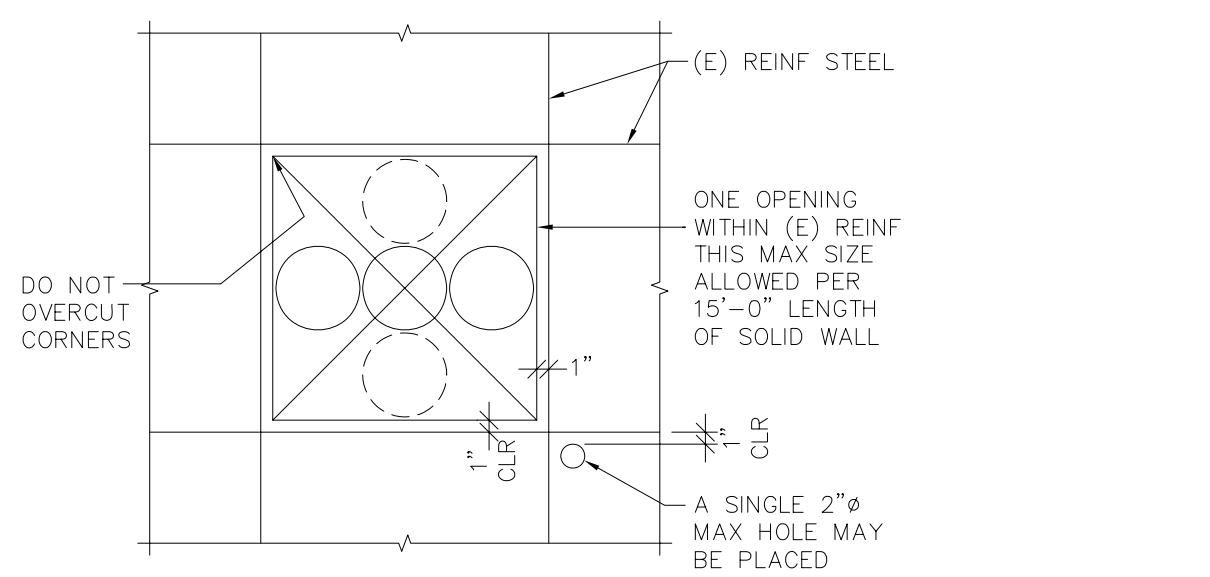
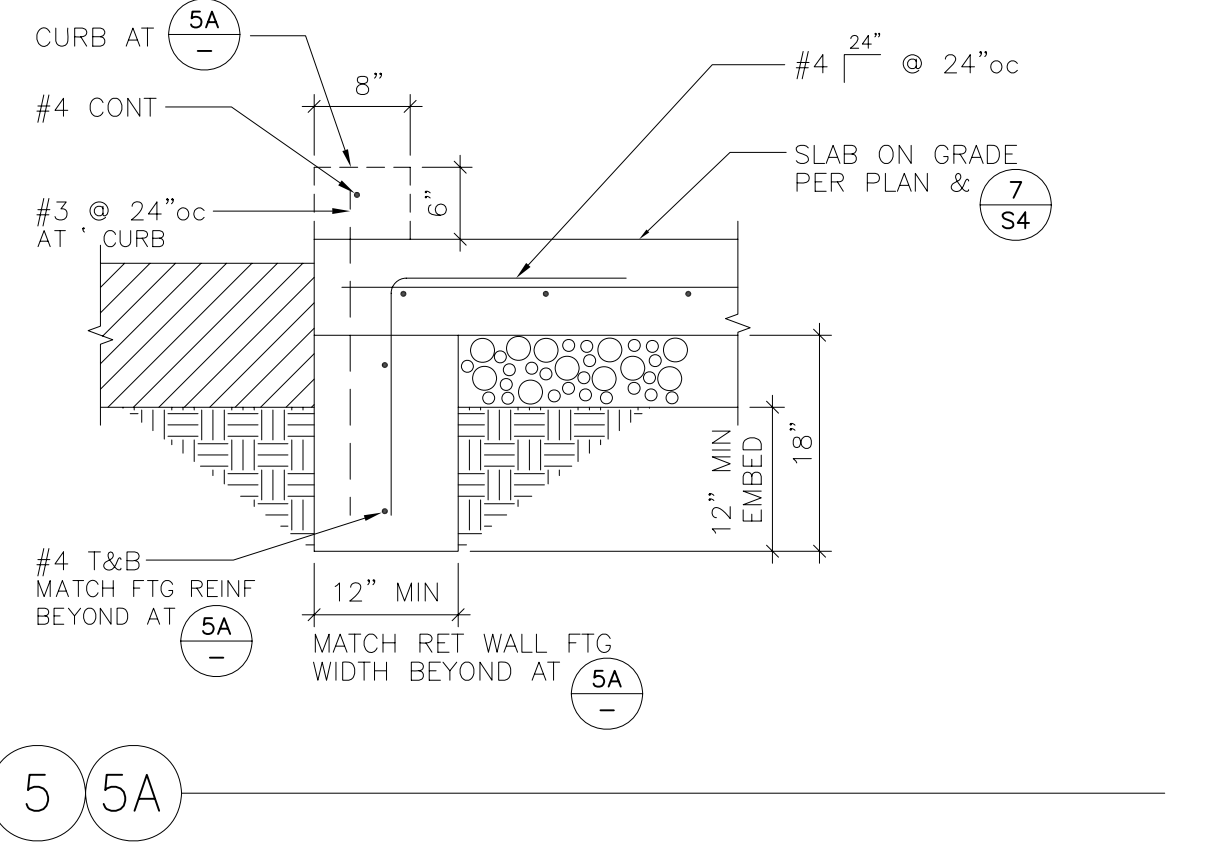


Table: TENSION TEST LOADS IN 3000 PSI MIN. CONCRETE. Columns: ANCHOR DIA., MIN. EMBED, MIN. TEST LOAD, ALLOWABLE LOADS (SHEAR, TENSION).

Table: BOLT MIN. INSTALL TORQUE FT-LB & ICBO #. Columns: BOLT DIA., MIN. EMBED, #3631, #1372, #4627, TEST LOAD, ALLOWABLE VALUES (SHEAR, TENSION).

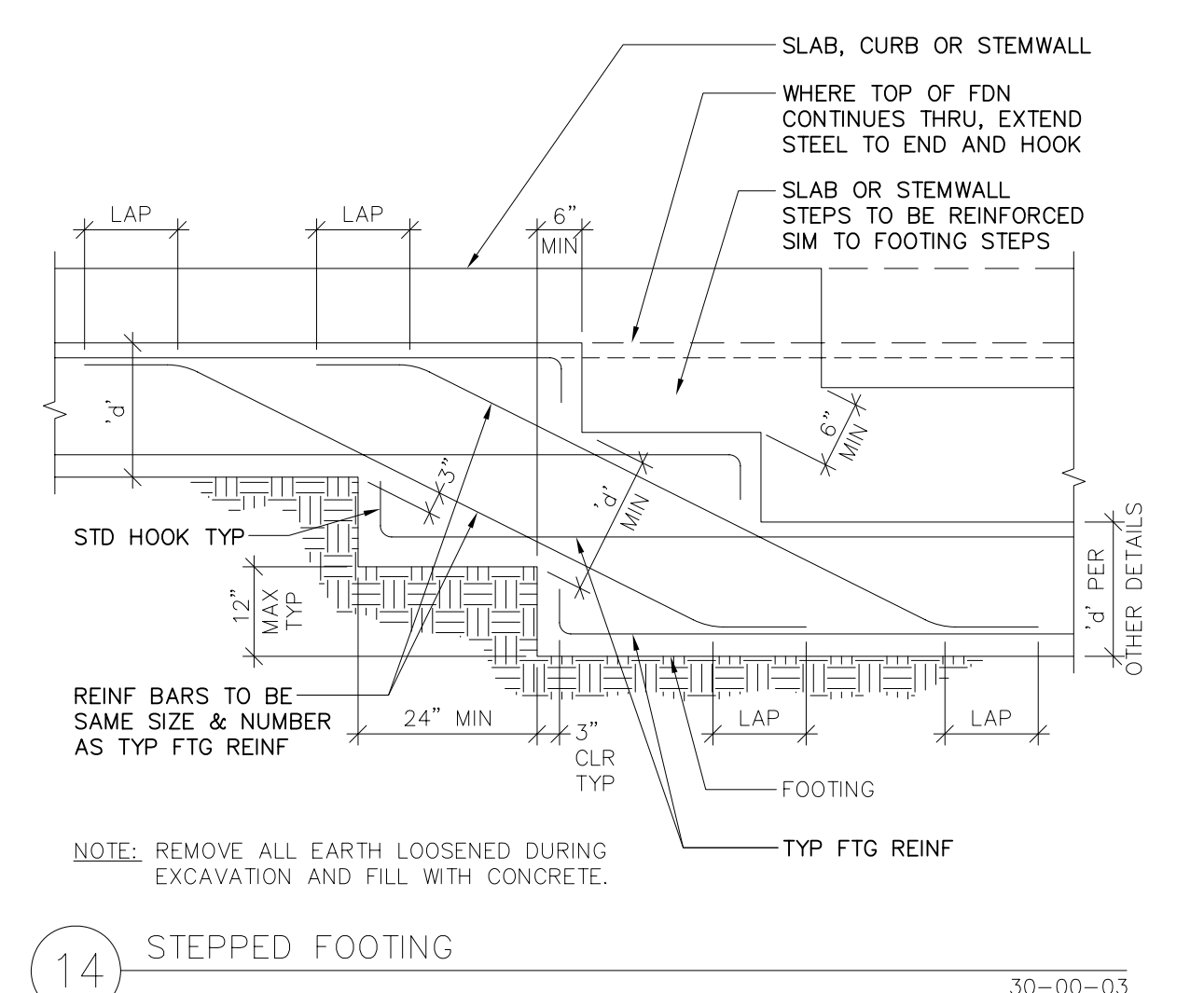
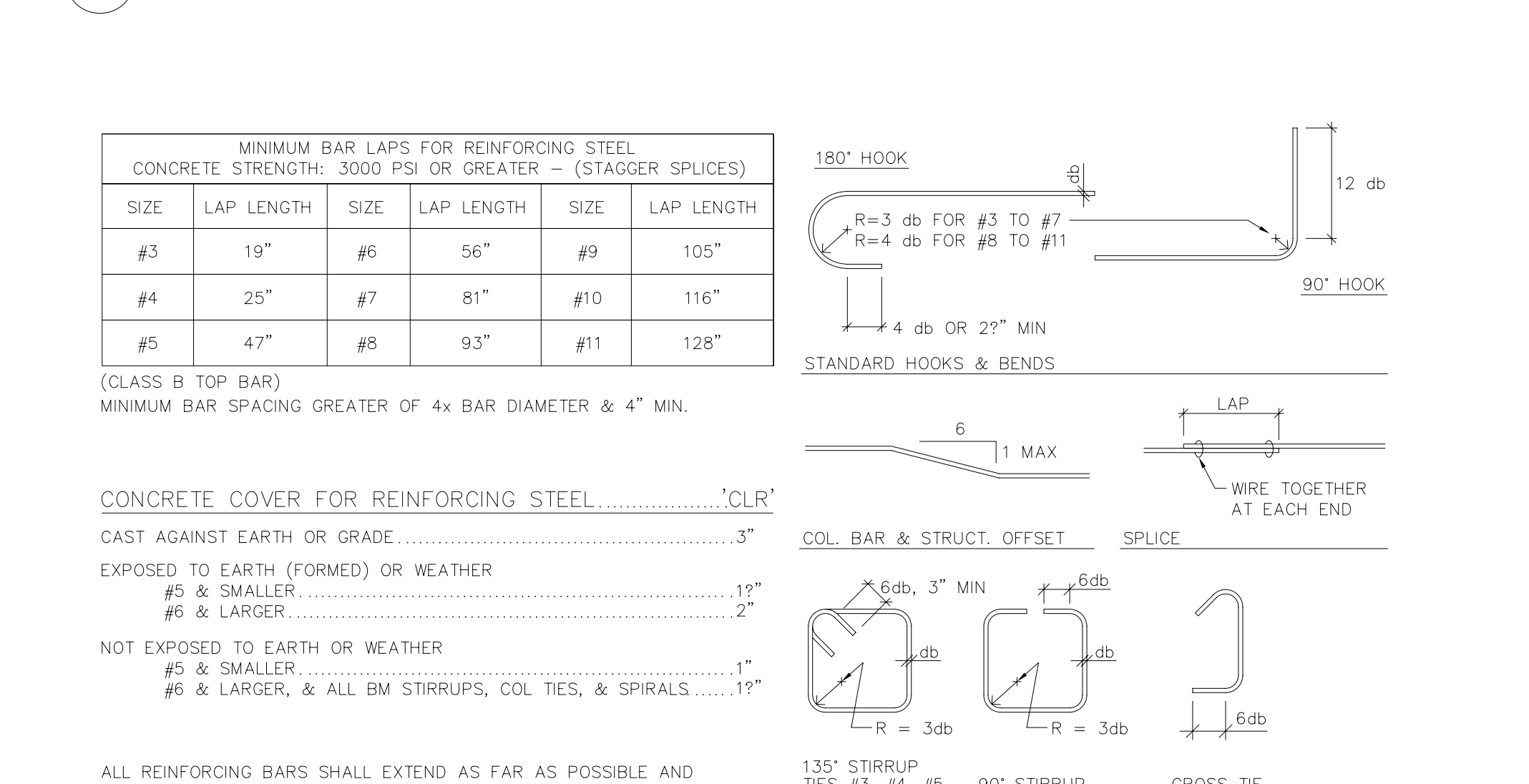
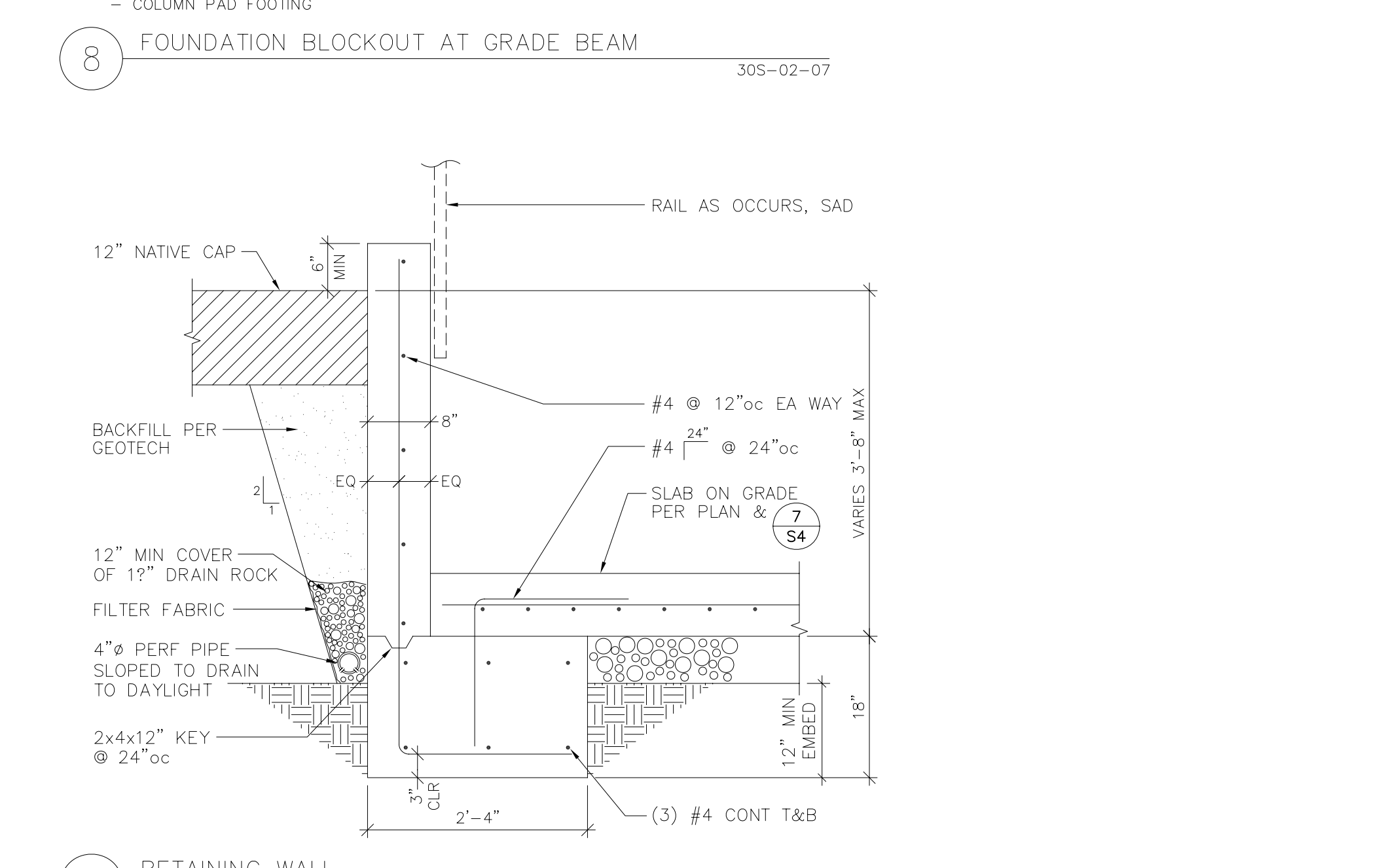
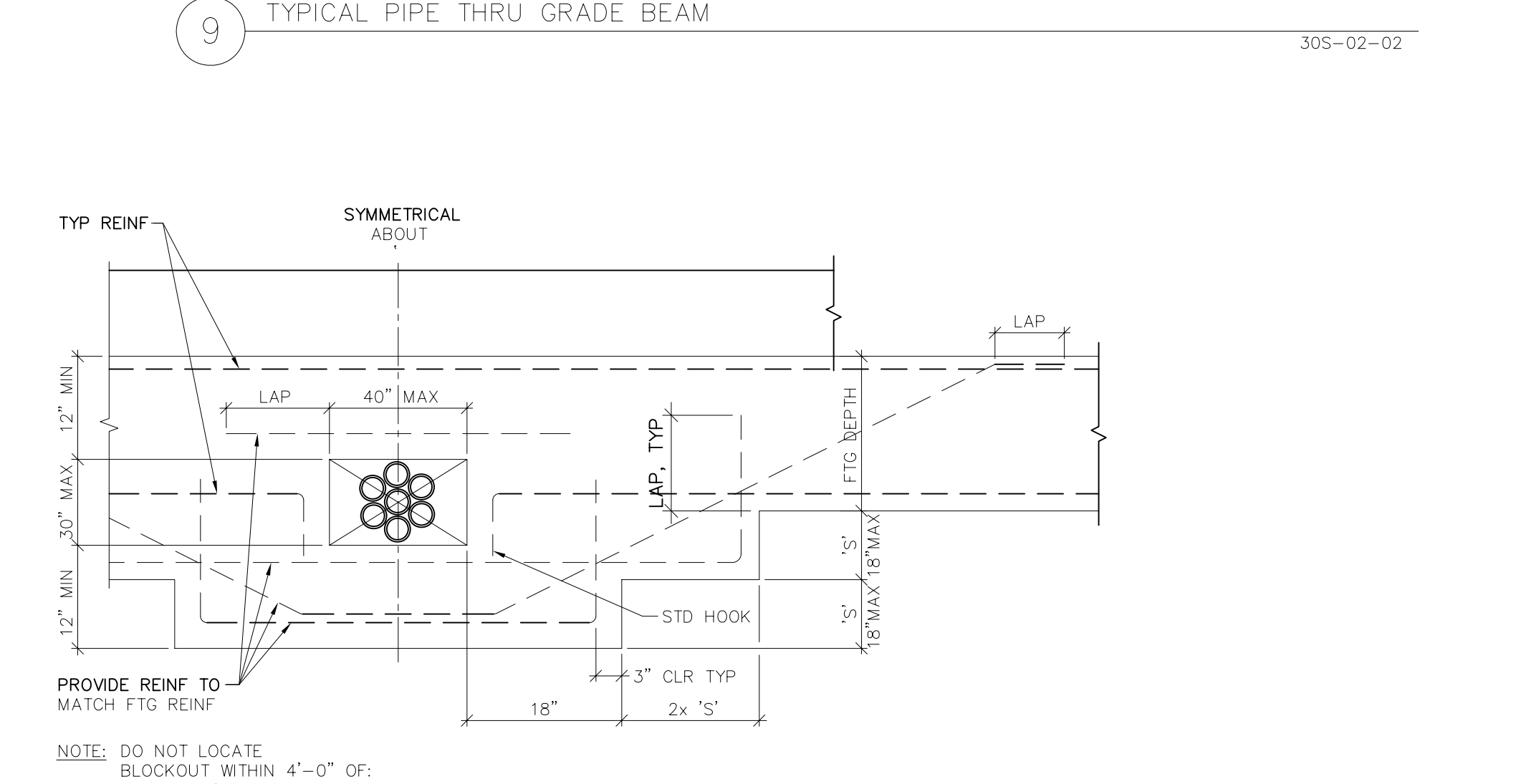
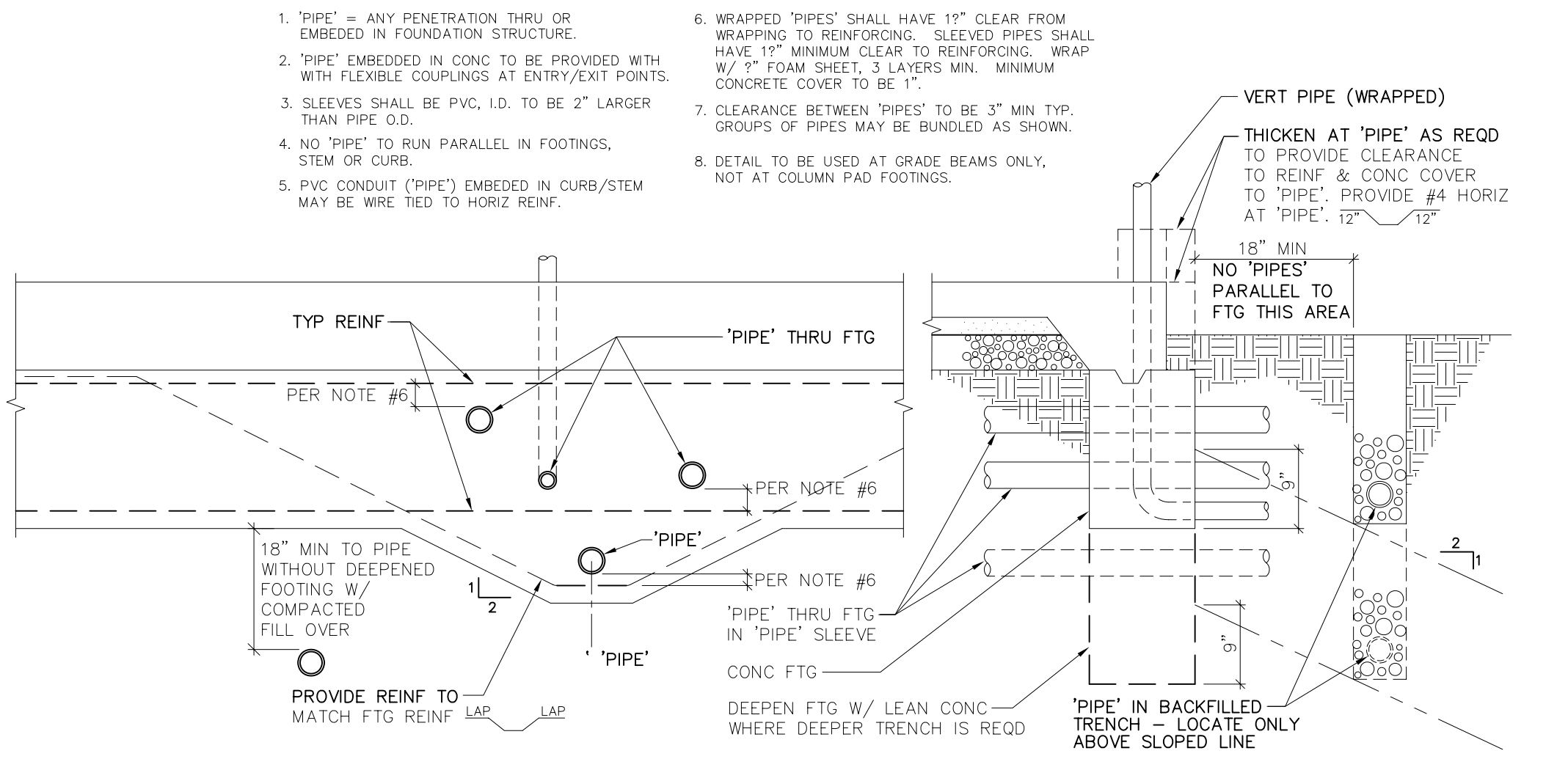
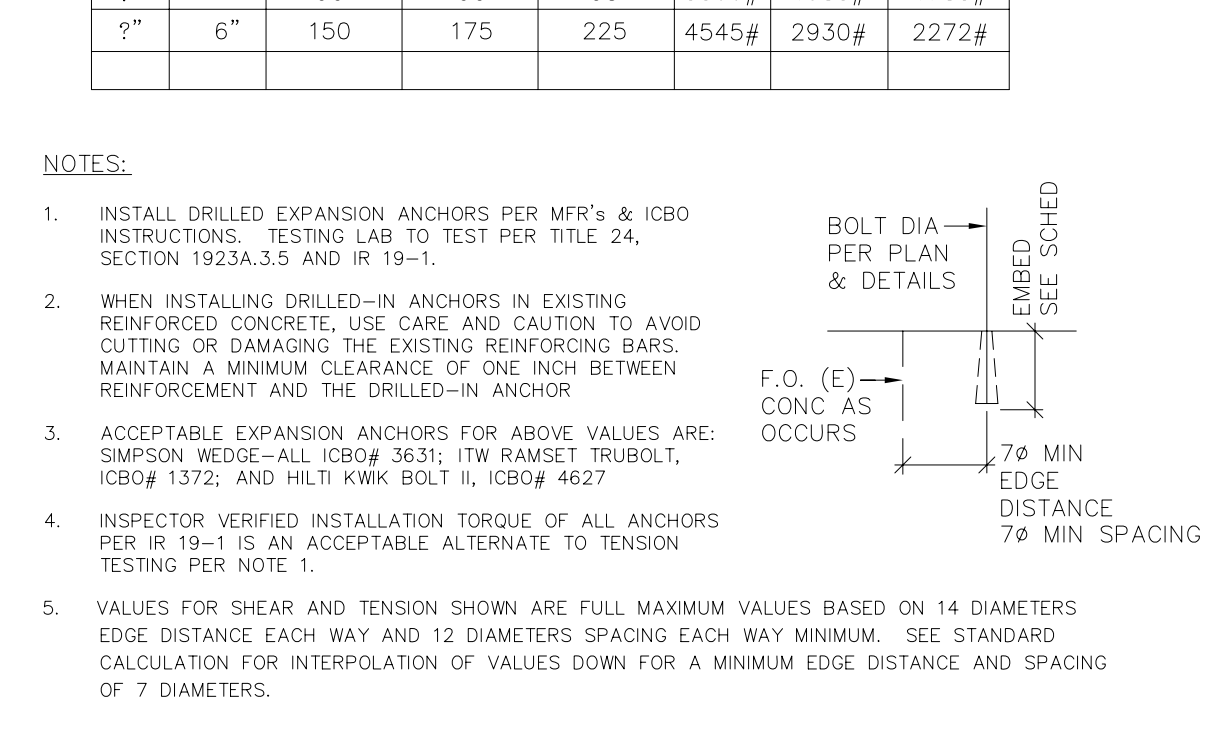


Table: MINIMUM EMBEDMENTS AND ALLOWABLE LOADS IN 3000 PSI MIN. CONCRETE AND 5000 PSI H.S. GROUT. Columns: BAR SIZE, EMBED., al SHEAR, al TENSION, T-TEST E MIN., E MIN.

