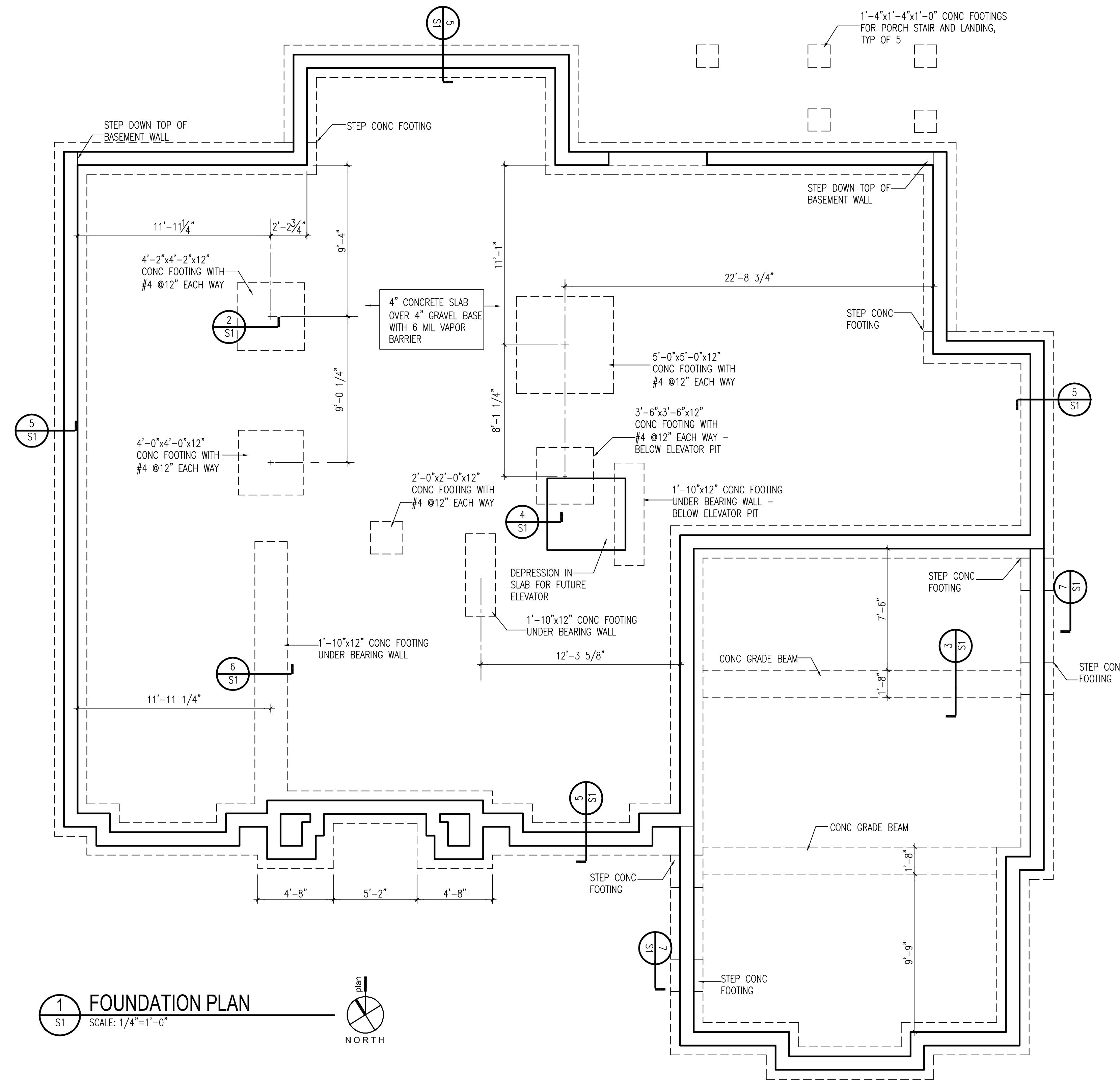
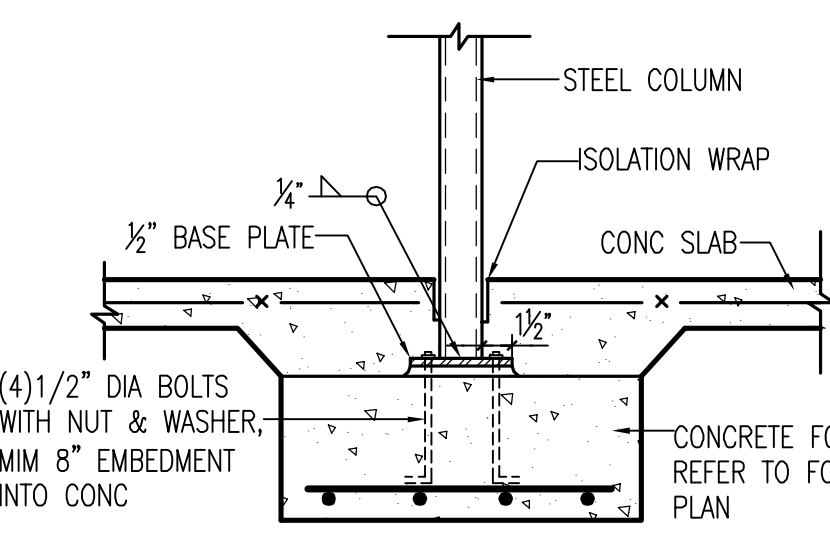


STRUCTURAL NOTES

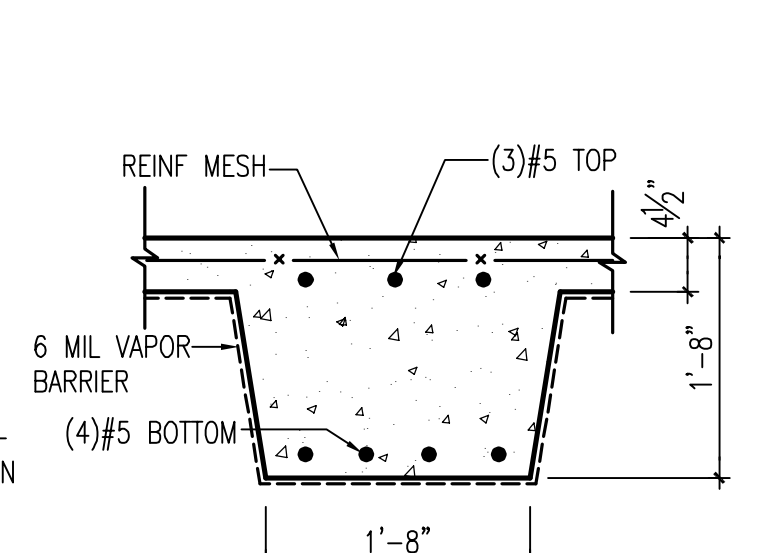
- A. BUILDING CODE**
 1. INTERNATIONAL RESIDENTIAL CODE (IRC) 2012 EDITION AS AMENDED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- B. GENERAL REQUIREMENTS**
 1. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS HAVE BEEN MADE. DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.
 2. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS ALWAYS.
 3. DESIGN LOADS:
 FLOOR LIVE LOAD (NON-SLEEPING AREAS) = 40 PSF
 FLOOR LIVE LOAD (SLEEPING AREAS) = 30 PSF
 FLOOR DEAD LOAD = 10 PSF
 STAIR LOAD = 40 PSF
 SNOW LOAD = 30 PSF
 PRESUMED SOIL BEARING CAPACITY = 1500 PSF
 DESIGN WIND SPEED = 90 MPH
 LIVE LOAD DEFLECTION LIMIT = L/360
 TOTAL LOAD DEFLECTION LIMIT = L/240
- C. CONCRETE**
 1. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE AS FOLLOWS:
 FOOTINGS AND BASEMENT SLABS = 3000 PSI
 WALLS = 4000 PSI
 GARAGE SLAB ON GRADE = 3500 PSI
 2. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING, ACI-318, ACI-301, AND ACI-332.
 3. ALL CONCRETE SLABS ON GRADE SHALL BE A MINIMUM OF 4" THICK ON 6 MIL POLYETHYLENE FILM WITH A 6x6, W2.1 x W2.1 WWF AT MID SLAB, UNLESS NOTED OTHERWISE.
 4. THE CONCRETE COVER SHALL BE AS FOLLOWS:
 FOOTINGS CAST AGAINST THE GROUND = 3-INCHES
 EXTERIOR WALL WITH FORMED SURFACES = 2-INCHES
 SLABS EXPOSED TO WEATHER = 1-1/2 INCHES
 5. NO CONCRETE SHALL BE PLACED UNTIL ALL REINFORCING HAS BEEN INSTALLED AND INSPECTED.
- D. REINFORCING STEEL**
 1. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
 2. ALL STEEL REINFORCEMENT: $F_y=60$ KSI.
 3. DETAILING, FABRICATING, AND PLACING OF REINFORCEMENT STEEL SHALL BE IN ACCORDANCE WITH ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
- E. MASONRY**
 1. MASONRY WALLS SHALL HAVE 9 GAUGE GALVANIZED DUR-O-WALL (LADDER) OR TRUSS TYPE JOINT REINFORCEMENT AT 16" OC VERTICALLY ABOVE GRADE AND 8" OC VERTICALLY AT BELOW GRADE JOINTS.
 2. PROVIDE AT LEAST 6" OF SOLID MASONRY UNDER CONCENTRATED LOADING CONDITIONS.
 3. MORTAR TO CONFORM TO ASTM C270, TYPE N WITH MINIMUM $F_m=1800$ PSI.
 4. GROUT SHALL CONFORM TO ASTM C476 AND HAVE MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
 5. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90 AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 1500 PSI.
- F. FOUNDATIONS**
 1. UNLESS OTHERWISE NOTED, FOOTINGS SHALL EXTEND A MINIMUM OF 12" INTO ORIGINAL UNDISTURBED SOIL AND A MINIMUM OF 24" BELOW FINISHED GRADE OR COMPACTED FILL (FROST LINE).
 2. WHERE REQUIRED, STEP FOOTINGS TO A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.
 3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE BUILDING OFFICIAL OR AN APPROVED THIRD PARTY INSPECTOR PRIOR TO PLACING OF ANY CONCRETE.
 4. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED PRIOR TO PLACING ANY CONCRETE. CLAY, IF FOUND, MUST BE REMOVED AND REPLACED WITH SUITABLE FILL AT LEAST 2 FEET BELOW THE FOOTING.
 5. FOOTINGS SHALL NOT BE CAST AGAINST FROZEN, WET, OR LOOSE GROUND.
- G. METALS**
 1. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE 9TH EDITION OF ASCI MANUAL OF STEEL CONSTRUCTION. STANDARD STEEL SHALL CONFORM TO ASTM A501.
 2. STEEL FOR PIPE COLUMNS SHALL CONFORM TO ASTM A501.
 3. ALL WELDS SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) CODE.
 4. ELECTRODES SHALL BE E-70-XX SERIES.
 5. STEEL COLUMNS, LINTELS, BEAMS, AND RAILINGS SHALL HAVE A SHOP COAT OF RUST INHIBITING PAINT.
 6. LIGHT-GAUGE ADJUSTABLE STEEL COLUMNS SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI AND A MINIMUM ULTIMATE STRENGTH OF 45 KSI.
 7. LIGHT-GAUGE STEEL COLUMNS SHALL HAVE MINIMUM 8" x 4" x 1/4" TOP AND CAP PLATES UNLESS NOTED OTHERWISE.
- H. FASTENERS**
 1. ALL FASTENERS IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALVANIZED.
 2. ANCHOR BOLTS SHALL BE S.R.E 1/2" DIAMETER PER ASTM A307.
 3. JOIST HANGERS SHALL BE USED TO SUPPORT ALL PURLINS, JOISTS, AND BEAMS NOT FRAMED OVER SUPPORTING MEMBERS UNLESS NOTED OTHERWISE.
 4. MACHINE BOLT AND CARRIAGE BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" LARGER THAN DIAMETER OF THE BOLT.
 5. LAG SCREWS SHALL BE SQUARE HEAD, OF STRUCTURAL GRADE STEEL, AND SHALL BE PLACED WITH WASHERS UNDER THREAD.
 6. USE SIMPSON STRONG-DRIVE SDW TRUSS-PLY SCREWS FOR FASTENING BUILT-UP WOOD COLUMNS TOGETHER. FOLLOW SIMPSON TRUSS-PLY SCHEDULE FOR INSTALLATION NUMBER AND TYPE OF FASTENERS.
- I. WOOD**
 1. ALL WOOD IN DIRECT CONTACT WITH SOIL OR CONCRETE SHALL BE PRESSURE TREATED.
 2. ALL LVLS SHALL HAVE A MINIMUM $F_b = 2800$ PSI AND 2.09 E.



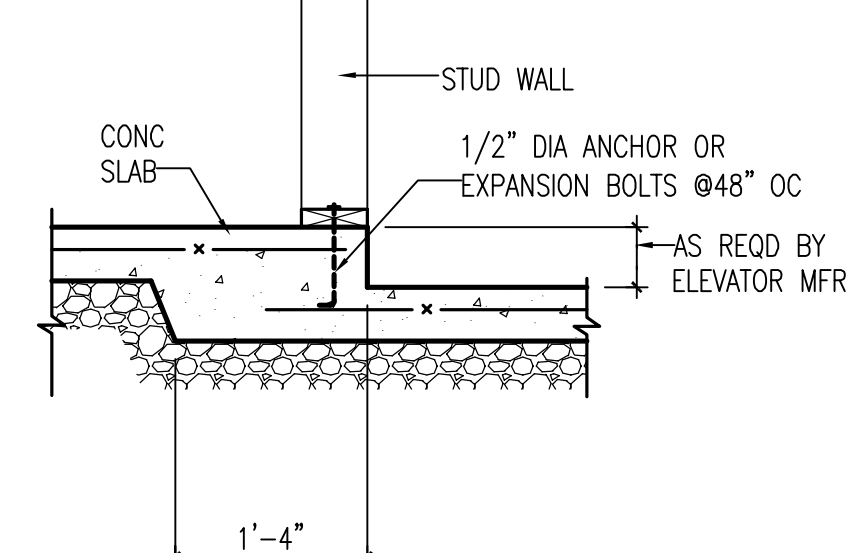
1 FOUNDATION PLAN
 SCALE: 1/4"=1'-0"
 NORTH



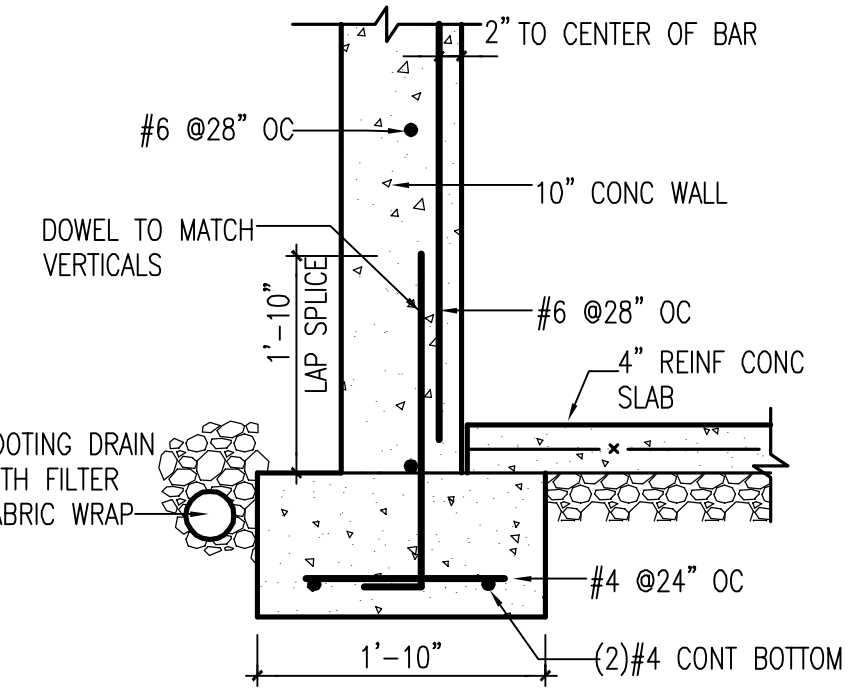
2 COLUMN FOOTING
 SCALE: 3/4"=1'-0"



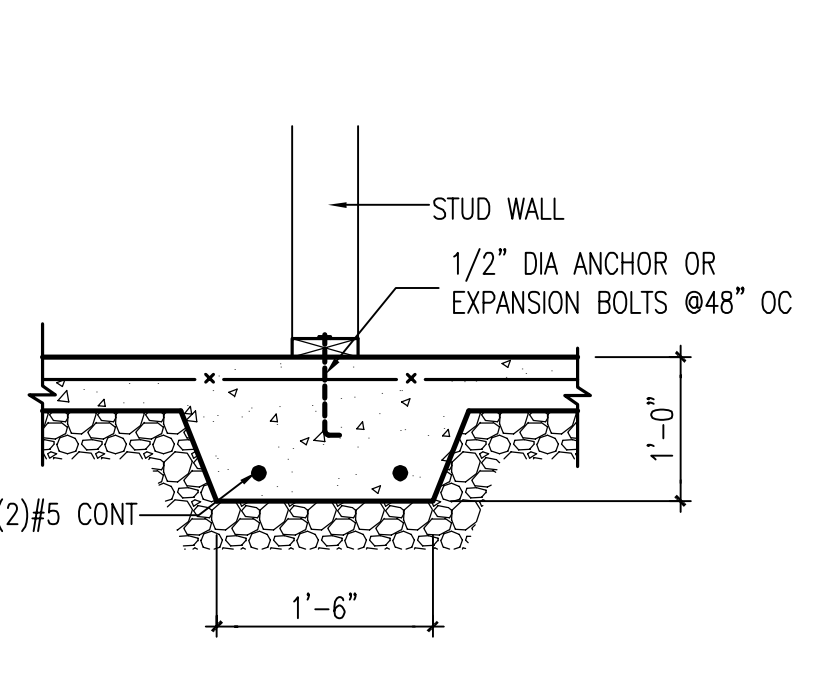
3 GRADE BEAM
 SCALE: 3/4"=1'-0"



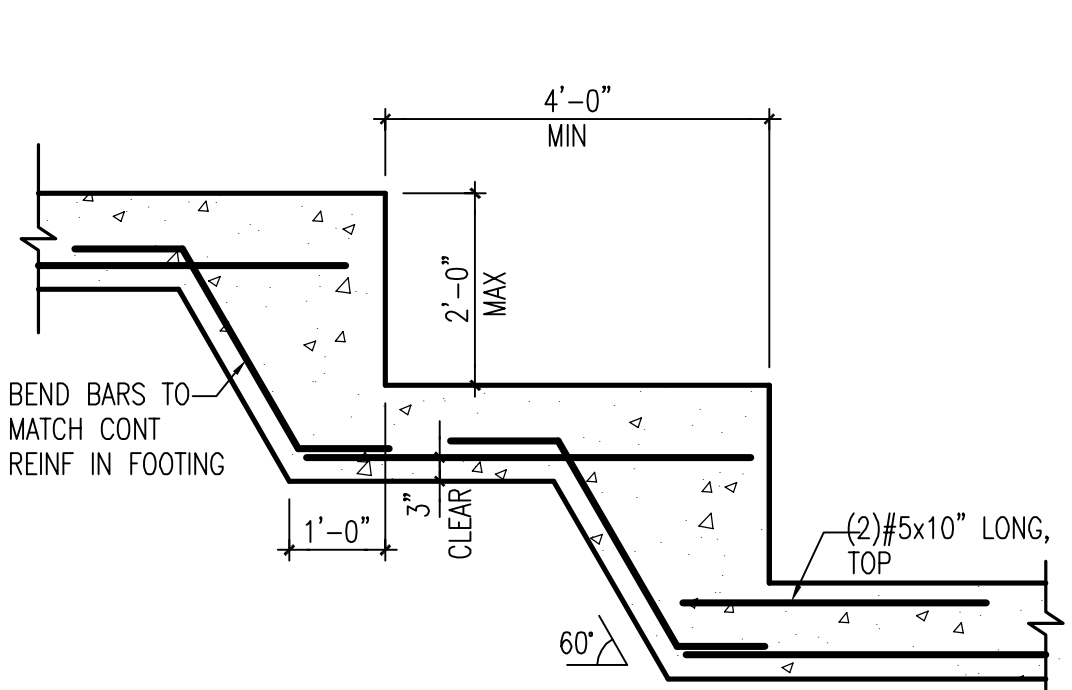
4 SLAB DEPRESSION
 SCALE: 3/4"=1'-0"



5 TYPICAL FOOTING
 SCALE: 3/4"=1'-0"



6 BEARING WALL FOOTING
 SCALE: 3/4"=1'-0"



7 STEP FOOTING
 SCALE: 1/2"=1'-0"

Residence

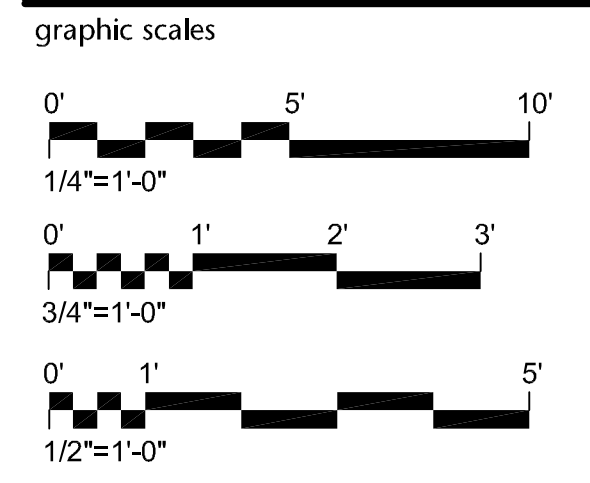
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Foundation Plan & Details