

ALL FOOTINGS 16" WIDE
BY 10" DEEP UNLESS
OTHERWISE NOTED

SALTBOX CUSTOM HOMES INC
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(970) 376-7258

FOUNDATION PLAN

BARNETT RESIDENCE
1851 RIVER QUEEN LANE
ROUTT COUNTY, COLORADO

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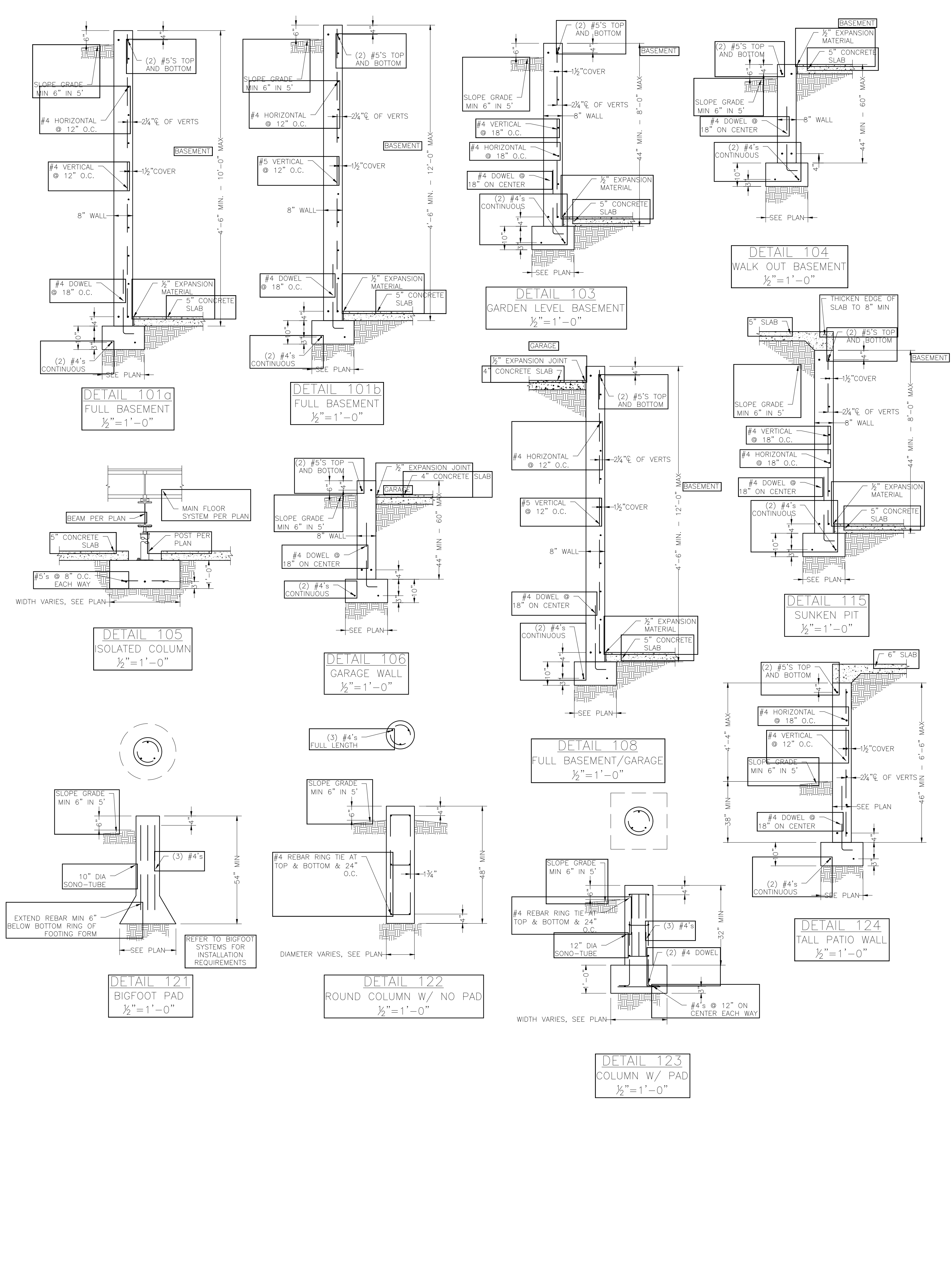
REVIEWED
FOR
CODE
COMPLIANCE
07/01/2024

DRAWN BY: JB
ISSUE DATE: 8-14-23
REVISIONS:

SCALE 1/4"=1'-0"
PROJECT # 23-028

F1

VERIFY ALL DIMENSIONS AND
ELEVATIONS PRIOR TO
CONSTRUCTION



GENERAL SPECIFICATIONS
FOUNDATION WALL ON FOOTINGS

1. FOUNDATION
- a. FOUNDATION DESIGN IS IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED IN SOILS INVESTIGATION REPORT NUMBER 17-10640, DATED 9-5-17, BY: NORTHWEST COLORADO CONSULTANTS, INC.
- b. THE REPORT IS HEREBY REFERENCED AND EXCEPT WHERE OTHERWISE SPECIFICALLY NOTED HEREIN, ALL RECOMMENDATIONS AND PRECAUTIONS CONTAINED IN THAT REPORT SHALL BE ADHERED TO BY THE CONTRACTOR.
- c. FOUNDATION SHALL BE SUPPORTED BY CONTINUOUS CONCRETE FOOTINGS BEARING ON UNDISTURBED NATURAL SOIL.
- d. MAXIMUM BEARING CAPACITY: 3000 PSF.
- e. MINIMUM DEAD LOAD: 700 PSF.
- f. LATERAL SOIL PRESSURE (EQUIVALENT FLUID PRESSURE): 55 PSF.
- g. AN OPEN HOLE INSPECTION PRIOR TO SETTING FOOTING FORMS IS REQUIRED TO VERIFY THE BEARING MATERIAL. THIS INSPECTION SHALL BE PERFORMED BY THE SOIL ENGINEER.
- h. FOOTING AND WALL STEEL INSPECTIONS ARE REQUIRED. THESE INSPECTIONS SHALL BE PERFORMED BY BLACK OAK ENGINEERING OR THE LOCAL BUILDING AUTHORITY.
- i. FLOOR SYSTEMS SHALL BE IN PLACE PRIOR TO BACKFILLING OR ADEQUATE BRACING OR SHORING SHALL BE PROVIDED. THE BACKFILL SHALL BE PLACED IN SMALL LIFTS AND COMPACTED ACCORDING TO THE RECOMMENDATIONS IN THE SOIL REPORT.
- j. ALL FOUNDATION WALLS SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE MUST SLOPE AWAY FROM THE FOUNDATION WALLS A MINIMUM OF 6" IN THE FIRST 5 FEET.
- k. WALL HEIGHTS VARY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF STEP DOWNS. VERIFY ALL STEP DOWNS WITH BUILDER PRIOR TO CONSTRUCTION.
- l. IF WALL HEIGHTS EXCEED 12', UNFORESEEN CIRCUMSTANCES ARISE OR THE DESIGN SHOWN VARIES GREATLY FROM SITE CONDITIONS, NOTIFY BLACK OAK ENGINEERING FOR FURTHER CONSULTATION.
- m. ALL CONCRETE SHALL BE PLACED CONTINUOUSLY. NO HORIZONTAL COLD JOINTS ARE ALLOWED WITHOUT APPROVAL OF THE ENGINEER.
- n. A PERIMETER DRAIN SHALL BE INSTALLED PER THE RECOMMENDATIONS FOUND IN THE SOIL INVESTIGATION.
- o. PLATES, SILLS AND SLEEPERS SHALL BE TREATED WOOD ATTACHED WITH 1/2" DIAMETER X 10" LONG ANCHOR BOLTS (7" EMBED).
- p. ANCHORS SHALL BE SPACED AT 4'-0" ON CENTER MAXIMUM, 12" FROM ALL CORNERS, WITH A MINIMUM OF 2 BOLTS PER PLATE.
- q. ALL INTERIOR NON-BEARING PARTITIONS AT THE BASEMENT LEVEL SHALL BE INSTALLED AS A FLOATING WALL, UNLESS CONSTRUCTED OVER A STRUCTURAL FLOOR INDEPENDENT FROM THE SUBSURFACE. REFER TO SOIL INVESTIGATION OF FURTHER DETAILS.
- r. ALL DIMENSIONS ON THE STRUCTURAL DRAWING SHALL BE CROSS-CHECKED AGAINST THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE BUILDER, ARCHITECT AND ENGINEER.
- s. INSTALL VAPOR BARRIER UNDER CRAWL SPACE AREAS.
- t. THIS FOUNDATION PLAN WAS DRAWN WITH THE DIMENSIONS SHOWN ON THE BASEMENT PLAN DATED 6-12-23, BY SALTBOX CUSTOM HOMES.
2. CONCRETE AND REINFORCING
- a. CONCRETE, CONCRETE PLACEMENT, REBAR FABRICATION, AND REBAR PLACEMENT SHALL CONFORM TO APPLICABLE PROVISIONS OF ACI-318, AND ACI332-08.
- b. ALL CONCRETE SHALL BE MADE WITH STONE AGGREGATE AND SHALL DEVELOP A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
- c. ALL EXTERIOR FLATWORK AND GARAGE SLABS SHALL BE MADE WITH STONE AGGREGATE AND SHALL DEVELOP A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI.
- d. CEMENT SHALL BE TYPE II.
- e. MAXIMUM SLUMP ALLOWED IS 5".
- f. MECHANICAL VIBRATION IS REQUIRED FOR FOOTINGS AND WALLS. NO LIFTS GREATER THAN 24" ARE ALLOWED.
- g. ALL CONCRETE SHALL BE PROTECTED FROM FREEZING FOR A MINIMUM OF 36 HOURS.
- h. DEFORMED BARS SHALL COMPLY WITH ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A185.
- i. CONCRETE COVER FOR REINFORCING
- CONCRETE CAST AGAINST THE EARTH: 3".
 - CONCRETE CAST AGAINST FORMS BUT EXPOSED TO EARTH: 1 1/2".
 - CONCRETE SLABS: 3/4".
- j. REINFORCING SHALL BE KEPT CLEAN AND FREE OF ALL DIRT, OIL, SCALE AND RUST. FORMS SHOULD BE OILED PRIOR TO PLACEMENT OF REINFORCING STEEL TO PREVENT CONTAMINATION.
- k. LAP SPLICES SHALL BE A MINIMUM OF 36 BAR DIAMETERS. ALL BARS SHALL BE CONTINUOUS AROUND ALL CORNERS AND ALL STEP DOWNS.
- l. ALL OPENINGS IN FOUNDATION WALLS SHALL BE REINFORCED WITH A MINIMUM OF TWO #5's. THIS REINFORCING SHALL EXTEND A MINIMUM OF 2'-6" BEYOND THE OPENING.
- m. ALL CONCRETE SLABS SHALL BE ISOLATED FROM THE FOUNDATION WALLS, STEEL COLUMNS AND UTILITY LINES.
3. STRUCTURAL STEEL
- a. ANGLES AND MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A36, BEAMS TO ASTM A992 (Fy=50 ksi), ROUND POSTS TO ASTM A53 (GRADE B) SQUARE TUBE POSTS ASTM A500 (GRADE B).
- b. ALL BEAM SPLICES SHALL BE INSTALLED AS LOCATED AND DETAILED ON THE DRAWINGS. MINIMUM BEAM SPLICES SHALL BE 3/8" PLATE WITH A MINIMUM OF (8) 3/8" A325 BOLTS. SPLICES SHALL OCCUR 2'-0" OFF OF PIPE SUPPORT COLUMN LOCATION, UNLESS NOTED OTHERWISE.
- c. ALL BEAMS SHALL BE GROUTED SOLID INTO BEAM POCKETS WITH NON-SHRINK GROUT.
- d. ALL DEAD END BEAMS (SUICIDE BEAMS) SHALL BE BRACED TO THE FLOOR ABOVE WITH 2x4 KNEE BRACES.
- e. WHERE BEAMS CROSS EACH OTHER, SOLID STEEL SHIMS SHALL BE INSTALLED AND WELDED BETWEEN THE BEAMS.
- f. MINIMUM BEARING OF BEAMS IN BEAM POCKETS SHALL BE 3".
- g. POSTS ARE SPECIFIED WITH NOMINAL DIMENSIONS. (3") SCHD. 40=3 3/8" O.D., 3 3/8" SCHD. 40=4" O.D., 4" SCHD. 40=4 1/2" O.D., 5" SCHD. 40=5 1/2" O.D.)
- h. POST BASE PLATES SHALL BE SIZED AS LISTED BELOW
- 3"o-3/4"x4"x8"
 - 3 3/8"o-3/4"x4 1/2"x8"
 - 4"o-3/4"x5"x10"
 - 5"o-3/2"x6"x10"
 - 6"o-3/2"x7"x12"
- i. ALL ADJUSTABLE POSTS SHALL HAVE A MAXIMUM ADJUSTMENT OF 3". AT TIME OF INSTALLATION THE MAXIMUM SCREW EXTENSION MUST BE 2" OR LESS.
- j. ALL NON-ADJUSTABLE POSTS SHALL HAVE SOLID STEEL SHIMS INSTALLED BETWEEN THE PLATE AND BEAM AS REQUIRED.
- k. ALL STEEL COLUMNS SHALL BE WELDED TO THE BEAM BELOW AND ABOVE (AS APPLICABLE) OR ATTACHED TO THE CONCRETE FOOTING WITH A MINIMUM OF (1) 1/2" DIAMETER EXPANSION ANCHOR.
- l. CAST IN PLACE ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
4. BASEMENT FLOOR CONSTRUCTION
- a. BUILDER AND OWNER MUST BE AWARE OF THE RISK OF SLAB ON GRADE CONSTRUCTION (SLAB MAY MOVE AND CRACK), AND HAVE OPTED FOR SLAB ON GRADE CONSTRUCTION, GIVEN THE INHERIT RISKS OF SLAB ON GRADE CONSTRUCTION.
- b. TO MINIMIZE MOVEMENT AND DAMAGE, ALL RECOMMENDATIONS IN THE SOIL REPORT MUST BE FOLLOWED.
- c. BLACK OAK ENGINEERING, LLC WILL NOT ACCEPT ANY LIABILITY FOR DAMAGE TO ANY PORTION OF THE SLAB ON GRADE, OR ANY FUTURE FINISHED SPACES CONSTRUCTED OVER THE SLAB ON GRADE.

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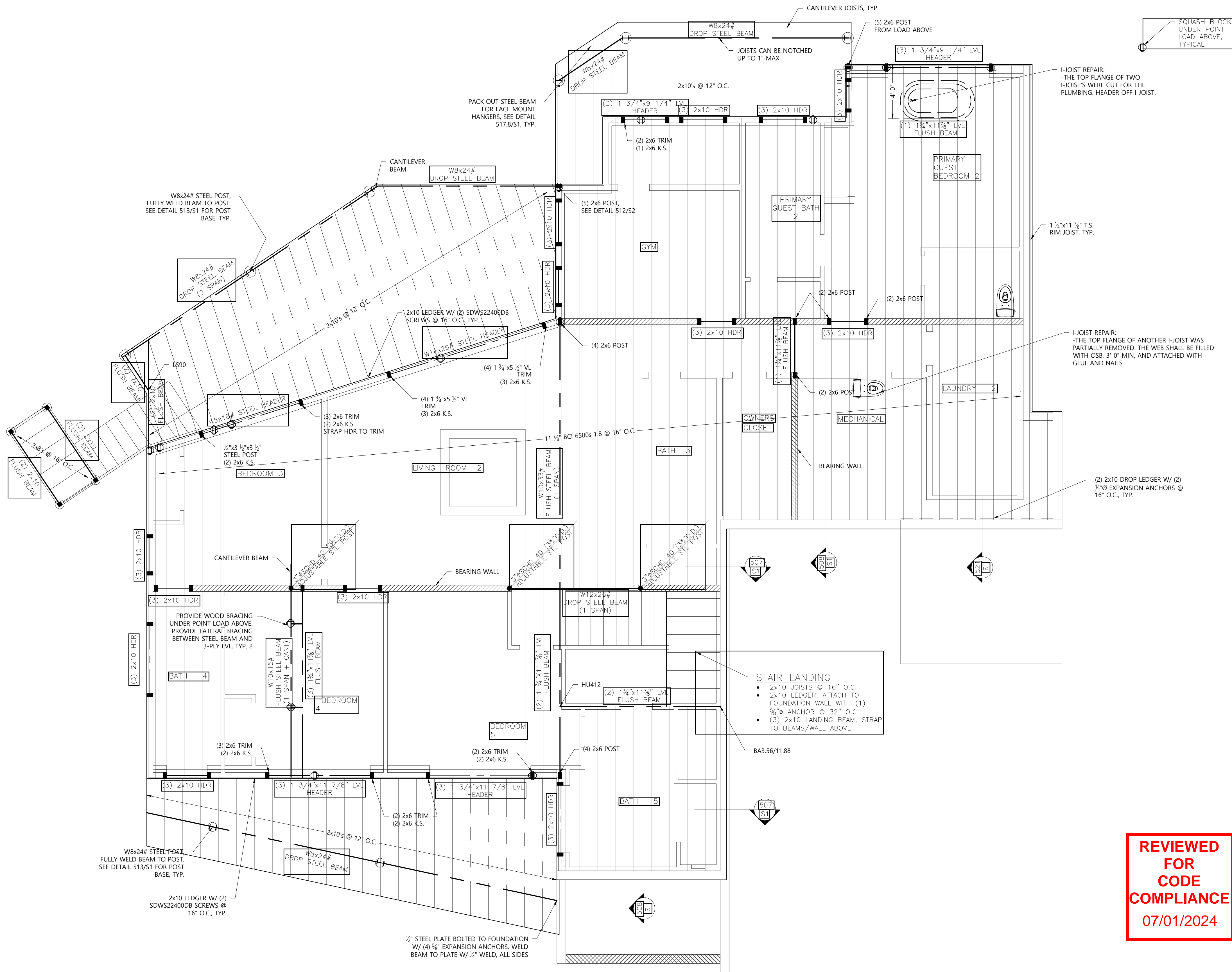
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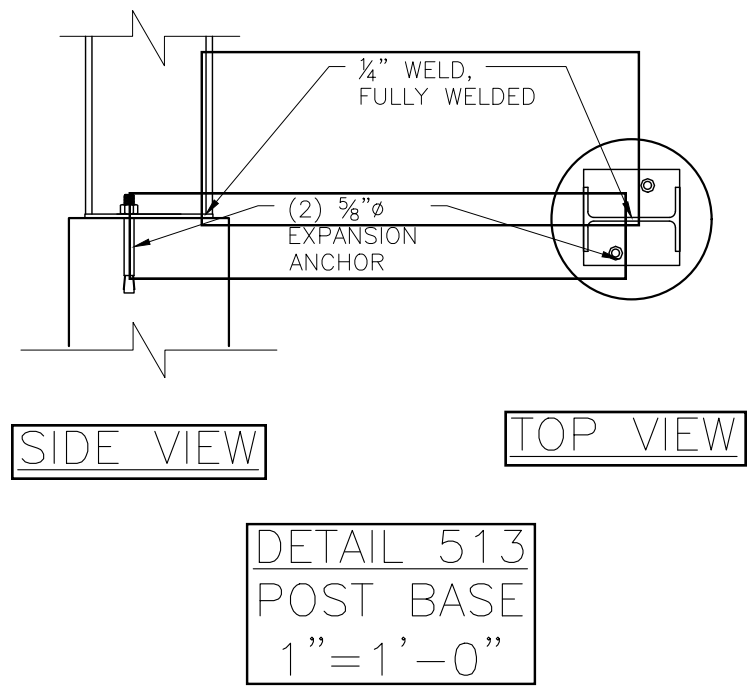
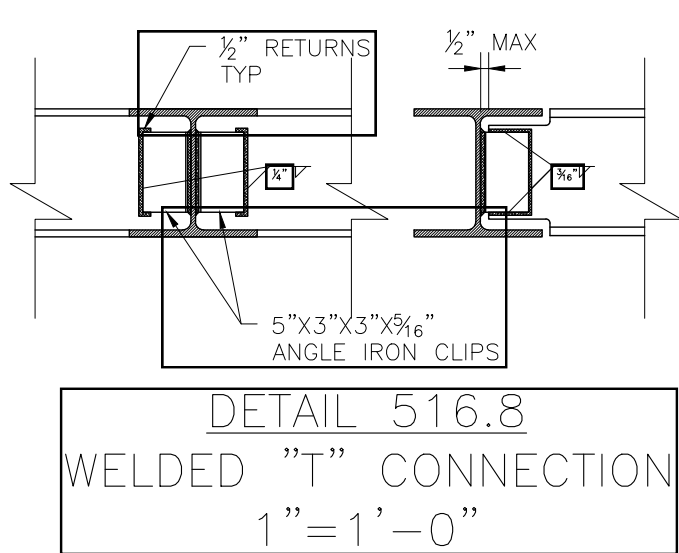
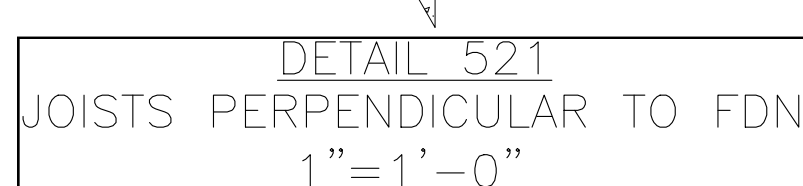
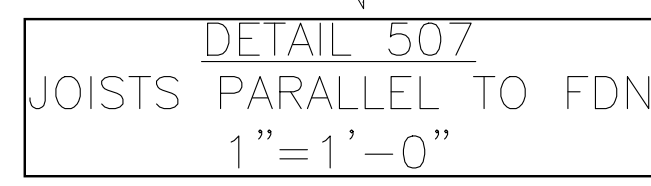
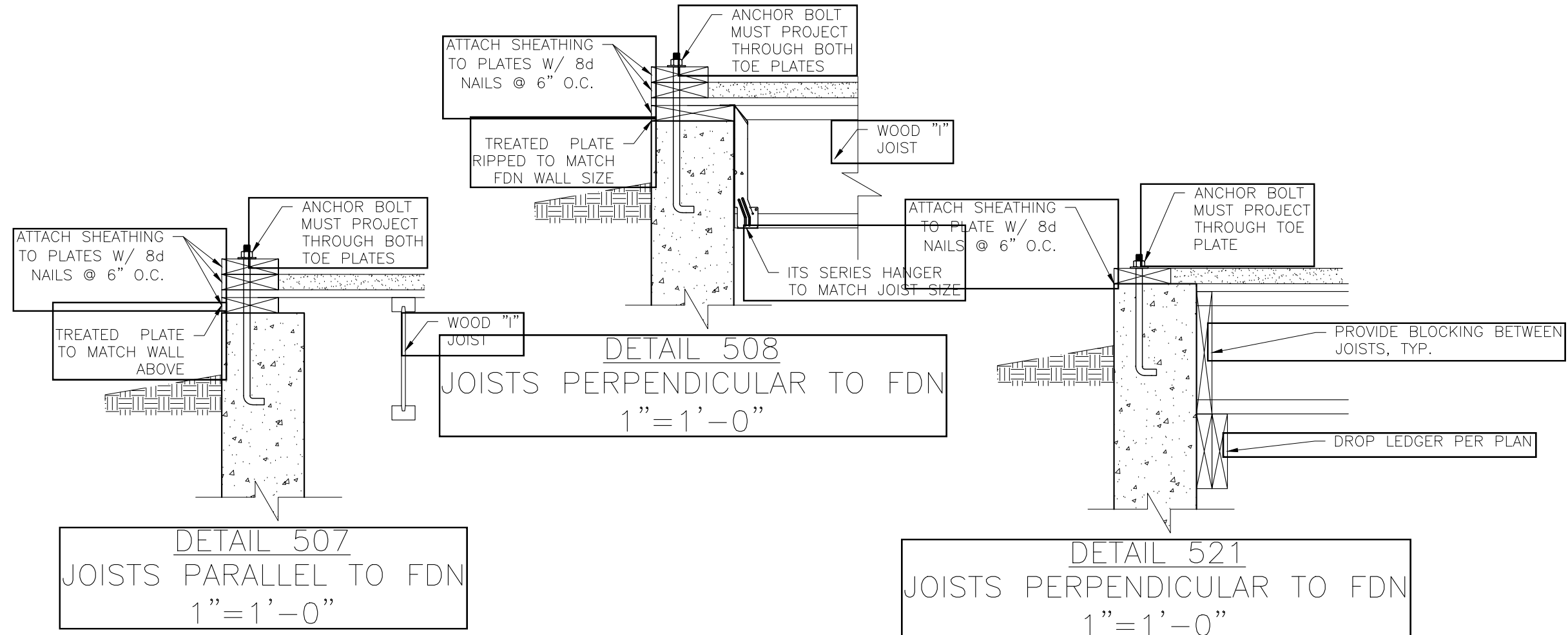
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F2



- FRAMING NOTES:**
- LUMBER**
 - ALL LUMBER, SHEATHING, AND ENGINEERED WOOD COMPONENTS SHALL CONFORM TO GUIDELINES FROM THE AWC, NDS 2018.
 - ALL STRUCTURAL FRAMING INCLUDING: HEADERS, TOP PLATES, JOISTS, AND RAFTERS SHALL BE HEM FIR #2 OR BETTER.
 - ALL STUDS LESS THEN OR EQUAL TO 10'-0" SHALL BE HEM FIR STUD GRADE OR BETTER. ALL STUDS MORE THAN 10'-0" SHALL BE HEM FIR #2 OR BETTER.
 - ALL HEAVY TIMBER MEMBERS 6" AND GREATER SHALL BE DF-L #1 OR BETTER.
 - WOOD "I" JOISTS ARE TO BE INSTALLED ACCORDING TO THE MANUFACTURES INSTRUCTIONS. IF VARIATIONS BETWEEN THOSE SPECIFICATIONS, AND THIS PLAN ARE FOUND CONTRACT ENGINEER FOR CLARIFICATION, SUBSTITUTIONS OF "I" JOISTS BETWEEN MANUFACTURES ARE ALLOWED BUT MUST BE AN APPROVED EQUAL.
 - ALL LUMBER IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.
 - ALL EXTERIOR GLU-LAM BEAMS TO BE ALASKAN CEDAR 20F-V12
 - ALL OTHER GLU-LAM BEAMS TO BE DOUGLAS FIR 24F-V4
 - STEEL**
 - ALL STEEL BEAMS TO BE ASTM A992 STEEL SHAPES (Fy=50 ksi).
 - ALL ROUND STEEL POSTS TO BE ASTM A53 (GRADE B) STEEL COLUMNS.
 - NOMINAL COLUMN DIAMETERS ARE LISTED (3"=3 1/2" O.D., 3 1/2"=4" O.D., 4"=4 1/2" O.D., 5"=5 1/2" O.D.).
 - ALL SQUARE TUBE SHAPES SHALL BE ASTM A500 (GRADE B).
 - ENDS OF POSTS SHALL HAVE PLATES WELDED TO THE POST, THE BASE WILL BE BOLTED TO THE CONCRETE WITH A MIN OF (1) 1/2" EXPANSION BOLT.
 - ALL OTHER ANGLES, PLATES, CHANNELS TO BE ASTM A36.
 - ALL STEEL TO STEEL CONNECTIONS SHALL BE FULLY WELDED AT ALL CONTACT SURFACES WITH A MIN OF A 3/16" FILLET WELD OF E70xx ELECTRODE.
 - STEEL BEAM SUPPLIER IS TO FURNISH BEAM BOLT TOGETHER CONNECTIONS WITH A MIN OF 3/8" PLATE AND (8) 3/8" # A325 BOLTS.
 - MINIMUM BEARING FOR STEEL BEAMS IS 3".
 - GROUT ALL BEAM POCKETS SOLID AFTER BEAM HAS BEEN SET AND SHIMMED.
 - CONNECTIONS**
 - ALL HANGER CALL OUTS CORRESPOND TO PRODUCTS MANUFACTURED BY SIMPSON STRONG-TIE CORPORATION. OTHER MANUFACTURER PRODUCTS ARE ALLOWED AS LONG AS THEY ARE AN APPROVED EQUAL.
 - HANGERS FOR "I" JOISTS TO BE SIZED PER JOIST MANUFACTURER RECOMMENDATIONS.
 - PROVIDE MIN. OF H2.5T TRUSS CLIPS AT ALL TRUSS BEARING POINTS, PROVIDE DOUBLE CLIPS AT MULTIPLE PLY TRUSSES. OTHER ATTACHMENT MAY BE REQUIRED BY THE TRUSS DESIGNER.
 - SILL PLATES SHALL BE ATTACHED W/ 1/2" ANCHOR BOLTS AT FOUR FEET MAXIMUM ON CENTER, 12" FROM ALL CORNERS, MINIMUM 2 BOLTS PER PLATE.
 - TO PROVIDE LATERAL SUPPORT, TIE ALL WOOD PLATES, WHICH REST ON STEEL BEAMS, TO THE STEEL BEAM WITH X-ZF 47 BPS23 POWDER ACTUATED PINS AT 32" O.C. OR 3/8" THRU BOLTS @ 48" O.C. INTO THE TOP FLANGE OF THE BEAMS.
 - MINIMUM MEMBER SIZES**
 - ALL LOAD BEARING HEADERS ARE TO BE (2) 2x10'S UNLESS NOTED OTHERWISE.
 - FOR 2x4 WALLS ALL HEADERS ARE TO BE SUPPORTED BY A MINIMUM OF (1) 2x4 TRIMMER AND (1) 2x4 KING STUD AT EACH JAMB, U.N.O. PROVIDE MINIMUM (2) 2x4 TRIMMERS AND (2) 2x4 KING STUDS AT EACH JAMB FOR OPENINGS 6'-0" TO 10'-0".
 - FOR 2x6 WALLS ALL HEADERS ARE TO BE SUPPORTED BY A MINIMUM OF (1) 2x6 TRIMMER AND (1) 2x6 KING STUD AT EACH JAMB, U.N.O. PROVIDE MINIMUM (2) 2x6 TRIMMERS AND (2) 2x6 KING STUDS AT EACH JAMB FOR OPENINGS 6'-0" TO 10'-0".
 - ALL WALLS SHALL BE FRAMED IN ACCORDANCE WITH TABLE R602.3.1.
 - ALL RAKE WALLS SHALL BE FRAMED FULL HEIGHT TO THE BOTTOM OF EITHER LOOKOUT RAFTERS OR VAULTED CABLE END TRUSS WITH PIECE STUDS. BLOCKING MAY BE REQUIRED ON WALLS TALLER THAN 10'-0".
 - ALL POINT LOADS SHALL BE CARRIED DOWN AND BEAR DIRECTLY ON THE FOUNDATION WALL OR BEAM. EACH POST MUST INCREASE BY ONE PLY FOR EACH LEVEL CARRYING THE POINT LOAD. SQUASH BLOCKS ARE REQUIRED BETWEEN FLOORS.
 - ALL BEARING LENGTHS FOR WOOD BEAMS SHALL NEVER BE LESS THAN 1 1/2" AT THE ENDS OF BEAMS. BEARING ACROSS THE FULL WIDTH OF THE BEAM IS REQUIRED.
 - TYPICAL ROOF OVER FRAMING SHALL BE 2x6 AT 24" ON CENTER AND BE POSTED DIRECTLY TO TRUSSES OR RAFTERS BELOW. MAX. SPAN FOR THE 2x6 MEMBERS IS 6'.
 - ALL MULTIPLE MEMBER LVL'S SHALL BE ASSEMBLED ACCORDING TO THE SUPPLIERS RECOMMENDATIONS.
 - 2-PLY STUDS SHALL BE NAILED TOGETHER W/ TWO ROWS OF 16d NAILS @ 16" O.C. ADJACENT NAILS SHALL BE DRIVEN FROM OPPOSITE SIDES OF THE COLUMN.
 - 3-PLY STUDS SHALL BE NAILED THE SAME AS THE 2-PLY W/ THE THIRD PLY NAILED TO THE 2-PLY W/ (2) 16d NAILS @ 16" O.C.
 - 4 & 5-PLY STUDS SHALL BE NAILED THE SAME AS THE 3-PLY W/ CS16 STRAPS TOP & BOTTOM.
 - 6 & 7-PLY STUDS SHALL BE NAILED THE SAME AS THE 3-PLY W/ CS16 STRAPS TOP, CENTER, & BOTTOM.
 - EXTERIOR WALL SHEATHING SHALL BE 7/8" OSB NAILED WITH 8d NAILS AT 12" O.C. IN FIELD AND 6" O.C. AT EDGE OR 15ga. x 1 1/4" LONG x 7/16" WIDE STAPLES AT 8" O.C. IN FIELD AND 4" O.C. AT EDGE, OR 16ga. x 1 1/4" LONG x 7/16" WIDE AT 6" O.C. IN FIELD AND 3" O.C. AT EDGE.
 - ROOF SHEATHING SHALL BE 1 1/2" OSB W/ 8d NAILS AT 6" O.C. EDGE AND 10" O.C. FIELD NAILING.
 - FLOOR SHEATHING SHALL BE MINIMUM 3/4" OSB W/ 8d NAILS AT 6" O.C. EDGE AND 12" O.C. FIELD NAILING.
 - INTERIOR WALL SHEATHING SHALL BE 1/2" DRYWALL W/ 1 1/4"x#6 DRYWALL SCREWS AT 8" O.C.
 - ALL NAILING SHALL BE IN CONFORMANCE WITH IRC TABLE R602.3
 - GENERAL**
 - FRAMING CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION OF PLUMBING IN REFERENCE TO FLOOR FRAMING.
 - AT FIRST FLOOR AND STRUCTURAL FLOOR, WHERE JOISTS RUN PARALLEL TO THE FOUNDATION WALLS, PROVIDE PERPENDICULAR SOLID BLOCKING AT 4'-0" ON CENTER FOR THE FIRST 3 BAYS.
 - PROVIDE SOLID BLOCKING AT SUPPORTS BETWEEN TRUSSES TO PREVENT ROTATION.
 - PROVIDE SOLID BLOCKING AT ALL TRUSS RIDGES, HIPS AND VALLEYS.
 - PROVIDE SOLID BLOCKING AT INTERMEDIATE BEARING FOR FLOOR JOISTS WHERE WALL ABOVE IS A BEARING WALL. SOLID BLOCKING IS ALSO REQUIRED WHEN JOIST SPLICES OCCUR OVER A BEAM. SOLID BLOCKING IS NOT REQUIRED WHEN THERE IS NO SPLICE OR BEARING WALL ABOVE.



CODE REFERENCES:
IRC 2018
AISC 15th EDITION
ACI 318-14
AWC, NDS 2018

FLOOR LOADS
40 PSF LIVE
15 PSF DEAD
55 PSF TOTAL

ROOF LOADS
79 PSF SNOW
20 PSF DEAD
99 PSF TOTAL

DECK LOADS
79 PSF LIVE
10 PSF DEAD
89 PSF TOTAL

WIND LOADS
115 MPH
EXPOSURE "C"

COVERED DECK LOADS
40 PSF LIVE
10 PSF DEAD
50 PSF TOTAL

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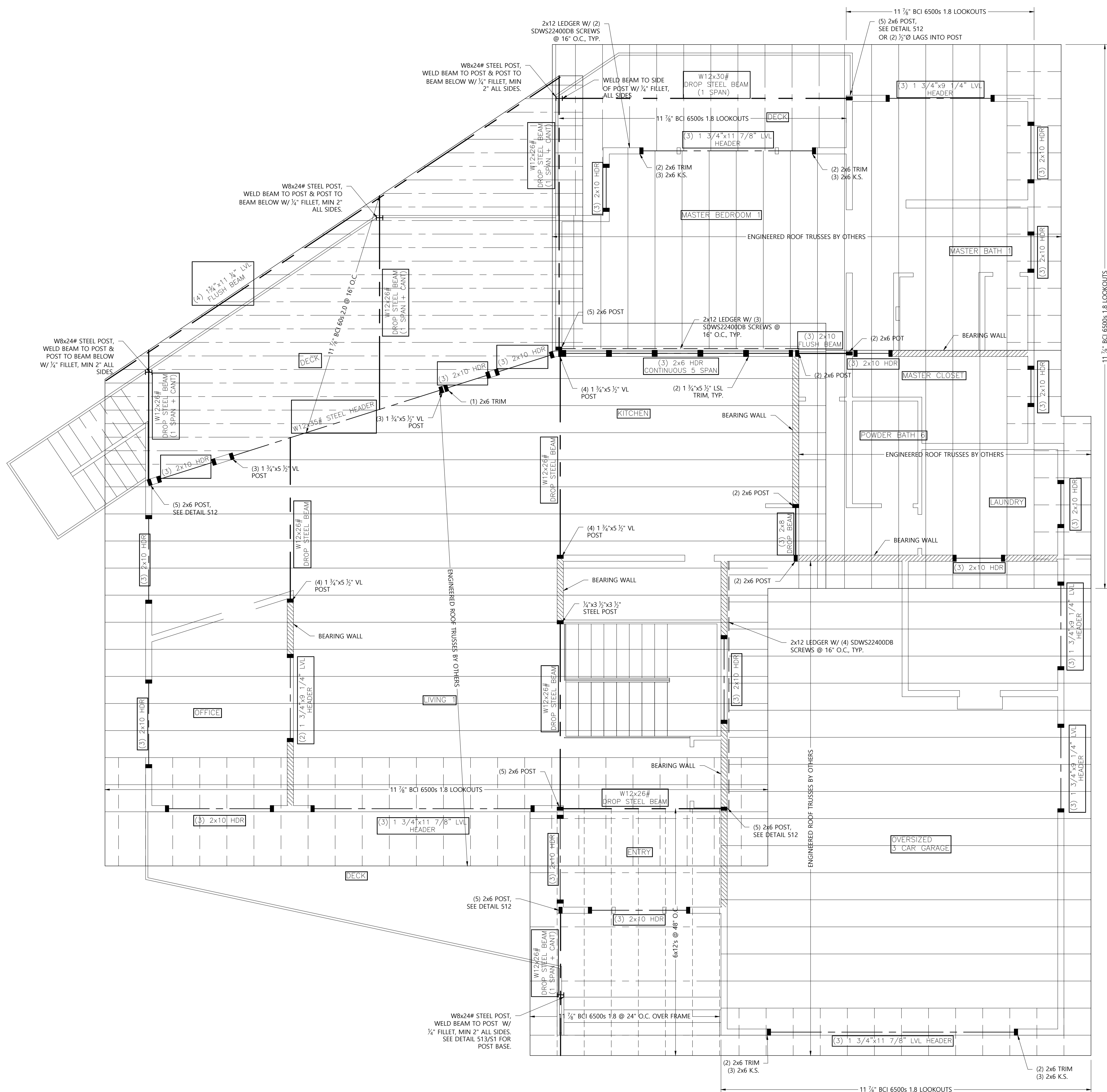
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