


COASTLINE ENGINEERING

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REVISIONS

JOB #: 16-020
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GENERAL NOTES

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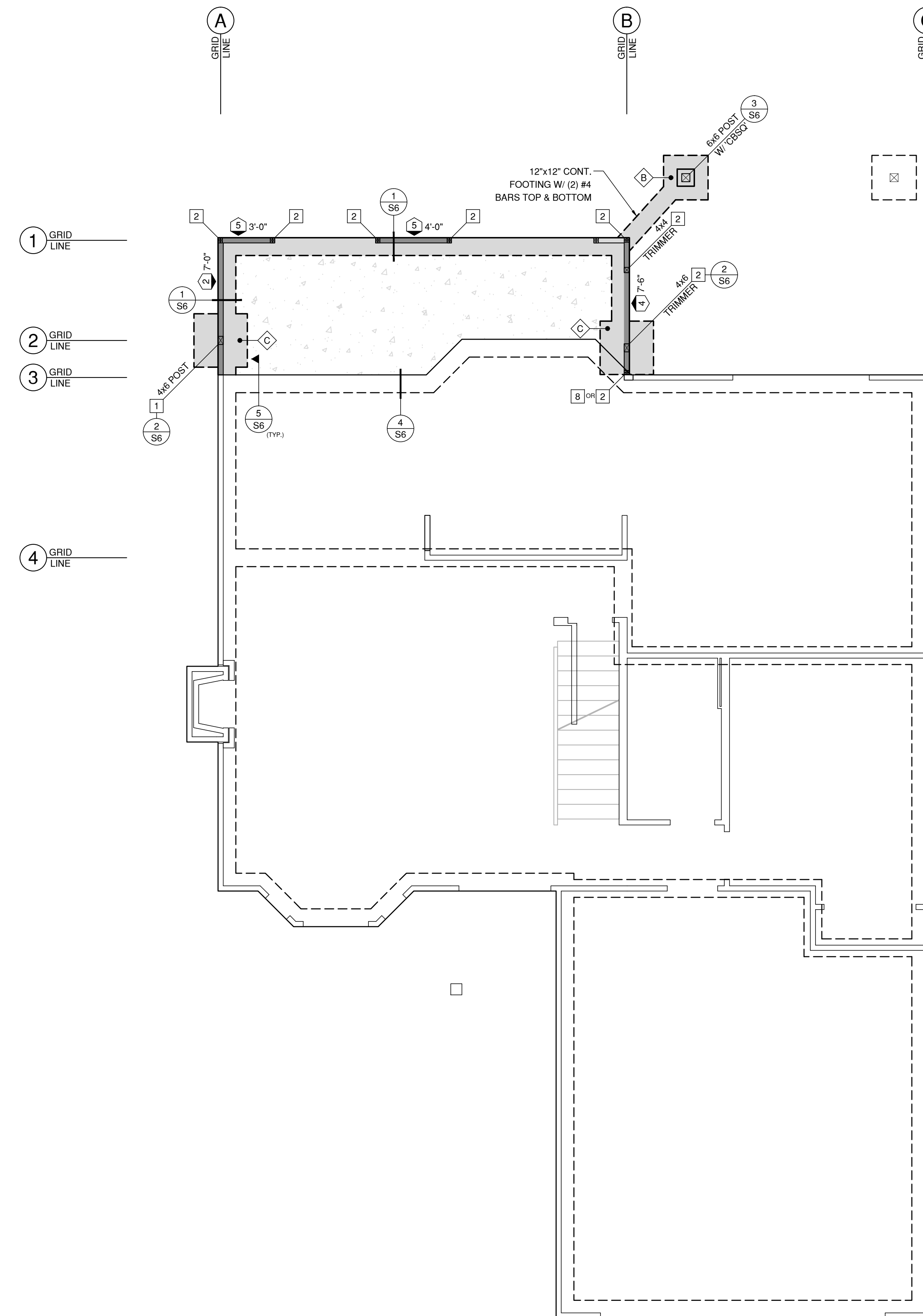
STATEMENT OF SPECIAL INSPECTION
<p>DESCRIPTION & TYPE OF INSPECTION REQUIRED</p> <p>1. RETROFIT ANCHOR BOLTS, HOLDOWNS, AND DOWELS USING SIMPSON "SET-XP" EPOXY INTO CONCRETE (ESR-2508)</p> <p>• CONTINUOUS SPECIAL INSPECTION TO VERIFY ANCHOR TYPE, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DRILLING METHOD, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, CONCRETE THICKNESS, ANCHOR EMBEDMENT, TIGHTENING TORQUE, AND ADHERENCE TO THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.</p> <p>4. TITEN HD ANCHORS INTO CONCRETE (ESR-2713)</p> <p>• CONTINUOUS SPECIAL INSPECTION TO VERIFY THE FASTENER TYPE & DIMENSIONS, HOLE CLEANING PROCEDURE, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, CONCRETE MEMBER THICKNESS, HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCE, INSTALLATION TORQUE, MAXIMUM IMPACT WRENCH TORQUE RATING, AND ADHERENCE TO THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.</p>
<p>SPECIAL INSPECTION NOTES:</p> <p>A. SPECIAL INSPECTIONS ARE IN ADDITION TO THOSE REQUIRED BY THE BUILDING DEPARTMENT. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTIONS BY THE CITY INSPECTOR.</p> <p>B. THE DUTIES OF THE SPECIAL INSPECTOR SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE CALIFORNIA BUILDING CODE.</p> <p>C. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE GOVERNING JURISDICTION TO PERFORM THE INSPECTION SPECIFIED, EXCEPT WHERE SPECIFICALLY STATED OTHERWISE.</p> <p>D. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE SPECIAL INSPECTOR. FAILURE OF NOTIFICATION FOR INSPECTION MAY RESULT IN COMPLETE REMOVAL AND REPLACEMENT OF ALL WORK SPECIFIED AS NEEDING SPECIAL INSPECTION AT CONTRACTOR'S EXPENSE.</p> <p>E. A CERTIFICATE OF COMPLIANCE OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DEPARTMENT.</p> <p>F. A PROPERTY OWNER'S FINAL REPORT FORM FOR WORK REQUIRED TO HAVE SPECIAL INSPECTIONS, TESTING, AND STRUCTURAL OBSERVATION MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD, ARCHITECT OF RECORD, OR ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.</p> <p>G. NOTICE TO THE APPLICANT / OWNER / OWNER'S AGENT / ARCHITECT OR ENGINEER OF RECORD: BY USING THESE PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION / INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING, AND OFF-SITE FABRICATION OF BUILDING COMPONENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS, AND AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.</p> <p>H. NOTICE TO THE CONTRACTOR / BUILDER / INSTALLER / SUB-CONTRACTOR / OWNER-BUILDER: BY USING THESE PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION / INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF THE REQUIREMENTS OF THE GOVERNING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING, AND OFF-SITE FABRICATION OF BUILDING COMPONENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS, AND AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.</p> <p>I. SHOP WELDING SHALL BE PERFORMED IN A SHOP THAT IS REGISTERED AND APPROVED BY THE GOVERNING JURISDICTION. FABRICATION DONE IN AN APPROVED SHOP NEED NOT HAVE SPECIAL INSPECTION. THE FABRICATOR SHALL SUBMIT AN APPLICATION TO PERFORM OFF-SITE FABRICATION TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION. THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION TO THE INSPECTION SERVICES DIVISION PRIOR TO THE ERECTION OF FABRICATED ITEMS AND ASSEMBLIES.</p> <p>J. FIELD SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AN INSPECTION.</p>

WELDING NOTES		
<p>1. WELDING SHALL CONFORM TO THE LATEST ADDITION OF THE "STRUCTURAL WELDING CODE" ANSI / AWS D1.1.</p> <p>2. WELDS SHALL USE E70 ELECTRODES (EXCEPT REINFORCING STEEL WELDS).</p> <p>3. WELDS OF REINFORCING STEEL USING A706 GRADE 60 STEEL SHALL USE E80 ELECTRODES AND SHALL CONFORM TO AWS D1.4 & RG43.77.</p> <p>4. SHOP WELDING SHALL BE PERFORMED IN A SHOP THAT IS REGISTERED AND APPROVED BY THE GOVERNING JURISDICTION.</p> <p>5. FIELD WELDING SHALL BE CONTINUOUSLY INSPECTED BY A REGISTERED INSPECTOR. ALL FIELD WELDING MUST BE INDICATED ON THE SHOP DRAWINGS.</p> <p>6. ALL EXPOSED WELDED CONNECTIONS SHALL BE FILLED AND GROUND SMOOTH AND SUBJECT TO ARCHITECTURAL APPROVAL.</p> <p>7. ALL WELDS NOT SPECIFIED SHALL BE CONTINUOUS FILLET WELDS. SIZE OF WELDS SHALL BE BASED ON AISC STANDARDS FOR THICKER MATERIAL CONNECTED.</p>		
ABBREVIATIONS		
<p>A.B. ANCHOR BOLT ABV. ABOVE AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION ALT. ALTERNATE ARCH. ARCHITECT ASTM AMERICAN SOCIETY OF TESTING MATERIALS BLK. BLOCK BLKG. BLOCKING BLW. BELOW BM. BEAM B.N. BOUNDARY NAIL BRG. BEARING M.B. BOTTOM CAMB. CAMBER C/B CEILING BEAM CBC CALIFORNIA BUILDING CODE C.J. CONTROL JOINT C/J CEILING JOIST C.L. CENTERLINE CLR. CLEARANCE C.M.U. CONCRETE MASONRY UNIT COL. COLUMN CONC. CONCRETE CONN. CONNECTION CONST. CONSTRUCTION CONT. CONTINUOUS CVR. COVER d NAIL PENNY SIZE D/B DECK BEAM DET. DETAIL D.F. DOUGLAS FIR LARCH DIA. DIAMETER DJ DECK JOIST (E) EXISTING EA. EACH E.F. EACH FACE EMBED. EMBEDMENT EN. EDGE NAIL E.O.R. ENGINEER OF RECORD EQ. EQUAL EQUIP. EQUIPMENT E.S. EACH SIDE EXIST. EXISTING EXT. EXTERIOR FIB. FLOOR BEAM F.G. FINISH GRADE F/J FLOOR JOIST FLR. FLOOR F.N. FIELD NAIL FNDT. FOUNDATION FRMG. FRAMING FEET FTG. FOOTING GA. GAUGE GALV. GALVANIZED GLB. GLUED LAMINATED BEAM GRD. GRADE</p>	<p>GYP. BRD. GYPSUM BOARD HDR. HEADER HGR. HANGER HORIZ. HORIZONTAL H.S. HIGH STRENGTH HSS. HOLLOW STRUCTURAL STEEL HT. HEIGHT IN. INCHES INT. INTERIOR JST. JOIST LBS. POUNDS MAX. MAXIMUM M.C.H. MACHINE BOLT MECH. MECHANICAL MFRG. MANUFACTURER MIN. MINIMUM MISC. MISCELLANEOUS (N) NEW N/A NOT APPLICABLE NO. NUMBER N.T.S. NOT TO SCALE O.C. ON CENTER OPNG. OPENING PAR. PARALLEL PAR. PERPENDICULAR PL. PLATE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH P.T. PRESSURE TREATED RAD. RADIUS R/B ROOF BEAM REINF. REINFORCING REQ'D. REQUIRED RF. ROOF R/R ROOF RAFTER SCHED. SCHEDULE SHTG. SHEATHING SIM. SIMILAR SPEC. SPECIFICATION SQ. SQUARE STD. STANDARD STL. STEEL S.S. SELECT STRUCTURAL STRUCT. STRUCTURE / STRUCTURAL TAB. TOP AND BOTTOM T&G TONGUE AND GROOVE THK. THICK TS. TUBE SHAPE THRU. THROUGH T.O.W. TOP OF WALL U.N.O. UNLESS NOTED OTHERWISE VERT. VERTICAL W. WIDE FLANGE W/ WITH W/O WITHOUT WD. WOOD</p>	
DESIGN CRITERIA		
<p>DESIGN LOADS</p>		
<p>ROOF LOADS</p> <p>ROOFING: CONCRETE TILE TOTAL DEAD LOAD: 22.0 PSF LIVE LOAD: 20.0 PSF TOTAL LOAD: 42.0 PSF</p>		
<p>FLOOR LOADS</p> <p>FLOORING: CARPET TOTAL DEAD LOAD: 14.0 PSF LIVE LOAD: 40.0 PSF TOTAL LOAD: 54.0 PSF</p>	<p>DECK LOADS</p> <p>DECKING: N/A TOTAL DEAD LOAD: LIVE LOAD: TOTAL LOAD:</p>	
<p>EXTERIOR WALL LOADS</p> <p>MATERIAL: STUCCO TOTAL DEAD LOAD: 16.0 PSF</p>		<p>INTERIOR WALL LOADS</p> <p>MATERIAL: DRYWALL TOTAL DEAD LOAD: 7.0 PSF</p>
LATERAL LOAD DESIGN DATA		
<p>EARTHQUAKE DESIGN EQUIV. LATERAL FORCE PROCEDURE</p> <p>RISK CATEGORY: II IMPORTANCE FACTOR, I_e: 1.0 SITE CLASS: D SEISMIC DESIGN CATEGORY: D S_s: 1.467 S₁: 0.540 S_{0.1}: 0.978 S_{0.2}: 0.540 C_v: 0.15 BASE SHEAR (KIPS): 16.47 R: (WOOD SHEAR WALLS) 6.5</p>		<p>WIND DESIGN ENVELOPE PROCEDURE</p> <p>RISK CATEGORY: II IMPORTANCE FACTOR, I_e: 1.0 EXPOSURE CATEGORY: C BASIC WIND SPEED, V (MPH): 110 TOPOGRAPHIC FACTOR, K_z: 1.0 EXPOSURE COEFFICIENT, K_d: 0.90 DIRECTIONALITY FACTOR, K_d: 0.85</p>
SOIL PROPERTIES		
<p>SOILS REPORT BY: N/A - VALUES FROM CBC TABLE 1806.2 ALLOWABLE BEARING PRESSURE: 1,500 PSF PASSIVE PRESSURE: 100 PCF</p>		

WOOD NOTES		
<p>1. ALL LUMBER SHALL CONFORM TO THE GRADES AS SET BY AN INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH THE DOC P92 200 OR EQUIVALENT.</p> <p>2. WOOD STRUCTURAL PANELS SHALL COMPLY WITH DOC P91 / PS2</p> <p>3. FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH WITH THE FOLLOWING GRADE (U.N.O.):</p> <ul style="list-style-type: none"> • STUDS (8'-1" HT. AND LESS) STUD GRADE OR BETTER • STUDS (GREATER THAN 8'-1" HT.) #2 OR BETTER • SILLS/PLATES AND LEDGERS #2 OR BETTER • HEADERS #2 OR BETTER • POSTS AND BEAMS #1 OR BETTER <p>4. MOISTURE CONTENT OF SAWN LUMBER AT THE TIME OF PLACEMENT SHALL NOT EXCEED 19%.</p> <p>5. WOOD BEARING ON CONCRETE OR MASONRY IN CONTACT WITH SOIL SHALL BE PRESSURE TREATED.</p> <p>6. WOOD STUDS/POSTS LESS THAN 8" FROM GRADE SHALL BE PRESSURE TREATED.</p> <p>7. FASTENERS, INCLUDING NUTS AND WASHERS, IN PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A153. ANCHOR BOLTS MAY HAVE A MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B695, CLASS 55. IT IS ACCEPTABLE TO USE PLAIN CARBON STEEL FASTENERS IN ZINC BORATE TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SUCH AS IN A WALL CAVITY.</p> <p>8. ALL BOLT HEADS, NUTS, AND LAG SCREWS BEARING ON WOOD SHALL HAVE CUT WASHERS (U.N.O.).</p> <p>9. BOLT HOLES IN WOOD SHALL BE DRILLED 1/8" LARGER THAN THE BOLT DIAMETER. BOLT HOLES SHALL BE ACCURATELY ALIGNED AND NOT FORCIBLY DRIVEN.</p> <p>10. LEAD HOLES FOR LAG SCREWS IN WOOD SHALL BE BORED AS FOLLOWS:</p> <ul style="list-style-type: none"> • FOR SHANK: SAME Ø AND LENGTH AS UNTHREADED SHANK • FOR THREADED PORTION: 60% - 75% OF SHANK DIAMETER AND LENGTH EQUAL TO THREADED PORTION <p>11. GLUED LAMINATED TIMBERS (GLULAM) SHALL BE FABRICATED IN ACCORDANCE WITH THE ANSI A190.1 AND ASTM D3737, USING DOUGLAS FIR INDUSTRIAL GRADE WOOD AND EXTERIOR GLUE WITH INTENDED DRY USE CONDITION. EACH GLULAM SHALL BE GRADE MARKED AND A CERTIFICATE OF CONFORMANCE MUST BE PROVIDED THAT INDICATES CONFORMANCE WITH ANSII/AITC A190.1.</p> <p>12. SIMPLE SPAN LUMBER BEAMS SHALL BE TYPE 24F-V4 DF/DF AND CANTILEVERED / MULTI-SPAN GLULAM BEAMS SHALL BE 24F-V8 DF/DF.</p> <p>13. MANUFACTURED LUMBER PRODUCTS SPECIFIED ON THE DRAWINGS SHALL BE MANUFACTURED BY "WEYERHAEUSER" (ESR-1387, 1153) OR AN ENGINEER APPROVED EQUAL. THE MODULUS OF ELASTICITY FOR PARALLAM (PSL) BEAMS = 2.0E. PARALLAM (PSL) COLUMNS = 1.8E. MICROLAM (LVL) = 2.0E. AND TIMBERSTRAND (LSU) = 1.55E. "BOISE CASCADE" MANUFACTURED LUMBER CAN BE SUBSTITUTED AS SHOWN BELOW:</p> <ul style="list-style-type: none"> • TJI 210 = BCI 6000 1.8 PSL (2.0E) = VERSA-LAM 2.0 3100 • TJI 230 = BCI 6500 1.8 PSL (1.8E) = VERSA-LAM 2.0 3100 • TJI 360 = BCI 60 2.0 LVL (2.0E) = VERSA-LAM 2.0 2800 • TJI 560 = BCI 90 2.0 LSL (1.55E) = VERSA-LAM 1.7 2400 / 2650 		
NAILING SCHEDULE		
<p>CBC TABLE 2304.9.1, FASTENING SCHEDULE</p> <p>NAILING OF SAWN WOOD MEMBERS SHALL CONFORM TO THE SCHEDULE BELOW (U.N.O.)</p>		
<p>1. JOIST TO SILL OR GIRDER, TOENAIL 3-8d 2. BLOCKING TO JOIST, TOENAIL EACH END 2-8d 3. 1"x6" SUBFLOOR (OR LESS) TO EA. JOIST, FACE NAIL 2-8d 4. WIDER THAN 1"x6" SUBFLOOR TO EA. JOIST, FACE NAIL 3-8d 5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND & FACE NAIL 2-16d 6. SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL 16d @ 16" O.C. 7. STUD TO JOIST OR BLOCKING @ BRACED WALL PANEL 3-16d @ 16" O.C. 8. TOP PLATE TO STUD, END NAIL 2-16d 9. STUD TO SOLE PLATE, TOENAIL 4-8d OR STUD TO SOLE PLATE, END NAIL 2-16d 10. DOUBLE STUDS, FACE NAIL 16d @ 24" O.C. 11. DOUBLE TOP PLATES, TYP. FACE NAIL 16d @ 16" O.C. 12. DOUBLE TOP PLATES, LAP SPLICE 8-16d 11. BLKG. BETWEEN JOISTS OR RAFTERS TO TOP PLATES, TOENAIL 3-8d 12. RIM JOIST TO TOP PLATE, TOENAIL 8d @ 6" O.C. 13. TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL 2-16d 14. CONTINUOUS HEADER, TWO PIECES, NAIL ALONG EDGE 16d @ 16" O.C. 15. CEILING JOIST TO PLATE, TOENAIL 3-8d 16. CONTINUOUS HEADER TO STUD, TOENAIL 4-8d 17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL 3-16d 18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL 3-16d 19. RAFTER TO PLATE, TOENAIL 3-8d 20. 1" DIAGONAL BRACE TO EA. STUD & PLATE, FACE NAIL 2-8d 21. 1" x 8" SHEATHING TO EA. BEARING, FACE NAIL 3-8d 22. WIDER THAN 1" x 8" SHEATHING TO EA. BEARING, FACE NAIL 3-8d 23. BUILT-UP CORNER STUDS 16d @ 24" O.C. 24. BUILT-UP GIRDER & BEAMS 20d @ 32" O.C. @ T&B, STAG. 2-20d @ ENDS & EA. SPLICE</p>	<p>25. 2" PLANKS TO EA. BEARING 16d 26. COLLAR TO RAFTER, FACE NAIL 3-10d 27. JACK RAFTER TO HIP, TOENAIL 3-10d OR JACK RAFTER TO HIP, FACE NAIL 2-16d 28. ROOF RAFTERS TO 2x RIDGE BEAM, TOENAIL 2-16d OR ROOF RAFTERS TO 2x RIDGE BEAM, FACE NAIL 2-16d 29. JOIST TO BAND JOIST, FACE NAIL 3-16d 30. LEDGER STRIP, FACE NAIL 3-16d 31. WOOD STRUCTURAL PANELS & PARTICLEBOARD SUBFLOOR, ROOF, & WALL SHEATHING (TO FRAMING) 1/2" & LESS, 6d 3/8" - 3/4", 8d 1/2" - 1", 10d 1/2" - 1 1/2", 12d 3/4" & LESS, 6d 1/2" - 1", 8d 1 1/2" - 1 1/2", 10d 3/4" & LESS, 6d 1/2", 6d 3/4", 8d 1", 4d 3/8", 6d</p>	
<p>SINGLE FLOOR (COMBINATION SUBFLOOR - UNDERLAYMENT TO FRAMING)</p> <p>32. PANEL SIDING (TO FRAMING) 1/2" & LESS, 6d 33. FIBERBOARD SHEATHING 1/2", 6d 34. INTERIOR PANELING 3/4", 4d 3/8", 6d</p>		
<p>NAILING SCHEDULE NOTES:</p> <p>A. ALL NAILS TO BE COMMONS.</p> <p>B. SEE WOOD NOTES FOR NAILS IN PRESSURE TREATED WOOD.</p> <p>C. WHENEVER POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOENAILS.</p> <p>D. DETAILS AND NOTES SUPERCEDE THE NAILING SCHEDULE WHERE THEY DIFFER.</p>		
STEEL NOTES		
<p>1. STEEL MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO THE 14TH ADDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION AND SHALL BE DETAILED, FABRICATED, AND ERECTED IN CONFORMANCE WITH THE AISC SPECIFICATIONS.</p> <p>2. STRUCTURAL STEEL MATERIAL SHALL BE AS FOLLOWS (U.N.O.):</p> <ul style="list-style-type: none"> • W SHAPES: ASTM A992, F_y = 50 KSI • HSS SHAPES (RECTANGULAR): ASTM A500, GRADE B, F_y = 46 KSI • HSS SHAPES (ROUND): ASTM A500, GRADE B, F_y = 42 KSI • ALL OTHER SHAPES: ASTM A36, F_y = 36 KSI • UNHEADED BOLTS & WASHERS ASTM A36, F_y = 36 KSI • HEADED BOLTS & THREADED RODS ASTM A307, GRADE A • HIGH STRENGTH BOLTS ASTM A325N / ASTM A490 (SEE PLANS) • SHEAR STUDS: ASTM A108 & A.W.S. D1.1, F_y = 60 KSI • NUTS ASTM A563, GRADE A • ANCHOR BOLTS & HEAVY HEX HEAD ASTM F1554, GRADE 36 <p>3. STEEL FABRICATORS SHALL FURNISH SHOP DRAWINGS FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION.</p> <p>4. STEEL FABRICATION SHALL BE PERFORMED IN A SHOP THAT IS APPROVED BY THE GOVERNING JURISDICTION.</p> <p>5. EXPOSED STEEL SHALL BE PRIMED/PAINTED OR HOT DIPPED GALVANIZED.</p> <p>6. HOLES SHALL NOT BE PLACED IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED ON DRAWINGS. HOLES SHALL BE 1/2" OVERSIZED FOR ORDINARY CONNECTIONS AND 3/8" OVERSIZED FOR ANCHOR BOLTS (U.N.O.).</p> <p>7. GROUTING MATERIAL AT BASE PLATES SHALL BE NON-SHRINK GROUT / DRY PACK WITH A COMPRESSIVE STRENGTH OF F_c = 6,000 PSI (MIN.). INSTALL GROUT AFTER COLUMN HAS BEEN PLUMBED AND PRIOR TO FRAMING ERECTION.</p> <p>8. HIGH STRENGTH BOLTS SHALL BE PROVIDED WITH HARDENED WASHERS CONFORMING TO ASTM F436.</p> <p>9. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOBSITE FREE OF RUST, MILL SCALE, GREASE, ETC.</p> <p>10. STEEL BEAMS WITH SPECIFIED INDUCED CAMBER PER PLAN MAY BE COLD CAMBERED (U.N.O.).</p>		

GENERAL NOTES	
<p>1. THESE PLANS, SPECIFICATIONS, DRAWINGS, NOTES, DETAILS, AND ATTACHMENTS ARE THE SOLE PROPERTY OF COASTLINE ENGINEERING, INC. AND SHALL NOT BE REPRODUCED, OR USED IN CONJUNCTION WITH ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN CONSENT OF THIS OFFICE.</p> <p>2. ALL ENGINEERING AND CONSTRUCTION, INCLUDING MATERIALS AND WORKMANSHIP, SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2013 CALIFORNIA BUILDING CODE WITH THE GOVERNING JURISDICTION AMENDMENTS.</p> <p>3. ALL ASTM STANDARDS SHALL BE PER THE LATEST ISSUE OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS.</p> <p>4. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, GRADES, ELEVATIONS, AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES, AND/OR CONDITIONS NEEDING CLARIFICATIONS.</p> <p>5. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, AND SHORING FOR THE STRUCTURE. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE ABOVE ITEMS.</p> <p>6. IN NO CASE SHALL DIMENSIONS BE SCALED FROM STRUCTURAL PLANS OR DETAILS.</p> <p>7. ANY OMISSIONS OR DISCREPANCIES FOUND WITHIN THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO PROCEEDING.</p> <p>8. VIBRATIONAL EFFECTS OF MECHANICAL AND/OR ANY OTHER EQUIPMENT HAVE NOT BEEN CONSIDERED IN THE STRUCTURAL DESIGN.</p> <p>9. CONNECTIONS OF ALL ITEMS SUPPORTED BY THE STRUCTURE ARE THE RESPONSIBILITY OF THE DISCIPLINES WHO MAKE THESE ATTACHMENTS.</p> <p>10. ALL MATERIALS, SPECIFICATIONS, CONNECTIONS, ETC. SHALL BE AS SHOWN IN THE STRUCTURAL DRAWINGS UNLESS ALTERNATES ARE APPROVED, IN WRITING, BY THE ARCHITECT, ENGINEER, AND OWNER.</p> <p>11. WHERE A DETAIL, SECTION, OR NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.</p> <p>12. SHOP DRAWINGS FOR ALL FABRICATED MATERIALS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION.</p> <p>13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, WHETHER INDICATED ON THE CONSTRUCTION DOCUMENTS OR NOT, AND TO PROTECT THEM FROM DAMAGE.</p> <p>14. SEE ARCHITECTURAL DRAWINGS FOR ALL WATER PROOFING REQUIREMENTS.</p> <p>15. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS OR PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE STRUCTURAL ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS, AND LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STRUCTURAL ENGINEER.</p>	
CONCRETE NOTES	
<p>1. CONCRETE MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO ACI 318-11.</p> <p>2. THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE (f_c) AT 28 DAYS SHALL BE AS FOLLOWS (U.N.O.):</p> <ul style="list-style-type: none"> • SLAB-ON-GRADE 4,500 PSI • FOOTINGS / GRADE BEAMS 4,500 PSI • RETAINING WALLS 4,500 PSI • CONCRETE OVER METAL DECK 3,000 PSI • CAISSONS 4,500 PSI <p>3. WHERE CONCRETE COMPRESSION DESIGN STRENGTH IS 3,000 PSI OR GREATER, CYLINDER TESTS ARE REQUIRED.</p> <p>4. THE CONCRETE SUPPLIER SHALL BEAR THE RESPONSIBILITY THAT THE MIX DESIGN WILL ATTAIN THE SPECIFIED STRENGTH. ACCEPTANCE OF MIX DESIGN SHALL BE BASED ONLY ON CONFORMANCE OF SPECIFIED COMPRESSION STRENGTH AND SLUMP.</p> <p>5. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4".</p> <p>6. CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C150, TYPE V. THE WATER/CEMENT RATIO SHALL BE A MAXIMUM OF 0.45.</p> <p>7. AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33 FOR NORMAL WEIGHT CONCRETE AND ASTM C330 FOR LIGHTWEIGHT CONCRETE. THE MAXIMUM SIZE OF THE COARSE AGGREGATE SHALL NOT EXCEED 1/2 SLAB THICKNESS, 3/4", OR THE MINIMUM CLEAR SPACING BETWEEN REINFORCING BARS.</p> <p>8. ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER OF RECORD. WHEN SUCH CONSENT IS PROVIDED, ADMIXTURES SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>9. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94.</p> <p>10. MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN NON-PRESTRESSED CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS (U.N.O.):</p> <ul style="list-style-type: none"> • CAST AGAINST EARTH 3" • EXPOSED TO EARTH OR WEATHER: #6 AND LARGER BARS 2" • #5 AND SMALLER BARS 1 1/2" • NOT EXPOSED TO EARTH OR WEATHER: - SLABS AND WALLS 3/4" • BEAMS AND COLUMNS (TIES, STIRRUPS, SPIRALS) 1 1/2" • UNPROTECTED COLUMNS 2" <p>11. ALL REINFORCING BARS, WIRE MESH, ANCHOR BOLTS, SLEEVES, AND OTHER CONCRETE INSERTS SHALL BE SECURED IN PLACE AND APPROVED BY THE BUILDING INSPECTOR PRIOR TO PLACING CONCRETE.</p> <p>12. ALL CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS.</p> <p>13. PIPES, DUCTS, SLEEVES, CONDUITS, ETC. SHALL NOT BE PLACED THROUGH CONCRETE UNLESS SHOWN ON THE STRUCTURAL PLANS OR WITH WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.</p>	
MASONRY NOTES	
<p>1. CONCRETE MASONRY UNITS MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO ASTM C90.</p> <p>2. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT WITH f_m = 1,500 PSI. ALL UNITS SHALL BE SAMPLED AND TESTED TO VERIFY COMPLIANCE WITH ASTM C55 OR ASTM C90.</p> <p>3. MASONRY SHALL BE SOLID GROUTED WITH REINFORCED CELLS.</p> <p>4. MORTAR SHALL HAVE A COMPRESSIVE STRENGTH OF 1,900 PSI (MIN.) FOR TYPE 'S' MORTAR AND 2,150 PSI (MIN.) FOR TYPE 'N' MORTAR. MORTAR SHALL CONFORM TO ASTM C270 AND ARTICLES 20.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6. TYPE 'S' MORTAR SHALL BE USED FOR ALL WALLS IN CONTACT WITH SOIL AND TYPE 'N' MORTAR FOR ALL OTHER LOCATIONS. ALL HEAD AND BED JOINT THICKNESS SHALL BE BETWEEN 3/8" AND 1/2". BED JOINT THICKNESS OF THE STARTING COURSE OVER THE CONCRETE FOUNDATION MAY BE BETWEEN 1/2" AND 3/4".</p> <p>5. GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF 2,000 PSI (MIN.), AS DETERMINED IN ACCORDANCE WITH ASTM C1019. GROUT SHALL CONFORM TO ASTM C476 AND ARTICLE 2.2.2 OF TMS 602/ACI 530.1/ASCE 6. "FINE" AND "COARSE" AGGREGATE SHALL COMPLY WITH ASTM C404.</p> <p>6. THE FIRST COURSE OF BLOCK SHALL BE SET INTO CONCRETE UNLESS A MORTAR KEY IS USED.</p> <p>7. HIGH LIFT GROUTING PROCEDURE MAY BE USED FOR HEIGHTS UP TO 24 FT. PER TABLE 7 OF TMS 602. FINE GROUT WITH ADMIXTURES SHALL BE USED FOR LIFTS OVER 12 FT. AND A CLEANOUT SHALL BE PROVIDED AT THE BOTTOM COURSE AT EVERY VERTICAL BAR TO HELP PREVENT VOIDS.</p>	
RETAINING WALL NOTES	
<p>1. ALL BACKFILL MATERIALS SHALL BE GRANULAR, NON COHESIVE SOIL. BACKFILL SHALL BE PLACED IN 12" MAX. HORIZONTAL LIFTS. ALL FILLS SHALL BE COMPACTED TO 90% (MIN.). IF EXPANSIVE SOIL IS ENCOUNTERED, THE ENGINEER OF RECORD SHALL BE NOTIFIED PRIOR TO WALL CONSTRUCTION.</p> <p>2. DO NOT PLACE BACKFILL BEHIND WALLS UNTIL THEY HAVE ATTAINED THEIR SPECIFIED DESIGN STRENGTH. WALLS THAT ARE DESIGNED TO BE BRACED BY THE STRUCTURE, SHALL BE SHORED UNTIL THE SUPPORTING MEMBERS ARE IN PLACE.</p> <p>3. CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN AND CONSTRUCTION OF ALL UNDERPINNING, CRIBBING, BRACING, AND SHORING REQUIRED FOR THE RETAINING WALL.</p> <p>4. WALL DRAINS, 4" Ø MIN., SHALL BE PLACED AT 6 FT. INTERVALS ALONG THE LENGTH OF THE WALL AND LOCATED JUST ABOVE THE LEVEL OF THE SOIL, OR PAVING ON THE FRONT FACE OF THE WALL. BACKFILL BEHIND WALL DRAINS OR OPEN HEAD JOINTS MUST BE GRAVEL WITH A MINIMUM THICKNESS OF 12" AND EXTENDING FROM THE TOP OF THE WALL TO THE TOP OF THE FOOTING.</p>	
REINFORCING STEEL (REBAR) NOTES	
<p>1. REINFORCING STEEL SHALL CONFORM TO ASTM A615. ALL REINFORCING SHALL BEAR MILL STOCK IDENTIFICATION.</p> <p>2. REINFORCING STEEL GRADE SHALL BE:</p> <ul style="list-style-type: none"> • GRADE 60 - #4 BARS AND LARGER • GRADE 40 - #3 BARS AND SMALLER • ASTM A706 GRADE 60 - ALL WELDED REINFORCING STEEL <p>3. REINFORCING STEEL DETAILING, BENDING, AND PLACING SHALL BE IN ACCORDANCE WITH THE LATEST ADDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE.</p> <p>4. SEE CONCRETE NOTES FOR CLEAR COVER REQUIREMENTS.</p> <p>5. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A934.</p> <p>6. REINFORCING STEEL SHALL BE CLEAN OF RUST, OIL, GREASE, OR ANY OTHER COATING MATERIAL LIKELY TO IMPAIR BONDING.</p> <p>7. SEE TYPICAL REBAR DETAIL ON SHEET S5 FOR LAP SPLICE, BEND, AND HOOK SPECIFICATIONS.</p> <p>8. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.</p>	

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FOUNDATION NOTES

- REFER TO THE GENERAL STRUCTURAL NOTES SHEET (S1).
 - CONCRETE COMPRESSIVE STRENGTH AND CEMENT TYPE PER CONCRETE NOTES
 - ANCHOR BOLT STEEL TYPE PER STEEL NOTES
 - PRESSURE TREATED LUMBER REQUIREMENTS PER WOOD NOTES (WHERE REQ'D. & FINISH / COATING OF FASTENERS)
- REFER TO THE TYPICAL STRUCTURAL DETAILS SHEET (S5).
- CONTINUOUS FOOTINGS SHALL HAVE A MINIMUM WIDTH OF 12" AND BE EMBEDDED A MINIMUM DEPTH OF 24" BELOW LOWEST ADJACENT FINAL GRADE (U.N.O.). THERE SHALL BE A TOTAL OF (4) #5 CONTINUOUS REINFORCING BARS; (2) TOP AND (2) BOTTOM BARS AS SHOWN IN THE STRUCTURAL DETAILS (U.N.O.).
- THE EDGE OF NEW CONTINUOUS FOOTINGS AT EXTERIOR STUD WALLS SHALL BE ALIGNED WITH THE EXTERIOR OF THE SHEATHING PER DETAILS.
- SLABS ON GRADE SHALL BE A MINIMUM OF 5" THICK WITH #4 REBAR @ 18" O.C. EACH WAY IN THE CENTER OF THE SLAB. UNDERLAY WITH A 2" THICK LAYER OF CLEAN SAND OVER A 10 MIL. VAPOR RETARDER / BARRIER (STEGO WRAP OR EQUIVALENT) OVER A 4" LAYER OF 3/4" GRAVEL (S.E. = 30 OR GREATER). THE MOISTURE BARRIER SHALL EXTEND TO THE BOTTOM OF THE FOOTING AND BE PROPERLY LAPPED AND SEALED AT JOINTS AND AROUND ANY BREAKS SUCH AS OPENINGS FOR UTILITY CONDUITS. REFER TO GEOTECHNICAL REPORT (IF APPLICABLE) FOR ADDITIONAL INFORMATION.
- FLATWORK / HARDCAPE SHALL BE INSTALLED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT (IF APPLICABLE) OR JURISDICTIONAL STANDARDS.
- BOTTOM OF ALL FOOTINGS SHALL MAINTAIN 7'-0" DISTANCE TO DAYLIGHT (UNLESS SPECIFIED DIFFERENTLY BY A GEOTECHNICAL REPORT). HORIZONTAL DISTANCE SHALL BE MEASURED FROM THE BOTTOM LEADING EDGE OF THE FOOTING.
- ALL REINFORCING BARS, WIRE MESH, ANCHOR BOLTS, SLEEVES, AND OTHER CONCRETE INSERTS SHALL BE SECURED IN PLACE AND APPROVED BY THE BUILDING INSPECTOR PRIOR TO PLACING CONCRETE.
- BEARING WALL SILL PLATES ON CONCRETE OR MASONRY SHALL HAVE ANCHOR BOLTS WITH THE FOLLOWING SPECIFICATIONS:
 - 3/8" O MIN. EMBEDDED 7" MIN. INTO CONCRETE OR MASONRY
 - PLACED 4" MIN. TO 12" MAX. FROM EACH SILL PLATE END (OR FROM NOTCH)
 - A MINIMUM OF 2 ANCHOR BOLTS PER SILL PLATE PIECE
 - MAXIMUM SPACING OF 72" O.C.
 - AT SHEAR WALL LOCATIONS, USE SPECIFICATIONS IN SHEAR WALL SCHEDULE
- ALL NON-BEARING WALLS SHALL USE 2x P.T. SILL PLATES WITH HILTI X-GR CONCRETE FASTENERS (ESR-1663), OR EQUIVALENT, @ 32" O.C. AND 8" FROM PLATE ENDS.
- THE STRUCTURE SHALL EITHER BE LOCATED ON COMPETENT (NATIVE) SOIL OR THE SOIL SHALL BE COMPACTED TO 90% AND BE TESTED BY A LICENSED GEOTECHNICAL ENGINEER WITH A COMPACTION REPORT SUBMITTED TO THE BUILDING OFFICIAL.
- WHERE FILL IS REQUIRED, ALL FILL MATERIALS TO BE GRANULAR, NON-COHESIVE SOIL. ALL FILL OVER 12" IN DEPTH SHALL BE COMPACTED TO 90% AND BE TESTED BY A LICENSED GEOTECHNICAL ENGINEER WITH A COMPACTION REPORT SUBMITTED TO THE BUILDING OFFICIAL.
- PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE CONTRACTOR / GEOTECHNICAL ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
 - THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT (IF APPLICABLE) OR JURISDICTIONAL STANDARDS
 - THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED
 - THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE GEOTECHNICAL REPORT (IF APPLICABLE) OR JURISDICTIONAL STANDARDS
- THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE EXISTING CONDITIONS OR INTEGRITY OF THE EXISTING FOUNDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SIZE OF THE EXISTING FOUNDATIONS AND TO NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES OR PROBLEM AREAS PRIOR TO CONSTRUCTION.

GEOTECHNICAL ENGINEER OF RECORD: N/A

SYMBOLS

- ⊞ SHEAR WALL PER SCHEDULE
 - # HOLDOWN PER SCHEDULE
 - ◊ PAD FOOTING PER SCHEDULE
- SEE SHEET S4 FOR SCHEDULES & CORRESPONDING NOTES

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GROOTHUIS RESIDENCE ADDITION
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REVISIONS

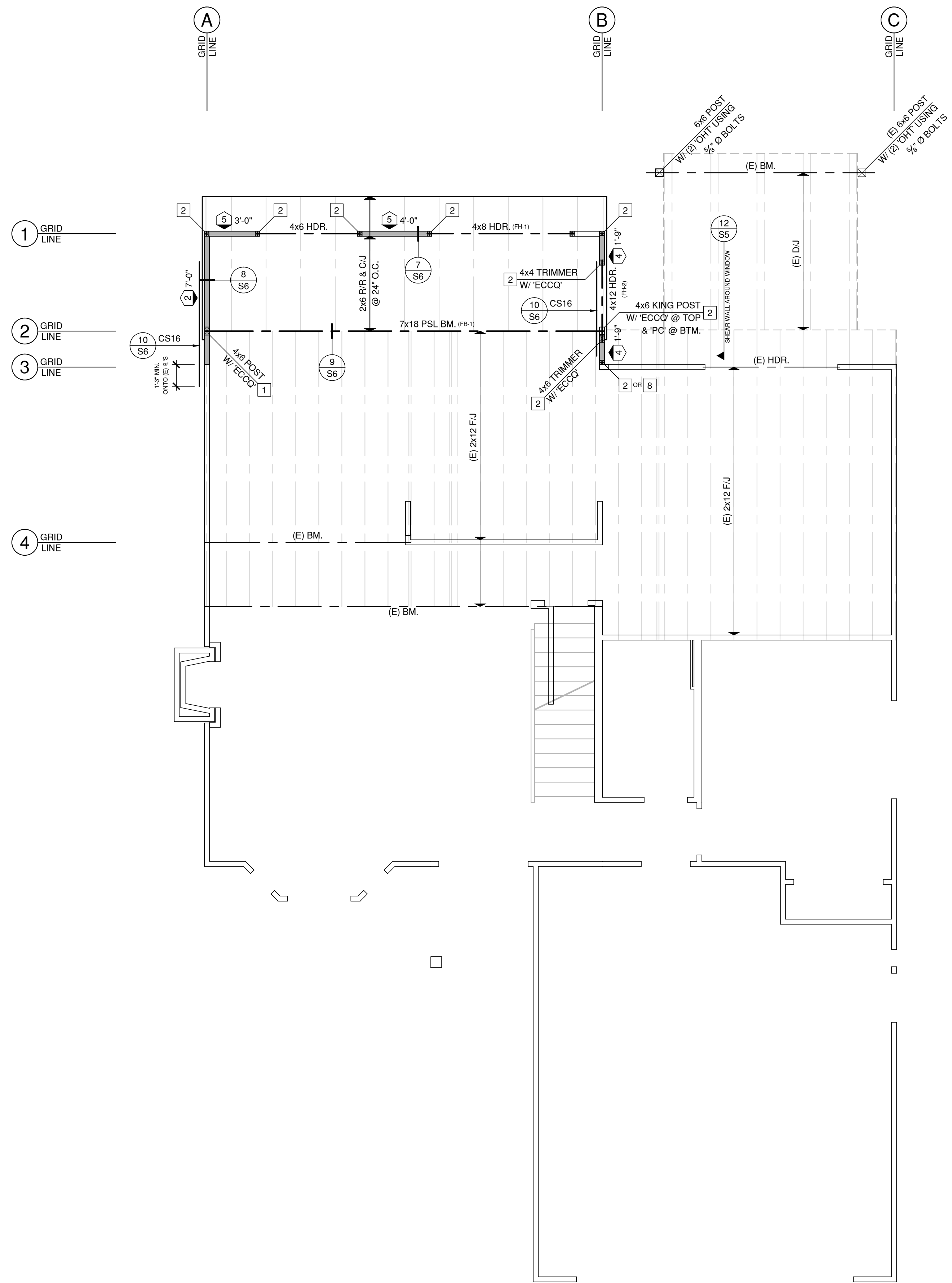
NO.	DESCRIPTION	DATE

JOB #: 16-020
 ENGINEER: M.I.
 DATE: 4/15/2016
 SCALE: 1/4" = 1'-0"

FOUNDATION PLAN

S2

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FRAMING NOTES

- REFER TO THE GENERAL STRUCTURAL NOTES SHEET (S1) FOR WOOD NOTES AND NAILING SCHEDULE.
- REFER TO THE TYPICAL STRUCTURAL DETAILS SHEET (S5).
- REFER TO THE STRUCTURAL SCHEDULES SHEET (S4) FOR ROOF AND FLOOR SHEATHING TYPE AND ATTACHMENT NOTES.
- REFER TO ARCHITECTURAL, ELECTRICAL, & MECHANICAL PLANS FOR COORDINATION PRIOR TO LAYING OUT JOISTS / RAFTERS.
- BEARING WALL STUD HEIGHTS SHALL NOT EXCEED THE FOLLOWING LIMITS:
 - 2x4 @ 16" O.C. 10'-0" MAX. PLATE HEIGHT
 - 2x4 @ 12" O.C. 12'-0" MAX. PLATE HEIGHT
 - 2x6 @ 16" O.C. 16'-0" MAX. PLATE HEIGHT
 - 2x6 @ 12" O.C. 20'-0" MAX. PLATE HEIGHT
- NON-BEARING WALL STUD HEIGHTS SHALL NOT EXCEED THE FOLLOWING LIMITS:
 - 2x4 @ 16" O.C. 14'-0" MAX. PLATE HEIGHT
 - 2x6 @ 16" O.C. 20'-0" MAX. PLATE HEIGHT
- ALL EXTERIOR AND/OR BEARING RAKE (SLOPING) WALLS SHALL HAVE CONTINUOUS STUDS BETWEEN FLOOR/FOUNDATION AND ROOF FRAMING.
- ALL BEAMS SHALL BEAR ON DOUBLE TOP PLATES WITH 'A34' CONNECTORS ON EACH SIDE UNLESS A POST CAP IS SPECIFIED. WHERE NO DOUBLE TOP PLATES OCCUR, THE CAP SHALL BE 'PC' (U.N.O.).
- ALL POST TO BOTTOM/SILL PLATE AND POST TO DOUBLE TOP PLATES SHALL HAVE 'A34' CONNECTORS ON EACH SIDE (U.N.O.). WHERE A POST BELOW IS NOT SPECIFIED, MATCH POST SIZE ABOVE.
- PROVIDE BUILT UP STUDS TO SUPPORT ALL BEAMS WHERE POSTS ARE NOT SPECIFIED. BUILT UP STUDS TO MATCH WIDTH OF BEAM. SISTER TOGETHER WITH 16d @ 16" O.C.
- PROVIDE DOUBLE JOISTS/RAFTERS AT SIDES AND ENDS OF ALL OPENINGS IN FLOOR/ROOF (U.N.O.).
- PROVIDE DOUBLE JOISTS BELOW ALL PARALLEL INTERIOR / PARTITION WALLS 8'-0" OR GREATER IN LENGTH, WITH BLOCKING AT ONE-THIRD OF THE SPAN. PROVIDE 2x BLOCKING BELOW ALL PERPENDICULAR INTERIOR / PARTITION WALLS.
- ALL DOUBLE JOISTS/RAFTERS SHALL BE SISTERED TOGETHER WITH 16d @ 12" O.C., STAGGERED.
- WHERE DOUBLE TRIMMERS ARE SPECIFIED, SISTER TOGETHER WITH 10d @ 12" O.C.
- EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED, OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED ON THE FACE OF THE BOTTOM CHORD:
 - IDENTITY OF THE TRUSS MANUFACTURER
 - DESIGN LOADS
 - SPACING OF THE TRUSS
- PROVIDE 'ST8224' STRAP ACROSS ALL DISCONTINUOUS DOUBLE TOP PLATES (U.N.O.).
- DO NOT CUT, NOTCH, DRILL, BORE, SHAVE, TAPER, OR MODIFY ANY WOOD OR MANUFACTURED LUMBER PRODUCTS UNLESS SUCH MODIFICATIONS ARE PER PLAN OR WITHIN THE PARAMETERS SET FORTH BY THE MANUFACTURER OF THAT PRODUCT. IN ADDITION, THE MANUFACTURER'S ENGINEER CAN PROVIDE A STAMPED LETTER ALLOWING THE MODIFICATIONS IF AUTHORIZED BY THE PROJECT ENGINEER OF RECORD AND APPROVED BY THE GOVERNING JURISDICTION.
- FRAMING CONNECTIONS SPECIFIED ON DRAWINGS SHALL BE MANUFACTURED BY 'SIMPSON STRONG-TIE' OR AN ENGINEER APPROVED EQUIVALENT. ALL CONNECTIONS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND SPECIFICATION TO DEVELOP THE MAXIMUM CAPACITY.

SYMBOLS

- # SHEAR WALL PER SCHEDULE
 - # HOLDOWN PER SCHEDULE
- SEE SHEET S4 FOR SCHEDULES & CORRESPONDING NOTES

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FLOOR FRAMING PLAN

S3

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REVISIONS

JOB #: 16-020
ENGINEER: M.I.
DATE: 4/15/2016
SCALE: N.T.S.

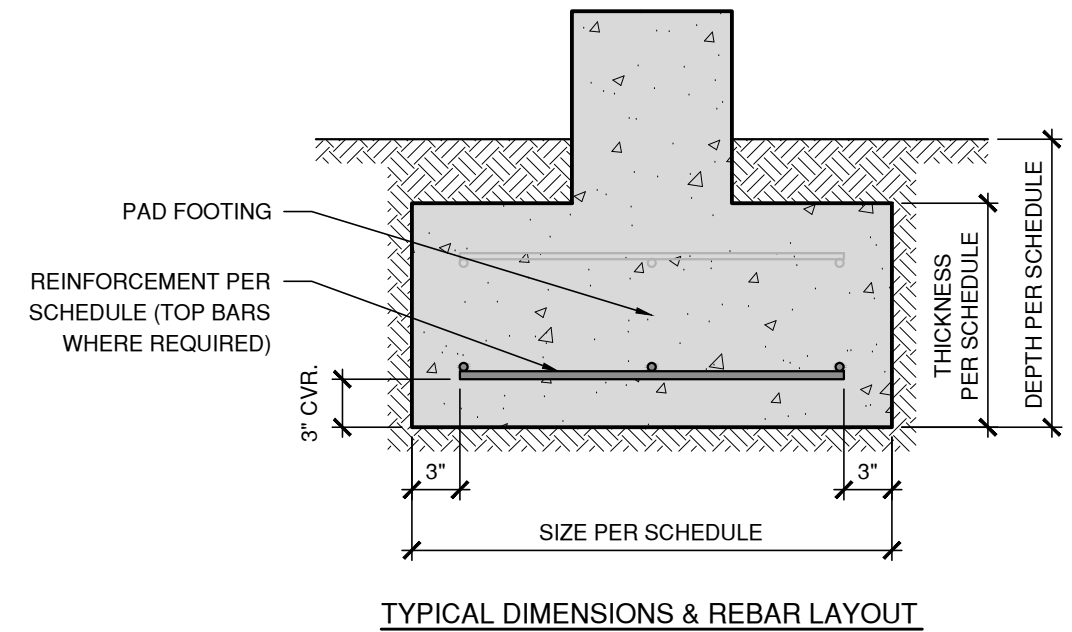
STRUCTURAL SCHEDULES

S4

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SYMBOL	SIZE	DEPTH	THICKNESS (WHERE APPLICABLE)	REINFORCEMENT
A	24" SQUARE	24"	15"	#5 BOTTOM BARS @ 10" O.C. EACH WAY
B	30" SQUARE	24"	15"	#5 BOTTOM BARS @ 10" O.C. EACH WAY
C	36" SQUARE	24"	15"	#5 BOTTOM BARS @ 10" O.C. EACH WAY
D	42" SQUARE	24"	15"	#5 TOP & BOTTOM BARS @ 10" O.C. EACH WAY
E	PER PLAN	24"	15"	#5 TOP & BOTTOM BARS @ 10" O.C. EACH WAY

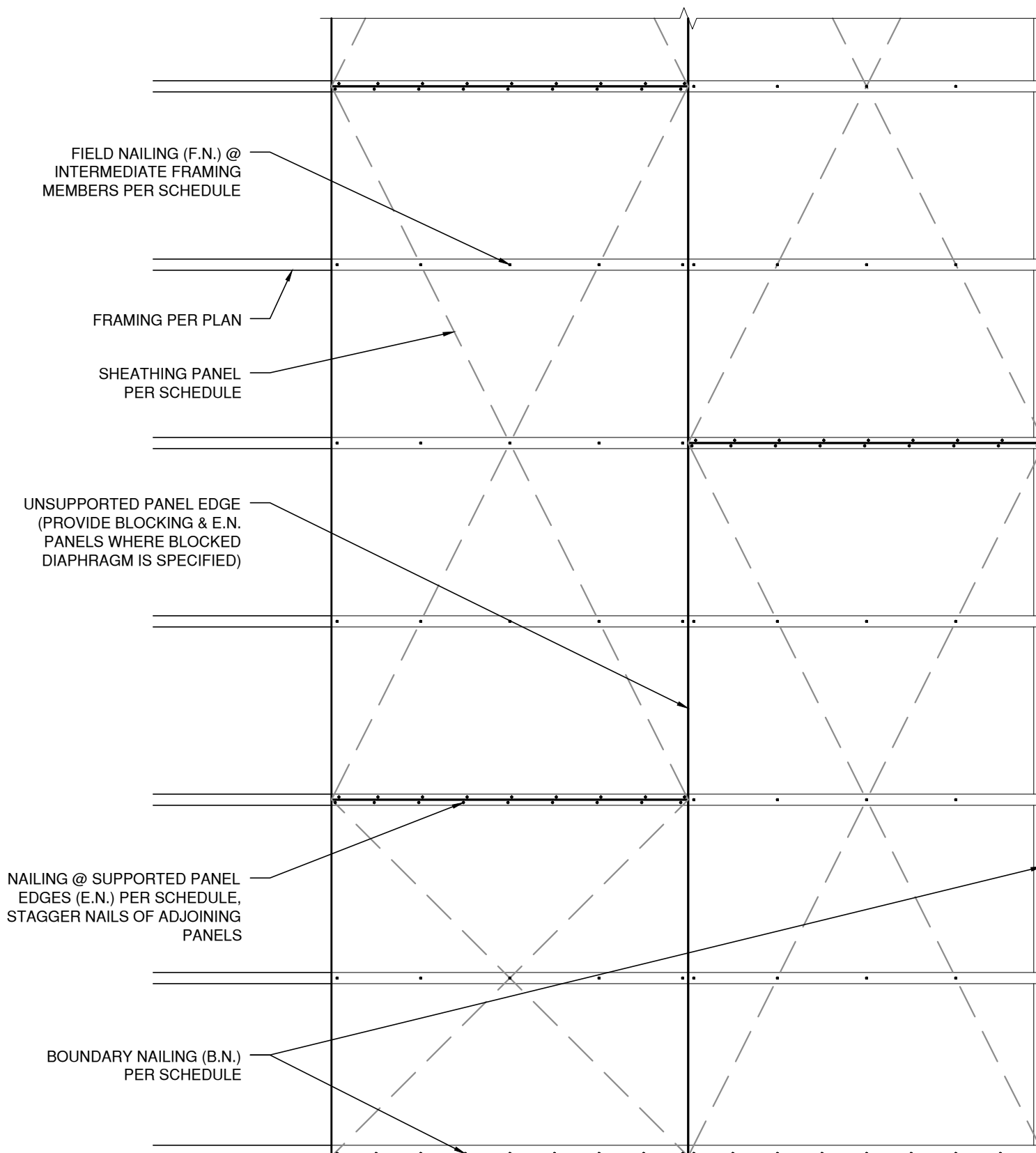
- DEPTH OF FOOTING SHALL BE MEASURED BELOW LOWEST ADJACENT FINAL GRADE. WHERE SPECIFIED, USE DEPTH CALLED OUT ON THE PLAN.
- REINFORCEMENT SHALL MAINTAIN 3" CLEAR DISTANCE FROM SOIL.
- THERE SHALL BE A BAR 3" FROM EACH EDGE OF THE PAD FOOTING WITH SPACING PER SCHEDULE IN BETWEEN.
- CENTER PAD FOOTING ON COLUMN / POST ABOVE (WHERE APPLICABLE).



PAD FOOTING SCHEDULE & TYPICAL DETAILS

LOCATION	THICKNESS	SPAN RATING	MAX. RAFTER / JOIST SPACING	NAIL TYPE	NAIL SPACING @ DIAPHRAGM BOUNDARIES (B.N.) & SUPPORTED PANEL EDGES (E.N.)
ROOF	1/2"	32/16	32" O.C.	8d	6" O.C.
FLOOR	3/4"	24" O.C.	24" O.C.	10d	6" O.C.

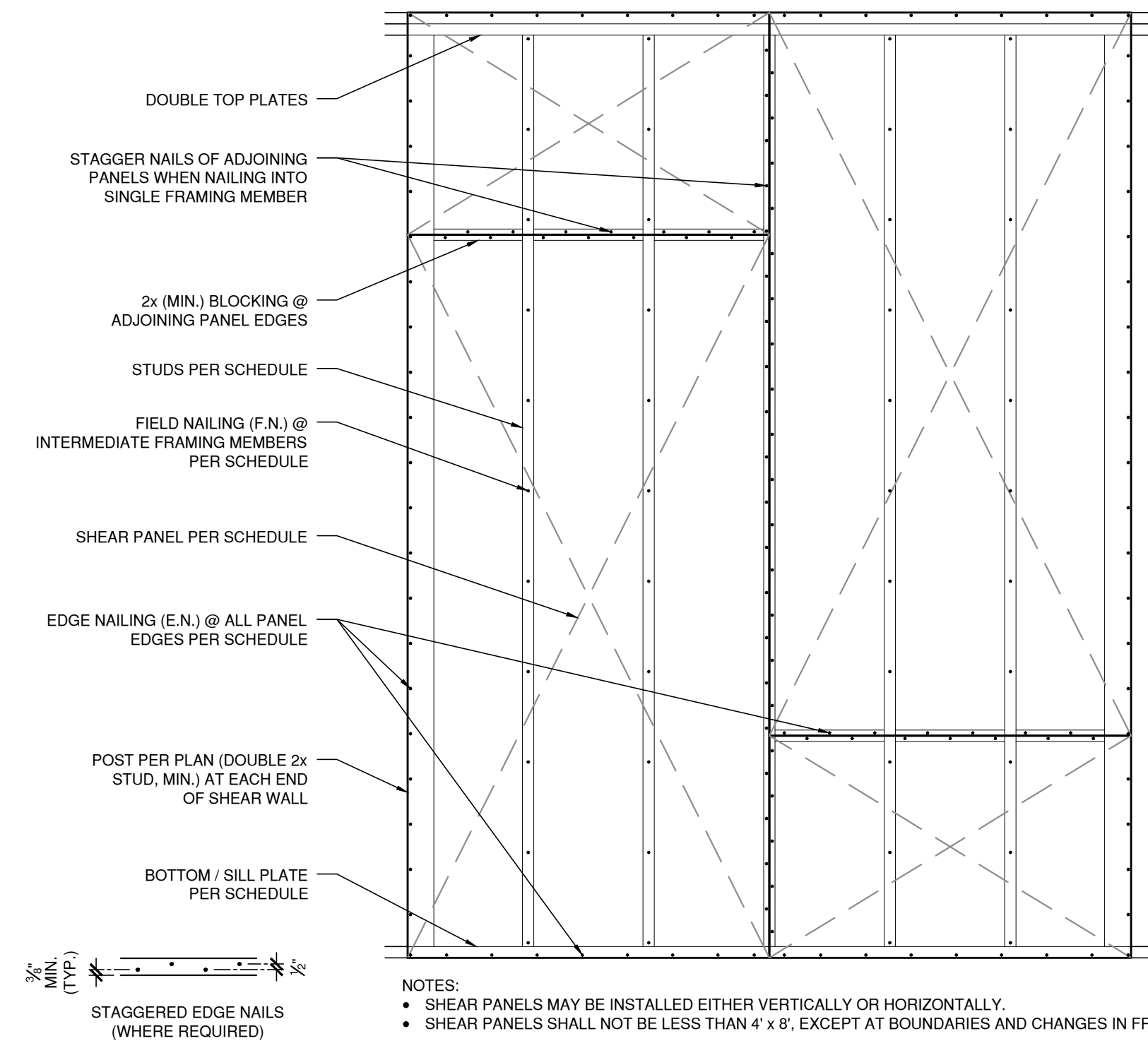
- ALL SHEATHING SHALL BE APA RATED, EXPOSURE 1.
- FLOOR SHEATHING SHALL BE T&G STURD-I-FLOOR AND SHALL BE GLUED AND NAILED.
- PLYWOOD OR OSB CAN BE USED.
- THICKER SHEATHING THAN INDICATED SHALL NOT BE USED WITHOUT WRITTEN CONSENT FROM THE ENGINEER OF RECORD AS NAILS SIZE MAY NEED TO BE ALTERED.
- NAILS AT INTERMEDIATE FRAMING MEMBERS (F.N.) SHALL BE THE SAME SIZE AS INDICATED IN CHART AND BE SPACED @ 12" O.C.
- ONLY COMMON NAILS SHALL BE USED. NAILS SHALL BE DRIVEN WITH THE HEAD OF THE NAIL FLUSH WITH THE SURFACE OF THE SHEATHING.
- NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF PANELS.



- NOTES:
- PANELS SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO FRAMING.
 - PANEL JOINTS PARALLEL TO FRAMING MEMBERS SHALL BE STAGGERED.
 - PANELS SHALL NOT BE LESS THAN 4' x 8' EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE MINIMUM PANEL DIMENSIONS SHALL BE 24".
 - BOUNDARY NAILING (B.N.) SHALL BE PROVIDED @ ALL BEARING WALLS & FLUSH BEAMS / DRAG MEMBERS.
 - WHERE A BLOCKED DIAPHRAGM IS SPECIFIED ON PLANS, USE 2x4 FLAT BLOCKING AND E.N. PANELS. USE SIMPSON 2" CLIPS TO ATTACH BLOCKING TO FRAMING MEMBERS.

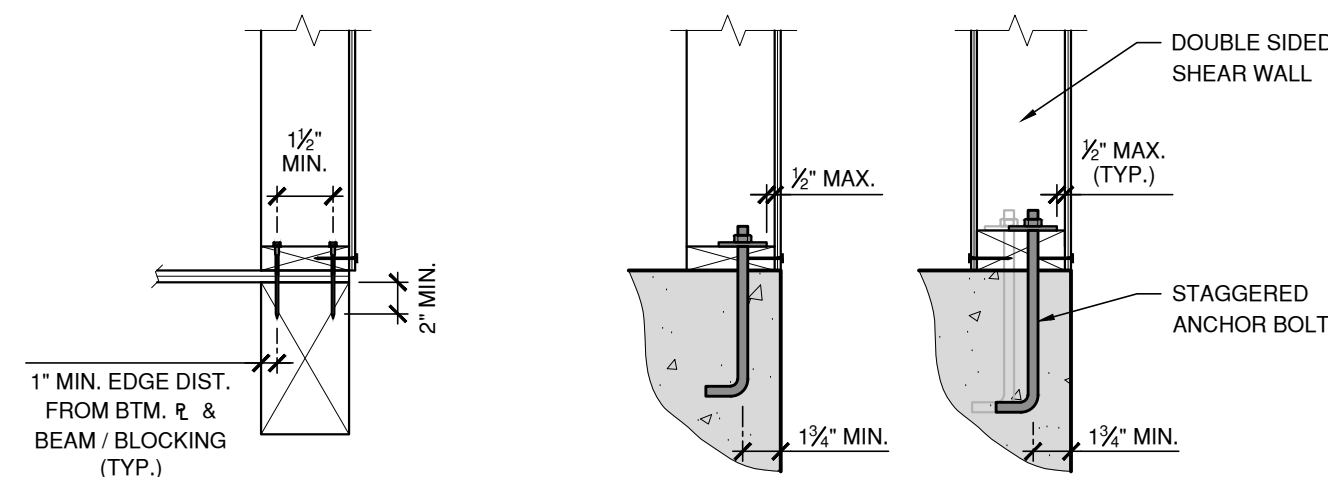
SHEATHING LAYOUT & NAILING

ROOF / FLOOR SHEATHING SCHEDULE & TYPICAL DETAILS



- NOTES:
- SHEAR PANELS MAY BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY.
 - SHEAR PANELS SHALL NOT BE LESS THAN 4' x 8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING.

SHEAR PANEL LAYOUT & NAILING



TYPICAL FRAMING @ SHEAR WALL

2 ROWS OF SDS SCREWS (WHERE REQUIRED)

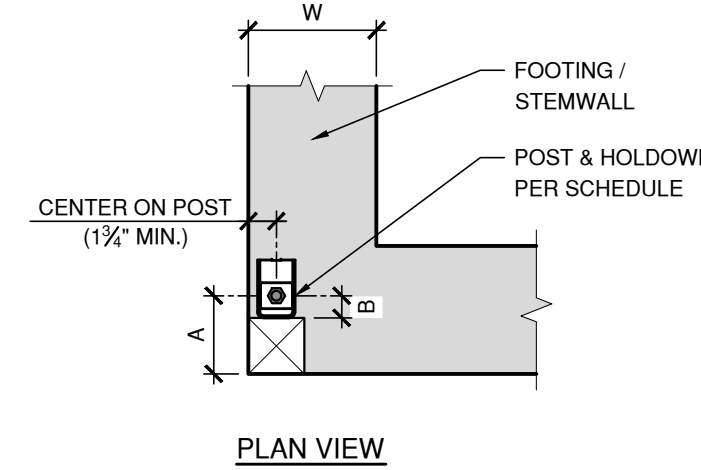
ANCHOR BOLT PLACEMENT (TYPICAL OF NEW & RETROFIT BOLTS)

SHEAR WALL SCHEDULE & TYPICAL DETAILS

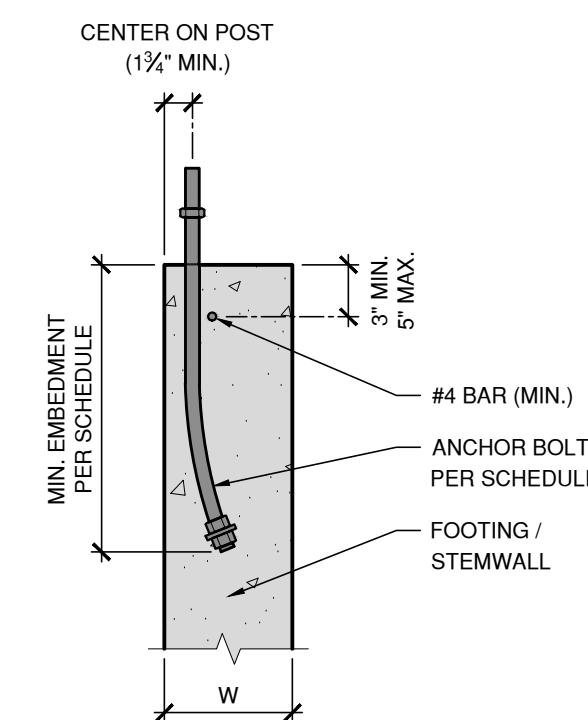
MINIMUM DIMENSIONS

ANCHOR BOLT	A	W
SB5/8x24	4 1/2"	6"
SB3/4x24	4 1/2"	6"
SB1x30	5"	8"
SSTB16	5"	6"
SSTB20	5"	6"
SSTB24	5"	6"
SSTB28	5"	8"

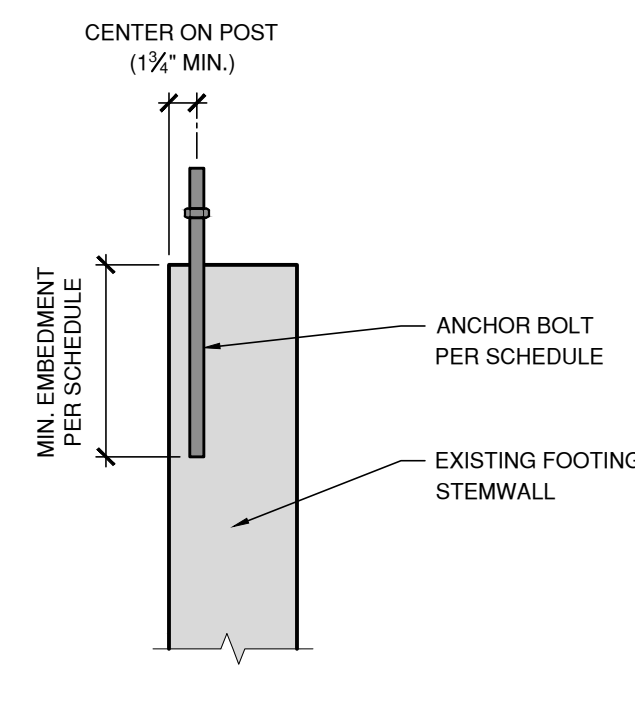
HOLDOWN	B
H DU2	1 1/2"
H DU4	1 3/4"
H DU5	1 3/4"
H DU8	1 3/2"
H DC8	2 1/2"
H HDQ11	3 1/2"



PLAN VIEW



CAST-IN-PLACE ANCHOR BOLT



RETROFIT ANCHOR BOLT

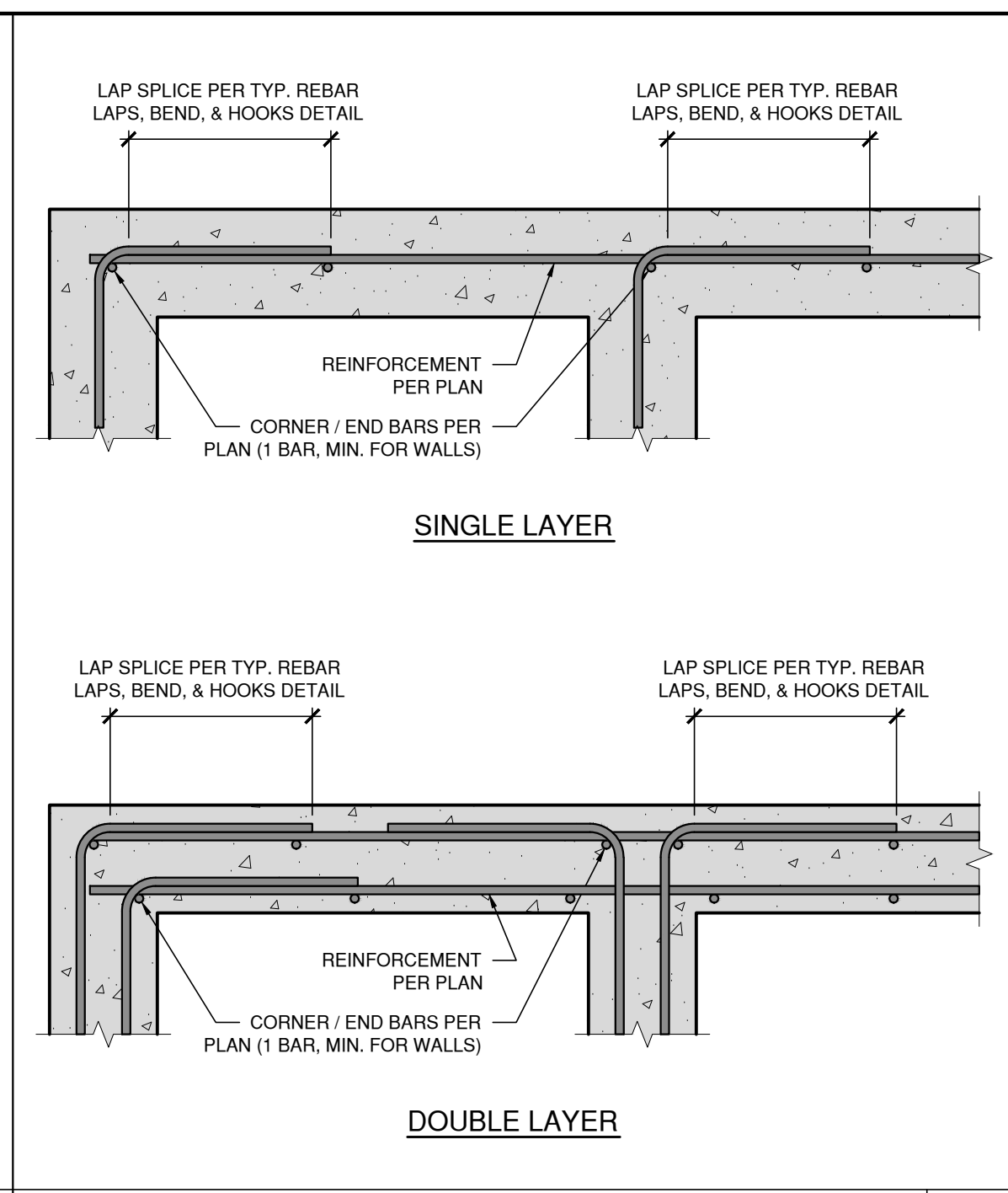
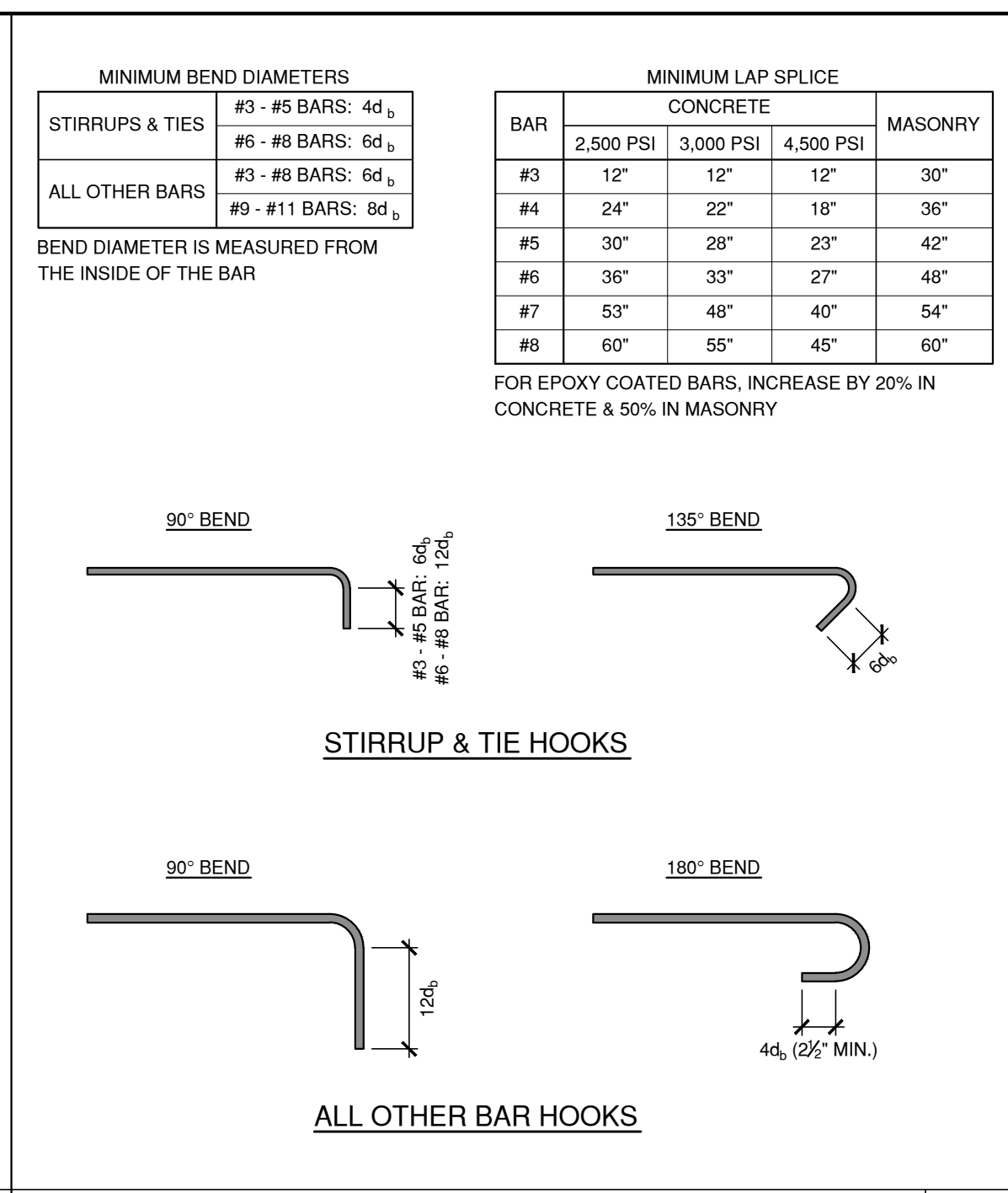
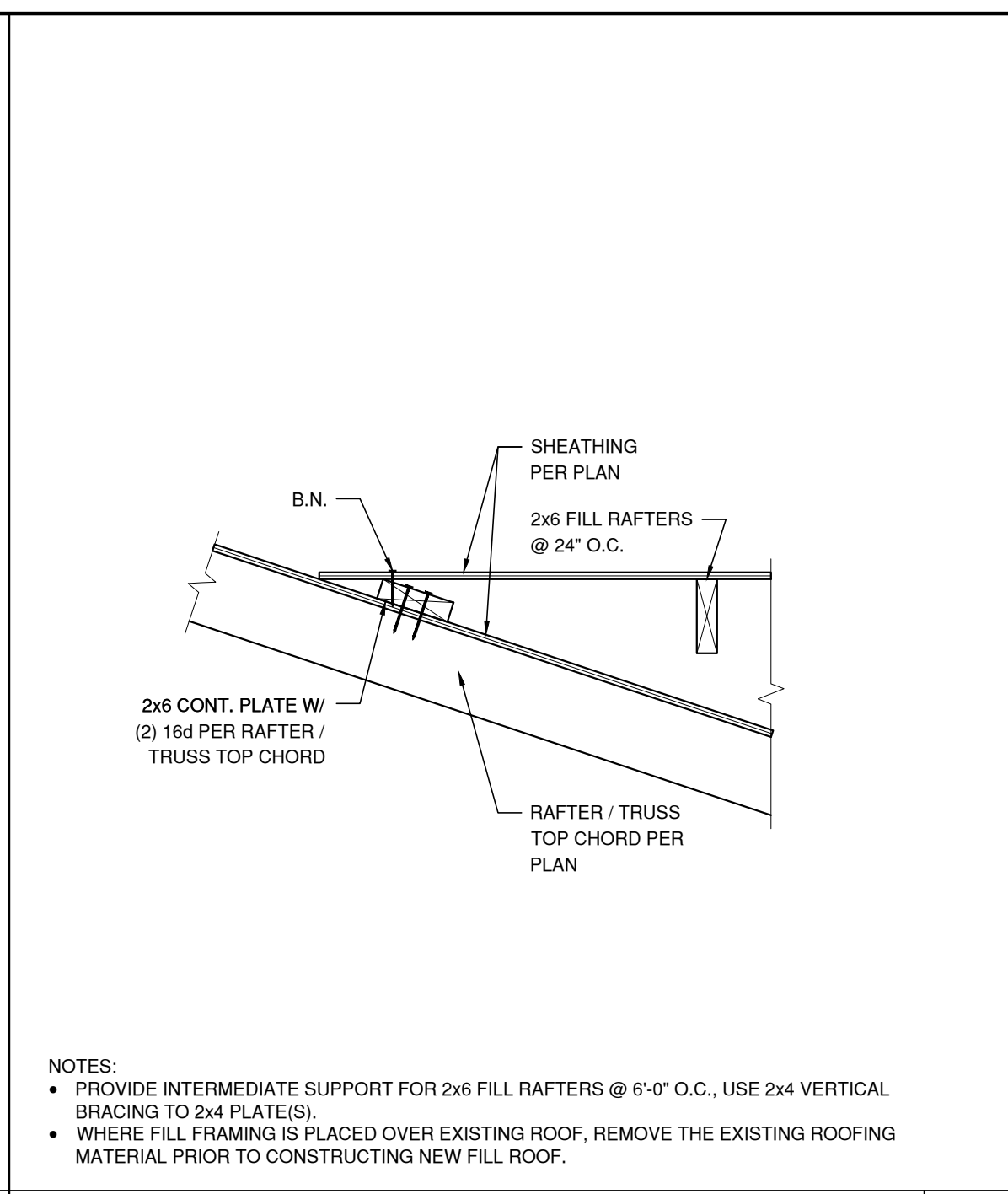
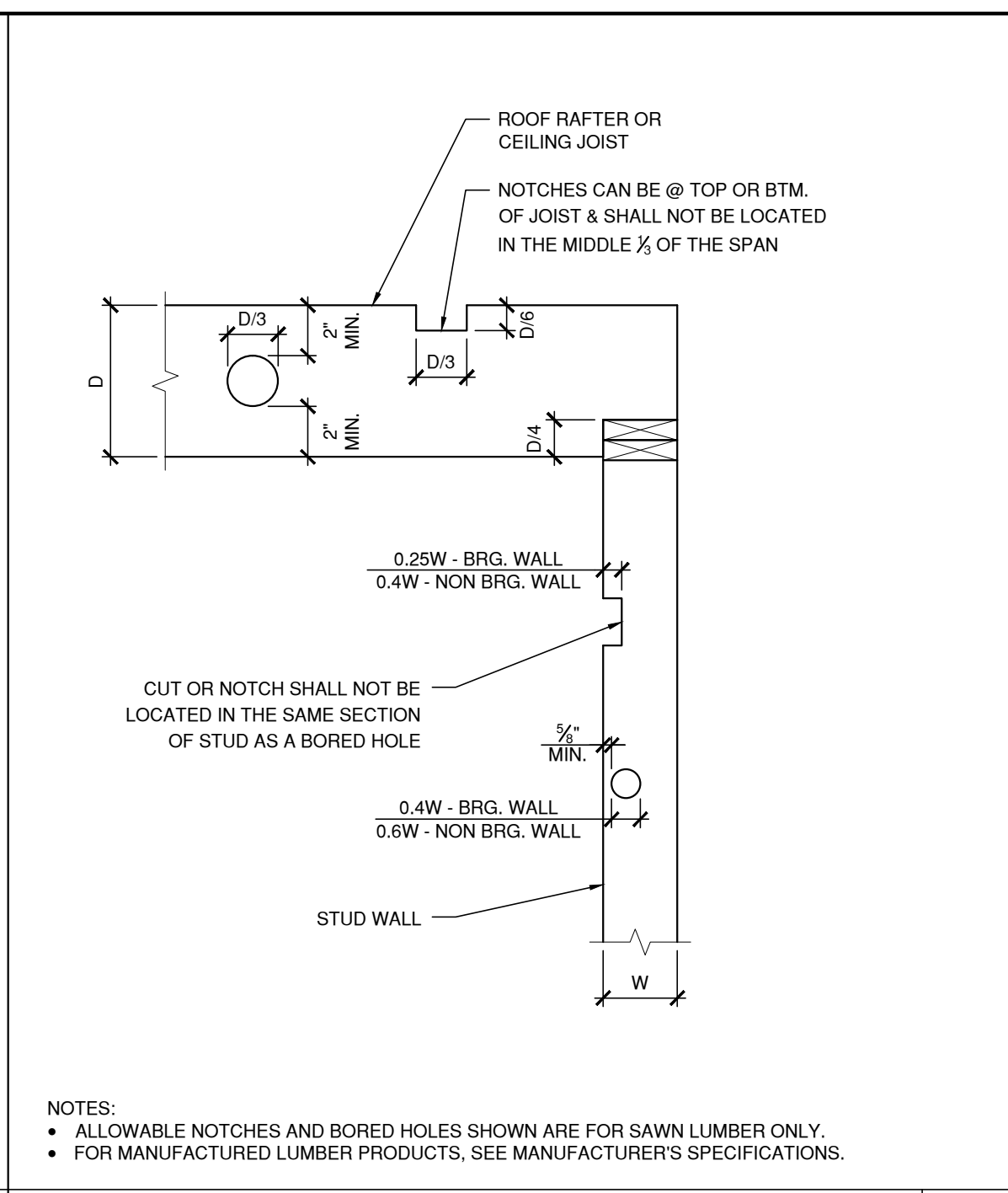
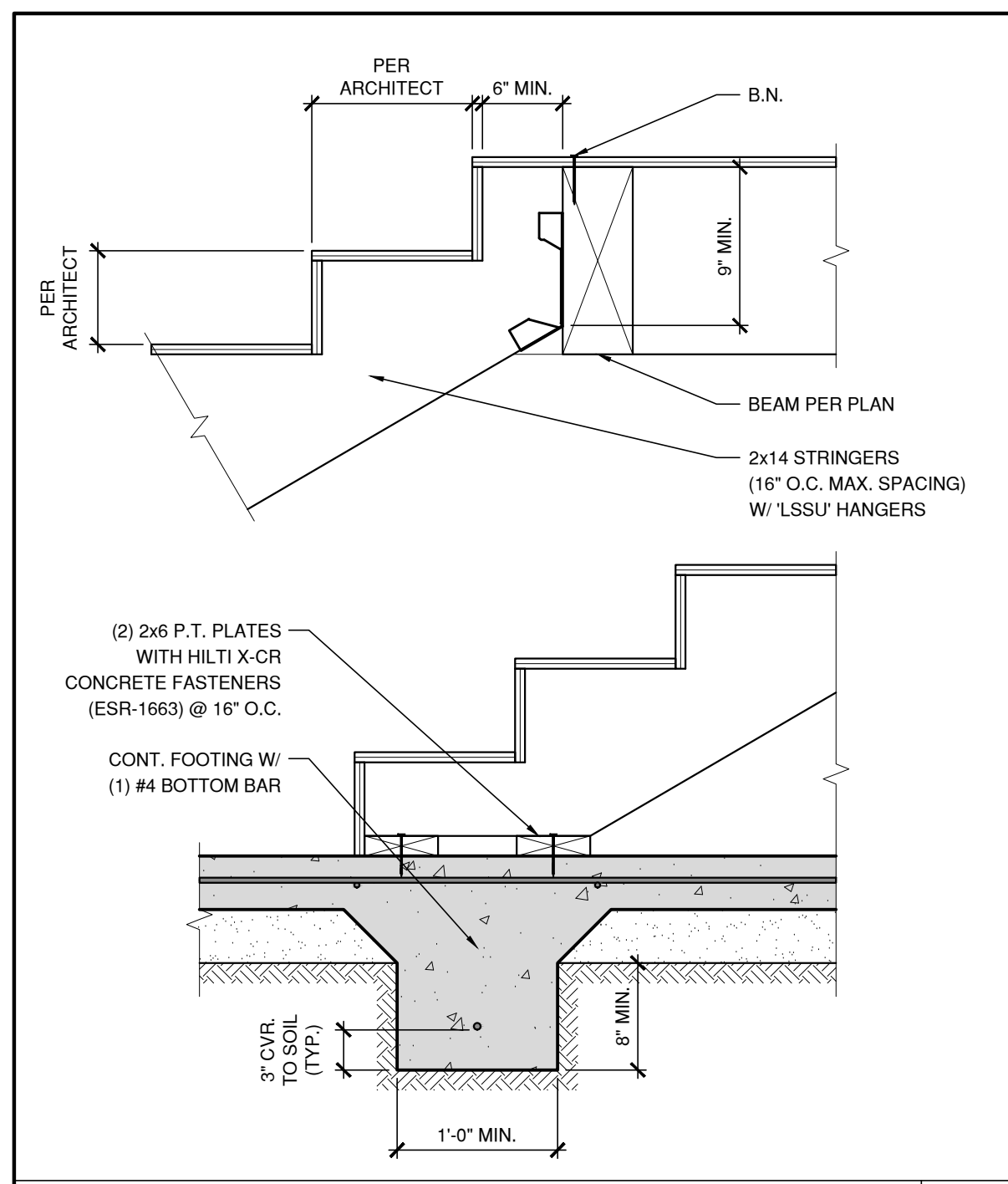
HOLDOWN SCHEDULE NOTES:

- CONCRETE AT ANCHOR BOLT SHALL BE A SINGLE POUR (NO COLD JOINT), UNLESS SPECIFICALLY DETAILED OTHERWISE.
- BOTTOM OF ANCHOR BOLT SHALL HAVE 3" MINIMUM CONCRETE COVER TO SOIL. WHERE FOOTING NEEDS TO BE DEEPENED TO ACCOMMODATE THIS, DEEPENED FOOTING SHALL EXTEND THE LENGTH OF THE SHEAR WALL AND 12" MINIMUM BEYOND THE ANCHOR BOLTS AT EACH END.
- SSTBL SHALL BE SUBSTITUTED FOR SSTB AT 3x SILL PLATES.
- RETROFIT ANCHOR BOLTS INTO CONCRETE SHALL USE SIMPSON'S "SET-XP" EPOXY (ESR-2508) WITH SPECIAL INSPECTION. RETROFIT ANCHOR BOLTS INTO MASONRY SHALL USE SIMPSON'S "SET" EPOXY (ESR-1772) WITH SPECIAL INSPECTION.
- AT RAISED WOOD FLOOR FOUNDATION, USE A "CNW" COUPLER NUT TO ATTACH ANCHOR BOLT TO AN F1554, GRADE 36 THREADED ROD TO EXTEND AND ATTACH TO HOLDOWN.
- DOUBLE 2x POST SHALL BE ATTACHED WITH 10d @ 6" O.C., STAGGERED (I.N.O.).
- WHERE SPECIFIED, USE POST SIZE AS CALLED OUT ON PLANS.
- WHERE EQUAL STRAP LENGTH ON POST AND BEAM IS NOT AVAILABLE DUE TO BEAM DEPTH, STRAP SHALL BE INSTALLED WITH THE BOTTOM OF THE STRAP FLUSH WITH THE BOTTOM OF THE BEAM.

SYMBOL	HOLDOWN	ANCHOR BOLT (SEE NOTE 1-6)	POST SIZE (SEE NOTE 6.7)		
			2x4 WALL	2x6 (MIN.) WALL	
1	H DU2	OR SB5/8x24 SSTB16	18" 12 1/2"	DBL. 2x	DBL. 2x
2	H DU4	OR SB5/8x24 SSTB20	18" 16 1/2"	DBL. 2x	DBL. 2x
3	H DU5	OR SB5/8x24 SSTB24	18" 20 1/2"	4x	4x
4	H DU8	OR SB5/8x24 SSTB28	18" 24 1/2"	6x	6x
5	H DC8	OR SB5/8x24 SSTB28	18" 24 1/2"	6x	8x PSL
6	H HDQ11	SB1x30	24"	8x	6x PSL
7	H DU2	5/8" Ø THREADED ROD	10"	DBL. 2x	DBL. 2x
8	H DU4	5/8" Ø THREADED ROD	12"	DBL. 2x	DBL. 2x
9	H DU8	7/8" Ø THREADED ROD	15"	6x	6x

SYMBOL	HOLDOWN	POST SIZE (SEE NOTE 6.7)			FRAMING BELOW (SIZE PER PLAN)	NOTES
		8'-0" t (MAX.)	10'-0" t (MAX.)	12'-0" t (MAX.)		
10	MSTC40	DBL. 2x	DBL. 2x	DBL. 2x	POST	• STRAP LENGTH SHALL BE EQUAL ON EACH POST
11	MSTC52	DBL. 2x	DBL. 2x	4x	POST	• STRAP LENGTH SHALL BE EQUAL ON EACH POST
12	MSTC66	4x	4x	6x	POST	• STRAP LENGTH SHALL BE EQUAL ON EACH POST
13	CMST14	4x	6x	8x	POST	• EACH POST SHALL HAVE (2) 16d OR (3) 10d
14	MSTC28	DBL. 2x	DBL. 2x	DBL. 2x	FLUSH BEAM	• STRAP LENGTH SHALL BE EQUAL ON POST & BEAM (WHERE EQUAL LENGTH IS NOT AVAILABLE DUE TO BEAM DEPTH, SEE NOTE 8)
15	MSTC66B3	DBL. 2x	DBL. 2x	4x	FLUSH BEAM	• FOR 10" DEEP BEAM, USE MSTC48B3
16	(2) ST6224	6x	6x	6x	FLUSH BEAM	• STRAP LENGTH SHALL BE EQUAL ON POST & BEAM (WHERE EQUAL LENGTH IS NOT AVAILABLE DUE TO BEAM DEPTH, SEE NOTE 8)
17	HST3	6x	6x	8x	FLUSH BEAM	• BEAM MUST BE PSL (OR EQUIV.) • STRAP LENGTH SHALL BE EQUAL ON POST & BEAM (WHERE EQUAL LENGTH IS NOT AVAILABLE DUE TO BEAM DEPTH, SEE NOTE 8)
18	MSTC40	DBL. 2x	DBL. 2x	DBL. 2x	HEADER / DROPPED BEAM	• STRAP LENGTH SHALL BE EQUAL ON POST & BEAM (WHERE EQUAL LENGTH IS NOT AVAILABLE DUE TO BEAM DEPTH, SEE NOTE 8)
19	MSTC66B3	DBL. 2x	DBL. 2x	4x	HEADER / DROPPED BEAM	• STRAP LENGTH SHALL BE EQUAL ON POST & BEAM (WHERE EQUAL LENGTH IS NOT AVAILABLE DUE TO BEAM DEPTH, SEE NOTE 8)

HOLDOWN SCHEDULE & TYPICAL DETAILS



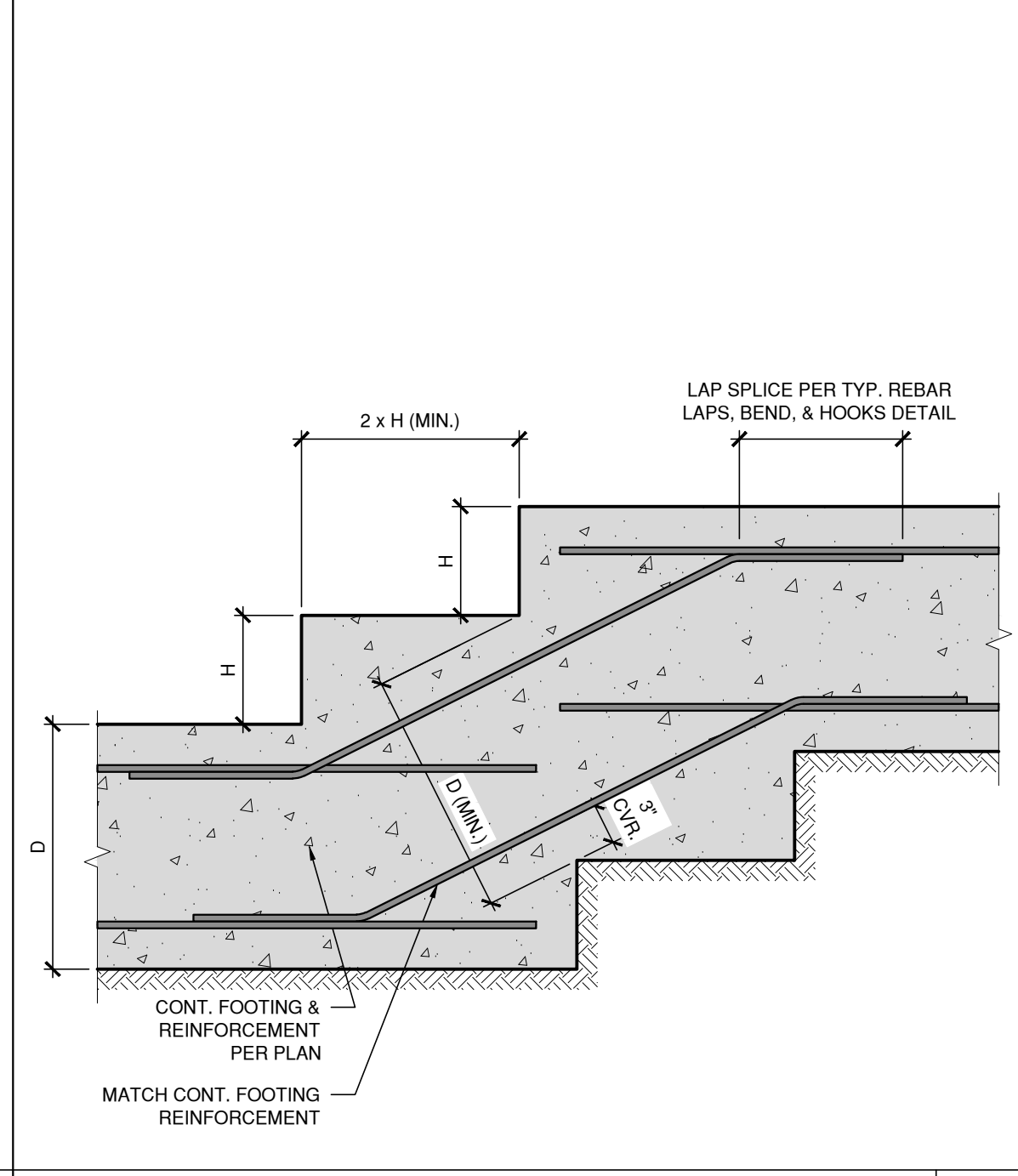
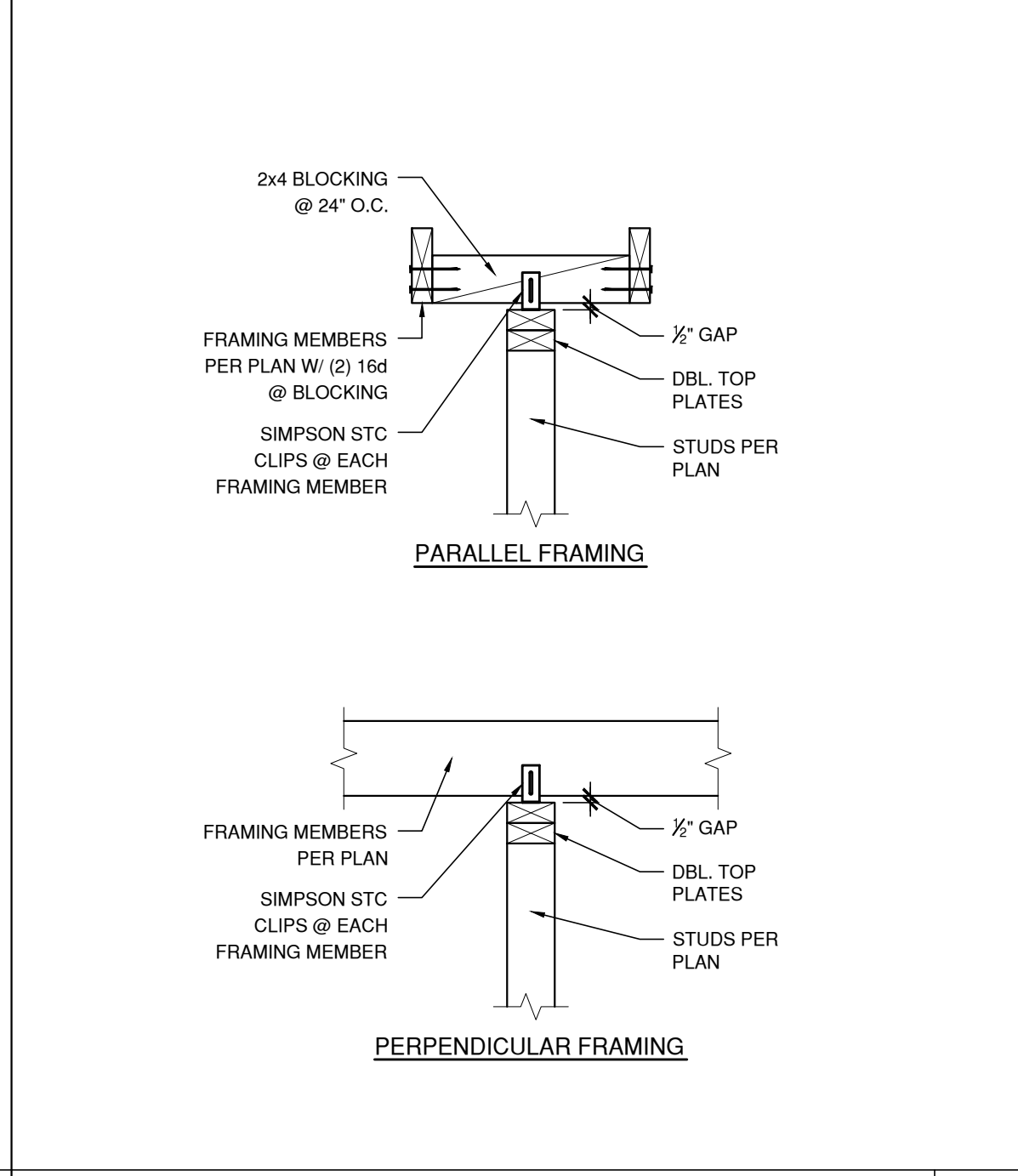
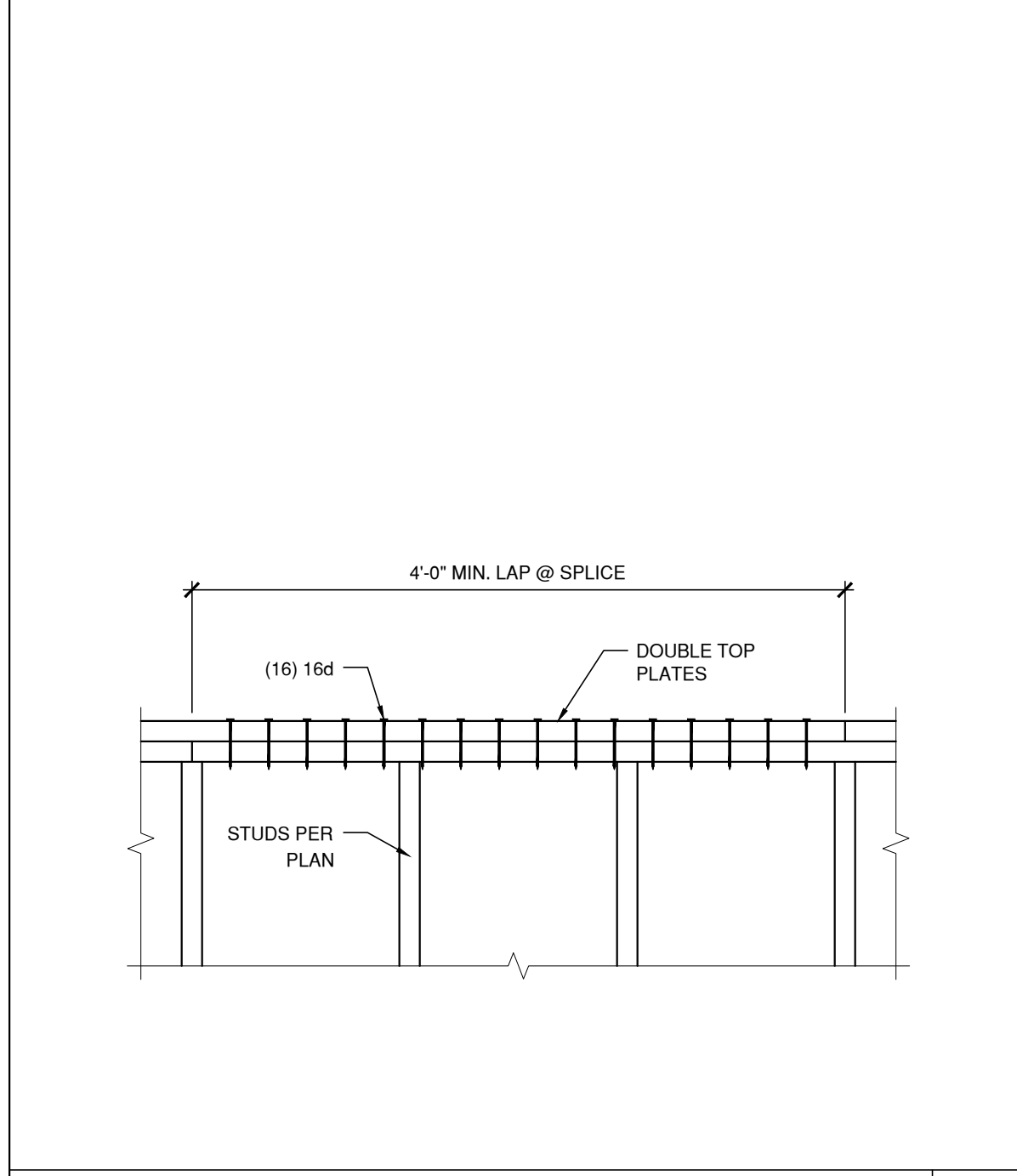
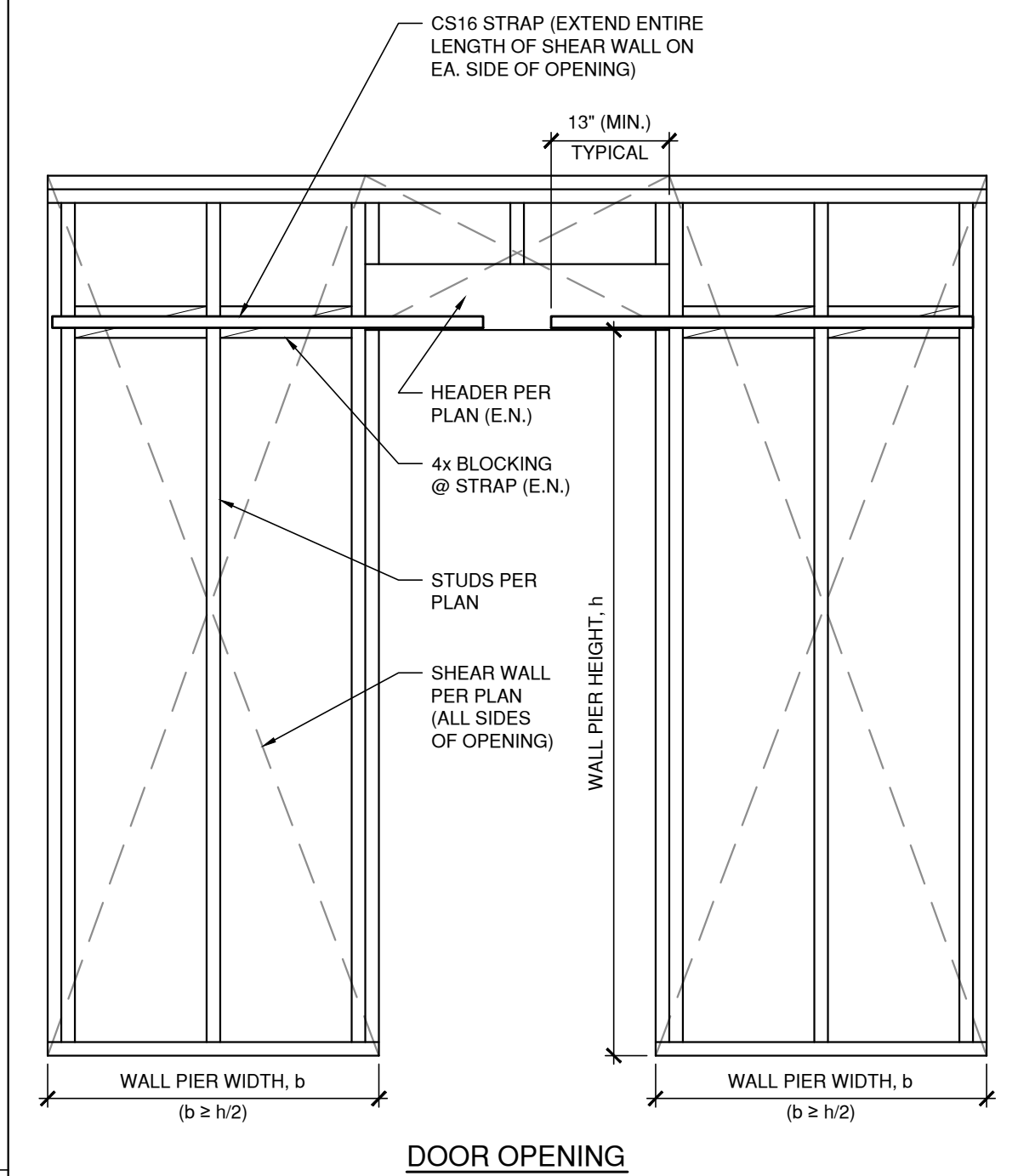
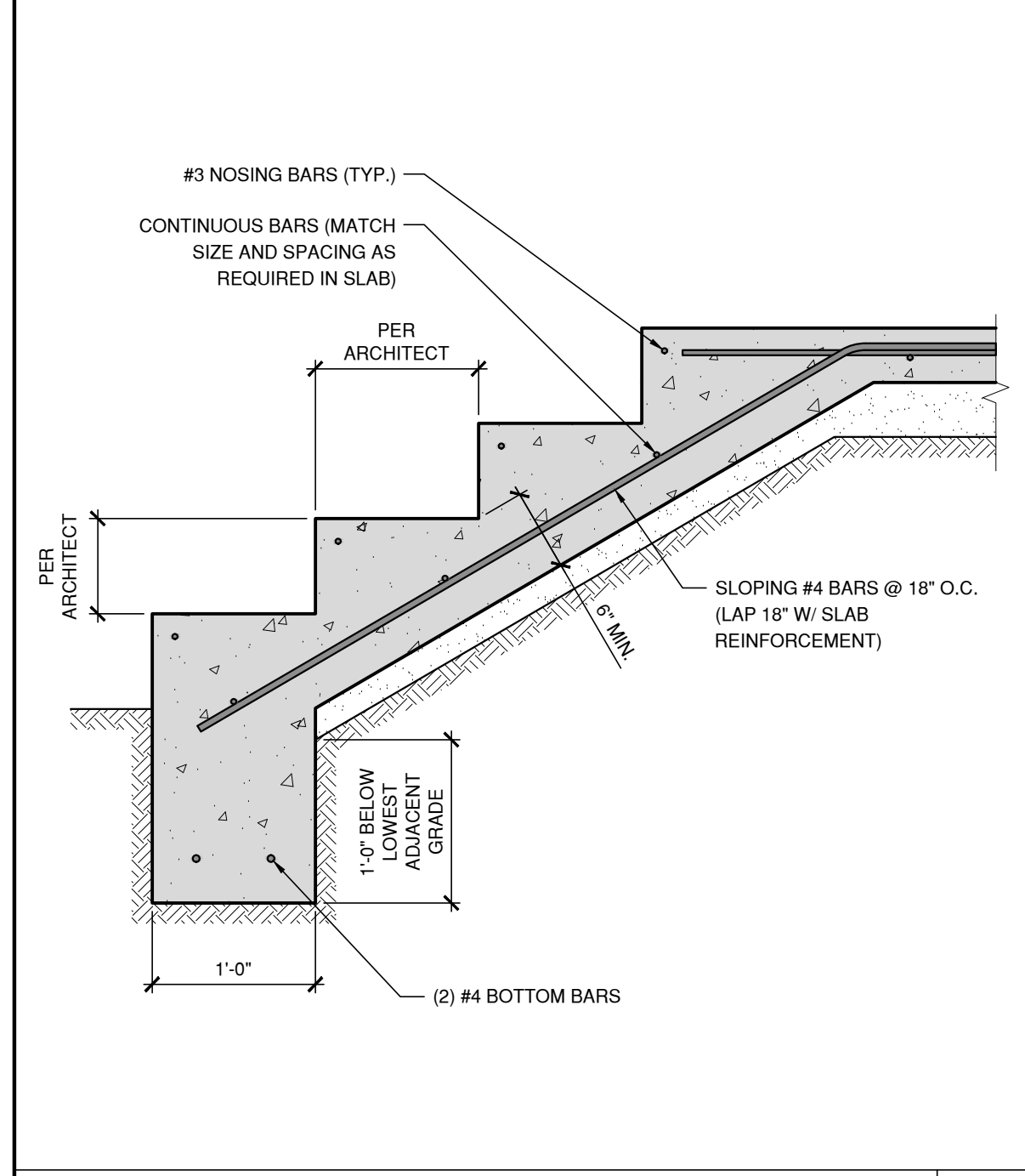
STAIR FRAMING 13

NOTCHES & BORED HOLES 10

'CALIFORNIA FILL' FRAMING 7

TYP. REBAR LAPS, BENDS, & HOOKS 4

TYP. FTG. / WALL INTERSECTION 1



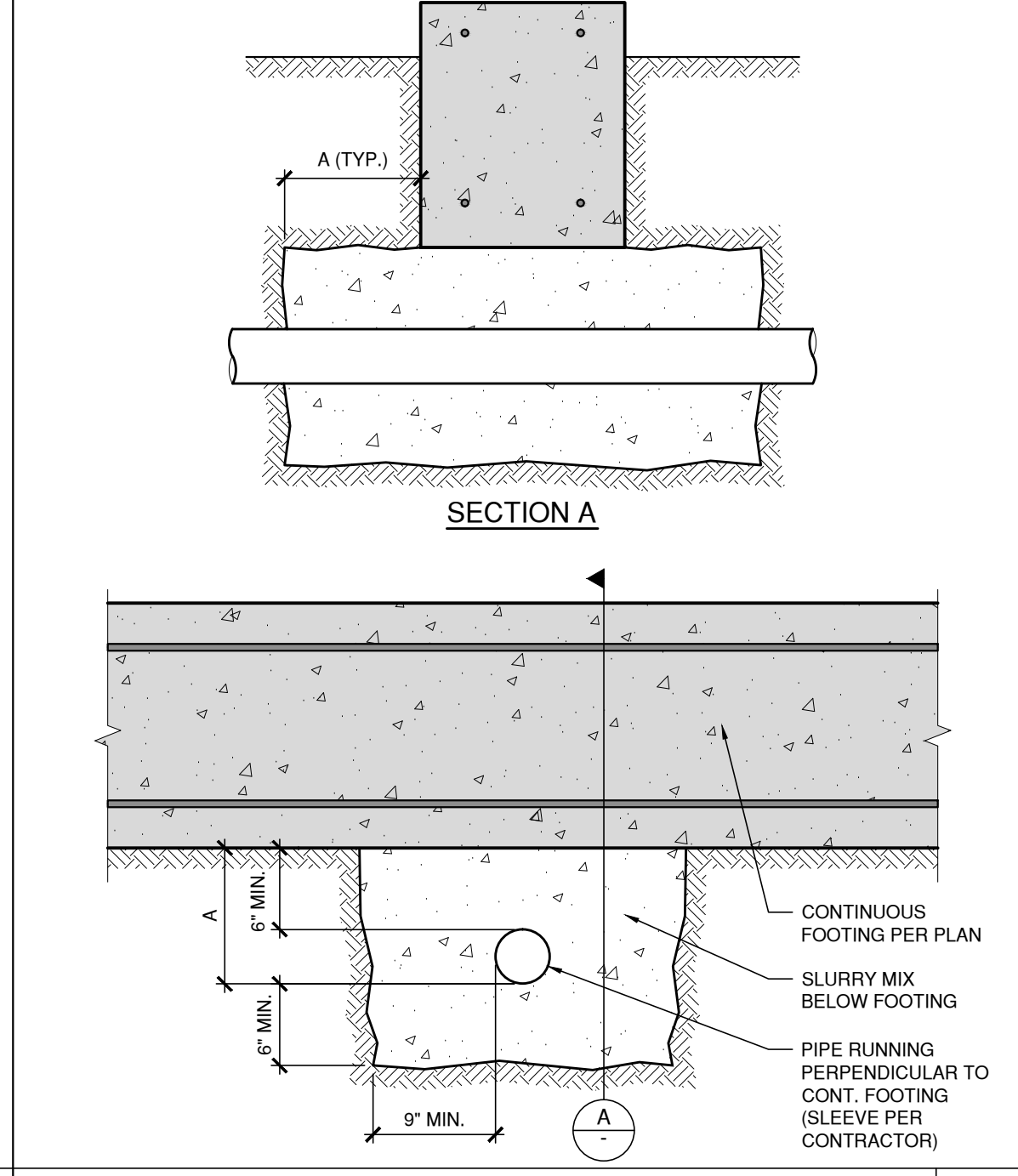
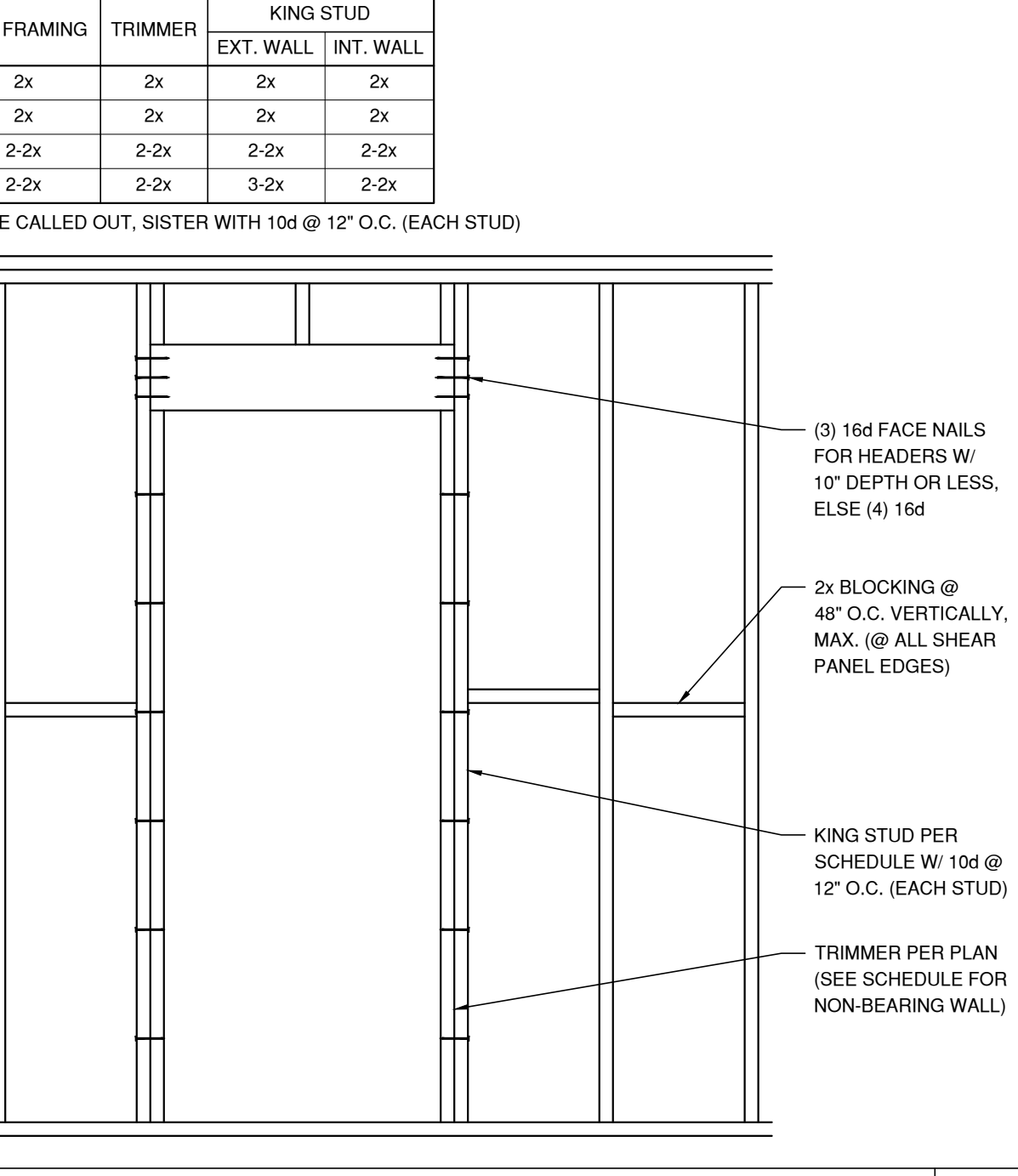
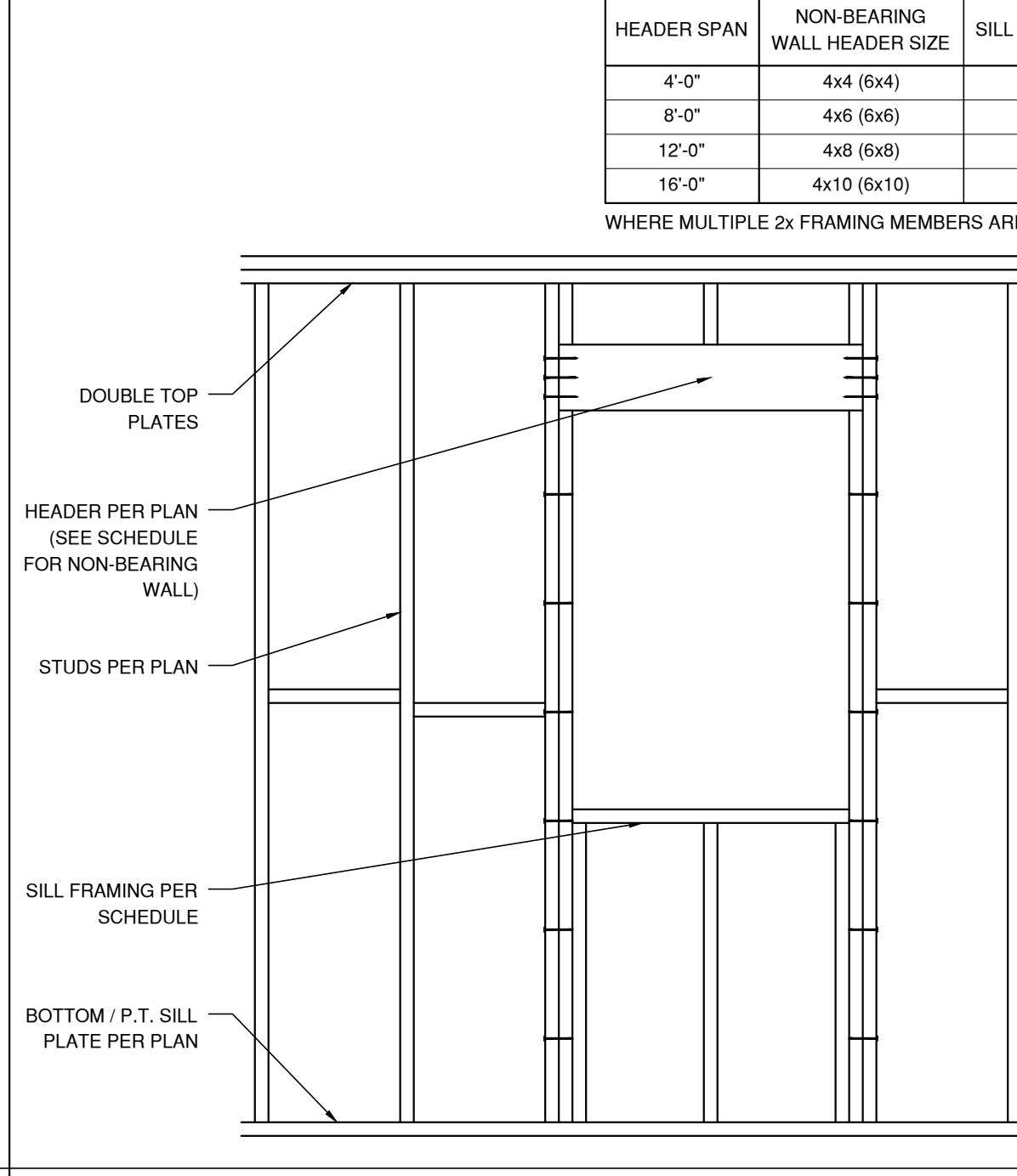
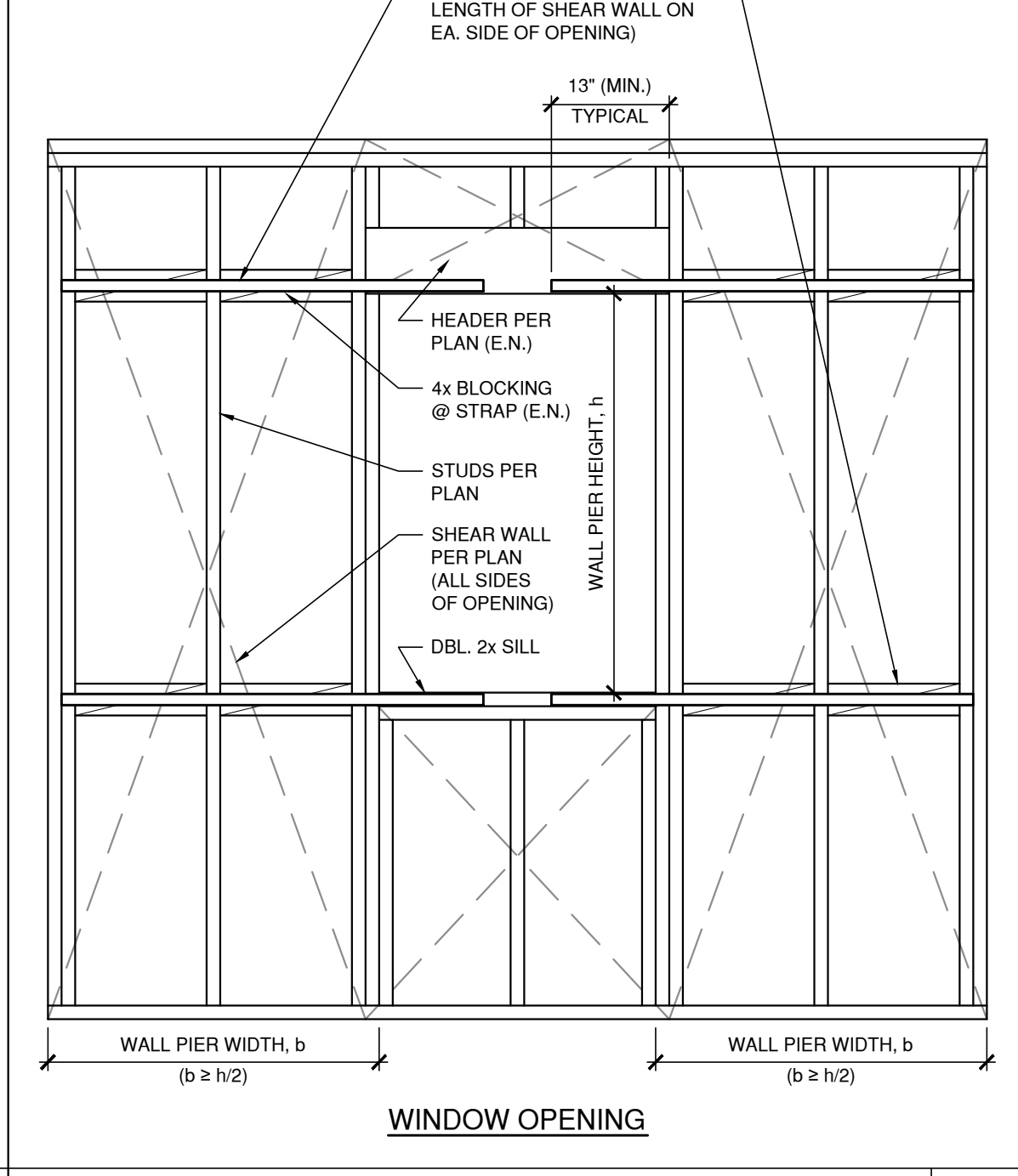
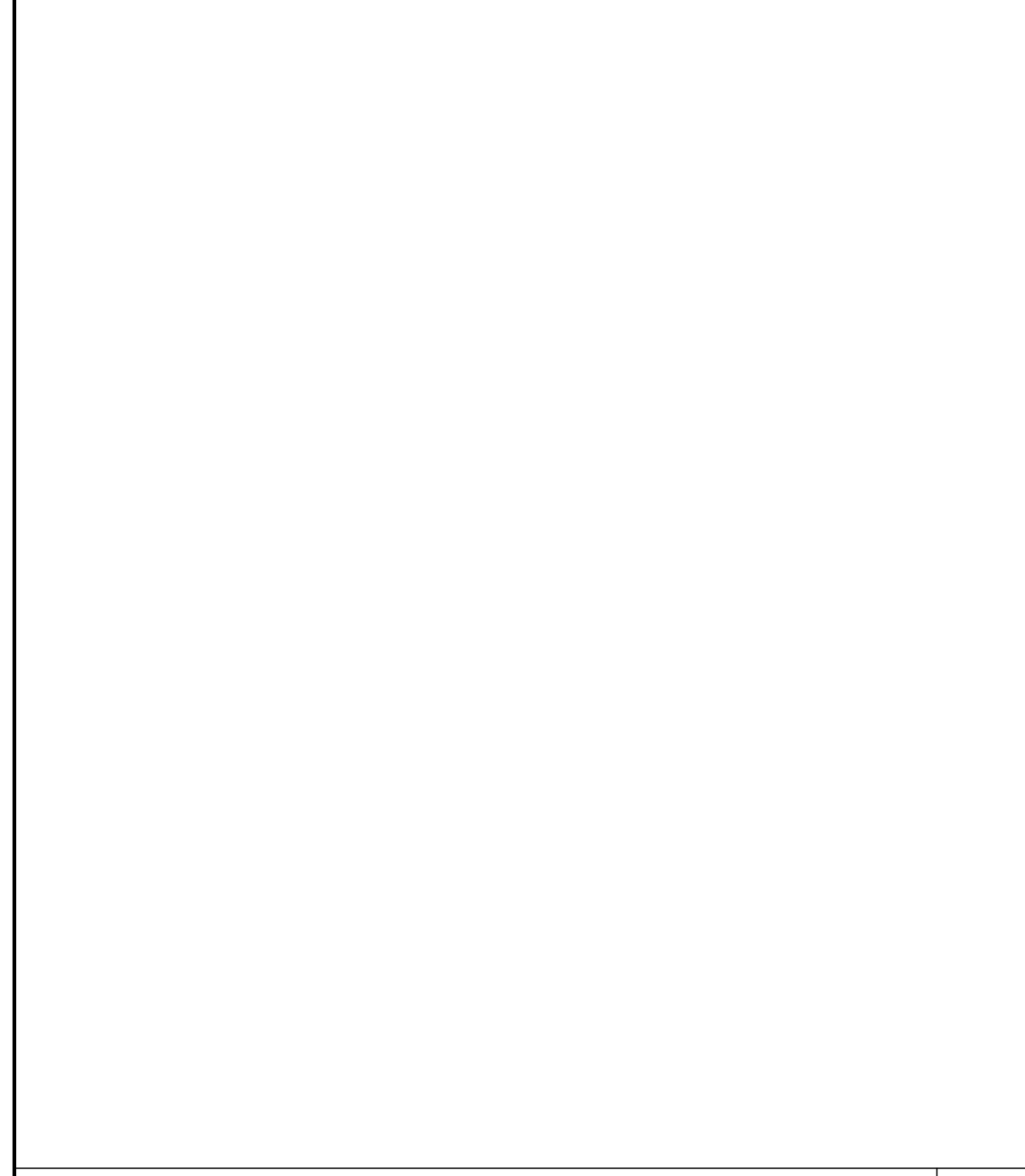
STAIRS ON GRADE 14

DOOR OPENING

TOP PLATE SPLICE 8

NON-BEARING WALL 5

STEPPED FOOTING 2



BLANK

SHEAR WALL WITH OPENINGS 12

TYPICAL WALL FRAMING 6

PIPES UNDER CONT. FOOTING 3

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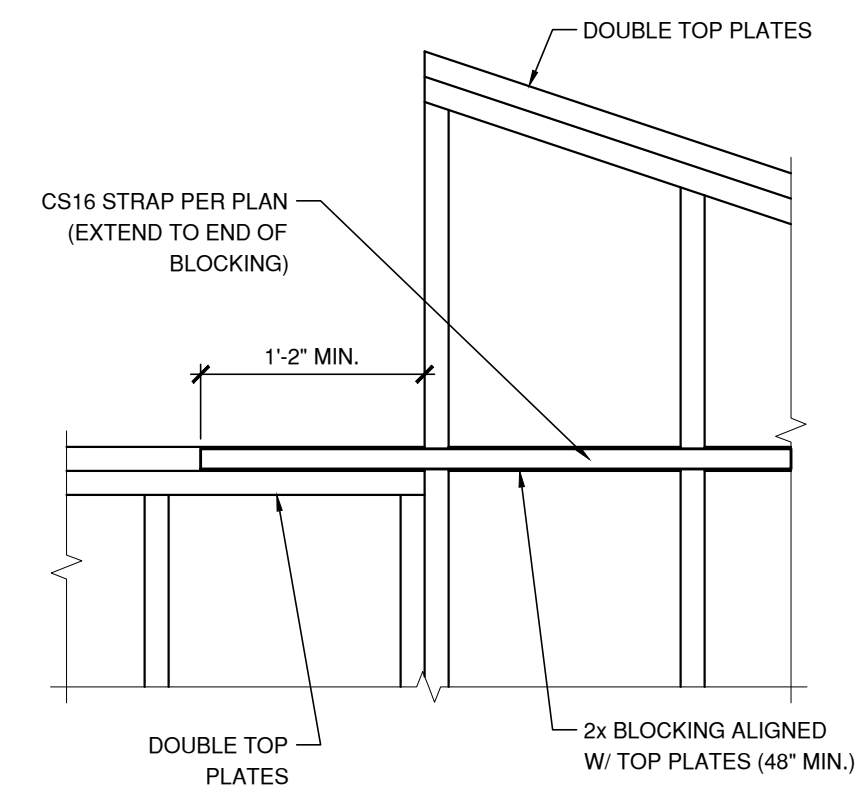
REVISIONS

JOB #: 16-020
ENGINEER: M.I.
DATE: 4/15/2016
SCALE: N.T.S.

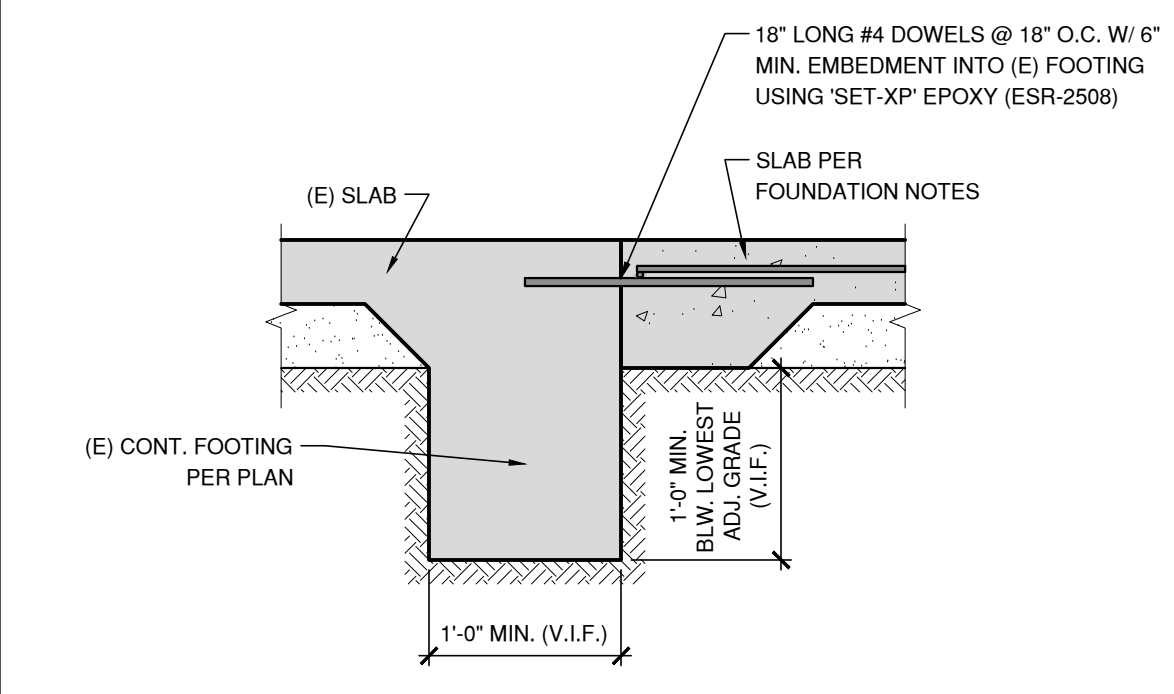
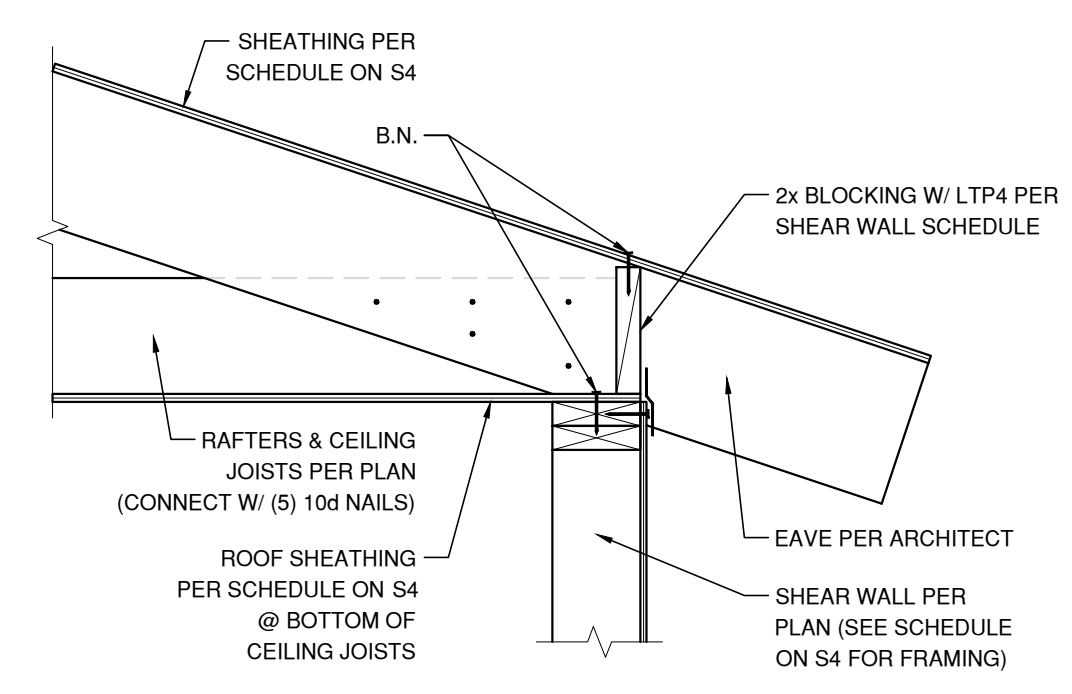
TYPICAL STRUCTURAL DETAILS

S5

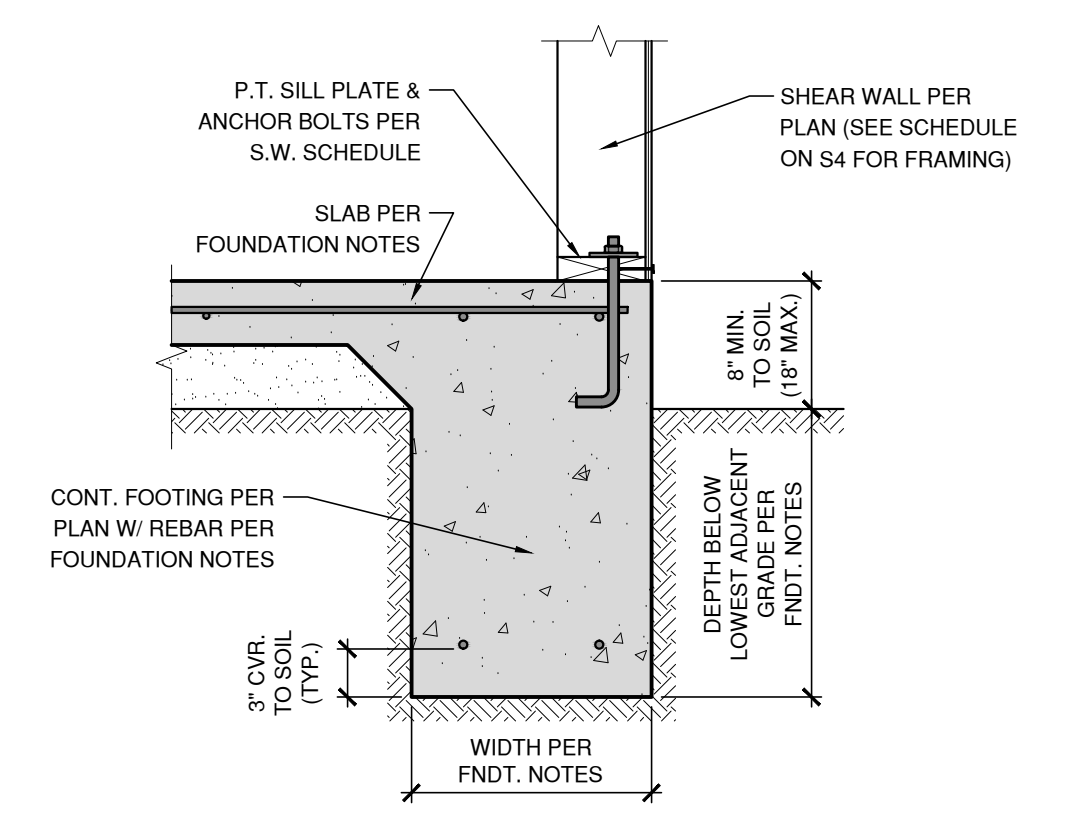
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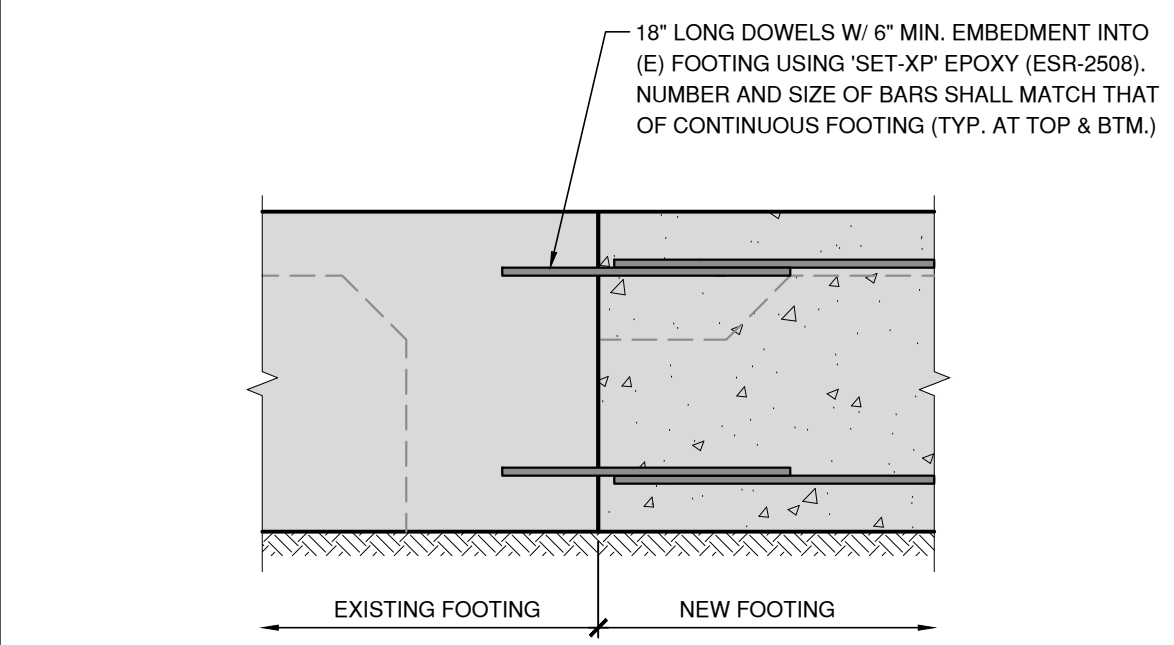
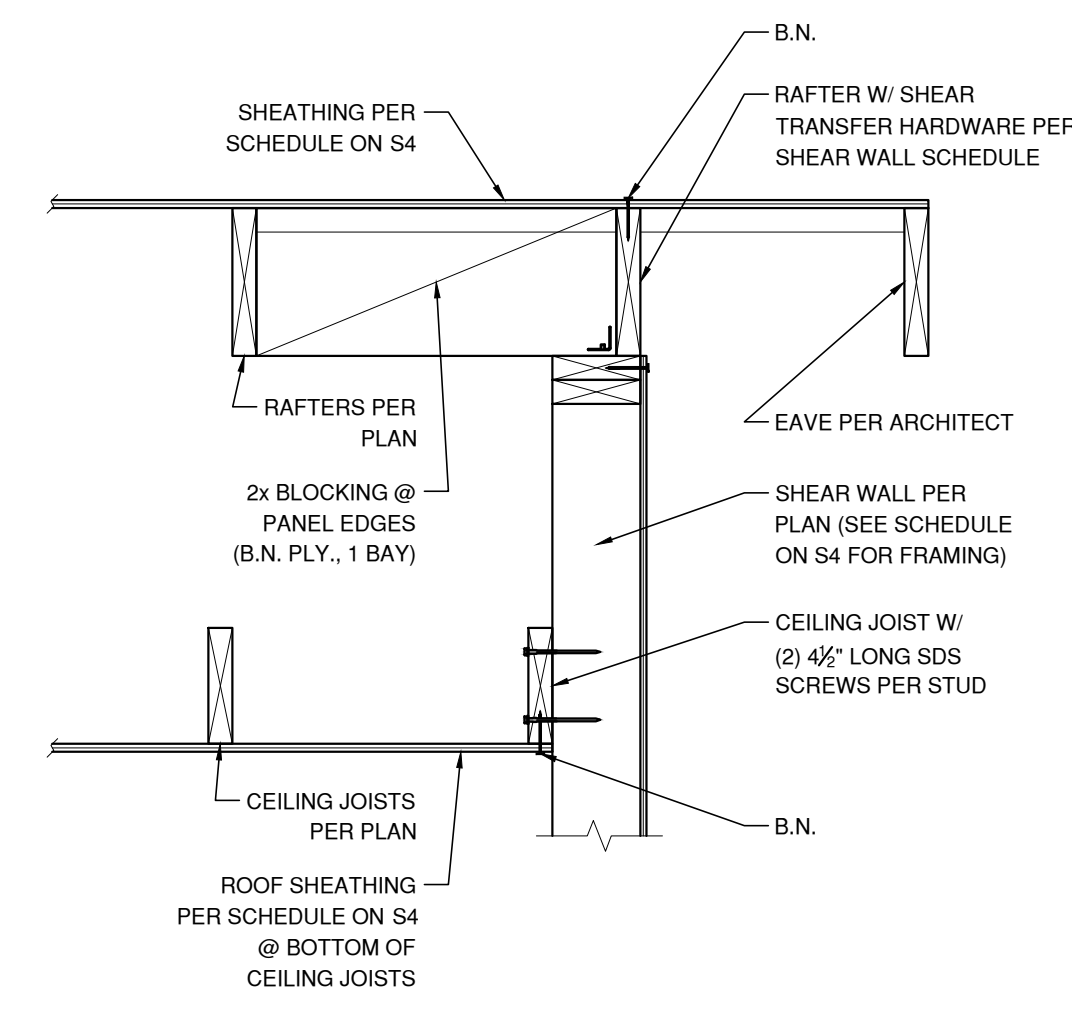
NOTES:
 • SHEAR PANEL NOT SHOWN FOR CLARITY.



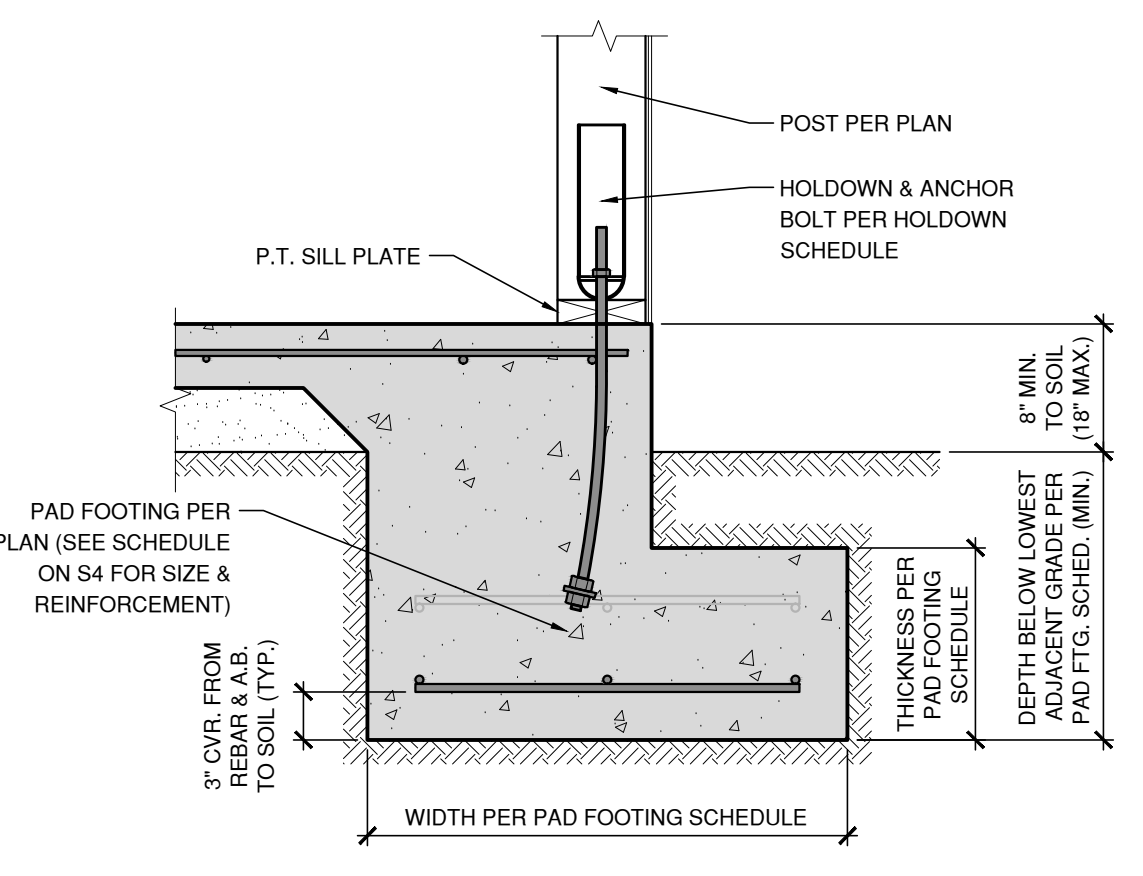
NOTES:
 • SEE STATEMENT OF SPECIAL INSPECTION (SHEET S1) FOR RETROFIT DOWEL INSTALLATION.



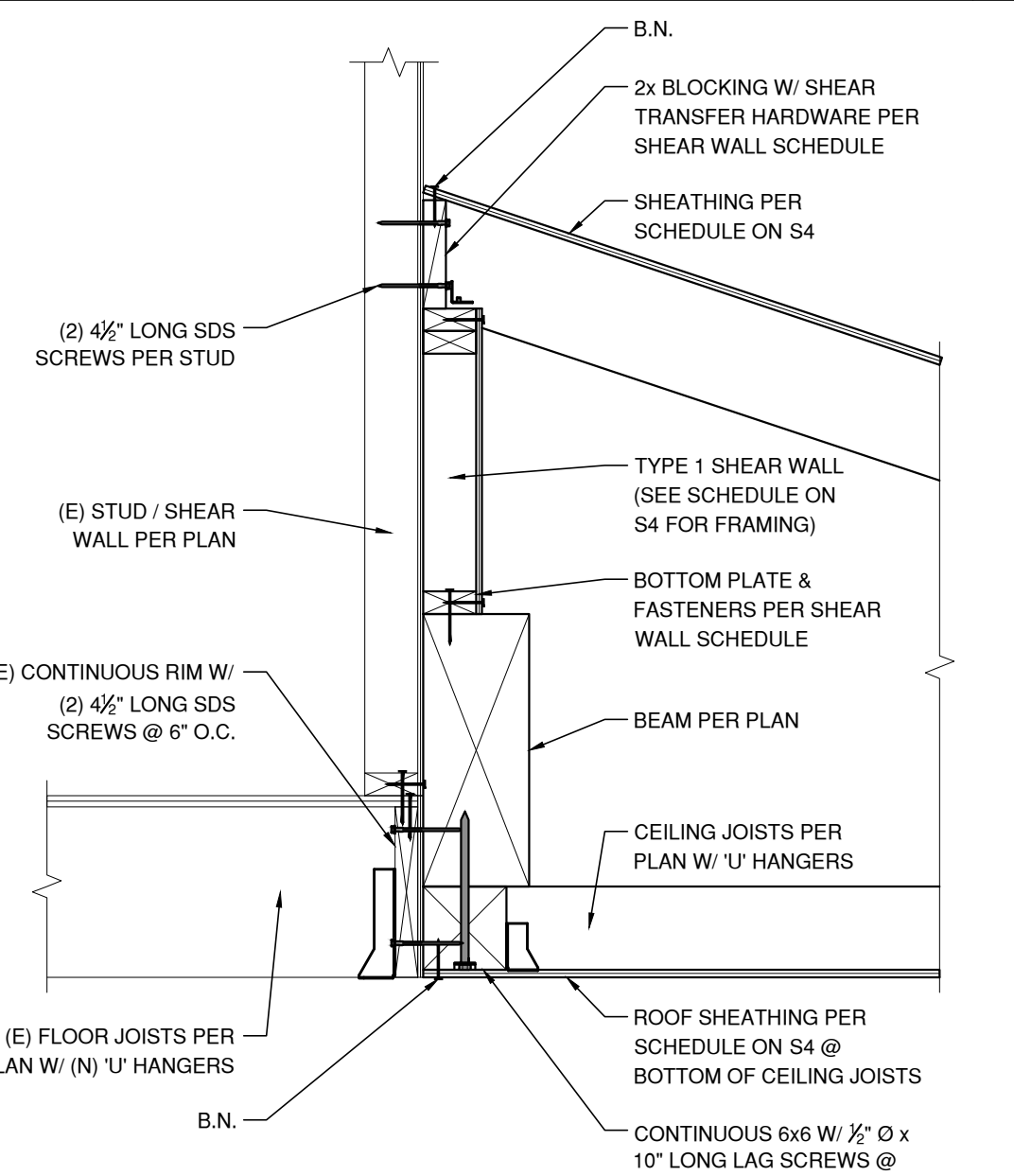
BLANK	DRAG	10	WOOD ROOF	7	CONTINUOUS FOOTING	4	CONTINUOUS FOOTING	1
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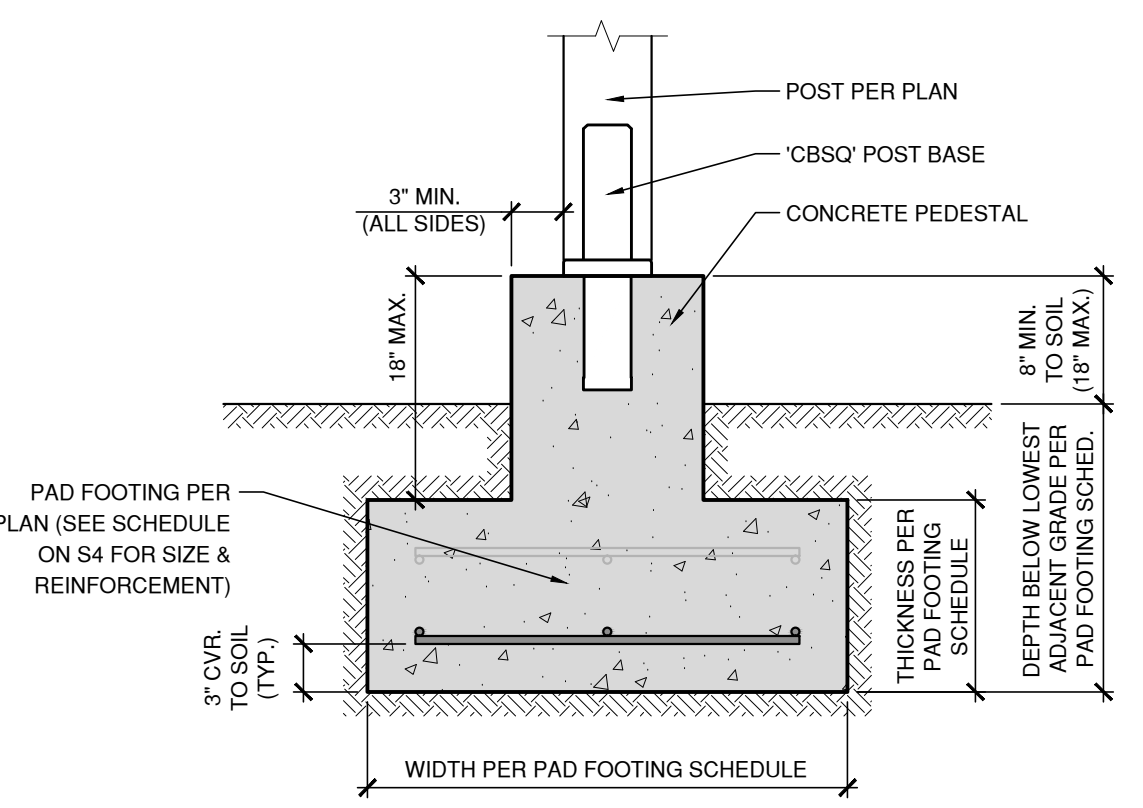
NOTES:
 • SEE STATEMENT OF SPECIAL INSPECTION (SHEET S1) FOR RETROFIT DOWEL INSTALLATION.



BLANK	BLANK		WOOD ROOF	8	(N) FOOTING TO (E) FOOTING	5	PAD FOOTING	2
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NOTES:
 • IF THERE IS BLOCKING INSTEAD OF A CONTINUOUS RIM AT THE EXISTING FLOOR, USE AN 'L' HANGER DIRECTLY TO THE BEAM PER PLAN / 6x6. BLOCKING WILL HAVE TO BE NOTCHED 1\"/>



BLANK	BLANK		WOOD FLOOR / ROOF	9	BLANK		PAD FOOTING	3
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