

3. DESIGN LOADS

- LIVE LOAD (ROOF) = 20 PSF
- LIVE LOAD (CEILING-NO STORAGE) = 10 PSF
- LIVE LOAD (FLOOR) = 40 PSF
- GROUND SNOW LOAD = 15 PSF
- ULTIMATE WIND VELOCITY = 120 MPH
- EXPOSURE CATEGORY = B
- ASSUMED GROUND BEARING CAPACITY 12" BELOW GRADE: 2,000 PSF (CONTRACTOR RESPONSIBLE FOR VERIFICATION)

1. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION.
2. THE CONTRACTOR SHALL COORDINATE THEIR WORK ACTIVITIES WITH THE OWNER OR OWNER REPRESENTATIVE.
3. CONTRACTOR SHALL MAKE A CAREFUL INSPECTION OF THE SITE TO FAMILIARIZE HIM/HERSELF WITH THE ACTUAL CONDITIONS OF THE SITE PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL CHECK AND VERIFY GIVEN DIMENSIONS, TAKE ADDITIONAL DIMENSIONS AS REQUIRED AND REPORT ANY INACCURACIES TO THE ENGINEER.
5. ALL WORK SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS OF THE NORTH CAROLINA STATE BUILDING CODE, THE AISI CODE, THE AISC BUILDING CODE (AISC 318), THE AMERICAN WELDING SOCIETY CODE, ALL APPLICABLE ASTM STANDARDS, AND LOCAL GUIDELINES. IN CASES OF CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
6. CONTRACTOR SHALL COORDINATE AND VERIFY THE SIZE, LOCATION, TYPE, AND DIRECTION OF ALL PADS, DEPRESSIONS, BOLTS, SLEEVES, ANCHORS, INSERTS, OPENINGS, ETC. TO BE SET OR CUT IN CONCRETE OR MAJOR STRUCTURAL ELEMENTS.
7. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS PRIOR TO FOUNDATION LAYOUT AND FABRICATION OF ANY STRUCTURAL MEMBERS. DIMENSIONS SHOWN ARE BASED ON PRELIMINARY DRAWINGS PROVIDED BY THE ARCHITECT/CONTRACTOR AND/OR SITE INSPECTION. THESE DIMENSIONS SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL DESIGN AND INSTALL ALL TEMPORARY SHORING REQUIRED TO STABILIZE NEIGHBORING STRUCTURES AND FOUNDATIONS UNTIL CONSTRUCTION IS COMPLETE.
9. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, SPECIFICATIONS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, AND RESOLVED BEFORE PROCEEDING WITH WORK.
10. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THE STRUCTURE SHOWN IS STRUCTURALLY SOUND IN ITS COMPLETED FORM ONLY. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.
11. APPLY TERMITTE TREATMENT TO GROUND SURFACES WITHIN THE DEFINED SCOPE OF WORK AS REQUIRED BY CODE AND LOCAL BUILDING INSPECTOR.
12. ONLY SEALED DRAWINGS WITH MOST RECENT REVISIONS ARE APPLICABLE FOR CONSTRUCTION.
13. STRUCTURAL PLANS DO NOT INCORPORATE ADA, PLUMBING, MECHANICAL, ELECTRICAL, OR OTHER FEATURES. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY.
14. SECTIONS AND DETAILS SHOWN AT LOCATIONS INDICATED ON PLAN ARE TYPICAL FOR OTHER SIMILAR CONDITIONS OF BUILDING, EVEN IF NO SECTION CUT IS INDICATED AT A SIMILAR LOCATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DETAILS WITH OTHER TRADES, DISCIPLINES, AND ALL SECTIONS AND DETAILS WITHIN STRUCTURAL DOCUMENTS. CONTRACTOR SHALL TERMINATE THESE STRUCTURAL DRAWINGS WITH DRAWINGS OF OTHER DISCIPLINES SHOULD A CONFLICT OR DEVIATION BE NOTED. THEY SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF SUBJECT DESIGNERS FOR REVIEW.
15. IN THE CASE WHERE NEW STRUCTURE IS INTEGRATED INTO EXISTING STRUCTURE, THE EXISTING STRUCTURE IS TO REMAIN UNMODIFIED UNLESS EXPLICITLY DESCRIBED IN THE DESIGN PLANS. ANY DAMAGE TO EXISTING STRUCTURE IDENTIFIED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR REVIEW PRIOR TO RESUMING WORK.
16. THE SCOPE OF THIS PROJECT IS CONTAINED IN THIS DRAWING AND WAS PERFORMED ON A FLAT RATE U.N.O. THE ENGINEER'S PROFESSIONAL LIMIT OF LIABILITY FOR THIS PROJECT IS 10 TIMES THE FEES COLLECTED.

ALL BOTTOM OF FOOTINGS SHALL BE CAST A MINIMUM OF 12" BELOW ORIGINAL GROUND LINE AND IN NO CASE ABOVE THE FROST LINE BASED ON 2018 NBC AND LOCAL STANDARDS. NO FILL SHALL BE PLACED IN THE FOOTING.

ALL FILL SHALL BE PLACED IN 8" MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-698 (STANDARD PROCTOR METHOD). THIS REQUIREMENT SHALL BE INCREASED TO 98 PERCENT OF ASTM D-698 IN THE FINAL FOOT BENEATH FLOOR SLABS AND PAVEMENTS.

ONCE FOOTINGS ARE ABLE TO HANDLE LATERAL LOADING, BACKFILL WITH ENGINEERED STONE OR NO. 57 STONE IN 8" UNIFORM LIFTS. EXTERIOR OF THE FOOTING MAY BE BACKFILLED WITH UNIFORM 3/4" SAND. THIS SAND IS COMPACTED TO 95% OF THE DRY DENSITY BEYOND THE PLACEMENT OF THE FOOTING DRAIN.

A 10 MIL PAVEMENT BARRIER IS TO BE PLACED OVER THE ENTIRETY OF THE SUB-BASE, PRIOR TO PLACEMENT OF THE FLOOR INSULATION AND ANY CONCRETE SLAB-ON-GRADE. WITHIN CRAWL SPACES A MINIMUM 6-MIL PAVEMENT BARRIER SHALL BE INSTALLED ON BARE SOILS.

1. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
2. CLEAR CONCRETE COVER OVER BARS SHALL BE 3" FOR FOOTINGS AND OTHER CONCRETE CAST AGAINST CONCRETE. CONCRETE COVER AT OTHER LOCATIONS TO BE A MINIMUM 1.5" (TYP. U.N.O.)
3. PROVIDE CORNER BARS AT ALL FOOTING STEPS AND CORNERS. THE REINFORCING BARS SHALL BE A MINIMUM OF 2"-6" LONG AND SHALL HAVE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING.
4. LAP OR SPICE REINFORCEMENT CONCRETE AS SPECIFICALLY CALLED FOR, BUT AT LEAST 48 BAR DIAMETERS FOR TENSION OR COMPRESSION, UNLESS NOTED OTHERWISE.
5. PROVIDE VERTICAL REINFORCEMENT IN FOUNDATION WALLS FOR UNBALANCED BACKFILL IN ACCORDANCE WITH APPLICABLE DESIGN DETAILS. WHERE NOT DETAINED IN PLAN, REINFORCEMENT SHALL BE INSTALLED PER TABLE R404.1.1(1) & (2) IN THE 2018 NBCG-RC.
6. REINFORCING BARS SHALL BE DEFORMED AND CONFORMING TO ASTM A615, GRADE 60.
7. WELDED FIBER FABRIC REINFORCEMENT SHALL BE CONFORMING TO ASTM A615/A616, NOTED ROLLS, U.N.O. MINIMUM 6X6 - W2 x 9 W2.9 WELDED WIRE FABRIC, MINIMUM 1.5" FROM BOTTOM OF CONCRETE SLAB ON GRADES. AS AN ALTERNATIVE TO WELDED WIRE FABRIC REINFORCEMENT, FIBER REINFORCEMENT AT 1.5 POUNDS PER CUBIC YARD MAY BE UTILIZED.

1. CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (LATEST EDITION), ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (LATEST EDITION), AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (LATEST EDITION).
2. MIX DESIGN SHALL BE IN ACCORDANCE WITH ACI 318 (CURRENT EDITION).
3. MINIMUM CEMENT CONTENT = 500 LBS PER CUBIC YARD.
4. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS (3,000 PSI FOR SLABS-ON-GRADE).
5. MAXIMUM SLUMP = 4" PLUS OR MINUS 1" PRIOR TO THE ADDITION OF ADMIXTURES.
6. THE MAX. AGGREGATE SIZE SHALL BE 3/4" UNLESS MIX DESIGN IS APPROVED BY ENGINEER.
7. CONCRETE AGGREGATES SHALL COMPLY WITH ASTM C33 AND SHALL BE FREE OF CLAY, FOAM, LUMPS, OR OTHER DELETERIOUS SUBSTANCES.
8. CONCRETE SHALL BE CONSOLIDATED USING CONCRETE VIBRATOR IN ACCORDANCE WITH ACI 309R-05.
9. EXTERIOR SLABS SHALL HAVE 6% $\pm$ 1% AIR ENTRAINMENT. DO NOT USE AIR ENTRAINMENT ON INTERIOR SLABS (3% MAXIMUM AIR ENTRAINMENT). AIR ENTRAINMENT SHALL COMPLY WITH ASTM C260.
10. THE CONTROL JOINT SPACING SHALL BE A MAXIMUM OF 12' OR AS SHOWN ON PLANS FOR A 4" THICK SLAB. PLACE CONTROL JOINTS TO AVOID RE-ENTRANT CORNERS. MAKE SAWCUTS TO FORM WEAKEN PLANE CONTROL JOINTS AS SOON AS POSSIBLE.

1. MORTAR MATERIALS:
 - PORTLAND CEMENT, ASTM C150, TYPE 1
 - MASONRY CEMENT, ASTM C91, TYPE "S" FOR STD. STRENGTH CMU, TYPE "M" FOR HIGH STRENGTH CMU
2. HORIZONTAL JOINT REINFORCEMENT
 - 9 GAUGE, GALVANIZED STEEL WIRE, LADDER TYPE FOR MULTIPLE WYTHE WALLS, TRUSS TYPE FOR SINGLE WYTHE WALLS.
 - LIGHTWEIGHT CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 FOR LOAD BEARING CONCRETE MASONRY UNITS. MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI. SEE DETAILS FOR LOCATIONS OF HIGH STRENGTH CMU (F'M = 4800 PSI).
3. GROUT FOR USE IN MASONRY WALLS SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. GROUT MIX SHALL HAVE MAXIMUM SLUMP OF 8".
4. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS AND WEBS. USE HORIZONTAL JOINT REINFORCEMENT AT 16" CENTERS IN ALL CMU WALLS, UNLESS NOTED OTHERWISE. GROUT SOLID ALL CELLS AND COURSES WITH BAR REINFORCEMENT AND GROUT SOLID ALL CELLS BELOW GRADE.

1. FRAMING STANDARD: COMPLY WITH AF&PA'S "DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION", UNLESS OTHERWISE INDICATED.
2. ALL EXTERIOR WALLS SHALL BE FRAMED WITH 2x4 STUDS SPACED AT 16" O.C., U.N.O. (MAXIMUM HEIGHT = 10'-0").
3. ALL INTERIOR WALLS SHALL BE FRAMED WITH 2x4 STUDS SPACED AT 16" O.C., U.N.O. (MAXIMUM HEIGHT = 10'-0").
4. ALL WALLS TO BE BALLOON FRAMED FROM BOTTOM PLATE TO TOP PLATE, U.N.O. SPECIAL CARE SHALL BE OBSERVED DURING CONSTRUCTION OF WALLS WITH STUDS GREATER THE 10' IN HEIGHT TO ENSURE CONTINUITY.
5. USE 12" LONG 1-1/2" DIAMETER ANCHOR BOLTS, 7" MINIMUM EMBEDMENT IN CONCRETE, AT A MAXIMUM OF 6" ON CENTER AND A MAXIMUM OF 12" FROM CORNERS AND OPENINGS EXCEEDING 4' IN WIDTH.
6. NAIL 2X BOTTOM PLATE TO RIM JOIST BELOW WITH 16D NAILS AT 4" O/C SPACING.
7. METAL FRAMING ANCHORS: INSTALL METAL FRAMING ANCHORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. ALL SPLICES SHALL BE MADE ABOVE EXTERIORS BETWEEN SUPPORTS UNLESS OTHERWISE INDICATED.
9. WHERE BUILT-UP BEAMS OR GIRDERS OF 2-INCH NOMINAL DIMENSIONAL LUMBER ON EDGE ARE REQUIRED, FASTEN TOGETHER WITH 3 ROWS OF 16D NAILS SPACED NOT LESS THAN 24" O.C. LOCATED ONE ROW 1.5" FROM TOP EDGE AND ONE ROW 1.5" FROM BOTTOM EDGE.
10. WHERE MULTI-PLY LVL BEAMS ARE REQUIRED, FASTEN TOGETHER WITH 2 ROWS OF FASTENMASTER FLATLOK STRUCTURAL WOOD SCREWS, EACH ROW SPACED 16". USE 3.5" LONG FLATLOK SWS FOR 2-PLY LVL; USE 5" LONG SWS FOR 3-PLY LVL; USE 6.5" LONG FLATLOK SWS FOR 4-PLY LVL. LONGER SCREWS SHALL BE NECESSARY IF PLYWOOD OR OSB SHEATHINGS ARE INSTALLED BETWEEN LVL PILES.
11. FOR BUILT-UP (GANG) COLUMNS, CONNECT EACH PLY W/ (2) ROWS OF 10D NAILS AT 12" O/C PROVIDE HORIZONTAL STRAPPING FOR COLUMN PILES GREATER THAN 3'.
12. INSTALL EQUIVALENT, SLOD BLOCKING BELOW ALL STUD GROUPS TO ENSURE CONTINUOUS LOAD PATH TO THE FOUNDATION.
13. FLOOR STRAP TIES, LAP EXTERIOR SHEATHING PANELS AT LEAST 24" ABOVE BOTTOM PLATE OR BELOW TOP PLATE.
14. SEE FRAMING PLANS FOR ALL BEARING HEADER SIZES. MINIMUM HEADER SIZE 2-2x8 (U.N.O.)
15. ALL ROOF FRAMING MUST BE TIED TO THE FRAMING BELOW WITH SIMPSON H-24 TIES, TRUSS SCREWS, OR EQUIVALENT FASTENING MECHANISM.
16. ALL LUMBER EXPOSED TO CONCRETE/MASONRY OR WEATHER MUST BE PRESERVED TREATED.
17. ALL FASTENERS/METAL HARDWARE EXPOSED TO WEATHER MUST BE GALVANIZED.
18. ALL FASTENING TO BE REFERRED TO TABLE R602.3(5) IN THE 2018 NBCIRC.
19. ALL DECK FRAMING COMPONENTS ARE TO BE INSTALLED PER 2018 NBCIRC.R. APPENDIX M.
20. PROVIDE KING STUDS AT NEW EXTERIOR OPENINGS PER 2018 NBCIRC. PLATE R602.3(5) SUBNOTE "G". ONE HALF OF THE STUDS INTERRUPTED BY A WALL OPENING SHALL BE PLACED IMMEDIATELY OUTSIDE THE JACK STUDS ON EACH SIDE OF THE OPENING AS KING STUDS. KING STUDS SHALL EXTEND FULL HEIGHT FROM SOLE PLATE TO TOP PLATE OF WALL.
21. ALL FASTENING TO BE REFERRED TO TABLE R602.3(5) IN THE 2018 NBCIRC.
22. PROVIDE DOUBLE JOISTS BELOW INTERIOR WALLS PARALLEL TO THE FLOOR FRAMING U.N.O.
23. PROVIDE STEEL ANGLE LINTELS ABOVE EXTERIOR OPENINGS TO SUPPORT MASONRY VENEER PER TABLE R703.8.3.1.

1. MAXIMUM MOISTURE CONTENT: 19%.
2. NO 2 GRADE OR BETTER (EXCEPT STUD WALLS) AND ANY OF THE FOLLOWING SPECIES:
 - HEM-FIR (NORTH), NLGA.
 - SOUTHERN PINE, SPIB.
 - DOUGLAS FIR-LARCH, WCLIB OR WWPA.
 - MIXED SOUTHERN PINE, SPIB.
 - SPRUCE-PINE-FIR, NLGA.
 - DOUGLAS FIR-SOUTH, WWPA.
 - HEM-FIR, WCLIB OR WWPA.
 - DOUGLAS FIR-LARCH (NORTH), NLGA.
3. EXTERIOR, LOAD BEARING AND INTERIOR PARTITION WALLS: ANY SPECIES (STUD GRADE OR BETTER) WITH A MODULUS OF ELASTICITY OF AT LEAST 1,300,000 PSI AND EXTREME FIBER STRESS IN BENDING OF AT LEAST 650 PSI FOR 2" NOMINAL THICKNESS AND 12" NOMINAL WIDTH FOR A SINGLE MEMBER USE.
4. JOISTS, RAFTERS, AND OTHER FRAMING NOT LISTED ABOVE: ANY SPECIES (NO 2 OR BETTER) WITH A MODULUS OF ELASTICITY OF AT LEAST 1,300,000 PSI AND EXTREME FIBER STRESS IN BENDING OF AT LEAST 650 PSI FOR 2" NOMINAL THICKNESS AND 12" NOMINAL WIDTH FOR SINGLE MEMBER USE.
5. USE ONLY KILN DRIED PRESSURE TREATED 2X FOR BLOCKING AT PIERS.

1. LAMINATED VENEER LUMBER: STRUCTURAL COMPOSITE LUMBER MADE FROM WOOD VENEERS WITH GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, EVALUATED AND MONITORED ACCORDING TO ASTM D5456 AND MANUFACTURED WITH AN EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM D2559 AND CONTAINING NO UREA FORMALDEHYDE.
2. AVAILABLE MANUFACTURERS: SUBJECTS TO COMPLIANCE WITH REQUIREMENTS MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - BOISE CASCADE CORPORATION
 - GEORGIA-PACIFIC
 - LOUISIANA-PACIFIC CORPORATION
 - ROSEBURG FOREST PRODUCTS CO.
 - WELLDWOOD OF CANADA LIMITED, SUBSIDIARY OF INTERNATIONAL PAPER COMPANY
 - WEYERHAEUSER COMPANY

EXTREME FIBER STRESS IN BENDING, EDGEWISE: 3,000 PSI FOR 12" NOMINAL DEPTH MEMBERS.

MODULUS OF ELASTICITY, EDGEWISE: 2,000,000 PSI.

3. WRAPPING, WEATHER, PROOFING, AND FLASHING REQUIREMENTS/SPECIFICATIONS AT ENGINEERED WOOD MEMBERS SHALL BE DETERMINED BY OTHERS.
4. PARALLEL-STRAND LUMBER: STRUCTURAL COMPOSITE LUMBER MADE FROM WOOD STAND ELEMENTS WITH GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, EVALUATED AND MONITORED ACCORDING TO ASTM D5456 AND MANUFACTURED WITH AN EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM D2559 AND CONTAINING NO UREA FORMALDEHYDE. EXTREME FIBER STRESS IN BENDING, EDGEWISE: 2,900 PSI FOR 12" NOMINAL DEPTH MEMBERS.

MODULUS OF ELASTICITY, EDGEWISE: 2,000,000 PSI.

1. UNLESS NOTED OTHERWISE: SHEATH ROOF AND WALLS WITH EXPOSURE 1, 7/16" THICK APA RATED OSB (SPAN RATING 32/16) WITH 8D NAILS AT 6" O/C EDGES, 12" O/C FIELD. BLOCKING NOT REQUIRED AT PANEL EDGES AT ROOF SHEATHING.
2. WHERE TOP CHORD IS DISCONTINUOUS, APPLY MSTC40 STRAP TO COMPLETE THE TENSILE LOAD PATH. POSITION TOP CHORD SPLICES OVER WALL STUDS.
3. INSTALL "H" CLIPS AT PANEL EDGES BETWEEN EACH RAFTER/TRUSS FOR ALL ROOF SHEATHING WITH RAFTER SPACING GREATER THAN 24".
4. NAIL ALL SHEATHING AT GABLE AND EAVE ROOF OVERHANGS WITH 8D NAILS AT 6" O/C EDGES, 6" O/C FIELD.
5. NAIL ALL SHEATHING AT PERIMETER AND PEAK OF ROOF WITH 8D NAILS AT 6" O/C EDGES, 6" O/C FIELD.
6. NAIL ALL SHEATHING WITHIN 4'-0" OF WALL CORNERS WITH 8D NAILS AT 6" O/C EDGES, 12" O/C FIELD.
7. SUBFLOORING SHALL BE IN ACCORDANCE WITH TABLE R503.1 WITHIN RESIDENTIAL BUILDING. CALL FOR ENGINEER APPROVED ALTERNATIVE.
8. MEMBERS AND BLOCKING AT ADJOINING PANEL EDGES SHALL BE MINIMUM 3" NOMINAL OR DOUBLE 2" NOMINAL WITH STAGGERED NAILING AT ALL PANEL EDGES.
9. HORIZONTAL BLOCKING MAY BE 2X LAID FLAT AGAINST SHEATHING.
10. AT EXISTING STRUCTURE WHERE SHEATHING IS IN PLACE, NEW SHEATHING SHALL BE KEYS IN A MINIMUM OF 2" WITHIN EVERY OTHER SHEATHING PANEL.

1. PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURER.
2. WHERE HIGH RELATIVE HUMIDITY IS EXPOSED TO WEATHER, IN GROUND CONTACT, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIPPED ZINC COATING COMPLYING WITH ASTM A153 A153M.
3. POWER DRIVEN FASTENERS: CABO NER-272
WOOD SCREWS: ASTM B18.6.1
LAG BOLTS: ASME B18.2.1
STEEL BOLTS COMPLYING WITH ASTM A-307, GRADE 1 (ASTM F568M, PROPERTY CLASS 5.0); WITH ASTM A563 (ASTM A563M) HEX NUTS AND, WHERE INDICATED, FLAT WASHERS.
4. EXPANSION ANCHORS: ANCHOR BOLTS AND SLEEVE ASSEMBLY OF MATERIAL INDICATED BELOW WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 6 TIMES THE LOAD IMPOSED WHEN INSTALLED IN UNIT MASONRY ASSEMBLIES AND EQUAL TO 4 TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE, AS DETERMINED BY TESTING PER ASTM E488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY.
5. MATERIAL: CARBON-STEEL COMPONENTS, ZINC PLATED TO COMPLY WITH ASTM B633, CLASS FE/ZN 5.

1. ALL EPOXY SHALL BE SIMPSON BRAND "SET" EPOXY SYSTEM, OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.
2. EPOXY ADHESIVES TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
3. EPOXY ANCHOR BOLTS TO BE SIZED AS SHOWN IN NOTES/DETAILS AND SHALL CONFORM TO THE FOLLOWING:
 - ANCHOR BOLTS INTO FOUNDATION: ASTM F1554, GRADE 36
 - ALL OTHER APPLICATIONS: ASTM 307, U.N.O.
4. ALL EPOXY ANCHOR BOLTS AND REBAR DOWELS SHOULD BE CLEAN AND OIL FREE.
5. CONCRETE DUST SHALL BE REMOVED FROM ALL DRILLED HOLES BY USE OF A NYLON BRUSH AND OIL FREE COMPRESSED AIR. CORRECT PROCEDURE INVOLVES BLOWING THE DUST OUT OF THE HOLE, BRUSHING THE HOLE CLEAN, AND THEN BLOWING AGAIN.
6. DRILLED HOLES SHALL BE KEPT DRY AND ANY STANDING WATER MUST BE BLOWN OUT WITH OIL FREE COMPRESSED AIR AND ALLOWED TO DRY PRIOR TO EPOXY INSTALLATION.
7. EPOXY SHALL NOT BE INSTALLED IN CONCRETE WHICH IS LESS THAN 7 DAYS OLD.
8. EPOXY ADHESIVES MUST BE ALLOWED THE FULL CURE TIME AS SPECIFIED BY THE MANUFACTURER PRIOR TO APPLICATION OF ANY LOAD AND ANCHOR BOLTS OR REBAR DOWELS MUST REMAIN UNDISTURBED DURING THIS SETTING PERIOD.
9. EPOXY ADHESIVE ANCHORS ARE NOT TO BE USED EXCEPT WHERE SPECIFICALLY INDICATED ON PLANS.

&	= AND	GA.	= GAUGE
@	= AT	HT.	= HEIGHT
A/E	= ARCHITECT/ENGINEER	MAX.	= MAXIMUM
A.	= ARCHITECTURAL	MECH.	= MECHANICAL
B.O.	= BY OTHERS	MFR.	= MANUFACTURER
B.P.	= CEILING JOIST	MIN.	= MINIMUM
C.L.	= CENTER LINE	N.T.S.	= NOT TO SCALE
C.M.U.	= CONCRETE MASONRY UNIT	O.C.	= ON CENTER
CONC.	= CONCRETE	P.A.F.	= POWER ACTUATED FASTENER
CONT.	= CONTINUOUS	PL	= PLATE
DEFL.	= DEFLECTION	REQ.	= REQUIRED
DIA.	= DIAMETER	SI.	= SIMILAR
DWG.	= DRAWING	STL.	= STEEL
ELEV.	= ELEVATION	SW	= SHEAR WALL
ENGR.	= ENGINEER	STR.	= STRUCTURAL
E.O.S.	= EDGE OF SLAB	TEMP.	= TEMPORARY
E.	= EQUAL	TYP.	= TYPICAL
EW	= EACH WAY	U.N.O.	= UNLESS NOTED OTHERWISE
EX.	= EXISTING	V.E.T.	= VERTICAL
FLR.	= FLOOR	W/	= WITH
F.J.	= FLOOR JOISTS		

2x JACK STUDS / 2x KING STUDS	(#)J/(#)K
2x STUD COLUMN	(#)SC
HEADERS NOT LABELED	2-2x8
BLOCKING BELOW PT. LOADS	

NOTE: HEADERS IN NON-LOAD BEARING INTERIOR WALLS ARE NOT SHOWN FOR CLARITY AND SHALL BE A MIN. 2-2x4

The logo for Built Up Engineers features a stylized 'BU' in blue and orange, followed by the text 'BUILT UP' in blue and 'ENGINEERS' in orange.

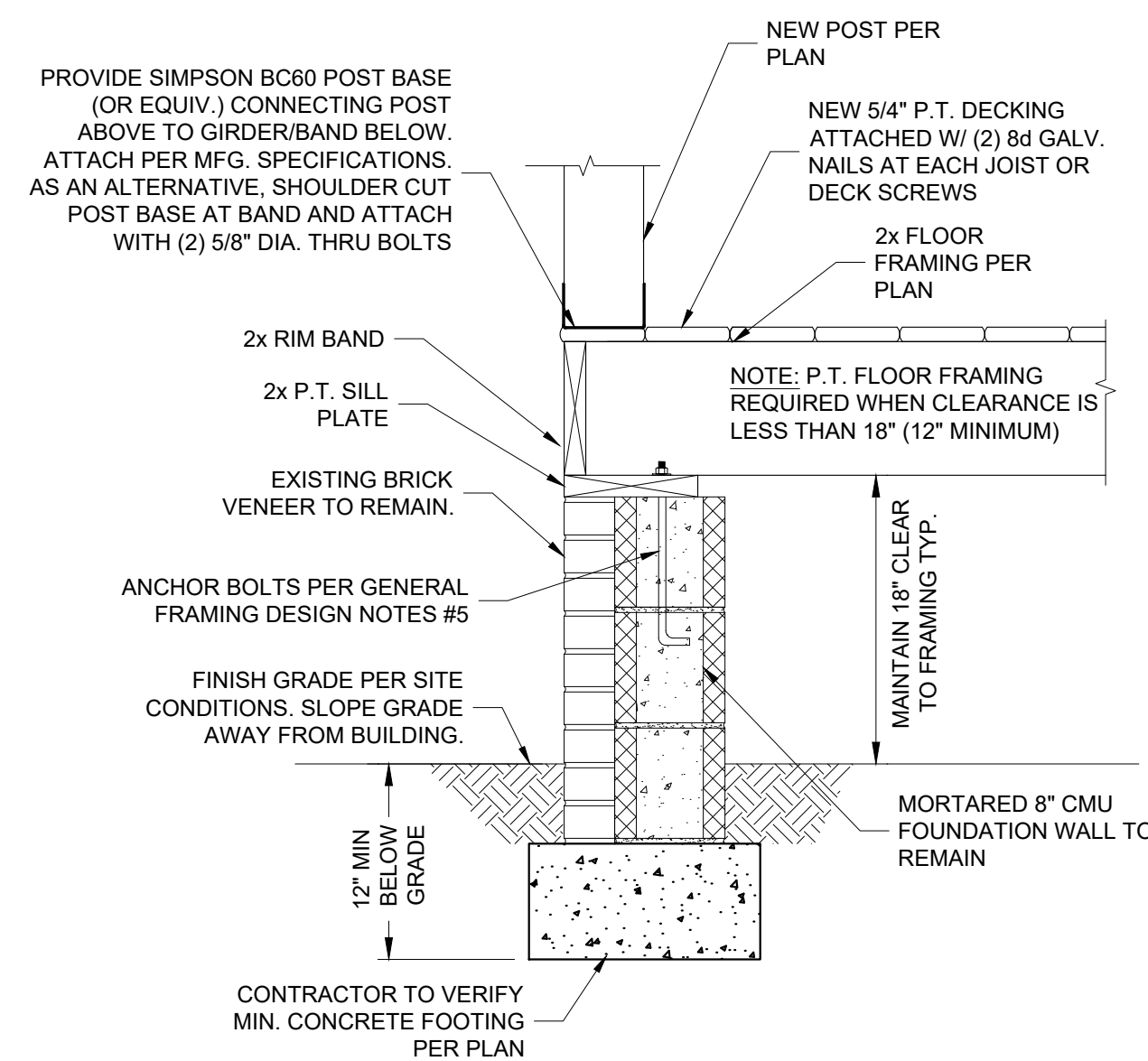
PRINCE RESIDENCE
PORCH STRUCTURAL PLANS

255 SURE FIRE LN.
SANFORD, NC

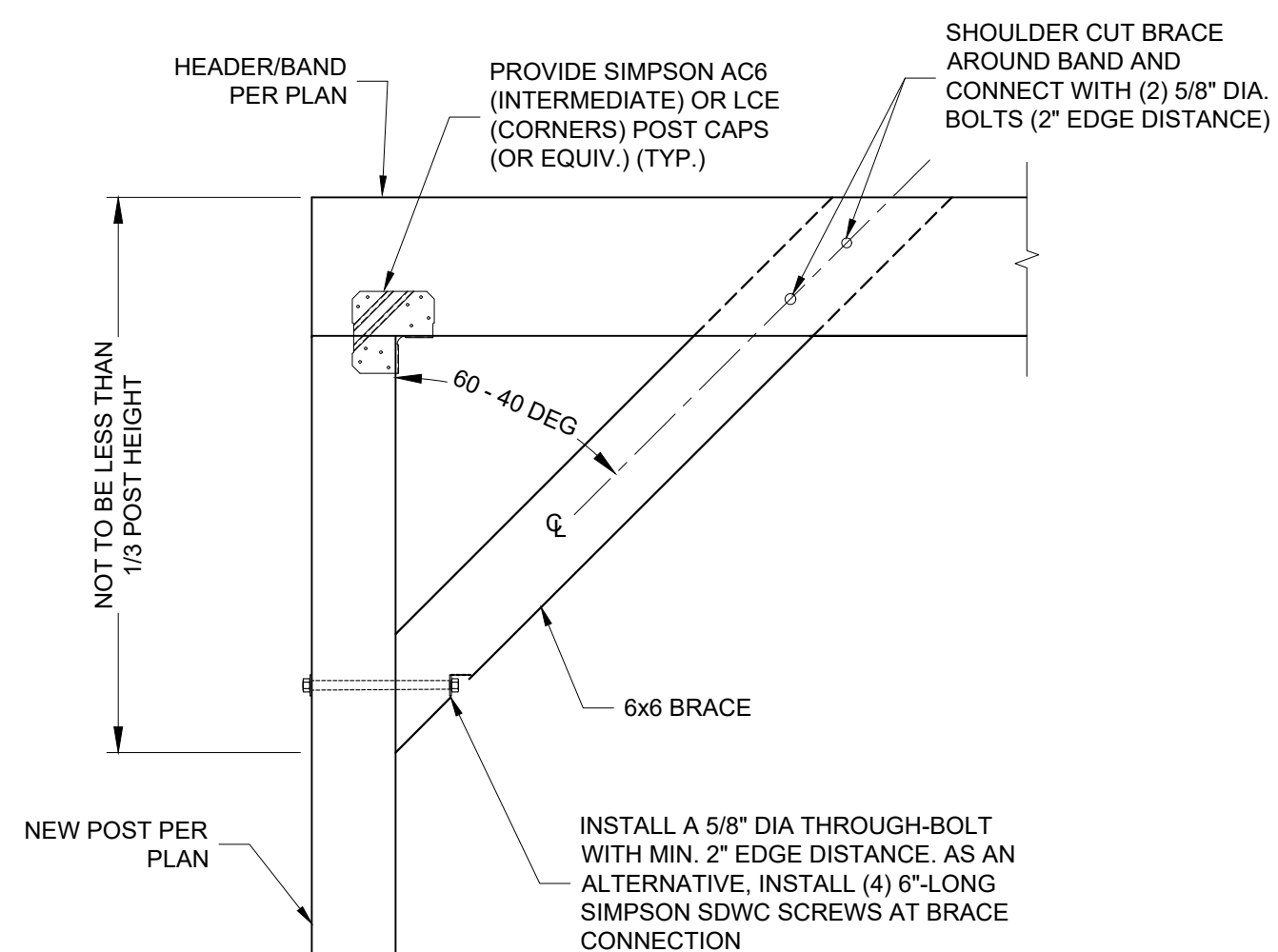
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DATE: JULY 09, 2025

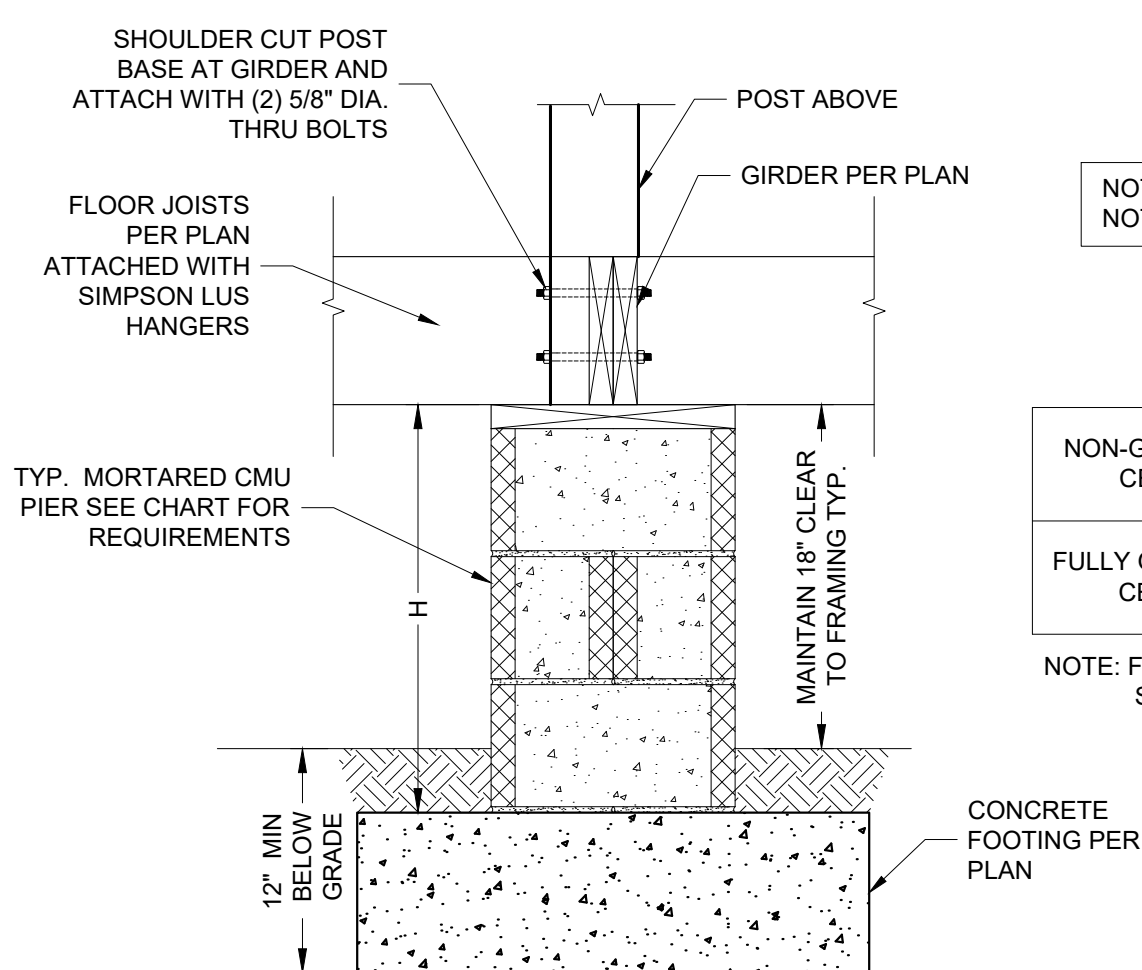
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1 TYP. FLOOR FRAMING AND FDN. WALL
S2.0 SCALE: N.T.S.



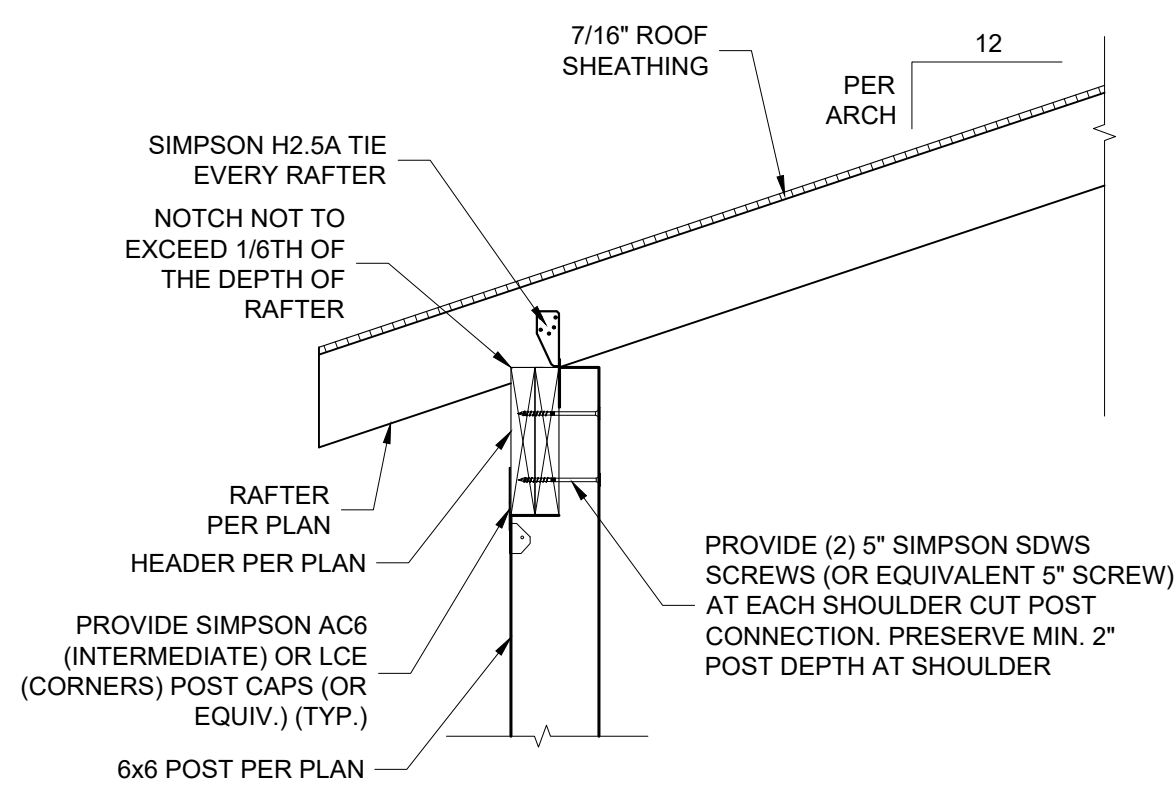
2 TYP. KNEE BRACE CONNECTIONS
S2.0 SCALE: N.T.S.



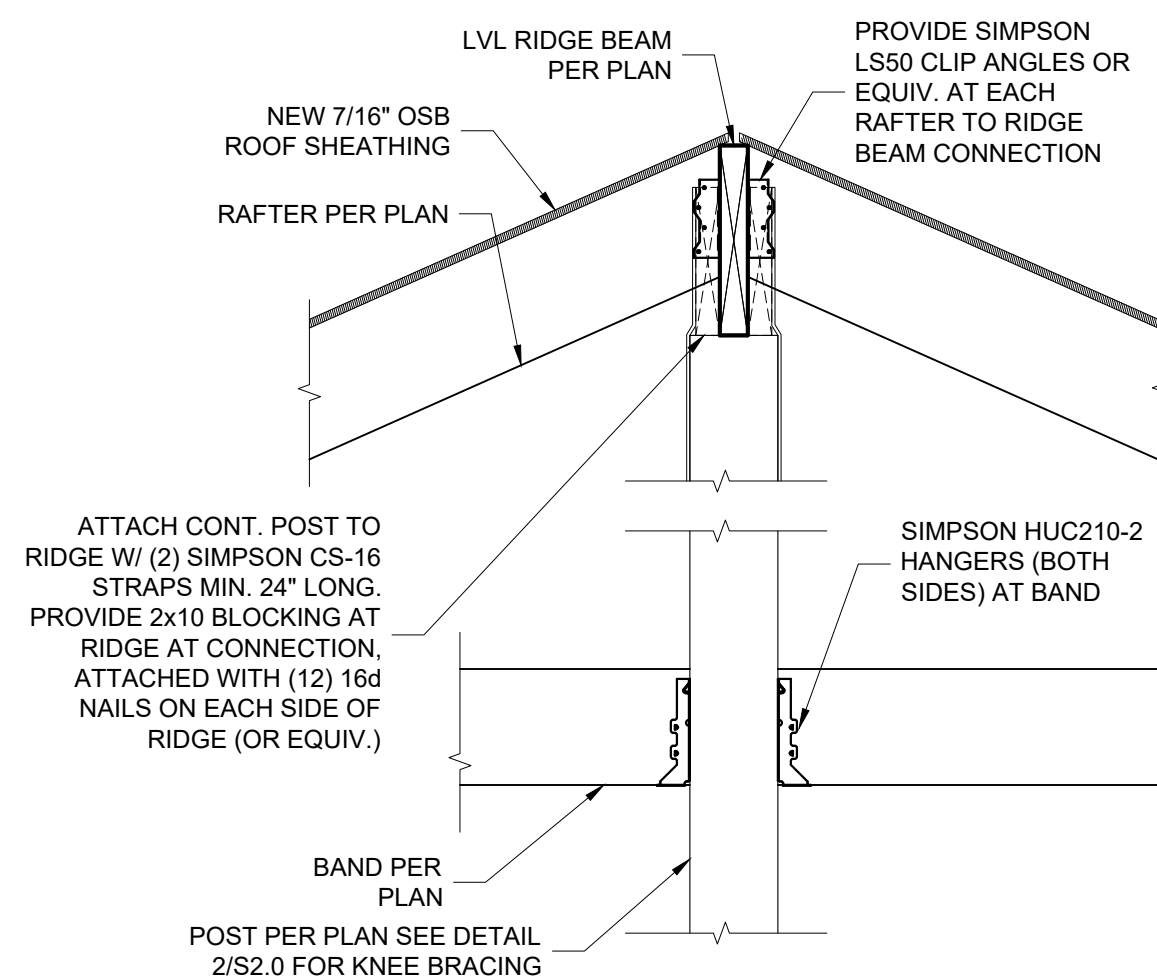
	PIER SIZE	MAX. PIER HEIGHT (H _p)
NON-GROUTED CELLS	8x16	2'-8"
	16x16	5'-4"
FULLY GROUTED CELLS	8x16	6'-8"
	16x16	13'-4"

NOTE: FOR NON-GROUTED PIERS, PROVIDE 4" SOLID CAP BLOCK

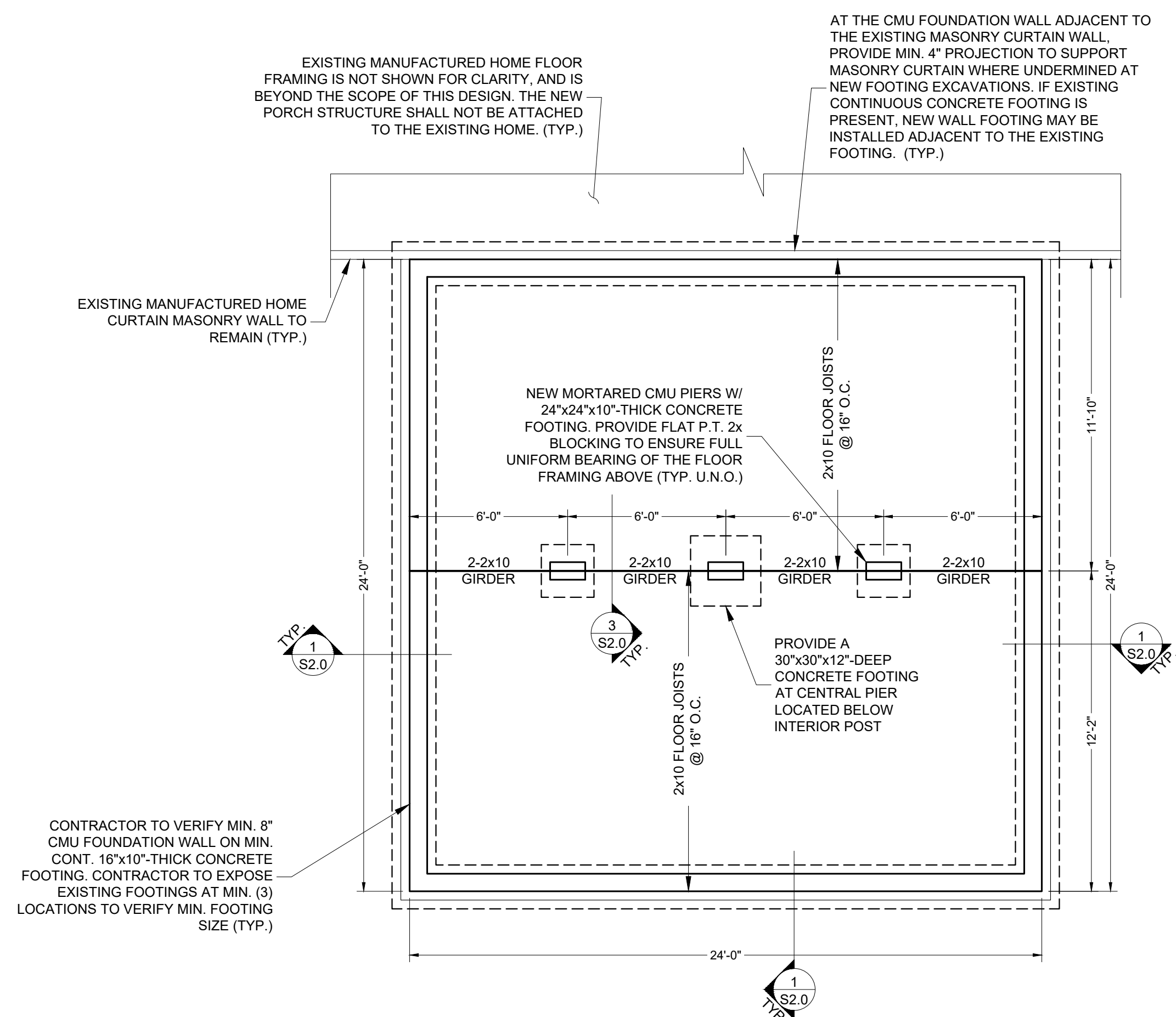
3 TYP. GIRDER AND CMU PIERS
S2.0 SCALE: N.T.S.



4 TYP. RAFTER/HEADER CONNECTIONS
S2.0 SCALE: N.T.S.

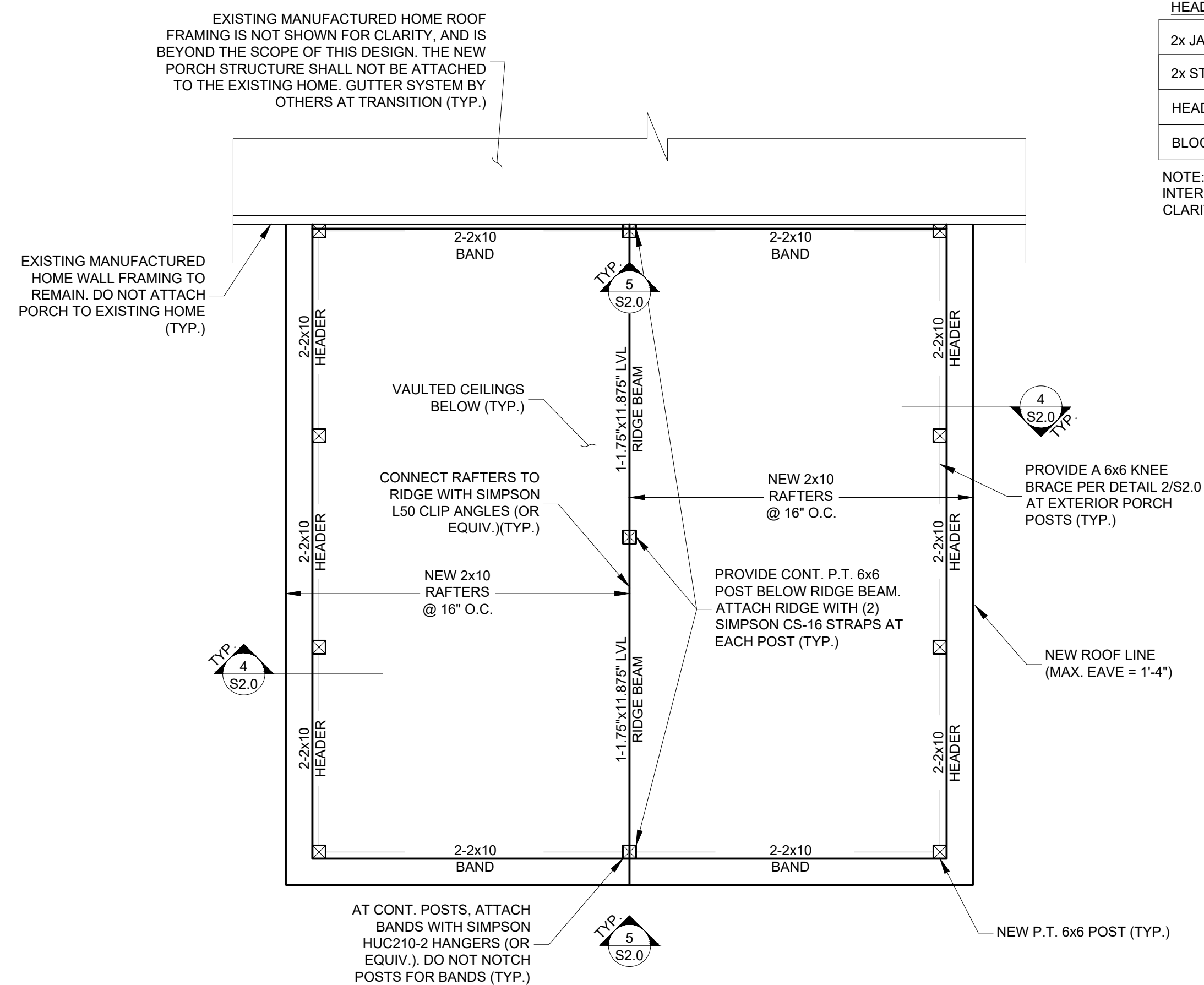


5 TYP. RIDGE CONNECTIONS
S2.0 SCALE: N.T.S.



FOUNDATION AND FIRST FLOOR FRAMING PLAN

SCALE: 1/4" = 1'-0"



NEW ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"



7283 VETERANS PARKWAY, STE: 102-148 RALEIGH, NC 27603
P: 919-817-9915
NC LICENSE NO. P-2664

PRINCE RESIDENCE PORCH STRUCTURAL PLANS

255 SURE FIRE LN.
SANFORD, NC

HEADER AND STUD SCHEDULE (U.N.O.)

2x JACK STUDS / 2x KING STUDS	(#)J/(#)K
2x STUD COLUMN	(#)SC
HEADERS NOT LABELED	2-2x8
BLOCKING BELOW PT. LOADS	

NOTE: HEADERS IN NON-LOAD BEARING INTERIOR WALLS ARE NOT SHOWN FOR CLARITY AND SHALL BE A MIN. 2-2x4

[illegible]

SCALE: AS SHOWN
REVIEWED BY: TLT
DRAWN BY: TLT
DATE: JULY 09, 2025

S2.0