GENERAL STRUCTURAL NOTES

GENERAL NOTES

1) THE INTENT OF THESE DRAWINGS IS TO SHOW ALL ITEMS NECESSARY TO COMPLETE THE STRUCTURE. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN. THE MINIMUM REQUIREMENTS OF THE 2018 NCRC NCBC SHALL GOVERN. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL OTHER APPLICABLE BUILDING CODES, SOIL REPORTS, REGULATIONS AND SAFETY REQUIREMENTS.
2) WHERE CONFLICTS OCCUR BETWEEN GENERAL NOTES AND SPECIICATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE CALLED FOR OR SHOWN.
3) THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, TEMPORARY BRACING AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY. DURING THE CONSTRUCTION OF THIS BUILDING SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL FLOORS, ROOF AND WALL SHEATHING HAVE BEEN ENTIRELY CONSTRUCTED. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER OR CONSTRUCTION MANAGER SHALL NOT RELIEVE THE CONTRACTOR OF SUCH RESPONSIBILITY.
4) THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS BEFORE PREPARING SHOP DRAWINGS, FABRICATION OR CONSTRUCTION. THE ENGINEER OF RECORD DOES NOT ACCEPT RESPONSIBILITY FOR ANY DIMENSION ERRORS, ARCHITECTURAL ERRORS, DETAILING OF WATERPROOFING, PLUMBING, ELECTRICAL, MECHANICAL INFORMATION, OR CONSTRUCTION PRACTICES, OR ANY PART OF THIS PLAN NOT RELEVANT TO THE STRUCTURAL INFORMATION THEREIN.
5) ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT OR ENGINEER.
6) SEE DRAWINGS OTHER THAN STRUCTURAL FOR: TYPES OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
7) CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
8) HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE COORDINATED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND THEIR SUB-CONTRACTORS.
9) NO PIPES OR DUCTS SHALL BE EMBEDDED IN WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER.
10) OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
11) DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT AND ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
12) LOADS APPLIED TO THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADS USED FOR THE DESIGN OF THE STRUCTURE ARE INDICATED IN THE GENERAL NOTES-DESIGN BASIS. DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY INSTALLED AN ALL TEMPORARY BRACING IS IN PLACE.
13) SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONTRACTOR SHALL REVIEW, APPROVE, AND SIGN EACH SHEET PRIOR TO SUBMISSION. THE STRUCTURAL ENGINEER'S REVIEW SHALL BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS.

MASONRY GENERAL NOTES:

1) ASSEMBLY STRENGTH f'm = 1500 PSI AT 28 DAYS.
2) MASONRY WALLS ARE TO BE OF THE SIZES AND IN THE LOCATIONS SHOWN ON THE PLANS AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF ACI 530.
3) HOLLOW LOAD BEARING UNITS: ASTM C90 MADE WITH LIGHTWEIGHT OR NORMAL WEIGHT AGGREGATES. GRADE N-I UNITS SHALL BE PROVIDED FOR EXTERIOR AND FOUNDATION WALLS. GRADE N-I OR S-I UNITS SHALL BE PROVIDED FOR OTHER LOAD-BEARING WALLS OR PARTITIONS.
4) CONCRETE BUILDING BRICK: ASTM C55 MADE WITH LIGHTWEIGHT OR NORMAL AGGREGATES, GRADE N-I OR S-I EXCEPT THAT BRICK EXPOSED TO WEATHER SHALL BE N-I.
5) MORTAR: ASTM C270-95, TYPE S PREPACKAGED MORTAR MIX WHICH SHALL NOT CONTAIN ANY NON-CEMENTITIOUS FILLERS COMBINED WITH NOT MORE THAN THREE PARTS SAND PER ON PART MIX.
6) REINFORCING STEEL: ASTM A615 GRADE 60 STEEL DEFORMED BARS WHERE INDICATED ON THE PLANS. WHERE REINFORCING BARS ARE INSTALLED IN THE CELLS OF CONCRETE MASONRY UNITS, THEY SHALL BE SECURED WITH WIRE TIES AT INTERVALS NOT EXCEEDING 24" O/C TO MAINTAIN THE BARS LOCATION IN THE CELL. THE TOLERANCE FOR SPACING OF VERTICAL BARS IS ± 2 INCHES ALONG THE LENGTH OF THE WALL. THE TOLERANCE FOR THE DISTANCE BETWEEN THE FACE OF THE CONCRETE MASONRY UNIT AND THE CENTER OF THE BAR SHALL NOT EXCEED ± ½".
7) MORTAR PROTRUSION SHALL BE LESS THAN ½". A PROTRUSION OF ½" OR GREATER MUST BE REMOVED BEFORE GROUTING.
8) HORIZONTAL JOINT REINFORCEMENT: ASTM A82 FABRICATED FROM COLD DRAWN STEEL WIRE AND HOT DIP ZINC COATED (ASTM A153). IT SHALL CONSIST OF TWO OR MORE PARALLEL, LONGITUDINAL WIRES 0.1875" IN DIAMETER WITH WELD-CONNECTED CROSS WIRES 0.1483" IN DIAMETER AT A MINIMUM OF 16" O/C. JOINT REINFORCEMENT IS TO BE INSTALLED IN EVERY OTHER COURSE AND IN THE FIRST TWO COURSES AT THE BOTTOM AND TOP OF WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 24" PAST THE OPENING. SPLICES SHALL OVERLAP NOT LESS THAN 12".
9) EXECUTION: MASONRY UNITS SHALL BE LAID IN A RUNNING BOND PATTERN UNLESS NOTED OTHERWISE. THE WALLS SHALL BE CARRIED UP LEVEL AND PLUMB WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1-88, SECTION 2.3.3.2. IF NONSTANDARD DIMENSIONS ARE ENCOUNTERED, BLOCK SHALL BE CUT WITH A MASONRY SAW TO FIT, NOT BY STRETCHING OR SHRINKING JOINTS. UNFINISHED WORK SHALL BE STEPPED BACK FOR JOINING WITH NEW WORK. TOOTHING WILL NOT BE PERMITTED EXCEPT WHERE SPECIFICALLY APPROVED. DAMAGED UNITS ARE TO BE CUT OUT AND NEW UNITS SET IN PLACE.
10) THE FILLED CELLS AND BOND BEAM BLOCKS OF REINFORCED MASONRY WALLS ARE TO BE FILLED WITH ASTM C476-91, GROUT FOR MASONRY WITH MINIMUM COMPRESSIVE STRESS OF 2,000 PSI AND SLUMP RANGE OR 8" TO 11".

DESIGN BASIS

APPLICABLE CODE:	2018 NORTH CAROLINA RESIDENTIAL CODE (NCRC)	
VERTICAL DEAD LOAD:	ROOF	17 psf
	FLOOR	16.5 psf
	KITCHEN ISLAND AND COUNTER TOP	40 psf
	BATHROOM TILE	20 psf
VERTICAL LIVE LOAD:	ROOF	VARIES, 20 psf MAX.
	FLOOR	40 psf
UNIFORM LIVE LOADING:	ATTIC FLOOR UNIFORM LIVE LOADING W/ THE FOLLOWING	
	I.) ATTIC ACCESSIBLE BY FIXED STAIRS (LL)	30 psf
	II.) UNINHABITABLE ATTICS W/ STORAGE (LL)	20 psf
	II.) UNINHABITABLE ATTICS W/O STORAGE (LL)	10 psf
WIND DESIGN:	ENVELOPE PROCEDURE, PART2-ASCE 07-16 (SECTION 28.5)	
	BASIC WIND SPEED	115 mph
	EXPOSURE	B
	IMPORTANCE FACTOR	1.0
	RISK CATEGORY	II
	HILL SHAPE	NO TOPOGRAPHIC OBSTRUCTIONS

FOUNDATIONS GENERAL NOTES:

U.N.O., FOUNDATION SHALL CONFORM TO FOLLOWING NOTES:

1) SHALLOW FOUNDATIONS ARE DESIGNED FOR AN ASSUMED SOIL BEARING CAPACITY OF 2,000 PSF. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEER OF RECORD IF ANY SOILS BE DEEMED UNSUITABLE IN MEETING THIS MINIMUM BEARING CAPACITY. THE CONTRACTOR IS RESPONSIBLE FOR PROCUREMENT OF SOIL TESTING TO ENDURE ALL APPLICABLE SOILS MEET OR EXCEED 2,000 PSF BEARING CAPACITY.
2) ALL FOOTING EXCAVATIONS SHALL BE NEAT, STRAIGHT, AND LEVEL IN THE PROPER ELEVATIONS TO RECEIVE THE CONCRETE. EXCESSIVE VARIATIONS IN THE DIMENSIONS OF FOOTINGS OR SLABS WILL NOT BE PERMITTED. REINFORCING STEEL AND MESH SHALL BE ACCURATELY PLACED AND SUPPORTED TO MAINTAIN THEIR POSITION DURING THE CONCRETE POURING. EDGE FORMS SHALL BE USED FOR CONCRETE THAT WILL BE EXPOSED.
3) ALL FILL REQUIRES A MINIMUM COMPACTION OF 95% DENSITY AS MEASURED BY THE STANDARD PROCTOR TEST (ASTM D-1557), OTHERWISE USE SELF-COMPACTING CLEAN WASHED #57 STONE.
4) ALL SOILS AND FILL UNDER FLOORS AND/OR WITHIN OR UNDER BUILDINGS SHALL HAVE PRECONSTRUCTION SOIL TREATMENT FOR PROTECTION AGAINST TERMITES. CERTIFICATION OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY A LICENSED PEST CONTROL COMPANY.
5) ALL SLAB PENETRATIONS ARE TO BE THE RESPONSIBILITY OF THE CONTRACTOR. PENETRATIONS INTERFERING WITH REINFORCING SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACEMENT OF CONCRETE.
6) ELEVATION DIFFERENCES BETWEEN THE BOTTOM OF ADJACENT FOOTINGS SHALL BE LESS THAN THEIR HORIZONTAL DISTANCE LESS ONE FOOT. DIFFERENTIAL HEIGHTS BETWEEN FOOTINGS CAN BECOME EXCESSIVE USUALLY WHERE A PIER FOOTING IN A CRAWLSPACE OR GARAGE FOOTINGS ARE ADJACENT BASEMENT WALL FOOTINGS.
7) ANY DEEP OR NON-CONVENTIONAL SHALLOW FOUNDATION SYSTEM REQUIRES SPECIAL DESIGN CONSIDERATIONS PER SITE CONDITIONS. CONSULT ENGINEER OR RECORD FOR DIRECTIVES.
8) MASONRY CHIMNEY FOOTINGS ARE TO BE 12" LARGER THAN THE CHIMNEY FOOTPRINT AND 12" THICK.
9) FOR RETAINING WALLS WITHOUT FRAMING OR ANY FOUNDATION WALL WITHOUT LATERAL SUPPORT AT THE TOP EDGE, CONSULT ENGINEER OF RECORD FOR DIRECTIVES.
10) SHIMS MATERIALS INSTALLED BETWEEN MASONRY PIERS AND WOOD GIRDERS SHOULD CONSIST OF EITHER SOLID WOOD OR MULTIPLE STACKED SOLID STEEL SHIMS EQUAL TO OR GREATER IN WIDTH TO THE GIRDER AND FULLY CONTACT AT LEAST 6" IN GIRDER LENGTH AND BELOW ANY SQUASH BLOCKS. ANY GIRDER SPLICES SHOULD BE CENTERED ALONG PIER AND EACH SUPPORTED A MINIMUM OF 6".
11) FOR UNRESTRAINED RETAINING WALLS SEE SPECIAL DESIGNS ON DRAWINGS.
12) ALL MASONRY FOUNDATION WALL EXTENSIONS, WING-WALLS AND MASONRY STAIRS TO HAVE MINIMUM 8" DEEP FOOTING WITH 4" PROJECTION U.N.O..

SPECIAL FOUNDATION CONSIDERATIONS:

13) FOUNDATION WALLS BACKFILLED WITH DIRT WHICH SUPPORT STRUCTURAL FRAMING SHALL BE CONSTRUCTED AS FOLLOWS:
   A) FOR EARTH FILL UP TO A MAXIMUM HEIGHT OF 4': USE 8" CMU OR 8" BRICK WITH BITUTHENE MEMBRANE WATERPROOFING ON EXTERIOR. FOOTINGS ARE TO BE 8" X 16" OR 8" X 24" AS NOTED ON THE PLAN.
   B) FOR EARTH FILL 4' TO A MAXIMUM HEIGHT OF 9': USE 8" X 24" FOOTING WITH #4 AT 16" DOWELS HOOKED IN FOOTING AND PROJECTING 18" ABOVE FOOTINGS. USE 12" CMU WALLS WITH #4 AT 16" VERTICAL BARS LOCATED 4" FROM NON-DIRT FILL FACE, LAP ALL SPLICES 12" AND USE DUR-O-WALL HORIZONTAL REINFORCING EVERY 8" IN CMU JOINTS. INSTALL 1-#3 L-BAR WITH 24" LEGS IN EVERY OTHER JOINT HORIZONTALLY AT ALL CORNERS; I.E., #3 CORNER BARS AT 16" O.C. VERTICALLY. FILL ALL OPEN CELLS OF CMU WITH EITHER TYPE S OR M MORTAR OR FILL WITH 2,500 PSI CONCRETE. INSTALL WATERPROOF BITUTHENE MEMBRANE OR EQUAL.
   C) IN LIEU OF THE PRECEDING DESIGN, BASEMENT WALLS MAY BE CONSTRUCTED IN ACCORDANCE WITH R404.1 OF THE CODE. HOWEVER, 24" X 24", #3 CORNER BARS SHALL BE INSTALLED AT 16" O/C VERTICALLY REGARDLESS OF THE WALL HEIGHT.
14) ALL RESTRAINED BASEMENT WALL TOP EDGES MUST EXTEND TO SILL PLATE BELOW FLOOR FRAMING ABOVE WHEN UNBALANCED FILL IS GREATER THAN 48".

WOOD

1) ALL STRUCTURAL WOOD WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE 2018 NCRC.
2) ALL STRUCTURAL LUMBER SHALL BE OF THE GRADE INDICATED BELOW OR BETTER, UNLESS OTHERWISE NOTED ON PLANS. ALL WOOD WILL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF USE AND SURFACE DRY-GREEN.

JOISTS AND RAFTERS	SPF #2
POSTS, BEAMS AND HEADERS	SPF #2
STUDS, BLOCKINGS, LIGHT FRAMING AND MISC.	SPF #2
WALL PLATES	SPF #2
WOOD SILL (P.T.)	SP #2
PRESSURE TREATED (P.T.) JOIST, BEAMS AND POSTS	SP #2

3) GLUE-LAMINATED BEAMS (GLB) SHALL BE IN ACCORDANCE WITH ANSI/AITC A190.1 AND ASTM D3737. CONTINUOUS IN-PLANT INSPECTION PER 2018 NCRC REQUIREMENTS PERFORMED BY A CERTIFIED INSPECTOR IS REQUIRED FOR ALL NEW GLB LARGER THAN 5 1/8x18 OR FOR SPANS GREATER THAN 32 FEET. ALL GLB SHALL BE INDUSTRIAL GRADE TYPICAL, CAMBER TO RADIUS OF 3,500 FEET, AND FABRICATED WITH EXTERIOR GLUE UNLESS OTHERWISE NOTED ON PLAN.

SIMPLE SPAN BEAM	24FV4
CANTILEVER AND CONTINUOUS BEAM	24FV8

   A. AT EXPOSED GLUE-LAMINATED BEAMS, USE ROSBORO GLULAM.

SIMPLE SPAN BEAM - PORT ORFORD CEDAR	22F-V/POC2
CANTILEVER AND CONTINUOUS BEAM - PORT ORFORD CEDAR	22F-V/POC1
SIMPLE SPAN BEAM - ALASKA YELLOW CEDAR	20F-V13
CANTILEVER AND CONTINUOUS BEAM - ALASKA YELLOW CEDAR	20F-V12

4) ALL STRUCTURAL COMPOSITE LUMBER (LVL, LSL, PSL) IS TO MEET THE FOLLOWING MINIMUM SPECIFICATIONS:

APPLICATION	Fb(psi)	Fc(psi)-PARA.	Fc(psi)-PERP.	E(ksi)
GIRDER/BEAMS (2.0E LVL)	2900	3200	750	2000
GIRDER/BEAMS (2.0E PARALLAM PSL)	2900	2900	625	2000
COLUMNS (1.8E PARALLAM PSL)	2500	2500	545	1800
LSL RIMBOARD (1.3E TIMBERSTRAND LSL)	1700	1835	710	1300

   A. ALL GLUE LAMINATED TIMBER (GLU-LAM) IS TO MEET THE FOLLOWING MINIMUM SPECIFICATIONS:

APPLICATION	Fb(psi)	Fc(psi)-PARA.	Fc(psi)-PERP.	E(ksi)
GIRDER/BEAMS	2400	1700	740	1700

5) PLYWOOD SHEATHING OR OSB SHEATHING:

ROOF	7/16 INCH APA RATED 24/0 EXPOSURE 1. (4 PLY MIN.) S.A.D. WHEN RADIANT BARRIER SHEATHINGS REQUIRED.
FLOOR	19/32 INCH APA RATED 48/24 EXPOSURE 1. 5 PLY MIN. WITH TONGUE AND GROOVE EDGES GLUED TO SUPPORT, U.N.O. MINIMUM SHEET DIMENSION FOR PANEL SHALL BE 24"
WALL	7/16 INCH APA STRUCT 1, INTERIOR WITH EXTERIOR GLUE. (4 PLY MIN.)

6) PRESSURE TREATED LUMBER:
   A) PRESSURE TREATED D.F. SHALL BE AWPA STAMPED. AMMONIACAL COPPER QUAT (ACQ), COPPER BORON AZOLE (CBA), OR BORATE TREATED AWPA STANDARD U1, MINIMUM 0.40 INCH. PENETRATION INCISED.
   B) ALL PRESERVATIVE TREATED LUMBER SHALL BE FIELD-APPLIED WITH PRESERVATIVE WHERE CUT AND DRILLED ON SITE WITH COPPER NAPHTHENATE (2% COPPER AS METAL).
   C) USE HOT DIPPED GALVANIZED HARDWARE PER ASTM A153 OR STAINLESS STEEL OR SILICON BRONZ OR COPPER MATERIAL, IE. BOLTS, NAIL, ETC. FOR ALL ATTACHMENT TO ACQ OR CBA TREATED MEMBERS. (NCBC 2304.10.5)
7) ALL NAILS SHALL BE COMMON STEEL WIRE NAILS SIZED AND SPACED AS SPECIFIED ON THE DRAWINGS, SCHEDULES AND IN TABLE 2304.10.1 OF THE NORTH CAROLINA BUILDING CODE. FASTENERS FOR P.T. WOOD SHALL BE HOT-DIPPED GALVANIZED. (NCBC 2304.10.5.1)
8) ROUGH HARDWARE WHERE EXPOSED SHALL BE GALVANIZED AND CONFORM TO THE FOLLOWING:

BOLTS	ASTM 307
PLATE HARDWARE	SIMPSON OR EQUIVALENT
HANGERS	SIMPSON OR EQUIVALENT
OTHER ACCESSORIES	SIMPSON OR EQUIVALENT

   FOR SIZE AND SPACING SEE PLANS.
9) PENETRATIONS IN WOOD SILLS OR PLATES OF BEARING OR SHEAR WALLS SHALL BE PLACED IN THE CENTER AND SHALL BE NO GREATER IN DIAMETER THAN 1/3 THE WIDTH OF THE LUMBER. HOLES LARGER THAN THOSE NOTED ABOVE MAY BE BORED "ONLY" IF PLATES ARE CONSIDERED CUT AND ADEQUATE REINFORCEMENT IS PROVIDED.
10) CUTTING, BORING, OR NOTCHING OF GIRDERS, BEAMS, JOISTS AND OTHER STRUCTURAL ELEMENTS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER UNLESS SPECIFICALLY DETAILED ON THESE DOCUMENTS.
11) HOLES FOR BOLTS IN WOOD SHALL BE DRILLED A MAXIMUM OF 1/16" LARGER THAN BOLT DIAMETER. METAL WASHERS SHALL BE PROVIDED FOR ALL HEAD AND NUTS OF BOLTS AND LAG SCREWS THAT BEAR ON WOOD. CUTS AND HOLES IN P.T. LUMBER SHALL BE SEALED AND TREATED.
12) ALL BOLTS AND SCREWS SHALL BE TIGHTENED AT THE TIME OF ERECTION AND RETIGHTENED BEFORE COMPLETION OF WORK OR INSTALLATIONS THAT WOULD MAKE THE BOLTS INACCESSIBLE.
13) USE DOUBLE FLOOR JOISTS AT NON-BEARING PARTITIONS WHEN PARALLEL TO FLOOR FRAMING. USE BLOCKING AT 4'-0" O.C. WHEN PERPENDICULAR TO FLOOR JOISTS.
14) PROVIDE 2x SOLID BLOCKING BETWEEN JOISTS OR RAFTERS OVER ALL SUPPORTS.
15) ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, GROUT OR MASONRY SHALL BE PRESSURE-TREATED.
16) LIGHT GAUGE FRAMING HARDWARE AND HOLDOWN HARDWARE SHALL BE SIMPSON STRONG-TIE IN ACCORDANCE WITH CATALOGUE C-C-2024. SIMILAR PRODUCTS WITH ICC VALUES EXCEEDING THOSE PUBLISHED FOR SIMPSON STRONG-TIE (ESR-2551, ESR-2552, AND ESR-2553) MAY BE CONSIDERED AS SUBSTITUTION. ALL SUBSTITUTIONS SHALL SHALL BE SUBMITTED TO THE ENGINEER ON RECORD FOR APPROVAL 10 WORKING DAY PRIOR TO INSTALLATION.
17) PROVIDE FULL-DEPTH SOLID BLOCKING OR OTHER MEANS OF LATERAL SUPPORT AT ENDS OF BEARING POINTS OF ALL JOISTS, RAFTERS, BEAMS AND HEADERS, AND AT INTERMEDIATE INTERVALS NOT TO EXCEED 8'-0".
18) LAG SCREWS PER ANSI/ ASME STANDARD B18.2.1 PROVIDE LEAD HOLE SAME DIAMETER AND DEPTH AS SHANK AND THEN DRILL HOLE 60% -70% OF SHANK DIAMETER FOR THREADED PORTIONS.

CONCRETE

1) EXCEPT WHERE OTHERWISE NOTED, FOR ALL CONCRETE, THE PROPORTIONS OF CEMENT, AGGREGATE, AND WATER TO ATTAIN REQUIRED PLASTICITY AND COMPRESSIVE STRENGTH SHALL BE IN ACCORDANCE WITH ACI 318 CODE. CONCRETE SHALL BE 3,000 PSI IN 28 DAYS FOR FOOTINGS AND 3,000 PSI FOR WALLS, BEAMS, AND COLUMNS, UNLESS NOTED OTHERWISE.
2) BEFORE PLACING CONCRETE, ALL DEBRIS, WATER AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE PLACES TO BE OCCUPIED BY THE CONCRETE. THE PLACING OF ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 AND ASTM C94 REQUIREMENTS. PUMPING OF CONCRETE WILL BE PERMITTED ONLY WITH THE ENGINEER OF RECORD'S APPROVAL OF PROPOSED CONCRETE MIX AND METHOD OF PUMPING. CONCRETE SHALL BE RAPIDLY HANDLED FROM THE MIXER TO FORMS AND DEPOSITED AS NEARLY AS POSSIBLE TO ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING. CONCRETE TO BE SPADED AND WORKED BY HAND AND VIBRATED TO ASSURE CLOSE CONTACT WITH ALL SURFACES OF FORMS AND REINFORCING STEEL AND LEVELED OFF AT PROPER GRADE TO RECEIVE FINISH. ALL CONCRETE SHALL BE PLACED UPON CLEAN, DAMP SURFACES. VIBRATION SHALL BE APPLIED DIRECTLY TO THE CONCRETE AND SHALL BE SUFFICIENT TO CAUSE FLOW OF SETTLEMENT BUT NOT LONG ENOUGH TO CAUSE SEGREGATION OF THE MIX.
3) PLACEMENT:
   A) ALL REINFORCING BARS, ANCHOR BOLTS, AND ALL OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
   B) CHAMFER ALL CORNERS OF CONCRETE TO PREVENT DAMAGE.
   C) CONSTRUCTION TOLERANCE SHALL COMPLY TO ACI 117.
   D) CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION JOINTS.
   E) USE VIBRATORS TO CONSOLIDATE CONCRETE. DO NOT USE VIBRATORS TO MOVE CONCRETE.
   F) CONCRETE SHALL BE CONTINUOUSLY CURED FOR 7 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER. FOOTINGS ARE EXEMPTED FROM THIS REQUIREMENT.
   G) PATCHING OF CONCRETE: ALL INSERT HOLES AND OTHER IMPERFECTIONS ON THE SURFACES OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED AND SACKED TO A UNIFORM FINISH.
4) CONSTRUCTION JOINTS SHALL BE LOCATED IN ACCORDANCE WITH ACI 301. ALL REINFORCING STEEL SHALL BE CONTINUOUS ACROSS JOINTS. IN SLABS ON GRADE, SAW CONTRACTION JOINTS SHALL NOT BE OVER 20 FEET CENTER TO CENTER EACH WAY. JOINTS SHALL BE SAWN A DEPTH OF ONE-THIRD OF THE SLAB THICKNESS. SAWING OF THE JOINTS SHALL COMMENCE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING. FILL THE SAW CUTS WITH APPROVED JOINT FILLER AFTER THE CONCRETE HAS CURED. ROUGHENED CONSTRUCTION JOINTS (R.C.J.): ROUGHEN JOINT TO MINIMUM 1/4 INCH AMPLITUDE.
5) CONCRETE, WHEN DEPOSITED, SHALL HAVE A TEMPERATURE NOT BELOW 50°F AND NOT ABOVE 90°F. THE METHODS AND RECOMMENDED PRACTICES AS DESCRIBED IN ACI 306 SHALL BE FOLLOWED FOR COLD WEATHER CONCRETING AND ACI 305 FOR HOT WEATHER CONCRETING.
6) FRESHLY PLACED CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING BY ONE OF THE FOLLOWING METHODS:
   A) PONDING OR CONTINUOUS SPRINKLING.
   B) ABSORPTIVE MAT OR FABRIC KEPT CONTINUOUSLY WET.
   C) WATERPROOF PAPER CONFORMING TO ASTM C171
   D) APPLICATION OF AN APPROVED CHEMICAL CURING COMPOUNDGF
7) THE CURING SHALL CONTINUE UNTIL THE CUMULATIVE NUMBER OR DAYS WHEN THE AMBIENT TEMPERATURE ABOVE 50°F HAS TOTALED SEVEN. DURING CURING, THE CONCRETE SHALL BE PROTECTED FROM ANY MECHANICAL INJURY, LOAD STRESSES, SHOCK, VIBRATION, OR DAMAGE TO FINISHED SURFACES.
8) REINFORCING STEEL BARS SHALL BE DEFORMED IN ACCORDANCE WITH ASTM A305 AND OR A408 AND FORMED OF ASTM A615-78 GRADE 60 STEEL. WELDED WIRE FABRIC REINFORCING TO BE ASTM A185 STEEL WIRE. ACCESSORIES SHALL CONFORM TO THE CRSI "MANUAL OF STANDARD PRACTICE." THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED OVER REINFORCING BARS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE FORMED BELOW GRADE OR EXPOSED TO WEATHER:	
NO.6 AND GREATER	2"
NO.5 AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER NOR IN CONTACT WITH GROUND:	
SLABS, WALLS, AND JOISTS: NO.11 AND SMALLER	1"
BEAMS AND COLUMNS: PRIMARY REINF., TIES, STIRRUPS, SPIRALS	1 1/2"

9) INTERIOR SLAB ON GRADE:
   A) DO NOT ALLOW WATER TO COLLECT ON OR AROUND BUILDING PAD.
   B) INITIAL CURING: INITIAL CURING SHALL IMMEDIATELY FOLLOW THE FINISHING OPERATION. CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST AT LEAST OVERNIGHT.
   C) FINAL CURING: IMMEDIATELY FOLLOWING THE INITIAL CURING AND BEFORE THE CONCRETE HAS DRIED. SLABS TO RECEIVE MOISTURE SENSITIVE FLOORING MATERIALS TO BE CONTINUOUSLY CURED FOR 7 DAYS BY WET COVERING OR MOISTURE RETAINING COVERING. LIQUID MEMBRANE CURING COMPOUNDS SHALL NOT BE PERMITTED.
   D) INTERIOR SLABS SHALL RECEIVE A LIGHT BROOM FINISH U.N.O., S.A.D. TOLERANCE SHALL BE 1/8" IN 10'-0". EDGES SHALL BE SMOOTH TROWELED.
10) ALL CONCRETE TO BE REINFORCED UNLESS SPECIFICALLY MARKED "NOT REINFORCED"
11) VAPOR BARRIER:
   A) 15 MIL ASTM E-1745 CLASS A, TYP. U.N.O.
12) GROUT:
   MANUFACTURED PRE-MIXED. NON-FERROUS, NON-STAINING, FLOWABLE GROUT WHICH WILL NOT SHRINK AS IT CURES, 4000 PSI AT 7 DAYS. FOR GROUT AT BASE PLATE, SEE STEEL NOTE #8. SUBMIT PRODUCT DATA FOR REVIEW.

REINFORCING STEEL

1) REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.
2) REINFORCING STEEL SHALL BE AS FOLLOWS:

BAR TYPE	GRADE
#4 BARS AND SMALLER	ASTM A615 GR. 60
#5 BARS AND LARGER	ASTM A615 GR. 60
WELDED BARS	ASTM A706
TIE WIRES AND SPIRALS	ASTM A82
WELDED WIRE FABRIC	ASTM A185
MECHANICAL BAR SPLICE	BAR LOCK OR APPROVED EQUAL

3) DO NOT FIELD BEND OR STRAIGHTEN IN ANY MANNER THAT WILL DAMAGE REINFORCING.
4) PROVIDE SPLICES IN REINFORCING ONLY WHERE SHOWN ON DRAWINGS OR APPROVED IN WRITING BY PROFESSIONAL OF RECORD.
5) WELDING TO CONFORM TO AWS D1.4. WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING E9018 OR APPROVED ELECTRODES. DO NOT WELD OR TACK WELD REINFORCING BARS TO OTHER BARS OR TOP PLATES, ANGLES, ETC UNLESS SPECIFICALLY APPROVED BY THE E.O.R.

STRUCTURAL SHEET INDEX

SCOPE OF WORK

DESIGN OF TWO STORY RESIDENTIAL BUILDING

ABBREVIATIONS

&	AND
A.B.	ANCHOR BOLT
A.O.R.	ARCHITECT OF RECORD
ARCH.	ARCHITECTURAL
B.F.E.	BASE FLOOD ELEVATION
BLDG.	BUILDING
BLK'G.	BLOCKING
BM.	BEAM
B.N.	BOUNDARY NAIL
B.O.C.	BOTTOM OF CONCRETE
BOT.	BOTTOM
BTW.	BETWEEN
C L	CENTER LINE
C.B.	CEILING BEAM
C.G.S.	CENTER OF GRAVITY OF POST-TENSIONING STRAND
C.J.	CONTROL JOINT
C.J.P.	COMPLETE JOINT PENETRATION
CLR.	CLEAR COVER
CLT	CROSS LAMINATED TIMBER
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
C.T.	COLLECTOR TRUSS
DBL.	DOUBLE
DBO.	DRAWING BY OTHER
DET.	DETAIL
D.C.	DEMAND CRITICAL
D.F.	DOUGLAS FIR
DWG.	DRAWING
(E)	EXISTING
EA.	EACH
EL.	ELEVATION
E.N.	EDGE NAIL
E.O.R.	ENGINEER OF RECORD
E.Q.	EQUAL
E.S.	EDGE SCREW
E.W.	EACH WAY
EXT.	EXTERIOR
FDN.	FOUNDATION
FIN.	FINISH
FL.	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.S.	FACE OF STUD
F.S.	FAR SIDE
FTG.	FOOTING
G.C.	GENERAL CONTRACTOR
G.C.T.	GIRDER COLLECTOR TRUSS
G.E.C.T.	GABLE END COLLECTOR TRUSS
G.E.T.	GABLE END TRUSS
G.T.	GIRDER TRUSS
GEOTECH.	GEOTECHNICAL
GLB.	GLULAM BEAM
J.H.	JOIST HANGER
K.D.D.F.	KILN DRIED DOUGLAS FIR
LONG.	LONGITUDINAL
L.V.F.	LOW-VELOCITY FASTENER
MAX.	MAXIMUM
M.B.	MACHINE BOLTS (UNFINISHED)
MFR.	MANUFACTURER
MIN.	MINIMUM
(N)	NEW
N/A	NOT APPLICABLE
N.S.	NEAR SIDE
NTS.	NOT TO SCALE
O/	OVER
O.C.	ON CENTER
OPP.	OPPOSITE
O.W.S.G.	OPEN WEB STEEL GIRDER
O.W.S.J.	OPEN WEB STEEL JOIST
P L	PLATE
P.A.D.	POWER ACTUATED DEVICE
PLY.	PLYWOOD
P.J.P.	PARTIAL JOINT PENETRATION
P.T.	PRESSURE TREATED
P/T	POST TENSIONING
R.C.J.	ROUGHENED CONSTRUCTION JOINT
REINF.	REINFORCEMENT
REQ'D.	REQUIRED
RTU	ROOF TOP UNIT
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
SCHED.	SCHEDULE
S.D.B.O.	SEE DRAWINGS BY OTHERS
SIM.	SIMILAR
S.J.	SEISMIC JOINT
S.L.R.S.	SEISMIC LOAD RESISTING SYSYEM
S.L.D.	SEE LANDSCAPE DRAWINGS
S.M.D.	SEE MECHANICAL DRAWINGS
S.W.	SHEAR WALL
SMS	SHEAR METAL SCREW
SS	STAINLESS STEEL
SPEC.	SPECIFICATION
SQ.	SQUARE
SYM.	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T.D.	TIE DOWN
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FINISH
T.O.S.	TOP OF STEEL FRAMING
T.P.	TOP OF PLATE
TRAN.	TRANSVERSE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE

STEEL

1) STRUCTURAL STEEL TO BE SUPPLIED DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) SPECIFICATIONS.
2) U.N.O. STEEL SHALL BE AS FOLLOWS:

SHAPE	GRADE
WIDE FLANGE SECTION (WF)	ASTM A992 GR. 50
HOLLOW STRUCTURAL SECTION (HSS)	ASTM A500B GR. 46
STANDARD PIPE	ASTM A53 GR. B
OTHER SHAPES AND PLATES	ASTM A36, ASTM A572 GR. 50 WHERE SPECIFIED
BOLTS	ASTM A307
HIGH STRENGTH BOLTS	ASTM A325, U.N.O.
THREADED RODS	ASTM A307 OR F1554 GR. 36
ANCHOR RODS	F1554 GR. 36 TYP., U.N.O.
WELDING ELECTRODES	E-70xx, U.N.O.
WELDED STUDS	FLUX FILLED HEADED STUDS ASTM A108 BY NELSON OR EQUAL.

3) WELDING TO CONFORM TO AWS AND TO BE PERFORMED BY CERTIFIED WELDERS.
4) BUTT WELDS ARE TO BE COMPLETE PENETRATION U.N.O. ALL FILLET WELDS SHOWN ARE MINIMUM REQUIRED BY STRESS. INCREASE WELDS TO A.I.S.C. MINIMUM SIZES BASED ON THICKNESS OF MATERIAL JOINED U.N.O.
5) STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS OR GRID LINES, U.N.O.
6) STEEL NOT RECEIVING FIRE PROOFING SHALL BE SHOP PRIMED.
7) ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP ZINC GALVANIZED U.N.O.
8) NON SHRINK GROUT: 7500 psi COMPRESSIVE STRENGTH, NON METALLIC CONFORMING TO ASTM 1107. MASTERFLOW 928 OR EQUAL.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

GENERAL STRUCTURAL NOTES

SHEET: GN1

RSI # NC2510

GENERAL STRUCTURAL NOTES

FRAMING CONSTRUCTION - OTHER THAN ROOF:

U.N.O., ROOF FRAMING SHALL CONFORM TO FOLLOWING NOTES:

1. REFERENCE TABLE R602.3(1) OF THE CODE FOR A FASTENER SCHEDULE FOR STRUCTURAL MEMBERS.
2. TO MITIGATE QUESTIONABLE CRACKING/SEPERATION IN HARDWOOD FLOORS OVER GIRDERS, USE THE FOLLOWING PROCEDURES:
   - A) TOENAIL JOISTS TO GIRDERS WITH (3) 8D NAILS (NO END NAILING THROUGH GIRDER/BAND IS PERMITTED)
   - B) LAP JOISTS FULLY OVER DROPPED GIRDERS AND SIDE NAIL WITH (3) 16D NAILS AT EACH END OF EACH JOIST. APPLY BLOCKING PANELS BELOW ALL LOAD BEARING WALLS.
   - C) BUILT UP GIRDERS/BEAMS SHALL BE FASTENED PER TABLE R602.3(1). ALL GIRDERS SHALL FULLY SPAN WITHOUT SPLICES IN OPEN SPANS.
   - D) INSTALL BRIDGING AT 6FT O.C. TO A MINIMUM OF (6) JOIST SPACINGS BEYOND ANY JOIST DIRECTIONAL CHANGES. THIS WILL ASSIST IN SHRINKAGE DISTRIBUTION TO MITIGATE ACCUMULATION AT GIRDERS.
3. WOOD JOIST OR BEAM SHALL BE SUPPORTED BY METAL HANGERS OF ADEQUATE CAPACITY WHERE INTERSECTING INTO BEAMS OF LEDGERS. SEE HANGER SCHEDULE OR PLAN SPECIFIC CONDITION. ALL HANGERS/FASTENERS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND NAILING PATTERN REQUIREMENTS. NAIL/SCREW FASTENERS MUST ADHERE TO THE MANUFACTURER'S DIRECT SPECIFICATIONS PER CORRESPONDING HANGER.
4. ALL EXTERIOR WALLS AT STAIR OPENINGS SHALL BE BALLOON FRAMED PER ABOVE OR AS SPECIFIED ON PLANS
5. HEADERS SHALL BE AS SHOWN OR NOTED PER PLAN.
6. AT ALL STAIRS, EVERY STUD AT EACH STRINGER MUST BE NAILED TO EACH STRINGER WITH A MINIMUM OF (2) 16D NAILS. THIS WILL MITIGATE CRACKING BETWEEN WALLBOARD AND TOP OF BASE MOULDING DUE TO OSCILLATION OF STAIR STRINGERS. ANY SELF-SUPPORTING STAIR SYSTEM IS PER THE MANUFACTURER AND SUCH SHALL NOTIFY THE E.O.R. OF ANY CORRESPONDING LOADING CONDITIONS PRIOR TO CONSTRUCTION.
7. ALL EXTERIOR WALL OPENINGS SHALL RECEIVE (1) KING STUD PER 3FT OF OPENING WIDTH. KING STUDS ARE TO BE FULL HEIGHT MEMBERS FROM SILL PLATE TO TOP PLATE. ATTACH INITIAL KING STUD ADJACENT OPENING SIDES TO EACH PLY OF HEADER WITH (4) 16D NAILS. AT OPENING 6'-0" AND GREATER, PROVIDE 2-2X SILL, ONE A34 CLIP AT EACH SIDE OF KING STUDS T&B, AT EACH END OF HEADER AND SILL TO STUDS.
8. 2X_ WOOD BEAMS SHALL HAVE A MINIMUM OF (2) 2X4 SUPPORT STUDS OR THE EQUIVALENT AMOUNT OF STUDS REQUIRED TO SUPPORT ALL PLIES U.N.O. PER PLAN.
9. STRUCTURAL COMPOSITE LUMBER BEAM SHALL HAVE AT MINIMUM (3) 2X4 SUPPORT STUDS OR THE EQUIVALENT STUD COUNT TO SUPPORT THE FULL BEAM WIDTH U.N.O. PER PLAN.
10. STEEL BEAMS SHALL HAVE A MINIMUM OF (5) 2X4 OR (4) 2X6 STUDS U.N.O. PER PLAN. SEE STUD CLUSTER CONNECTION DETAIL.
11. ALL STEEL COLUMNS SHALL DIRECTLY SUPPORT STEEL BEAMS AND HAVE A 1/4" FILLET WELD CONNECTION. U.N.O., ALL STEEL COLUMNS SHALL HAVE 5/8" x3-1/2"x12" BASE PLATE (2X4 WALLS) OR 5/8"x5-1/2"x12" BASE PLATE (2X6 WALLS) WITH AT LEAST 2-1/2" DIAMETER CAST-IN-PLACE OR POST-INSTALLED BOLTS TO CONCRETE OR CMU.
12. SEE STEEL GENERAL NOTES FOR FURTHER DIRECTIVES.
13. WHERE PARTITION WALLS FALL BETWEEN FLOOR JOISTS OR TRUSSES, 2X4 LADDER FRAMING AT 16" O.C. SHALL BE INSTALLED PERPENDICULAR TO THE JOISTS TO SUPPORT THE FLOOR DECKING. LADDER MATERIALS SHOULD BE SUPPORTED WITH SIMPSON "Z" CLIPS OR WITH SIMILAR DEVICE. A DOUBLE JOISTS CAN BE SUBSTITUTED BELOW PARTITION WALLS OF 5FT LENGTH OR GREATER. SEPARATE DOUBLE JOIST BELOW THE WIDTH OF WALL ABOVE TO ALLOW FOR TRADE MATERIAL FLOOR PENETRATIONS. A SINGLE JOIST CAN BE USED WHEN NO TRADE INTERFERENCES ARE APPLICABLE.
14. ALL I-JOIST AND OPEN WEB FLOOR TRUSSES ARE TO BE BRACED PER THE MANUFACTURER'S GUIDELINES AND DETAIL SPECIFIC CONDITIONS. LOAD BEARING PARTITION WALLS, JACK STUDS, BEAMS AND COLUMNS MUST BE SOLID BLOCKED THROUGH ALL FLOORS WITH AN EQUAL AMOUNT OF SUPPORTS. TRUSSES, I-JOIST BLOCKING, PLYWOOD AND RIM-BOARD SHALL NOT SUPPORT CONCENTRATED POINT LOADS.
15. ALL POINT LOADS FROM ROOF BRACES, JACK STUDS OR ANY TYPE BEAM CANNOT BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO OR GREATER THAN THE POINT LOAD SUPPORTS ABOVE MUST BE TRANSFERRED THROUGH ALL LEVELS OF CONSTRUCTION TO THE FOUNDATION OR PIERS WITH ADEQUATE BLOCKING OR BEAMS.
16. UNLESS OTHERWISE DETAILED, ALL STICK-BUILT CHIMNEYS SHALL BE CONSTRUCTED WITH 2x6 STUDS @ 16" O.C. BALLOON FRAMED FROM THE ATTIC CEILING LEVEL. FASTEN 15/32" CDX PLYWOOD ON ALL SIDES OF CHIMNEY ALONG THE FULL LENGTH OF STUDS WITH 8D NAILS @ 6" ON CENTER. STRAP EACH STUD TO THE SUPPORTING BEAM OR CEILING JOIST WITH (1) 24" LONG SIMPSON CS-16 OR EQUIVALENT WITH STRAP CENTERED AT THE JOINT.
17. ALL EXTERIOR WALL SHEATHING SHALL BE MINIMUM 7/16" OSB OR EQUIVALENT PLYWOOD FASTENED TO FRAMING WITH 8D NAILS @ 6" O.C. ALONG PANEL EDGES AND 6" O.C. ALONG INTERMEDIATE/FIELD MEMBERS. REFERENCE TABLES R602.3(1)/(2) FOR ALTERNATIVE SHEATHING FASTENERS. SHEATHING TO LAP FOUNDATION SILL PLATE MEMBERS FOR 6" O.C. PANEL EDGE CONNECTION. INSTALL 2X4 SEAM BLOCKING AT HORIZONTAL PANEL EDGES FOR FASTENERS.
18. WHEN LVL MULTI-PLY CONNECTIONS ARE REQUIRED, SEE BELOW:

LVL PLY-TO-PLY CONNECTIONS:

2-PLY - (16D (3.5") NAILS AT 12" O.C.) # OF ROWS EDGE/END DIST.

LVL DEPTH:
- 9-1/4" TO 11-7/8" (2) ROWS STAGGERED 2"/2"
- 14" TO 18" (3) ROWS STAGGERED 2"/2"
- 24" (4) ROWS STAGGERED 2"/2"

3-PLY - (SIMPSON SDWS22500 AT 16" O.C.) # OF ROWS

LVL DEPTH:
- 9-1/4" TO 11-7/8" (2) ROWS STAGGERED 2"/6"
- 14" TO 24" (3) ROWS STAGGERED 2"/6"

4-PLY - (SIMPSON SDWS22634 AT 16" O.C.) # OF ROWS

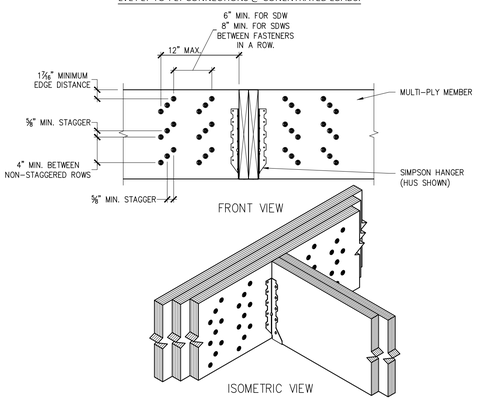
LVL DEPTH:
- 9-1/4" TO 11-7/8" (2) ROWS STAGGERED 2"/6"
- 14" TO 24" (3) ROWS STAGGERED 2"/6"

5-PLY - (½" DIAMETER THROUGH BOLTS @ 16" O.C.) # OF ROWS

LVL DEPTH:
- 9-1/4" TO 11-7/8" (2) ROWS STAGGERED 2"/6"
- 14" TO 24" (3) ROWS STAGGERED 2"/6"

ALL LVL'S NOTED ON PLANS ARE 1-3/4" WIDTH PER PLY U.N.O.
ALL THROUGH BOLT HOLES TO BE DRILLED WITH MAX 1/16" LARGER DIAMETER DRILL BIT.
ALL BOLTS TO RECEIVE WSHERS/NUT APPLICATION.

LVL PLY-TO-PLY CONNECTIONS @ CONENTRATED LOADS:



HANGER SERIES — SIMPSON SDWS SCREW COUNT REQ'D FOR LVL PLY-TO-PLY CONNECTIONS @ CONCENTRATED LOADS

	2PLY LVL (SDWS22338)	3PLY LVL (SDWS22500)	4PLY LVL (SDWS22634)	5PLY LVL (SDWS22800)
MIU or HU	(6)	(8)	(8)	(16)
HHUS	(8)	(10)	(12)	(24)
HGUS	(18)	(24)	(28)	(28)
HHGUS	(24)	(30)	(36)	(36)

SCREW APPLICATION

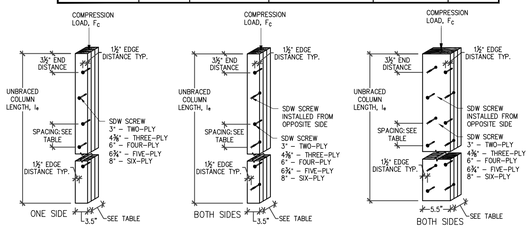
- 2PLY - 4PLY LVLS (HANGER SIDE - SEE DETAIL)
- 5PLY LVLS (BOTH SIDES - SEE DETAIL - STAGGER SCREWS FROM OPPOSING SIDE TO AVOID IMPACTING FASTENERS)

PLIES MUST BE HELD TOGETHER THRU CLAMPING OR OTHER METHODS TO AVOID GAPS PRIOR TO SCREW INSTALLATION

19. BUILT-UP STUD COLUMNS OR STUD CLUSTER CONNECTION REQUIREMENTS PER TABLE:

BUILT-UP COLUMN/STUD CLUSTER CONNECTON TABLE

NOMINAL LUMBER SIZE (IN.)	# OF STUDS	FASTENER	FASTENER SIZE	INSTALLTION	SPACING (IN.)
2X4	2	10D COMMON	0.148 DIA. x 3" L	BOTH SIDES	6
2X6/2X8	2	10D COMMON	0.148 DIA. x 3" L	BOTH SIDES	8
2X4	3	SDW22438	0.220 DIA. x 4-3/8" L	ONE SIDE	6
2X6/2X8	3	SDW22438	0.220 DIA. x 4-3/8" L	BOTH SIDES	8
2X4	4	SDW22600	0.220 DIA. x 6" L	ONE SIDE	6
2X6/2X8	4	SDW22600	0.220 DIA. x 6" L	BOTH SIDES	8
2X4	5	SDW22634	0.220 DIA. x 6-3/4" L	BOTH SIDES	8
2X6/2X8	5	SDW22634	0.220 DIA. x 6-3/4" L	BOTH SIDES	8
2X4	6	SDWS22800	0.220 DIA. x 8" L	BOTH SIDES	8
2X6/2X8	6	SDWS22800	0.220 DIA. x 8" L	BOTH SIDES	8



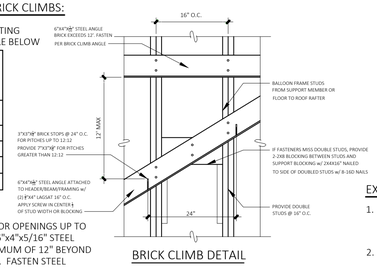
MASONRY LINTELS AND BRICK CLIMBS:

1. ALLOWABLE SPANS SUPPORTING MASONRY VENEER PER TABLE BELOW

TABLE R703.8.3.1
ALLOWABLE SPANS FOR LINTELS SUPPORTING MASONRY VENEER

SIZE OF STEEL ANGLE A36 (inches)	NO STORY ABOVE	ONE STORY ABOVE	TWO STORIES ABOVE
3X3X¼	6'-0"	4'-6"	3'-0"
4X3X¼	8'-0"	6'-0"	4'-6"
5X3½X5/16	10'-0"	8'-0"	6'-0"
6X3½X5/16	14'-0"	9'-6"	7'-0"

2. LINTELS ABOVE GARAGE DOOR OPENINGS UP TO 18'-3" SHALL BE MINIMUM 6"x4"x5/16" STEEL ANGLE AND EXTEND A MINIMUM OF 12" BEYOND EACH SIDE OF THE OPENING. FASTEN STEEL ANGLE TO STRUCTURAL WOOD HEADER WITH 1/2"x4" LAG SCREWS AT 16" O.C. MAX AND SHORE A MINIMUM OF 7 DAYS AFTER INSTALLATION.
3. SEE BRICK CLIMB DETAIL FOR ALL BRICK VENEER CONDITIONS OVER LOWER ROOF SECTION



BRICK CLIMB DETAIL

ROOF CONSTRUCTION:

U.N.O. ROOF FRAMING SHALL CONFORM TO FOLLOWING NOTES:

1. ALL ROOF TRUSSES SHALL BE INSTALLED PER THE ROOF TRUSS MANUFACTURER'S INSTALLATION DIRECTIVES AND WTCA/BCSI GUIDELINES. ALL CONNECTIONS, INCLUDING UPLIFT, ARE THE TRUSS MANUFACTURER'S RESPONSIBILITY U.N.O.. WHEN TRUSS MANUFACTURER'S DO NOT PROVIDE THE REQUIRED CONNECTORS IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE E.O.R. FOR DIRECTIVES. A MINIMUM OF (1) SIMPSON H2.5A CLIP IS RECOMMENDED AT EACH END OF COMMON TRUSSES.
2. IN ADDITION TO THE CODE'S FASTENER SCHEDULE, UNLESS NOTED PER PLAN, ROOF MEMBERS SHALL BE TIED DOWN WITH METAL FASTENERS AS FOLLOWS:
   - A) STICK FRAME RAFTERS EXCEEDING 10' IN LENGTH MEASURED HORIZONTAL SPAN AND ALL OTHER ROOF UNENCLOSED AREAS SUCH AS PORCHES USE SIMPSON H2.5A CLIPS EVERY 48" O.C. OR AT EVERY 3RD RAFTER TO FASTEN THE LOWER RAFTER END TO THE BEARING PLATE.
   - B) ALL LOWER ENDS OF VALLEY/HIP MEMBERS WHICH BEAR ON TOP PLATE USE SIMPSON HCP OR EQUIVALENT CONNECTION.
3. ALL RAFTERS SHALL BE 2X6 SPF#2 @ 16" O.C. @ UP TO 12FT HORIZONTAL SPAN FOR SHINGLES U.N.O. WITH MINIMUM 7/16" OSB SHEATHING AND UNDERLAYMENT PER R905.2.2. TILE, SLATE AND OTHER HEAVY COVERINGS REQUIRE 2X8 SPF#2 @ 16" O.C. WITH MINIMUM 3/4" OSB SHEATHING AND UNDERLAYMENT PER R905.2.2 OR AS DIRECTED PER THE COVERING MANUFACTURER'S SPECIFICATIONS. ALL RAFTERS SHALL BE CUT INTO HIPS, VALLEYS, RIDGES ETC U.N.O. RAFTERS SHALL BE INSTALLED IN ALIGNMENT AT OPPOSING SIDES OF RIDGE, HIP, VALLEY ETC U.N.O. REFERENCE TABLE R602.3(1) FOR RAFTER AND COLLAR TIE CONNECTIONS. COLLAR TIES SHALL CONSIST OF 2X6 SP/SPF#2 APPLIED @ 1/3 H OF ROOF HEIGHT BELOW ALL RIDGES @ 48" O.C. OR EVERY 3RD RAFTER. VAULTED CEILINGS REQUIRE SPECIAL COLLAR TIE DETAILS OR STRUCTURAL RIDGE BEAMS. SEE FIGURE R802.5.1 AND RAFTER HOG DETAILS UNLESS OTHERWISE DETAILED PER PLAN. RAFTERS MAY BE SPLICED OVER HOG BRACES IN OVERLAP FORM.
4. ALL HIPS, VALLEYS AND RIDGE MEMBERS ARE TO BE MINIMUM 2X10 SPF#2 U.N.O.
5. GABLE END WALLS MUST BE BRACED PARALLEL TO RIDGES WITH 2X6 DIAGONAL BRACING @ 6FT O.C. ALONG GABLE WALL FACE TO INTERIOR CEILING JOISTS. BRACES SHALL BE APPLIED AT 45° TO APPROXIMATE MID-HEIGHT OF GABLE FRAMING TO BEAR ON (2) 2X6 HOG BRACE WITH 5-16d NAILS AT EACH END.
6. WHEN CEILING JOISTS ARE ISNTALLED PARALLEL TO GABLE WALLS, INSTALL 2X4 (8FT) STRONG-BACKS BUTTED INTO GABLE FACE AND ALONG TOP OF CEILING JOIST MEMBERS. ATTACH WITH (3) 8D NAILS TO GABLE AND OVERLAPPED CEILING JOISTS.
7. CEILING JOIST INSTALLED PARALLEL TO RAFTERS SHALL BE "SISTERED" TO RAFTERS AND FASTENED PER NCRC R602.3(1) AND TABLE R802.5.1(9). WHERE CEILING JOIST CANNOT BE "SISTERED" AND A KNEE-WALL IS USED, RAFTERS MUST BE TIED BACK TO THE CEILING JOISTS USING 2X4 ANGLE RAFTER TIES @ 48" O.C. MAX OR EVERY 3RD RAFTER.
8. AT VAULTED ROOF, INSTALL 6'-0" LONG CS-16 OR EQUIVALENT STRAP AT 4'-0" ON CENTER OVER RIDGE BEAM TO ADJACENT RAFTERS.
9. AT ROOF RAFTER TO STRUCTURAL RIDGE BEAM OR LEDGER CONNECTION, PROVIDE SIMPSON SLOPED HANGER OR A36 ON EACH SIDE.
10. WHERE RIDGE BEAMS ARE SUPPORTED BY STRUT, INSTALL A34 CLIP AT STRUT TO EACH RIDGE BEAM AND AT STRUT TO FRAMING MEMBER BELOW.
11. AT DOUBLE RAFTERS, PROVIDE RAFTER TIE AND COLLAR TIE ON EACH SIDE OF THE RAFTERS.

STUD WALL SCHEDULE

WALL TYPE	LEVEL	STUD WALL SCHEDULE 2ND FLOOR	1ST FLOOR
	MAX. HEIGHT	9'-0"	10'-0"
EXTERIOR WALL		2x6 AT 16" O.C.	2x6 AT 16" O.C.
INTERIOR SINGLE WALL		2x4 AT 16" O.C.	2x4 AT 16" O.C.
STUD GRADE		SPF NO. 2	SPF NO. 2

BALLOON FRAMED STUD WALL SCHEDULE

HEIGHT	EXTERIOR	INTERIOR
9'	2x6 AT 16" O.C.	2x4 AT 16" O.C.
10'	2x6 AT 16" O.C.	2x4 AT 16" O.C.
11'	2x6 AT 16" O.C.	2x4 AT 16" O.C.
12'	2x6 AT 16" O.C.	2x4 AT 12" O.C.
13'	2x6 AT 16" O.C.	2x4 AT 12" O.C.
14'	2x6, SPF NO.1 AT 16" O.C.	2x4, SPF NO.1, AT 8" O.C. OR 2x6, SPF NO.1, AT 16" O.C.
15'	2x6, SPF NO.1 AT 16" O.C.	2x4, SPF NO.1, AT 8" O.C. OR 2x6, SPF NO.1, AT 16" O.C.

NOTE:
AT SHEARWALL, REFER PLAN AND SCHEDULE ON DETAIL 6/SW2 FOR MINIMUM STUD WIDTH AT EDGE NAILING REQUIREMENT.

LEDGER CONNECTION

ROOF: 2x MATCH OR (1) SIZE LARGER THAN RAFTER ATTACHED W/ (3) 16d NAILS @ 16" O.C. INTO STUD CENTERS OR SOLID SUPPORTED BLOCKING U.N.O.

UNINHABITABLE ATTIC CEILING: 2x MATCH OR (1) SIZE LARGER THAN JOIST ATTACHED W/ (3) 16d NAILS @ 16" O.C. INTO STUD CENTERS OR SOLID SUPPORTED BLOCKING OR BAND MATERIAL U.N.O.

FLOOR: 2x MATCH OR (1) SIZE LARGER THAN JOIST ATTACHED W/ (4) 16d NAILS @ 16" O.C. INTO STUD CENTERS OR SOLID SUPPORTED BLOCKING OR BAND MATERIAL U.N.O.

DECK: 2x P.T. MATCH OR (1) SIZE LARGER THAN DECK JOIST W/ (3) 1/4" DIA. x 5" LONG SDS SCREWS @ 12" O.C.

NCRC TABLE R602.7.5
MIN. NUMBER OF FULL HEIGHT KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (feet)	MIN. NUMBER OF FULL HEIGHT STUDS (King)
UP TO 3'	1
>3' TO 6'	2
>6' TO 9'	3
>9' TO 12'	4
>12' TO 15'	5

HEADERS SHALL BE SUPPORTED ON EACH END WITH ONE OR MORE JACK STUDS OR WITH APPROVED FRAMING ANCHORS IN ACCORDANCE WITH TABLE R602.7(1) OR R602.7(2). THE FULL HEIGHT STUD ADJACENT TO EACH END OF THE HEADER SHALL BE END NAILED TO EACH END OF THE HEADER WITH FOUR-16D NAILS (3.5 INCHES X 0.135 INCHES). THE MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF A HEADER SHALL BE IN ACCORDANCE WITH TABLE R602.7.5.

SEE GENERAL FRAMING CONSTRUCTION NOTES FOR ADDITIONAL HEADER INSTALLATION REQUIREMENT.

TYPICAL HANGERS

MEMBER	HANGER
2X8	LUS28
2X10	LUS210
2X12	LUS210
12" PRI-40 I-JOIST	MIU2.56/11
14" PRI-40 I-JOIST	MIU2.56/14
16" PRI-60 I-JOIST	MIU2.56/16
(2) 2X8	HUS28-2
(2) 2X10	HUS210-2
(2) 2X12	HUS212-2
(3) 2X8	LUS28-3
(3) 2X10	LUS210-3
(3) 2X12	LUS210-3
(2) 9¼" / (2) 11⅞" LVL	HGUS410
(2) 14" / (2) 16" / (2) 18" LVL	HGUS414
(3) 9¼" LVL	HGUS5.50/10
(3) 11⅞" LVL	HGUS5.50/12
(3) 14" / (3) 16" / (3) 18" LVL	HGUS5.50/14
(4) 9¼" LVL	HGUS7.25/10
(4) 11⅞" LVL	HGUS7.25/12
(4) 14" / (4) 16" / (4) 18" LVL	HGUS7.25/14

NOTES:
1. INSTALL PER MANUFACTURE'S INSTRUCTIONS. FILL ALL HOLES WITH FASTENERS SPECIFIED.
2. USE SKEWED AND/OR SLOPED HANGERS AS REQUIRED.
3. HANGERS ARE TYPICAL U.N.O. IN DRAWINGS.
4. SCHEDULE ABOVE BASED ON SIMPSON STRONG TIE WOOD CONSTRUCTION CONNECTORS C-C-2024

EXISTING CONSTRUCTION/CONDITIONS:

1. SHORING: THE CONTRACTOR SHALL PROVIDE SHORING WHEREVER NECESSARY TO ALLOW INSTALLATION OF THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL SHORING AND TEMPORARY WORK REQUIRED THROUGHOUT THE PROGRESS OF THE WORK.
2. EXISTING CONSTRUCTION: EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS WAS OBTAINED FROM LIMITED VISUAL OBSERVATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD OF ALL EXCEPTIONS AND RECEIVE DIRECTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
3. DEMOLITION: THE REMOVAL, CUTTING, DRILLING. ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE AND WITH APPROPRIATE TOOLS IN ORDER TO NOT JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.
4. IT IS ASSUMED THAT THE STRUCTURAL CONDITION OF THE FOUNDATION SYSTEM AND EXISTING FRAMING TO REMAIN IS IN SOUND CONDITION AND NO UPGRADES ARE NEEDED.

SYMBOLS

- DETAIL NUMBER / SHEET NUMBER
- DROP IN FLOOR ELEVATION
- SLOPE — SLOPED FINISH SEE ARCHITECTURAL DRAWING
- DEPRESSED FLOOR
- NEW CONTINUOUS FOUNDATION UNDER STRUCTURAL WALL
- Fx — SPREAD FOOTING
- CONCRETE CURB OR HIGH STEM
- S — S — STEP IN FOOTING, SEE DETAIL 7/SF1
- BUILT-UP FLOOR AT FLOOR FRAMING PLAN AND VALLEY FRAMING AT ROOF FRAMING PLAN
- CONTINUOUS WOOD MEMBER IN SECTION
- WOOD BLOCKING MEMBER IN SECTION
- POST ABOVE FRAMING
- POST BELOW FRAMING
- POST ABOVE AND BELOW FRAMING
- WALLS ABOVE FOR ANCHOR BOLT REQUIREMENTS SEE 8/SW2
- WALLS BELOW FLOOR/ ROOF FRAMING SEE 1/SW1

SYMBOLS

- CEILING BEAM OR DROPPED BEAM BELOW FRAMING
- X — VERTICAL TIE DOWN STRAP., SEE DETAIL 10/SW2 AND 12/SW2
- CMSTXX (X,Y) — X=LENGTH TO LEFT, Y=LENGTH TO RIGHT BOTH IN FEET; HORIZONTAL COLLECTOR STRAP, SEE DETAIL 8/SW3 AND 11/SW3; CENTER OF STRAP

NOTE:
1. FOR CLARITY STRAP ARE SHOWN OFFSET FROM WALL, SEE SPECIFIED DETAILS FOR ACTUAL STRAP LOCATION.
2. CS16(3,3) AT ROOF TYP., U.N.O.

- H — FRAMING MEMBER DIAGRAMMATIC SPAN
- DBL. — DOUBLE JOISTS OR RAFTER
- HANGER SEE SCHEDULE ON THIS SHEET
- HDR — HEADER BELOW FRAMING
- BEARING WALL; INDICATES JOIST SPLICE
- BEAM/GIRDER

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE
3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

GENERAL STRUCTURAL NOTES

SHEET: GN2

RSI # NC2510

FOUNDATION NOTES:

1. ALL DIMENSIONS SHALL BE VERIFIED AGAINST ARCHITECTURAL PLANS.
2. ALL DIMENSIONS ARE TO THE OUTSIDE EDGE OF FRAMING. GENERAL CONTRACTOR TO ADJUST CONC. FTG. LOCATION TO ACCOMODATE BRICK VENEER.
3. SEE DETAILS FOR TYPICAL FOUNDATION REINFORCEMENT
4. TRANSFER ALL POINT LOADS ABOVE TO FOUNDATION WITH AN EQUAL NUMBER OF STUDS
5. ALL CONCRETE TO BE 3000 PSI (MIN)
6. SOIL TO HAVE A MIN 2000 PSF BEARING CAPACITY
7. ALL FOOTINGS TO BEAR MIN 12" BELOW GRADE OR AS RECOMMENDED PER GEOTECHNICAL EVALUATION
8. ALL PIERS TO BE 8"x16"CMU PIERS ON 24"x32"x10" CONC. FTG. U.N.O.
9. 4" BEAM POCKET OR 8"x16" CMU PIER TYPICAL AT GIRDER END SUPPORT TO FOUNDATION WALL U.N.O.

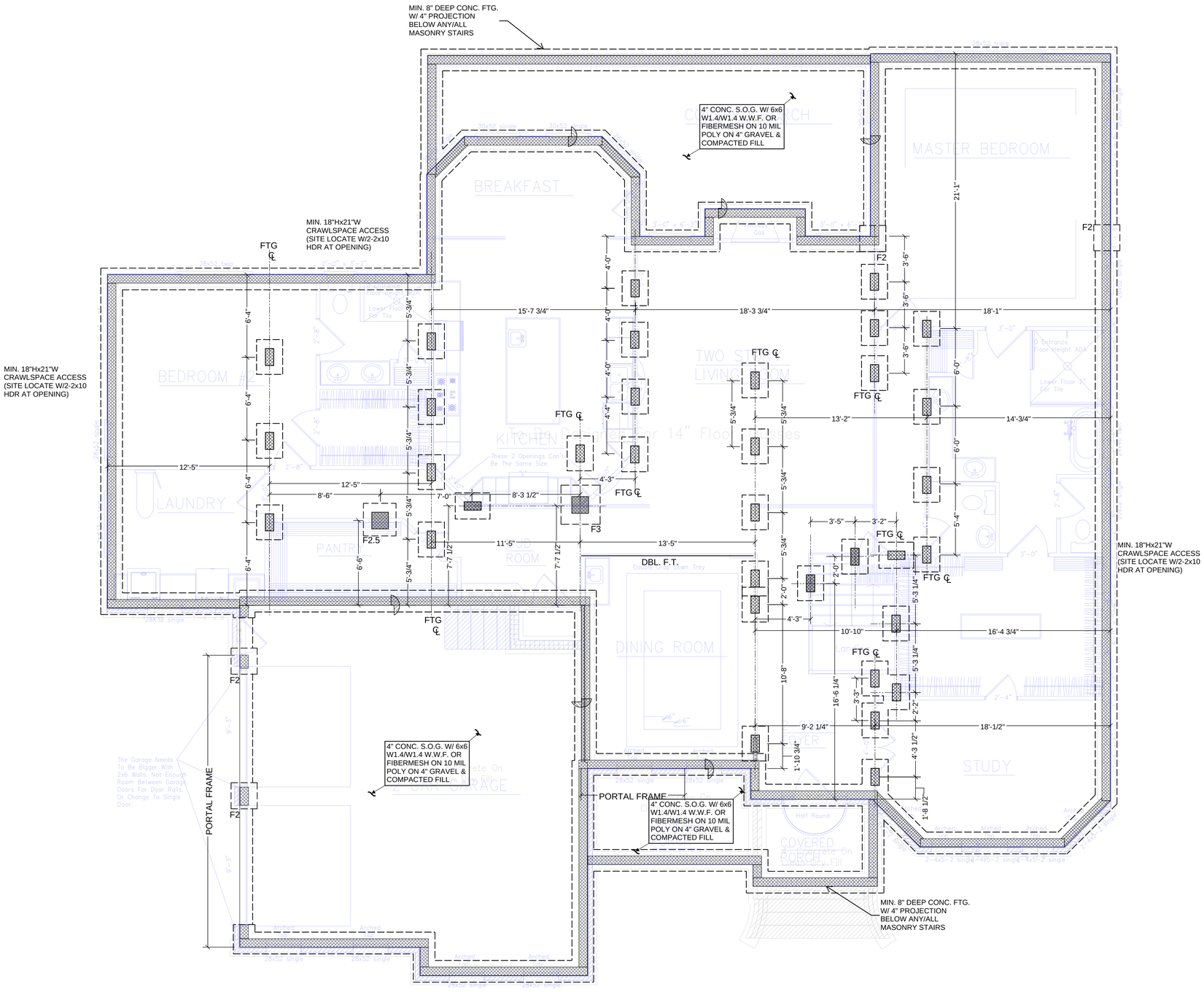
FOUNDATION LEGEND: MIN PIER SIZE, INCREASE SIZE AS NECESSARY FOR HEIGHT BASED ON CODE REQUIREMENTS

- = 8x16 CMU PIER
- = 8x16 CMU PIER (FLUSH)
- = 16x16 CMU PIER
- = 16x16 CMU PIER (FLUSH)

℄ CENTER LINE

FOOTING SCHEDULE

MARK	SIZE	REBAR
F2	24"X24"X12"	(3) #4'S EACH WAY OR: (2) #5'S EACH WAY
F2.5	30"X30"X12"	(4) #4'S EACH WAY OR: (3) #5'S EACH WAY
F3	36"X36"X12"	(5) #4'S EACH WAY OR: (3) #5'S EACH WAY
F3.5	42"X42"X12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
F4	48"X48"X12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
F4.5	54"X54"X12"	(7) #4'S EACH WAY OR: (5) #5'S EACH WAY
F5	60"X60"X12"	(6) #5'S EACH WAY



FOUNDATION PLAN

1/4"=1'-0"

Foundation Plan
Scale: 1/4"= 1'-0"

First Floor Plan
Scale: 1/4"= 1'-0"

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

FOUNDATION PLAN

SHEET: S2.0

RSI # NC2510

1ST FLOOR FRAMING NOTES

1. ALL FLOOR SECTIONS TO BE SHEATHED W/ 19/32" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 10d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
2. ALL JOISTS TO BE 2x10 (SPF #2) @ 16" O.C. U.N.O
3. ALL GIRDERS TO BE 3-2x10 (SPF #2) DROP GIRDERS U.N.O.
4. AT INTERIOR PARTITION WALLS, INSTALL DOUBLE JOIST OR FLAT 2x4 BLOCKING AT 16" O.C. W/ Z CLIP AT EACH END
5. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS w/ AN EQUAL AMOUNT OF STUD MATERIAL
6. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
7. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING @ ALL PANEL SPLICES
8. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.)
9. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING AT ALL PANEL SPLICES.
10. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2X BLOCKING AT 48" O.C. U.N.O. EDGE NAIL FLOOR DIAPHRAGM TO BLOCKING AT 6" O.C.
11. ALL LOAD BEARING HEADERS TO BE 2-2x10 AT 2x4 WALL AND 3-2x8 AT 2X6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
12. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS

FRAMING LEGEND

D.J. = DOUBLE JOIST

B.W.A. = BEARING WALL ABOVE. PROVIDE BLOCKING b/n JOISTS/TRUSSES

#J#KE.E. = # OF JACK STUDS AND # OF KING STUDS @ EACH END

= INTERIOR BEARING WALL

(#) = NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O. **NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.**

B.W.P. = BRACED WALL PANEL. PROVIDE 7/16" SHEATHING W/ 6" O.C. E.N. AND 12" O.C. F.N. PROVIDE BLOCKING @ ALL PANEL SPLICES. PROVIDE TOP AND BOTTOM ATTACHMENT PER 2018 NCRC SECTION R602.10. PROVIDE GYPSUM BOARD SHEATHING ON THE OTHER SIDE OF WALL w/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING w/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES & IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.

REFER DET. 6/SW2 SHEARWALL TYPE 6 FOR SHEAR CLIP AND ANCHOR BOLT SPACING, AND ADDITIONAL INFORMATION.

FRAMING LEGEND

(F.T.) 14" DEEP FLOOR TRUSS PER MANUFACTURER AT MAX. 16" O.C.
MAX. TOTAL DEFLECTION = L/480
MAX. DEAD LOAD DEFLECTION = L/360

AT ALL KITCHEN COUNTER AND KITCHEN ISLAND, APPLY AN ADDITIONAL 25 PSF DEAD LOAD

AT BATHROOM APPLY AN ADDITIONAL 5 PSF DEAD LOAD

G1 3-2x10 SPF#2 GIRDER

—— - —— ℄ CENTER LINE

FOUNDATION LEGEND: MIN PIER SIZE, INCREASE SIZE AS NECESSARY FOR HEIGHT BASED ON CODE REQUIREMENTS

= 8x16 CMU PIER
= 8x16 CMU PIER (FLUSH)
= 16x16 CMU PIER
= 16x16 CMU PIER (FLUSH)

NOTE:
PROVIDE BLOCKING ABOVE ALL INTERIOR WALLS SHEATHED PER METHOD "GB"

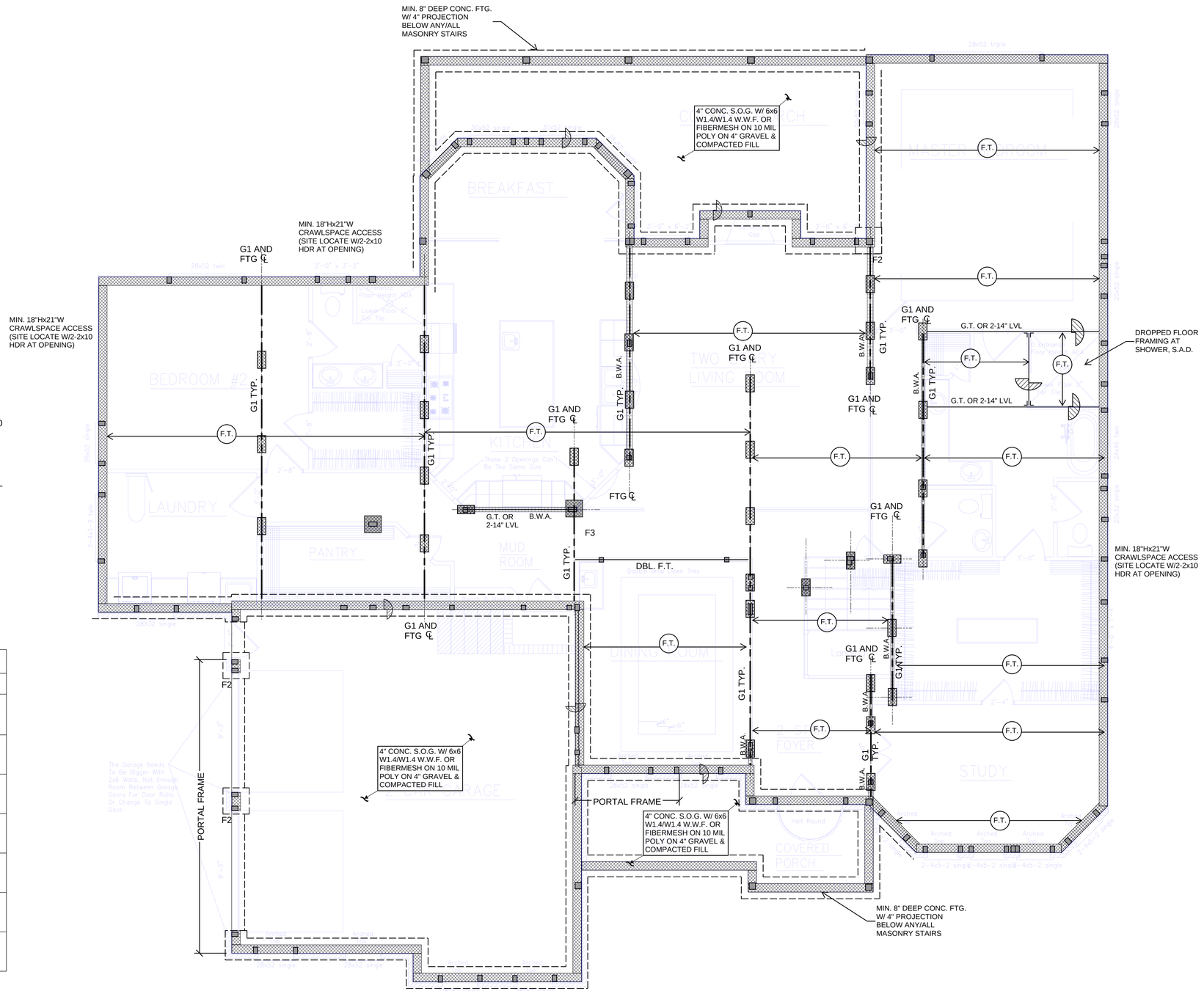
NOTE:
ALL DECKING TO BE CONSTRUCTED PER APPENDIX "M" OF THE 2018 NCRC

NOTE:
PROTECT LVL's FROM THE ELEMENTS OR USE PRESSURE TREATED LVL's (TYP.)

NOTE:
ALL DIMENSIONAL LUMBER EXPOSED TO THE ELEMENTS TO BE (SP #2) PRESSURE TREATED (TYP.)

FOOTING SCHEDULE

MARK	SIZE	REBAR
F2	24"X24"X12"	(3) #4'S EACH WAY OR: (2) #5'S EACH WAY
F2.5	30"X30"X12"	(4) #4'S EACH WAY OR: (3) #5'S EACH WAY
F3	36"X36"X12"	(5) #4'S EACH WAY OR: (3) #5'S EACH WAY
F3.5	42"X42"X12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
F4	48"X48"X12"	(6) #4'S EACH WAY OR: (4) #5'S EACH WAY
F4.5	54"X54"X12"	(7) #4'S EACH WAY OR: (5) #5'S EACH WAY
F5	60"X60"X12"	(6) #5'S EACH WAY



1ST FLOOR FRAMING & FOUNDATION PLAN

1/4"=1'-0"

First Floor Plan
Scale: 1/4"= 1'-0"

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE
3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:
DRAFTER:
SCALE: AS NOTED
DATE: 03/28/2025

1ST FLOOR FRAMING & FOUNDATION PLAN

SHEET: S2.1

RSI # NC2510

2ND FLOOR FRAMING NOTES

1. ALL FLOOR SECTIONS TO BE SHEATHED W/ 19/32" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 10d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
2. AT CLIP LINES, CEILING JOISTS TO BE NAILED TO RAFTERS W/ (5) 16d NAILS U.N.O.
3. AT INTERIOR PARTITION WALLS, INSTALL DOUBLE JOIST OR FLAT 2X4 BLOCKING AT 16" O.C. W/ Z CLIP AT EACH END
4. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS W/ AN EQUAL AMOUNT OF STUD MATERIAL
5. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
6. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING @ ALL PANEL SPLICES
7. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.) PROVIDE BLOCKING @ ALL PANEL SPLICES.
8. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING AT ALL PANEL SPLICES.
9. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2x BLOCKING AT 48" O.C. U.N.O. EDGE NAIL FLOOR DIAPHRAGM TO BLOCKING AT 6" O.C.
10. ALL LOAD BEARING HEADERS TO BE 2-2x10 AT 2x4 WALL AND 3-2x8 AT 2x6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
11. EXTERIOR WALLS ARE MIN. 2x6 AND INTERIOR WALLS ARE MIN. 2x4 AT 16" O.C. U.N.O.
12. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANUF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS

CEILING FRAMING NOTES

1. FOR CEILING JOIST TO CEILING BEAM CONNECTION, USE HANGER PER TYP. HANGER SCHEDULE
2. PROVIDE DBL 2x8 AROUND ATTIC ACCESS OPENING U.N.O.
3. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS W/ AN EQUAL AMOUNT OF STUD MATERIAL
4. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
5. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING @ ALL PANEL SPLICES.
6. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.)
7. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.
8. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2x BLOCKING AT 48" O.C. U.N.O. EDGE NAIL FLOOR DIAPHRAGM TO BLOCKING AT 6" O.C.
9. ALL LOAD BEARING HEADERS TO BE 2-2x8 AT 2x4 WALL AND 3-2x6 AT 2X6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
10. EXTERIOR WALLS ARE MIN. 2x6 AND INTERIOR WALLS ARE MIN. 2x4 AT 16" O.C. U.N.O.
11. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS

FRAMING LEGEND

D.J.	=	DOUBLE JOIST
B.W.A.	=	BEARING WALL ABOVE. PROVIDE BLOCKING b/n JOISTS/TRUSSES
B.T.O.W.	=	BRACE FLOOR TRUSS/JOIST ON WALL
#J#KE.E.	=	# OF JACK STUDS AND # OF KING STUDS @ EACH END

= INTERIOR BEARING WALL

(#) = NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O. **NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.**

= B.W.P. = BRACED WALL PANEL. PROVIDE 7/16" SHEATHING W/ 6" O.C. E.N. AND 12" O.C. F.N. PROVIDE BLOCKING @ ALL PANEL SPLICES. PROVIDE TOP AND BOTTOM ATTACHMENT PER 2018 NCRC SECTION R602.10. PROVIDE GYPSUM BOARD SHEATHING ON THE OTHER SIDE OF WALL w/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING w/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES & IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.

REFER DET. 6/SW2 SHEARWALL TYPE 6 FOR SHEAR CLIP AND ANCHOR BOLT SPACING, AND ADDITIONAL INFORMATION.

NOTE:
PROVIDE BLOCKING ABOVE ALL INTERIOR WALLS SHEATHED PER METHOD "GB"

NOTE:
ATTACH ALL RAFTERS/HIPS/VALLEYS TO STRUCTURAL RIDGES/BEAMS W/(2) SIMPSON L50's OR SLOPEABLE HANGERS

NOTE:
ALL OVERFRAMED VALLEY/HIP/ROOF BEAMS TO BE 2X10 FLAT U.N.O. (TYP.)

NOTE:
SEE SHEET FN1 FOR ALL FOUNDATION AND FRAMING NOTES, LEGEND, AND CHARTS

NOTE:
ALL DECKING TO BE CONSTRUCTED PER APPENDIX "M" OF THE 2018 NCRC

NOTE:
PROTECT LVL's FROM THE ELEMENTS OR USE PRESSURE TREATED LVL's (TYP.)

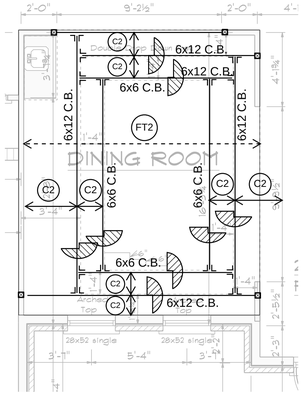
NOTE:
ALL DIMENSIONAL LUMBER EXPOSED TO THE ELEMENTS TO BE (SP #2) PRESSURE TREATED (TYP.)

FRAMING LEGEND

R1	2x6 RAFTER AT 16" O.C.	A	3 1/2 x 5 1/4 PSL POST
C1	2x8 C.J. AT 16" O.C.	B	3 1/2 x 7 PSL POST
C2	2x6 C.J. AT 16" O.C.	DJ1	2x10 JOIST AT 16" O.C.
F.T.	14" DEEP FLOOR TRUSS PER MANUFACTURER AT MAX. 16" O.C. MAX. TOTAL DEFLECTION = L/480 MAX. DEAD LOAD DEFLECTION = L/360		

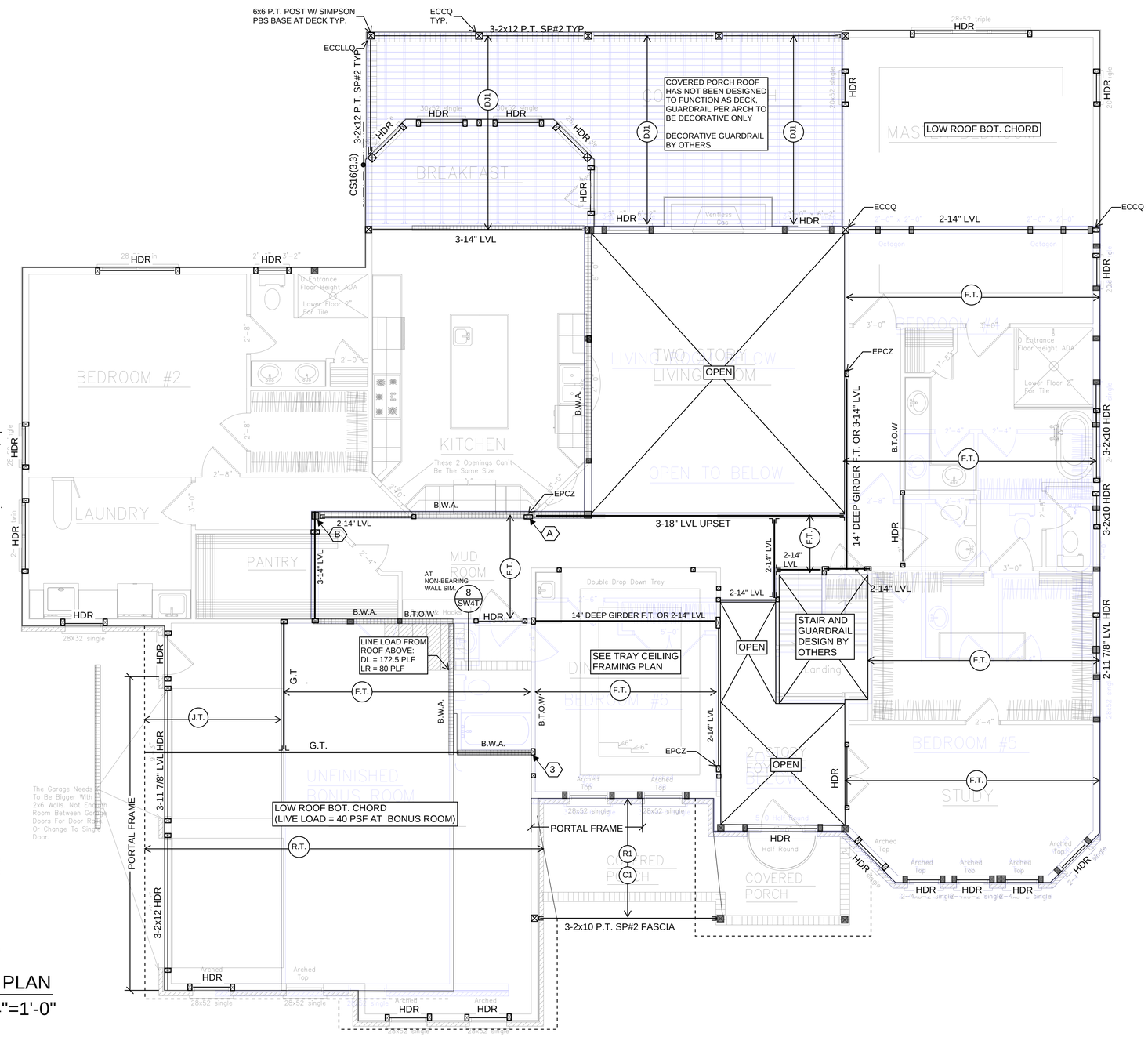
AT ALL KITCHEN COUNTER AND KITCHEN ISLAND, APPLY AN ADDITIONAL 25 PSF DEAD LOAD

AT BATHROOM APPLY AN ADDITIONAL 5 PSF DEAD LOAD



TRAY CEILING FRAMING PLAN

1/4"=1'-0"



1ST FLOOR CEILING FRAMING & 2ND FLOOR FRAMING PLAN

1/4"=1'-0"

Second Floor Plan
First Floor Plan
Scale: 1/4"=1'-0"
Stairs and Layer Counted On First Floor Only

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

1ST FLOOR CEILING & 2ND FLOOR FRAMING PLAN

SHEET: S2.2

RSI # NC2510

ROOF FRAMING NOTES

1. ALL ROOF SECTIONS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 8d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
2. SEE SHEET GN1 AND CEILING FRAMING PLAN FOR RAFTER TO CEILING JOIST CONNECTION
3. OVERBUILD/OVERFRAME W/ 2x6 (SPF #2) @ 16" O.C. PROVIDE 2x10 FLAT @ ROOF OVERFRAMING END SUPPORT
4. AT INTERIOR PARTITION WALLS, INSTALL DOUBLE JOIST OR FLAT 2x4 BLOCKING AT 16" O.C. W/ Z CLIP AT EACH END
5. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS w/ AN EQUAL AMOUNT OF STUD MATERIAL
6. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
7. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING AT ALL PANEL SPLICES.
8. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.)
9. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING AT ALL PANEL SPLICES.
10. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2x BLOCKING AT 48" O.C. U.N.O. EDGE NAIL ROOF DIAPHRAGM TO BLOCKING AT 6" O.C.
11. ALL LOAD BEARING HEADERS TO BE 2-2x8 AT 2x4 WALL AND 3-2x6 AT 2x6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
12. EXTERIOR WALLS ARE MIN. 2x6 AND INTERIOR WALLS ARE MIN. 2x4 AT 16" O.C. U.N.O.
13. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS
14. PROVIDE LRUZ OR LSSZ SLOPABLE AND SKEWABLE HANGER AT EA. RAFTER TO RIDGE BEAM.

CEILING FRAMING NOTES

1. FOR CEILING JOIST TO CEILING BEAM CONNECTION, USE HANGER PER TYP. HANGER SCHEDULE
2. PROVIDE DBL 2x8 AROUND ATTIC ACCESS OPENING U.N.O.
3. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS W/ AN EQUAL AMOUNT OF STUD MATERIAL
4. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
5. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING @ ALL PANEL SPLICES.
6. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.)
7. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.
8. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2x BLOCKING AT 48" O.C. U.N.O. EDGE NAIL FLOOR DIAPHRAGM TO BLOCKING AT 6" O.C.
9. ALL LOAD BEARING HEADERS TO BE 2-2x8 AT 2x4 WALL AND 3-2x6 AT 2X6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
10. EXTERIOR WALLS ARE MIN. 2x6 AND INTERIOR WALLS ARE MIN. 2x4 AT 16" O.C. U.N.O.
11. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS

FRAMING LEGEND

B.B. = BEAM BELOW
H.B. = HDR BELOW
D.R. = DOUBLE RAFTER
T.R. = TRIPLE RAFTER
R.B. = RAFTER BRACE
B.R.O.W. = BRACE RAFTERS/TRUSS ON WALL
D.J. = DOUBLE JOIST
B.W.A. = BEARING WALL ABOVE. PROVIDE BLOCKING b/n JOISTS/TRUSSES
#J#KE.E. = # OF JACK STUDS AND # OF KING STUDS @ EACH END
= ROOF BRACE POINT AND BRACE TO POINT
= INTERIOR BEARING WALL NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O.
= **NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.**

B.W.P. = BRACED WALL PANEL. PROVIDE 7/16" SHEATHING W/ 6" O.C. E.N. AND 12" O.C. F.N. PROVIDE BLOCKING @ ALL PANEL SPLICES. PROVIDE TOP AND BOTTOM ATTACHMENT PER 2018 NCRC SECTION R602.10. PROVIDE GYPSUM BOARD SHEATHING ON THE OTHER SIDE OF WALL w/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING w/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES & IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.

REFER DET. 6/SW2 SHEARWALL TYPE 6 FOR SHEAR CLIP AND ANCHOR BOLT SPACING, AND ADDITIONAL INFORMATION.

NOTE:
PROVIDE BLOCKING ABOVE ALL INTERIOR WALLS SHEATHED PER METHOD "GB"

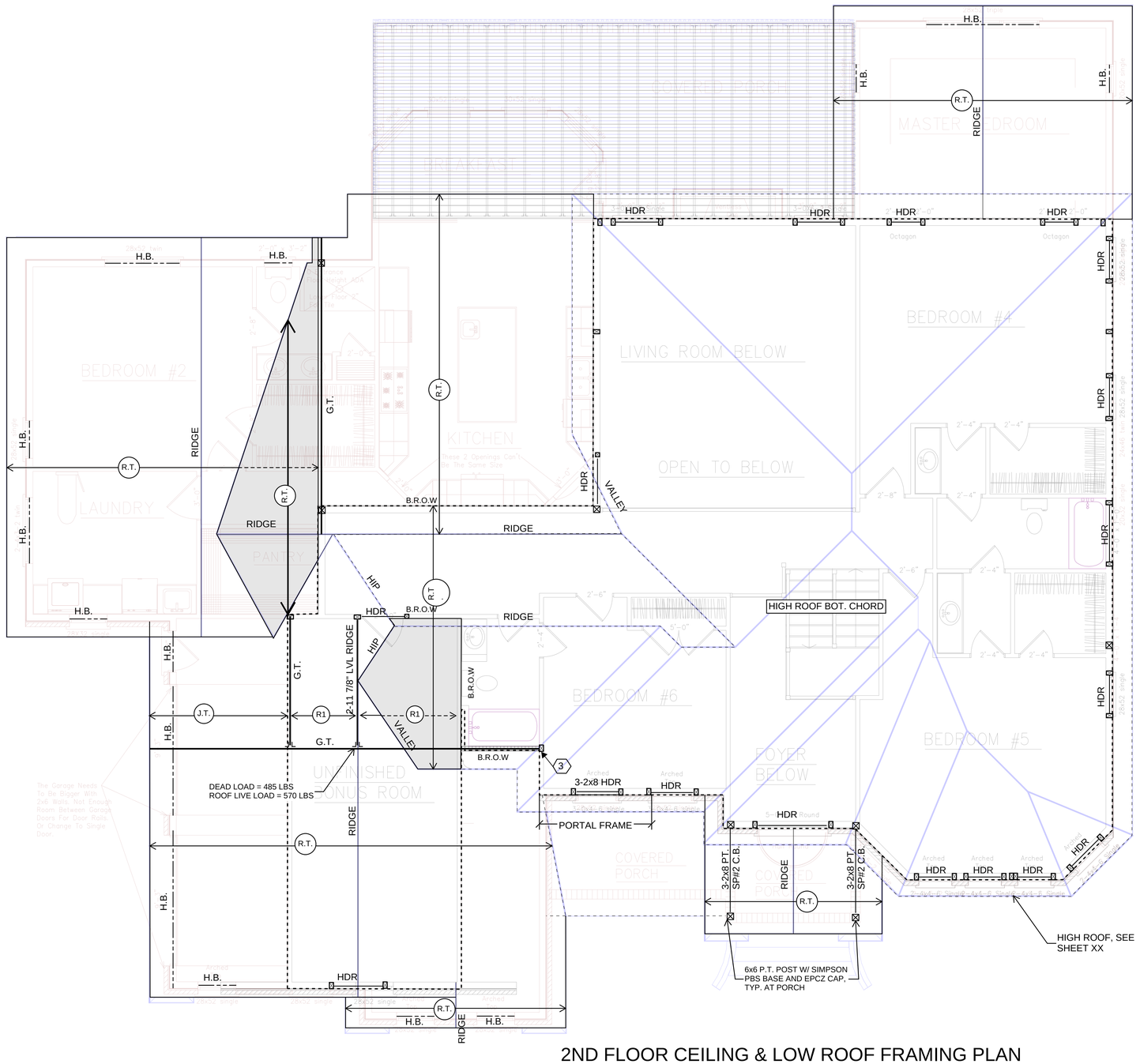
NOTE:
ATTACH ALL RAFTERS/HIPS/VALLEYS TO STRUCTURAL RIDGES/BEAMS W/(2) SIMPSON L50's OR SLOPEABLE HANGERS

NOTE:
ALL OVERFRAMED VALLEY/HIP/ROOF BEAMS TO BE 2X10 FLAT U.N.O. (TYP.)

NOTE:
SEE SHEET FN1 FOR ALL FOUNDATION AND FRAMING NOTES, LEGEND, AND CHARTS

FRAMING LEGEND

(R1) 2x6 RAFTER AT 16" O.C.



2ND FLOOR CEILING & LOW ROOF FRAMING PLAN

1/4"=1'-0"

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

2ND FLOOR CEILING & LOW ROOF FRAMING PLAN

SHEET: S2.3

RSI # NC2510

ROOF FRAMING NOTES

1. ALL ROOF SECTIONS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO ALL FRAMING MEMBERS W/ 8d NAILS @ 6" O.C. EDGE AND 12" MAX O.C. FIELD
2. SEE SHEET GN1 AND CEILING FRAMING PLAN FOR RAFTER TO CEILING JOIST CONNECTION
3. OVERBUILD/OVERFRAME W/ 2x6 (SPF #2) @ 16" O.C. PROVIDE 2x10 FLAT @ ROOF OVERFRAMING END SUPPORT
4. AT INTERIOR PARTITION WALLS, INSTALL DOUBLE JOIST OR FLAT 2x4 BLOCKING AT 16" O.C. W/ Z CLIP AT EACH END
5. TRANSFER ALL POINT LOADS FROM ABOVE THROUGH FLOOR SYSTEMS w/ AN EQUAL AMOUNT OF STUD MATERIAL
6. ALL HOLDOWNS REFERENCED ARE SIMPSON PRODUCTS U.N.O.
7. ALL EXTERIOR WALLS TO BE SHEATHED W/ 7/16" OSB ATTACHED TO FRAMING W/ 8d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD. PROVIDE GYPSUM BOARD SHEATHING ON THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS CONFORMING TO CS-WSP BRACING METHOD PER CODE U.N.O. PROVIDE BLOCKING AT ALL PANEL SPLICES.
8. ALL HEADERS NOTED TO BE PORTAL FRAMED PER METHOD "PF" AND SHALL BE IN ACCORDANCE W/ THE 2018 NCRC (U.N.O.)
9. ALL WALLS NOTED TO BE SHEATHED PER METHOD "GB" SHALL BE SHEATHED ON BOTH SIDES W/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING W/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND IN THE FIELD. PROVIDE BLOCKING AT ALL PANEL SPLICES.
10. AT EXTERIOR RIM BEAM PARALLEL TO JOIST, PROVIDE FULL DEPTH 2x BLOCKING AT 48" O.C. U.N.O. EDGE NAIL ROOF DIAPHRAGM TO BLOCKING AT 6" O.C.
11. ALL LOAD BEARING HEADERS TO BE 2-2x8 AT 2x4 WALL AND 3-2x6 AT 2x6 WALLS U.N.O. W/ A MIN. OF 2 JACK STUDS AND KING STUDS PER SCHEDULE U.N.O. SEE SHEET GN1 FOR ADDITIONAL REQUIREMENTS
12. EXTERIOR WALLS ARE MIN. 2x6 AND INTERIOR WALLS ARE MIN. 2x4 AT 16" O.C. U.N.O.
13. ALL WATER PROOFING MATERIALS, METHODS AND INSTALLATION FOR WATER TIGHT CONDITIONS IS THE FULL RESPONSIBILITY OF THE BUILDER TO COORDINATE. THE BUILDER SHOULD REFER TO CODE REQUIREMENTS AND ALL MANF. INSTALLATION GUIDELINES PER CORRESPONDING APPLICATIONS
14. PROVIDE LRUZ OR LSSZ SLOPABLE AND SKEWABLE HANGER AT EA. RAFTER TO RIDGE BEAM.

FRAMING LEGEND

B.B. = BEAM BELOW
H.B. = HDR BELOW
D.R. = DOUBLE RAFTER
T.R. = TRIPLE RAFTER
R.B. = RAFTER BRACE
B.R.O.W. = BRACE RAFTERS/TRUSS ON WALL
D.J. = DOUBLE JOIST
B.W.A. = BEARING WALL ABOVE. PROVIDE BLOCKING b/n JOISTS/TRUSSES
#J#KE.E. = # OF JACK STUDS AND # OF KING STUDS @ EACH END
= ROOF BRACE POINT AND BRACE TO POINT
= INTERIOR BEARING WALL
(#) = NUMBER OF STUDS. STUDS TO BE SAME SIZE AS ASSOCIATED WALL FRAMING STUDS U.N.O. **NOTE: STUD COUNTS DO NOT ACCOUNT FOR KING STUDS. SEE KING STUD CHART FOR REQUIRED KING STUDS.**

B.W.P. = BRACED WALL PANEL. PROVIDE 7/16" SHEATHING W/ 6" O.C. E.N. AND 12" O.C. F.N. PROVIDE BLOCKING @ ALL PANEL SPLICES. PROVIDE TOP AND BOTTOM ATTACHMENT PER 2018 NCRC SECTION R602.10. PROVIDE GYPSUM BOARD SHEATHING ON THE OTHER SIDE OF WALL w/ MIN. 1/2" GYPSUM BOARD ATTACHED TO FRAMING w/ 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES & IN THE FIELD. PROVIDE BLOCKING @ ALL PANEL SPLICES.

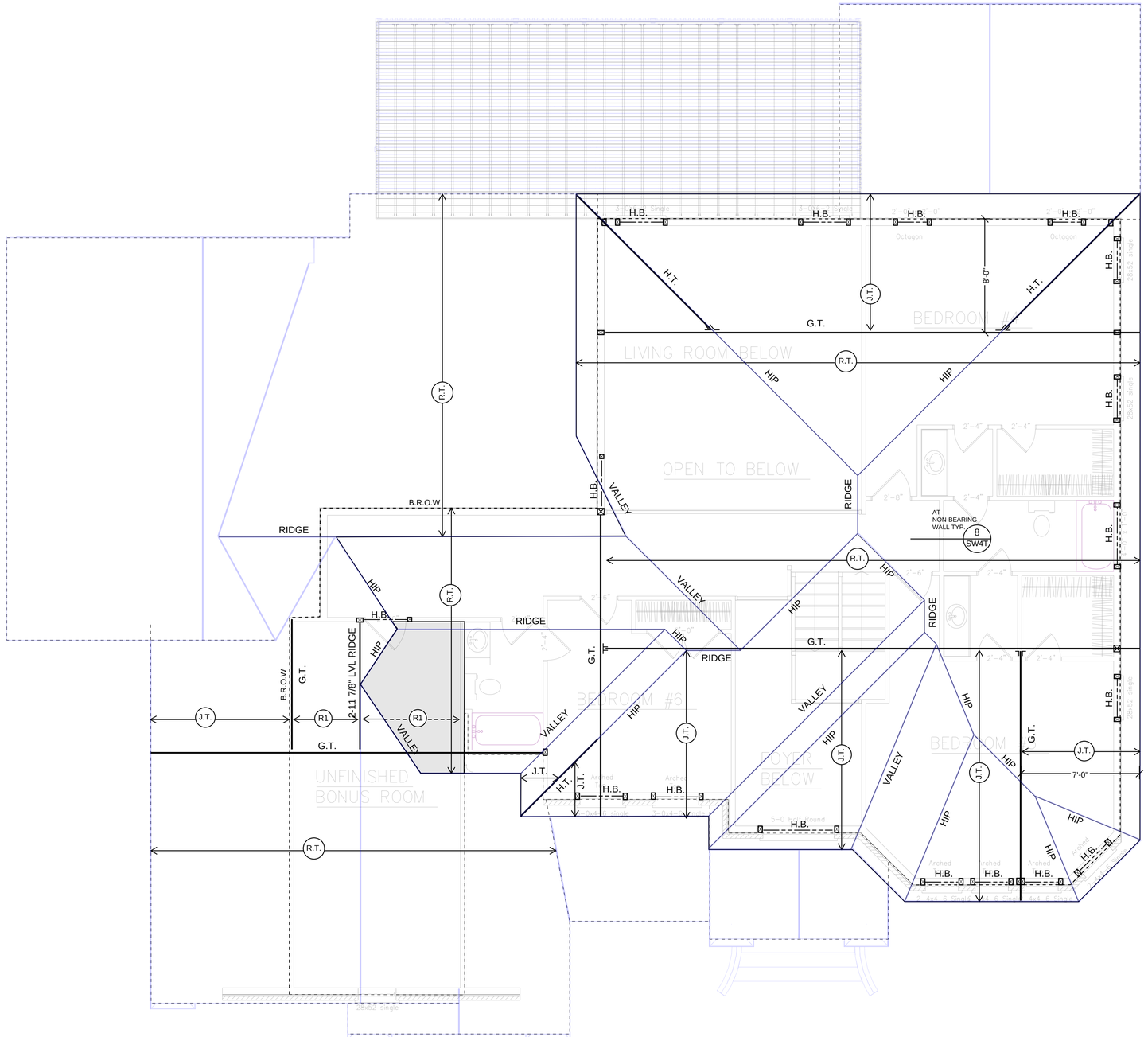
REFER DET. 6/SW2 SHEARWALL TYPE 6 FOR SHEAR CLIP AND ANCHOR BOLT SPACING, AND ADDITIONAL INFORMATION.

NOTE:
PROVIDE BLOCKING ABOVE ALL INTERIOR WALLS SHEATHED PER METHOD "GB"

NOTE:
ATTACH ALL RAFTERS/HIPS/VALLEYS TO STRUCTURAL RIDGES/BEAMS W/(2) SIMPSON L50's OR SLOPEABLE HANGERS

NOTE:
ALL OVERFRAMED VALLEY/HIP/ROOF BEAMS TO BE 2X10 FLAT U.N.O. (TYP.)

NOTE:
SEE SHEET FN1 FOR ALL FOUNDATION AND FRAMING NOTES, LEGEND, AND CHARTS



MAIN ROOF FRAMING PLAN

1/4"=1'-0"

Roof Second Floor Plan
Scale: 1/4"= 1'-0"
Stairs and Foyer Counted On First Floor Only

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

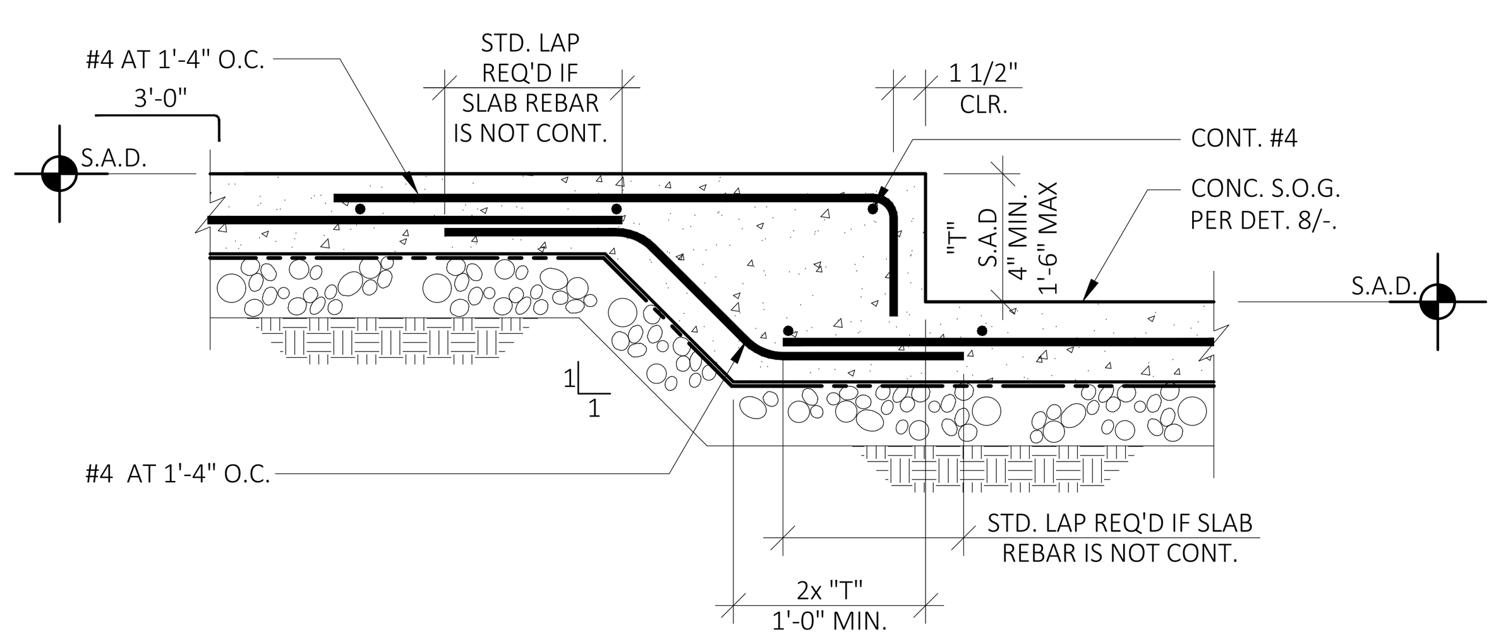
REV.	DATE	DESCRIPTION

DESIGNER:
DRAFTER:
SCALE: AS NOTED
DATE: 03/28/2025

MAIN ROOF FRAMING PLAN

SHEET: S2.4

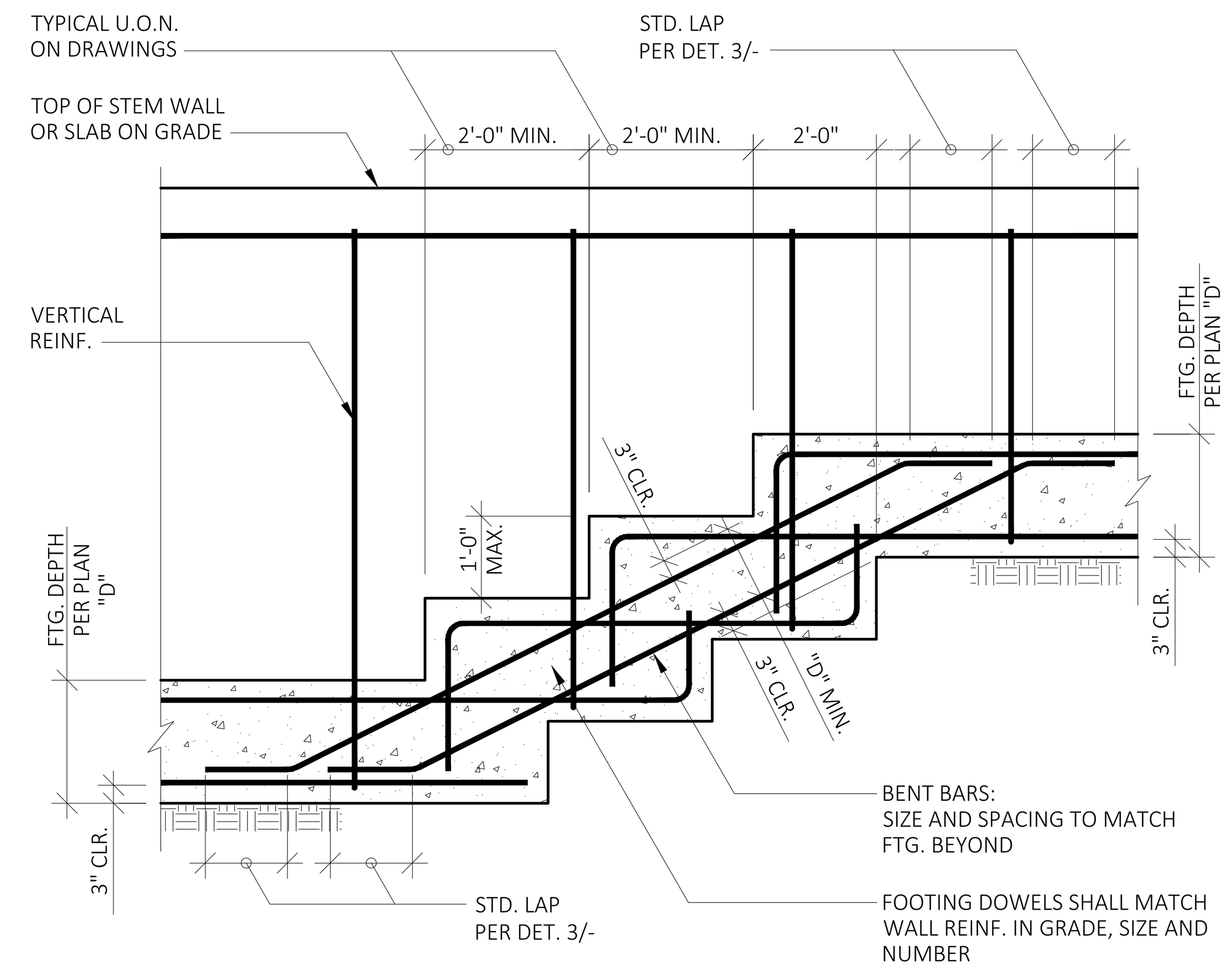
RSI # NC2510



10 SLAB-ON-GRADE STEP OVER 4"

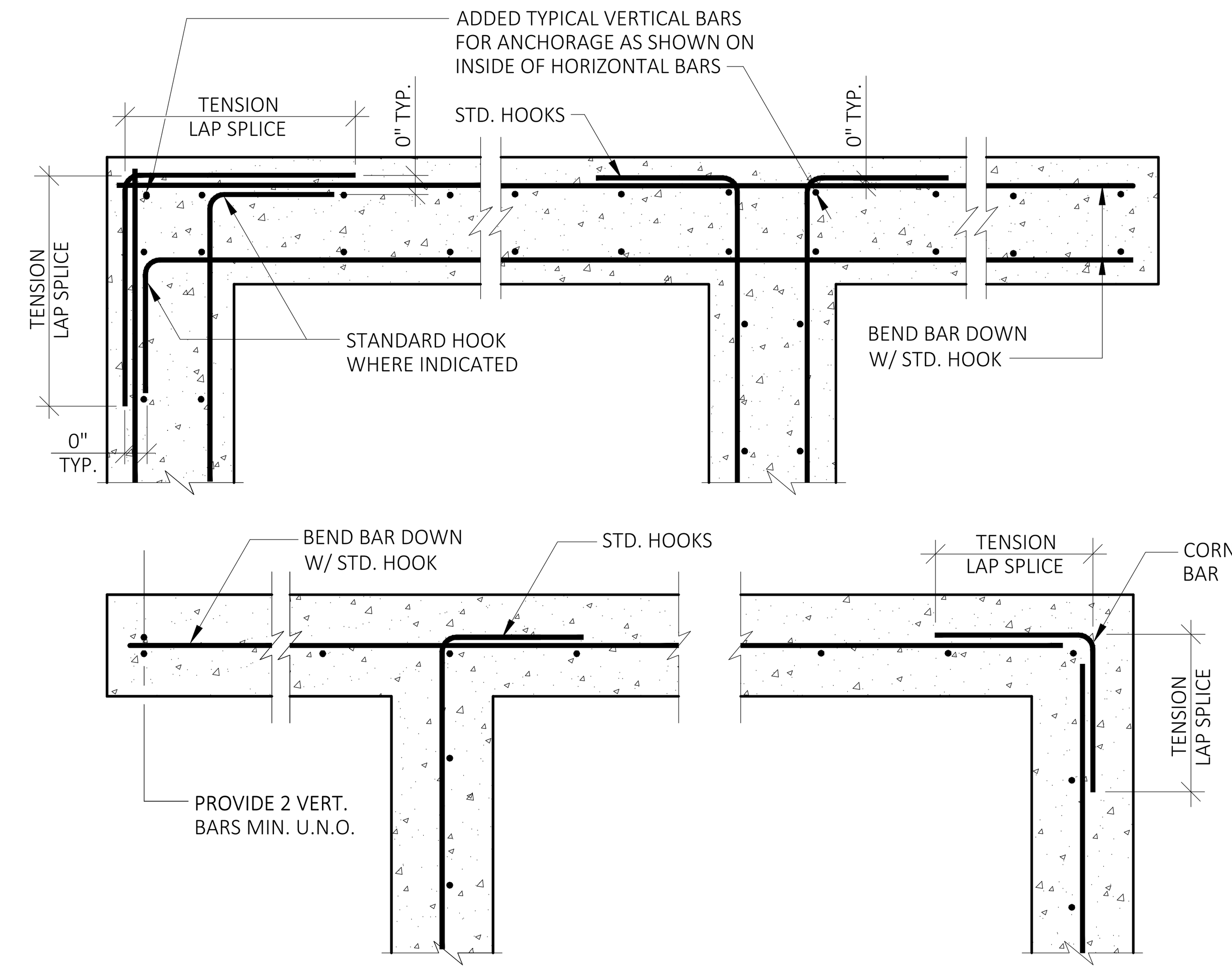
05-101-03A

1"=1'-0"



7 TYPICAL STEP IN CONTINUOUS FOOTING

N.T.S.



4 TYPICAL CONCRETE MEMBER AT INTERSECTIONS - PLAN VIEW

N.T.S.

TABLE 1A - REINFORCING STEEL HOOKS

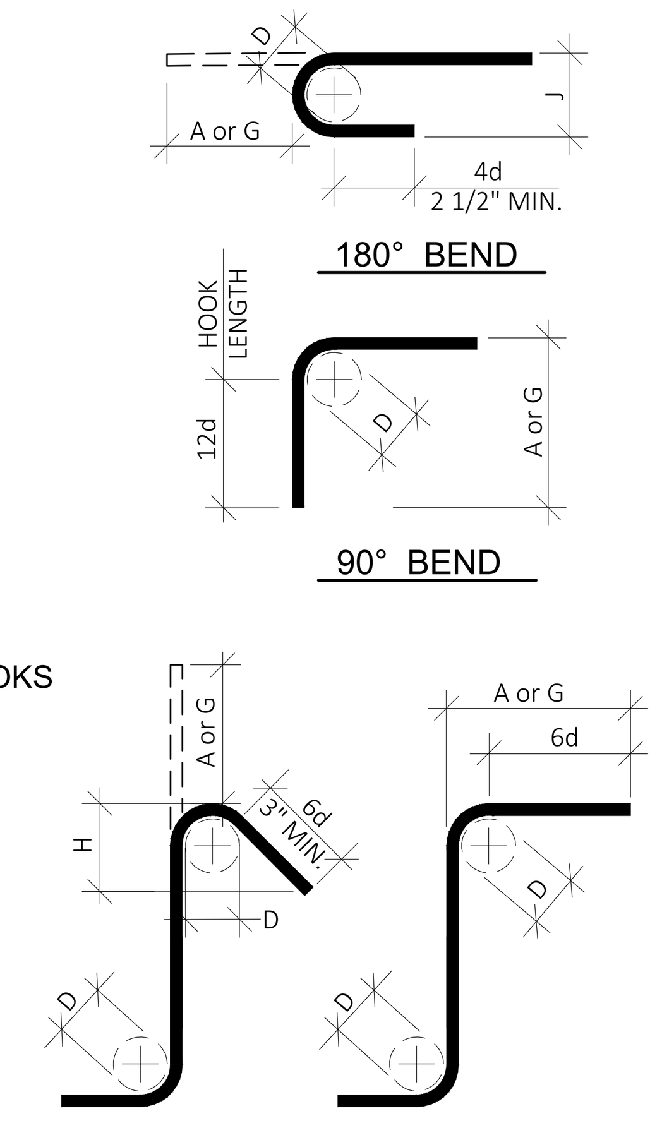
BAR SIZE	D (IN.)	STANDARD HOOK LENGTH (INCHES)		
		180°		90°
		A or G	J	A or G
#3	2 1/4	5	3	6
#4	3	6	4	3
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16

NOTE:
d = BAR DIAMETER
D = MINIMUM DIAMETER OF BEND
D = 6d FOR #3 THROUGH #8

TABLE 1B - TYPICAL STIRRUP AND TIE HOOKS

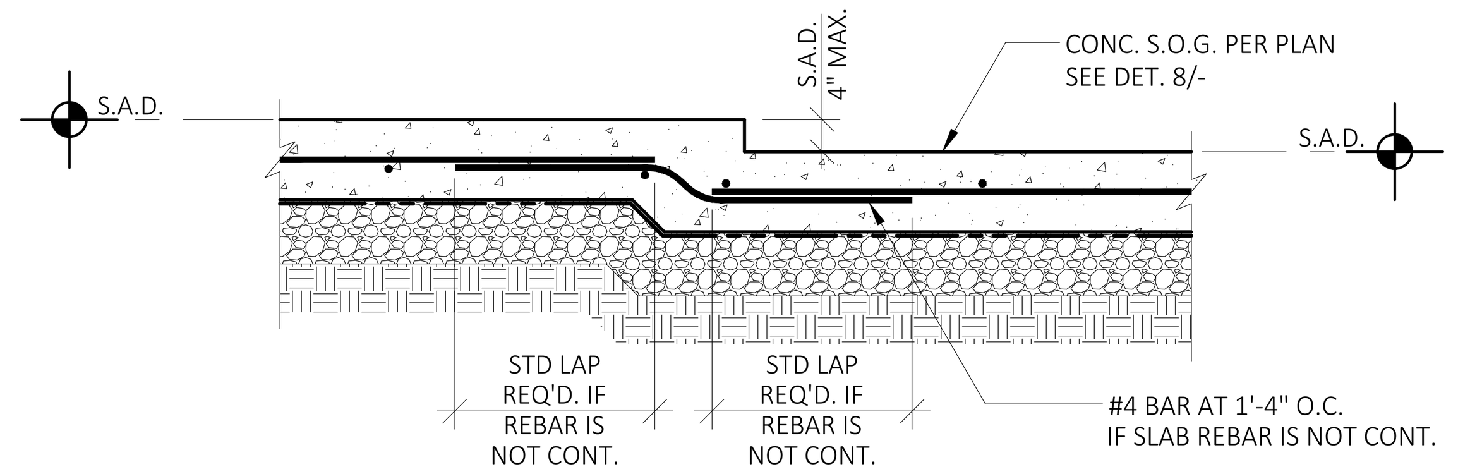
BAR SIZE	D (IN.)	STANDARD HOOK LENGTH (INCHES)		
		90°	135°	
		A or G	A or G	Happrox.
#3	1 1/2	4	4	2 1/2
#4	2	4 1/2	4 1/2	3
#5	2 1/2	6	5 1/2	3 3/4
#6	4 1/2	12	8	4 1/2
#7	5 1/4	14	9	5 1/4
#8	6	16	10 1/2	6

NOTE:
d = BAR DIAMETER
D = MINIMUM DIAMETER OF BEND
D = 6d FOR #3 THROUGH #8
12d FOR #6 THROUGH #8



1 STANDARD HOOKS, STIRRUPS, AND TIES

N.T.S.

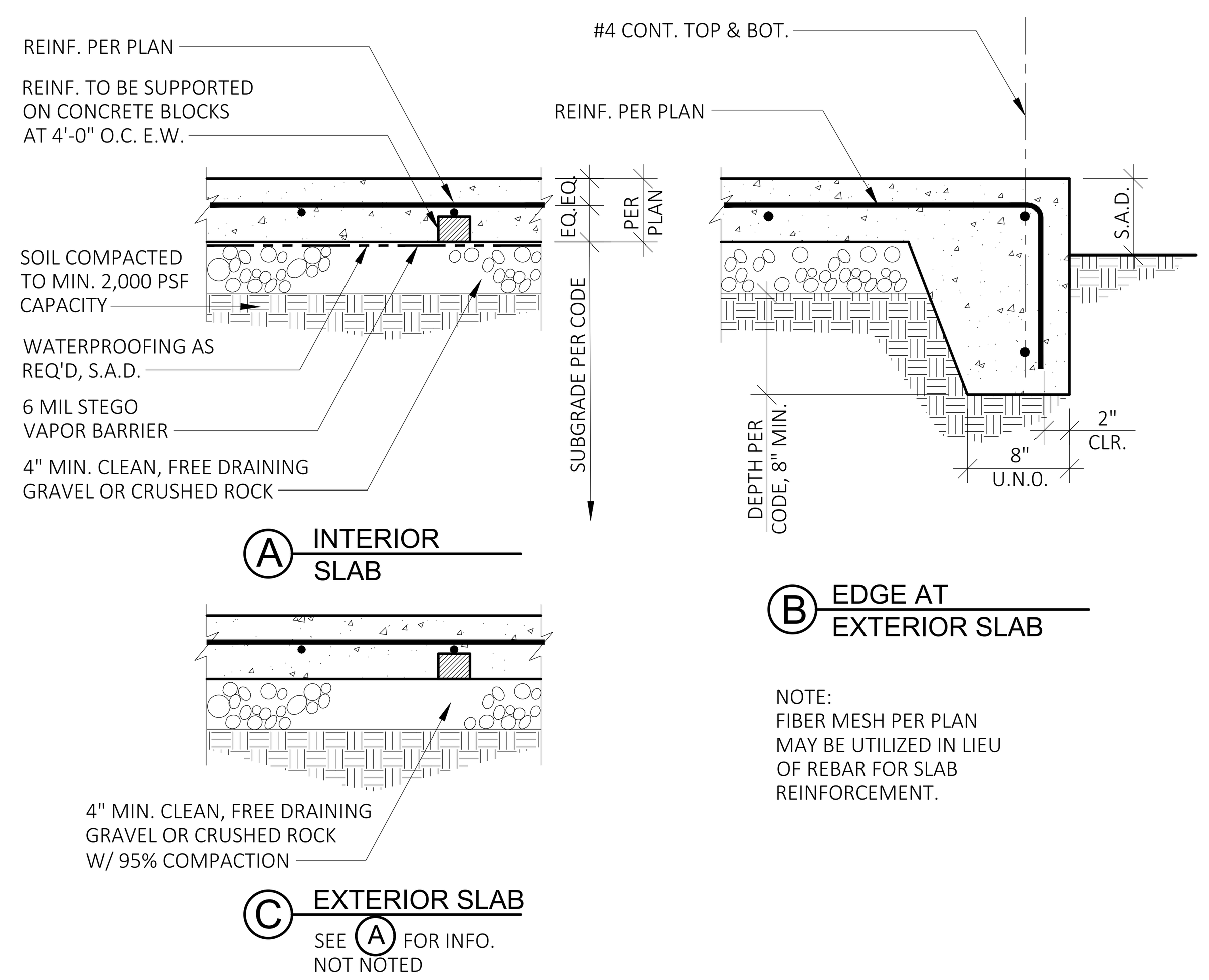


NOTE:
FOR STEP GREATER THAN 4", SEE DET. 14/-.

11 STEP IN SLAB-ON-GRADE UP TO 4"

05-101-03B

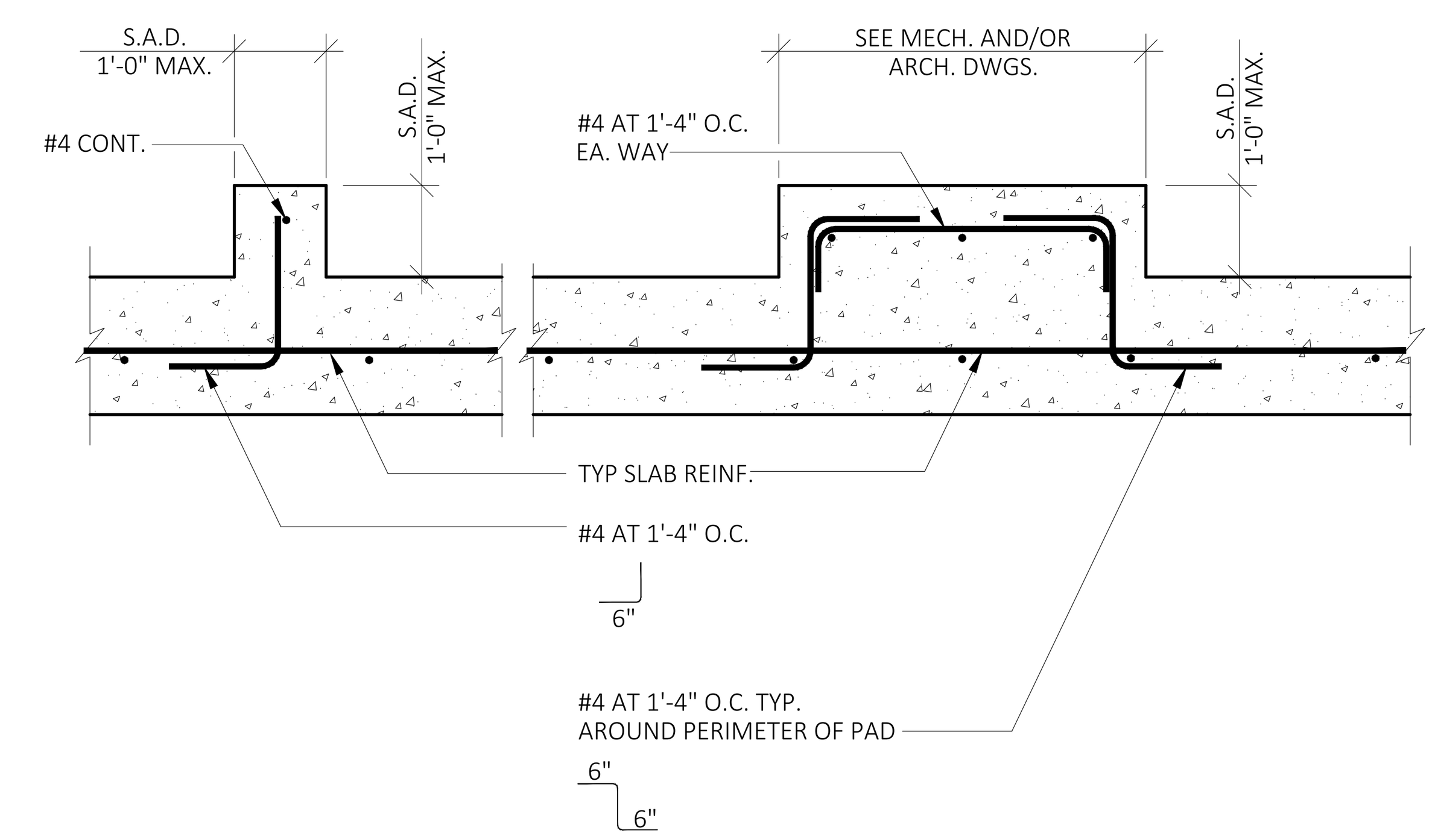
1"=1'-0"



NOTE:
FIBER MESH PER PLAN MAY BE UTILIZED IN LIEU OF REBAR FOR SLAB REINFORCEMENT.

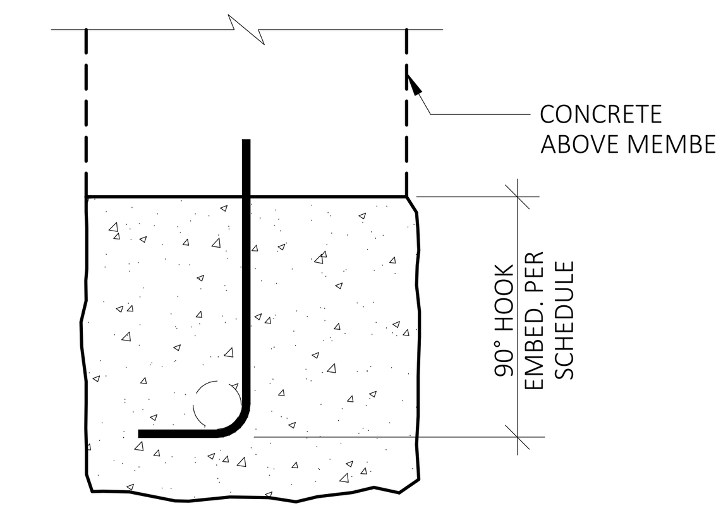
8 SLAB-ON-GRADE

N.T.S.



5 TYPICAL CURB AND RAISED PAD DETAILS

N.T.S.



90° HOOK EMBEDMENT FOR GRADE 60 REINFORCING

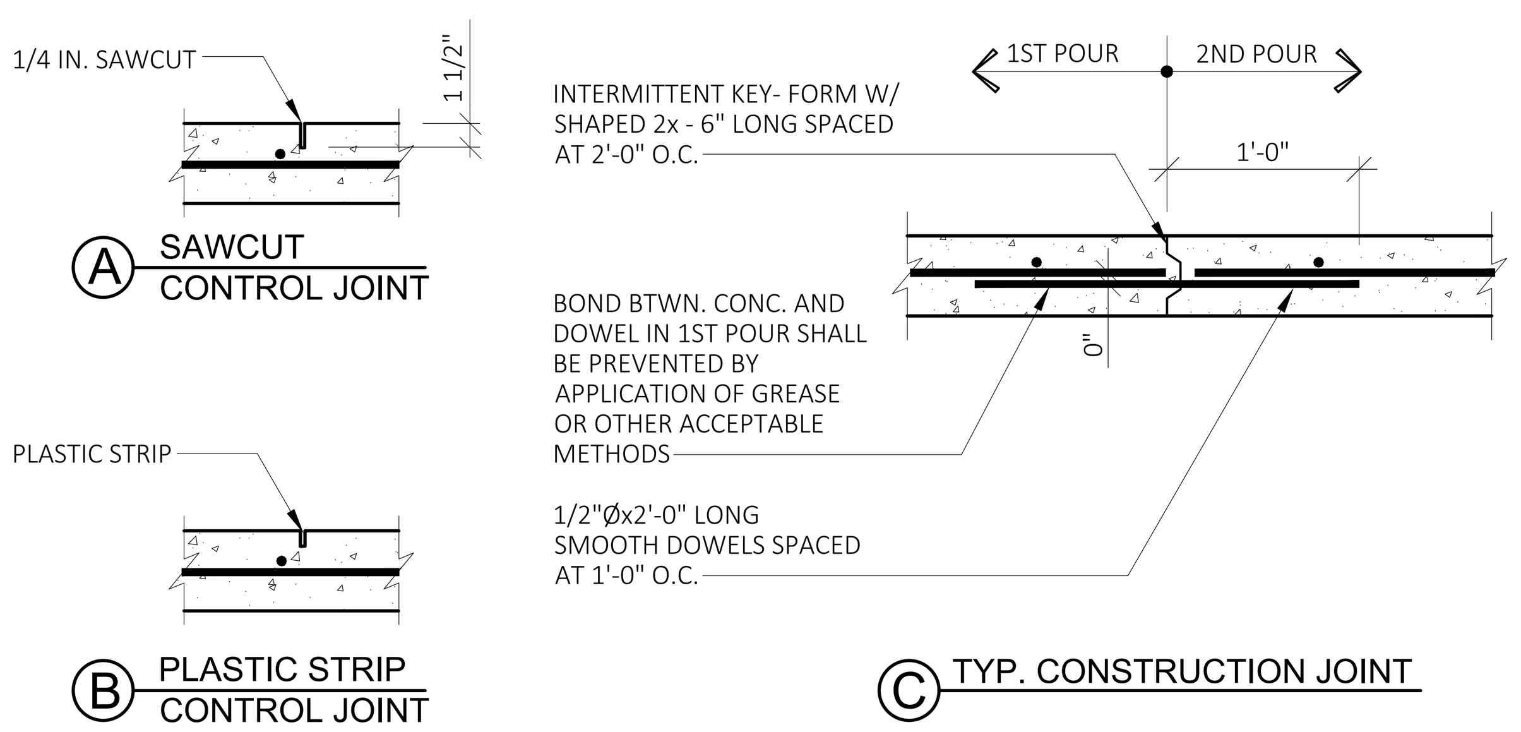
f'c	2,500 PSI	3,000 PSI	4,000 PSI	5,000 PSI
BAR SIZE	EMBED. (IN)	EMBED. (IN)	EMBED. (IN)	EMBED. (IN)
#3	9	9	8	7
#4	12	11	10	9
#5	15	14	12	11
#6	18	17	15	13
#7	21	20	17	15
#8	24	22	19	17

2 TYPICAL REINFORCEMENT EMBED

N.T.S.

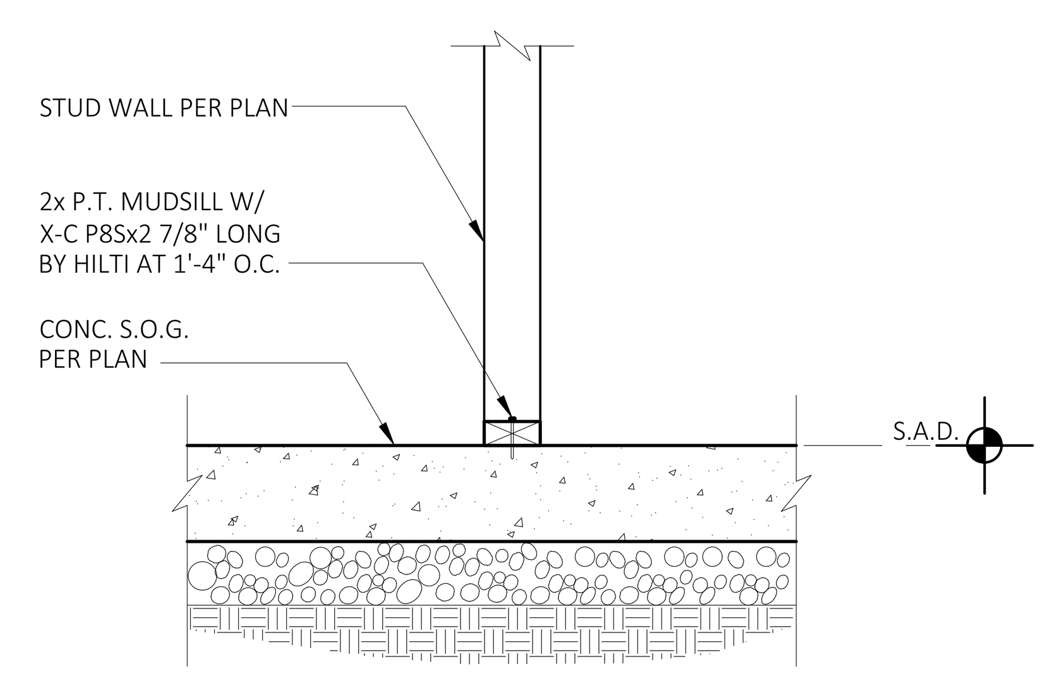
NOTES:

1. AT CONTRACTOR'S OPTION USE EITHER SAWCUT OR PLASTIC STRIP CONTROL JOINTS.
2. LOCATE CNTRL. AND CONSTR. JNTS. TO ENCLOSE APPROXIMATELY SQUARE AREAS (WIDTH TO LENGTH RATIOS OF ENCLOSED AREAS SHALL NOT EXCEED 1.33 U.N.O. ON PLAN) NO GREATER THAN 300 SQUARE FEET.



12 TYPICAL CONSTRUCTION AND CONTROL JOINT AT SLAB ON GRADE

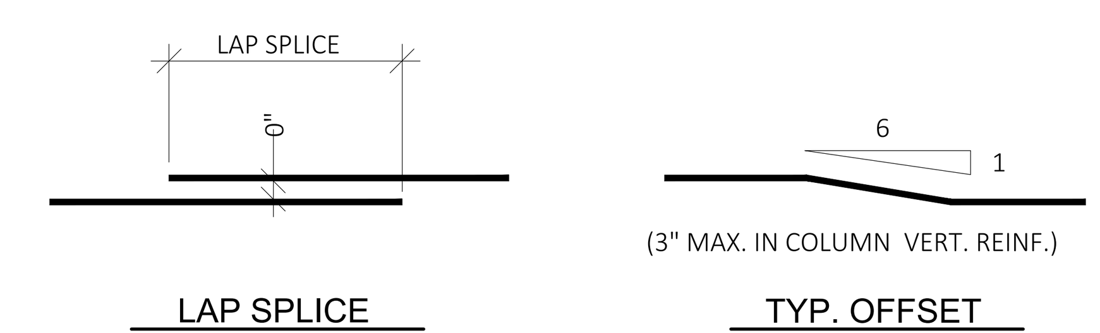
N.T.S.



9 NON-STRUCTURAL WALL AT CONC. SLAB

05-101-09

1"=1'-0"



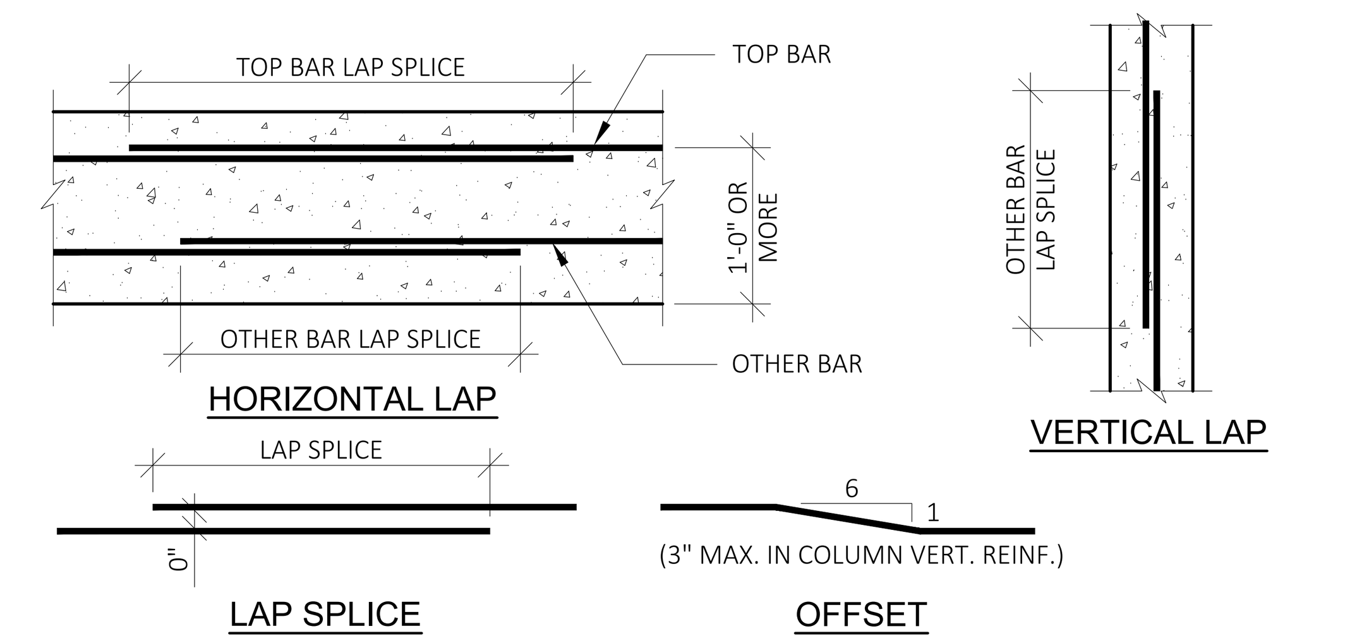
BAR SIZE	MINIMUM LAP SPLICE	
	MIN. 2" COVER AND CLEAR SPACING	MIN. 3 1/2" COVER AND CLEAR SPACING
#3	15"	15"
#4	25"	20"
#5	40"	25"
#6	54"	42"
#7	63"	57"
#8	72"	72"
#9	81"	81"

NOTE: SPLICE LENGTHS BASED ON:
1. f'm=1500 psi OR GREATER
2. STRENGTH DESIGN REQUIREMENTS

6 TYPICAL CMU STANDARD REINFORCING STEEL LAP SPLICES

06-100-01

N.T.S.



CLASS B TENSION LAP SPLICE FOR GRADE 60 REINFORCING (INCHES)

BAR SIZE	TOP BARS				OTHER BARS			
	f'c				f'c			
	2,500 PSI	3,000 PSI	4,000 PSI	5,000 PSI	2,500 PSI	3,000 PSI	4,000 PSI	5,000 PSI
#3	30	29	25	22	23	22	20	17
#4	41	37	32	29	31	29	25	22
#5	51	47	41	37	39	36	31	29
#6	61	56	49	44	47	43	38	34
#7	90	81	71	64	69	62	55	49
#8	101	93	81	73	78	72	62	56

NOTE:

1. TOP BARS = HORIZONTAL BARS (OTHER THAN IN WALLS) PLACED WITH MORE THAN 1'-0" OF FRESH CONCRETE CAST BELOW THEM.
2. ABOVE TABLES ARE BASED UPON THE FOLLOWING CRITERIA. MIN. CLEAR COVER OF 1.0dB FOR TIED ELEMENTS (COLS & BEAMS), OR 2.0dB FOR ALL OTHER ELEMENTS WHERE EITHER OF THESE REQUIREMENTS IS NOT MET. INCREASE THE LAP LENGTH BY 50%.
3. USE CLASS B LAP SPLICE FOR ALL BAR SPLICES TYPICAL.
4. ADJACENT SPLICES SHALL BE OFFSET PER SPECIFICATION.

3 TYPICAL REINFORCEMENT LAP SPLICE

05-100-03A

N.T.S.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

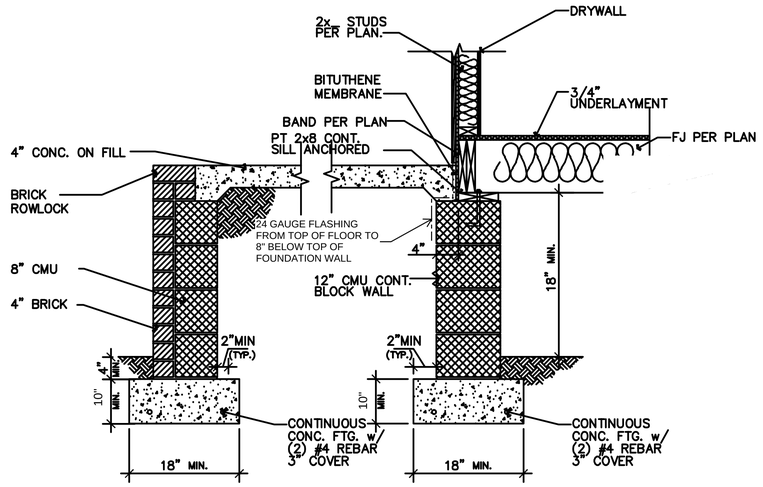
SCALE: AS NOTED

DATE: 03/28/2025

FOUNDATION DETAILS

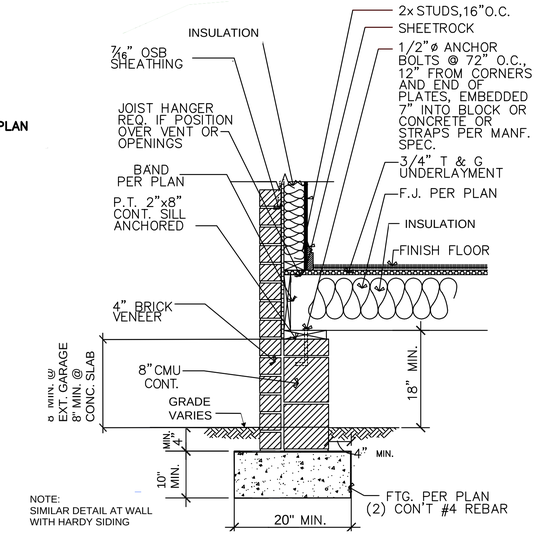
SHEET: SF1

RSI # NC2510



4 PORCH SLAB TO EXT. FDN. AT CRAWL SPACE

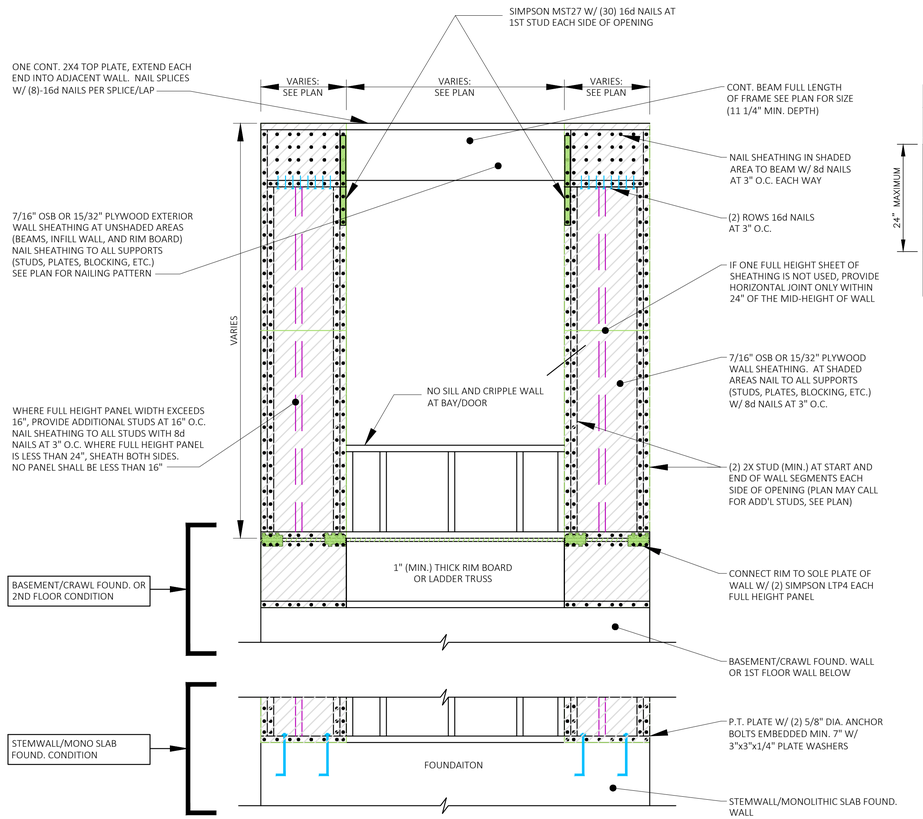
N.T.S.



NOTE:
SIMILAR DETAIL AT WALL WITH HARDY SIDING

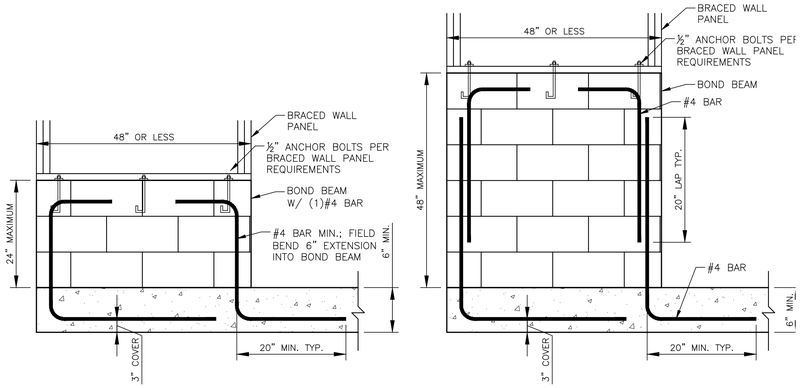
1 EXTERIOR FOUNDATION AT CRAWL SPACE W/ BRICK VENEER

N.T.S.



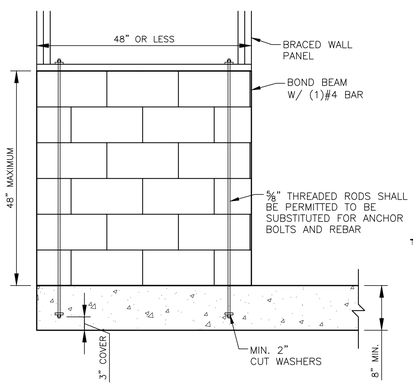
12 METHOD CS-PF: CONTINUOUS PORTAL FRAME (2 PANELS)

N.T.S.

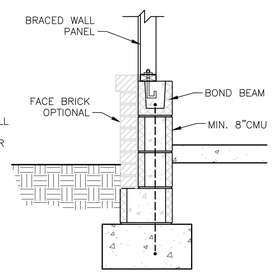


SHORT STEM WALL REINFORCEMENT

TALL STEM WALL REINFORCEMENT



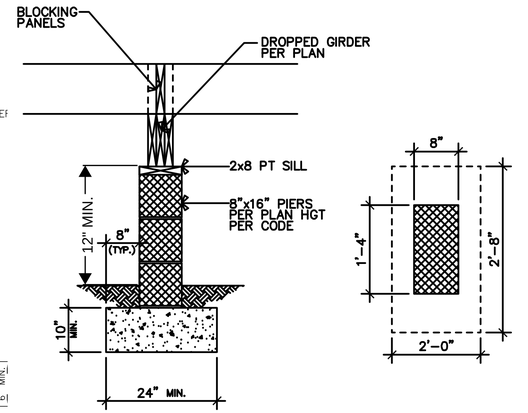
OPTIONAL STEM WALL REINFORCEMENT



TYPICAL STEM WALL SECTION

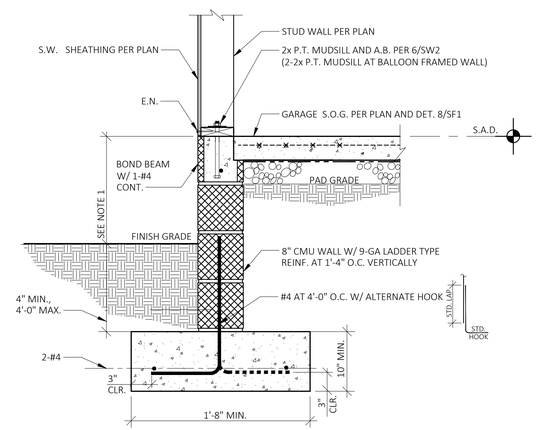
9 MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS (APPLIED AT EA. GARAGE LUG WALL, TYP. U.N.O.)

N.T.S.



2 INT. PIER AT CRAWLSPACE

N.T.S.



NOTE:
1. 8" MIN. ABOVE GRADE, AND 6" MIN. ABOVE HARDSCAPE, S.A.D.
2. MASONRY CELLS CONTAINING REBAR AND/OR HD DEVICE SHALL BE GROUTED SOLID.

3 GARAGE CONC. S.O.G.

N.T.S.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

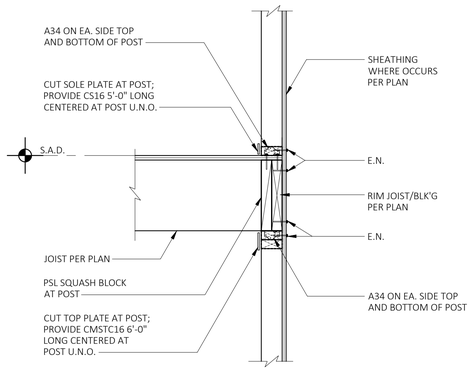
SCALE: AS NOTED

DATE: 03/28/2025

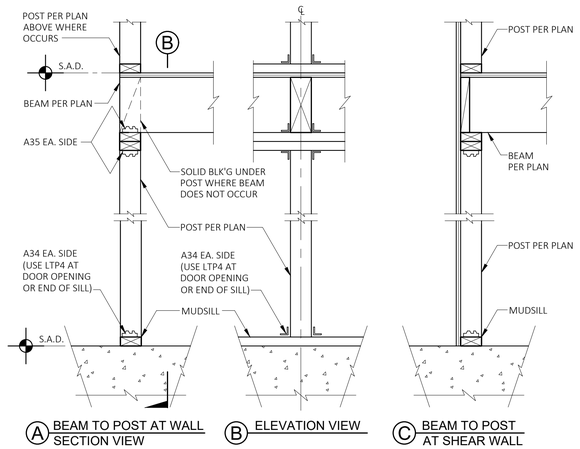
FOUNDATION DETAILS

SHEET: SF2

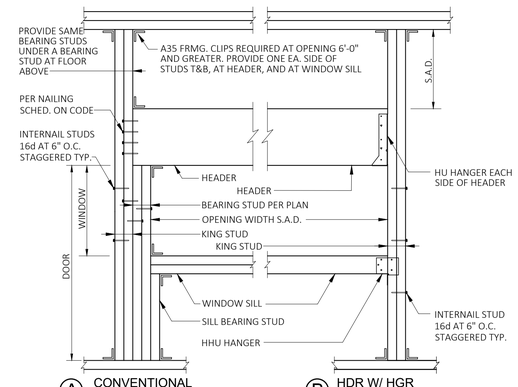
RSI # NC2510



10 PSL POST STACKING ABOVE AND BELOW — N.T.S.

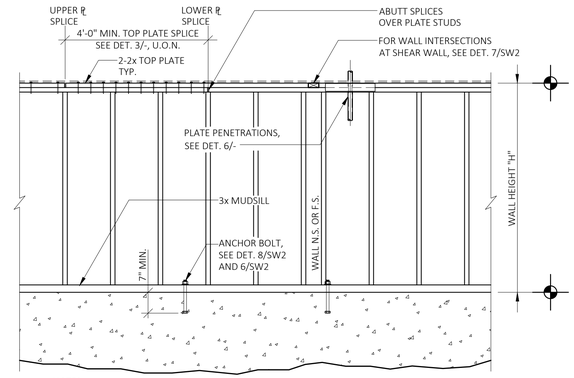


7 FLUSH BEAM TO POST CONNECTION AT WALL — 08-102-01 — N.T.S.



NOTE:
1. FOR WINDOW SILL: USE 1-2x BEARING STUD AT OPENING 4'-0" OR LESS, USE 2-2x BEARING STUDS AT OPENINGS 4'-0" TO 7'-0". USE 3-2x BEARING STUDS AT OPENINGS 7'-0" TO 10'-0". FOR OPENING GREATER THAN 10'-0" NOTIFY E.O.R.
2. FOR 2x4 WALLS USE A34 CLIPS.

4 TYPICAL FRAMING OPENINGS IN WALL — 08-101-07 — N.T.S.

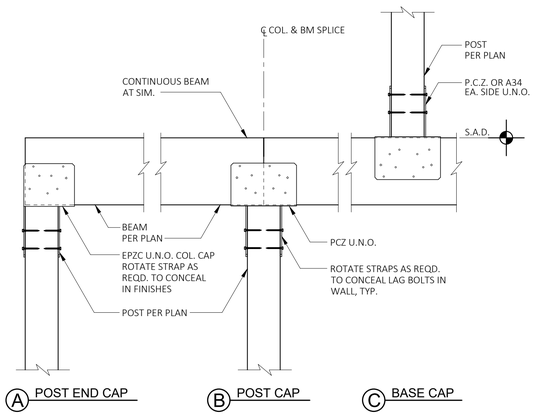


NOTES:
1. USE CBC 20 OTHER NAILING REQUIREMENTS NOT NOTED PER CODE.
2. FOR TALLER WALLS, SEE DET. 2/-.

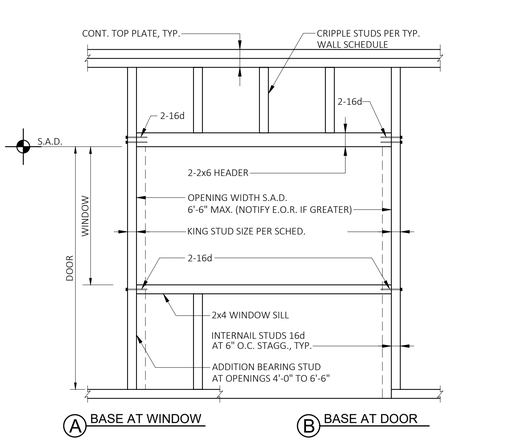
1 BEARING OR SHEAR WALL FRAMING — 08-101-01 — N.T.S.

NOTES:
1. POST CAPS SHALL MATCH SIZE OF CONNECTING BEAM AND SHALL BE SELECTED FROM THE MOST CURRENT SIMPSON (STRONG-TIE CONNECTOR) CATALOG BASED ON THE MAXIMUM MANUFACTURER RECOMMENDATIONS CAPACITIES U.O.N.
2. FOR POST BASE CONNECTIONS, SEE DETAIL 7/-.
3. POSTS SPECIFIED ARE FOR SUPPORTING ONE END OF THE BEAM ONLY WHERE TWO BEAMS FRAME INTO THE SAME LOCATION, PROVIDE A POST UNDER EACH, U.O.N.
4. PROVIDE A SAME SIZE POST AT EACH LEVEL BELOW FOR SUPPORT UNLESS BEAM OCCURS AT THE LEVEL BELOW.
5. FOR FLUSH BEAM TO POST CONNECTION AT WALL, USE DETAIL 7/-.
6. FOR FLUSH BEAM DEEPER THAN JOIST AT WALL, USE POST CONNECTION DETAIL 9/-.
7. FOR DROP BEAM TO POST CONNECTION USE DETAIL 8/-.

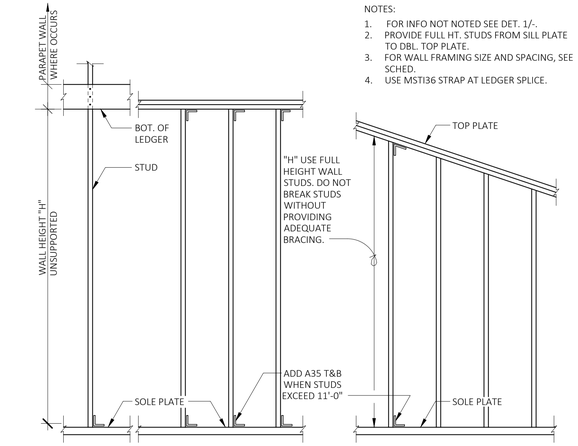
11 TYP. BEAM TO POST CONN. — 08-100-03 — N.T.S.



8 TYPICAL BEAM TO POST CONNECTION — 08-102-01 — N.T.S.

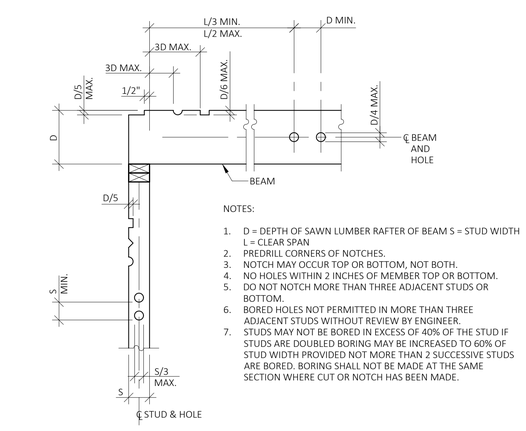


5 NON-STRUCTURAL INTERIOR WALL OPENING — 08-101-09 — N.T.S.



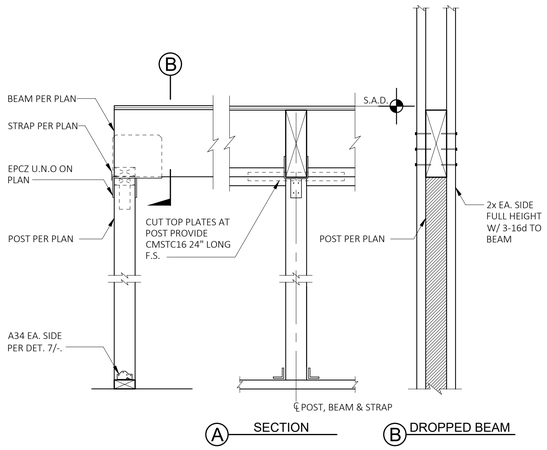
NOTES:
1. FOR INFO NOT NOTED SEE DET. 1/-.
2. PROVIDE FULL HT. STUDS FROM SILL PLATE TO DBL. TOP PLATE.
3. FOR WALL FRAMING SIZE AND SPACING, SEE SCHED.
4. USE MSTI36 STRAP AT LEDGER SPLICE.

2 BALLOON FRAMED WALLS — 08-101-04 — N.T.S.

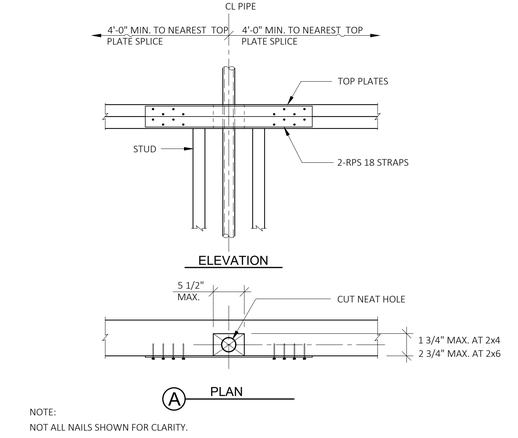


NOTES:
1. D = DEPTH OF SAWN LUMBER RAFTER OF BEAM S = STUD WIDTH L = CLEAR SPAN
2. PREDRILL CORNERS OF NOTCHES.
3. NOTCH MAY OCCUR TOP OR BOTTOM, NOT BOTH.
4. NO HOLES WITHIN 2 INCHES OF MEMBER TOP OR BOTTOM.
5. DO NOT NOTCH MORE THAN THREE ADJACENT STUDS OR BOTTOM.
6. BORED HOLES NOT PERMITTED IN MORE THAN THREE ADJACENT STUDS WITHOUT REVIEW BY ENGINEER.
7. STUDS MAY NOT BE BORED IN EXCESS OF 40% OF THE STUD IF STUDS ARE DOUBLED BORING MAY BE INCREASED TO 60% OF STUD WIDTH PROVIDED NOT MORE THAN 2 SUCCESSIVE STUDS ARE BORED. BORING SHALL NOT BE MADE AT THE SAME SECTION WHERE CUT OR NOTCH HAS BEEN MADE.

12 ALLOWABLE HOLES FOR STRUCTURAL SAWN LUMBER MEMEBERS — 08-103-01 — N.T.S.

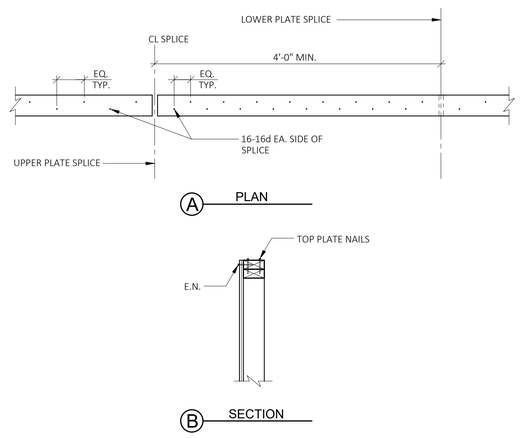


9 TYPICAL FLUSH BEAM DEEPER THAN JOIST TO POST CONNECTION AT WALL — 08-102-05 — N.T.S.



NOTE:
NOT ALL NAILS SHOWN FOR CLARITY.

6 STRENGTHENING PENETRATION THROUGH BEARING OR SHEAR WALL — 08-101-02 — N.T.S.



3 TOP PLATE SPLICE AT BEARING OR SHEAR WALLS — 08-101-05 — N.T.S.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE
3219 ASHE AVENUE
DUNN, NC 28334

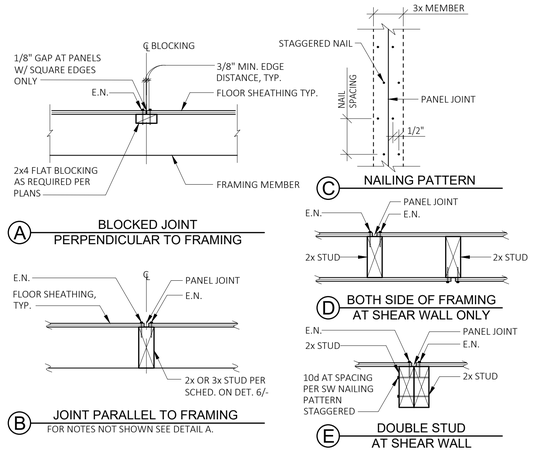
REV.	DATE	DESCRIPTION

DESIGNER:
DRAFTER:
SCALE: AS NOTED
DATE: 03/28/2025

WOOD DETAILS

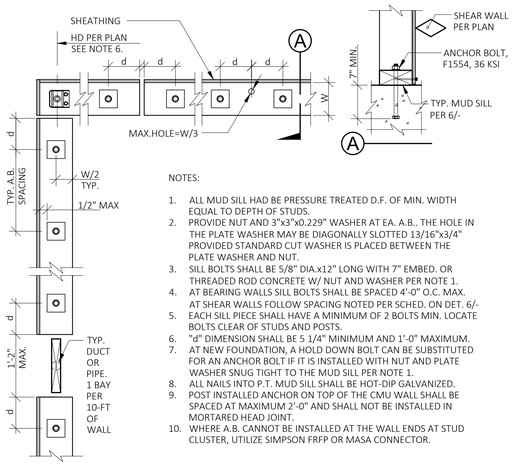
SHEET: SW1

RSI # NC2510



10 N.T.S.

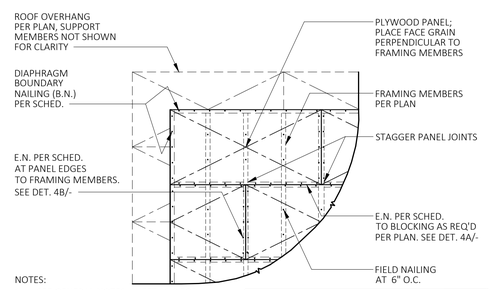
4 SHEATHING NAILING N.T.S.



NOTES:

1. ALL MUD SILL HAD BE PRESSURE TREATED D.F. OF MIN. WIDTH EQUAL TO DEPTH OF STUDS.
2. PROVIDE NUT AND 3"x3"x0.229" WASHER AT EA. A.B.. THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x3/4" PROVIDED STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT.
3. SILL BOLTS SHALL BE 5/8" DIA.x12" LONG WITH 7" EMBED. OR THREADED ROD CONCRETE W/ NUT AND WASHER PER NOTE 1.
4. AT BEARING WALLS SILL BOLTS SHALL BE SPACED 4'-0" O.C. MAX. AT SHEAR WALLS FOLLOW SPACING NOTED PER SCHED. ON DET. 6/-
5. EACH SILL PIECE SHALL HAVE A MINIMUM OF 2 BOLTS MIN. LOCATE BOLTS CLEAR OF STUDS AND POSTS.
6. "d" DIMENSION SHALL BE 5 1/4" MINIMUM AND 1'-0" MAXIMUM.
7. AT NEW FOUNDATION, A HOLD DOWN BOLT CAN BE SUBSTITUTED FOR AN ANCHOR BOLT IF IT IS INSTALLED WITH NUT AND PLATE WASHER SNUG TIGHT TO THE MUD SILL PER NOTE 1.
8. ALL NAILS INTO P.T. MUD SILL SHALL BE HOT-DIP GALVANIZED.
9. POST INSTALLED ANCHOR ON TOP OF THE CMU WALL SHALL BE SPACED AT MAXIMUM 2'-0" AND SHALL NOT BE INSTALLED IN MORTARED HEAD JOINT.
10. WHERE A.B. CANNOT BE INSTALLED AT THE WALL ENDS AT STUD CLUSTER, UTILIZE SIMPSON FRFP OR MASA CONNECTOR.

8 MUD SILL AND ANCHOR BOLT REQUIREMENTS N.T.S.



NOTES:

1. SEE GENERAL NOTES, SHEET S1.0 FOR PANEL THICKNESS AND GRADE.
2. SEE FRAMING PLANS FOR SPECIAL NAILING AND BLOCKING REQUIREMENTS.
3. INDIVIDUAL PANEL SHEETS SHALL BE A MINIMUM OF 4 FEETx8 FEET. EDGE PIECE SHALL NOT BE LESS THAN 2 FEET WIDE.
4. IF BLOCKING SPECIFIED AT FLOORS PANELS, TONGUE & GROOVE EDGES ARE NOT REQUIRED.

DIAPHRAGM NAILING SCHEDULE				
	NAIL SIZE	E.N.	B.N.	BLOCKING
FLOORS	10d COMMON	6" O.C.	12" O.C.	PER PLAN
ROOFS	8d COMMON	6" O.C.	6" O.C.	PER PLAN

5 ROOF OR FLOOR DIAPHRAGM N.T.S.

MARK	NO. OF SIDES	EDGE NAIL 8d COMMON SEE DETAIL 4C/- WHERE SPECIFIED AS STAGGERED	EDGE OF PANEL NAILING		SOLE PLATE OR TOP PLATE CONNECTIONS		SHEAR CLIPS W/ 8d COMMON NAIL U.O.N.		5/8"Ø A.B. OR TITEN HD W/ MIN. 7" EMBED. INTO MUDSILL SEE DET. 8/-		URFP AT (E) CONC. TO MUDSILL	5/8"Ø TITEN HD W/ EMBED. DEPTH 7" MIN. INTO TOP OF FULLY GROUTED CMU AT RETROFIT CONDITION, SEE DET. 8/-	ALLOWABLE SHEAR (plf)
			SIZE	DETAIL	16d SINKER NAILS	SDS 1/4x5	LTP4	A34	2x MUDSILL	3x MUDSILL			
E	SINGLE SIDE	6"	2x	4B/-	6" O.C.	1'-3" O.C.	2'-0" O.C.	1'-6" O.C.	AT 4'-0"	AT 4'-0"	AT 4'-0"	AT 2'-0"	308

6 SHEAR WALL SCHEDULE: 7/16" OSB SHEATHING N.T.S.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

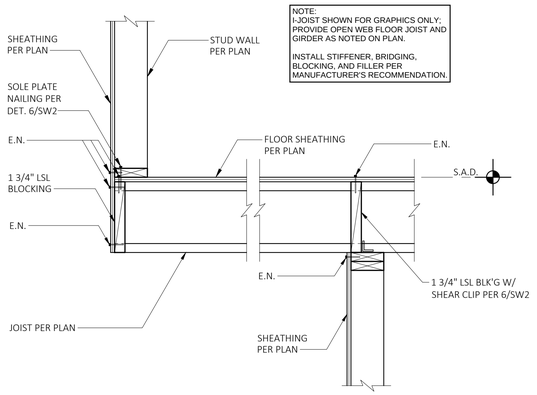
SCALE: AS NOTED

DATE: 03/28/2025

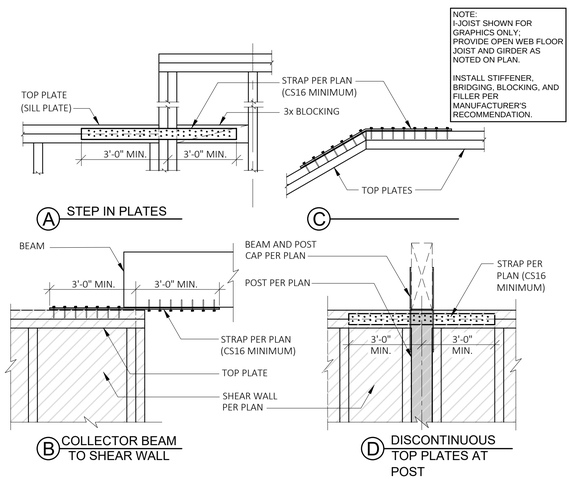
WOOD DETAILS

SHEET: SW2

RSI # NC2510

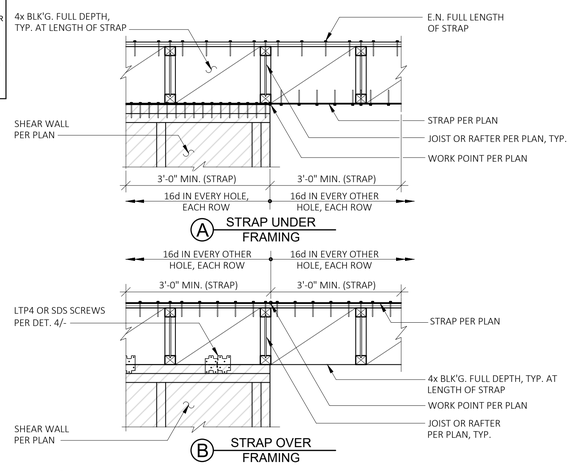


10 N.T.S.



11 HORIZONTAL STRAP DETAIL 08-122-01 N.T.S.

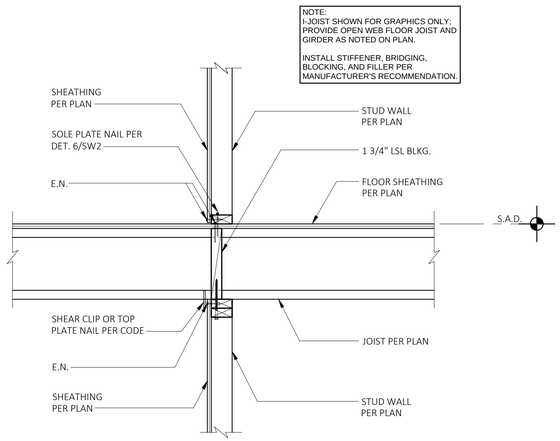
7 WALL ON CANTILEVER JOIST N.T.S.



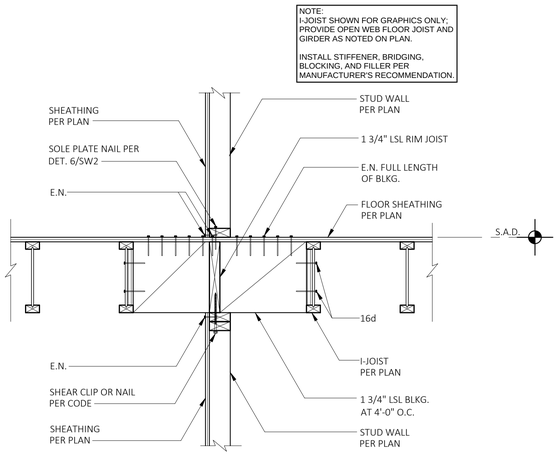
8 HORIZONTAL STRAP AT PARALLEL JOIST/RAFTER 08-122-10B N.T.S.

12 JOIST TO DEEP BEAM CONNECTION FLUSH AT BOTTOM N.T.S.

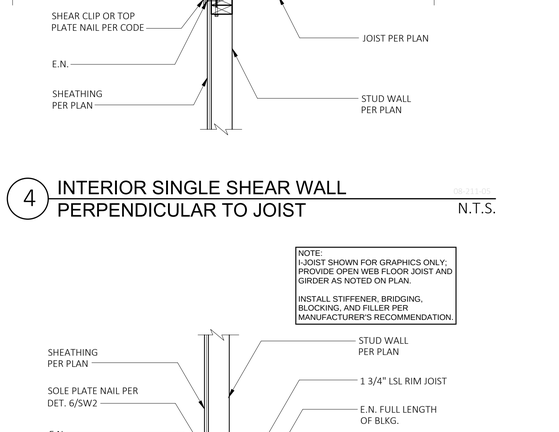
4 INTERIOR SINGLE SHEAR WALL PERPENDICULAR TO JOIST 08-211-01 N.T.S.



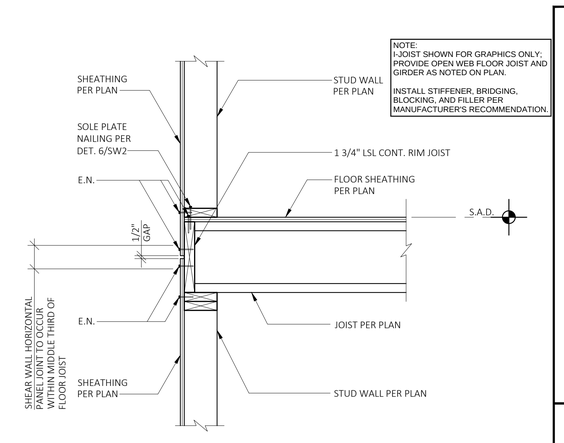
5 INTERIOR SINGLE SHEAR WALL PARALLEL TO JOIST 08-211-05 N.T.S.



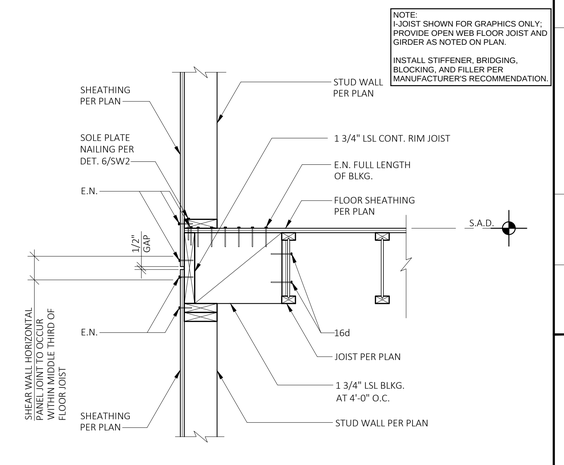
6 BEAM AT INTERIOR SHEAR WALL PARALLEL TO JOIST N.T.S.



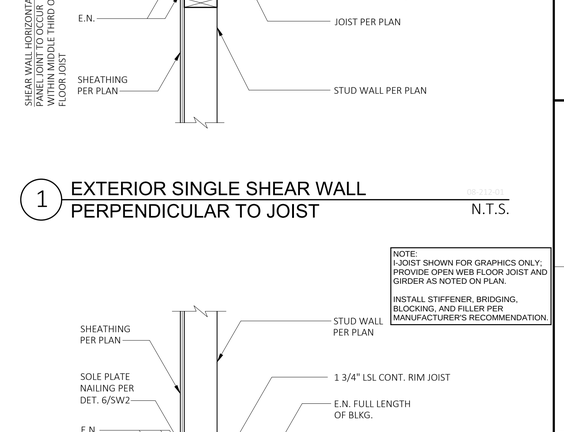
1 EXTERIOR SINGLE SHEAR WALL PERPENDICULAR TO JOIST 08-212-01 N.T.S.



2 EXTERIOR SINGLE SHEAR WALL PARALLEL TO JOIST 08-212-05 N.T.S.



3 BEAM AT INTERIOR SHEAR WALL PERPENDICULAR TO JOIST N.T.S.



Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR R SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION
NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

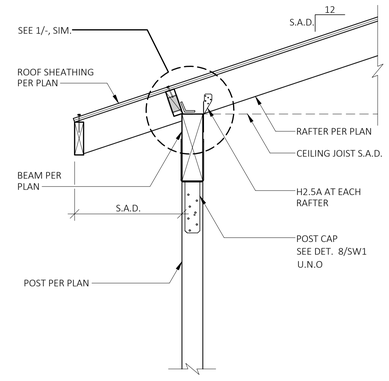
REV.	DATE	DESCRIPTION

DESIGNER:
DRAFTER:
SCALE: AS NOTED
DATE: 03/28/2025

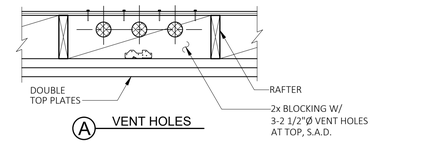
WOOD DETAILS

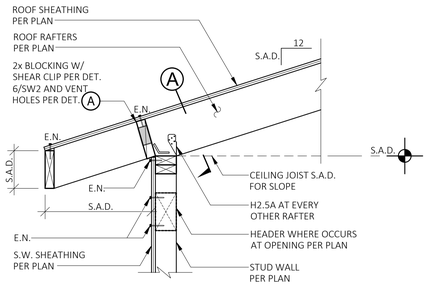
SHEET: SW3

RSI # NC2510



8 EAVE PORCH 08-700-17 N.T.S.

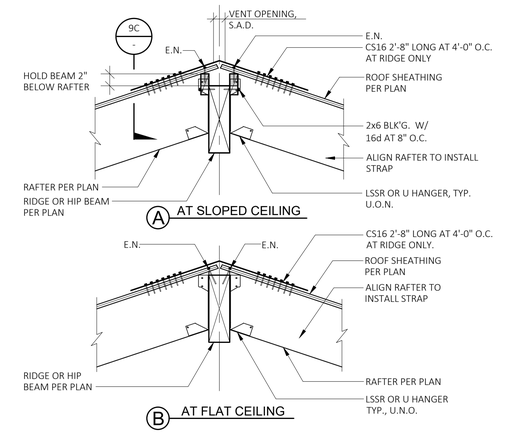




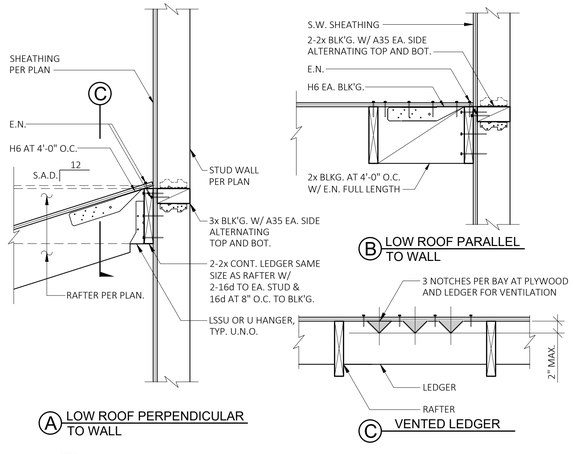
1 EAVE DETAIL 08-700-01 N.T.S.

7 N.T.S.

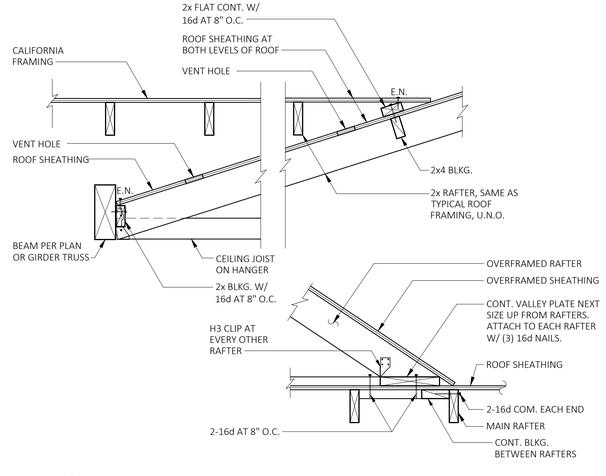
4 N.T.S.



2 STRUCTURAL RIDGE BEAM OR HIP 08-700-02 N.T.S.



9 LOW ROOF PERPENDICULAR TO WALL 08-700-17 N.T.S.



6 VALLEY FRAMING 08-700-15 N.T.S.

12 N.T.S.

3 N.T.S.

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL SEAL 055533 ENGINEER PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025

SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE

3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

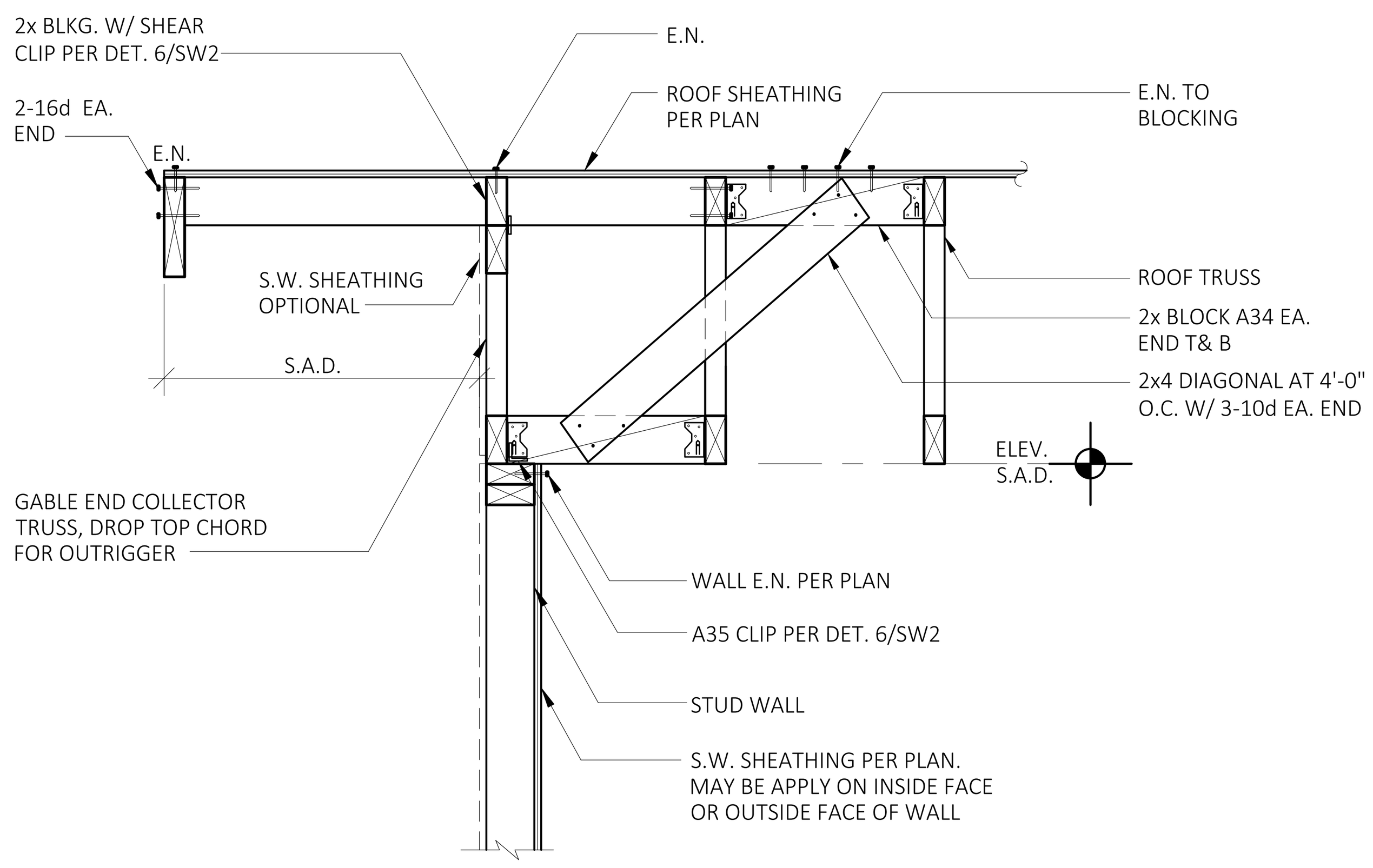
SCALE: AS NOTED

DATE: 03/28/2025

WOOD DETAILS

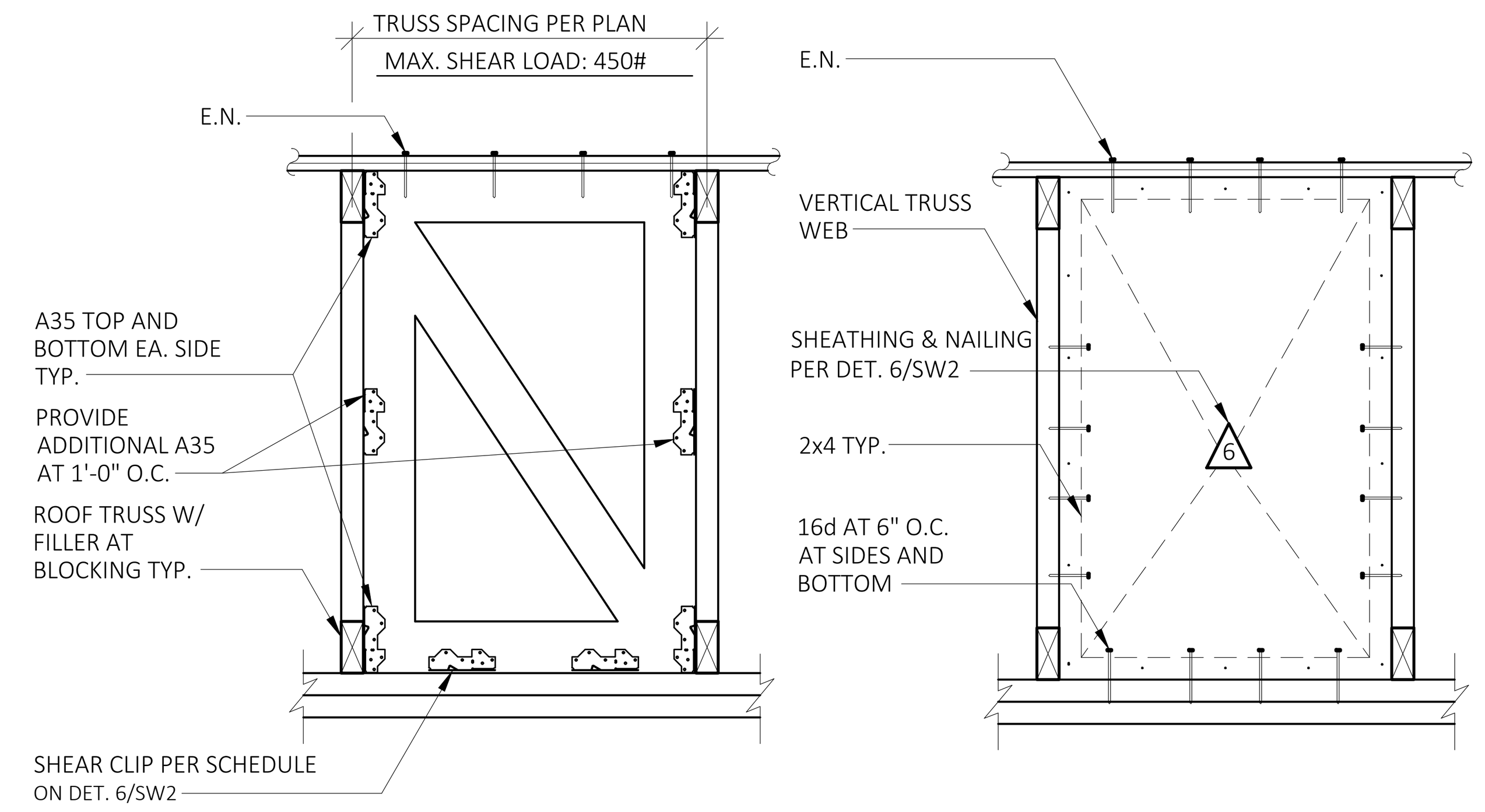
SHEET: SW4

RSI # NC2510



10 GABLE WALL /TRUSS
N.T.S.

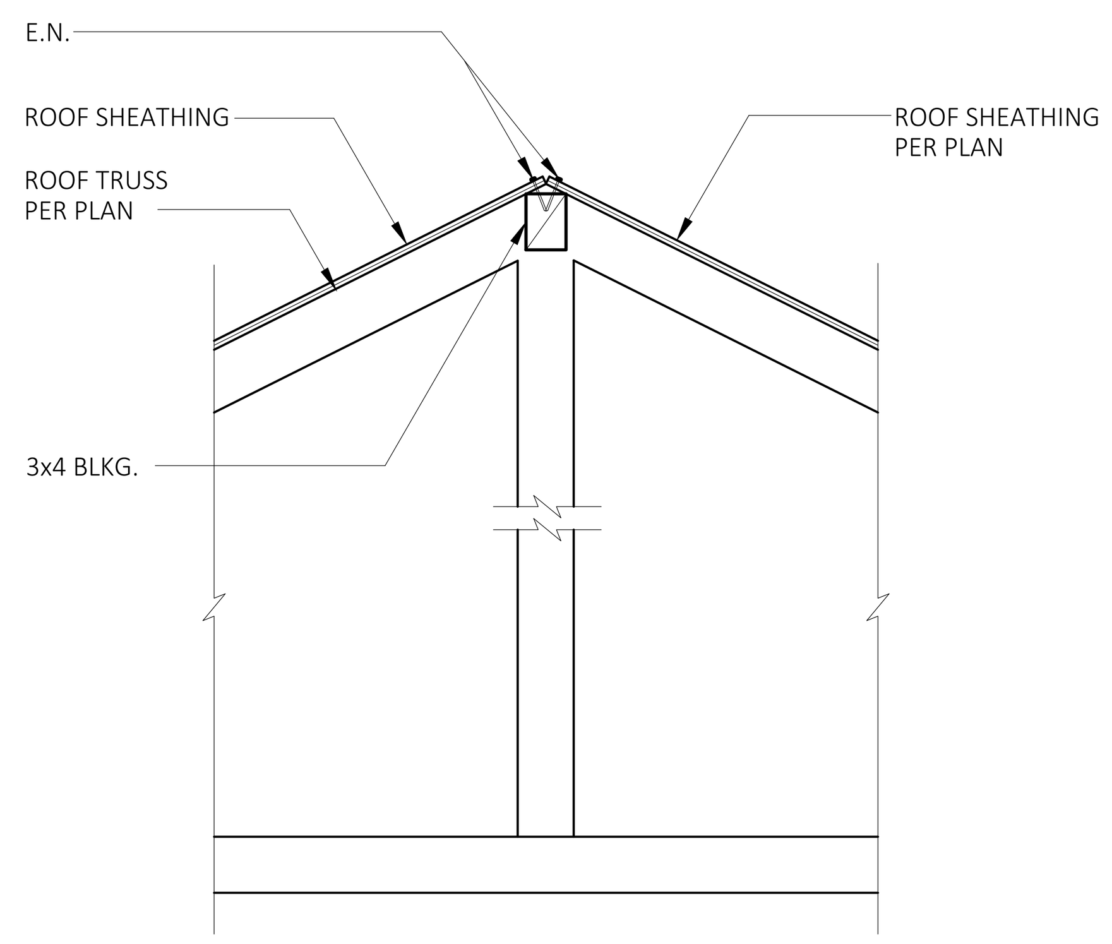
7
N.T.S.



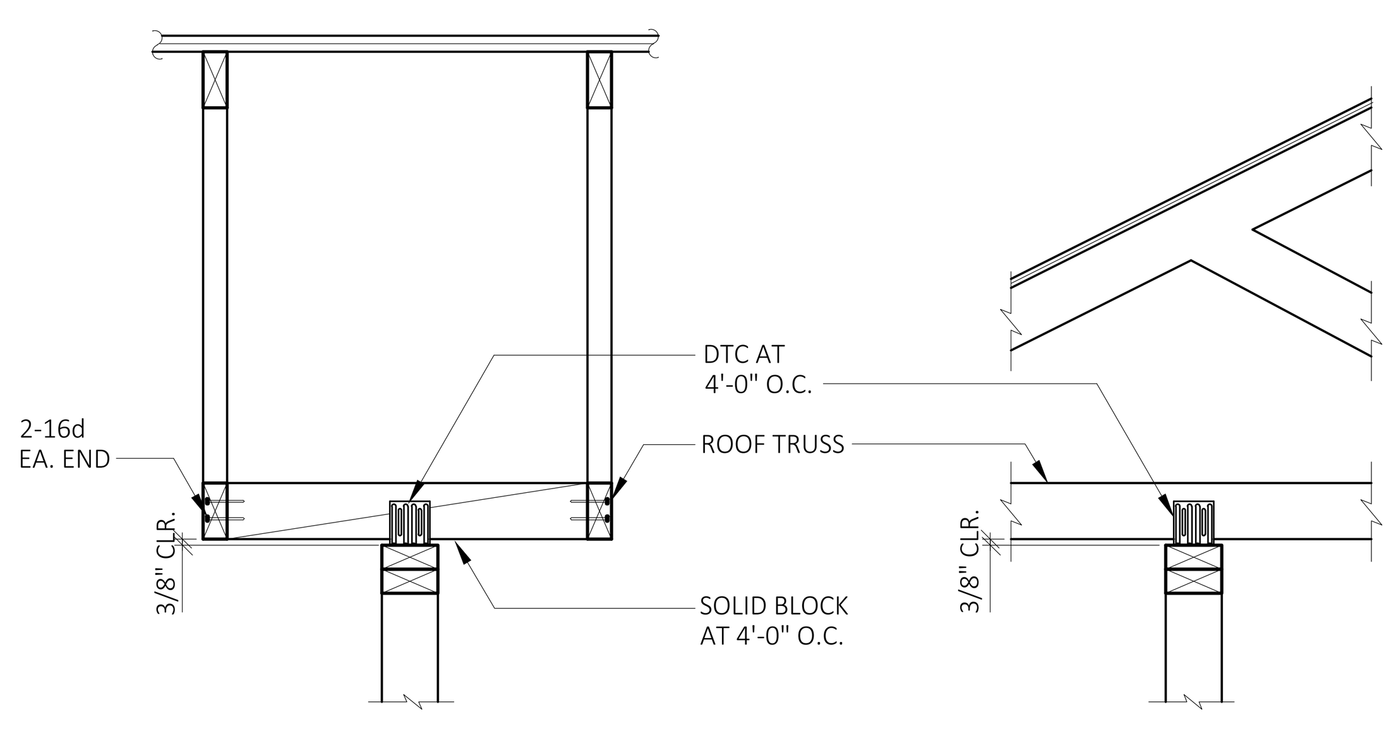
A TYP. TRUSS BLOCK BY TRUSS MANUF.

B ALTERNATIVE TRUSS BLOCK

4 TRUSS BLOCK DETAILS
N.T.S.



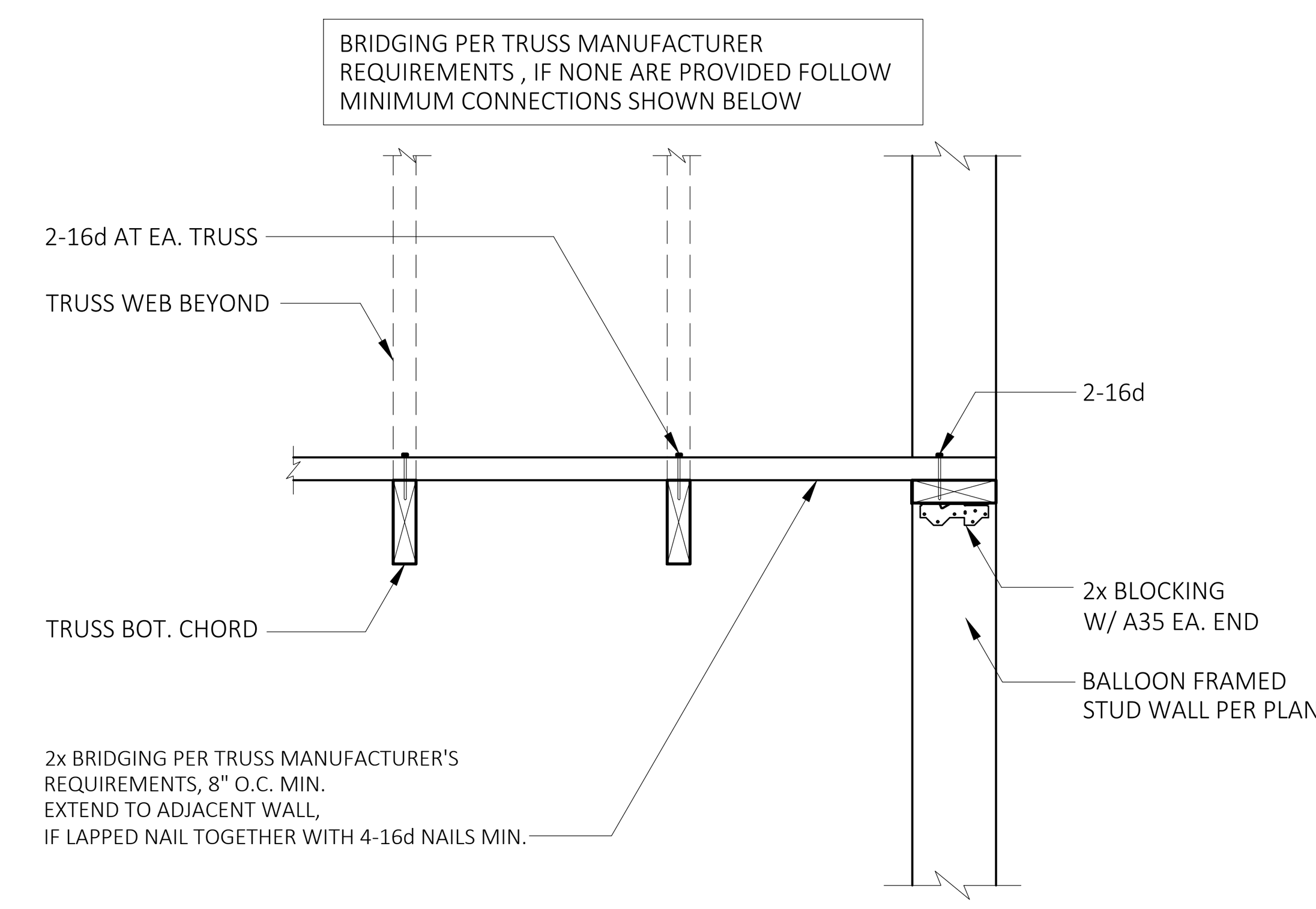
11 TRUSS RIDGE
N.T.S.



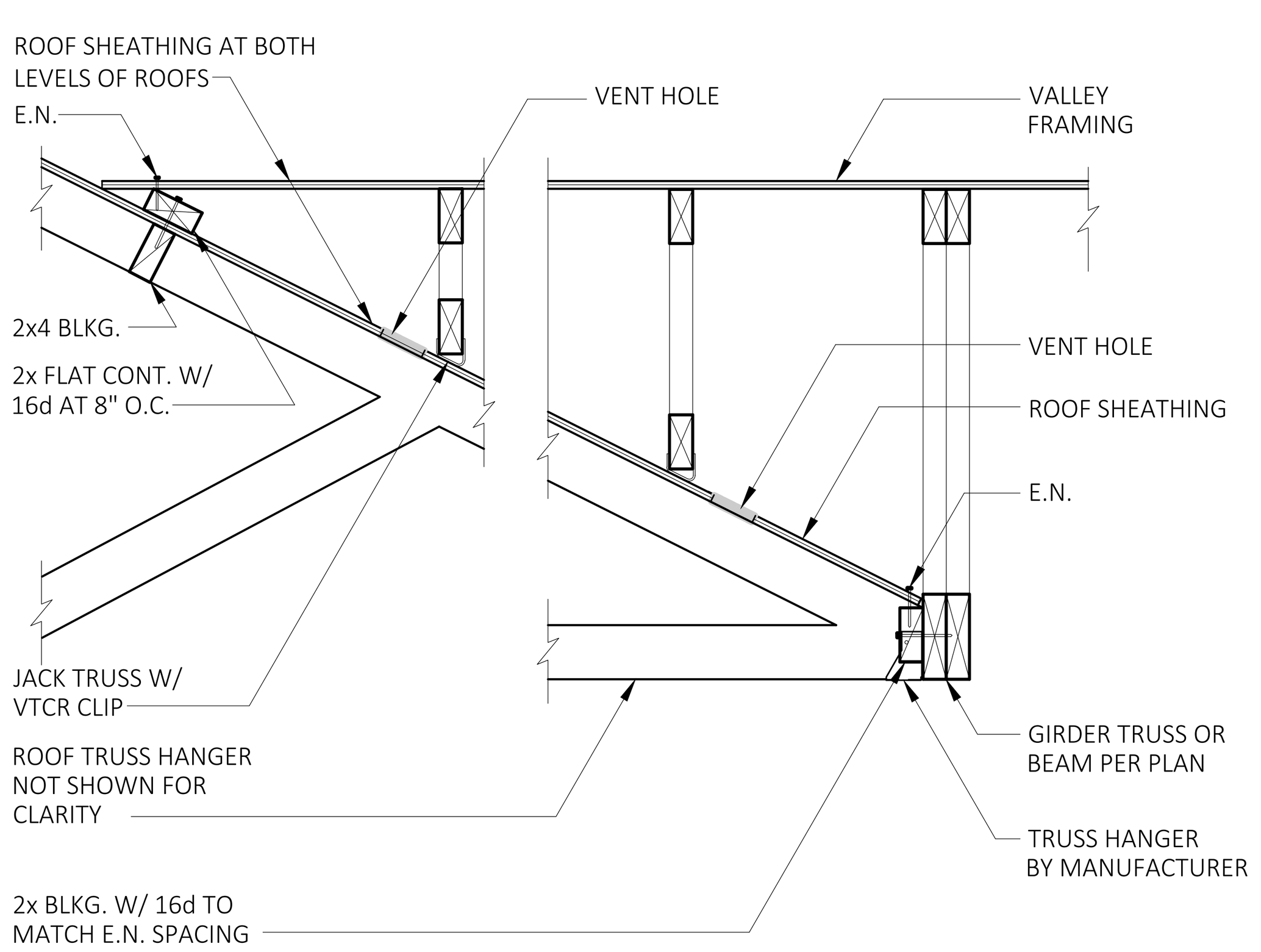
A PARALLEL

B PERPENDICULAR

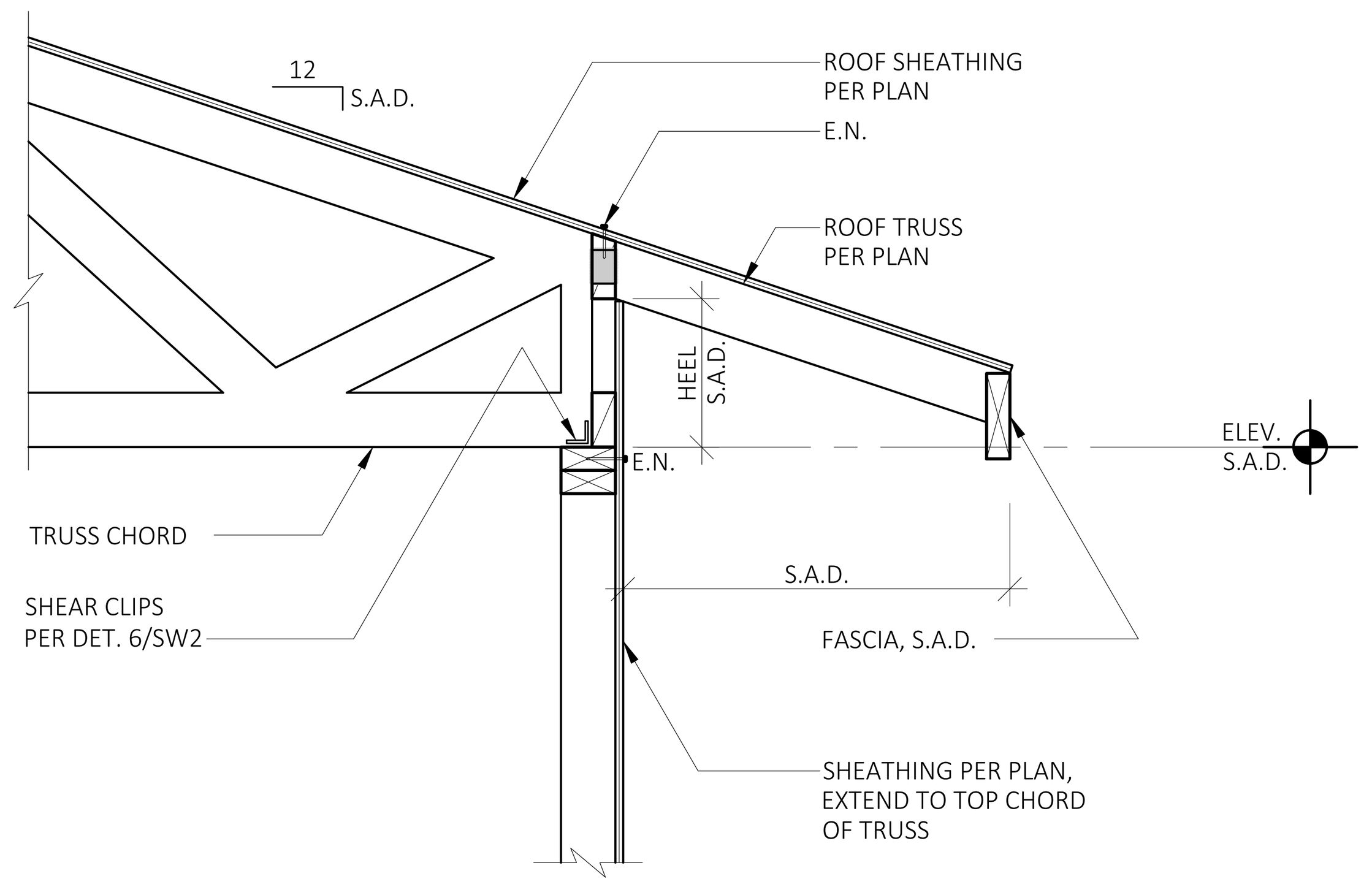
8 NON - STRUCTURAL PARTITION BRACING AT TRUSS
N.T.S.



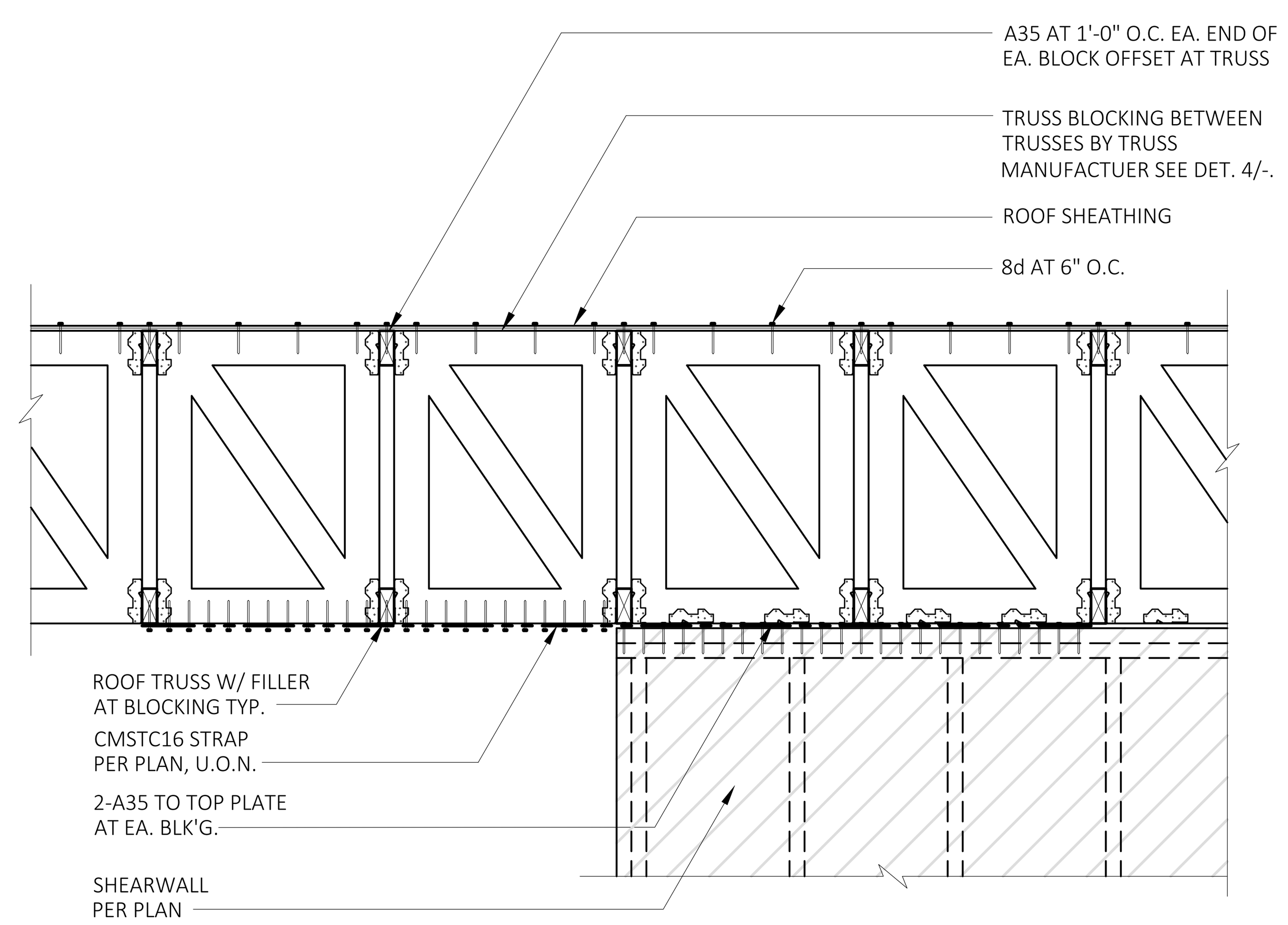
5 TRUSS BRIDGING
N.T.S.



12 VALLEY TRUSS
N.T.S.



9 EAVE WITH HEEL
N.T.S.



6 COLLECTOR STRAP AND TRUSS BLOCKS
N.T.S.

A. TRUSSES SHALL BE PREFABRICATED BY A MANUFACTURER WITH A MINIMUM OF 5 YEARS EXPERIENCE PERFORMING SIMILAR WORK.

B. TRUSSES SHALL BE DESIGNED TO WITHSTAND THE FOLLOWING MINIMUM UNIFORM VERTICAL LOADS:

ROOF:

TOP CHORD:
DEAD LOAD= 7.5 PSF
LIVE LOAD= 20 PSF

BOTTOM CHORD:
DEAD LOAD= 5 PSF
LIVE LOAD= 10 PSF (AT FLAT BOTTOM CHORD ONLY)
ATTIC LIVE LOAD= PER PLAN AND SHEET GN1 (DESIGN BASIS)

COLLECTOR TRUSS:
LATERAL LOAD PER PLAN

C. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS DETAILS AND TRUSS PROFILES NOT SHOWN ON STRUCTURAL DRAWINGS.

D. CONTRACTOR TO COORDINATE MECHANICAL SYSTEMS WITHIN OR SUPPORTED BY TRUSSES WITH MANUFACTURER PRIOR TO FABRICATION OF TRUSSES. SEE DRAWINGS OTHER THAN STRUCTURAL FOR THESE SYSTEMS.

E. MANUFACTURER TO DESIGN TRUSS PROFILES TO PROVIDE 3/8-INCH CLEAR ABOVE NON-STRUCTURAL WALLS. SEE DETAIL 8/-

F. THE TRUSS DESIGN DRAWINGS AND CALCULATIONS SHALL INCLUDE AT A MINIMUM THE FOLLOWING INFORMATION:

1. SLOPE OR DEPTH, SPAN AND SPACING;
2. LOCATION OF JOINTS AND SUPPORT LOCATIONS;
3. NUMBER OF PLIES IF GREATER THAN ONE;
4. REQUIRED BEARING WIDTHS;
5. DESIGN LOADS AS APPLICABLE INCLUDING:
   - 5.1 TOP CHORD LIVE LOAD AS NOTED ABOVE;
   - 5.2 TOP CHORD DEAD LOAD AS NOTED ABOVE;
   - 5.3 BOTTOM CHORD LIVE LOAD AS NOTED ABOVE;
   - 5.4 BOTTOM CHORD DEAD LOAD AS NOTED ABOVE;
   - 5.5 ADDITIONAL LOADS AND LOCATIONS;
6. OTHER LATERAL LOADS, INCLUDING DRAG STRUT LOADS;
7. CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION AS APPLICABLE;
8. ADJUSTMENTS TO LUMBER AND METAL CONNECTOR PLATE DESIGN VALUE FOR CONDITIONS OF USE;
9. MAXIMUM REACTION FORCE AND DIRECTION INCLUDING MAX UPLIFT REACTION FORCES WHERE APPLICABLE;
10. METAL CONNECTOR PLATE TYPE, SIZE, THICKNESS, OR GAGE, AND THE DIMENSIONED LOCATION OF EACH METAL CONNECTOR PLATE EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE;
11. LUMBER SIZE, SPECIES, AND GRADE FOR EACH MEMBER.
12. CONNECTION REQUIREMENTS FOR TRUSS TO TRUSS; TRUSS PLY TO PLY; FIELD SPLICES; AND FIELD ASSEMBLY REQUIREMENTS;
13. CALCULATED SPAN-TO-DEFLECTION RATIO AND MAXIMUM VERTICAL AND HORIZONTAL DEFLECTION FOR LIVE AND TOTAL LOAD;
14. MAXIMUM AXIAL TENSILE AND COMPRESSION FORCES IN THE TRUSS MEMBERS;
15. REQUIRED PERMANENT INDIVIDUAL TRUSS MEMBER BRACING AND METHOD PER SECTION 2303.4, UNLESS A SPECIFIC TRUSS MEMBER PERMANENT BRACING PLAN FOR THE ROOF OR FLOOR STRUCTURAL SYSTEM IS PROVIDED BY A REGISTERED DESIGN PROFESSIONAL;
16. EACH INDIVIDUAL TRUSS DESIGN DRAWING SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED DESIGN PROFESSIONAL;

G. THE TRUSS MANUFACTURER SHALL PROVIDE A TRUSS PLACEMENT DIAGRAM THAT IDENTIFIES THE PROPOSED LOCATION FOR EACH INDIVIDUALLY DESIGNATED TRUSS AND REFERENCES THE CORRESPONDING TRUSS DESIGN DRAWING. THE TRUSS PLACEMENT DIAGRAM SHALL BE PROVIDED AS PART OF THE TRUSS SUBMITTAL PACKAGE, AND WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. TRUSS PLACEMENT DIAGRAMS THAT SERVE ONLY AS A GUIDE FOR INSTALLATION AND DO NOT DEVIATE FROM THE PERMIT SUBMITTAL DRAWINGS SHALL NOT BE REQUIRED TO BEAR THE SEAL OR SIGNATURE OF THE TRUSS DESIGNER.

H. THE TRUSS SUBMITTAL PACKAGE PROVIDED BY THE TRUSS MANUFACTURER SHALL CONSIST OF EACH OF EACH INDIVIDUAL TRUSS DESIGN DRAWING, THE TRUSS PLACEMENT DIAGRAM, THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING METHOD AND DETAILS, AND ANY OTHER STRUCTURAL DETAILS GERMANE TO THE TRUSSES; AND, AS APPLICABLE, THE COVER/TRUSS INDEX SHEET.

I. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHER WISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G., HVAC EQUIPMENT, PIPING, ADDITIONAL ROOFING OR INSULATION, ETC.) SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

J. TRUSSES NOT PART OF A MANUFACTURING PROCESS IN ACCORDANCE WITH EITHER SECTIONS 2303.4.1 THROUGH 2303.4.5, THE DESIGN MANUFACTURE AND QUALITY ASSURANCE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH TPI 1. JOB-SITE INSPECTIONS SHALL BE IN COMPLIANCE WITH SECTIONS 1704.2 AND 1704.6, AS APPLICABLE.

K. TRUSS MANUFACTURER PROVIDE HANGER SIZES AND HARDWARE COMPONENTS TO BE SPECIFIED ON TRUSS DRAWINGS.

3 PREFABRICATED TRUSS NOTES

Residential Structures, P.C.
Engineering and Design
Charlotte: 704-332-5460
Charleston: 843-406-7174
Myrtle Beach/Florence: 704-301-9521
www.residentialstructurespc.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 055533 PRAKHAR SHRESTHA

SIGNED DATE: 04/09/2025
SEAL FOR STRUCTURAL ONLY

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

NC COA NO. 3295

Residential Structures, P.C.
3410 North Davidson St.
Charlotte, NC 28205

Plans to be used in conjunction with Residential Structures P.C. general notes

MENCIA RESIDENCE
3219 ASHE AVENUE
DUNN, NC 28334

REV.	DATE	DESCRIPTION

DESIGNER:

DRAFTER:

SCALE: AS NOTED

DATE: 03/28/2025

WOOD DETAILS

SHEET: SW4T

RSI # NC2510