DESIGN LOADS LIVE LOAD DEAD LOAD TABLE R301.4 (PSF) (PSF) DWELLING UNITS SLEEPING ROOMS ATTICS WITH STORAGE ATTICS WITHOUT STORAGE ROOF SNOW STAIRS DECKS EXTERIOR BALCONIES PASSENGER VEHICLE GARAGES FIRE ESCAPES GUARDRAILS AND HANDRAILS 200

MATERIALS

1. FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 875 PSI Fv = 70 PSI E = 1.4E6 PSI

2. FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE #2 SOUTHERN YELLOW PINE (SYP) TREATED IN ACCORDANCE WITH AWPA C22 WITH THE FOLLOWING DESIGN PROPERTIES: Fb = 1050 PSI Fv = 95 PSI E = 1.6E6 PSI

3. ENGINEERED WOOD BEAMS SHALL BE LAMINATED VENEER LUMBER (LVL) OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES: Fb = 2900 PSI Fv = 285 PSI E = 1.9E6 PSI

4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 MINIMUM GRADE.

5. BOLTS SHALL CONFORM TO A307 MINIMUM GRADE.

6. REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60.

7. POURED CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. MATERIALS USED TO PRODUCE CONCRETE SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN ACI 318 OR ASTM C 1157.

8. CONCRETE LOCATED PER TABLE R402.2 SHALL BE AIR ENTRAINED WITH THE TOTAL AIR CONTENT NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCNET.

9. MASONRY UNITS SHALL CONFORM TO ACI 530/ASCE 5/TMS 402 AND MORTAR SHALL COMPLY WITH ASTM C 270.

10. ALLOWABLE SOIL BEARING PRESSURE 2000 PSF.

GENERAL

ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS OR ANY DEVIATION FROM THE PLANS

ALL CONSTRUCTION, WORKMANSHIP, MATERIAL QUALITY AND SELECTION SHALL BE IN ACCORDANCE WITH THE <u>NORTH</u> CAROLINA STATE BUILDING CODE - RESIDENTIAL CODE 2018 EDITION FROM THE INTERNATIONAL RESIDENTIAL CODE 2018 (IRC), AND LOCAL CODES AND REGULATIONS. DIMENSIONS SHALL GOVERN OVER SCALE AND CODE SHALL GOVERN OVER DIMENSIONS.

ADDITIONAL LOADS

FIGURE R301.2(4) - BASIC DESIGN WIND SPEED 100 MPH

FIGURE R301.2(2) - SEISMIC DESIGN CATEGORY B

TABLE R301.2(4) - DESIGN POSITIVE AND NEGATIVE PRESSURE FOR DOORS AND WINDOW FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF

TABLE R301.2(2) - COMPONENT AND CLADDING LOADS FOR A MEAN ROOF HEIGHT OF 30 FEET OR LESS LOCATED IN EXPOSURE B ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE DESIGNED BASED ON ROOF PITCHES AS FOLLOWS: 45.4 PSF FOR 0:12 TO 2.25:12. 34.8 PSF FOR 2.25:12 TO 7:12 AND 21 PSF FOR 7:12 TO 12:12 WALL CLADDING IS DESIGNED FOR A 24.1 PSF POSITIVE AND NEGATIVE PRESSURE

ENERGY COMPLIANCE:

TABLE N1102.1 - REFER TO TABLE N1101.1 TO DETERMINE THE CLIMATE ZONE BY COUNTY AND REFER TO TABLE N1102.1 FOR R VALUE INSULATION REQUIREMENTS LISTED BY ZONE.

 $\underline{ TABLE \ N1102.1 - ZONE \ 7 - MAX. \ GLAZING \ U \ FACTOR: \underline{0.40}. \ MIN. \ INSULATION \ R \ VALUES: \ CEILING \ \underline{R-30}, \ WALLS \ \underline{R-13}, \ FLOORS \ \underline{R-19}, \ BASEMENT \ WALLS \ \underline{R-7}. \ SLAB \ PERIMETER \ \underline{R-0}, \ CRAWL \ SPACE \ WALLS \ \underline{R-7}. \ \underline{R-7$

TABLE N1102.1 - ZONE 8 - MAX. GLAZING U FACTOR: 0.40. MIN. INSULATION R VALUES: CEILING R-30, WALLS R-13, FLOORS R-19, BASEMENT WALLS R-8, SLAB PERIMETER R-5 (2 FT DEEP), CRAWL SPACE WALLS R-10.

CONSTRUCTION

1. STEEL FLITCH BEAMS SHALL BE FASTENED TOGETHER WITH 1/2" DIAMETER BOLTS WITH WASHERS PLACED UNDER THE THREADED END OF THE BOLT. BOLTS SHALL BE SPACED AT MAXIMUM 24" o.C. STAGGERED TOP AND BOTTOM OF BEAM WITH A MINIMUM 2" EDGE DISTANCE. TWO BOLTS SHALL BE LOCATED AT 6" FROM EACH END OF FLITCH BEAM.

2. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. BEAMS MUST BE ANCHORED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR TWO 1/2" x 4" LAG SCREWS. 3. ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.

4. ALL BEAMS SHALL BE CONTINUOUSLY SUPPORTED LATERALLY AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED WITH A MINIMUM OF THREE STUDS.

5. SOLID BLOCKING SHALL BE PROVIDED AT ALL POINT LOADS TO TRANSFER LOADS THROUGH FLOOR LEVELS. COLUMNS SHALL BE CONTINUOUS TO THE FOUNDATION OR TO OTHER STRUCTURAL ELEMENTS.

6. ENGINEERED WOOD FLOOR SYSTEMS AND ROOF TRUSS SYSTEMS SHALL BE PROVIDED FOR REVIEW AND COORDINATED WITH THE ENGINEER OF RECORD. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

7. WALL BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION R602.10 OF THE NORTH CAROLINA RESIDENTIAL CODE.

8. BRICK LINTELS SHALL BE 3 1/2 x 3 1/2 x 1/4 STEEL ANGLE FOR UP TO 6'0" MAXIMUM SPAN AND 6 x 4 x 5/16 FOR SPANS GREATER THAN 6'0".

9. BRICK LINTELS AT SLOPED AREAS SHALL BE 4 x 3 1/2 x 1/4 STEEL ANGLE WITH 16d NAILS IN 3/16" HOLES IN 4" ANGLE LEG AT 12" o.c. TO DOUBLE RAFTER. WHEN THE SLOPE EXCEEDS 4:12 A MINIMUM OF 3 x 3 x 1/4 PLATES SHALL BE WELDED AT 24" o.c. ALONG THE STEEL ANGLE.

Prince Place Lot 14

ATTIC VENT SCHEDULE										
	ROOF PLAN									
MAIN HOUSE SQ FTG 1982 AT / NEAR RIDGE AT										
VENT TYPE										
	0.2778 0.125 0	0.2778 0.125 0.194	44							
RIDGE VENT	0 80.00	0 80.00								
SOFFIT VENTS		0								
TOTAL (MIN)	REQUIRED IF THERE IS INSUFFICIENT RIDGE AV	AY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILA	BLE							
TOTAL (MIN)	REQUIRED IF THERE IS INSUFFICIENT RIDGE AV	ILA								

* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION

REVISION LOG

DATE: -/-/---

REVISION: 001

1. ---

CONCCONCRETECONTCONTINUOUSDBLDUBLEDJDOUBLE JOISTDSPDOUBLE STUD POCKETEAEACHFL PTFLAT PLATEFTGFOOTINGHGRHANGERLVLLAMINATED VENEER LUMBERNTSNOT TO SCALEOCON CENTERPSLPARALLEL STRAND LUMBERPTPRESSURE TREATEDSCSTUD COLUMNSPSTUD POCKETTJTRIPLE JOISTTYPTYPICALUNOUNLESS NOTED OTHERWISE

TABLE N1102.1 CLIMATE ZONES 3-5

	LIMATE ZONES	FENESTRATION U-FACTOR b	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC b,e	CEILING ^k R-VALUE	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT ^C WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE ^C WALL R-VALUE
	3	0.35	0.65	0.30	30	13	5/10	19	10/13 ^f	0	5/13
	4	0.35	0.60	0.30	38 OR 30 CONT j	15 OR 13+2.5 ^h	5/10	19	10/13	10 ^d	10/13
	5	0.35	0.60	NR	38 OR 30 CONT j	19 OR 13+5 OR 15+3 ^{e,h}	13/17	30 g	10/13	10 ^d	10/13
R-VALI	UES ARE N	INIMUMNS, U-FACTO	ORS AND SHGC	ARE MAXIMUMS.							
		ION U-FACTOR COLL									
		10 CONT. INSULATE	D SHEATHING C	IN THE INTERIOR OR	EXTERIOR OF	THE HOME OR R-13	CAVITY INSU	LATION AT T	HE INTERIOR OF	THE BASEMENT	WALL OR
	SPACE W	ALL. C SLABS, INSULATIO									
		ESS. FOR FLOATING									
		EDGE R VALUE FOR			TO THE BOTT			IN 24 INOTIES	, minorie rentio		DE NODED TO THE
R-19 F	BERGLAS	S BATTS COMPRESS	ED AND INSTAL	LED IN A NOMINAL 2	x6 CAVITY IS D	EEMED TO COMPLY	FIBERGLASS	BATTS RAT	ED R-19 OR HIGH	IER COMPRESSE	D AND INSTALLED IN
		T DEEMED TO COMP									
		INSULATION IS NOT				NED BY FIGURE N11	01.2 (1 AND 2)	AND TABLE	N1101.2.		
		SUFFICIENT TO FILL									
											SHEATHING COVERS 25 ERS MORE THAN 25 PERI
											IS R-2.5 SHEATHING.
		S. THE SECOND R-V									one in energiando.
		FEMED TO SATISFY								ION EXTENDS O	/FR THE WALL TOP
PLATE	AT THE EA	AVES. OTHERWISE R	-38 INSULATION	IS REQUIRED WHEN	RE ADEQUATE	CLEARANCE EXIST	S OR INSULAT	ION MUST EX	TEND TO EITHE	R THE INSULATIO	N BAFFLE OR WITHIN 1"
	E ATTIC RO										
TABLE	E VALUE RE	EQUIRED EXCEPT FC	OR ROOF EDGE	WHERE THE SPACE	IS LIMITED BY	THE PITCH OR THE	ROOF, THERE	THE INSULA	TION MUST FILL	THE SPACE UP T	O THE AIR BAFFLE.

AT / NE/	AR EAVE
VE VENT R. IN. EACHJ	CONT. VENT (SQ. IN. PER LF)
).1944	0.0625
	1
0	200.00
AILABLE	

SQUARE FOOTAGE				
	HEATED S.F.	UNHEATED S.F.		
FIRST FLOOR	1523	0		
SECOND FLOOR	1205	0		
3 CAR GARAGE	0	738		
FRONT PORCH	0	132		
SCREEN PORCH	0	197		
TOTAL	2728	1067		
	OPTIONS			
	HEATED S.F.	UNHEATED S.F.		

MEAN ROOF HEIGHT 1 STORY = 11'-0" CLADDING POSITIVE & NEGATIVE PRESSURE = 21 PSF

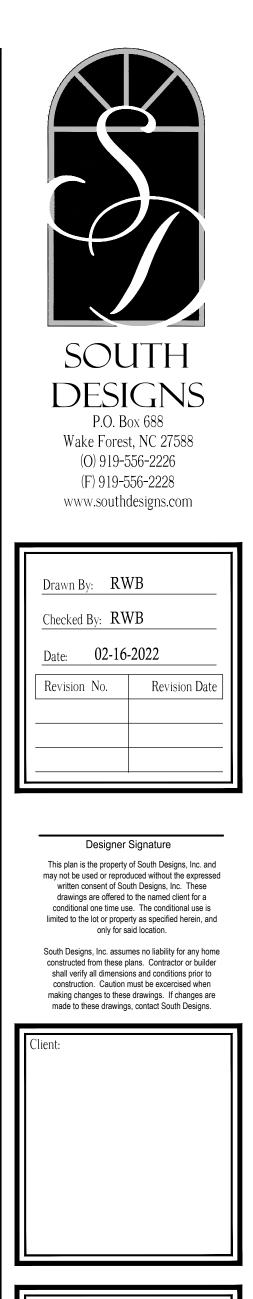
1 1/2 STORY = 19'-0" CLADDING POSITIVE & NEGATIVE PRESSURE = 34.8 PSF

2 STORY = 19'-0" CLADDING POSITIVE & NEGATIVE PRESSURE = 34.8 PSF

ANCHOR BOLTS INSTALL ANCHOR BOLTS, NUTS, AND WASHERS PER CODE AT ALL EXTERIOR WALL TREATED PLATES AND AT INTERIOR BEARING WALL TREATED PLATES ON SLAB FOUNDATIONS. TO BE A MINIMUM OF 6' O.C. AND WITHIN 12" FROM THE ENDS OF EACH PLATE.

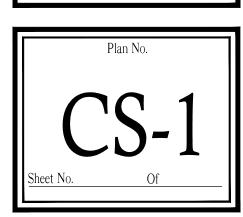
DESIGN PRESSURES MINIMUM RATING: 25 PSF

MI WINDOWS 3500 SERIES LOW E-GLASS WINDOWS

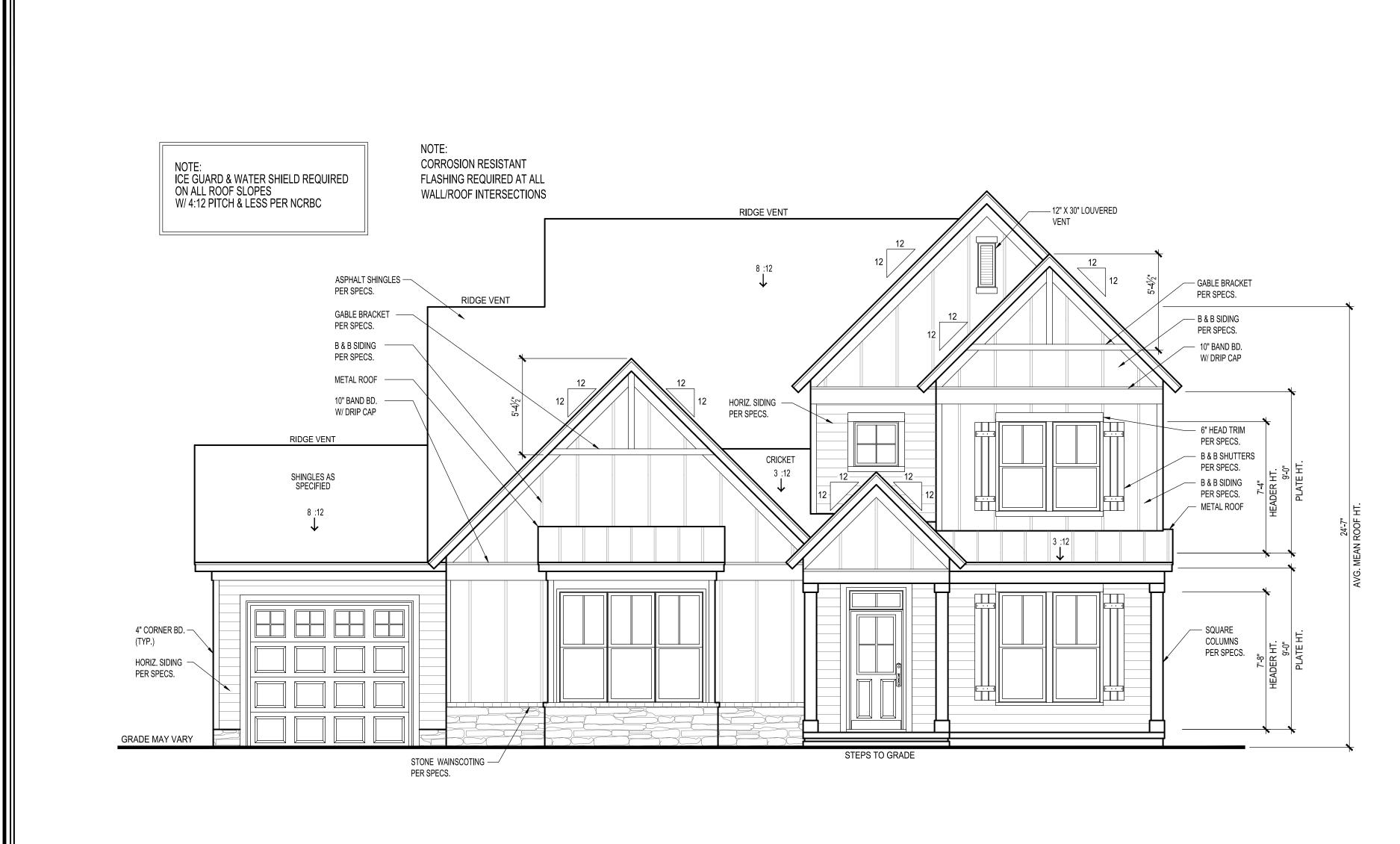


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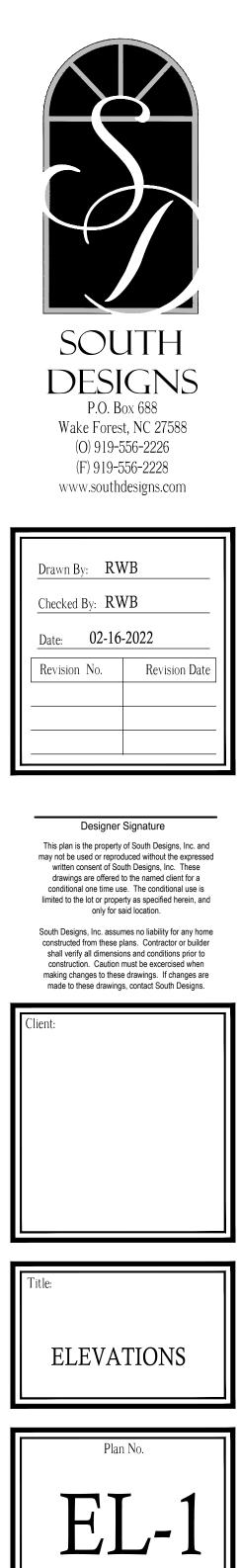
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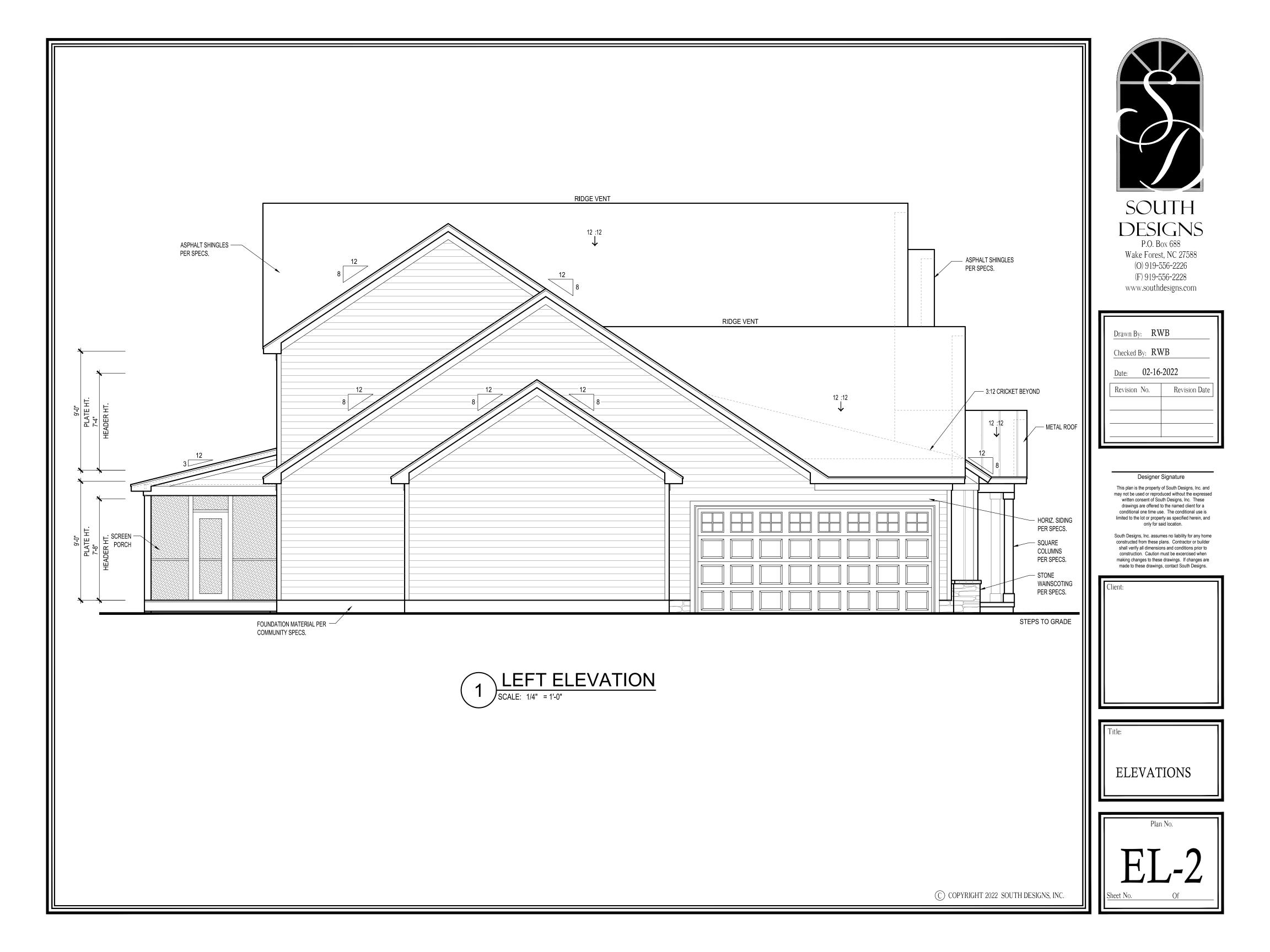






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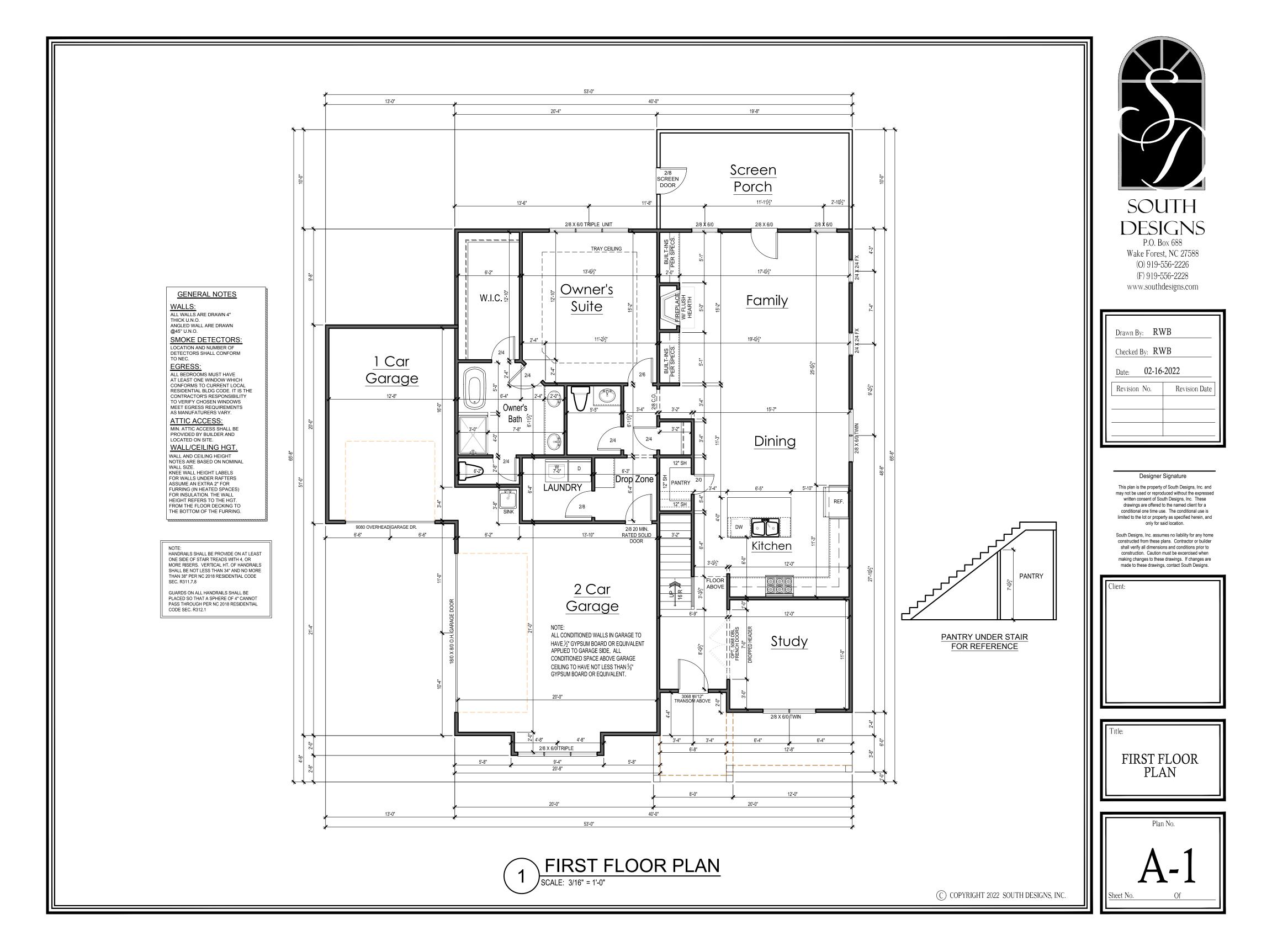


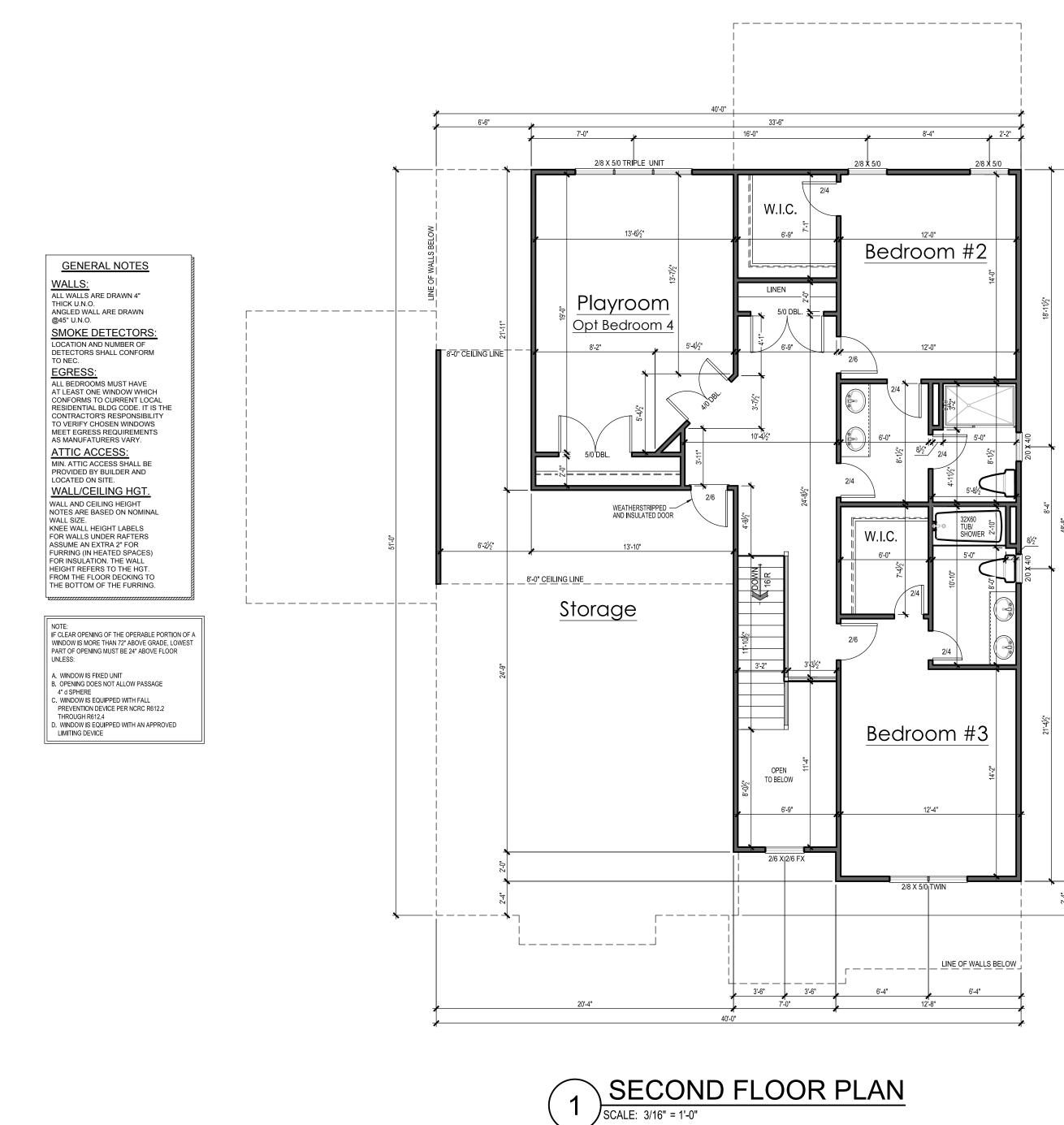




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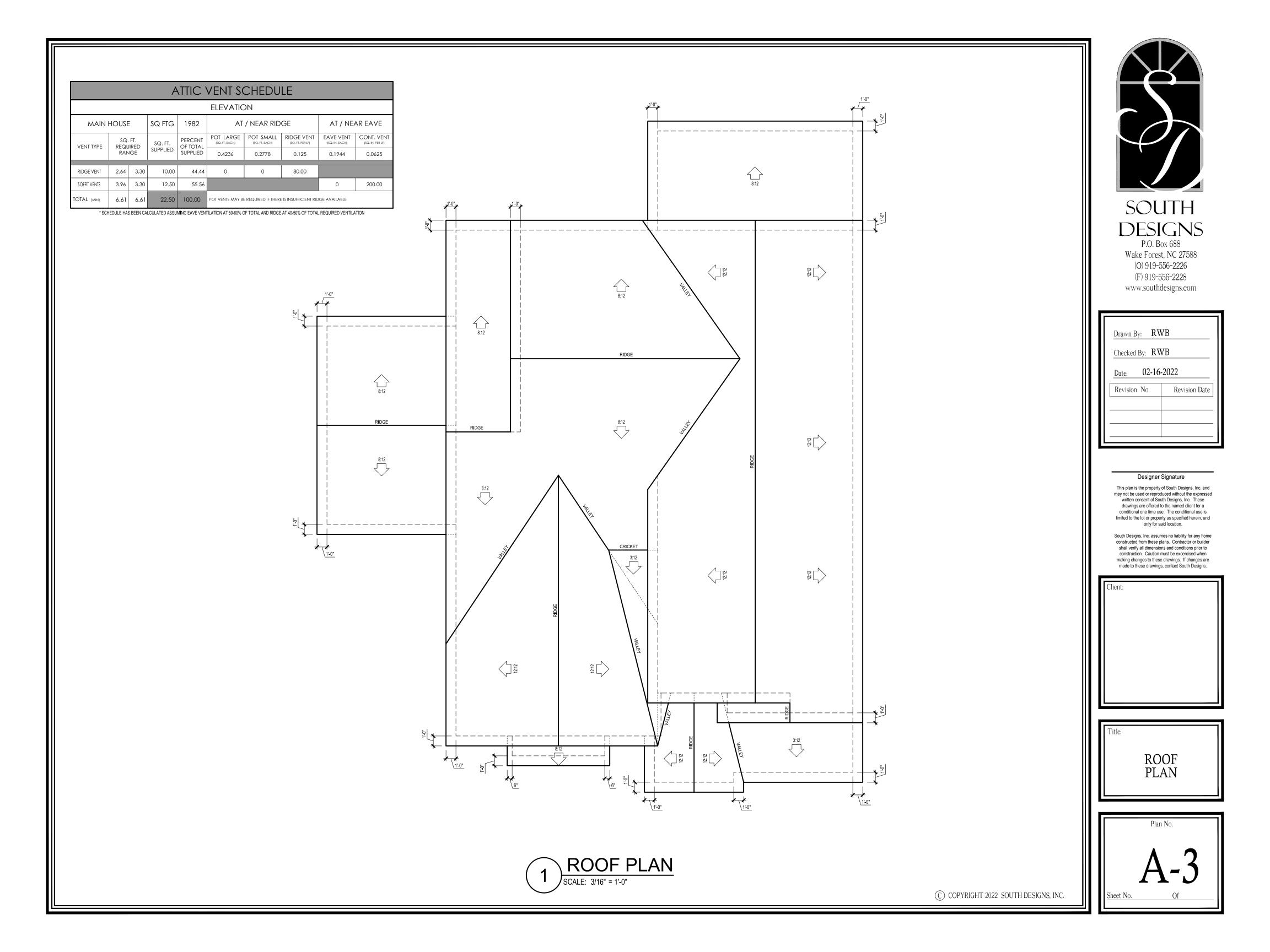


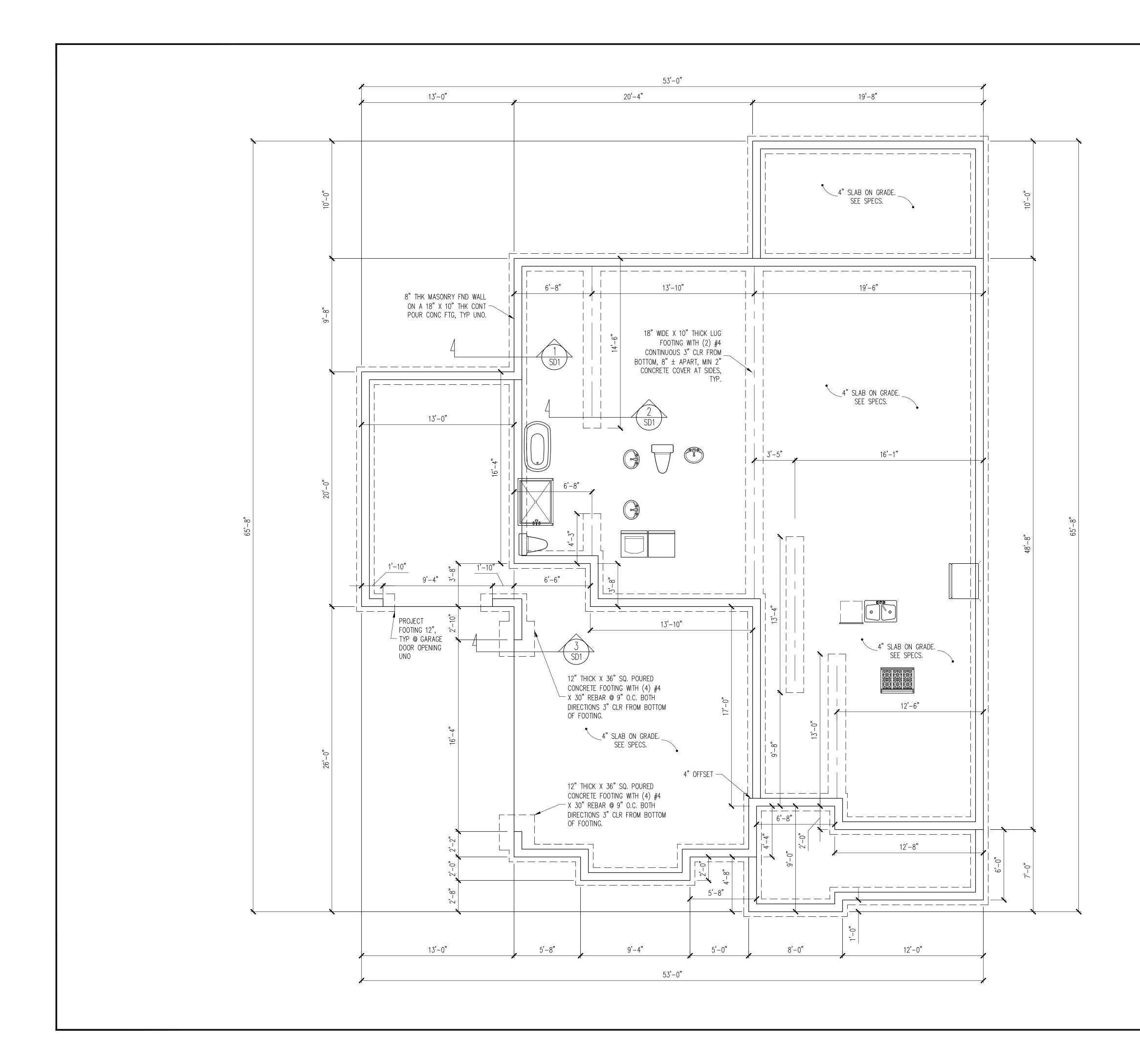


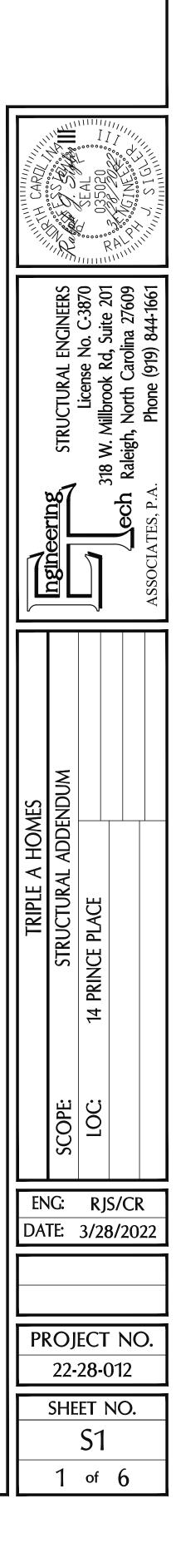
SOUTH DESIGNS P.O. Box 688 Wake Forest, NC 27588 (O) 919-556-2226 (F) 919-556-2228 www.southdesigns.com Drawn By: RWB Checked By: RWB 02-16-2022 Date: Revision Date Revision No. Designer Signature This plan is the property of South Designs, Inc. and may not be used or reproduced without the expressed written consent of South Designs, Inc. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location. South Designs, Inc. assumes no liability for any home constructed from these plans. Contractor or builder shall verify all dimensions and conditions prior to construction. Caution must be excercised when making changes to these drawings. If changes are made to these drawings, contact South Designs. lient Title SECOND FLOOR PLAN Plan No.

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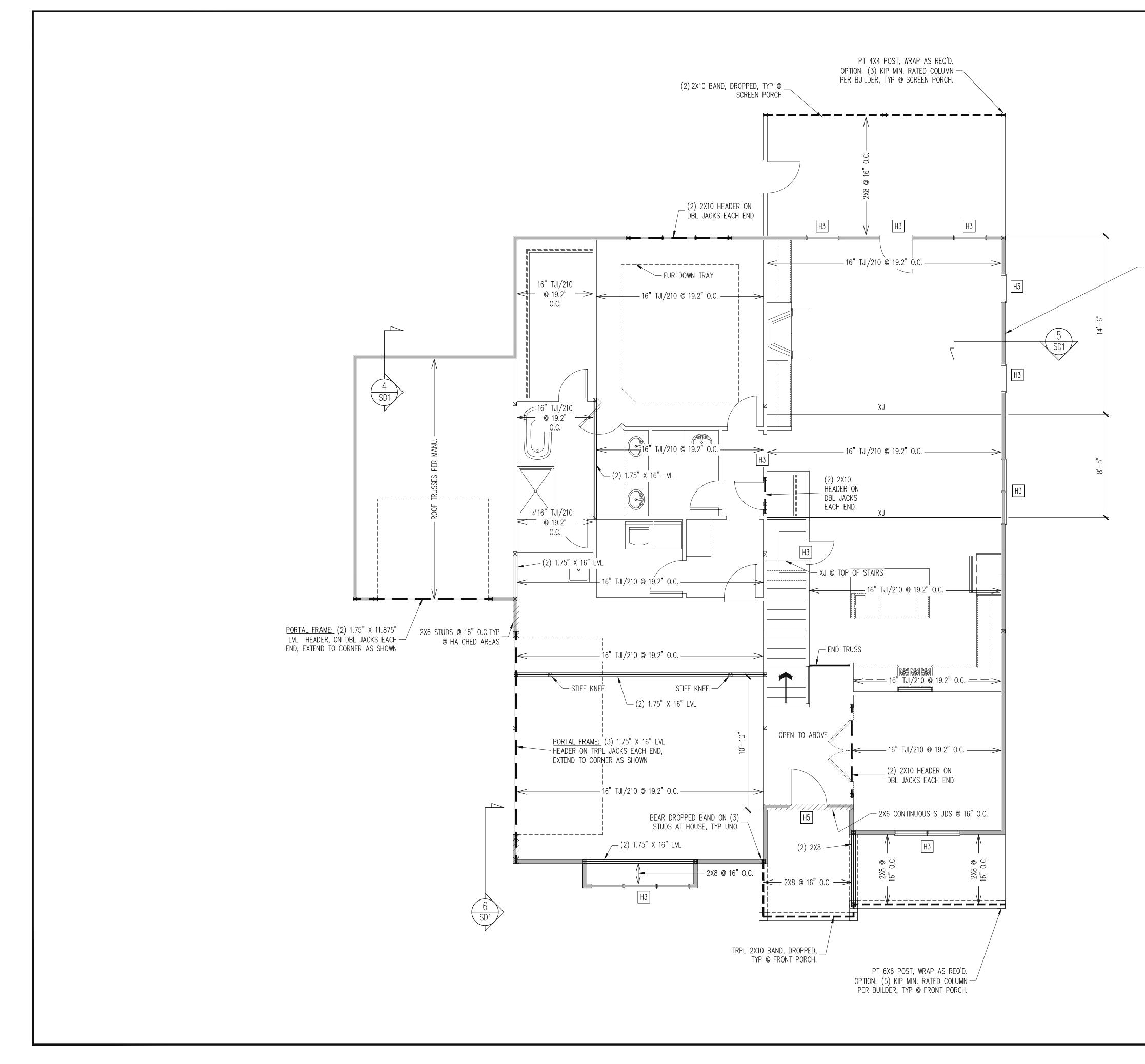


NOTES: -HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION. REINFORCEMENT AND GROUTING SHALL BE DETERMINED BY FINAL SITE CONDITIONS.

-PLUMBING SHOWN FOR REFERENCE ONLY. BUILDER VERIFY FINAL FIXTURE LOCATIONS, SIZES AND REQUIREMENTS PRIOR TO INSTALLATION.

FOUNDATION PLAN

1/4" = 1'-0"



NOTE: ALL EXTERIOR WALLS ARE – TO BE CONTINUOUSLY SHEATHED PER WALL BRACING NOTES

WALL BRACING

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

SHADED WALLS:

NOTES:

PROVIDED CONTINUOUS SHEATHING = 186' MIN. REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

<u>HEADER SCHEDULE</u>

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

- H3 (2) 2X10'S ON SINGLE JACKS (C)
- H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- H5 (3) 2X10'S ON SINGLE JACKS
- (A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- (B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
 (C) TYPICAL FOR ALL CONDITIONS NOT LISTED

IN (A) OR (B) UNO.

-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

CONSTRUCTION SPECIFICATIONS INSTANT REFERENCES

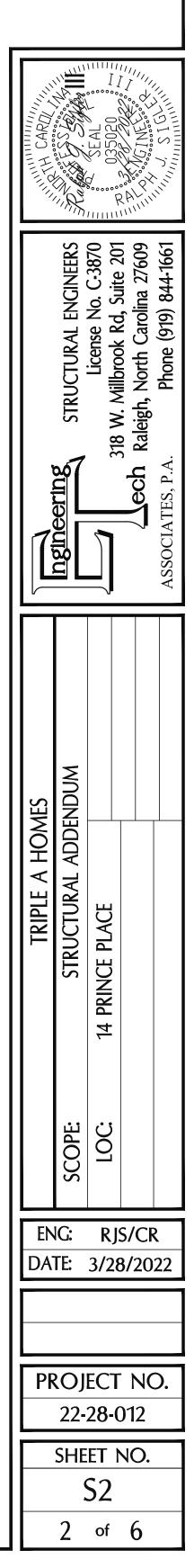
REFER TO THE CONSTRUCTION SPECIFICATIONS
SECTIONS FOR THE FOLLOWING INFORMATION:PART 1.01:CURRENT GOVERNING CODEPART 14:STUD SUPPORT FOR BEAMS

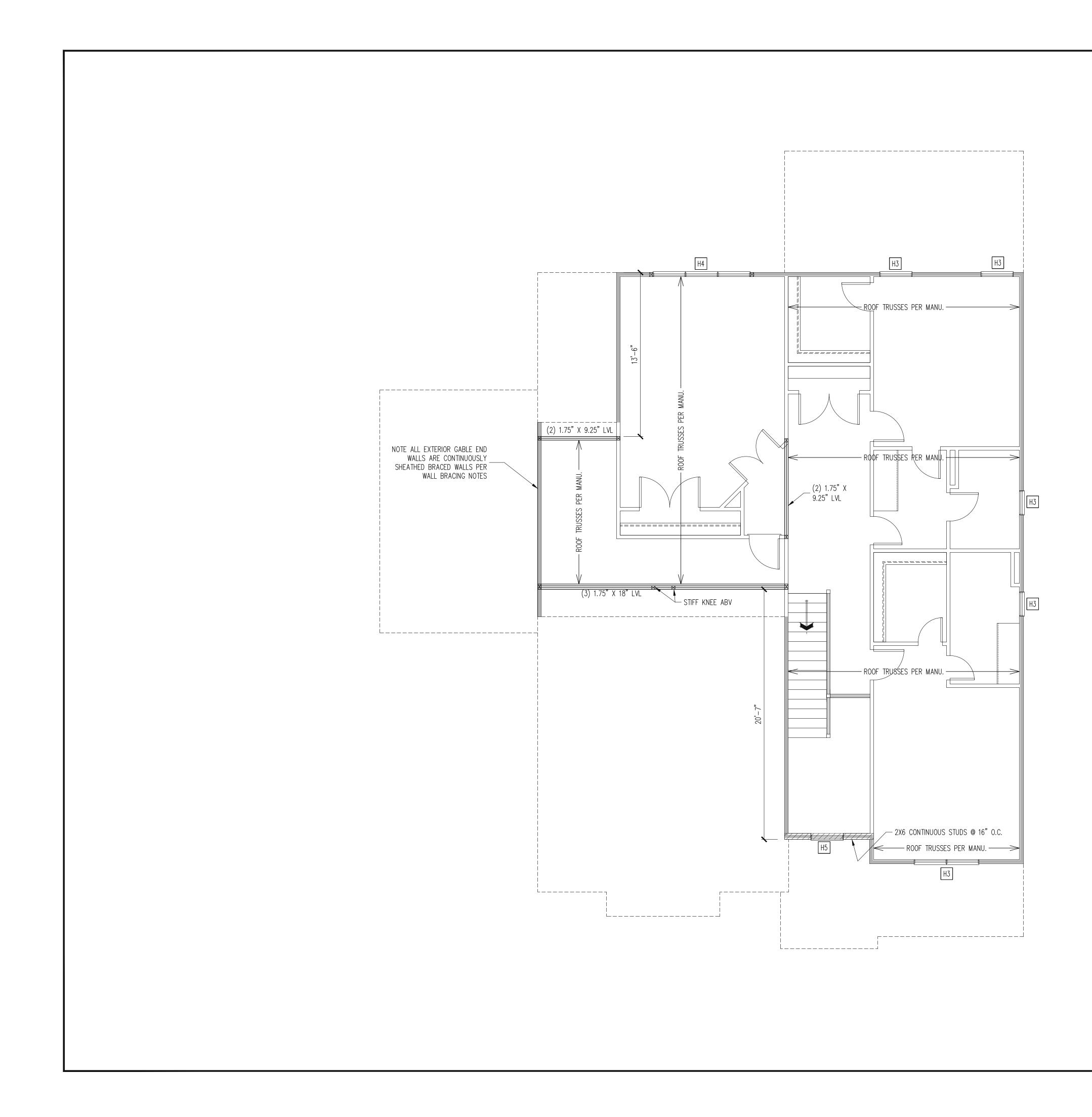
PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

<u>IST FLOOR FRAMING PLAN</u> WALLS AND CEILING

1/4" = 1'-0"





	CARDA CARDA		1. X
<u>G</u> R SIDE, D WITH TUDS WITH	Pineering	 STRUCTURAL ENGINEERS STRUCTURAL ENGINEERS License No. C-3870 318 W. Millbrook Rd, Suite 201 Palaich North Carolina 27600 	ASSOCIATES, P.A. Phone (919) 844-1661
TUDS WITH S, 12"O.C.	neit		ASSOC
<u>117' MIN.</u> ICTION BRACING			7
<u>JLE</u> (B)	OMES		
(C) BL JACKS	TRIPLE A HOMES	SIRUCTURAL ADDENDUM ICE PLACE	
DAD BEARING 38" MAX. DAD BEARING 3" TO 74" MAX.		14 PRINCE PLACE	
NOT LISTED			
INTERIOR		SCOPE: LOC:	
CATIONS	ENC	C: RJS/C	
FICATIONS RMATION:		3/28/2	
<u>DE</u> MS			
D <u>R WALLS</u> TICATIONS JBSTITUTIONS		DJECT N 22-28-012	
NG PLAN	S	HEET NC).
WALLS AND CEILING		<u>S3</u>	
1/4" = 1'-0"		3 of 6	

WALL BRACING SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:

PROVIDED CONTINUOUS SHEATHING = 117' MIN. REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

- H1 SINGLE 2X4 TURNED FLAT (A)
- H2 (2) 2X4'S ON SINGLE JACKS (B)
- H3 (2) 2X10'S ON SINGLE JACKS (C)
- H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- H5 (3) 2X10'S ON SINGLE JACKS
- (A) TYPICAL FOR INTERIOR NON LOAD BEARING
- (B) TYPICAL FOR INTERIOR NON LOAD BEARING
- WALLS ONLY, ROUGH OPNG 38" TO 74" MAX. (C) TYPICAL FOR ALL CONDITIONS NOT LISTED

IN (A) OR (B) UNO.

-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

CONSTRUCTION SPECIFICATIONS

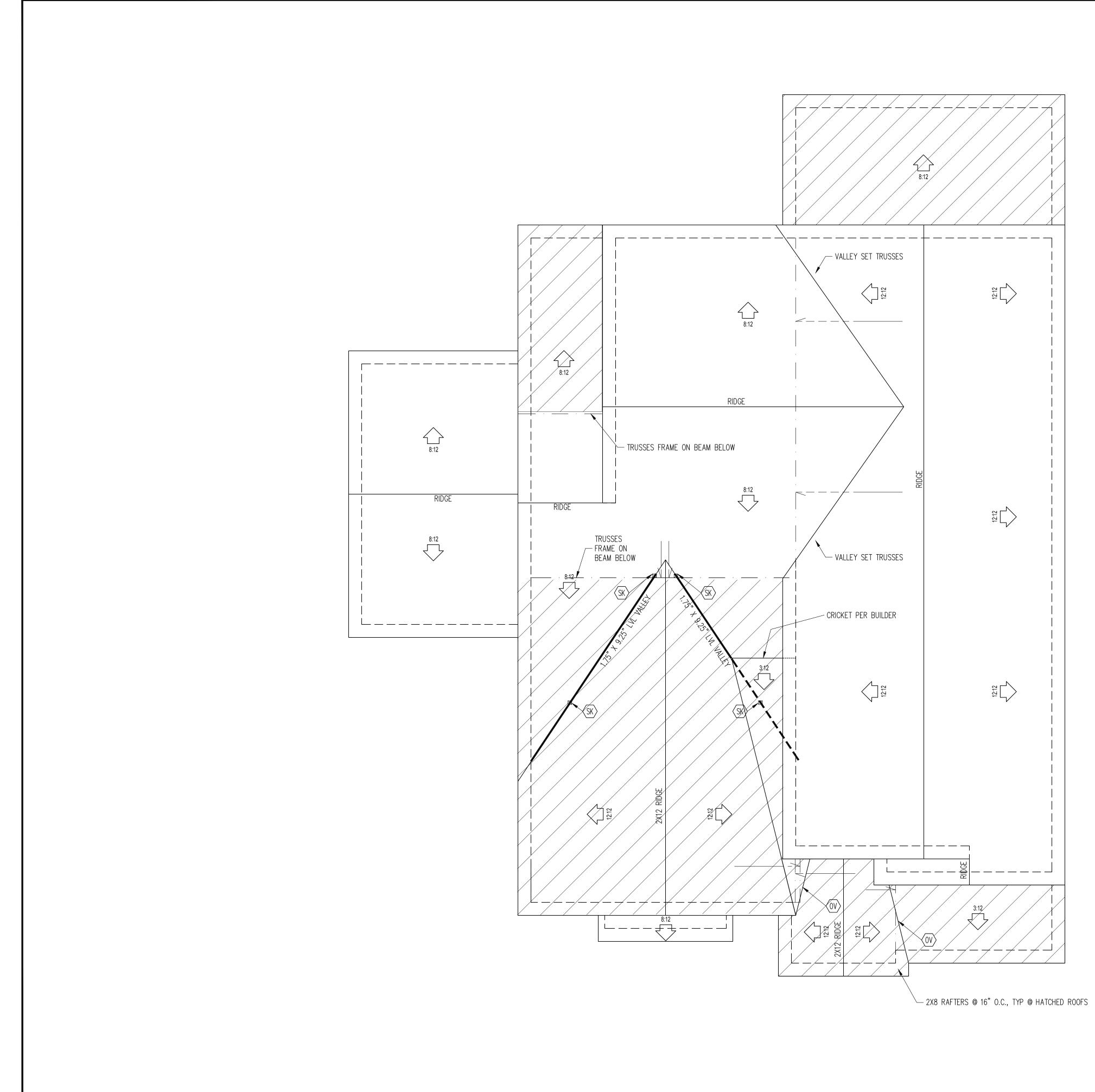
REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION: PART 1.01: <u>CURRENT GOVERNING CODE</u>

 PART 14:
 STUD SUPPORT FOR BEAMS

 PART 17:
 KING STUDS FOR EXTERIOR WALLS

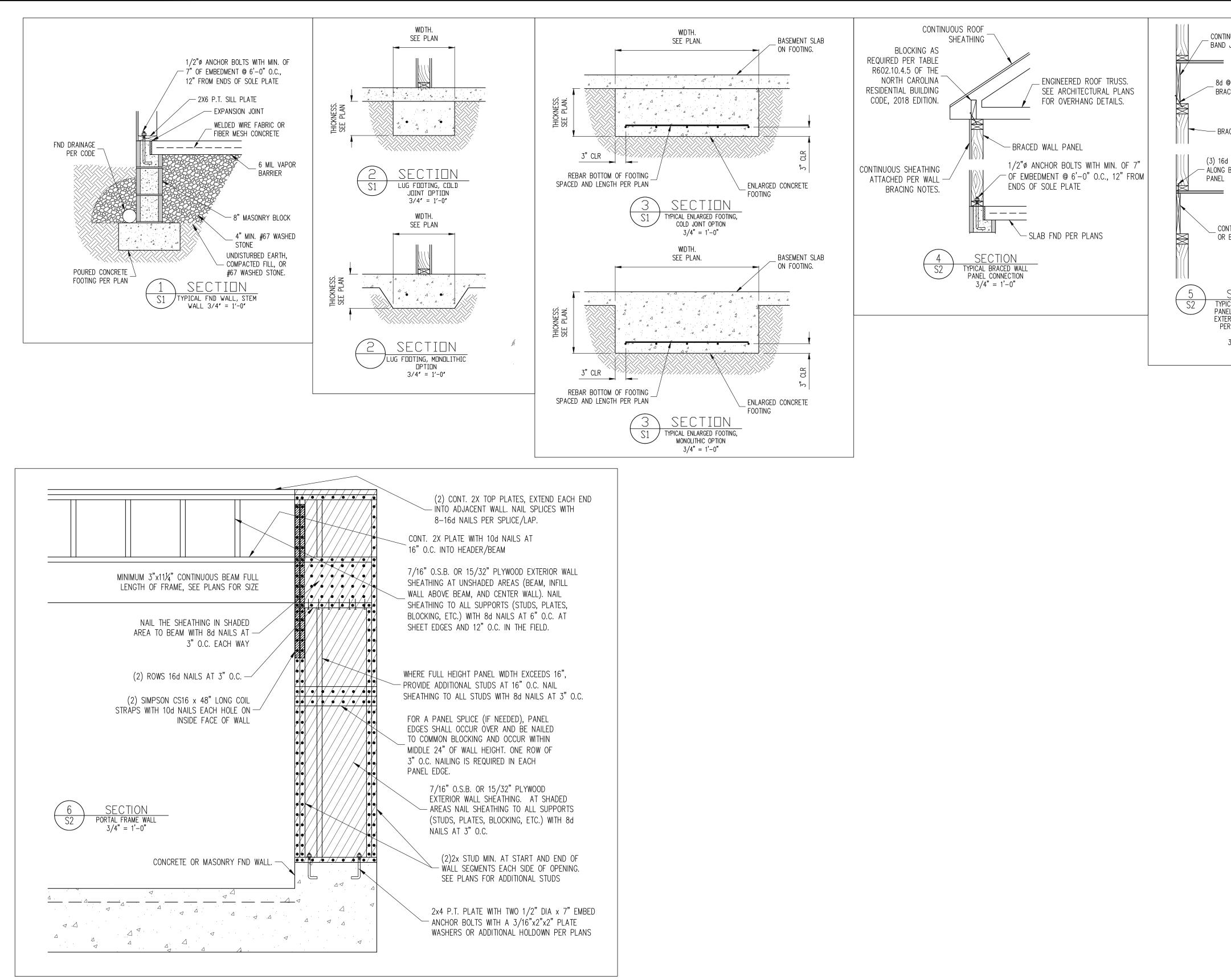
SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

2ND FLOOR FRAMING PLAN



CARDY / CARDY / ////	Partie Street	035020			
	STRUCTURAL ENGINEERS	License No. C-3870	Ch Raleigh, North Carolina 27609	Phone (919) 844-1661	
			∐ech R	ASSOCIATES, P.A.	
IES	MDUM				
TRIPLE A HOMES	STRUCTURAL ADDENDUM	14 PRINCE PLACE			
	SCOPE	LOC:			
	IG:	-	S/C		
	I E:	3/28	5/20	122	
PR	PROJECT NO. 22-28-012				
	SHEET NO.				
	SHEET NO.				
	4	of	6		

TRUSS UPLIFT CONNECTORS <u>EXPOSURE B, 115 MPH, ANY PITCH</u> 24" O.C. MAX ROOF TRUSS SPACING	TRIPLE A HOMES
TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.	TRIPLE /
ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.	
ROOF SPAN UP TO 28'CONNECTOR NAILING PER TABLE 602.3(1) NCRBC 2018 EDITION	
OVER 28' (1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR BEAM	
FRAMING SCHEDULE	
SK DBL 2X4 STIFF KNEE	ENC
FRAMING NOTES	DAT
ROOF ONLY	
-COMMON RAFTERS 2X8 @ 16" O.C. TYP U.N.O.	
-COLLAR TIES 2X4 EVERY 3RD SET OF RAFTERS TYP U.N.O.	
-VERIFY ROOF PITCHES, OVERHANG LENGTHS, AND KNEEWALL FRAMING HGTS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION, TYPICAL.	
	S
<u>ROOF FRAMING PLAN</u> 1/4" = 1'-0"	
	11



CONTINUOUS RIM OR BAND JOIST

8d @ 6" O.C. ALONG BRACED WALL PANEL

BRACED WALL PANEL

(3) 16d NAILS @ 16" O.C. ALONG BRACED WALL

> CONTINUOUS RIM OR BAND JOIST

SECTION TYPICAL BRACED WALL PANEL CONNECTION AT EXTERIOR WALL, JOISTS PERPENDICULAR OR PARALLEL. 3/4" = 1'-0"

CARDEN CARDEN	Ration of Street In	SEAL C	The second se	
STRUCTURAL ENGINEERS License No. C-3870 318 W. Millbrook Rd, Suite 201 Raleigh, North Carolina 27609				Phone (919) 844-1661
			∐ech	ASSOCIATES, P.A
MES	ENDUM			
TRIPLE A HOMES	STRUCTURAL ADDENDUM	14 PRINCE PLACE		
	SCOPE:	LOC		
	IG: TF:	RJ 3/28	S/C	
		5, 20		,
PROJECT NO. 22-28-012				
SHEET NO.				
STILLT NO.				
5 of 6				

	<u>CONSTRUCTION</u>	SPE	ECIFICATIONS
Į	PART 1: GENERAL		f'M = 1,500 PSI MIN
1.01	CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.	7.02	CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62-17 GRADE SW
	DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.	7.03	MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.
1.05	METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF	7.04	MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530
	THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.	7.05	LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS
	PART 2: DESIGN LOADS		PART 8: BOLTS AND LAG SCREWS
2.01	DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW: USE LIVE LOAD (PSF) DEAD LOAD (PSF)	8.01	BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F844–07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS. HOLES FOR BOLTS SHALL BE AISC STANDARD HOLES UNO
	BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH	8.02	LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1–1981. PILOT HOLES
	FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES4010GARAGES (PASSENGER CARS ONLY)50		SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR SCREW HEAD
	ATTICS (NO STORAGE, LESS THAN 5' HEADROOM) 10 10 ATTICS (WITH STORAGE) 20 10	8.03	ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554-15 GRADE 36 UNO. BENT
	ROOF 20 10 (15 FOR VAULTS)		PART 9: DRIVEN FASTENERS
NOTES:	- INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED	9.01	NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667– 05. NAILS ARE TO B
	LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS. - BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR		COMMÓN WIRE OR BOX PART 10: DIMENSIONAL LUMBER
	ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER		SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2
2.02	INTERIOR WALLS: 5 PSF LATERAL.		FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC. MINIMUM ALLOWABLE DESIGN "PROPERTIES ARE AS FOLLOWS: E= 1,400,000 PSI, F_c perp = 425 PSI, F_v = 285 PSI, SPECIFIC GRAVITY = 0.42 MIN
	BASIC WIND DESIGN VELOCITY OF 120 MPH.		$F_b = 875 \text{ PSI}$ For 2X4, 2X6, 2X8. $F_b = 800 \text{ PSI}$ For 2X10'S, 750 PSI FOR 2X12'S
	SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).		T 11: ENGINEERED LUMBER
	<u>PART 3: STRUCTURAL STEEL</u> WIDE FLANGE BEAMS AND TEE SECTIONS SHALL CONFORM TO ASTM A992 MINIMUM	11.01	LVL OR PSL MINIMUM ALLOWABLE DESIGN PROPERTIES ARE AS FOLLOWS: E= 1,900,000 PSI, F_b = 2600 PSI, F_v = 285 PSI, $F_c \text{ perp}$ = 750 PSI LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
(GRADE		E= 1.3 X 10E6 PSI, F_b = 1700 PSI, F_v = 400 PSI, F_c perp = 680 PSI
3.02	SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500 GRADE B MINIMUM GRADE.	11.02	LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMB DEPTH SPECIFIED IN THE PLANS
3.03	STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, TYPE S, MINIMUM GRADE		PART 12: PRESSURE TREATED LUMBER
	ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 MINIMUM GRADE	12.01	LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSUR TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER
	STRUCTURAL STEEL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL		SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATUR
	FOR BUILDINGS. PART 4: WELDING		DECAY RESISTANT WOOD PER SECTION 19-6(A)
-	<u>PART 4: WELDING</u> WELDING ELECTRODES SHALL BE E70XX AND ALL WELDING SHALL BE PERFORMED BY AN	13.01	PART 13: STEEL FLITCH PLATE BEAMS FLITCH PLATE BEAMS SHALL CONSIST OF A CONTINUOUS STEEL PLATE BOLTED BETWE
,	AWS CERTIFIED WELDER		TWO PIECES OF CONTINUOUS LUMBER AS SIZED ON THE PLANS. BOLT PIECES TOGETHI USING 1/2" Ø BOLTS SPACED AT 16" O.C. STAGGERED TOP TO BOTTOM OF THE BEAM
-	PART 5: CONCRETE AND SLABS ON GRADE CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 4–6% AIR ENTRAINMENT, FOR		MAINTAIN A 2" EDGE DISTANCE. PLACE TWO BOLTS, ONE ABOVE THE OTHER, 16" MAX FROM EACH END OF THE BEAM. TYP UNO
E	EXTERIOR CONCRETE AND SHALL BE OF NORMAL WEIGHT, 4–6% AIR ENTRAINMENT, FOR EXTERIOR CONCRETE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. <u>ALL</u> ITEMS NOTED AS 'CONCRETE' ARE TO BE CAST IN PLACE,		PART 14: STUD SUPPORTS FOR BEAMS
	TYP UNO.	14.01	STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:
	REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.	1-W	HEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM
	SLABS ON GRADE, IF ANY, SHALL BE CAST IN PLACE, CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2	B`	HALL BEAR <u>FULL WIDTH</u> ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTE Y A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER F STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF
	LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 4" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE	TH C(HE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED ONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED (
	OMITTED FOR SLABS NOT IN ENCLOSED AREAS	TH 2B	HE BEAM EAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR
! 6.01	PART 6: REBAR AND WIRE REINFORCEMENT REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60 TYP UNO	A C(MINIMUM OF 4 $1/2$ " ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED OLUMN TYP UNO.
6.02	LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO		DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:
	WIRE REINFORCEMENT SHALL BE 9 GA AND SHALL CONFORM TO ASTM A1064.	SH	HEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM HALL BEAR <u>FULL WIDTH</u> ON THE SUPPORTING WALL INDICATED (LESS 1 1/2" TO ALLOW
ĺ	PART 7: MASONRY	G	OR A CONTINUOUS RIM JOIST WHERE APPLICABLE) AND SHALL BE SUPPORTED BY A ANGED STUD COLUMN THE SAME WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 IS
7.01	CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT,		D BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALI E TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
	NOTES		ABBREVIATIONS
		۸D\/	
SHALL	JILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE	ABV B. B.E.	BOTH FTG FOOTING TYP TYPICAL
1) T⊦	VING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION: HE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR	B.E. BTWN CIP	
,	HE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION	CONC CONC CS	CONCRETE LVL LAMINATED VENEER OTHERWISE
respon Ensure	RRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE NSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO E THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE	DIA DBL	DIAMETER NTS NOT TO SCALE DOUBLE O.C. ON CENTER
SUBCON THE EO	NTRACTORS OR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER	DJ DSP EQ	DBL STUD POCKET LUMBER EQUAL PT PRESSURE TREATED
	ATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.	EA FLG	
	AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW	FL PL FLR	
	Dividing Onoold DE Codmitted to the Edit Contraction		

	М	EAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A NIMUM OF 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN 'P UNO.
IN	14.03	EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.
)	14.04	STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS OF 10d NAILS @ 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE FLOOR JOISTS.
		PART 15: NAILING OF MULTI PLY WOOD BEAMS
)	15.01	SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS © 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS © 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS © 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.
IT	15.02	LVL MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP UNO
BE		PART 16: WALL FRAMING AND BRACING
2	16.01	STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO. MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, INCLUSIVE OF SOLE PLATE AND DBL TOP PLATE AND 7/16" OSB EXTERIOR BRACING AND ROW OF 2X4 2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO: 2X4 @ 16" O.C.: 11'-1 1/2" 2X6 @ 16" O.C.: 17'-0" 2X4 @ 12" O.C.: 12'-1 1/2" 2X6 @ 12" O.C.: 18'-8" DBL 2X4 @ 16" O.C.: 13'-4" DBL 2X6 @ 16" O.C.: 21'-0"
BER RE 2) RAL	16.02	 FOR WALL BRACING THE FOLLOWING SHALL APPLY: BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO. WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED. BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS. MAY SUBSTITUTE WSP FOR GB SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.
EEN	17.01	PART 17: KING STUDS
HER M.	17.01	KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS: NUMBER OF KING STUDS
X		$\frac{MAX OPENING WIDTH 5'-0" 9'-0" 13'-0" 17'-0" 21'-0"}{2X4 1 2 3 4 5}$
		STUD SIZE 2X6 1 1 2 2 2 2X8 1 1 1 2 2 2
		PART 18: SUBSTITUTIONS
ED	18.01	MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
ON		PART 19: OWNERSHIP OF STRUCTURAL DESIGN
R	19.01	THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA
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