THIS PLAN HAS BEEN DRAWN TO CONFORM TO THE 2018 NORTH CAROLINA RESIDENTIAL CODE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO BEGGINING WORK. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL STATE AND LOCAL BUILDING CODES AND ORDINANCES. KADS CUSTOM HOME DESIGNS ASSUMES NO LIABILITY FOR SITE CONDITIONS, CONSTRUCTION METHODS OR ANY DEVIATION OF THESE PLANS.

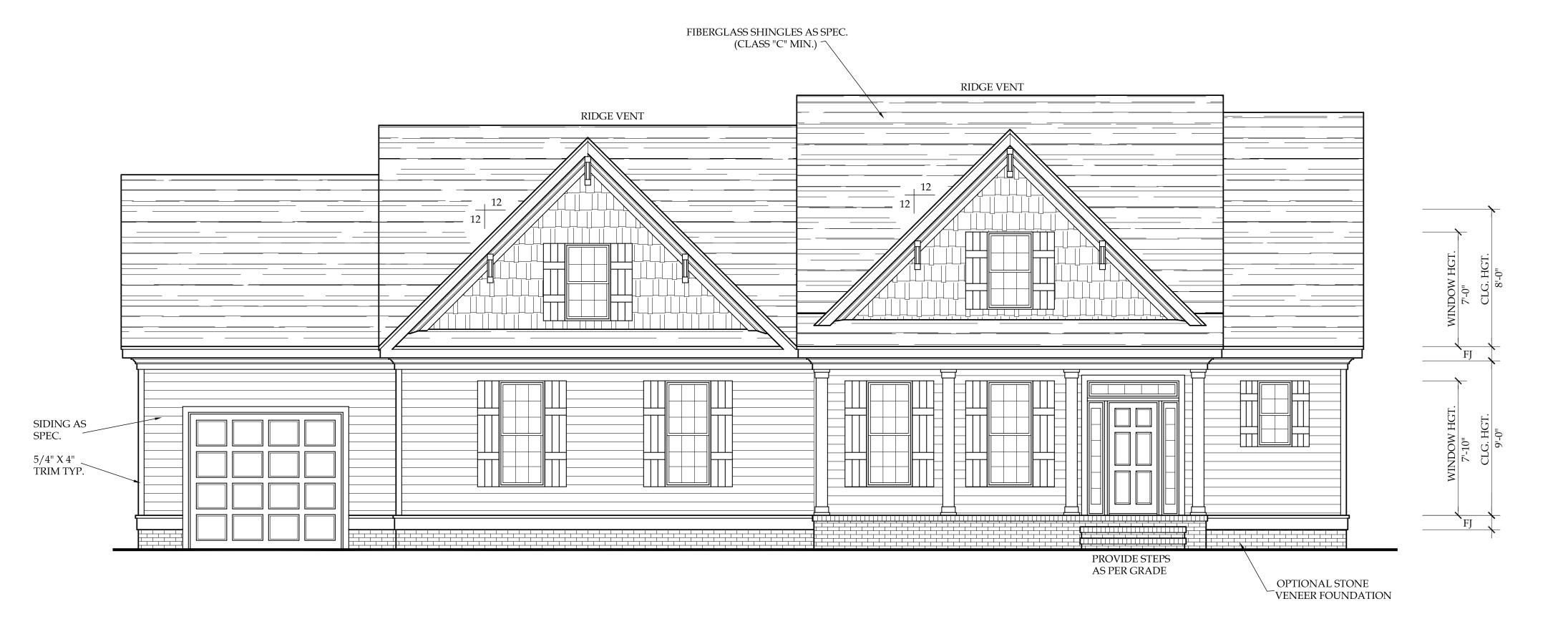
NOTE:
ALL WINDOWS TO BE INSTALLED MUST MEET
A MAXIMUM OF .32 U VALUE OR BETTER, UNLESS
ENERGY CALCULATIONS ARE SUBMITTED WITH PLANS
PROVIDED BY BUILDER AT TIME OF PLAN REVIEW.

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

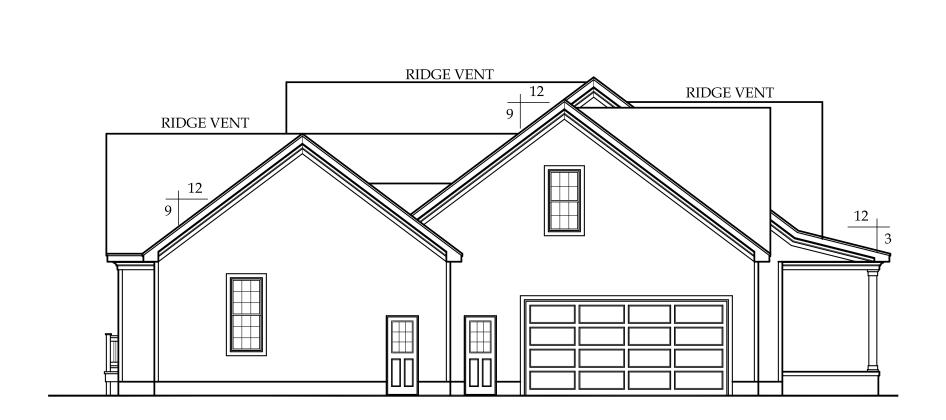
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

O5/11/2021

Harnett
Country
NORTH CAROLINA

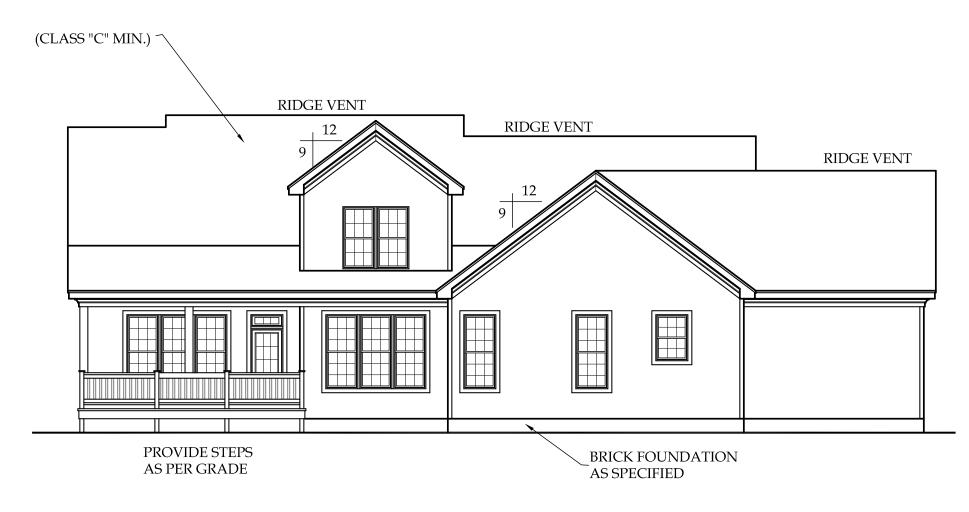


FRONT ELEVATION SCALE: 1/4"=1'-0"



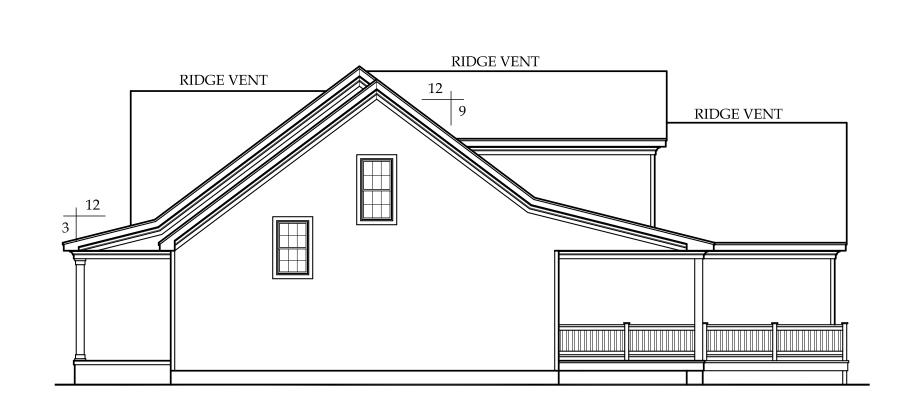
LEFT ELEVATION

SCALE: 1/8"=1'-0"



REAR ELEVATION

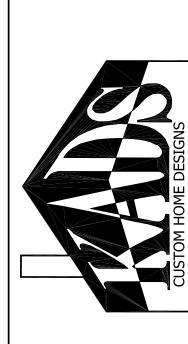
SCALE: 1/8"=1'-0"



RIGHT ELEVATION

SCALE: 1/8"=1'-0"

STEPHENSON BUILDERS, INC



ANGIER, NC 919-369-7181

DRAWN BY: D.W.O.

DATE:

3/15/21 PAGE NO

1

OF 4

PLAN NO. DK3057

STEPHENSON BUILDERS, INC CORN RESIDENCE



ANGIER, NC 919-369-7181

> DRAWN BY: D.W.O.

DATE:

DATE: 3/15/21

PAGE NO

2

OF 4

PLAN NO.

FIRST FLOOR PLAN
SCALE: 1/4"=1'-0"
9'-0" CLG. HGT.

FRONT PORCH SQ. FT.
GARAGE SQ. FT.
REAR PORCH SQ. FT.
DECK SQ. FT.

FIRST FLOOR HTD. SQ. FT. = 1847 SECOND FLOOR HTD. SQ. FT. = 822

TOTAL HTD. SQ $\overline{FT. = 3057}$

= 978 = 220

HEATED

REC. ROOM

UNHEATED

SET WINDOWS AT 7'-10" A.F.F.

STEPHENSON BUILDERS, INC CORN RESIDENCE



ANGIER, NC 919-369-7181

> DRAWN BY: D.W.O.

DATE:

3/15/21

PAGE NO

3

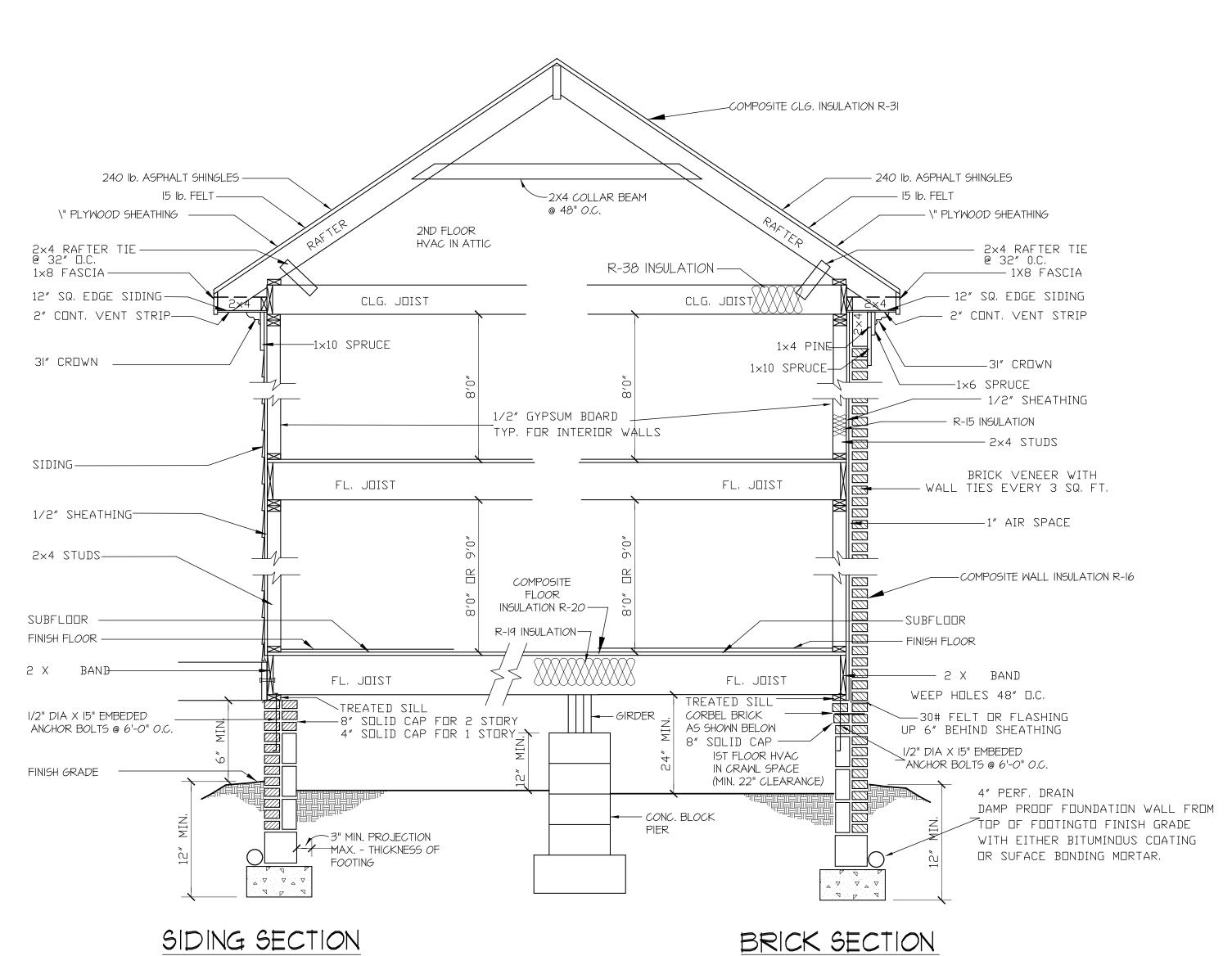
OF ⊿

PLAN NO.

DK3057

SECOND FLOOR PLAN

SCALE: 1/4"=1'-0"
8'-0" CLG. HGT.
SET WINDOWS AT 7'-0" A.F.F.



CRAWL SPACE VENTILATION

PROVIDE AT LEAST 1.0 SQ. FT. NET FREE VENTILATION AREA FOR EACH 150 SQ. FT. OF CRAWL SPACE.

CRAWL SPACE AREA = 1715 SQ.FT. 1715/150 = 11.43 SQ. FT. REQ'D. REDUCE REQUIRED AREA TO 1.0 SQ. FT NET FREE VENTILATION AREA FOR EACH 1,500 SQ. FT. OF CRAWL SPACE WITH APPROVED VAPOR BARRIER.

PROVIDE (1) VENT WITHIN 3'-0" OF EACH CORNER.

REFER TO MANUFACTURER SPECIFICATIONS FOR ACTUAL VENTS USED TO DETERMINE NUMBER OF VENTS REQUIRED.

ROOF VENTILATING REQUIREMENTS

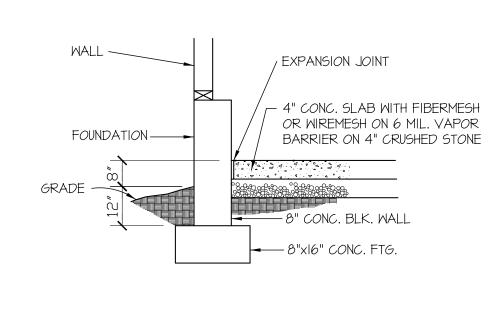
 $\frac{2952}{150}$ = $\underline{19.68}$ SQ. FT. REQ'D

ROOF VENTILATING REQUIREMENTS

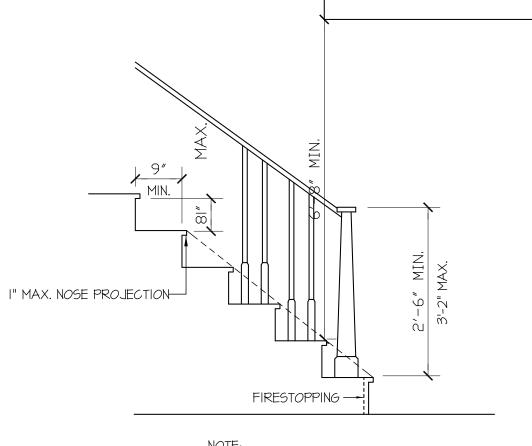
 $\frac{2952}{300}$ = 9.84 SQ. FT. REQ'D

(POWER ROOF VENTILATOR REQUIRED)

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED.



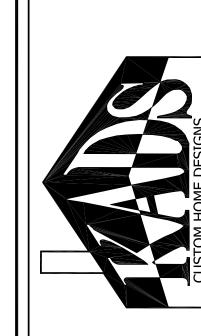
GARAGE SLAB SCALE: NTS



MINIMUM CLEAR WIDTH: 2'-8\" FOR INTERIOR STAIRS 3'-0" FOR EXTERIOR STAIRS

STAIR DETAIL
SCALE: NTS

STEPHENSON BUILDERS, J CORN RESIDENC



ANGIER, NC 919-369-7181

DRAWN BY:

<u>D.W.O.</u>

DATE: 3/15/21

PAGE NO

PAGE NO

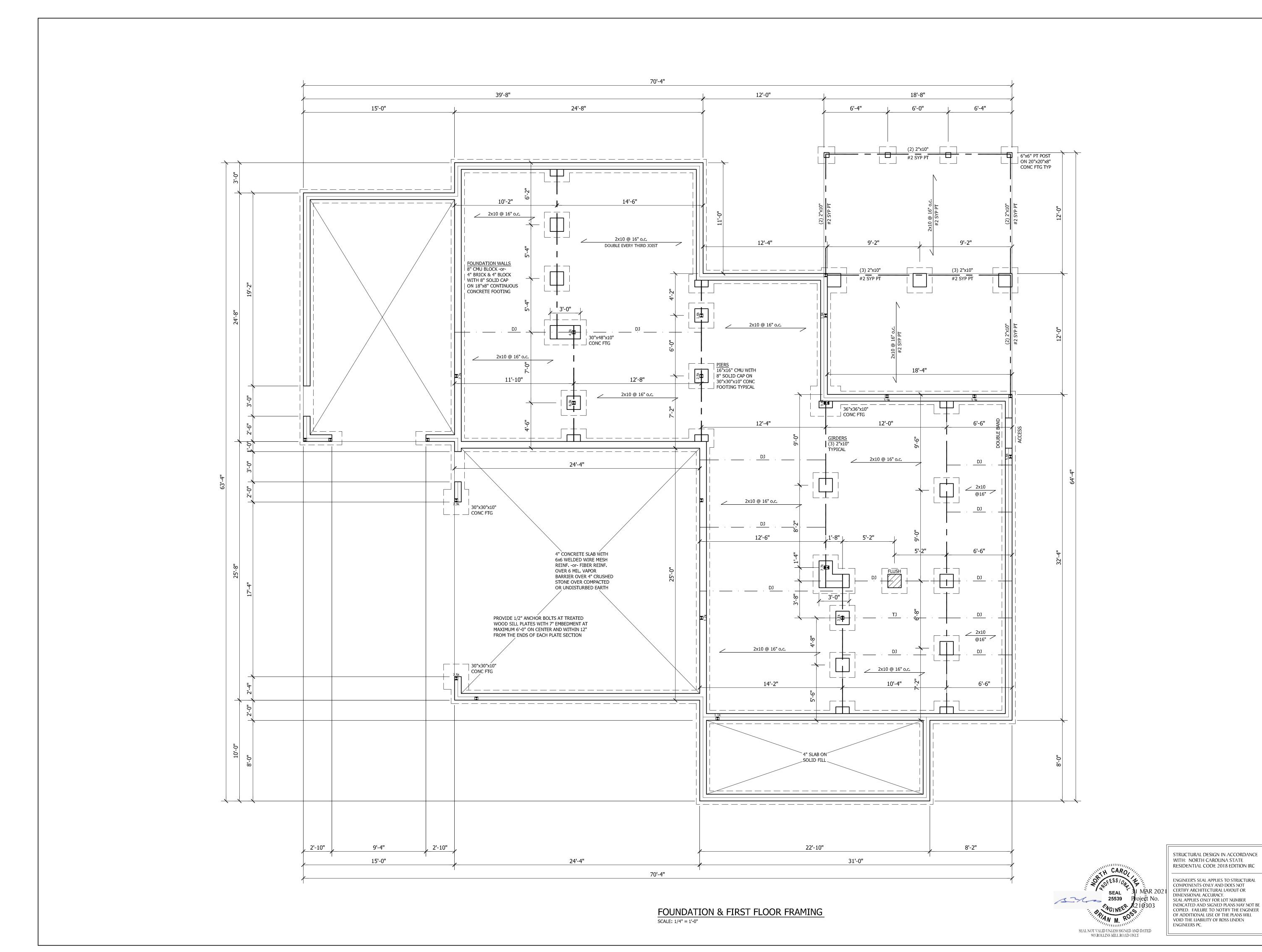
4

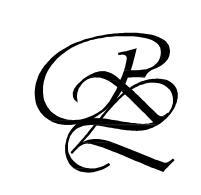
OF 4

PLAN NO. DK3057

WALL SECTION

SCALE: \" = |'-0"





709 W. JONES STREET RALEIGH, NC 27603 TEL 919.832.5680 FAX 919.832.5675 WWW.ROSSLINDEN.COM

ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE PLANS.

PLAN ENGINEERING REMAINS THE PROPERTY OF ROSS LINDEN ENGINEERS PC AND ANY UNAUTHORIZED USE OR DUPLICATION IN WHOLE OR PART IS STRICTLY PROHIBITED. WHOLE OR PART IS STRICTLY PROHIBITED.
THESE DRAWINGS ARE OFFERED TO THE
CLIENT FOR A CONDITIONAL ONE TIME USE.
THE CONDITIONAL USE IS LIMITED TO THE
LOT OR PROPERTY AS SPECIFIED HEREIN,
AND ONLY FOR THE SAID LOCATION.

STEPHENSON BUILDERS THE CORN RESIDENCE 903 ROLLINS MILL ROAD

PROJECT NO. R210303

DESIGN BY LLR

31 MAR 2021 **REVISION** 180501 14 MAY 18

170706 160102 150403

> FOUNDATION & FIRST FLOOR

27 JUL 17

15 JAN 16 27 APR 15

SHEET NO.

OF S5

COPIED. FAILURE TO NOTIFY THE ENGINEER OF ADDITIONAL USE OF THE PLANS WILL VOID THE LIABILITY OF ROSS LINDEN

WALL BRACING NOTES:

WALL BRACING SHALL BE IN ACCORDANCE WITH SECTION R602.10.3
CONTINUOUS SHEATHING. BRACING METHOD CS-WSP SHALL BE USED IN
ACCORDANCE WITH TABLE R602.10.1.

THE REQUIRED LENGTH OF BRACING FOR EACH SIDE OF A RECTANGLE CIRCUMSCRIBED AROUND THE PLAN OR A PORTION OF THE PLAN AT EACH STORY LEVEL SHALL BE IN ACCORDANCE WITH TABLE R602.10.3 AND FIGURE R602.10.3(1). UNLESS NOTED OTHERWISE, THE ENTIRE STRUCTURE IS ASSUMED TO CIRCUMSCRIBED WITHIN A SINGLE RECTANGLE.

MINIMUM PANEL WIDTH IS 24". SEE SECTION R602.10.3 FOR ADDITIONAL INFORMATION. CONNECTION CRITERIA SHALL BE IN ACCORDANCE WITH TABLE R602.10.1. PORTAL FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH FIGURE R602.10.1

HOLD DOWN DEVICE SHALL BE AS FOLLOWS:
SIMPSON LSTA24 STRAP (OR EQUIVALENT) BETWEEN FLOORS EXTENDING
FROM BOTTOM OF FLOOR BAND UP STUDS WHERE SHOWN.
SIMPSON HD3B HOLDOWN (OR EQUIVALENT) WHERE REQUIRED TO
CONNECT DIRECTLY TO FOUNDATION.

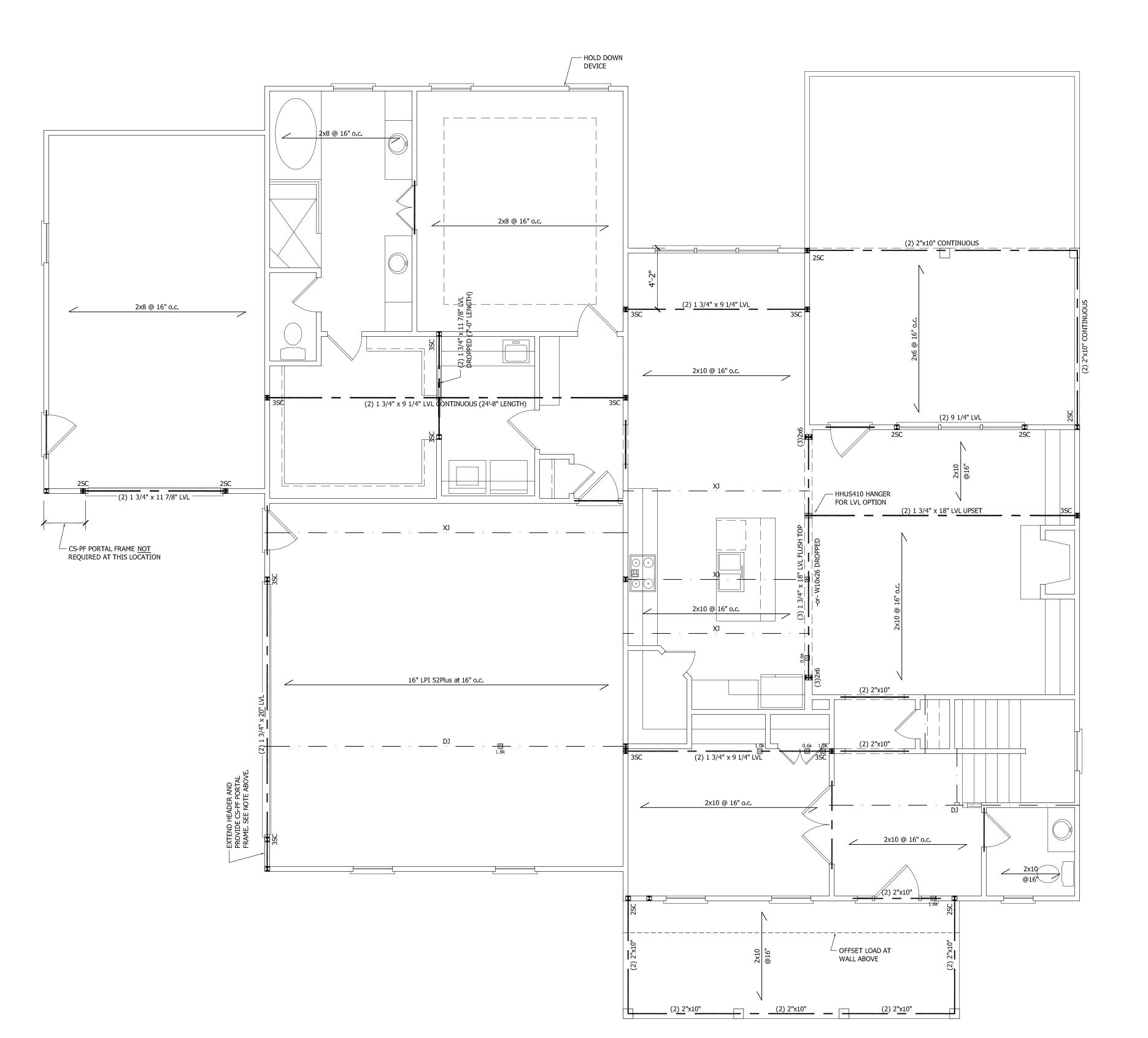
WIND SPEED: 115 mph

EAVE TO RIDGE HEIGHT: 14.67 ft

FIRST FLOOR:

SHORT SIDE LENGTH OF CIRCUMSCRIBED RECTANGLE: 55.33 ft REQUIRED LENGTH OF BRACING = 7.0 ft PROVIDED LENGTH OF BRACING = 36.42 ft

LONG SIDE LENGTH OF CIRCUMSCRIBED RECTANGLE: 70.33 ft REQUIRED LENGTH OF BRACING = 9.0 ft PROVIDED LENGTH OF BRACING = 24.67 ft



FRAMING NOTES

1. STRUCTURAL NOTES SHEET S5.

2. FRAMING SHALL BE #2 SPF OR #2 SYP u.n.o.

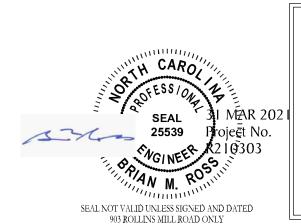
3. EXTERIOR AND BEARING HEADERS (2) 2"x10" u.n.o.

4. 🗖 DENOTES POINT LOAD. SEE CONSTRUCTION NOTE #4 ON S5.

EDAMINIC CYCTEN

FRAMING SYSTEM
JOIST LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE
WITH THE SUPPORT LOCATIONS SHOWN. JOISTS SHALL BE
DESIGNED FOR MAXIMUM L/480 LIVE LOAD DEFLECTION. JOIST
LAYOUT SHALL BE PROVIDED FOR REVIEW AND COORDINATED
WITH THE ENGINEER OF RECORD.
INSTALLATION SHALL BE IN ACCORDANCE WITH THE
MANUFACTURER'S INSTRUCTIONS.

EXTEND HEADER AND PROVIDE CS-PF PORTAL FRAME PANEL PER FIG. R602.10.1. PROVIDE LSTA24 STRAP (OR EQUIVALENT) EACH SIDE AS SHOWN. FASTEN SHEATHING TO HEADER AND WALL FRAMING (EACH STUD) WITH 8d NAILS AT 3" o.c. AS SHOWN. SEE FIG. R602.10.1 FOR ADDITIONAL REQUIREMENTS. SEE SHEET S5 FOR DETAIL.



STRUCTURAL DESIGN IN ACCORDANCE WITH: NORTH CAROLINA STATE RESIDENTIAL CODE 2018 EDITION IRC

ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.
SEAL APPLIES ONLY FOR LOT NUMBER INDICATED AND SIGNED PLANS MAY NOT BE COPIED. FAILURE TO NOTIFY THE ENGINEER OF ADDITIONAL USE OF THE PLANS WILL VOID THE LIABILITY OF ROSS LINDEN

STRUCTURAL DI WITH: NORTH CRESIDENTIAL COMPONENTS ON CERTIFY ARCHITE DIMENSIONAL ACT SEAL APPLIES ON INDICATED AND COPIED. FAILURE OF ADDITIONAL WOID THE LIABILITENGINEERS PC.

Representation of the second s

709 W. JONES STREET RALEIGH, NC 27603 TEL 919.832.5680 FAX 919.832.5675 WWW.ROSSLINDEN.COM

ROSS LINDEN

ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE PLANS.

PLAN ENGINEERING REMAINS THE PROPERTY OF ROSS LINDEN ENGINEERS PC AND ANY UNAUTHORIZED USE OR DUPLICATION IN WHOLE OR PART IS STRICTLY PROHIBITED. THESE DRAWINGS ARE OFFERED TO THE CLIENT FOR A CONDITIONAL ONE TIME USE. THE CONDITIONAL USE IS LIMITED TO THE LOT OR PROPERTY AS SPECIFIED HEREIN, AND ONLY FOR THE SAID LOCATION.

STEPHENSON BUILDERS THE CORN RESIDENCE 903 ROLLINS MILL ROAD

R210303

DESIGN BY LLR 31 MAR 2021

PROJECT NO.

REVISION DATE
180501 14 MAY 18
170706 27 JUL 17

160102

150403

FIRST CEILING

15 JAN 16

27 APR 15

FRAMING

SHEET NO.

OF S5

FIRST CEILING FRAMING

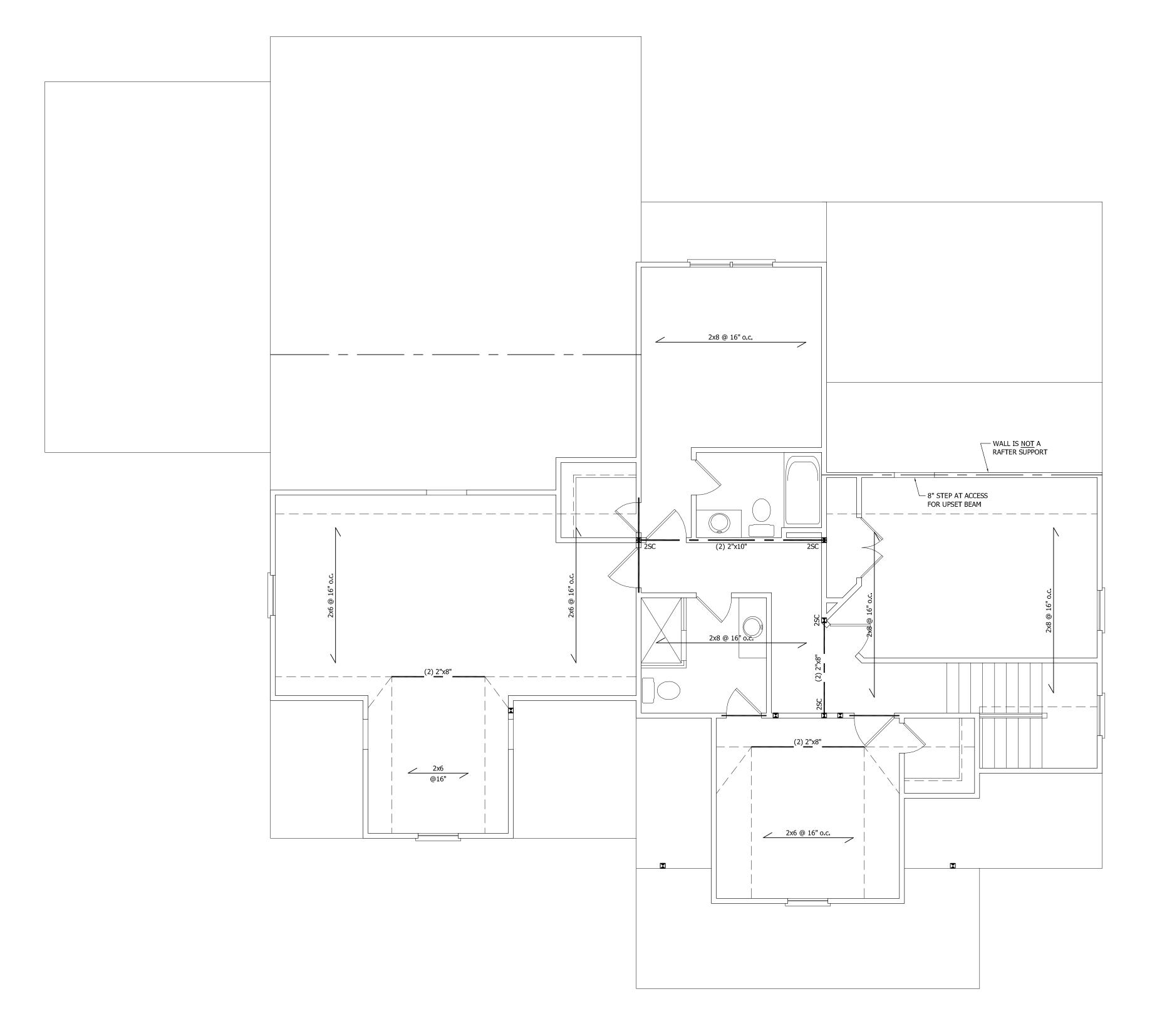
SCALE: 1/4" = 1'-0"

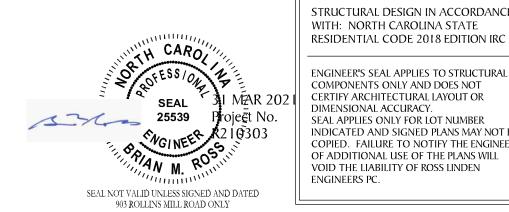
1. STRUCTURAL NOTES SHEET S5.

2. FRAMING SHALL BE #2 SPF OR #2 SYP u.n.o.

3. EXTERIOR AND BEARING HEADERS (2) 2"x10" u.n.o.

4. ■ DENOTES POINT LOAD. SEE CONSTRUCTION NOTE #4 ON S5.





STRUCTURAL DESIGN IN ACCORDANCE WITH: NORTH CAROLINA STATE RESIDENTIAL CODE 2018 EDITION IRC ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.
SEAL APPLIES ONLY FOR LOT NUMBER
INDICATED AND SIGNED PLANS MAY NOT BE COPIED. FAILURE TO NOTIFY THE ENGINEER

709 W. JONES STREET RALEIGH, NC 27603 TEL 919.832.5680 FAX 919.832.5675 WWW.ROSSLINDEN.COM

ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE PLANS.

PLAN ENGINEERING REMAINS THE PROPERTY OF ROSS LINDEN ENGINEERS PC AND ANY
UNAUTHORIZED USE OR DUPLICATION IN
WHOLE OR PART IS STRICTLY PROHIBITED.
THESE DRAWINGS ARE OFFERED TO THE
CLIENT FOR A CONDITIONAL ONE TIME USE.
THE CONDITIONAL USE IS LIMITED TO THE
LOT OR PROPERTY AS SPECIFIED HEREIN,
AND ONLY FOR THE SAID LOCATION. AND ONLY FOR THE SAID LOCATION.

STEPHENSON BUILDERS THE CORN RESIDENCE 903 ROLLINS MILL ROAD

PROJECT NO. R210303

DESIGN BY LLR 31 MAR 2021

REVISION 180501 170706 160102 27 APR 15 150403

SECOND CEILING FRAMING

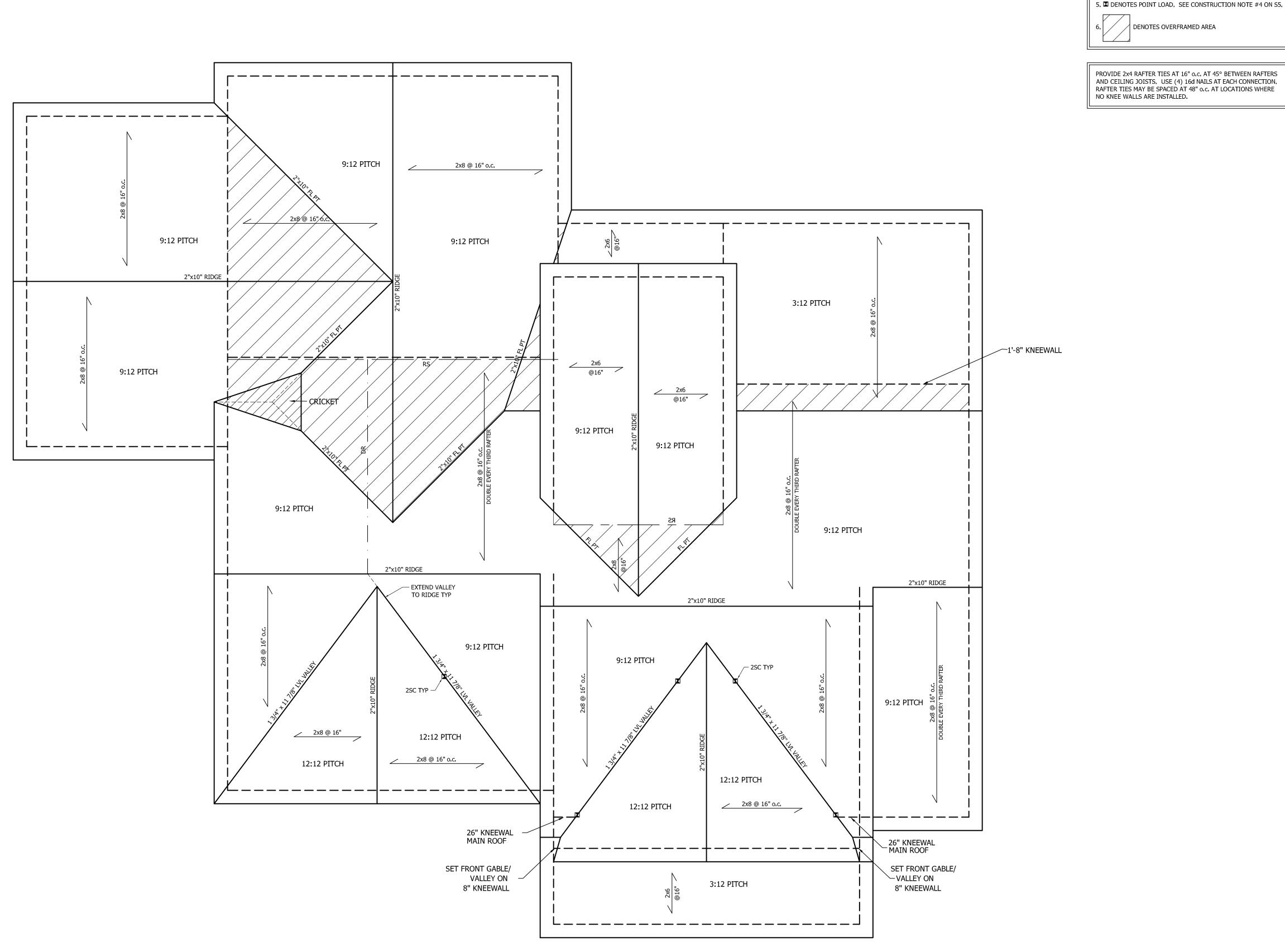
14 MAY 18

27 JUL 17

15 JAN 16

SHEET NO.

OF S5



ROOF FRAMING NOTES

1. STRUCTURAL NOTES SHEET S5.

2. FRAMING SHALL BE #2 SPF OR #2 SYP u.n.o.

3. PROVIDE 2x4 COLLAR TIES AT 48" o.c. AT UPPER THIRD OF

RAFTERS u.n.o. ON PLAN.

4. FUR RIDGES FOR FULL RAFTER CONTACT

DENOTES OVERFRAMED AREA

PROVIDE 2x4 RAFTER TIES AT 16" o.c. AT 45° BETWEEN RAFTERS AND CEILING JOISTS. USE (4) 16d NAILS AT EACH CONNECTION. RAFTER TIES MAY BE SPACED AT 48" o.c. AT LOCATIONS WHERE NO KNEE WALLS ARE INSTALLED.

709 W. JONES STREET RALEIGH, NC 27603 TEL 919.832.5680 FAX 919.832.5675

WWW.ROSSLINDEN.COM

ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY

PLAN ENGINEERING REMAINS THE PROPERTY OF ROSS LINDEN ENGINEERS PC AND ANY

UNAUTHORIZED USE OR DUPLICATION IN WHOLE OR PART IS STRICTLY PROHIBITED THESE DRAWINGS ARE OFFERED TO THE CLIENT FOR A CONDITIONAL ONE TIME USE. THE CONDITIONAL USE IS LIMITED TO THE LOT OR PROPERTY AS SPECIFIED HEREIN, AND ONLY FOR THE SAID LOCATION.

STEPHENSON BUILDERS THE CORN RESIDENCE 903 ROLLINS MILL ROAD

R210303

ROOF PLAN

31 MAR 2021

14 MAY 18

27 JUL 17

15 JAN 16

27 APR 15

DEVIATION FROM THESE PLANS.

SEAL 25539 SEAL NOT VALID UNLESS SIGNED AND DATED 903 ROLLINS MILL ROAD ONLY STRUCTURAL DESIGN IN ACCORDANCE WITH: NORTH CAROLINA STATE RESIDENTIAL CODE 2018 EDITION IRC ENGINEER'S SEAL APPLIES TO STRUCTURAL

VOID THE LIABILITY OF ROSS LINDEN

ENGINEERS PC.

FRAMING COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. SEAL APPLIES ONLY FOR LOT NUMBER INDICATED AND SIGNED PLANS MAY NOT BE COPIED. FAILURE TO NOTIFY THE ENGINEER OF ADDITIONAL USE OF THE PLANS WILL

SHEET NO.

PROJECT NO.

REVISION 180501

170706

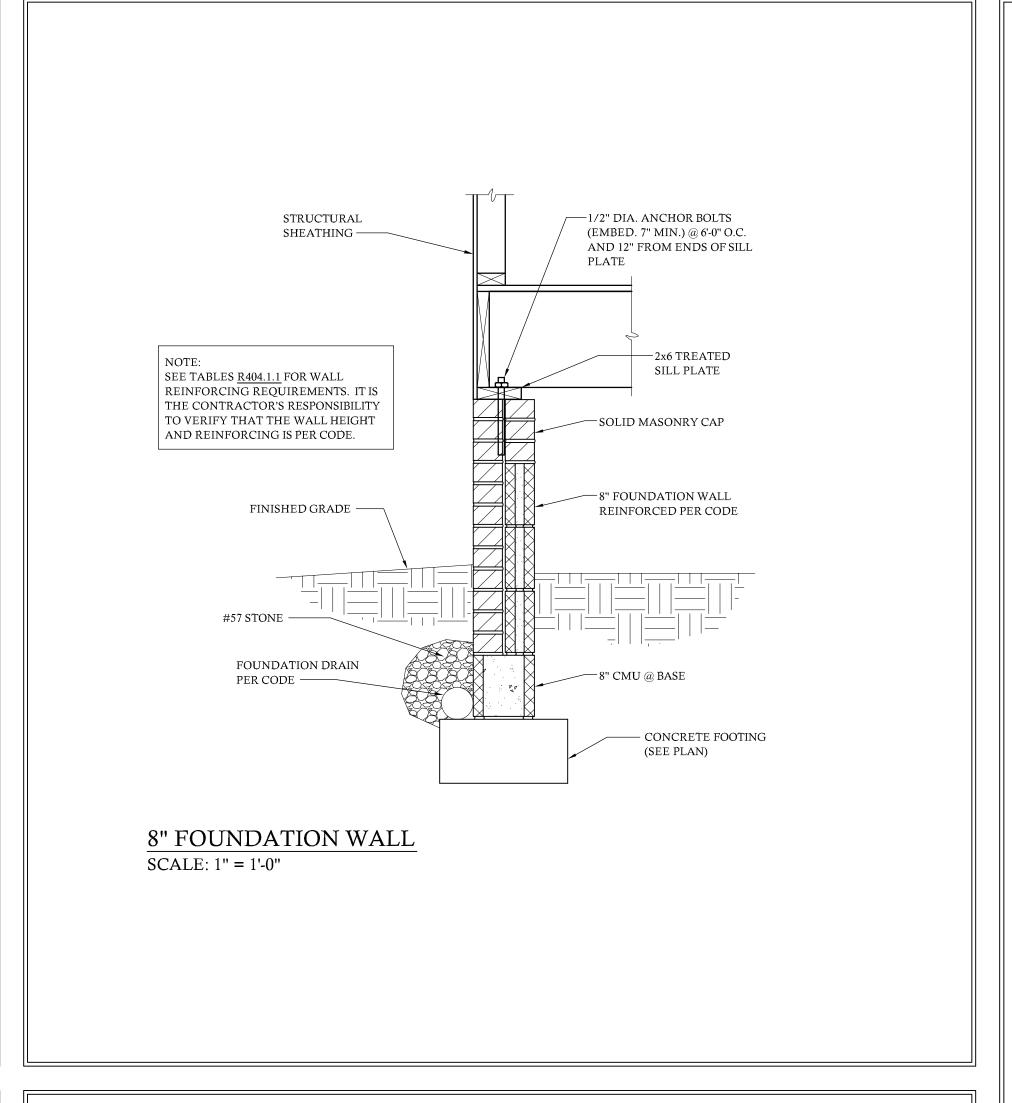
160102

150403

DESIGN BY LLR

OF S5

ROOF PLAN FRAMING SCALE: 1/4" = 1'-0"



EXTENT OF HEADER FASTEN HEADER TO KING STUD 6-16d FASTEN SHEATHING TO HEADER AND WALL FRAMING (EACH STUD 0 0 0 0 0 WITH 8d NAILS AT 3" o.d 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 - SEE PLAN FOR HEADER PROVIDE LSTA24 STRAP BEAMS WITH 2x MATERIAL INSIDE FACE OF WALL FOR ATTACHMENT OF (TYP. EACH SIDE). — SHEATHING AND STRAPS. — FOR A PANEL SPLICE, PANEL EDGES SHALL BE BLOCKED AND OCCUR WITHIN 24" OF MID-HEIGHT. ONE ROW OF TYP. SHEATHING-TO-FRAMING CONNECTIONS IS REQUIRED IN EACH PANEL. — WOOD STRUCTURAL PANEL SEE FIG. R602.10.1 FOR ADDITIONAL INFORMATION ANCHOR BOLT PER R403.1.6 TYP. PROVIDE MIN. 2" x2" x 3/16" PLATE WASHER AT BOLTS EACH SIDE OF DOOR. CS-PF PORTAL FRAME BRACED WALL PANEL NO SCALE BASED ON FIG. <u>R602.10.1</u>

STRUCTURAL NOTES

1. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THE PLANS.

2. ALL CONSTRUCTION, WORKMANSHIP, MATERIAL QUALITY AND SELECTION SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE - RESIDENTIAL CODE 2018 EDITION FROM THE INTERNATIONAL RESIDENTIAL CODE 2015 (IRC), AND LOCAL CODES AND REGULATIONS. DIMENSIONS SHALL GOVERN OVER SCALE AND CODE SHALL GOVERN OVER DIMENSIONS.

3. CONTACT THE ENGINEER PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES ARE NOTED ON THE PLANS.

4. ONLY CURRENT SEALED DRAWINGS ARE TO BE USED FOR CONSTRUCTION.

DESIGN LOADS LIVE LOAD DEAD LOAD DWELLING UNITS SLEEPING ROOMS ATTICS WITH STORAGE ATTICS WITHOUT STORAGE ROOF SNOW STAIRS DECKS EXTERIOR BALCONIES PASSENGER VEHICLE GARAGES FIRE ESCAPES GUARDRAILS AND HANDRAILS

ADDITIONAL LOADS

TABLE R301.2(4) - BASIC DESIGN WIND SPEED 115 MPH

TABLE R301.2(7) - SEISMIC DESIGN CATEGORY B

 $\underline{\text{TABLE R301.2(6)}}$ - 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 BUILDING LOCATED IN EXPOSURE B

ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE DESIGNED BASED ON ROOF PITCHES AND MEAN ROOF HEIGHT AS FOLLOWS:

2.25:12 TO 7:12 34.8 PSF 36.5 PSF 37.9 PSF 7:12 TO 12:12 21.0 PSF 22.1 PSF 22.9 PSF

WALL CLADDING SHALL BE DESIGNED FOR A 24.1 PSF POSITIVE AND NEGATIVE PRESSURE

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 = 2600 PSI Fv = 285 PSI E = 1.9E6 PSITHE FOLLOWING PRODUCTS MEET OR EXCEED THE ABOVE SPECIFICATIONS AND MAY BE USED AT THE LOCATION

INDICATED ON THE PLANS: BROADSPAN 1.9E-2750Fb LVL BY GEORGIA PACIFIC iLEVEL TRUS JOIST 1.9E MICROLLAM LVL BY WEYERHAUSER

4. STRUCTURAL STEEL WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A992 OR A572, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.

5. BOLTS SHALL CONFORM TO A325 MINIMUM GRADE.

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

7. SEE <u>TABLE R602.3(1)</u> FOR STRUCTURAL MEMBER FASTENING

REQUIREMENTS. 8. 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. 9. CONCRETE LOCATED PER <u>TABLE R402.2</u> SHALL BE AIR ENTRAINED WITH THE TOTAL AIR CONTENT NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.

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

CONSTRUCTION

1. 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.

2. ENGINEERED WOOD BEAMS SHALL BE INSTALLED WITH ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.

3. 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.

4. 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.

5. 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. ROOF TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

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

A. EXTERIOR WALLS ARE ASSUMED TO BE BRACED WALL LINES. ADDITIONAL INTERIOR WALLS MAY ALSO BE USED AS BRACED WALL LINES WHERE APPLICABLE. SEE PLAN FOR LOCATIONS.

B. THE EXTERIOR OF THE STRUCTURE SHALL BE CONTINUOUSLY SHEATHED WITH 1/2" WOOD STRUCTURAL SHEATHING (PLYWOOD OR OSB) PER CODE SECTION <u>R602.10.3</u>. EXTERIOR BRACED WALL LINES ARE ASSUMED TO BE BRACED WITH CS-WSP (WOOD STRUCTURAL PANEL) BRACED WALL PANELS. ALTERNATE BRACING METHODS, IF USED, MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CODE AND MUST BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION.

C. INTERIOR BRACED WALL LINES ARE CONSIDERED TO BE BRACED WITH 1/2" GB (GYPSUM BOARD) BRACED WALL PANELS. SEE TABLE R602.10.2 FOR CONNECTION CRITERIA. D. SEE PLANS FOR SPECIAL WALL BRACING REQUIREMENTS FOR GARAGE WALLS AND OTHER WALLS WITH MULTIPLE

OR LARGE OPENINGS.

7. 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.

8. BRICK LINTELS SHALL BE 3 $1/2 \times 3 1/2 \times 1/4$ 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 TRIPLE 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.

FOUNDATION

1. MINIMUM ALLOWABLE SOIL BEARING CAPACITY IS ASSUMED TO BE 2000 PSF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SOIL BEARING CAPACITY.

2. CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE SELECTED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF <u>SECTION R404</u> OR IN ACCORDANCE WITH ACI 318, NCMA TR68-A, OR ACI 530/ASCE 5/TMS 402.

3. MASONRY AND POURED CONCRETE WALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH TABLES R404.1.1 (1 THROUGH 4) OF THE NORTH CAROLINA RESIDENTIAL CODE.

A. PER R404.1.3, TABLES ASSUME THAT WALLS HAVE PERMANENT LATERAL SUPPORT AT THE TOP AND BOTTOM. B. WALL REINFORCING SHALL BE PLACED ACCORDING TO FOOTNOTE (c) OF THE TABLES (REINFORCING IS NOT CENTERED IN WALL).

C. FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER

4. WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" ANCHOR BOLTS WITH MINIMUM 7" EMBEDMENT SPACED A MAXIMUM OF 6'-0" o.c. AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION.

5. THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION. UNFILLED HOLLOW PIERS MAY BE USED IF THE UNSUPPORTED HEIGHT IS NOT MORE THAN FOUR TIMES THEIR LEAST DIMENSION.

6. CENTERS OF PIERS SHALL BEAR IN THE MIDDLE THIRD OF THE FOOTINGS, AND GIRDERS SHALL CENTER IN THE MIDDLE THIRD OF THE PIERS.

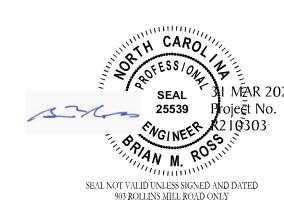
7. ALL FOOTINGS SHALL HAVE MINIMUM 2" PROJECTION ON EACH SIDE OF FOUNDATION WALLS.

ABBREVIATIONS	
CONC	CONCRETE
CONT	CONTINUOUS
DBL	DOUBLE
DJ	DOUBLE JOIST
DSP	DOUBLE STUD POCKET
EA	EACH
FL PT	FLAT PLATE
FTG	FOOTING
HGR	HANGER
LVL	LAMINATED VENEER LUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PT	PRESSURE TREATED
RS	RAFTER SUPPORT
SC	STUD COLUMN
SP	STUD POCKET
TJ	TRIPLE JOIST
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
XJ	EXTRA JOIST



STRUCTURAL DESIGN IN ACCORDANCE WITH: NORTH CAROLINA STATE RESIDENTIAL CODE 2018 EDITION IRC

ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY. SEAL APPLIES ONLY FOR LOT NUMBER INDICATED AND SIGNED PLANS MAY NOT BE COPIED. FAILURE TO NOTIFY THE ENGINEER OF ADDITIONAL USE OF THE PLANS WILL VOID THE LIABILITY OF ROSS LINDEN ENGINEERS PC.



709 W. JONES STREET

RALEIGH, NC 27603 TEL 919.832.5680 FAX 919.832.5675 WWW.ROSSLINDEN.COM

ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE PLANS.

PLAN ENGINEERING REMAINS THE PROPERTY OF ROSS LINDEN ENGINEERS PC AND ANY UNAUTHORIZED USE OR DUPLICATION IN WHOLE OR PART IS STRICTLY PROHIBITED THESE DRAWINGS ARE OFFERED TO THE CLIENT FOR A CONDITIONAL ONE TIME USE THE CONDITIONAL LISE IS LIMITED TO THE LOT OR PROPERTY AS SPECIFIED HEREIN, AND ONLY FOR THE SAID LOCATION.

SON BUILDERS
RESIDENCE
S MILL ROAD

PROJECT NO. R210303

DESIGN BY LLR 31 MAR 2021

REVISION 180501 14 MAY 18 170706 27 JUL 17 160102

15 JAN 16

27 APR 15

STRUCTURAL **NOTES & DETAILS**

SHEET NO.

150403