- 1. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 2. ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
- 3. ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED
- 4. STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
- 5. DO NOT SCALE PLANS. DRAWING SCALE MAY BE DISTORTED DUE TO COPIER IMPERFECTIONS.
- 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.

## SQUARE FOOTAGE

HEATED SQUARE F	O O T A G E	UNHEATED SQUARE FOO	OTAG
FIRST FLOOR=	1662	GARAGE = 5	528
SECOND FLOOR=	320	FRONT PORCH = 1	116
THIRD FLOOR=	N/A	CVD.PORCH = 1	158
BASEMENT =	N/A	STORAGE =	712
		$OPT. 3^{RD} CAR = 3$	308
TOTAL HEATED=	1982	TOTAL UNHEATED =	151 <u>4</u>

## CRAWL SPACE VENTILATION CALCULATIONS

-VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

-100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)

SQ. FT. OF CRAWL SPACE/1500

SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: 3 VENTS AT 0.45 SQ. FT. NET FREE VENTILATION EACH= 1.35 SQ. FT. OF VENTILATION

\*\*FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.

# ATTIC VENTILATION CALCULATIONS

- CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTIALTION PROVIDED BE EAVE VENTS.

- CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

2464 SQ. FT. OF ATTIC/300= 8.21

EACH OF INLET AND OUTLET REQUIRED.

### \*WALL AND ROOF CLADDING DESIGN VALUES

- WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.
- ROOF VALUES BOTH POSITVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

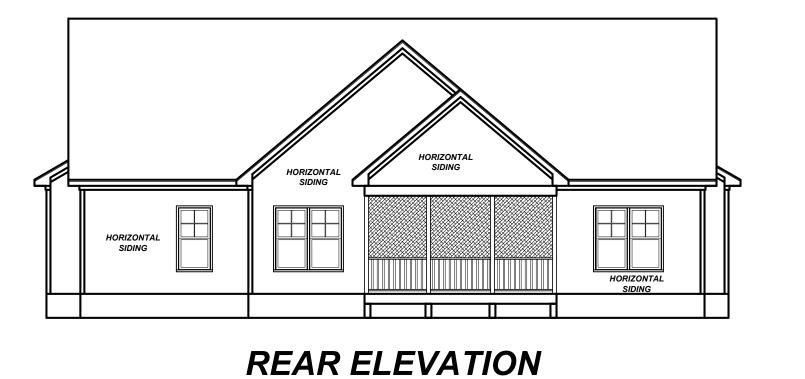
21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

\*\* MEAN ROOF HEIGHT 30' OR LESS

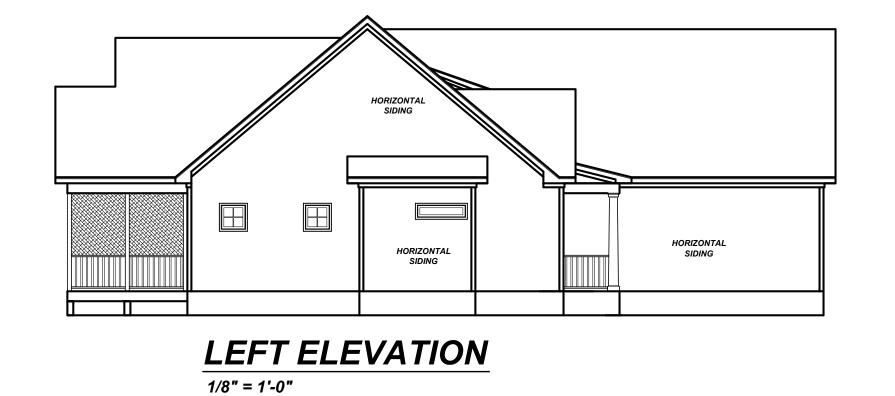


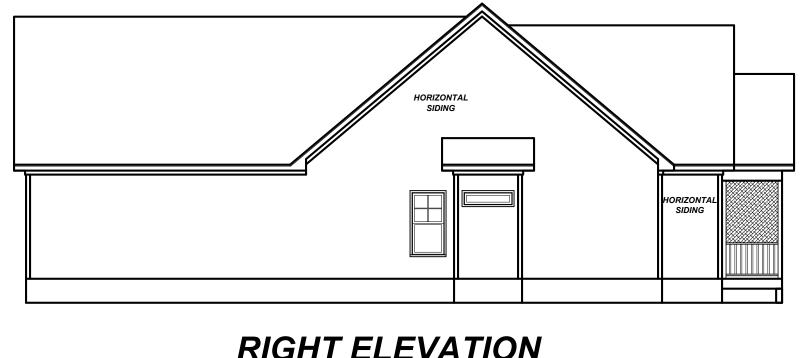
FRONT ELEVATION

1/4" = 1'-0"



1/8" = 1'-0"





RIGHT ELEVATION 1/8" = 1'-0"

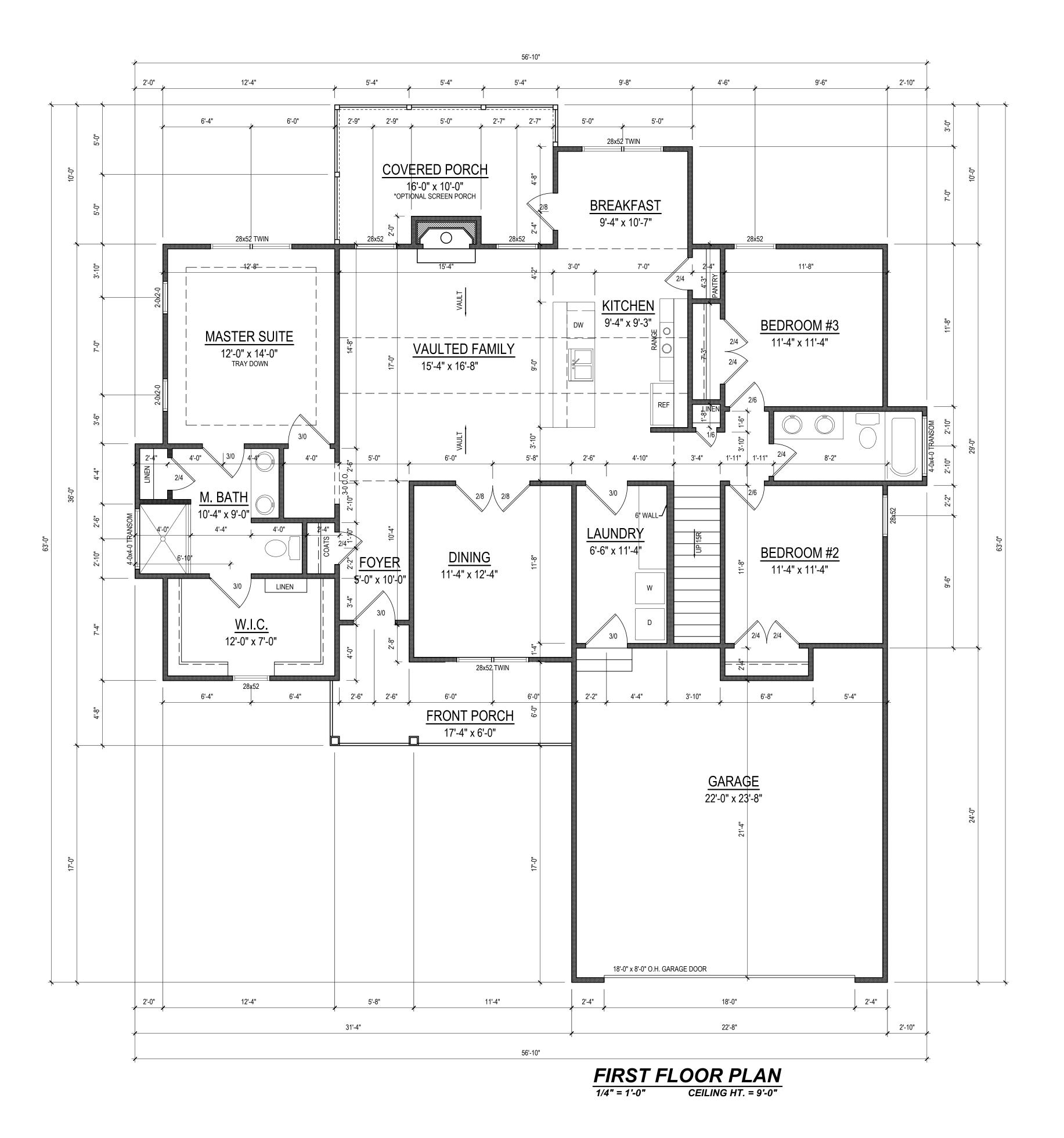
12-21-20 REFER TO ELEV.



**ELEVATIONS** 

Southern

FIRST FLOOR



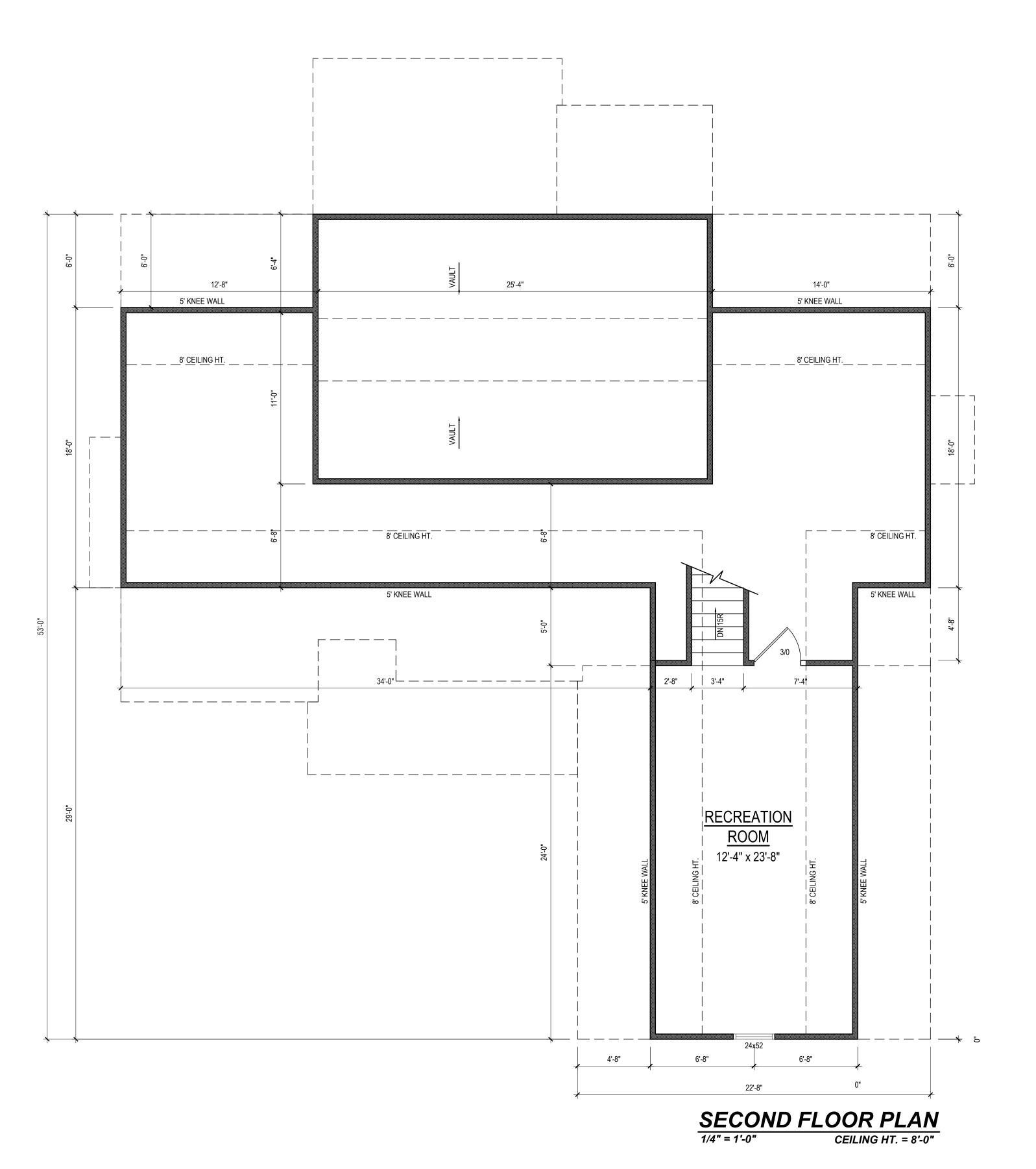
12-21-20 Drawn/Design By: KBB

Project #: 20-267

Scale: 1/4" = 1'-0" **REVISIONS** 

Remarks

SECOND FLOOR

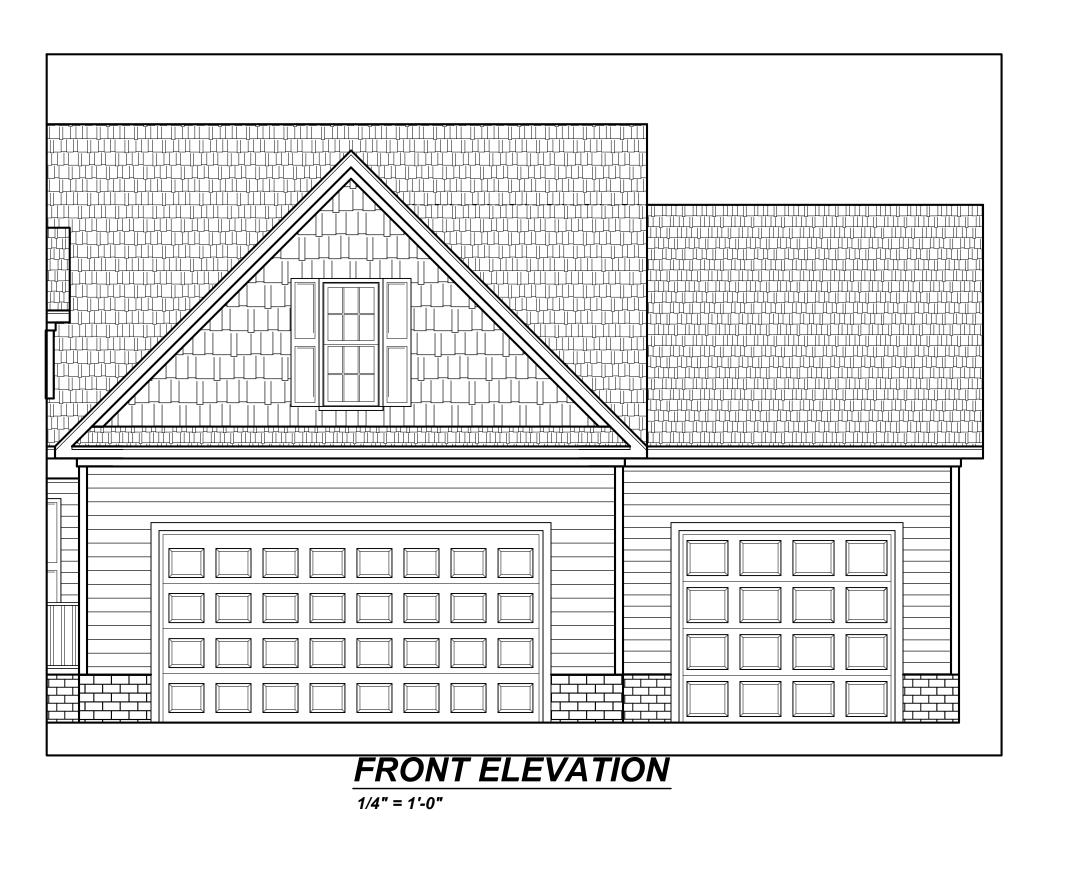


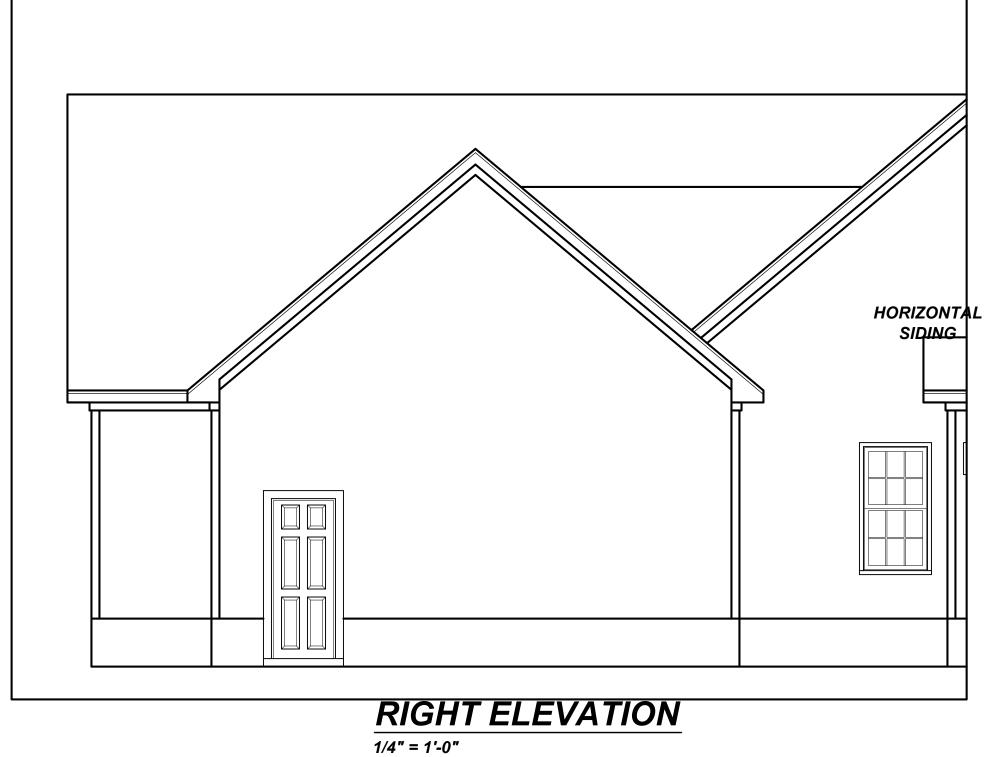
Project #: 20-267

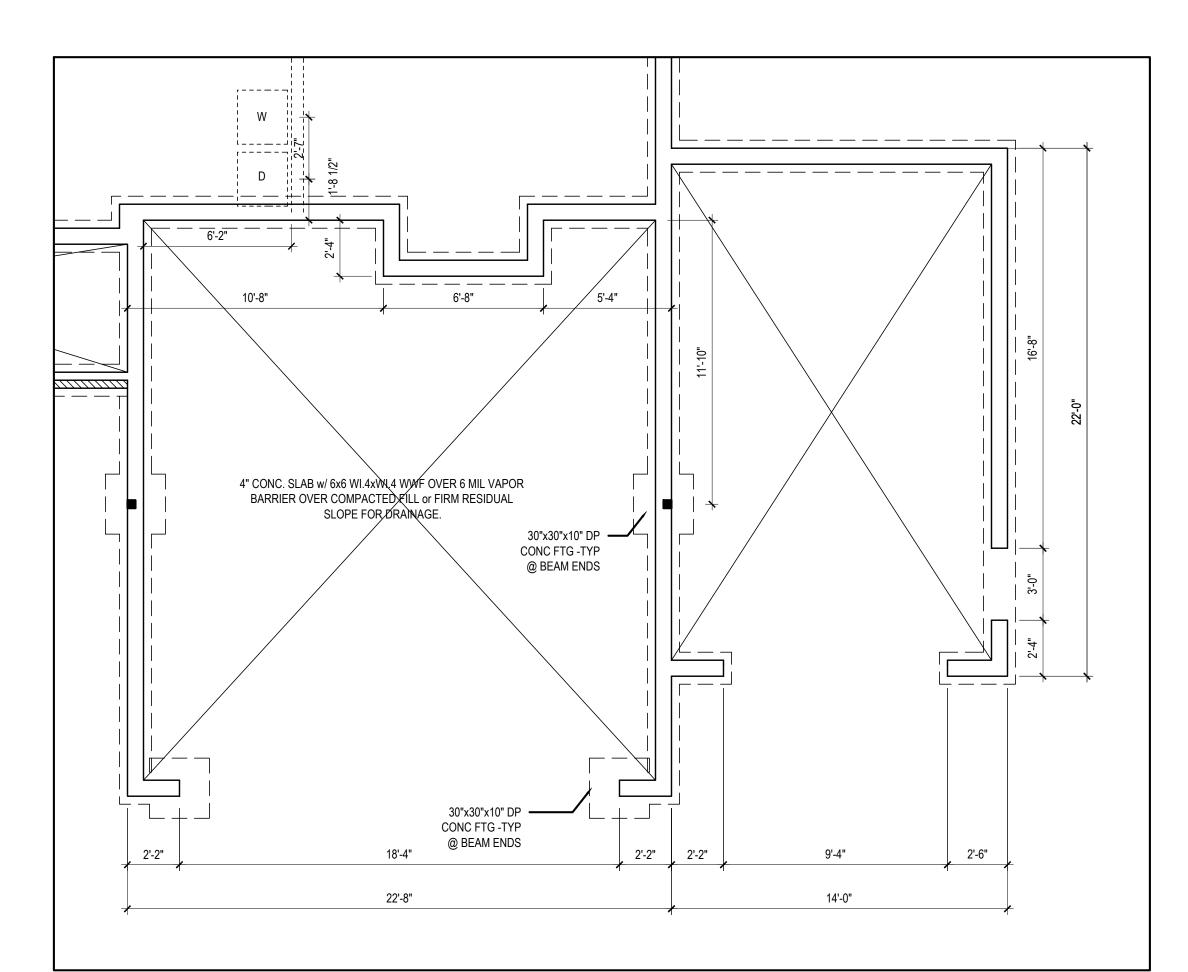
12-21-20

LLC.
P.O. Box 2135

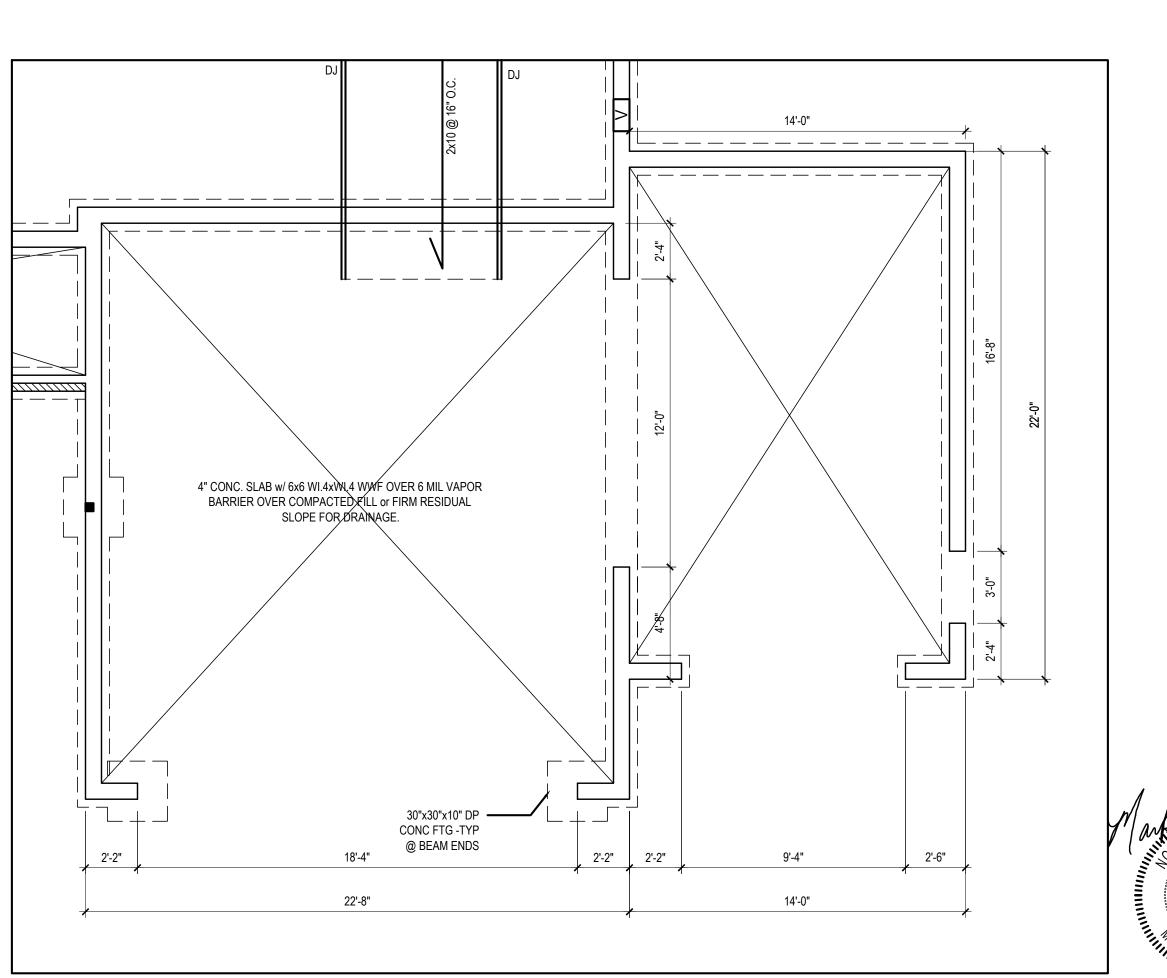
THIRD CAR OPTION









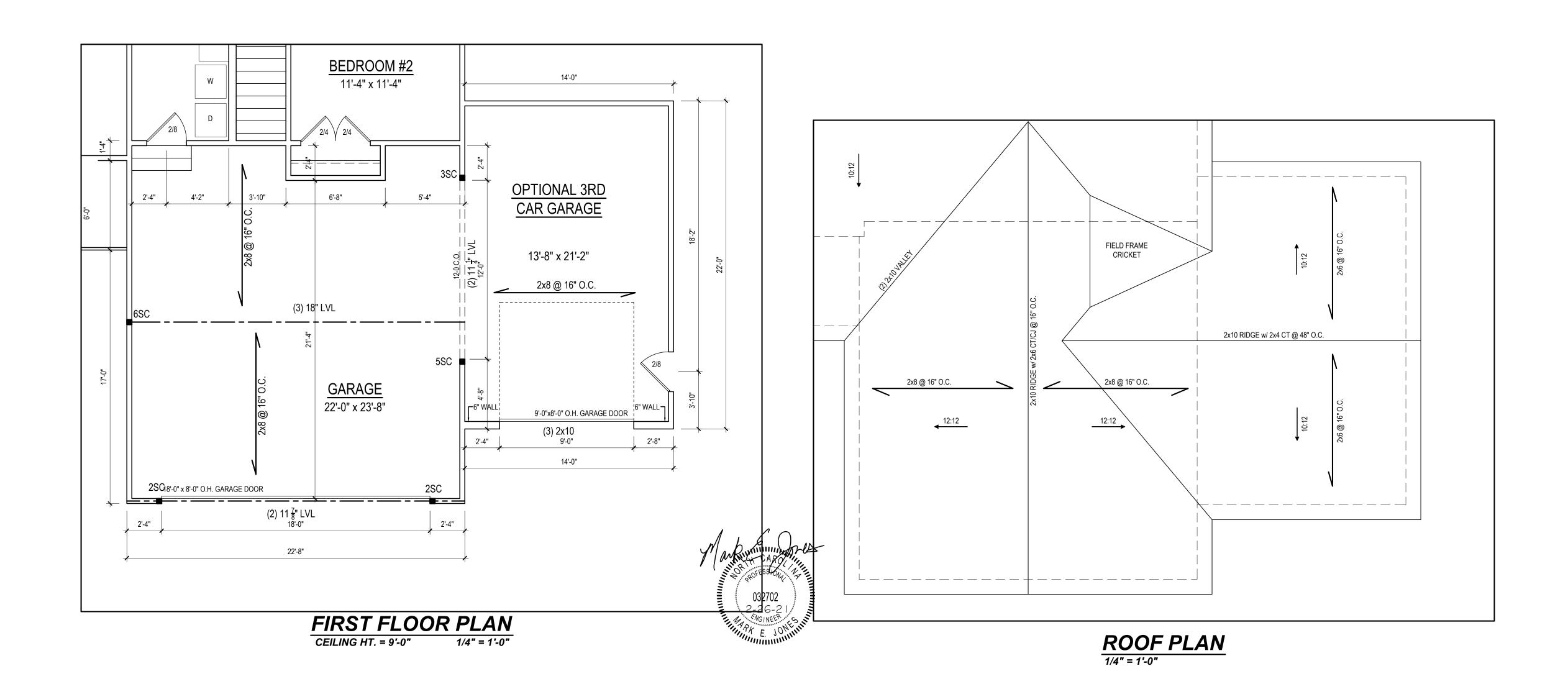


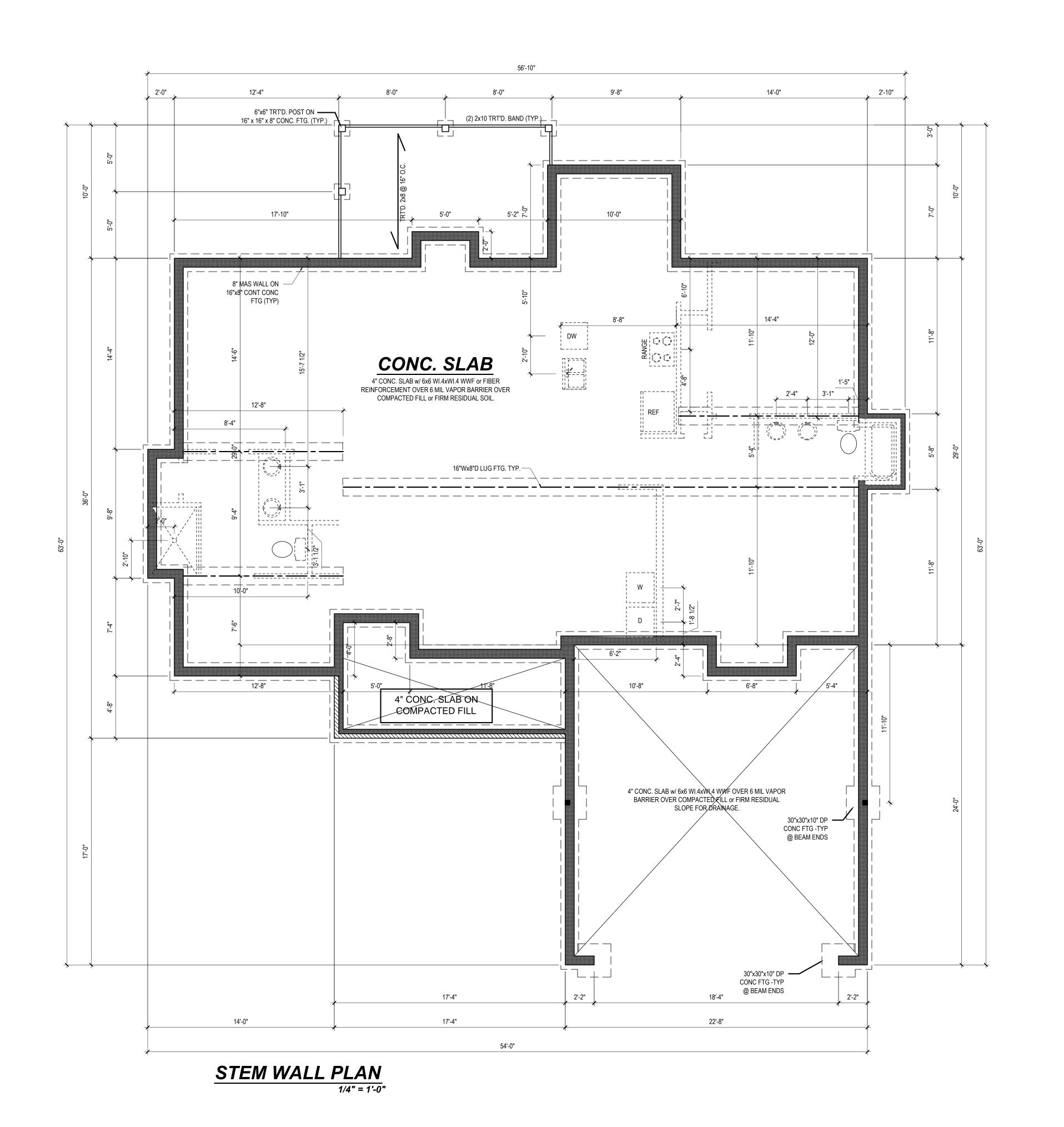
FOUNDATION PLAN

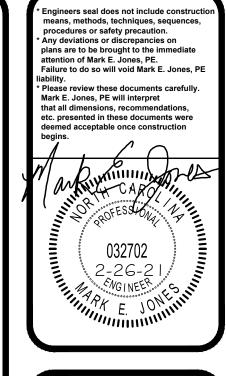
1/4" = 1'-0"



THIRD CAR OPTION







Holly Plan (Garage Right)

Touch Homes LLC.

Southern

21-024

2/26/21 Drawn/Design By: MEJ

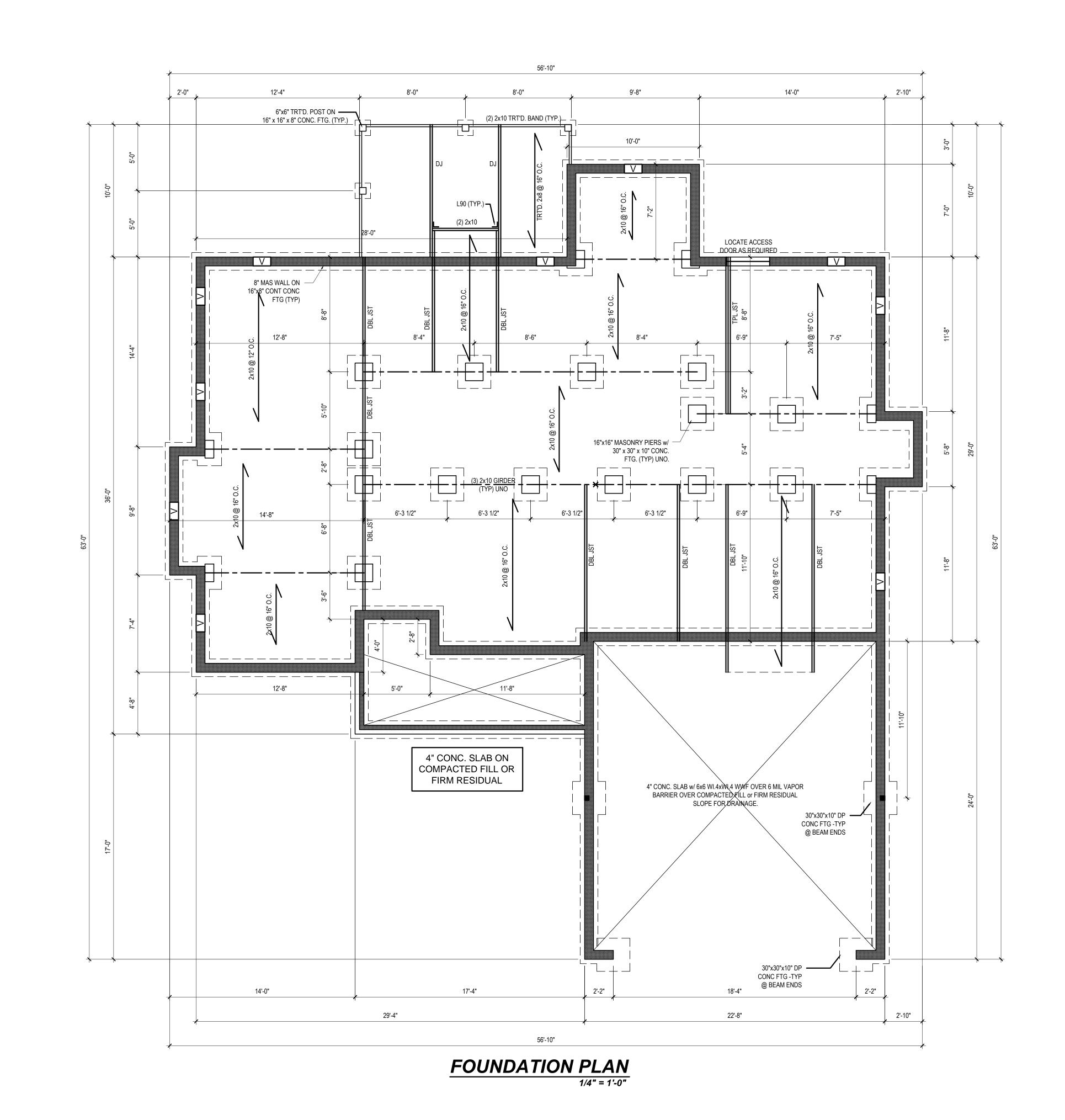
DWG. Checked By: MEJ

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

P.O. B Angier,

FOUND (SLAB)

**REVISIONS** 



\* Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.

\* Any deviations or discrepancies on plans are to be brought to the immediate attention of Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE liability. liability.

\* Please review these documents carefully.
Mark E. Jones, PE will interpret
that all dimensions, recommendations,
etc. presented in these documents were

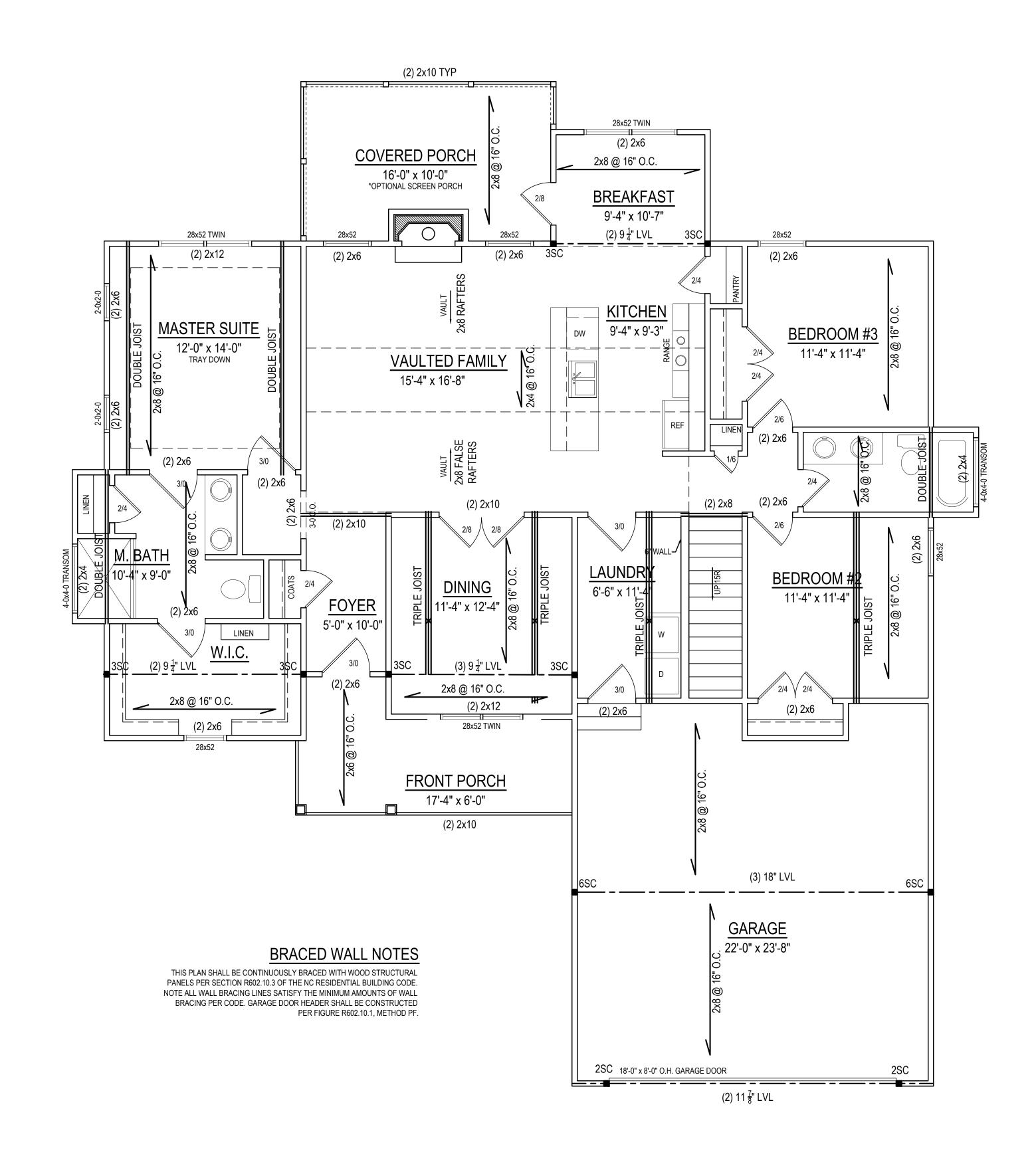
Holly Plan (Garage Right)

Touch Homes LLC.

21-024 2/26/21 Drawn/Design By: MEJ DWG. Checked By: MEJ Scale: 1/4"=1'-0"

	RI	EVISIONS
<u>No.</u>	Date:	Remarks
1		
2		
3		
4		

FOUND (CRAWL)



FIRST FLOOR STRUCTURAL PLAN
CEILING HT. = 9'-0"

1/4" = 1'-0"

**E. Jones, PE**len Dean Court
jh, NC 27603
9) 395-5618

Plan Right

\* Engineers seal does not include construct means, methods, techniques, sequences, procedures or safety precaution.

\* Any deviations or discrepancies on plans are to be brought to the immediate attention of Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE liability.

\* Please review these documents carefully.
 \* Please review these documents carefully.
 Mark E. Jones, PE will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

Southern Touch Homes
LLC.
P.O. Box 2135
Angier, NC 27501

Project #:
21-024

Date:
2/26/21

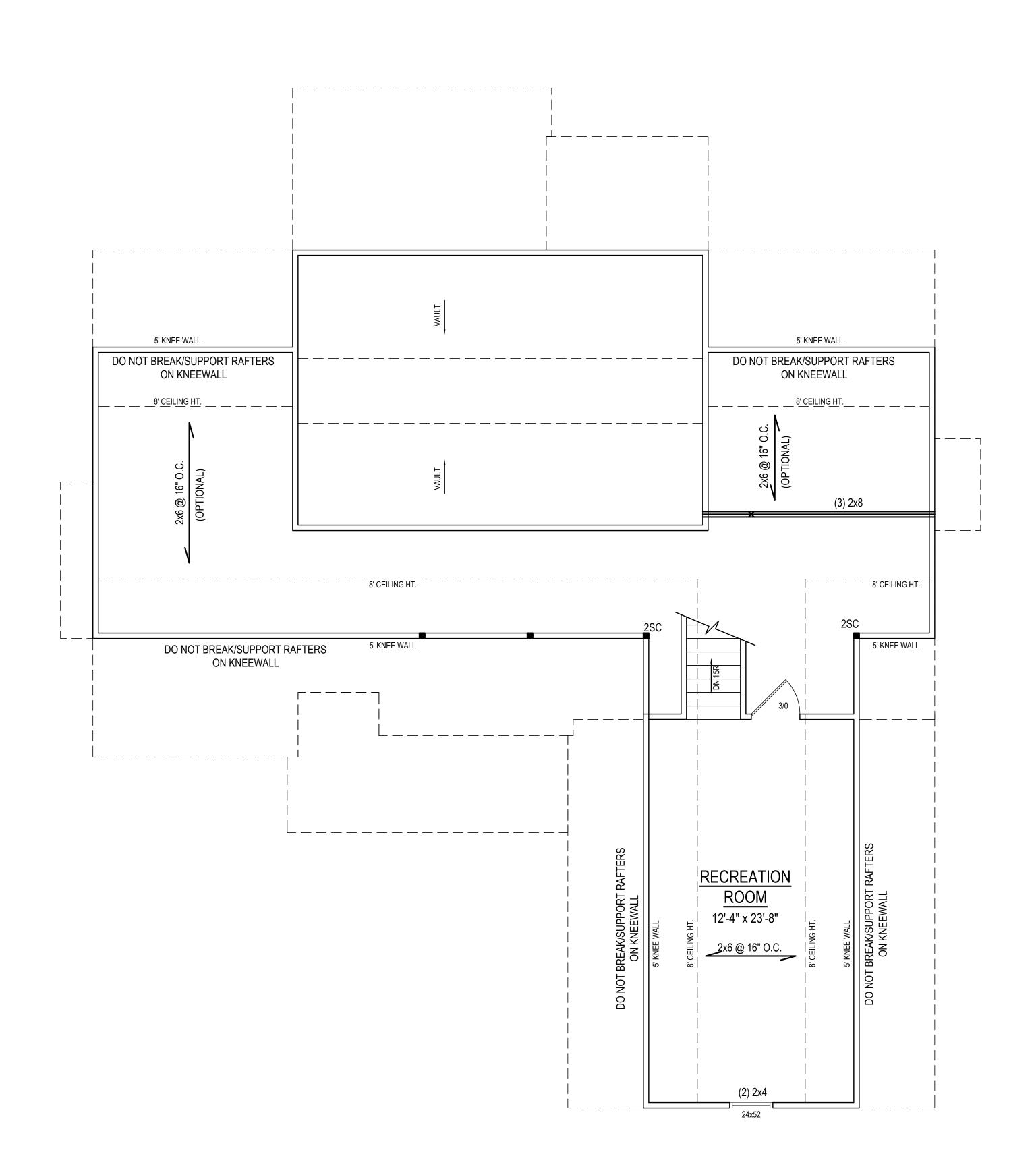
Drawn/Design By:
MEJ

DWG. Checked By:
MEJ

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

	REVISIONS					
No.	Date:	Remarks				
1						
2						
3						
4						

1ST FLR STRUC



Johns, PE liability.

\*Please review these documents carefully. Mark E. Jones, PE will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.

\*\*Oncorrect Control of the Control of the

\* Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.

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Holly Plan (Garage Right)

ouch Homes
LC.
Ox 2135
(Galactic Street)

Southern Touch Homes
LLC.
P.O. Box 2135

1	
	Project #:
1	21-024
	Date:
	2/26/21
	Drawn/Design By:
	MEJ
	DWG. Checked By:
	MEJ
	Scale:
1	1/4"=1'-0"

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<u>No.</u>	Date:	<u>Remarks</u>
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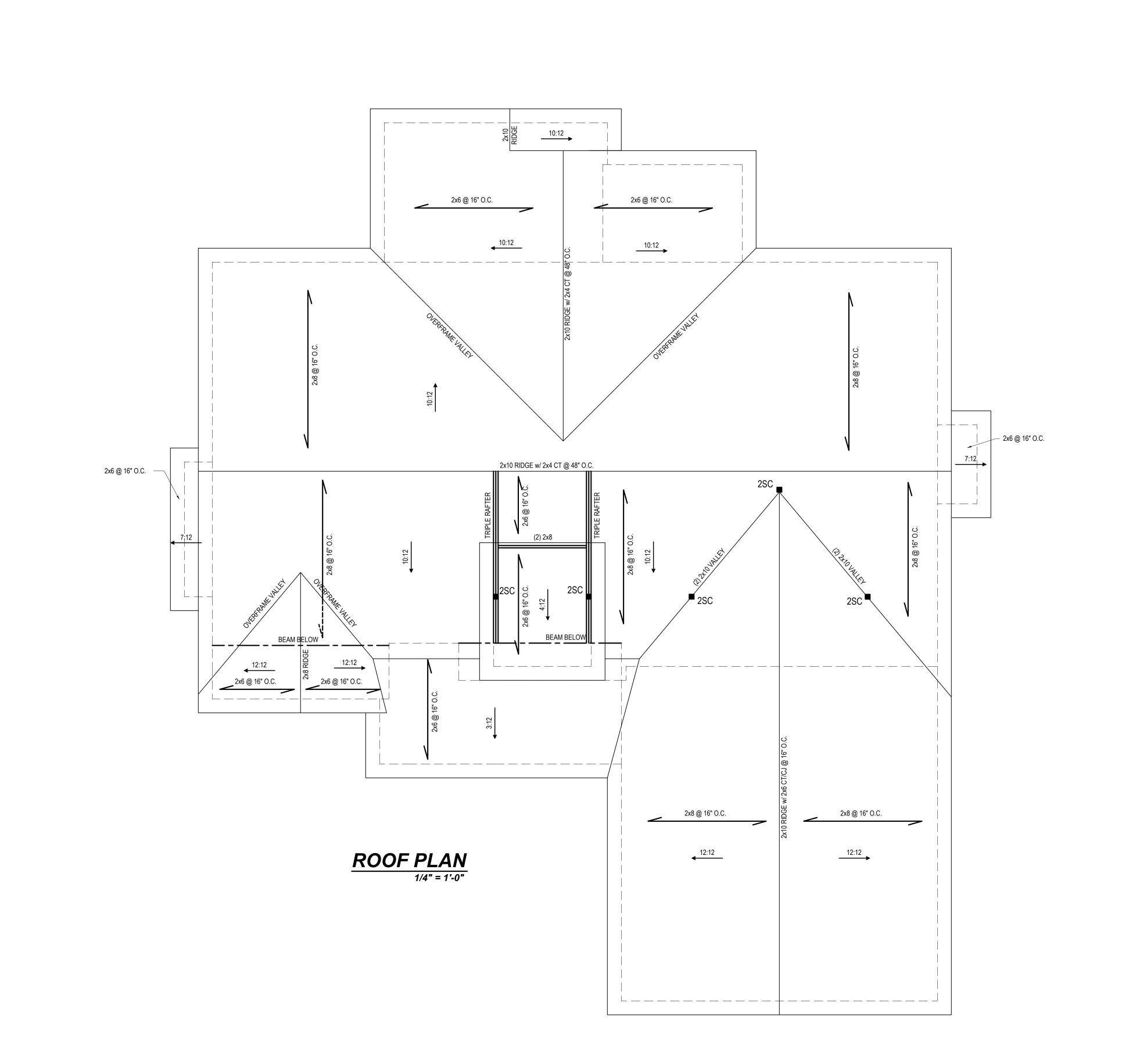
2ND FLR STRUC

Sheet Number

S4

SECOND FLOOR STRUCTURAL PLAN
CEILING HT. = 8'-0"

1/4" = 1'-0"



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\*\*O32702\*\*

\*

Mark E. Jones, PE 5425 Glen Dean Court Raleigh, NC 27603 (919) 395-5618

> Holly Plan (Garage Right)

Southern Touch Homes
LLC.
P.O. Box 2135
Angier, NC 27501

Project #:
21-024

Date:
2/26/21

Drawn/Design By:
MEJ

DWG. Checked By:
MEJ

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

<b>\</b>	1/4 = 1	-0
$oldsymbol{L}$	<u>RI</u>	EVISIONS
<u>No.</u>	Date:	<u>Remarks</u>
1		
2		
3		
4		

ROOF

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS. 2) DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (DL & LL)
ALL FLOORS	40	10	L/360
ATTIC (pull down access)	20	10	L/240
ATTIC (no access)	10	5	L/240
EXTERNAL BALCONY	60	10	L/360
ROOF	20	10	L/180
ROOF TRUSS	20	20	L/240
WIND LOAD	[BASED ON 115 MPH (3-second gusts)]		

3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF

4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED

- 5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT
- 6) ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSI) UNO. ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.
- 7) ALL LOAD BEARING HEADERS SHALL BE (2)2x10 (UNO). ALL WINDOW AND DOOR HEADERS SHALL BE SUPPORTED BY (1) JACK STUD AND (1) KING STUD AT EACH END UNLESS NOTED. ALL OTHER BEAMS SHALL BE SUPPORTED BY 2 STUDS OR THE AMOUNT OF STUDS REQUIRED FOR FULL BEARING AT EACH END UNLESS NOTED. POINT LOADS (STIFF KNEES, ETC.) SHALL CONSIST OF 2 STUDS UNLESS NOTED. ALL SUPPORTS OF 2 STUDS OR MORE SHALL BE TRANSFERRED THROUGH
- EACH FLOOR TO THE FOUNDATION. 8) ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 7/16" WOOD STRUCTURAL PANELS FASTNED WITH 8D NAILS 6" O.C. AT EDGES AND 12" O.C. AT INT. SUPPORTS. BLOCKING SHALL BE INSTALLED IF LESS THAN 50 PERCENT OF THE WALL LENGTH IS SHEATHED. WHERE BLOCKING IS REQ'D, ALL PANELS SHALL BE FASTENED AT 3" O.C AT EDGES AND 6" O.C. AT
- 9) ALL STRUCTURAL STEEL SHALL ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1\2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2 DIAMETER AND 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- 10) ANCHOR BOLT PLACEMENT PER SECTION R403.1.6. 1/2" DIAMETER ANCHOR BOLTS SPACED AT 6'-0" O/C AND PLACED 12" FROM THE END OF EACH PLATE SECTION 1) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2018 NC BUILDING CODE
- 12) WALL AND ROOF CLADDING VALUES: WALL CLADDING SHALL BE DESIGNED FOR A 24.1 SQ.FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE
- ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS: 45.5 LBS/SQFT FOR ROOF PITCHES OF 0/12 TO 2.25/12
- 34.8 LBS/SQFT FOR ROOF PITCHES OF 2.25/12 TO 7/12 21.0 LBS/SQFT FOR ROOF PITCHES OF 7/12 TO 12/12
- \*\* MEAN ROOF HEIGHT 30' OR LESS

RAFTERS PER PLAN \_

3) FOR ROOF SLOPES FROM 2:12 THROUGH 4:12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER 14) IT IS THE CONTRACTOR'S RESPONSIBLITY TO VERIFY ALL DIMENSIONS AND SQ. FTG. ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SQ. FTG. ERRORS ONCE CONSTRUCTION BEGINS

	CLIMATE ZONE MAXIMUM GLAZING U-FACTOR			MINIMUN	M INSULATION F	R-VALUE		
		CEILINGS	WALLS	FLOORS	BASEMENT WALLS	SLAB PERIMETER	CRAWL SPACE WALLS	
	3	.35	R-38 or R-30	R-15	R-19	R-5/13	R-0	R-5/13
	4	.35	R-38 or R-30	R-15	R-19	R-10/15	R-10	R-10/15

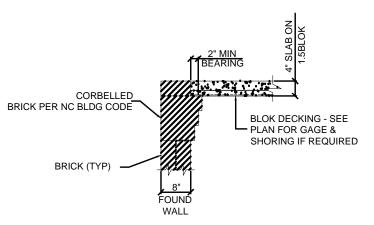
2X4 TIE BACK 1:1

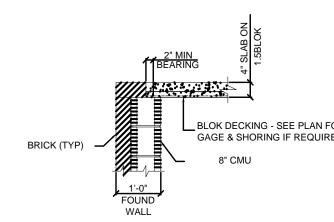
CEILING JOIST PER PLAN

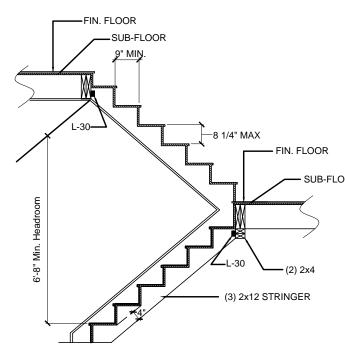
ATTACH E.E. WITH (2) 12d @ 32" o/c

CROSS THREE JOISTS MIN.

ATTACH WITH (2) 12d PER JOIST CROSSING



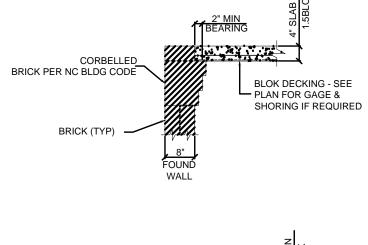


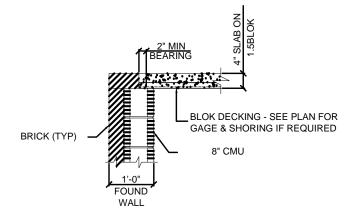


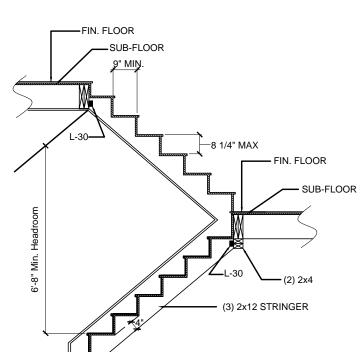




ATTACH E.E. WITH (2) 12d







-BALCONY HANDRAIL HT. 36" MIN. -STAIR HANDRAIL HT. 30" MIN., 34" MAX FROM NOSE OF STEP TREAD



#### 1. MAXIMUM HEIGHT OF DECK SUPPORT POSTS AS FOLLOWS:

POST SIZE *	MAX POST HEIGHT **
4 X 4	8'-0"
6 X 6	20'-0"
***	OVER 20'-0"

- \* THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. \*\* FROM TOP OF FOOTING TO BOTTOM OF GIRDER
- \*\*\* DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

#### 2. DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THE METHODS:

- A.WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4' AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION AM104, LATERAL BRACING IS NOT REQUIRED.
- B. 4X4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN  $\frac{1}{3}$  OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE NAILED TO THE POST AND THE GIRDER OR BOLTED WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF THE BRACE.
- C. FOR FREESTANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN ACCORDANCE WITH THE FOLLOWING:

POST SIZE	MAX TRIBUTARY AREA	MAX POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER	
4 X 4	48 SF	4'-0"	2'-6"	1'-0"	
6 X 6	120 SF	6'-0"	3'-6"	1'-8"	
D. 2x6 DIAGONAL VERTICAL ROSS-BRACING MAY BE PROVIDED IN TWO					

\_\_\_ STUD WALL

THRU-BOLT @ 24" O.C.

2x FLOOR JOIST

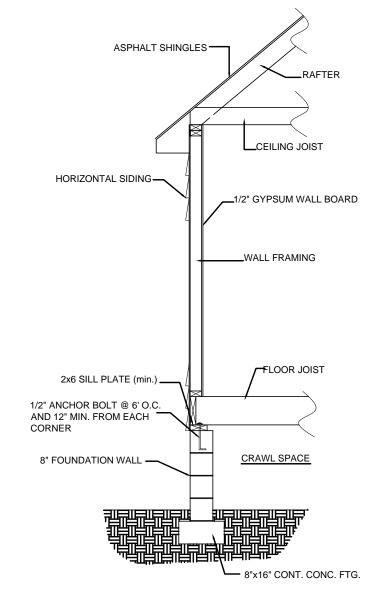
PERPIINDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS.

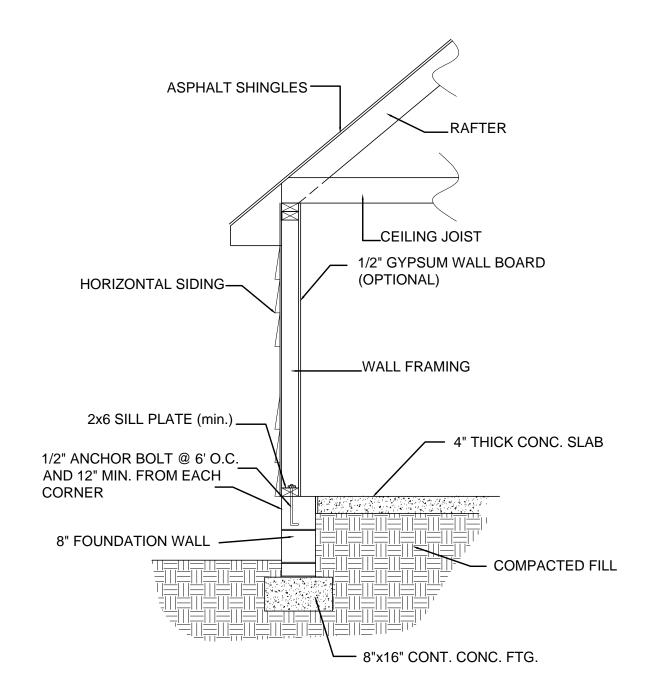
DECKING —

2x2 LEDGER— 2x6 (MIN) TRT. SILL

HEIGHT

2x TRT. JOIST (SEE PLAN)



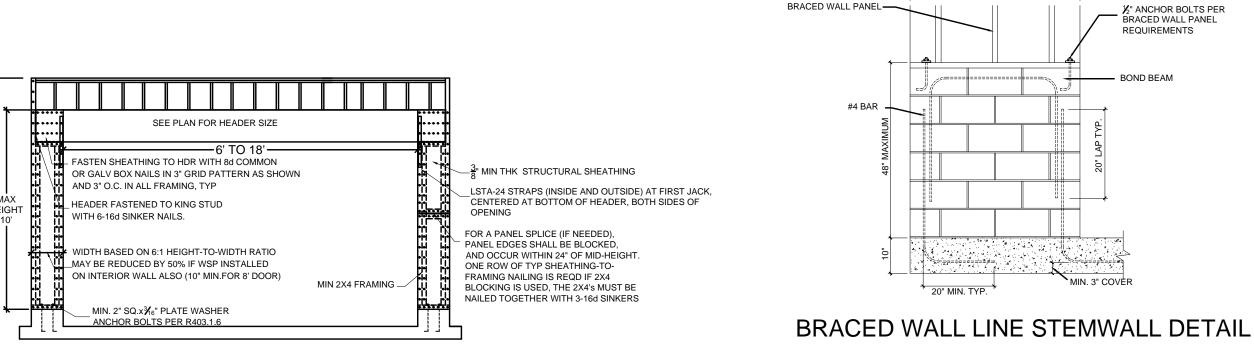


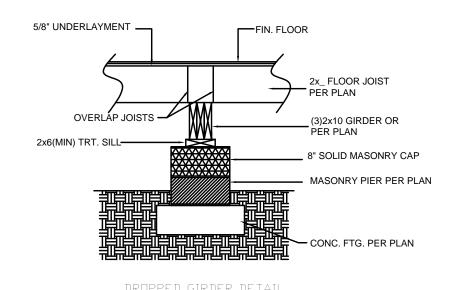
TYPICAL STEM WALL w/ SLAB DETAIL

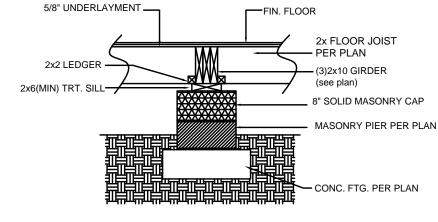
\_ ½" ANCHOR BOLTS PER BRACED WALL PANEL

REQUIREMENTS

BOND BEAM







MASONRY PIER PER PLAN

means, methods, techniques, sequences, procedures or safety precaution. Any deviations or discrepancies on plans are to be brought to the immediate attention of Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE liability.

\* Please review these documents carefull
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•	
	Project #:
	21-024
	Date:
	2/26/21
	Drawn/Design By:
	MEJ
	DWG. Checked By:
	MEJ
	Scale:
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No.	Date:	<u>Remarks</u>	
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**DETAILS**