

**HEATED SQUARE FOOTAGE**

First Floor 1500

**TOTAL HEATED 1500**

**UNHTD SQUARE FOOTAGE**

Garage 336

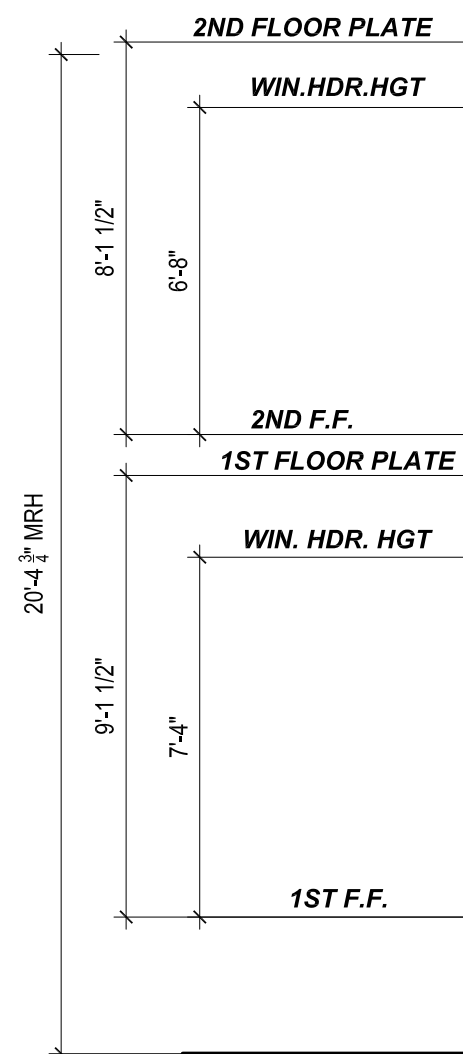
Front Porch 119

Patio 140

**TOTAL UNHEATED 595**

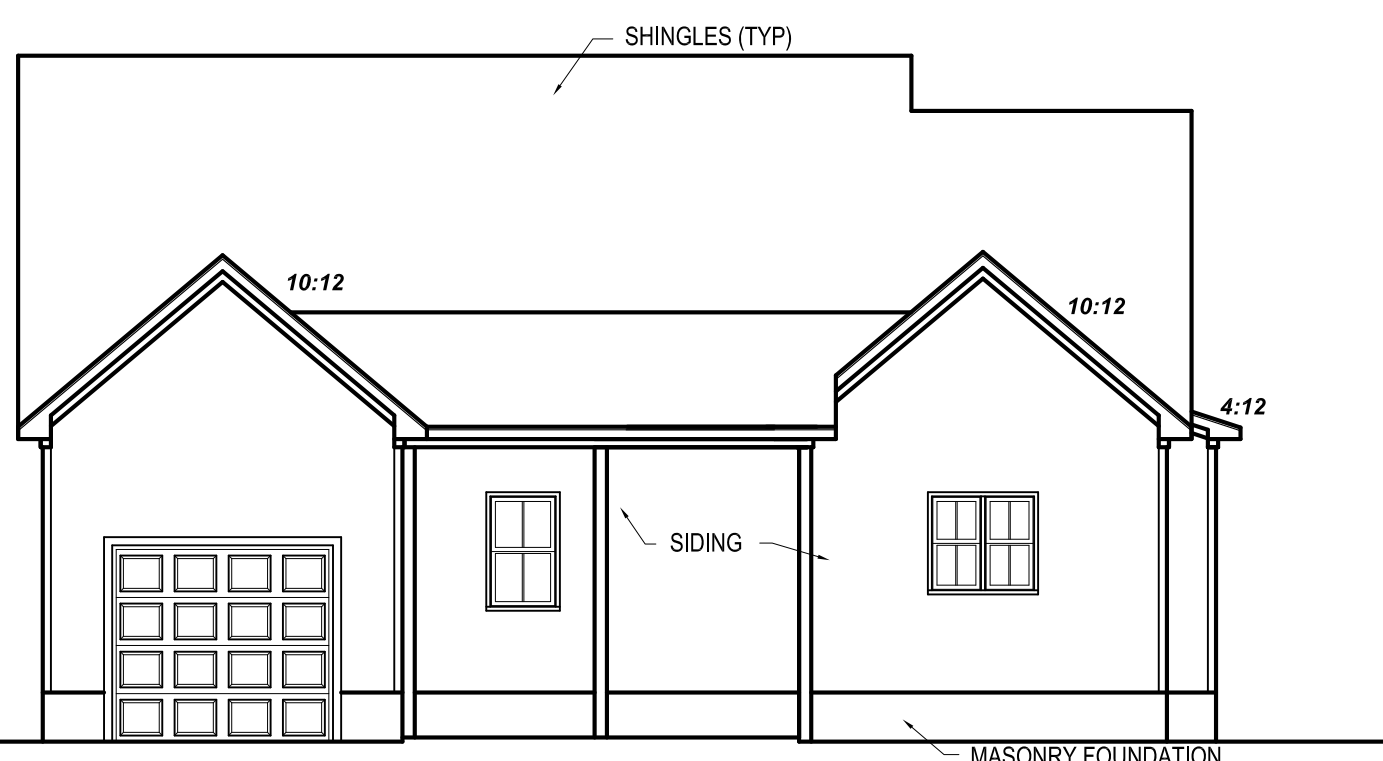
**GENERAL NOTES:**

1. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER 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 OTHERWISE.
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.



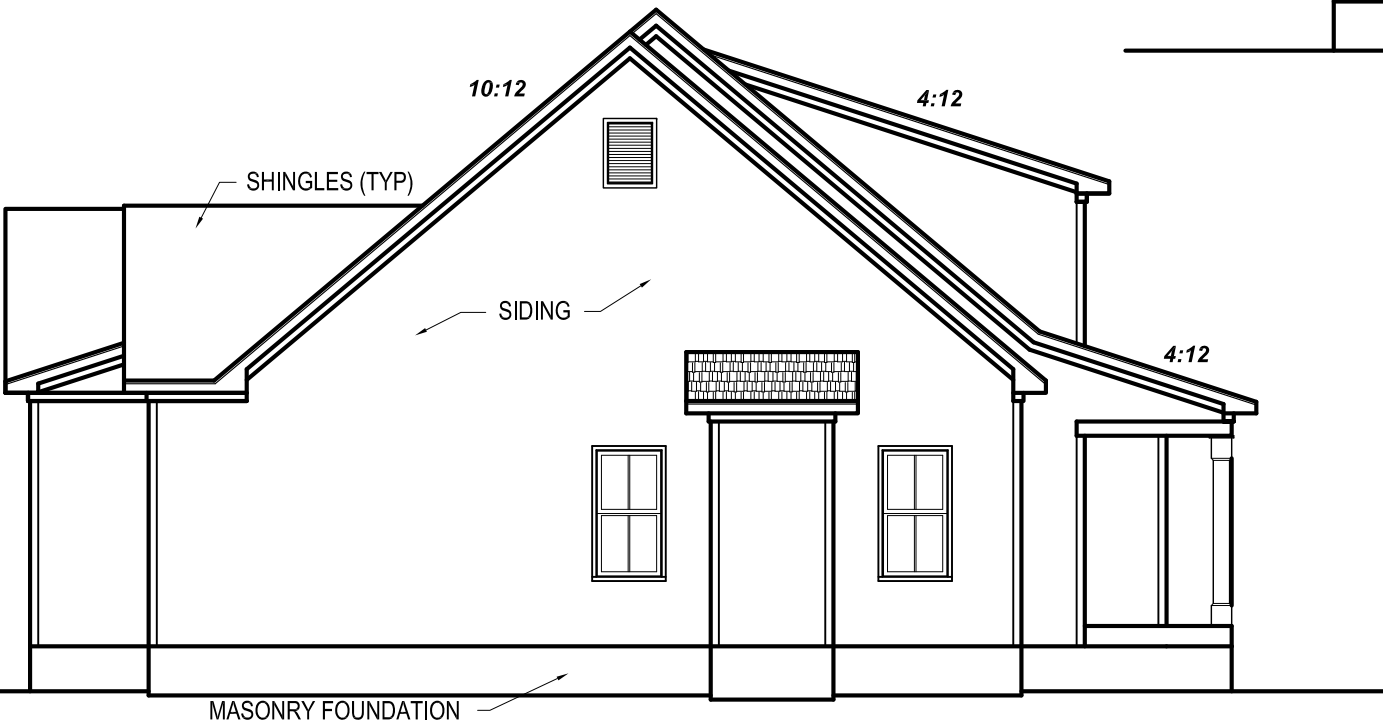
**FRONT ELEVATION**

SCALE 1/4"=1'-0"



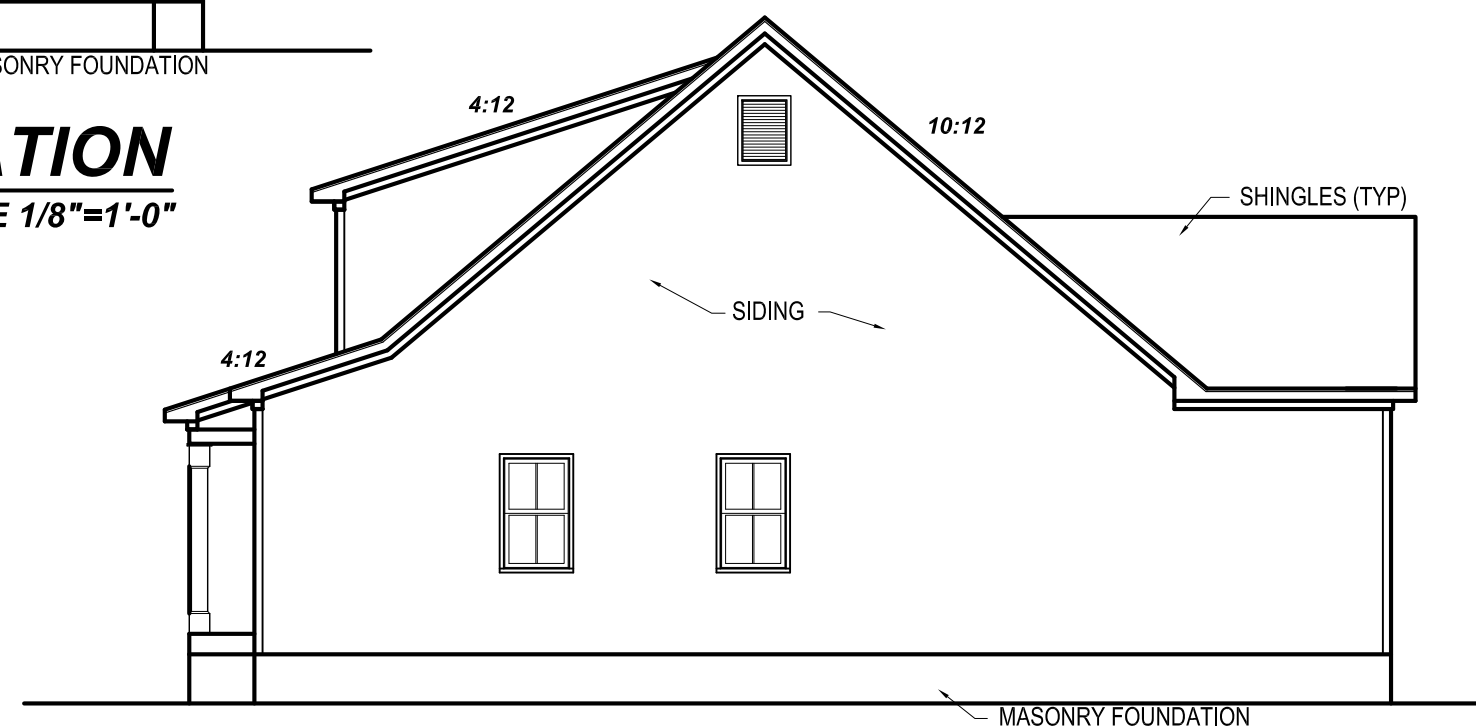
**REAR ELEVATION**

SCALE 1/8"=1'-0"



**LEFT ELEVATION**

SCALE 1/8"=1'-0"



**RIGHT ELEVATION**

SCALE 1/8"=1'-0"

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 \* 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.

NOV 12 2023  
 PROFESSIONAL ENGINEER  
 032702  
 12-28-23  
 MARK E. JONES

**Mark E. Jones, PE**  
 6425 Glen Dean Court  
 Raleigh, NC 27603  
 (919) 395-5618

**The Orchard House**

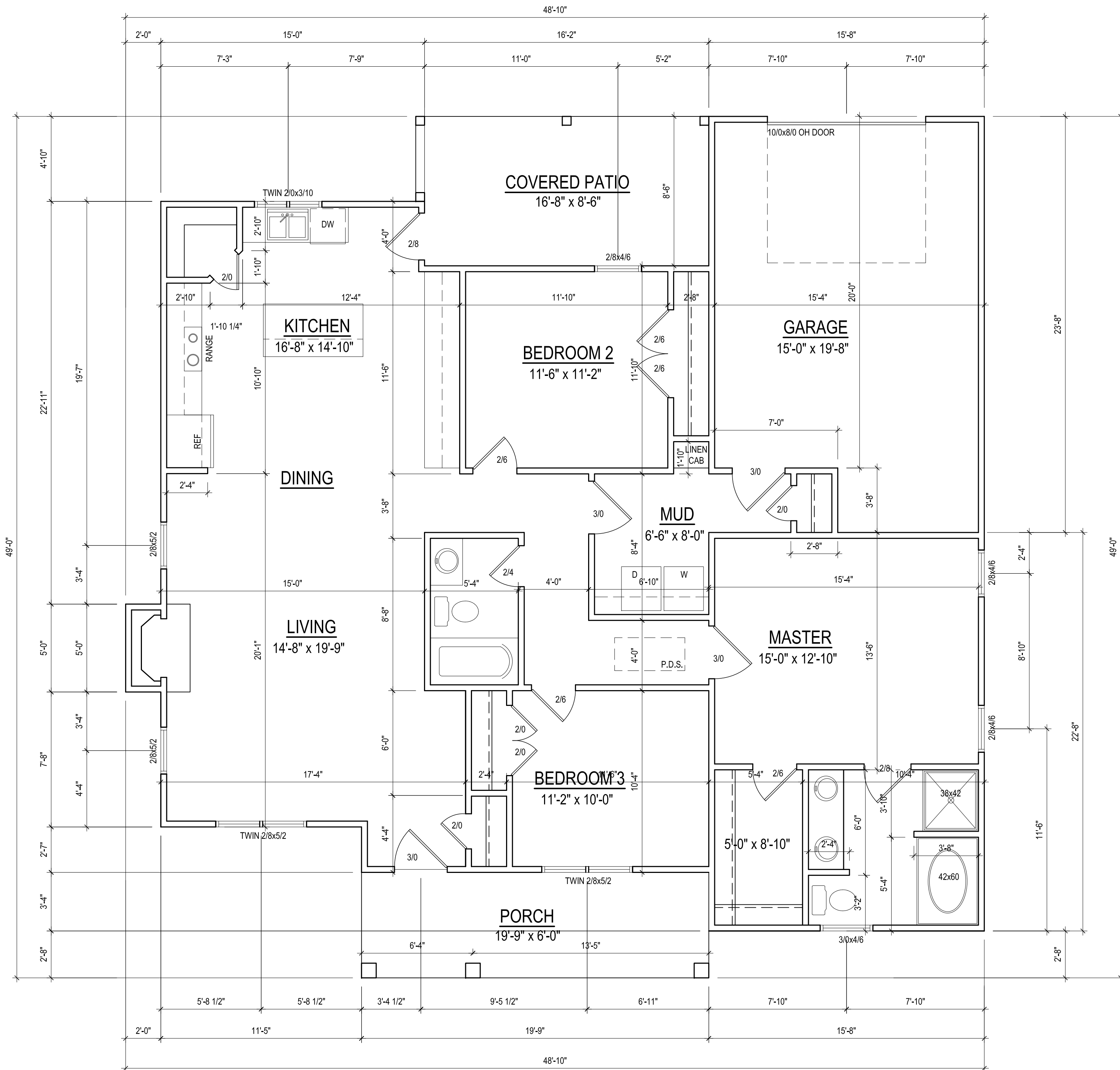
**Pleasant Builders of NC, LLC**  
 2201 Sheriff Johnson Rd.  
 Lillington, NC 27546

Project: 23-242  
 Date: 12-28-23  
 Drawn/Design By: MEJ  
 Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks
1		
2		
3		
4		

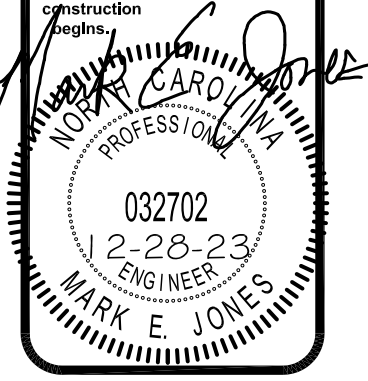
ELEVATIONS

Sheet Number  
**1**  
 of 6



**FLOOR PLAN**  
 CEILING HT. = 9'-0"  
 1470 HTD. SQ. FT.

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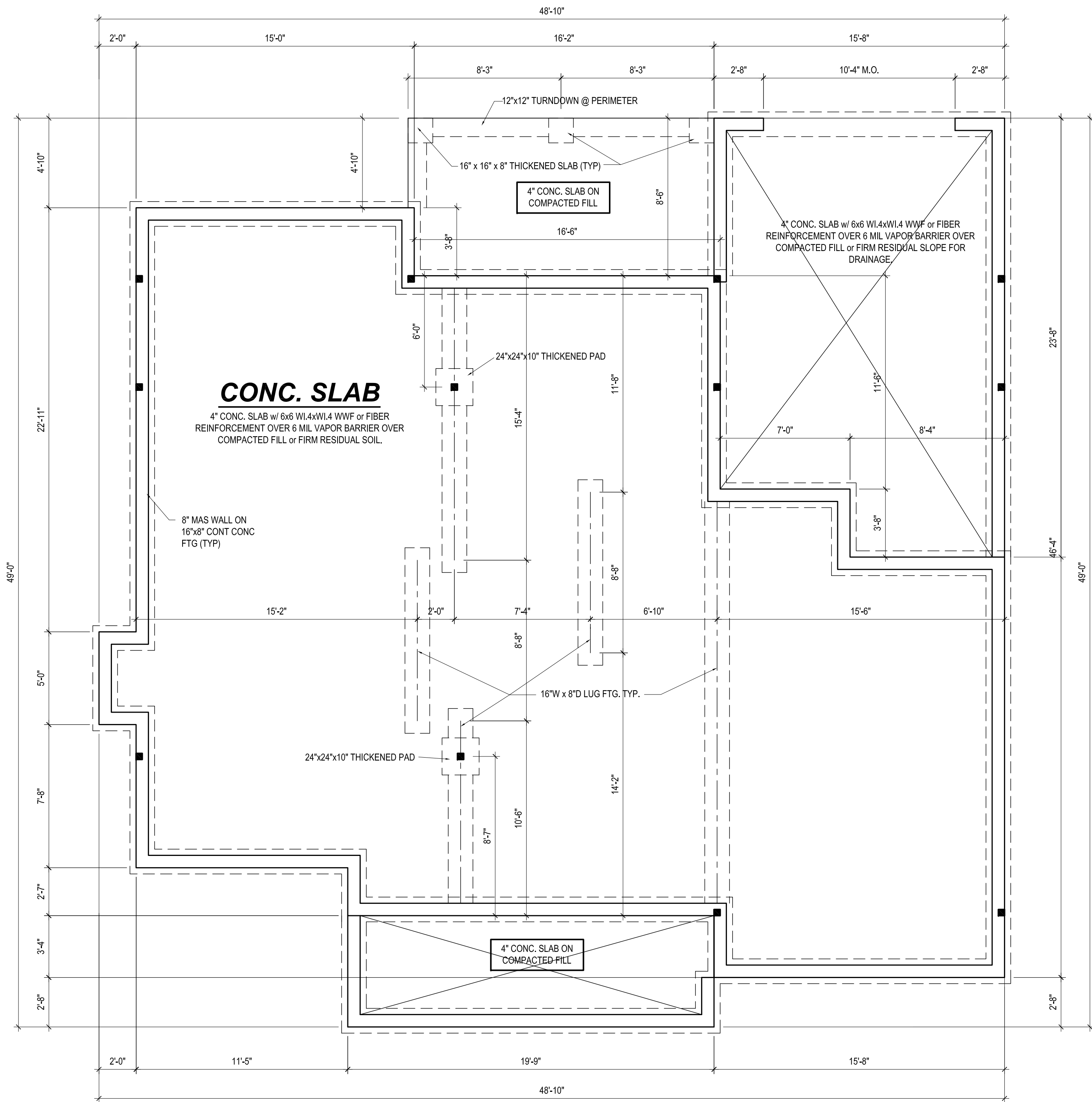
**Pleasant Builders of NC, LLC**  
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 Lillington, NC 27546

Project: 23-242  
 Date: 12-28-23  
 Drawn/Design By: MEJ  
 Scale: 1/4" = 1'-0"

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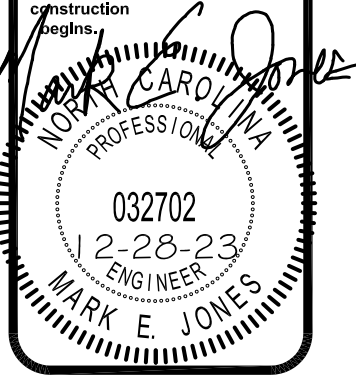
FLOOR

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**2**  
 of 6



**FOUNDATION PLAN**

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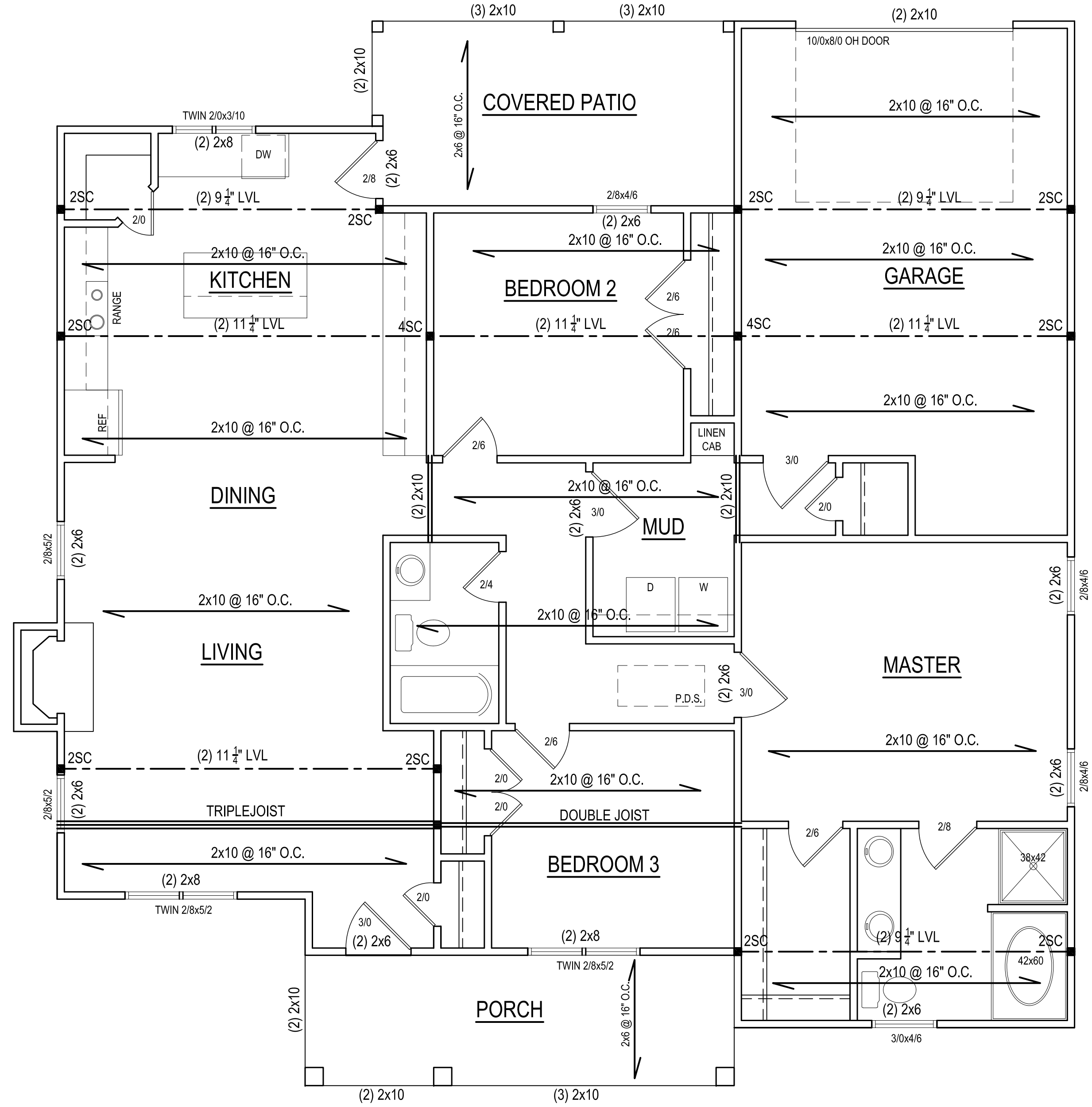
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FOUNDATION

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49'-0"



**FLOOR PLAN**  
CEILING HT. = 9'-0"

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STRUCTURAL

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**ATTIC VENTILATION CALCULATIONS**

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

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

1909 SQ. FT. OF ATTIC/300= 6.36  
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.

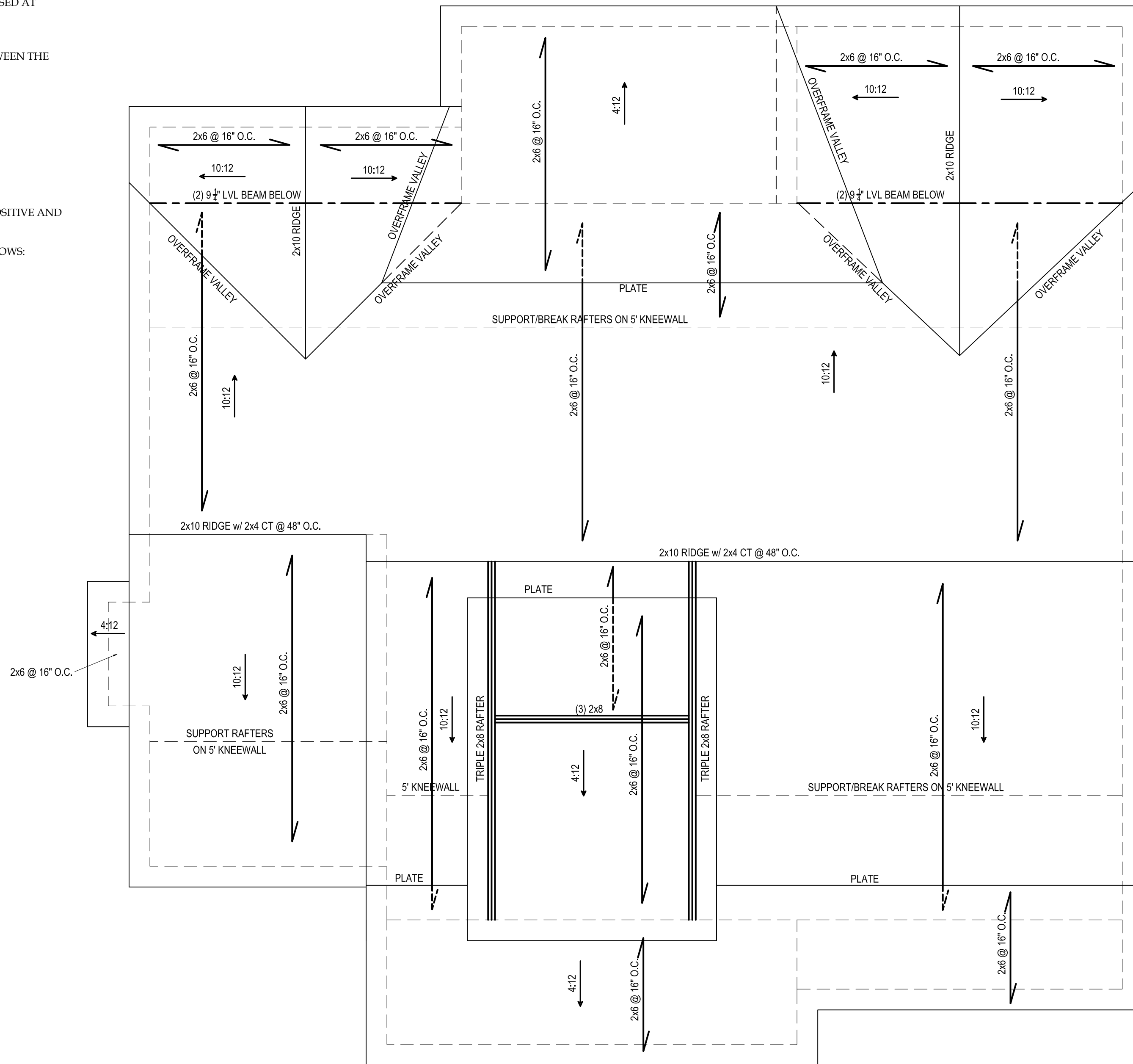
- ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:

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

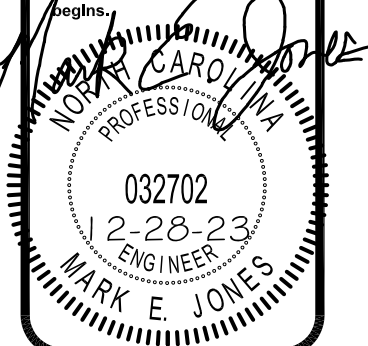
21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

**\*\* MEAN ROOF HEIGHT 30' OR LESS**



**ROOF PLAN**

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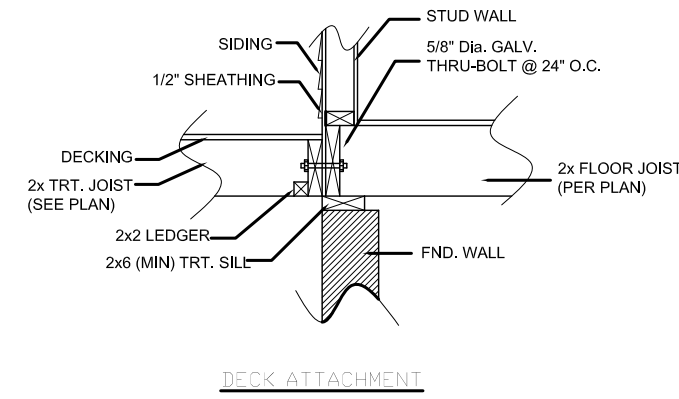
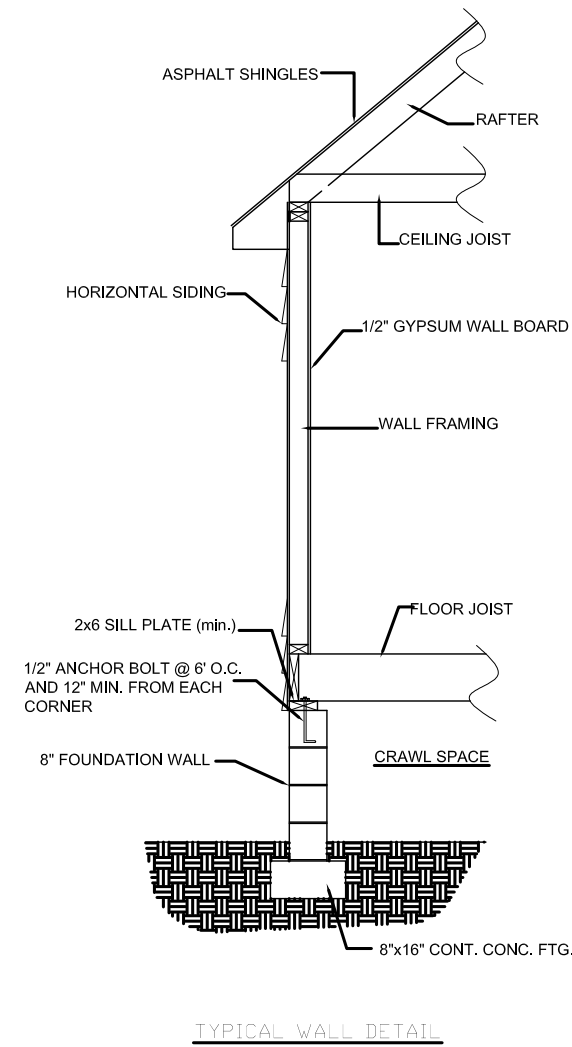
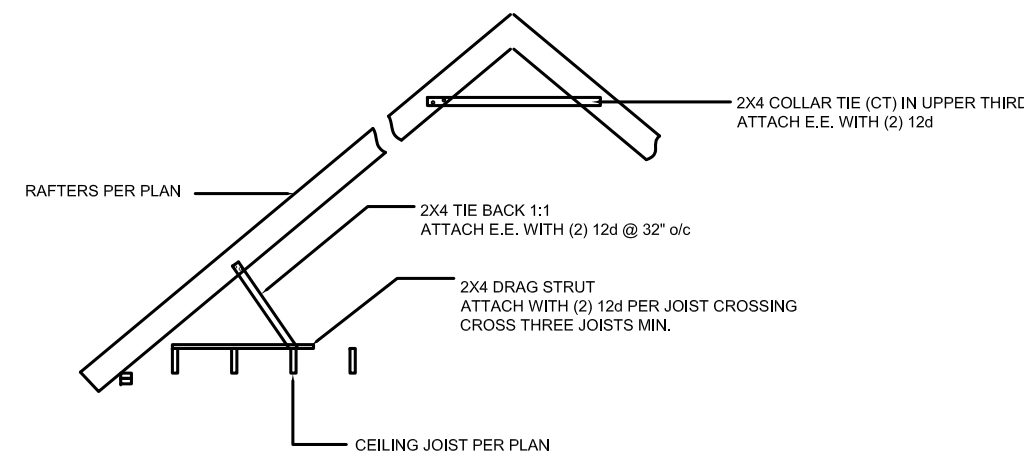
ROOF  
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of 6

**STRUCTURAL NOTES**

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF 'NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE', IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- 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 120 MPH (3-second gusts))		
- MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE (UNO).
- 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.
- ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSF) UNO. ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.
- ALL LOAD BEARING HEADERS SHALL BE (2)x10 (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.
- ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 7/16" WOOD STRUCTURAL PANELS FASTENED 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 REQD. ALL PANELS SHALL BE FASTENED AT 9" O.C. AT EDGES AND 6" O.C. AT INT. SUPPORTS.
- 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.
- 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.
- FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2018 NC BUILDING CODE.
- 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/SQ.FT FOR ROOF PITCHES OF 0/12 TO 2.25/12  
34.3 LBS/SQ.FT FOR ROOF PITCHES OF 2.25/12 TO 7/12  
21.0 LBS/SQ.FT FOR ROOF PITCHES OF 7/12 TO 12/12  
\*\* MEAN ROOF HEIGHT 30' OR LESS
- FOR ROOF SLOPES FROM 2:12 THROUGH 4:12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SO. FTG. ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SO. FTG. ERRORS ONCE CONSTRUCTION BEGINS.

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



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 A1014, LATERAL BRACING IS NOT REQUIRED.

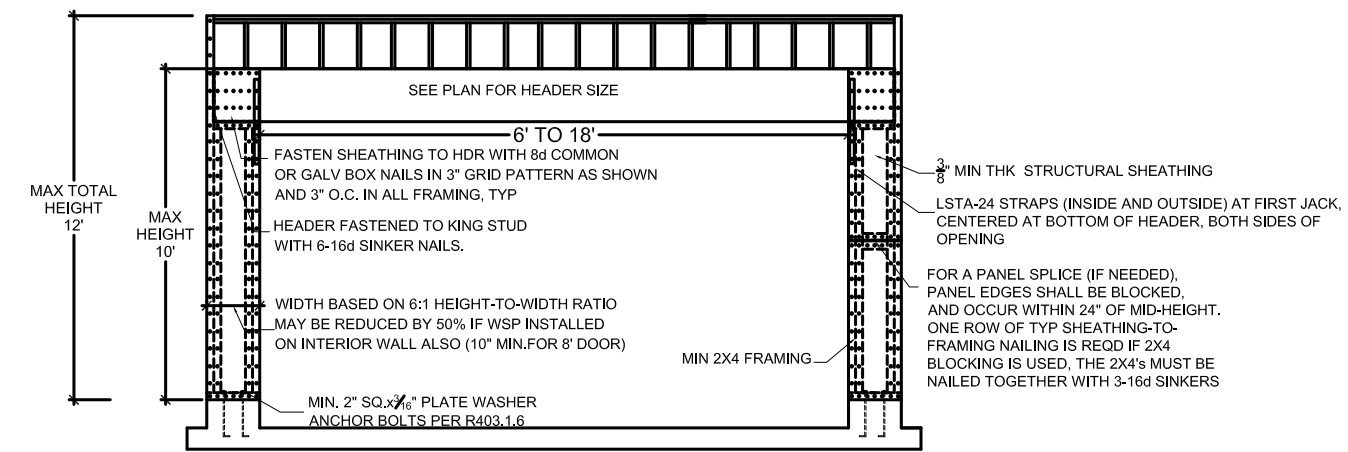
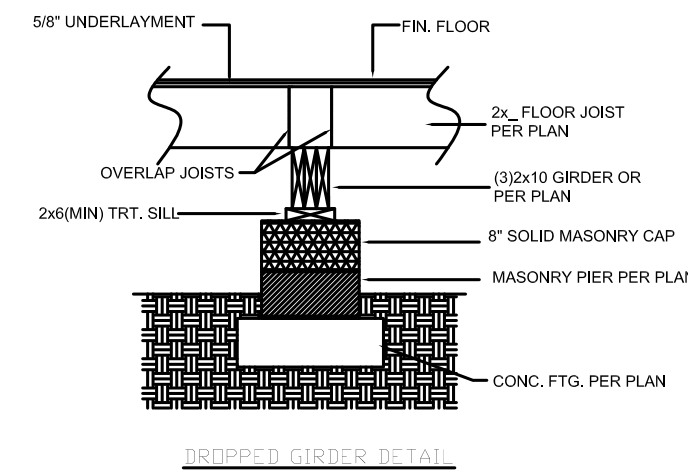
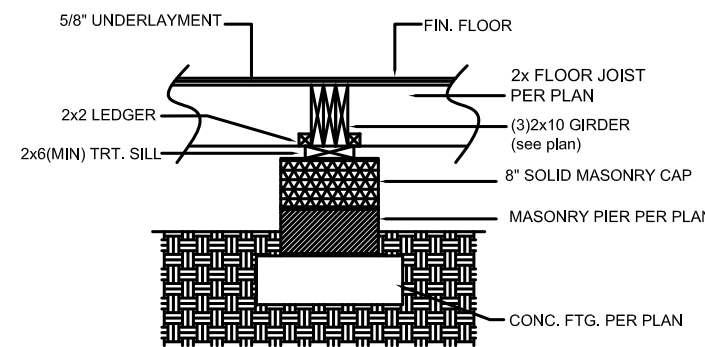
B. 4X4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/4 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE NAILED TO THE POST 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"

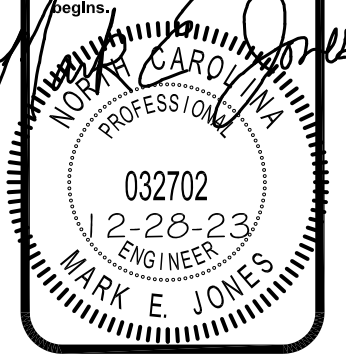
D. 2x6 DIAGONAL VERTICAL CROSS-BRACING MAY BE PROVIDED IN TWO PERPENDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS.

DECK DETAILS



**PORTAL WALL FRAMING**

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DETAILS

Sheet Number

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