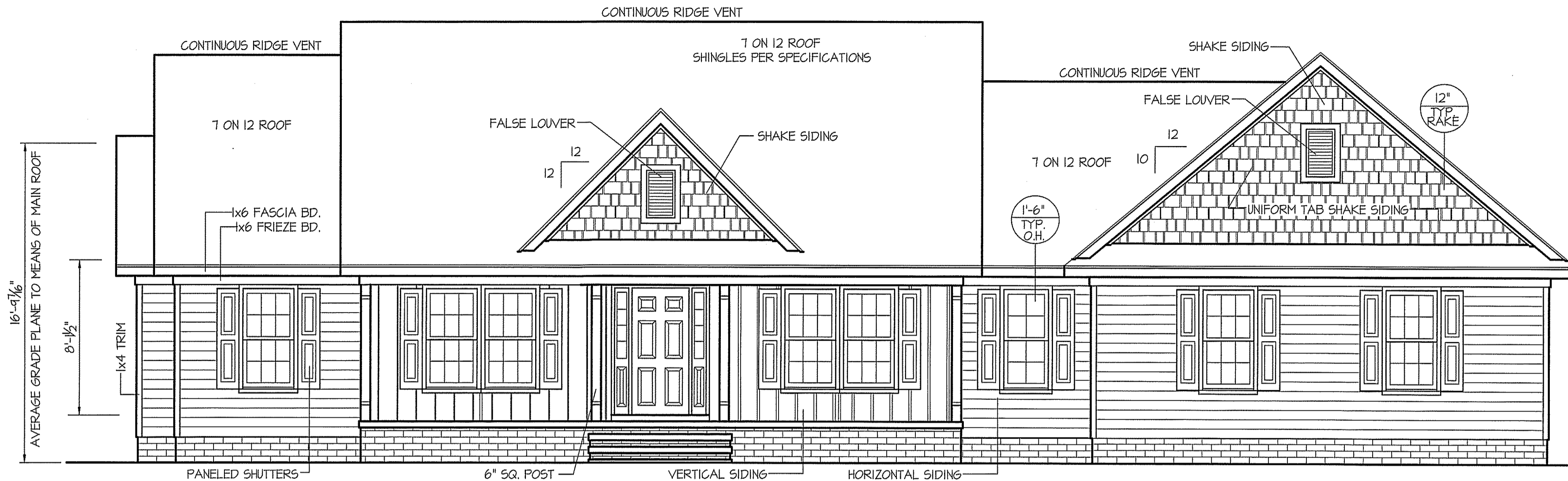


THIS PLAN IS DESIGNED TO MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION



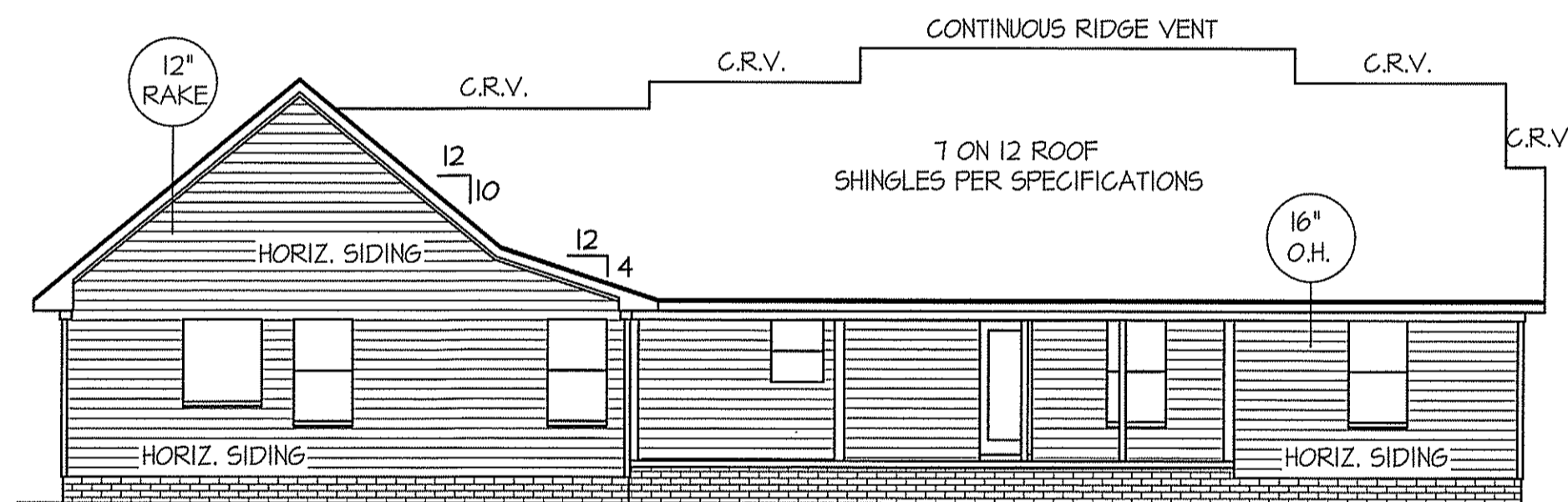
**FRONT ELEVATION**

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

WIND ZONES (PER TABLE R301.2(4))

COUNTY	MPH
HARNETT	120
JOHNSTON	120
SAMPSON	130
WAKE	115

ALL EXTERIOR WALLS TO BE SHEATHED WITH CS-WSP (7/16" OSB) IN ACCORDANCE WITH SECTION R602.10.3 UNLESS OTHERWISE NOTED.



**REAR ELEVATION**

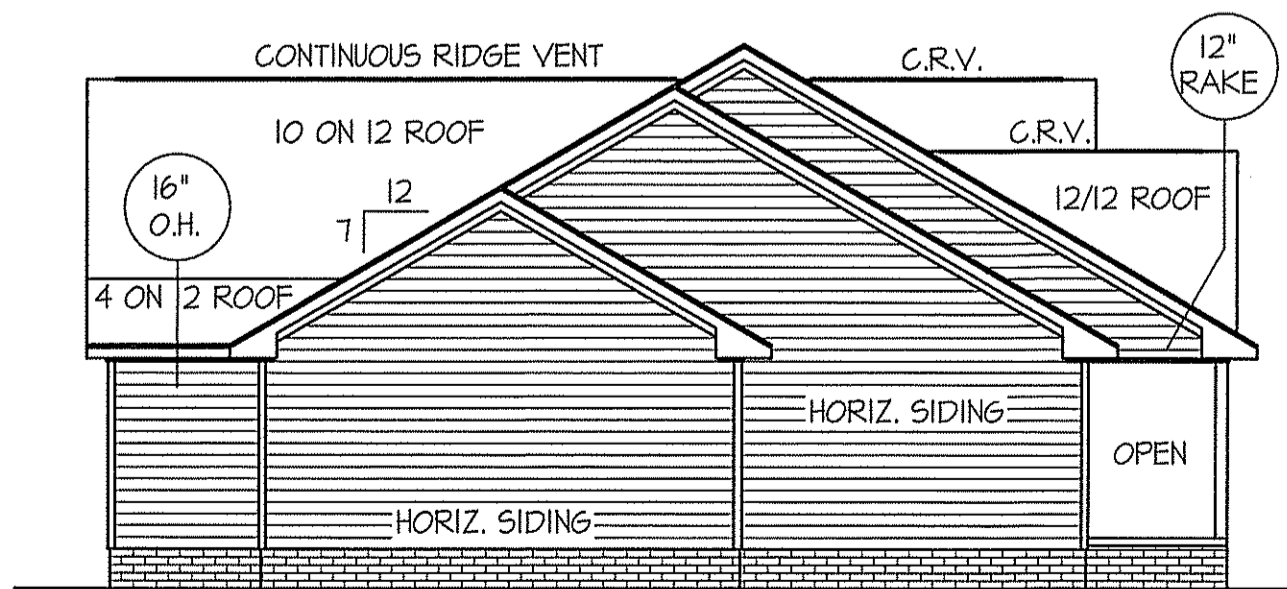
SCALE: 1/8" = 1'-0"

INSULATION and FENESTRATION REQUIREMENTS

CLIMATE ZONE	ZONE-3	ZONE-4
FENESTRATION U-FACTOR	0.35	0.35
GLAZED FENESTRATION SHGC	0.30	0.30
MINIMUM CEILING R-VALUE	R-38	R-38
MINIMUM WALL R-VALUE	R-15, 13+2.5	R-15, 13+2.5
MINIMUM FLOOR R-VALUE	R-19	R-19
MIN. CRAWL SPACE WALL R-VALUE	5/13	10/15
MIN. SLAB R-VALUE	0	R-10

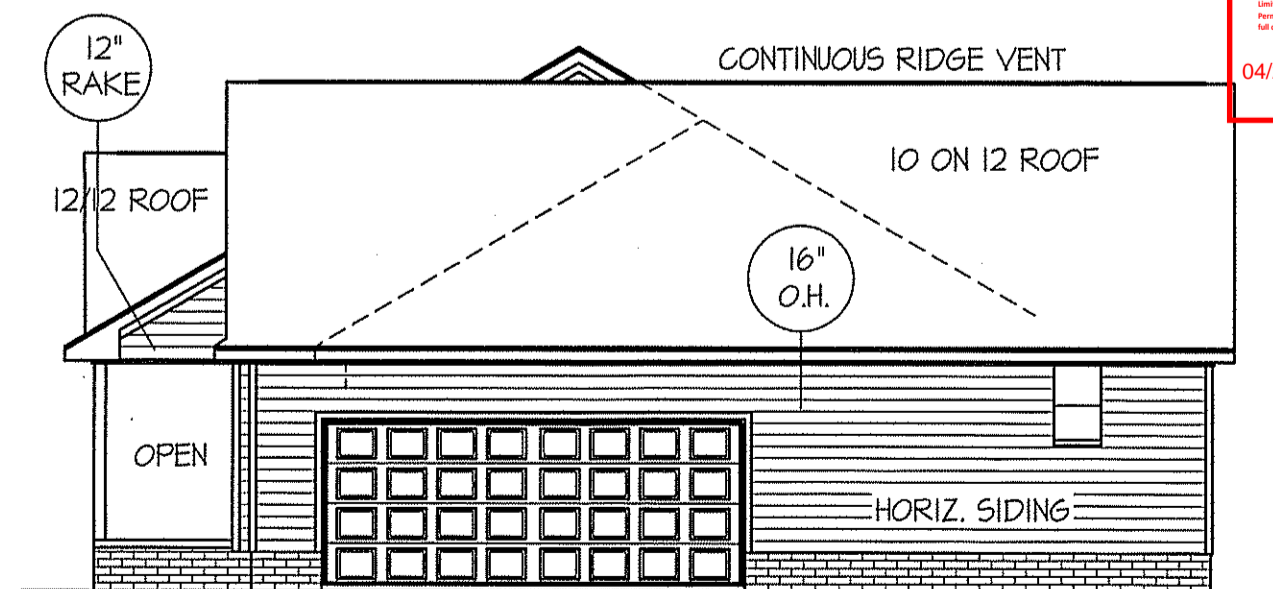
PROVIDE STEPS AS REQUIRED  
GRADE MAY VARY - BUILDER TO VERIFY

ROOF VENTILATION REQ'MTS.  
2902 ATTIC SQ. FT. / 300 = 9,68  
PROVIDED ON PLAN  
109 L.F. RIDGE VENT = 20.43  
144 L.F. SOFFIT VENT = 9.0  
TOTAL = 29.43 S.F. FREE NET AREA



**LEFT ELEVATION**

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



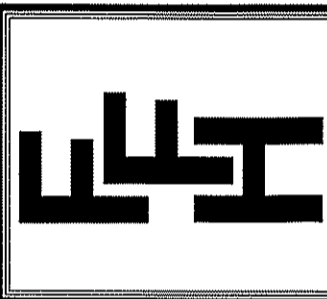
**RIGHT ELEVATION**

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

NOTICE TO CONTRACTOR:  
All construction shall comply with current NC Building Codes and is subject to field inspection and verification.  
APPROVED  
04/20/2023  
Harnett COUNTY NORTH CAROLINA

DATE:  
JANUARY 19, 2023

**FREEDOM FAMILY HOMES**  
P.O. BOX 608  
DUNN, N.C. - 28335  
O: (910) 892-1231 FAX: (910) 892-5680  
© 2023, FREEDOM FAMILY HOMES



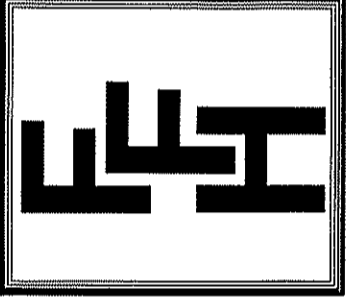
EXCLUSIVE PLAN FOR  
FREEDOM FAMILY HOMES  
**Campbell-Thomas**

SHEET NO.  
**1**



DATE:  
JANUARY 19, 2023

**FREEDOM FAMILY HOMES**  
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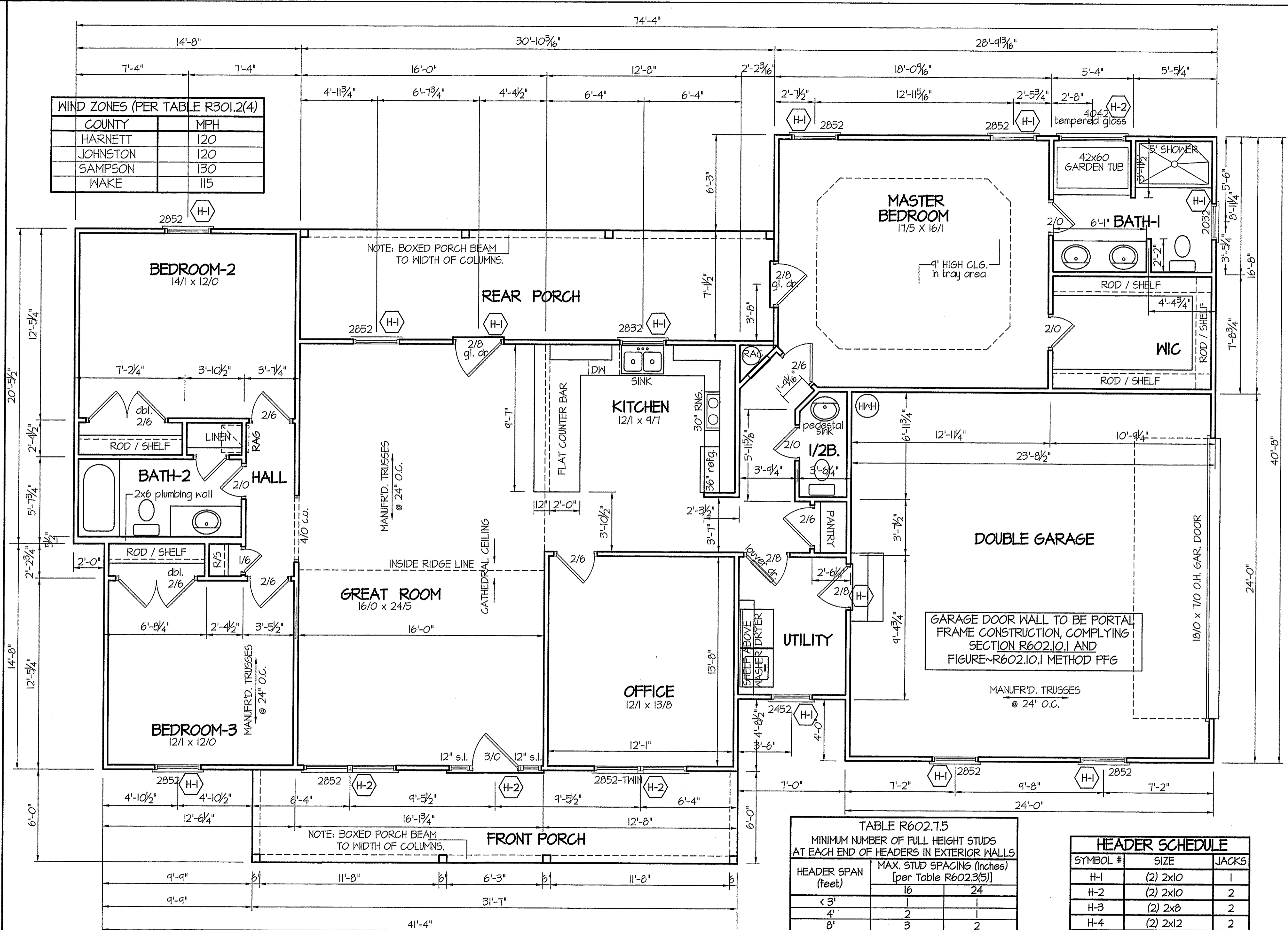


EXCLUSIVE PLAN FOR  
FREEDOM FAMILY HOMES  
**Campbell-Thomas**

SHEET NO.  
**2**

WIND ZONES (PER TABLE R301.2(4))

COUNTY	MPH
HARNETT	120
JOHNSTON	120
SAMPSON	130
WAKE	115



COMPUTER FILE: Campbell-Thomas ~ JANUARY 2023

**SECTION R407-COLUMNS**  
R407.3 STRUCTURAL REQUIREMENTS.  
THE COLUMNS SHALL BE RESTRAINED TO PREVENT LATERAL DISPLACEMENT AT THE TOP AND BOTTOM END. WOOD COLUMNS SHALL BE NOT LESS IN NOMINAL SIZE THAN 4 INCHES BY 4 INCHES (102 mm BY 102 mm). STEEL COLUMNS SHALL BE NOT LESS THAN 3-INCH-DIAMETER (76 mm) SCHEDULE 40 PIPE MANUFACTURED IN ACCORDANCE WITH ASTM A53 GRADE B OR APPROVED EQUIVALENT.

ALL INTERIOR AND EXTERIOR LOAD BEARING HEADERS WILL BE 2X10 #2 SPF UNLESS OTHERWISE NOTED.

TYP. 8' CEILINGS  
**FLOOR PLAN**  
SCALE: 1/4" = 1'-0"  
1922 S.F. (HEATED-FRAME)  
190 S.F. (FRONT PORCH)  
220 S.F. (REAR PORCH)  
570 S.F. (DBL. GARAGE)

**TABLE R602.7.5**  
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

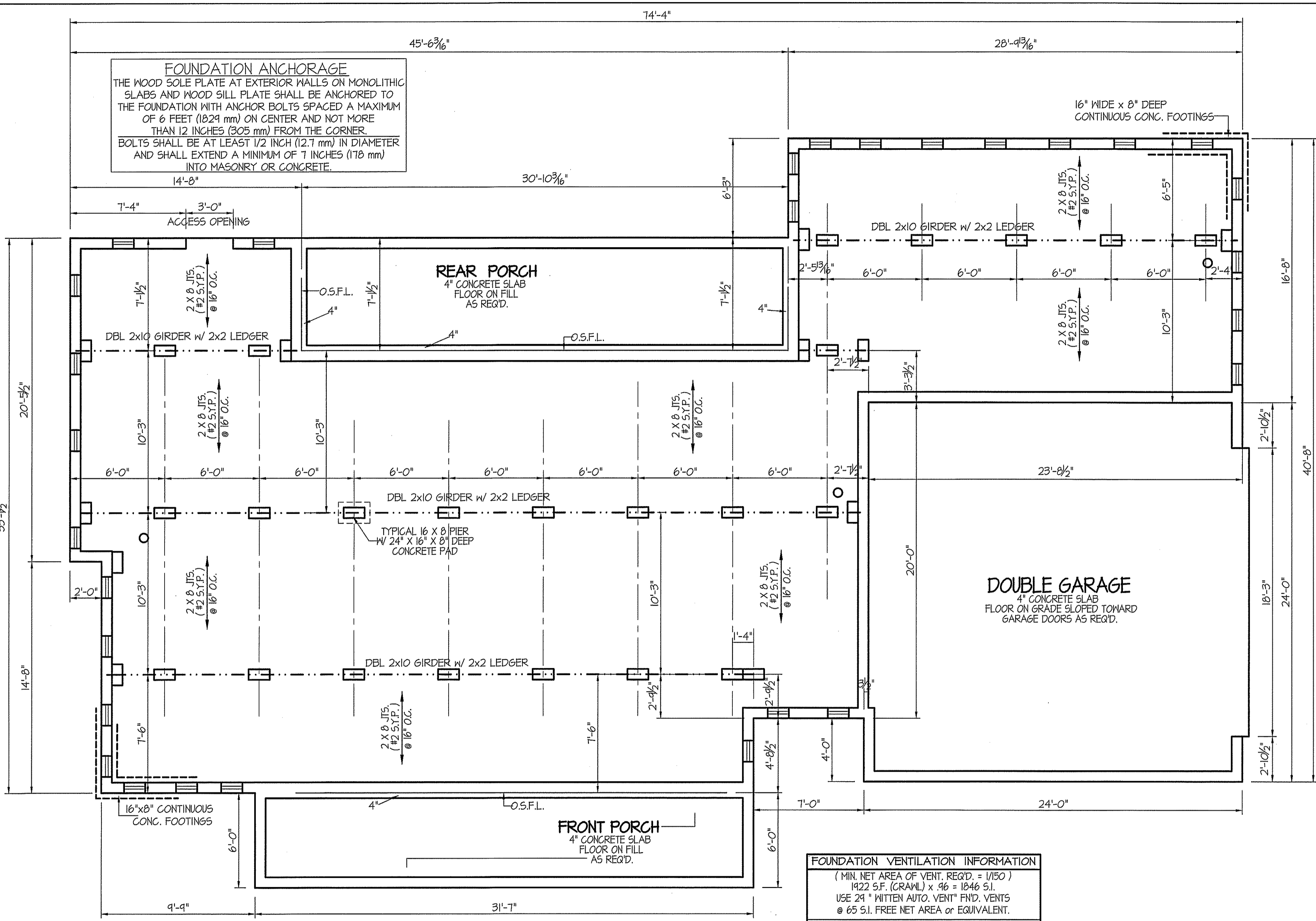
HEADER SPAN (feet)	MAX. STUD SPACING (Inches) [per Table R602.3(5)]	
	16	24
< 3'	1	1
4'	2	1
8'	3	2
12'	5	3
16'	6	4

GIRDER AND HEADER SIZES AND JACK STUD REQUIREMENTS ON EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE TO COINCIDE WITH TABLE EXT.-R602.7 (1) AND INT.-R602.7 (2).

**HEADER SCHEDULE**

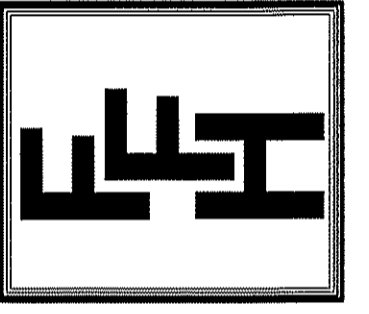
SYMBOL #	SIZE	JACKS
H-1	(2) 2x10	1
H-2	(2) 2x10	2
H-3	(2) 2x8	2
H-4	(2) 2x12	2
H-5	(2) 1.75 x 9.25 LVL	3

ALL EXTERIOR WALLS TO BE SHEATHED WITH CS-WSP (7/16" OSB) IN ACCORDANCE WITH SECTION R602.10.3 UNLESS OTHERWISE NOTED.



DATE:  
 JANUARY 19, 2023

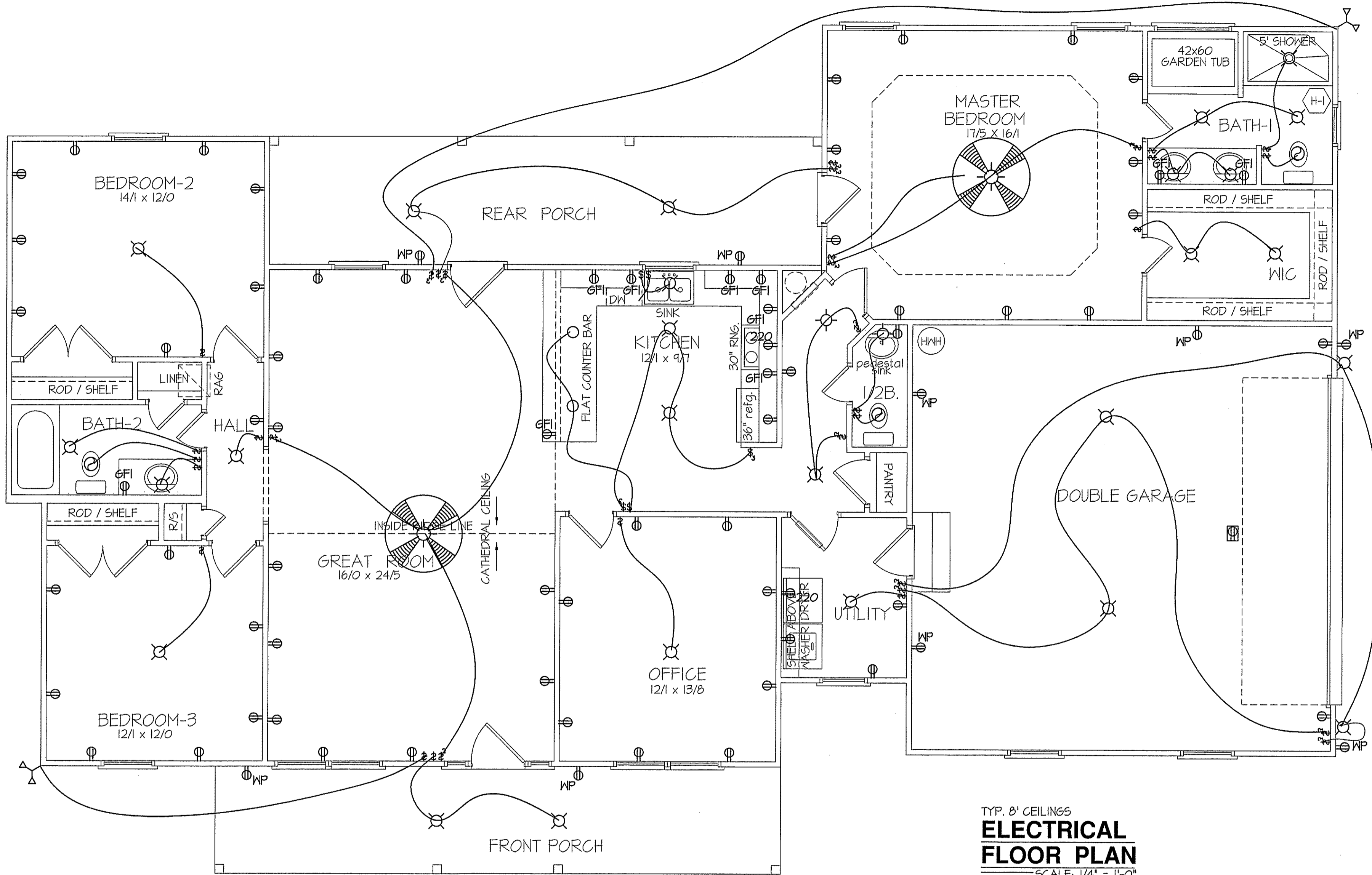
**FREEDOM FAMILY HOMES**  
 P.O. BOX 608  
 DUNN, N.C. - 28335  
 O: (910) 892-1231 FAX: (910) 892-5680  
 © 2023, FREEDOM FAMILY HOMES



**EXCLUSIVE PLAN FOR  
 FREEDOM FAMILY HOMES**  
**Campbell-Thomas**

PLAN:  
 SHEET NO.  
**3**

BOX SILL  
**FOUNDATION PLAN**  
 SCALE: 1/4" = 1'-0"



TYP. 8' CEILINGS  
**ELECTRICAL FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"

TOTAL HEAT GAIN = 30,944 B.T.U.H.  
 TOTAL HEAT LOSS = 48,915 B.T.U.H.

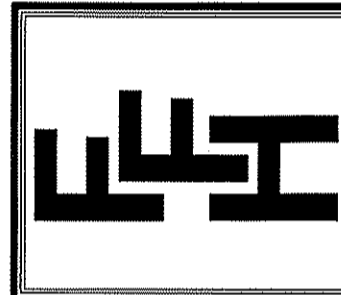
**NOTE:**  
 HVAC CONTRACTOR TO PROVIDE OWNERS AND BUILDERS UNIT INFORMATION, BTUH REQUIREMENTS, AND DUCT LAYOUTS BEFORE CONSTRUCTION BEGINS.

1922 S.F. (HEATED-FRAME)  
 190 S.F. (FRONT PORCH)  
 220 S.F. (REAR PORCH)  
 570 S.F. (DBL. GARAGE)

ELECTRICAL LEGEND		
<small>PROVIDE BURGLAR/SMOKE AND FIRE DETECTORS AS PER MANUFACTURER'S SPECIFICATIONS.                      PROVIDE CENTRAL VACUUM SYSTEM AS PER MANUFACTURER'S SPECIFICATIONS.                      ALL FANS ARE TO BE CONTROLLED BY VAR/SPEED AND DIRECTIONAL SWITCHES</small>		
⊕ SURF. MOUNTED LIGHT	⊕ TYPICAL WALL RECP.	⊕ TYPICAL SWITCH
○ RECESSED LIGHT	⊕ TOP 1/2 HOT W/SWITCH	⊕ 3-WAY SWITCH
⊕ EYEBALL LIGHT	⊕ CEILING RECEPTACLE	⊕ 4-WAY SWITCH
⊕ FAN/LIGHT COMB.	⊕ FLOOR RECEPTACLE	⊕ DIMMER SWITCH
— FLUORESCENT TUBE	⊕ WATERPROOF RECP.	⊕ ELEC. PANEL BOX
⊕ FLUOR. LIGHT FIXTURE	⊕ GROUND FAULT	⊕ T.V. CABLE RECP.
⊕ EXHAUST FAN	⊕ DISPOSAL UNIT	⊕ TELEPHONE JACK
⊕ CL'G. FAN	⊕ 220 VOLT RECEPTACLE	⊕ COMPUTER JACK
⊕ FLOOD LIGHT		

DATE:  
 JANUARY 19, 2023

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EXCLUSIVE PLAN FOR  
 FREEDOM FAMILY HOMES  
**Campbell-Thomas**

PLAN:

SHEET NO.

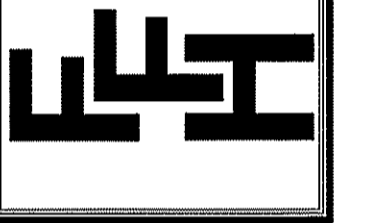
**4**



DATE:

JANUARY 19, 2023

**FREEDOM FAMILY HOMES**  
 P.O. BOX 608  
 DUNN, N.C. - 28335  
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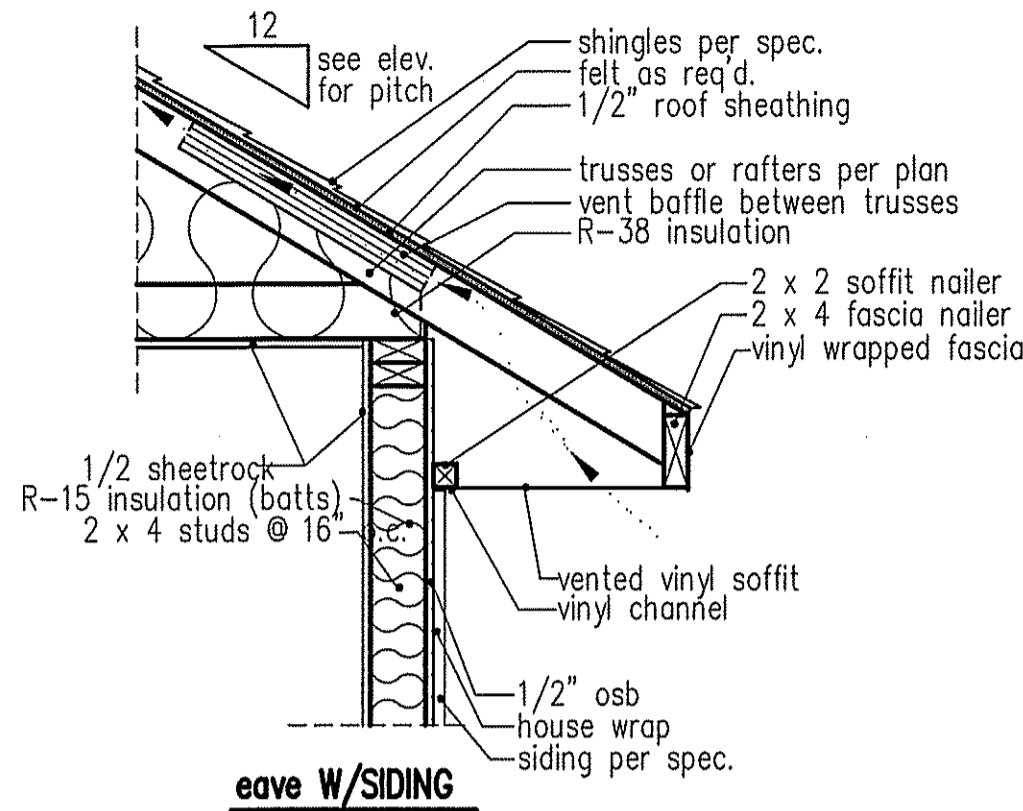
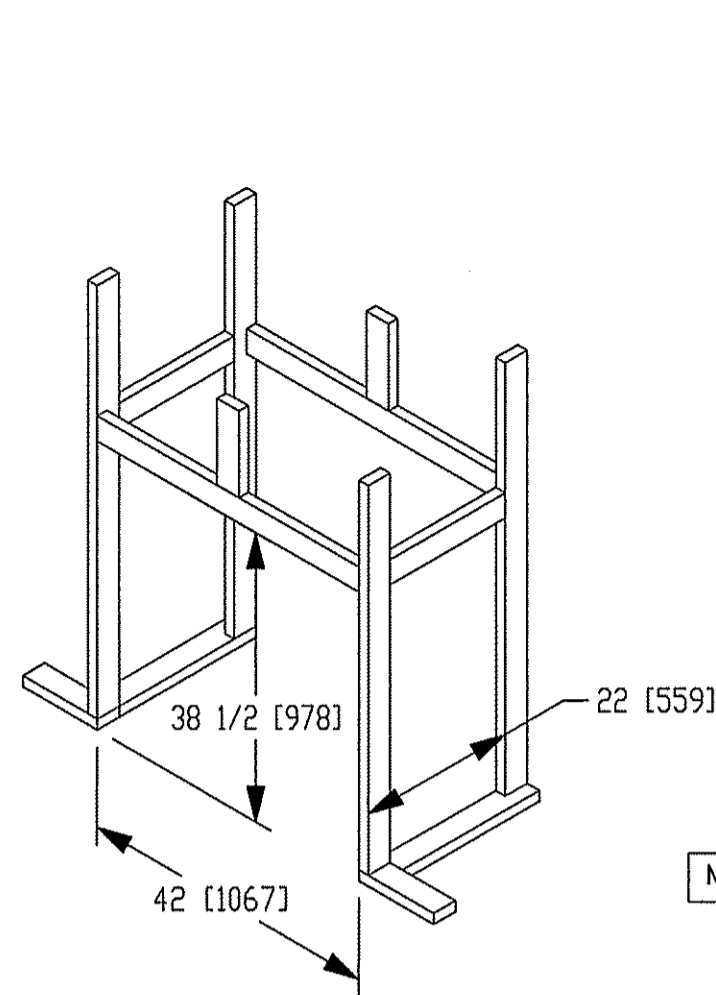
**EXCLUSIVE PLAN FOR  
 FREEDOM FAMILY HOMES**

**Campbell-Thomas**

PLAN:

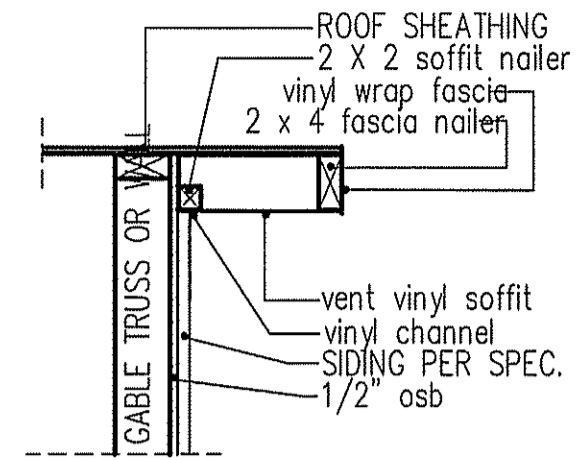
SHEET NO.

**5**



NOTE: OVERHANG DISTANCE NOTED ON ELEVATION SHEET IS ALWAYS MEASURED FROM FRAME LINE

**standard eave details**



**RAKE w/SIDING**

NOTE: OVERHANG DISTANCE NOTED ON ELEVATION SHEET IS ALWAYS MEASURED FROM FRAME LINE

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

HEADER SPAN (feet)	MAX. STUD SPACING (Inches) [per Table R602.3(5)]	
	16	24
< 3'	1	1
4'	2	1
8'	3	2
12'	5	3
16'	6	4

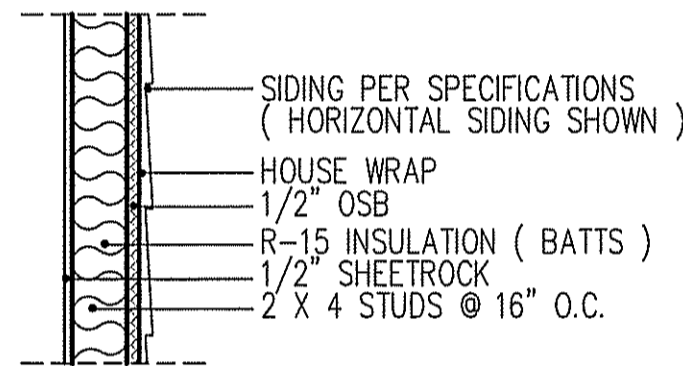
GIRDER AND HEADER SIZES AND JACK STUD REQUIREMENTS ON EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE TO COINCIDE WITH TABLE EXT.~R602.7 (1) AND INT.~R602.7 (2).

DIMENSIONS IN [ ] ARE MM

SPECIFICATIONS

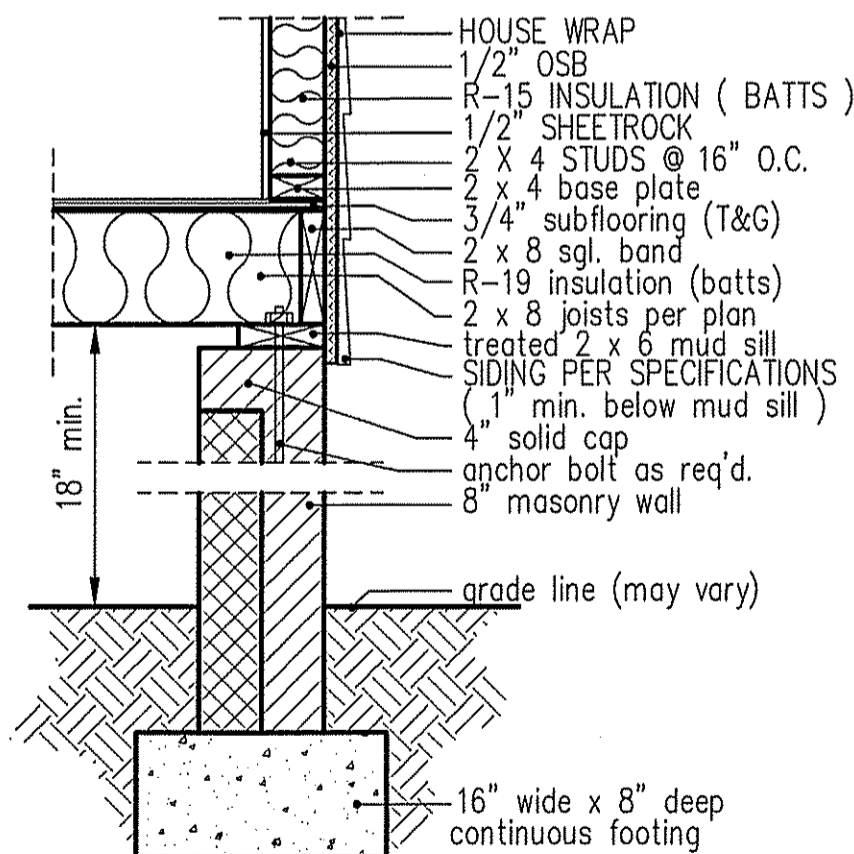
Model 6000-TR	Height		Front Width		Back Width		Depth		Glass Size	BTU Input
	Actual	Framing	Actual	Framing	Actual	Framing	Actual	Framing		
Inches	38	38-1/2	41	42	28-1/2	42	21-1/2	22		

Reference dimensions only. We recommend measuring individual units at installation.

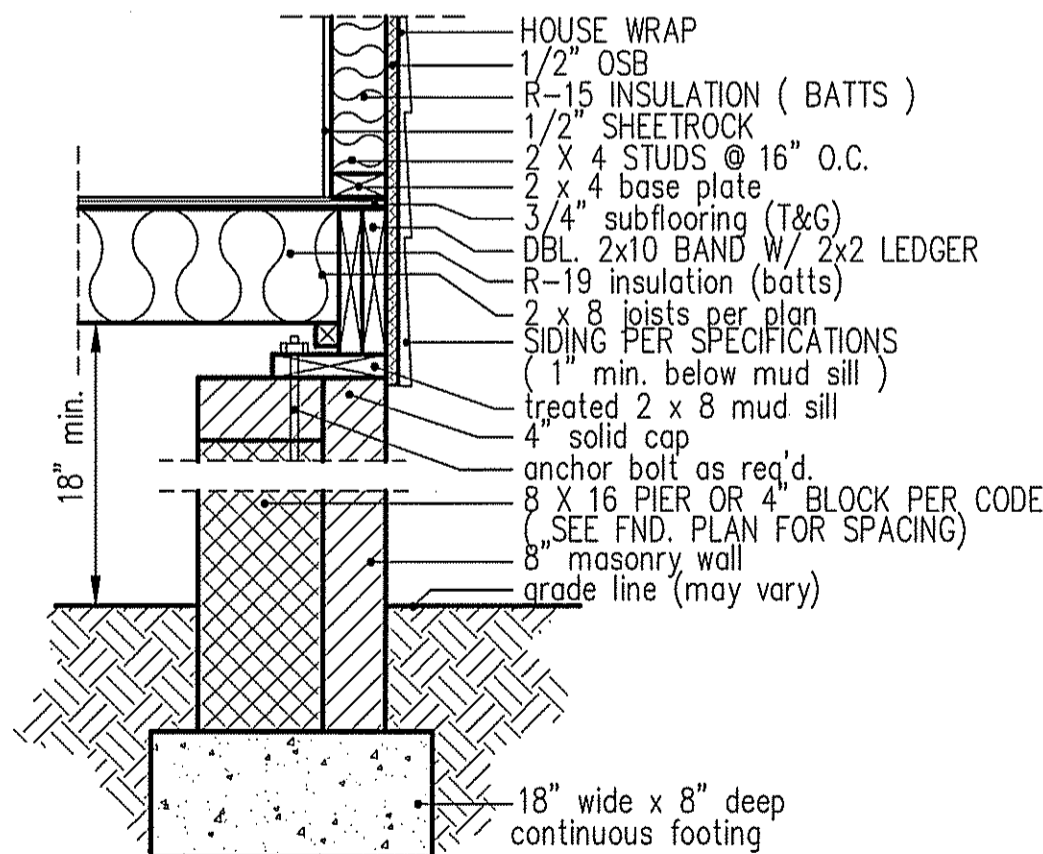


**WALL W/siding**

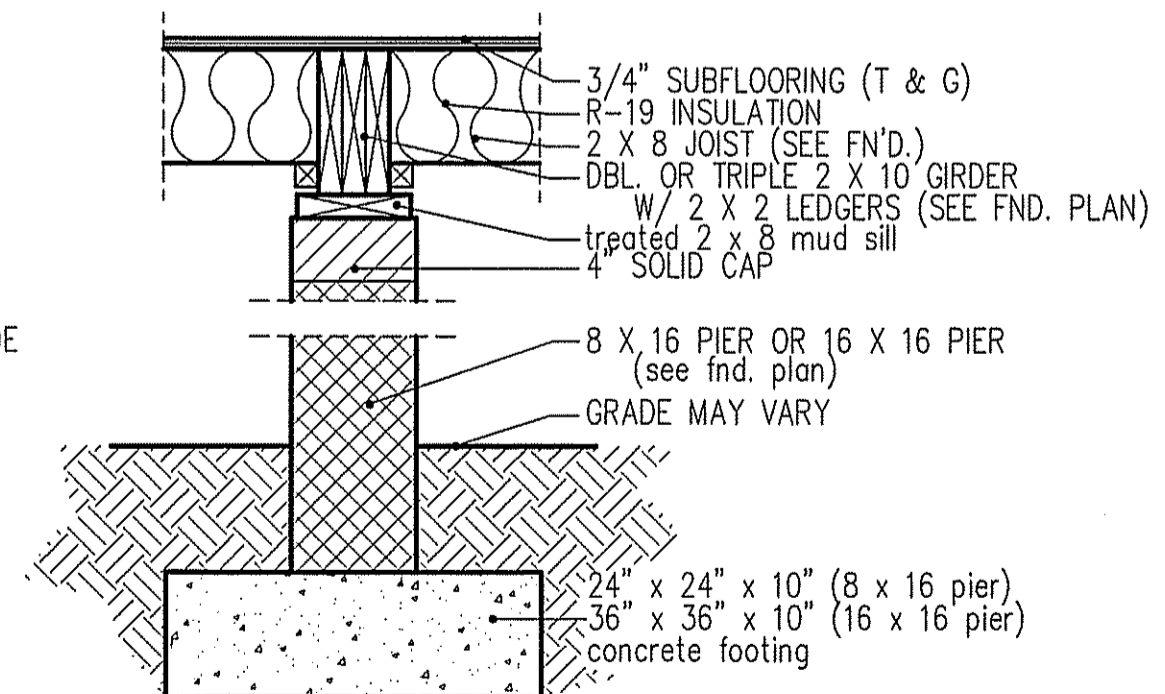
**intermediate wall details**



**8" BOX SILL  
 FOUNDATION WALL**



**PIER and CURTAIN  
 FOUNDATION WALL**



**PIER and GIRDER  
 DETAIL**

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables ( derived from the prescriptive Code requirements ) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Lenny Norris  
**Lenny Norris**

**LOAD CHART FOR JACK STUDS**

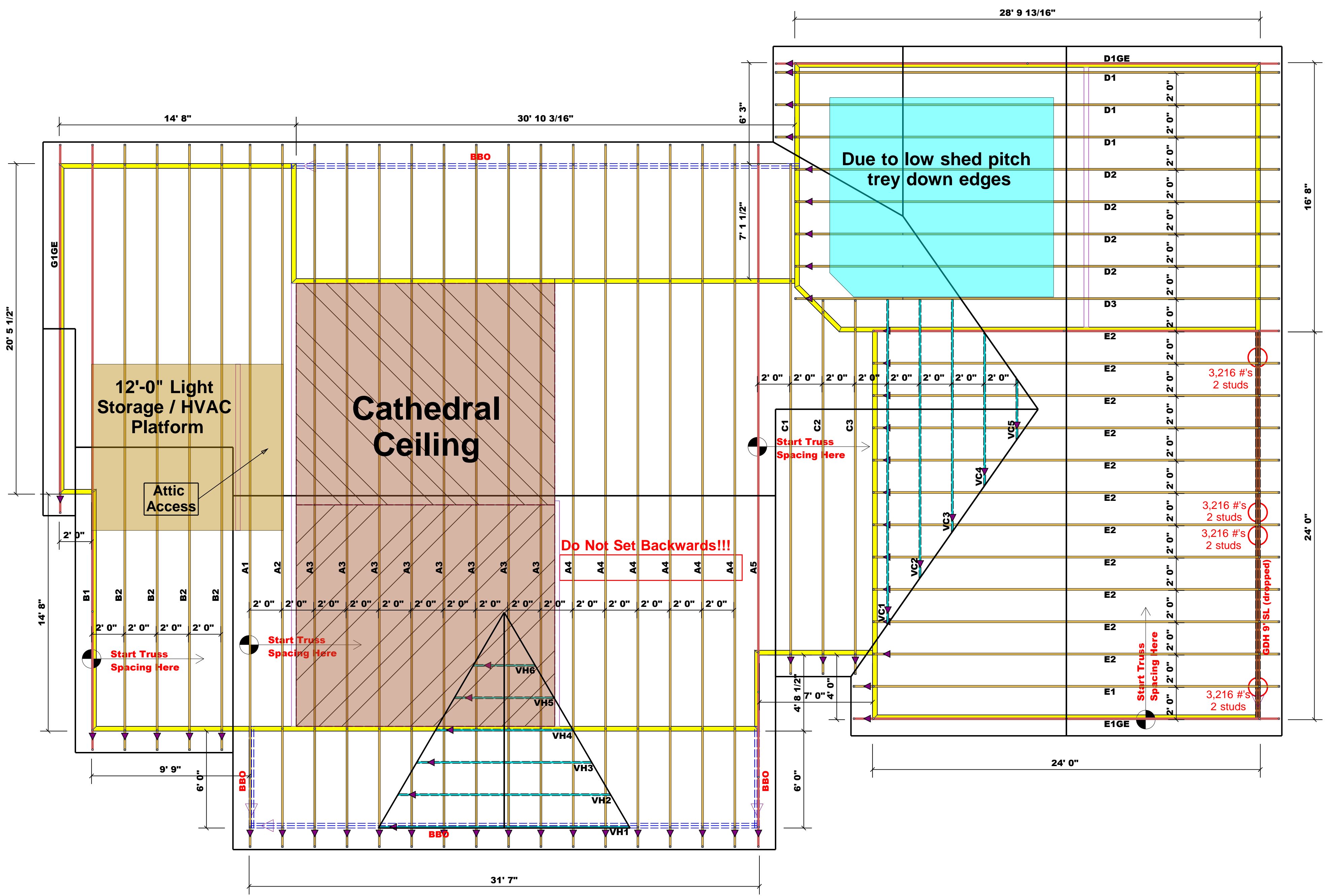
(BASED ON TABLES R502.5(1) & (b))  
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1" X 4" HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1" X 4" HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) 1" X 4" HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	5100	2
5100	3	7650	3	6800	2
6800	4	10200	4	10200	3
8500	5	12750	5	13600	4
10200	6	15300	6	17000	5
11900	7				
13600	8				
15300	9				

CITY / CO.	Cameron / Harnett
ADDRESS	150 Mickey Rouse Lane
MODEL	Roof
DATE REV.	/ /
DRAWN BY	Lenny Norris
SALES REP.	Lenny Norris

BUILDER	Freedom Constructors, Inc.
JOB NAME	Campbell-Thomas
PLAN	Campbell-Thomas
SEAL DATE	Seal Date
QUOTE #	Quote #
JOB #	J0223-0831

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com



▲ = Denotes Left End of Truss  
(Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

Estimation			
Name	Selection	Formula	Calculation
Roof Area	1st Floor	Roof Area	3984.28
Roof Decking	1st Floor	Roof Decking	137

BEAM LEGEND					
PlotID	Length	Product	Plies	Net Qty	Fab Type
GDH 9' SL (dropped)	24-00-00	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

**Truss Placement Plan**  
**SCALE: 1/4" = 1'-0"**

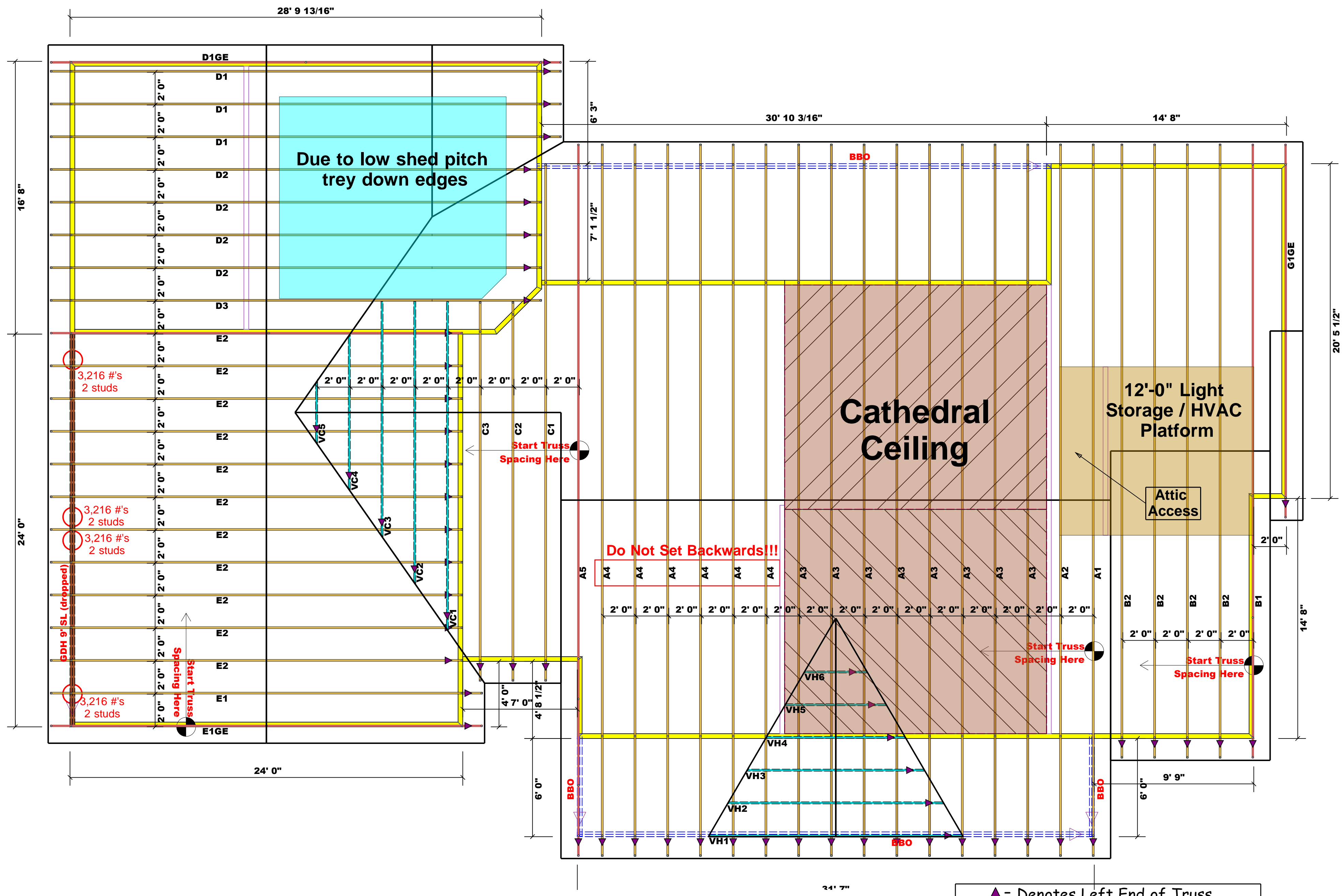
Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables ( derived from the prescriptive Code requirements ) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Lenny Norris  
**Lenny Norris**

**LOAD CHART FOR JACK STUDS**

(BASED ON TABLES R502.5(1) & (b))  
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ. D. STUDS FOR (1) PLY HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) PLY HEADER	END REACTION (UP TO)	REQ. D. STUDS FOR (1) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				



**Estimation**

Name	Selection	Formula	Calculation
Roof Area	1st Floor	Roof Area	3984.28
Roof Decking	1st Floor	Roof Decking	137

**BEAM LEGEND**

PlotID	Length	Product	Plies	Net Qty	Fab Type
GDH 9' SL (dropped)	24' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

**Truss Placement Plan**  
**SCALE: 1/4" = 1'-0"**

▲ = Denotes Left End of Truss  
(Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

BUILDER	JOB NAME	PLAN	SEAL DATE	QUOTE #	JOB #
Freedom Constructors, Inc.	Campbell-Thomas	Campbell-Thomas	Seal Date	Quote #	J0223-0831

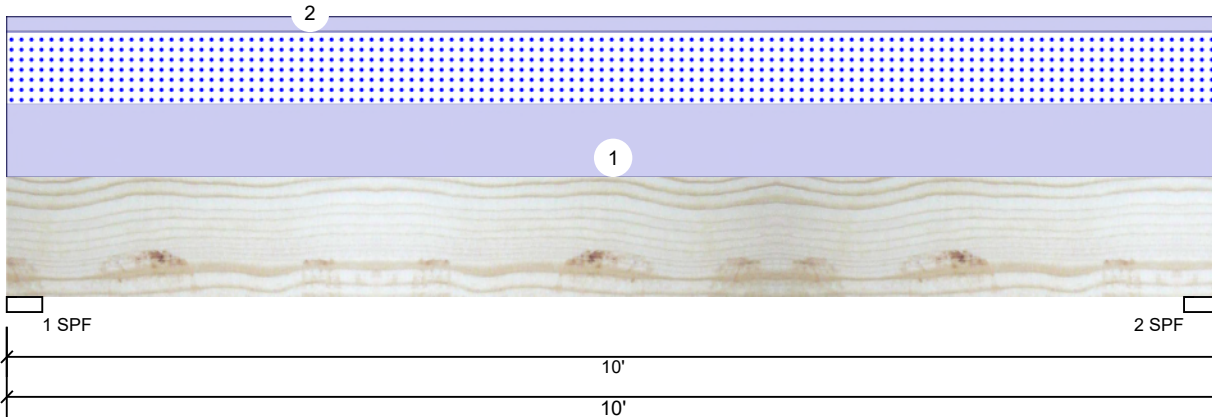
CITY / CO.	ADDRESS	MODEL	DATE REV.	DRAWN BY	SALES REP.
Cameron / Harnett	150 Mickey Rouse Lane	Roof	/ /	Lenny Norris	Lenny Norris

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com



**GDH 9' SL Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1781	1435	0	0
2	Vertical	0	1781	1435	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	62%	1781 / 1435	3216	L	D+S
2 - SPF	3.500"	Vert	62%	1781 / 1435	3216	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7320 ft-lb	5'	22897 ft-lb	0.320 (32%)	D+S	L
Unbraced	7320 ft-lb	5'	9721 ft-lb	0.753 (75%)	D+S	L
Shear	2401 lb	1'3 3/8"	10197 lb	0.235 (24%)	D+S	L
LL Defl inch	0.064 (L/1793)	5'	0.239 (L/480)	0.268 (27%)	S	L
TL Defl inch	0.143 (L/800)	5'	0.477 (L/240)	0.300 (30%)	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	287 PLF	0 PLF	287 PLF	0 PLF	0 PLF	E TRUSSES
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	DEAD WALL
	Self Weight				9 PLF					

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS

