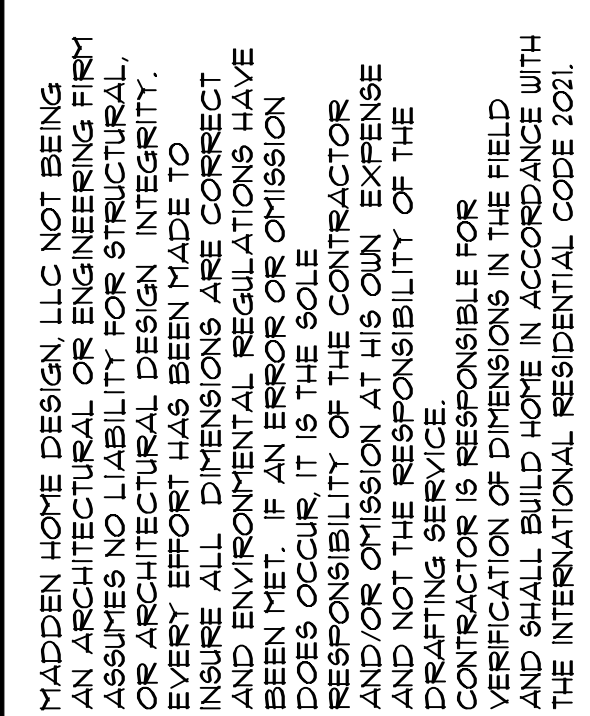




Project

MADDEN
HOME DESIGN

8875 Rushing Road
Denham Springs, Louisiana
70726
Phone: (225) 791-2912

A | B D[®]

Project No.: Southern Ridge-Mirror

DATE: FEBRUARY 21, 2024

DRAWN BY: Steven Madden

DESIGNED BY: Steven Madden

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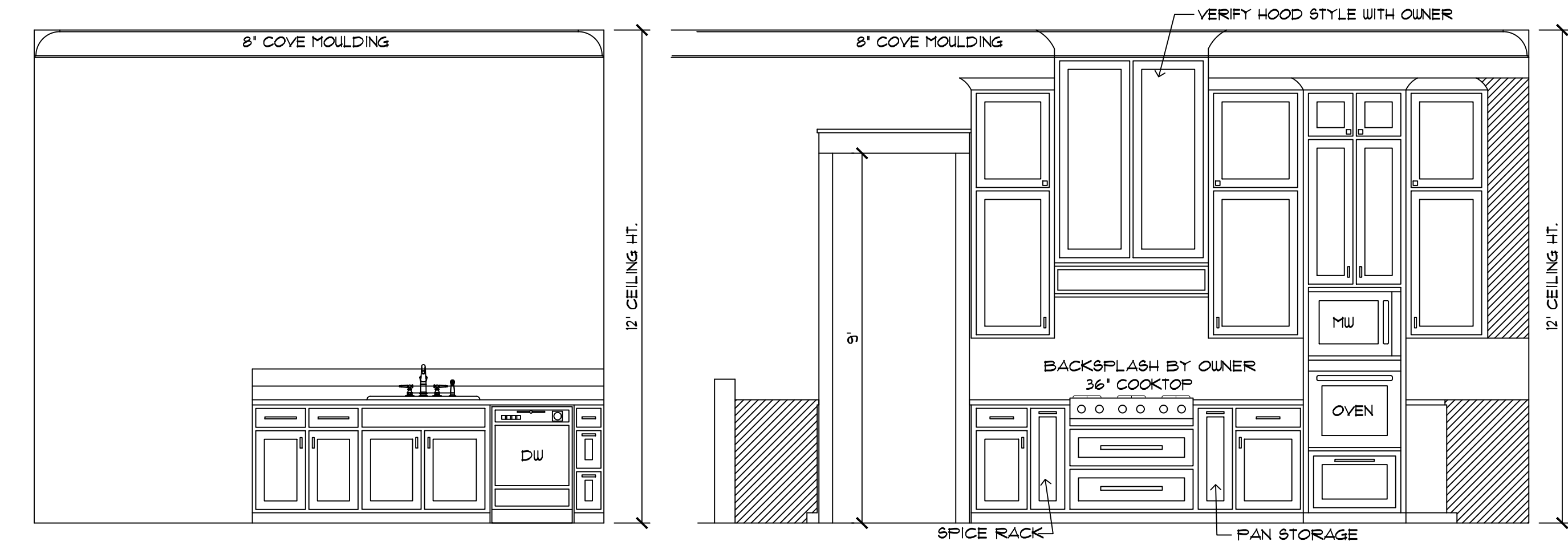
Sheet Title

FLOOR PLAN

☐ Preliminary Dwg.
☐ Bidding Doc.
☐ Construction Doc.

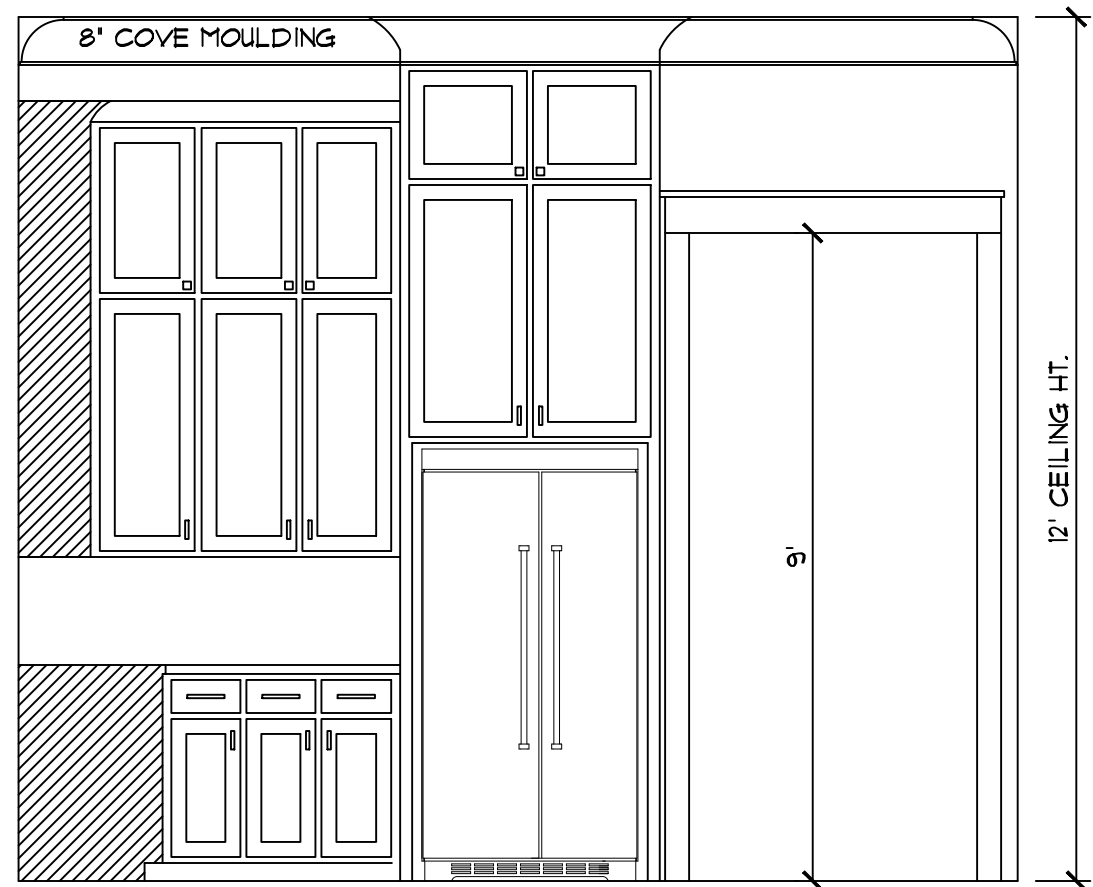
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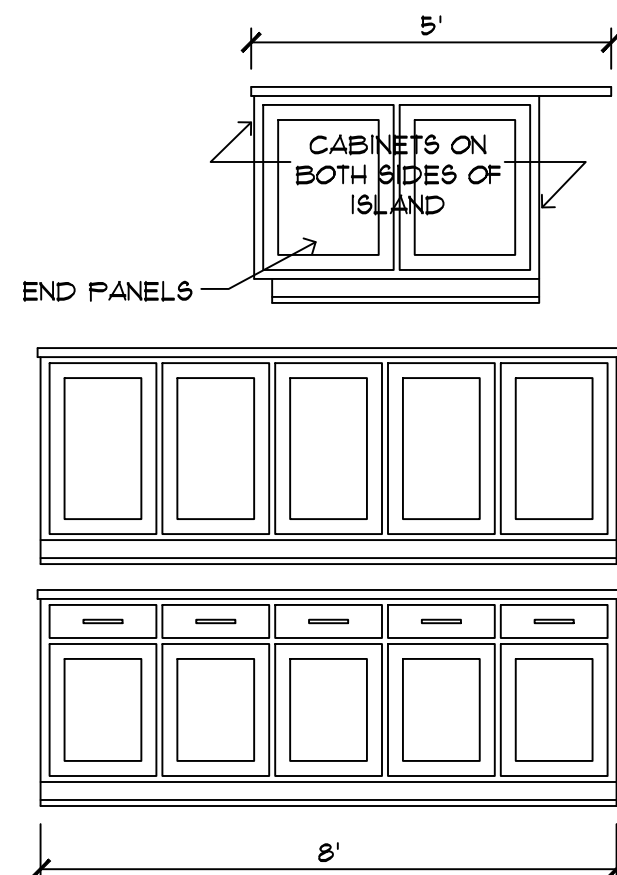


A KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"

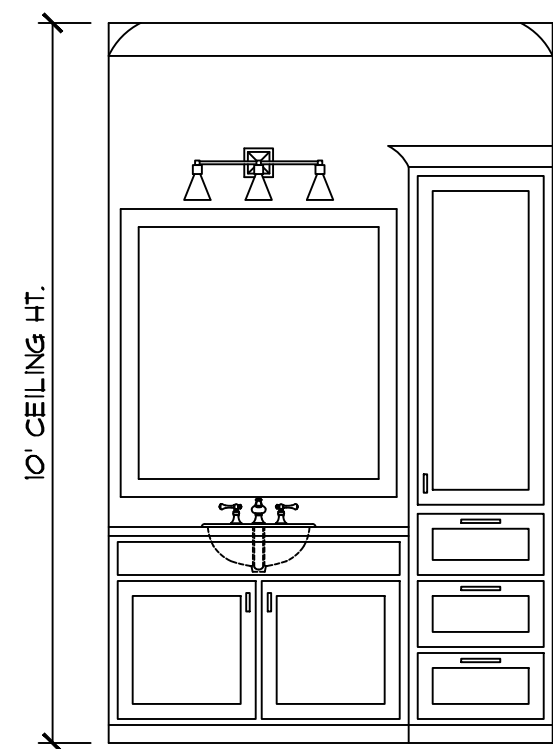
B KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"



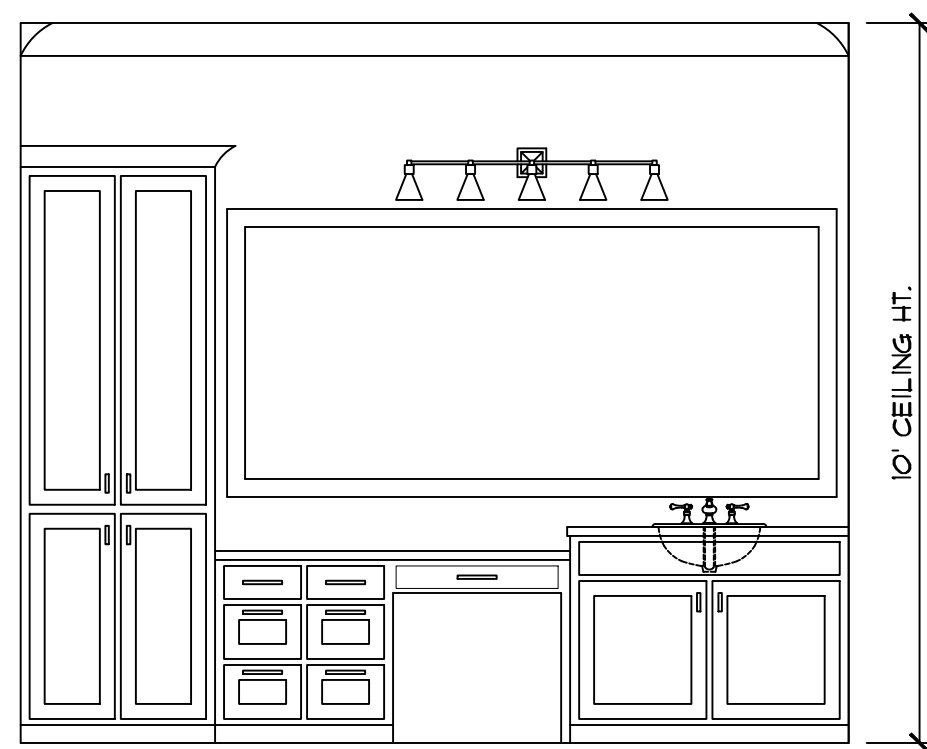
C KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"



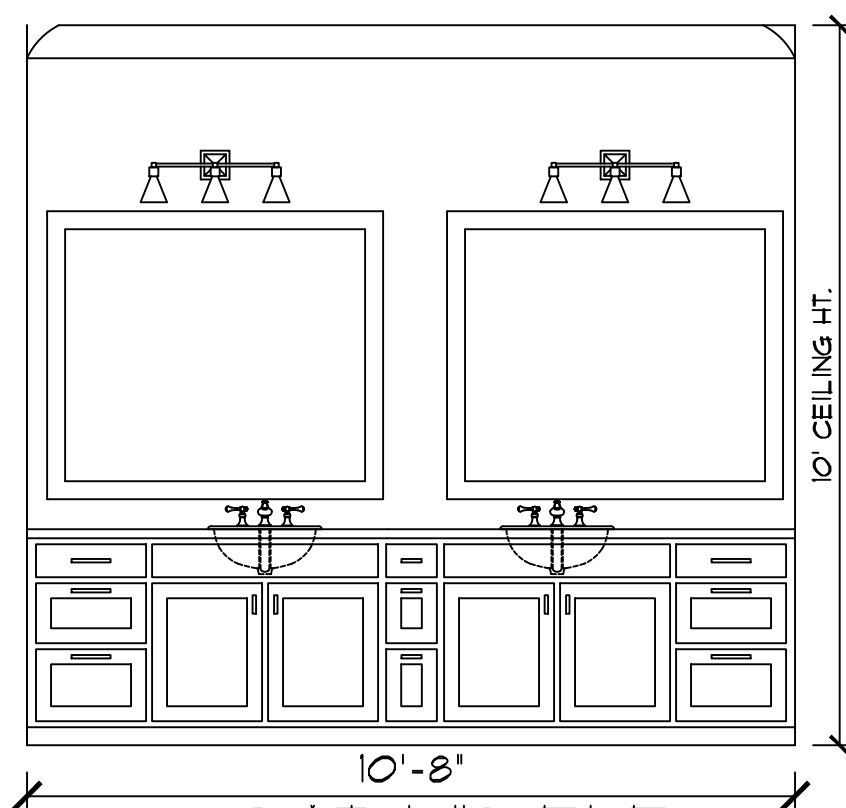
KITCHEN ISLAND
SCALE: 3/8" = 1'-0"



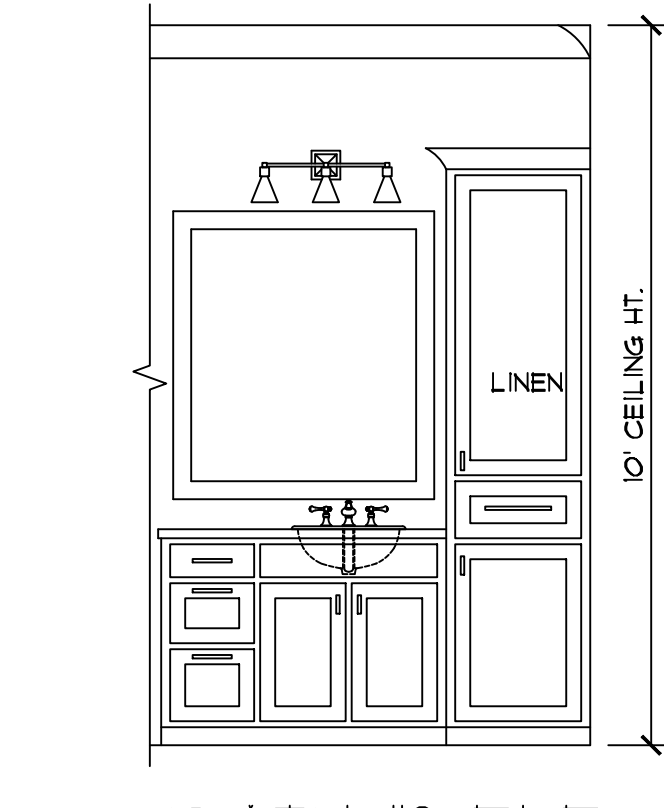
D MASTER BATH ELEV.
SCALE: 3/8" = 1'-0"



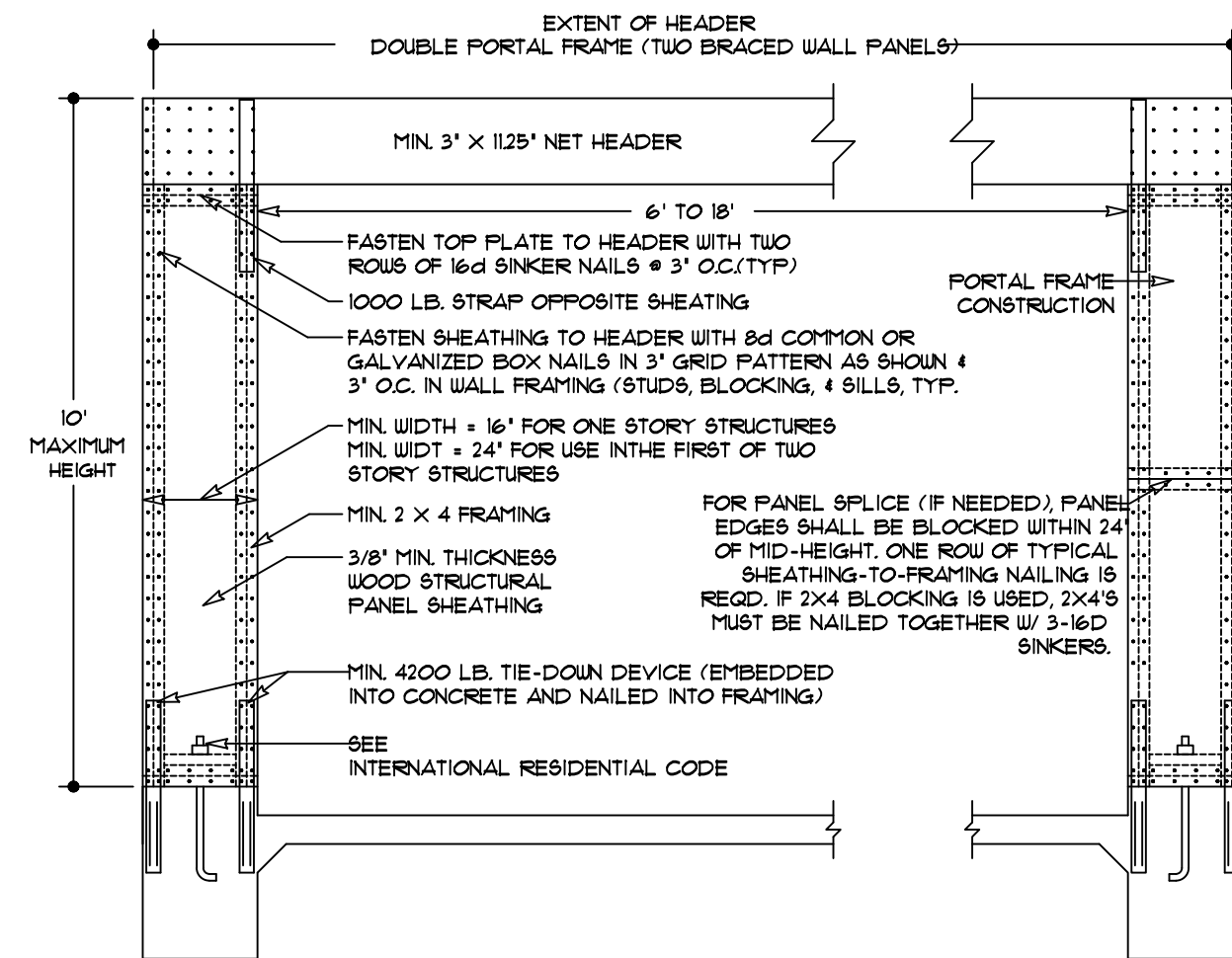
E MASTER BATH ELEV.
SCALE: 3/8" = 1'-0"



H BATH #3 ELEV.
SCALE: 3/8" = 1'-0"



J BATH #2 ELEV.
SCALE: 3/8" = 1'-0"



G GARAGE PORTAL DETAIL
NOT TO SCALE

IMPORTANT NOTE:
ALL EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. GRADE FLOOR WINDOWS MAY HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24". THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20". MAXIMUM SILL HEIGHT - 44" AFF.

WINDOW SCHEDULE				
MARK	OPENING SIZE	DESCRIPTION	QTY.	
A	3'0" X 7'0"	4/4 LITE VINYL SINGLE HUNG WINDOW DBL. INSUL. W/ 16" TRANS.	4	
B	3'0" X 6'0"	4/4 LITE VINYL SINGLE HUNG WINDOW DBL. INSULATED	4	
C	2'0" X 3'6"	4/4 LITE VINYL SINGLE HUNG DBL. INSULATED	2	
D	DBL 2'8" X 6'0"	TWIN 4/4 LITE VINYL SINGLE HUNG WINDOWS DBL. INSULATED	2 PAIR	
E	2'6" X 4'6"	6 LITE VINYL FIXED DBL. INSULATED WINDOWS (SEE SHT. A2.0)	2	
F	3'6" X 7'0"	1/1 LITE VINYL SINGLE HUNG WINDOW DBL. INSUL. W/ 22" TRANS.	3	
G	3'0" X 6'0"	1/1 LITE VINYL SINGLE HUNG WINDOW DBL. INSULATED	5	

DOOR SCHEDULE				
MARK	SIZE	DESCRIPTION	QTY.	
1	DBL 2'6" X 8'0"	EXT. 4 LITE 3/4 FRENCH SOLID WOOD DOORS W/ 18" TRANS.	1 PAIR	
2	DBL 3'0" X 8'0"	EXT. 1 LITE 3/4 FRENCH FIBERGLASS DOORS W/ 22" TRANS.	1 PAIR	
3	3'0" X 6'8"	EXTERIOR 1 LITE 3/4 FRENCH FIBERGLASS DOOR	1	
4	18'0" X 8'0"	EXTERIOR OVERHEAD METAL GARAGE DOOR W/ OPENER	1	
5	3'0" X 6'8"	EXTERIOR RAISED PANEL METAL DOOR	1	
6	3'0" X 8'0"	INT. RAISED PANEL H.C. MASONITE POCKET DOOR W/ 22" TRANS.	2	
7	3'0" X 6'8"	INTERIOR RAISED PANEL H.C. MASONITE DOOR	11	
8	3'0" X 6'8"	INTERIOR RAISED PANEL H.C. MASONITE POCKET DOOR	3	
9	2'4" X 6'8"	INTERIOR RAISED PANEL H.C. MASONITE DOOR	3	
10	2'0" X 8'0"	INTERIOR RAISED PANEL H.C. MASONITE DOOR	0	
11	9'0" X 8'0"	EXTERIOR OVERHEAD METAL GARAGE DOOR W/OUT OPENER	1	
12	3'0" X 6'8"	EXTERIOR 1 LITE 3/4 FRENCH FIBERGLASS DOOR	1	
13	DBL 1'6" X 6'8"	INTERIOR RAISED PANEL H.C. MASONITE DOORS	0	
14	DBL 2'6" X 6'8"	INTERIOR RAISED PANEL H.C. MASONITE DOORS	2 PAIR	
15	DBL 2'6" X 8'0"	INTERIOR 10 LITE FULL FRENCH DOOR	1 PAIR	
16	3'0" X 7'0"	CASED OPENING	1	
17	1'6" X 8'0"	INTERIOR RAISED PANEL H.C. MASONITE DOOR	0	
18	3'0" X 8'0"	OWNER SELECT - SAFE DOOR	0	
19	DBL 3'0" X 6'8"	EXT. 1 LITE 3/4 FRENCH FIBERGLASS DOORS	1 PAIR	

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RESIDENCE OF
WENDY BUCHANAN

Project

MADDEN
HOME DESIGN

8375 Rushing Road
Denham Springs, Louisiana
70726
Phone: (225) 791-2912

A

B D

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DESIGNED BY: Steven Madden

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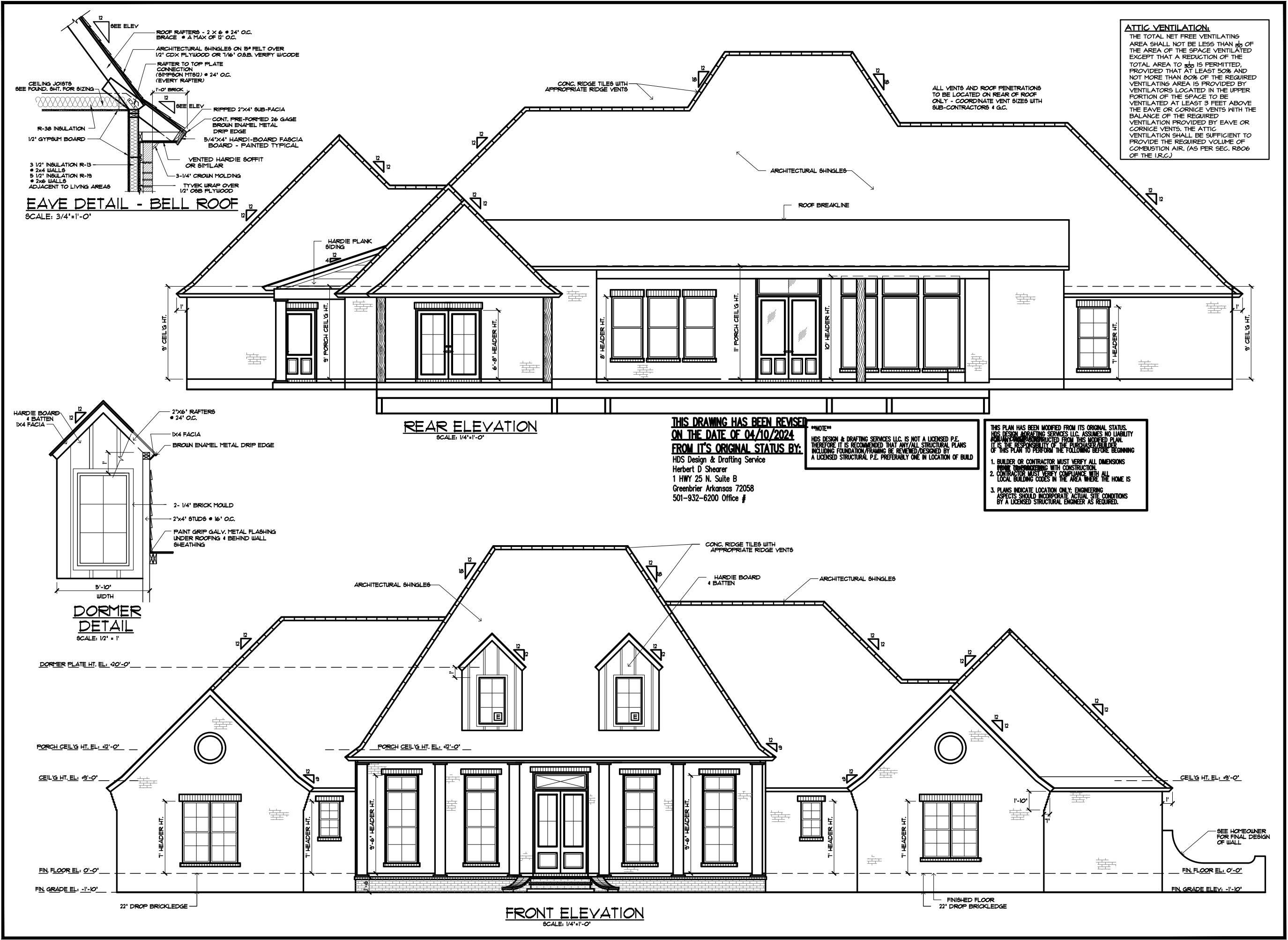
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Sheet Title

INTERIOR
ELEVATIONS

- Sheet:
- ☐ Preliminary Dwg.
☐ Bidding Doc.
☐ Construction Doc.

A1.1



ATTIC VENTILATION:
THE TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/60 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT A REDUCTION OF THE TOTAL AREA TO 1/80 IS PERMITTED, PROVIDED THAT AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. THE ATTIC VENTILATION SHALL BE SUFFICIENT TO PROVIDE THE REQUIRED VOLUME OF COMBUSTION AIR. (AS PER SEC. R806 OF THE I.R.C.)

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HDS Design & Drafting Service
Herbert D Shearer
1 HWY 25 N. Suite B
Greenbrier Arkansas 72058
501-932-6200 Office #

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1. BUILDER OR CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR MUST VERIFY COMPLIANCE WITH ALL LOCAL BUILDING CODES IN THE AREA WHERE THE HOME IS LOCATED.
3. PLANS INDICATE LOCATION ONLY; ENGINEERING ASPECTS SHOULD INCORPORATE ACTUAL SITE CONDITIONS BY A LICENSED STRUCTURAL ENGINEER AS REQUIRED.

RESIDENCE OF
WENDY BUCHANAN

MADDEN HOME DESIGN
8375 Rushing Road
Denham Springs, Louisiana 70726
Phone: (225) 791-2912

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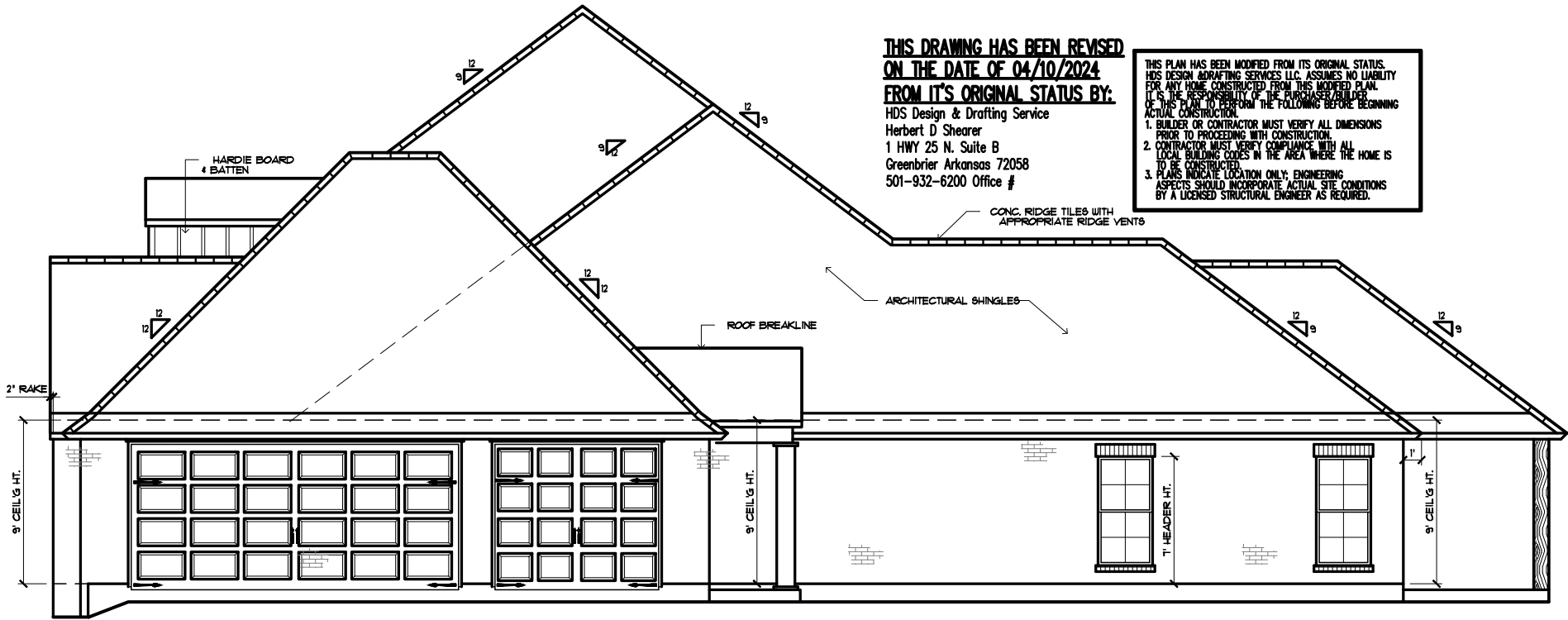
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DRAWN BY: Steven Madden
DESIGNED BY: Steven Madden

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FRONT & REAR ELEVATIONS

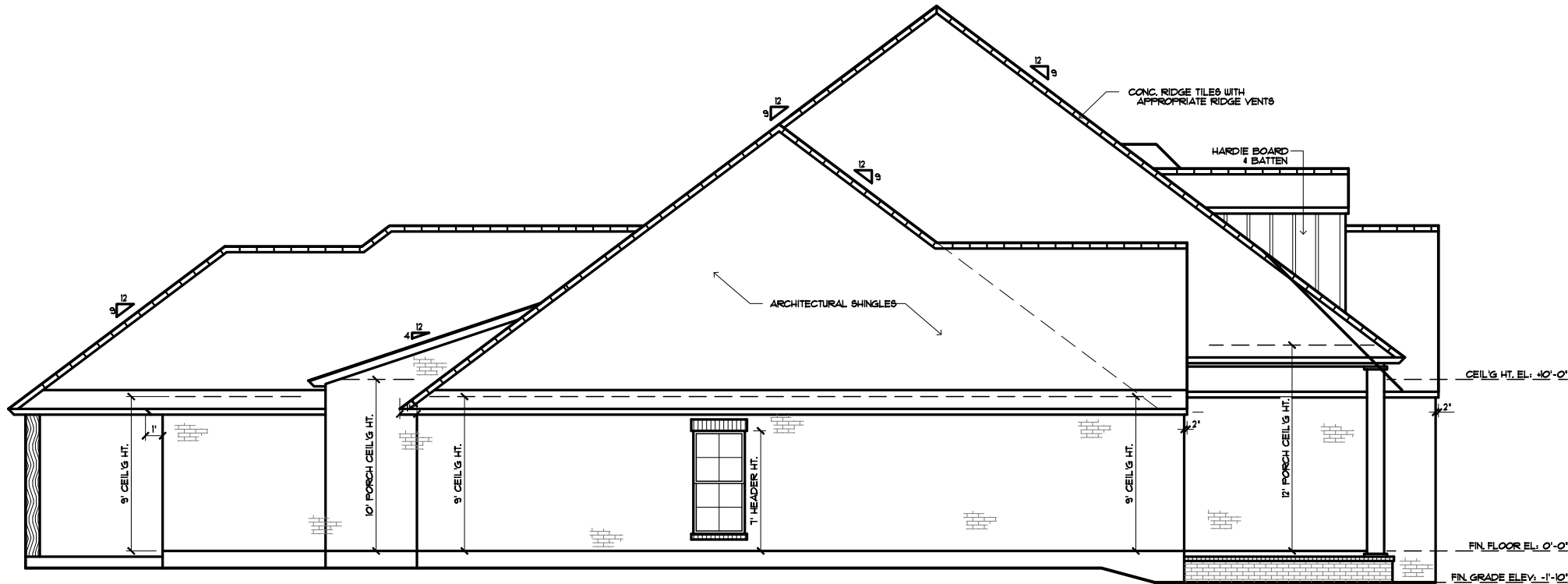
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☐ Bidding Doc.
☐ Construction Doc.

Sheet:
A2.0



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

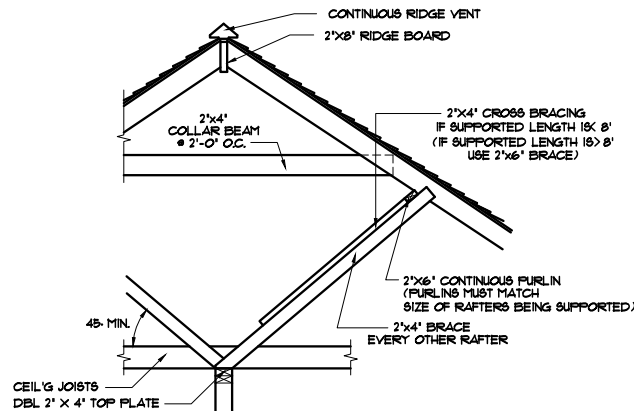
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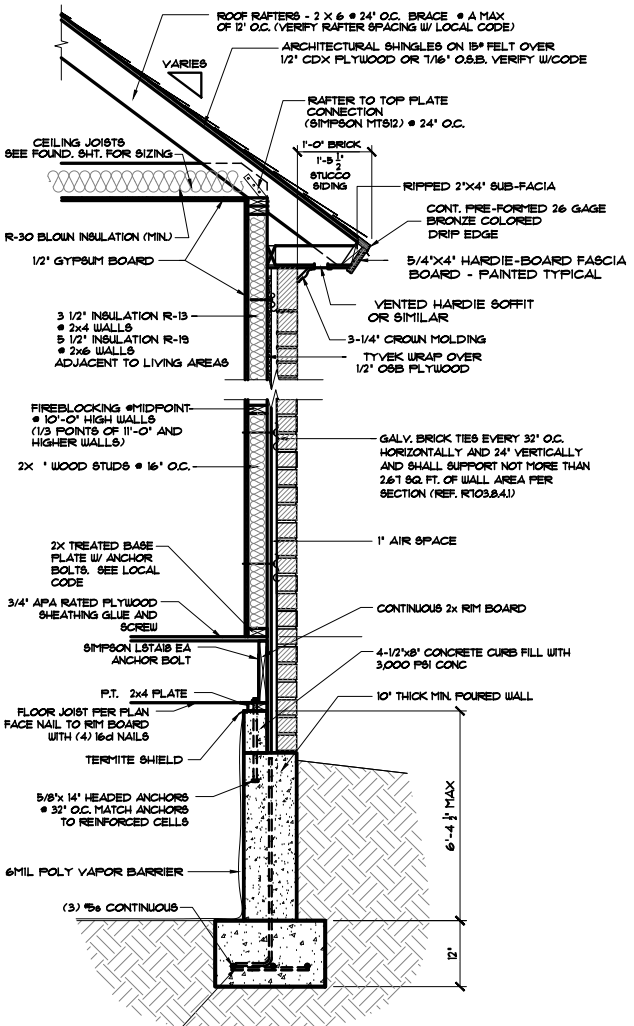
LEFT ELEVATION
SCALE: 1/4"=1'-0"

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IT IS THE RESPONSIBILITY OF THE PURCHASER/BUILDER
TO HAVE THIS PLAN TO PERFORM THE FOLLOWING BEFORE BEGINNING
ACTUAL CONSTRUCTION:
1. BUILDER OR CONTRACTOR MUST VERIFY ALL DIMENSIONS
PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR MUST VERIFY COMPLIANCE WITH ALL
LOCAL BUILDING CODES IN THE AREA WHERE THE HOME IS
TO BE CONSTRUCTED.
3. PLANS INDICATE LOCATION ONLY; ENGINEERING
ASPECTS SHOULD INCORPORATE ACTUAL SITE CONDITIONS
BY A LICENSED STRUCTURAL ENGINEER AS REQUIRED.



TYPICAL ROOF
BRACING DETAIL
SCALE: 1/2" = 1'



TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"

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OR ARCHITECTURAL DESIGN, INTEGRITY,
EVERY EFFORT HAS BEEN MADE TO
INSURE ALL DIMENSIONS ARE CORRECT
AND THAT THE HOME WILL BE CONSTRUCTED
IN ACCORDANCE WITH THE INTERNATIONAL
RESIDENTIAL CODE. IT IS THE SOLE
RESPONSIBILITY OF THE CONTRACTOR
AND/OR OMISSION AT HIS OWN EXPENSE
AND NOT THE RESPONSIBILITY OF THE
DRAFTING SERVICE.
CONTRACTOR IS RESPONSIBLE FOR
OBTAINING ALL NECESSARY PERMITS
AND SHALL BUILD HOME IN ACCORDANCE WITH
THE INTERNATIONAL RESIDENTIAL CODE 2021.

RESIDENCE OF
**WENDY
BUCHANAN**

Project

MADDEN
HOME DESIGN

8375 Rushing Road
Denham Springs, Louisiana
70726
Phone: (225) 791-2912

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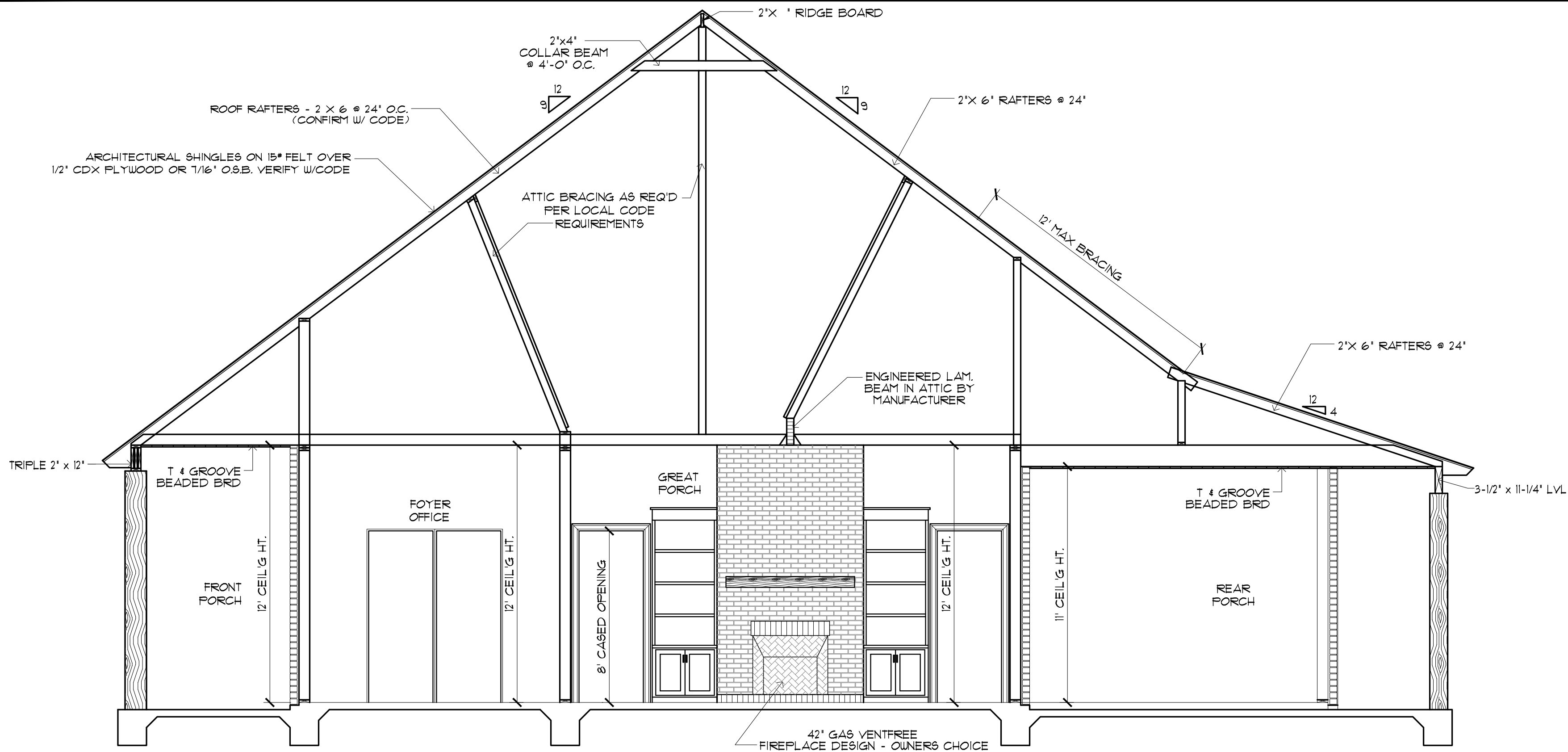
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**SIDE
ELEVATIONS**

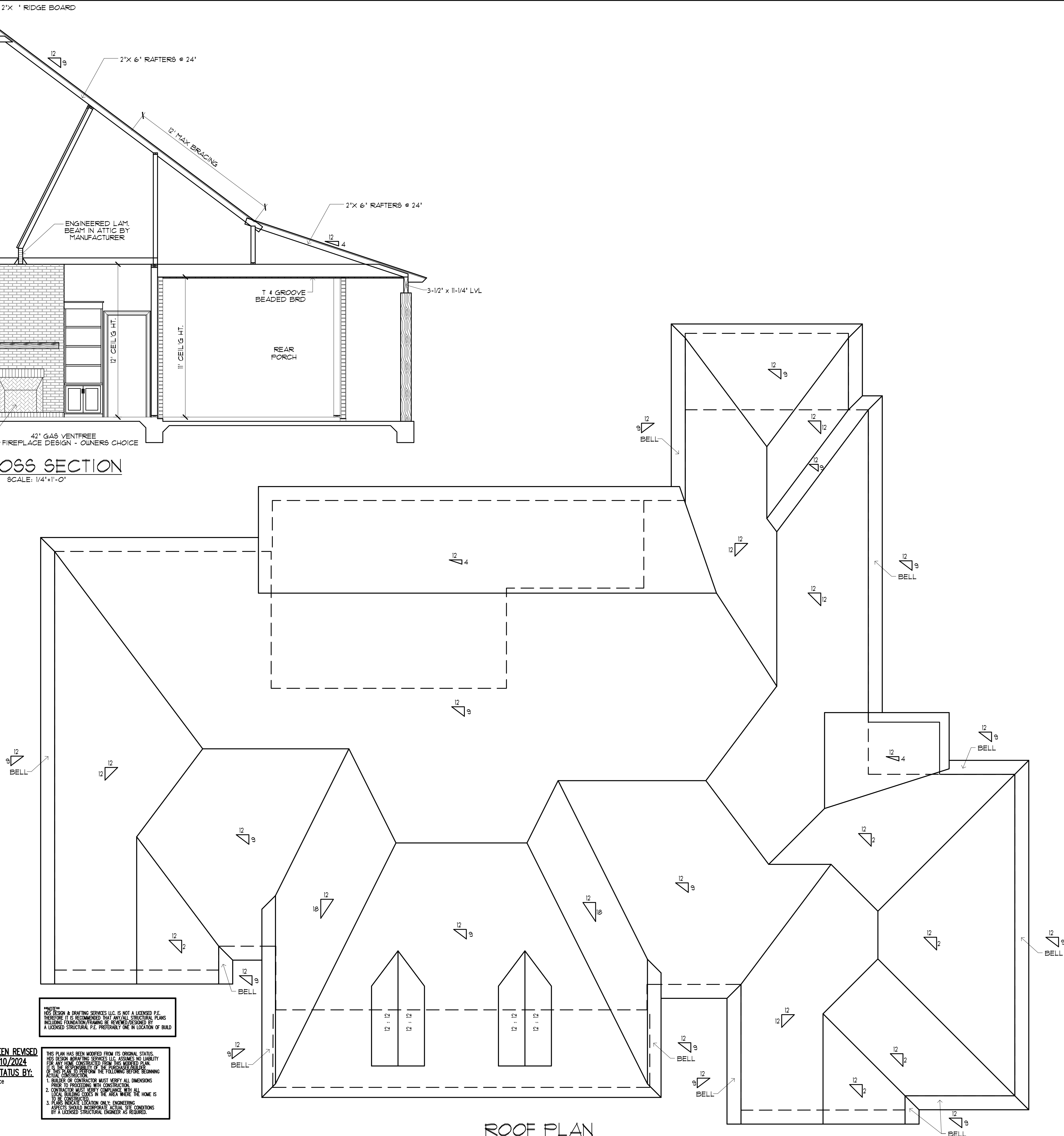
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A3.0



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



ROOF PLAN
SCALE: 3/16"=1'-0"

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DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
1. BUILDING OR CONTRACTOR MUST VERIFY ALL DIMENSIONS
PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO
CONSTRUCTION. ALL DIMENSIONS IN THE AREA WHERE THE HOME IS
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3. PLANS INDICATE LOCATION ONLY. ENGINEERING
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ROOF PLAN &
DETAILS

☐ Preliminary Dwg.
☐ Bidding Doc.
☐ Construction Doc.

Sheet:

A3.1

FILENAME: Z:\MUSH OFFICE\DWG\08_2024\082401-0297_MESU.CLT_BUCHANAN\082401-0297_FLOOR_SWD.BT.WY LAST PLOT DATE: 7/25/2025 4:10 PM

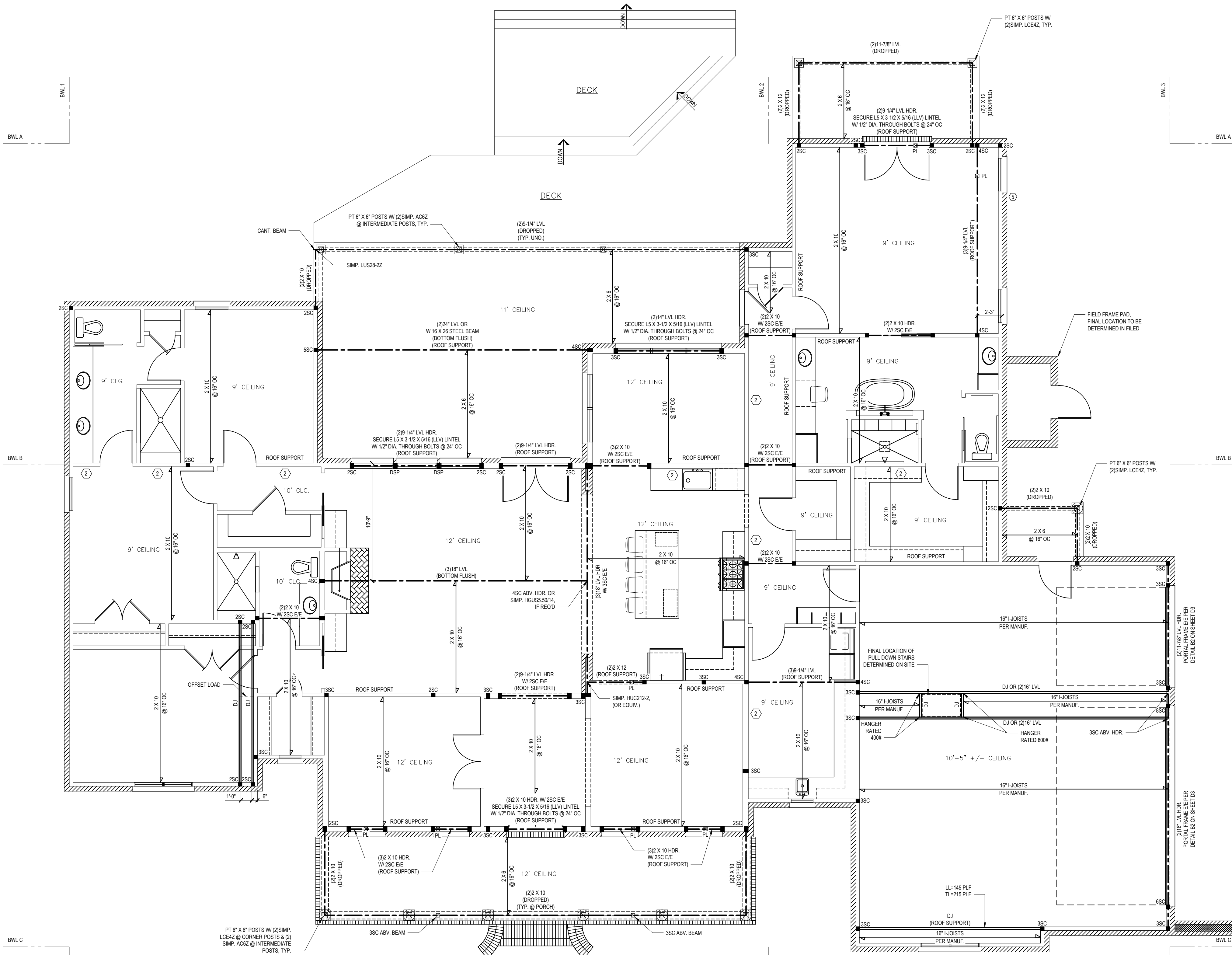
DESIGN LOADS					
FLOOR (primary)	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION		
			LL	TL	TL
FLOOR (secondary)	40	10	L/360	L/240	
FLOOR (storage)	40	10	L/240	L/180	
ATTIC (no storage)	10	5	L/240	L/180	
EXTERNAL BALCONY	40	10	L/360	L/240	
ROOF	20	10	L/240	L/180	
ROOF TRUSS	20	20	L/240	L/180	
WIND LOAD					
BASED ON 120 MPH (EXPOSURE B)					
SEISMIC					
BASED ON SEISMIC ZONES A, B & C					

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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- ALL LUMBER SHALL BE #2 (UNO) ALL LVL LUMBER TO BE 1.75" WIDE (ACTUAL) EACH SINGLE MEMBER AND $F_b = 2600$ PSI, $E = 1.9M$ PSI (OR GREATER) (I.E. LEVEL MODULAM).
- ALL LVL LUMBER IS TO BE 1.5E ($F_b = 2325$ PSI) (OR GREATER) ALL LVL LUMBER IS TO BE 1.8E ($F_b = 2400$ PSI) (OR GREATER) ALL LOAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 w/ (1) 2x4 JACK STUD (UNO) AND KING STUDS PER TABLE R602.7.5, AND TOGETHER w/ (2) 100 NAILS @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8". MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLES R602.7(1) AND R602.7(2).
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (UNO) REFER TO TABLES R602.7(1) AND R602.7(2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
- REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
- ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 $F_y = 50$ KSI MIN. (UNO)
- ALL EXTERIOR LUMBER TO BE #2 SYP PT
- ALL CONCRETE, $f_c = 3000$ PSI MIN.
- PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 10'-0" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
- PER COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (UNO)
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCRC.
- MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

STRUCTURAL SHEATHING NOTES:

- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)
- 12" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING) SECURE w/ 5d COOLER NAILS (OR EQUAL PER TABLE R702.3.5) SPACED @ 7" O.C. AT PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES & 7" O.C. AT INTERMEDIATE SUPPORTS
- 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 8" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
- EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
- ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8" SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 8" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS.
- MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
 - 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
 - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT
 - 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
- SHEATH INTERIOR & EXTERIOR
- FOR CS-WSP METHOD, A MINIMUM 2x4 BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3(a), IN LIEU OF A CORNER RETURN, EITHER A MIN. 4x6 BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
- MINIMUM 800# HOLD-DOWN DEVICE



BRACING PANEL LENGTHS REQUIRED:
BWL A = 10.8 FT
BWL B = 26.4 FT
BWL C = 15.8 FT
BWL 1 = 22.2 FT
BWL 2 = 35.4 FT
BWL 3 = 13.2 FT

BRACING PANEL LENGTHS PROVIDED:
BWL A = 92.77 FT CS-WSP
BWL B = 27.75 FT CS-WSP / GB
BWL C = 65.17 FT CS-WSP
BWL 1 = 47.00 FT CS-WSP
BWL 2 = 51.00 FT CS-WSP / GB
BWL 3 = 40.83 FT CS-WSP / PF

*NOTE: SECURE 4-PLY W/ 10\"/>

FIRST FLOOR PLAN

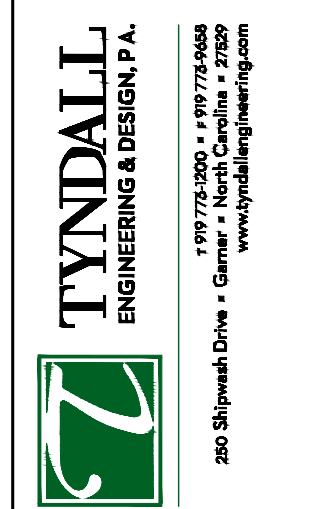
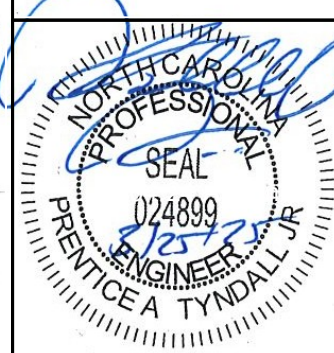
3/16" = 1'-0"

KING STUD SCHEDULE			
HEADER SPAN (FT)	MIN. # OF FULL HEIGHT STUDS (KING) I.E. OF OPENING PER WALL DEPTH		2 X 6 STUD WALL
	2 X 4 STUD WALL	2 X 6 STUD WALL	
UP TO 3'-0"	1	1	
3'-1" TO 6'-0"	2	1	
6'-1" TO 9'-0"	3	2	
9'-1" TO 12'-0"	4	2	
12'-1" TO 15'-0"	5	3	
15'-1" TO 18'-0"	6	3	

NOTES:

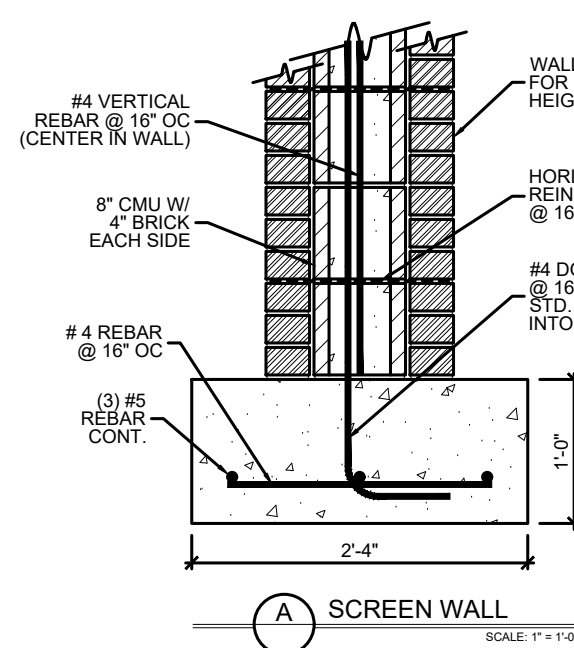
- TABLE DENOTES REQUIRED MINIMUM NUMBER OF STUDS I.E. OF HEADER, TYP. UNO OR PLANS
- NUMBER OF KING STUDS LISTED ABOVE ARE BASED UPON NOMINAL WALL HEIGHT. STUD SPACING OF 12" O.C. SHALL BE MAINTAINED AND SPACED AT 10" WPM EXPOSURE B
- HEADER SPANS IN TABLE ARE BASED ON ROUGH OPENING. INTERPOLATION BETWEEN SPAN VALUES IS PERMITTED. ROUND UP NUMBER OF KING STUDS. EXTENSION IS PERMITTED. CONTACT TYNDALL ENGINEERING AND DESIGN IF HEADER SPANS EXCEED TABLE VALUES

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution. Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability. *Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



CLIENT: WESLEY BUCHANAN
2195 MT. PISGAH CHURCH RD.
BROADWAY, NC 27505
FROM: BUCHANAN RESIDENCE
1141 MT. PISGAH CHURCH RD.
BROADWAY, NC 27505

1ST FLOOR HEADER 1ST FLOOR CEILING



Project #: DRB2401-0297
Date: 03/25/2025
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DWG. Checked By: PAT
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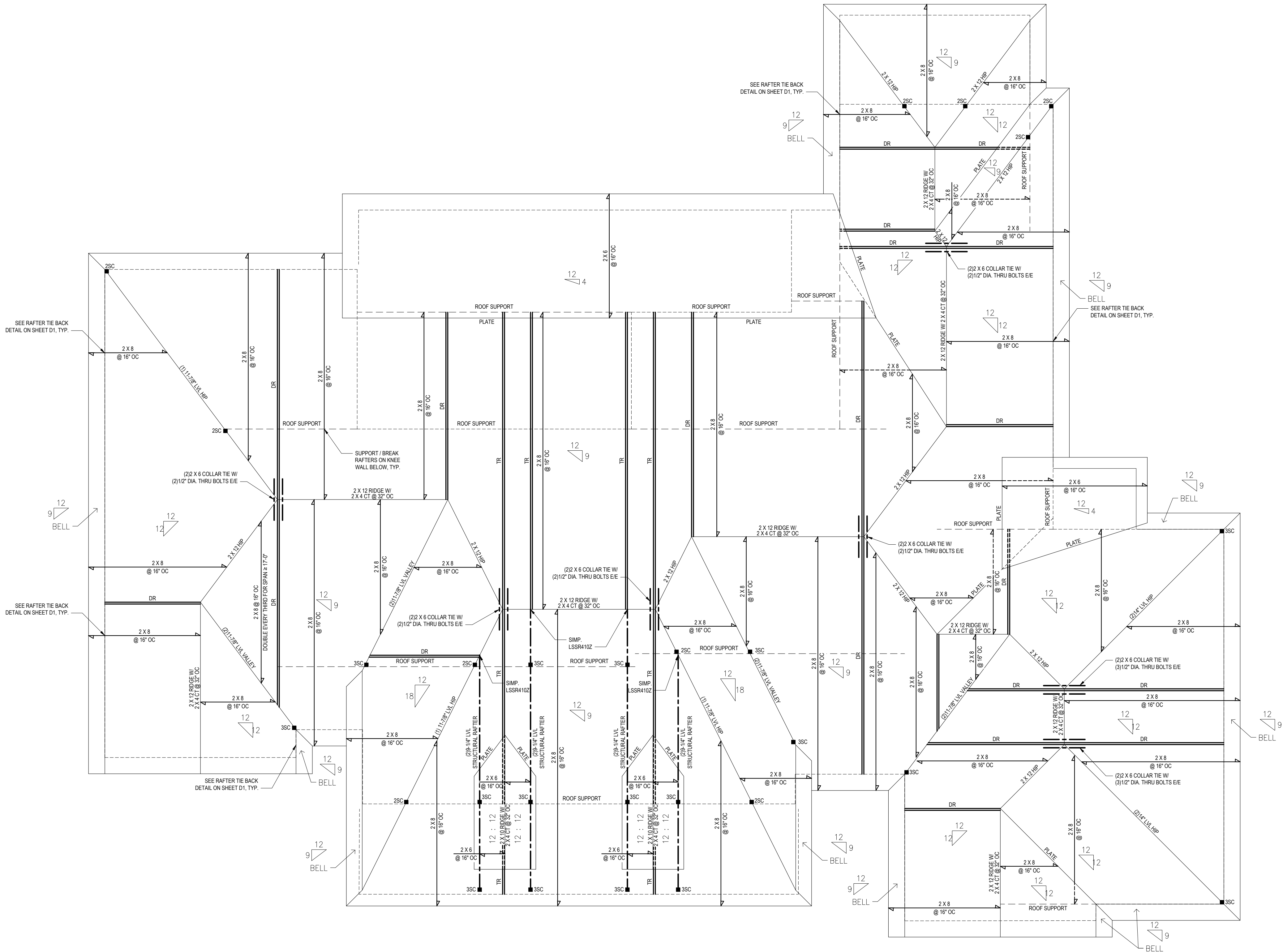
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4889 SQ. FT. OF ATTIC / 300 = 15.63 SQ. FT. INLETS/OUTLETS REQUIRED

1) CALCULATION BASED ON VENTILATORS USED AT LEAST 1' OF ABOVE THE CORNER VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY EAVE VENTS

2) CATHEDRAL CEILING SHALL HAVE A 4" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF JOIST AND THE INSULATION

ATTIC VENTILATION CALCULATION

NO SCALE

ROOF PLAN
3/16" = 1'-0"

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Drawn: **BUCHANAN RESIDENCE**
1141 MT. PISGAH CHURCH RD.
BROADWAY, NC 27505

Project #: **DRB2401-0297**
Date: **03/25/2025**
Engineered By: **JA**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

No.	Date:	Remarks
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Sheet Number

S3

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STRUCTURAL NOTES

- 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	
			LL	TL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	5	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	SEISMIC ZONES A, B & C			

- 3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- 4) CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE. (U.N.O.)
- 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, BASED ON 2x10) UNO.
- ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.
- ALL LV LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI (U.N.O.)
- ALL LSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2325 PSI, E = 1.6M PSI (U.N.O.)
- ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E = 1.8M PSI (U.N.O.)

- 7) ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10. (U.N.O.) REFER TO TABLE R602.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.

- 8) ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50.
- ALL STEEL ANGLES, PLATES, AND C-CHANNELS SHALL BE ASTM A36.
- ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.

- 9) STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3'-1/2" AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG SCREWS (1/2"x2" x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED 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) PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6: 1/2"Ø ANCHOR BOLTS SPACED AT 6'-0" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. THERE SHALL BE A MINIMUM TWO ANCHOR BOLTS PER PLATE SECTION.

- 11) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.

- 12) WALL AND ROOF CLADDING VALUES:
- WALL CLADDING SHALL BE DESIGNED FOR 28.0 POUNDS PER SQUARE FOOT (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE. ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
- 39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1/5/12
- 36.0 LBS/SQFT FOR ROOF PITCHES 1/5/12 TO 6/12
- 18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12
- *MEAN ROOF HEIGHT 30'-0" OR LESS

- 13) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.

- 14) REFER TO SECTION R602.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.

- 15) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCRC.

- 16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.

- 17) REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.

- 18) PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (U.N.O.)

- 19) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)

- 20) MAXIMUM MASONRY PEIR HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.

- 21) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

DEFINITIONS FOR COMMON ABBREVIATIONS

ALT	=	ALTERNATE	MANUF	=	MANUFACTURER
CANT	=	CANTILEVER	MAX	=	MAXIMUM
CJ	=	CEILING JOIST	MIN	=	MINIMUM
CMU	=	CONCRETE MASONRY UNIT	NOM	=	NOMINAL
COL	=	COLUMN	O.C.	=	ON CENTER
CONC	=	CONCRETE	PL	=	POINT LOAD
CONT	=	CONTINUOUS	PT	=	PRESSURE TREATED
CT	=	COLLAR TIE	REINF	=	REINFORCED
DBL	=	DOUBLE	REQD	=	REQUIRED
DIA	=	DIAMETER	RJ	=	ROOF JOIST
DJ	=	DOUBLE JOIST	RS	=	ROOF SUPPORT
DR	=	DOUBLE RAFTER	SC	=	STUD COLUMN
DSP	=	DOUBLE STUD POCKET	SCH	=	SCHEDULE
EA	=	EACH	SPEC	=	SPECIFIED
EE	=	EACH END	TH	=	THICK
FJ	=	FLOOR JOIST	TJ	=	TRIPLE JOIST
FND	=	FOUNDATION	TRTD	=	TREATED
FTG	=	FOOTING	TSP	=	TRIPLE STUD POCKET
GALV	=	GALVANIZED	TYP	=	TYPICAL
HORIZ	=	HORIZONTAL	UNO	=	UNLESS NOTED OTHERWISE
HT	=	HEIGHT	W	=	WIDE FLANGE BEAM
JSC	=	JACK STUD	WWF	=	WELDED WIRE FABRIC
KS	=	KING STUD	XJ	=	EXTRA JOIST

- 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"

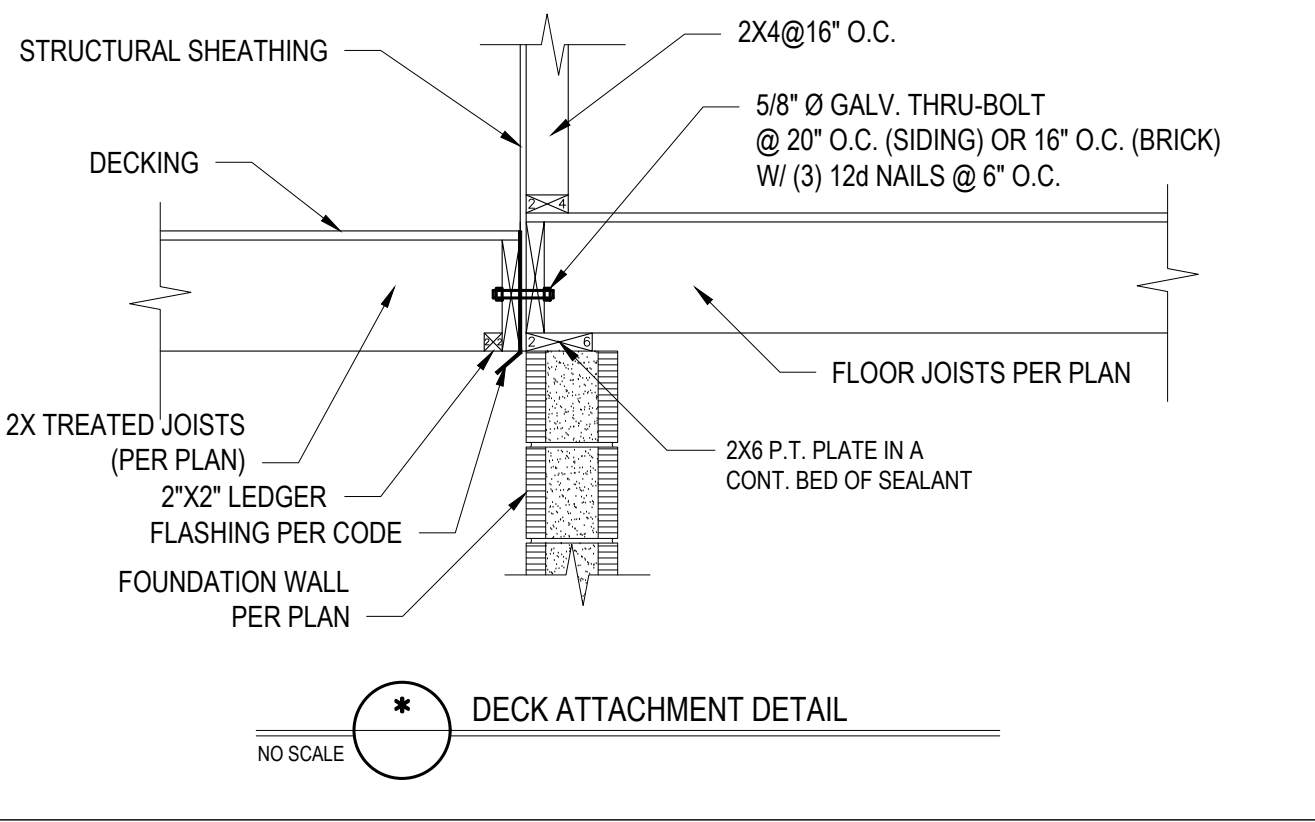
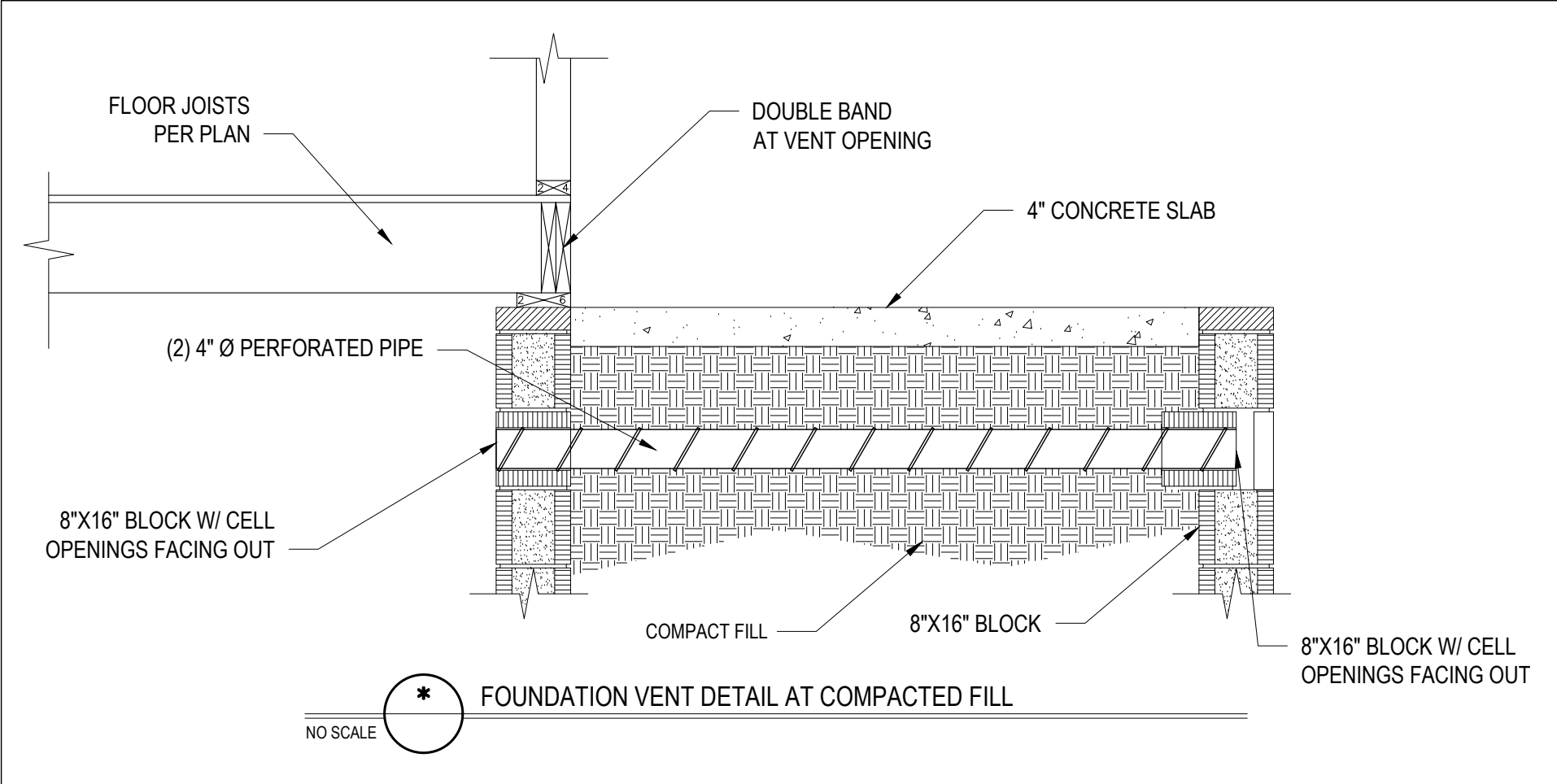
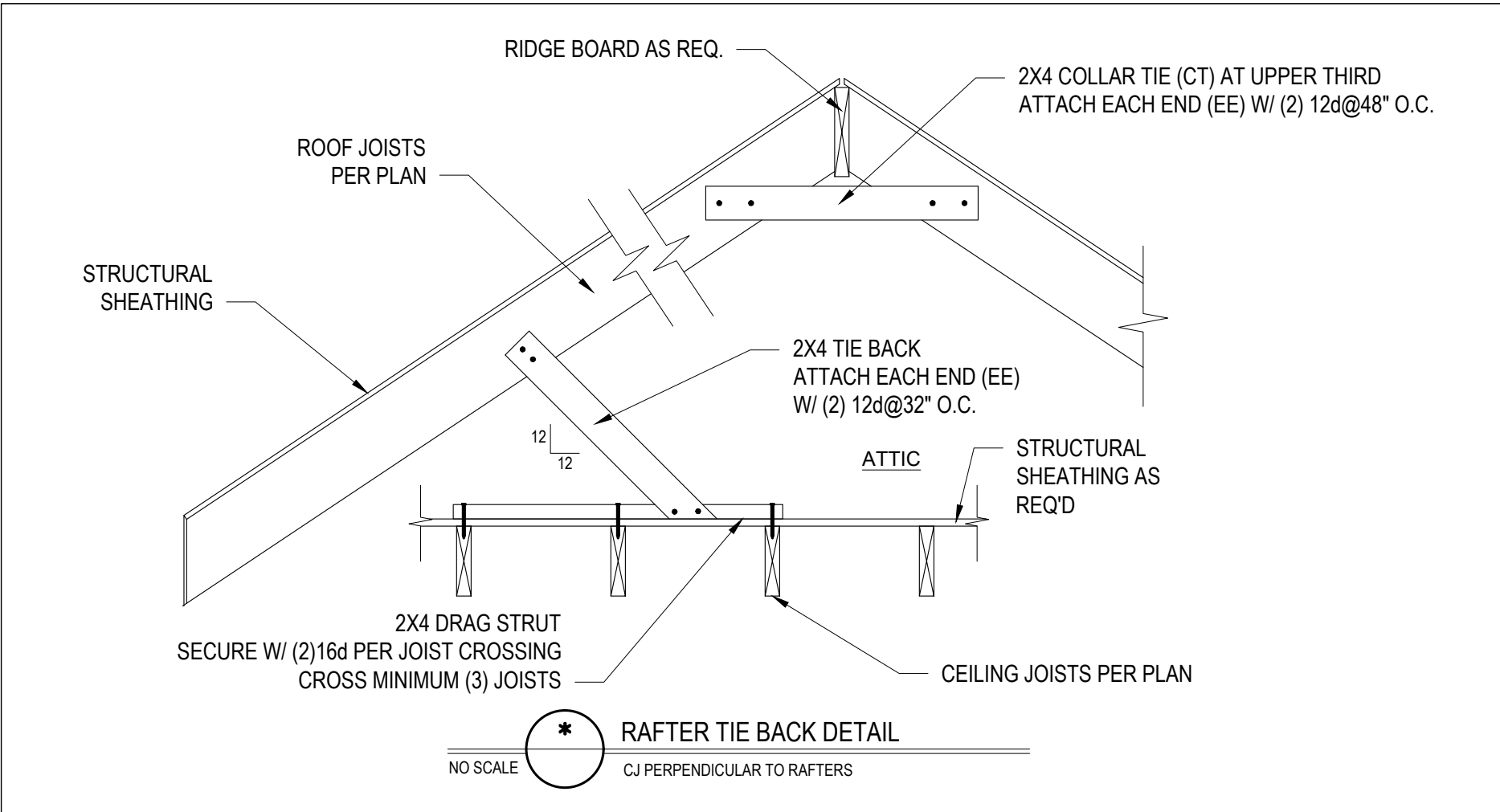
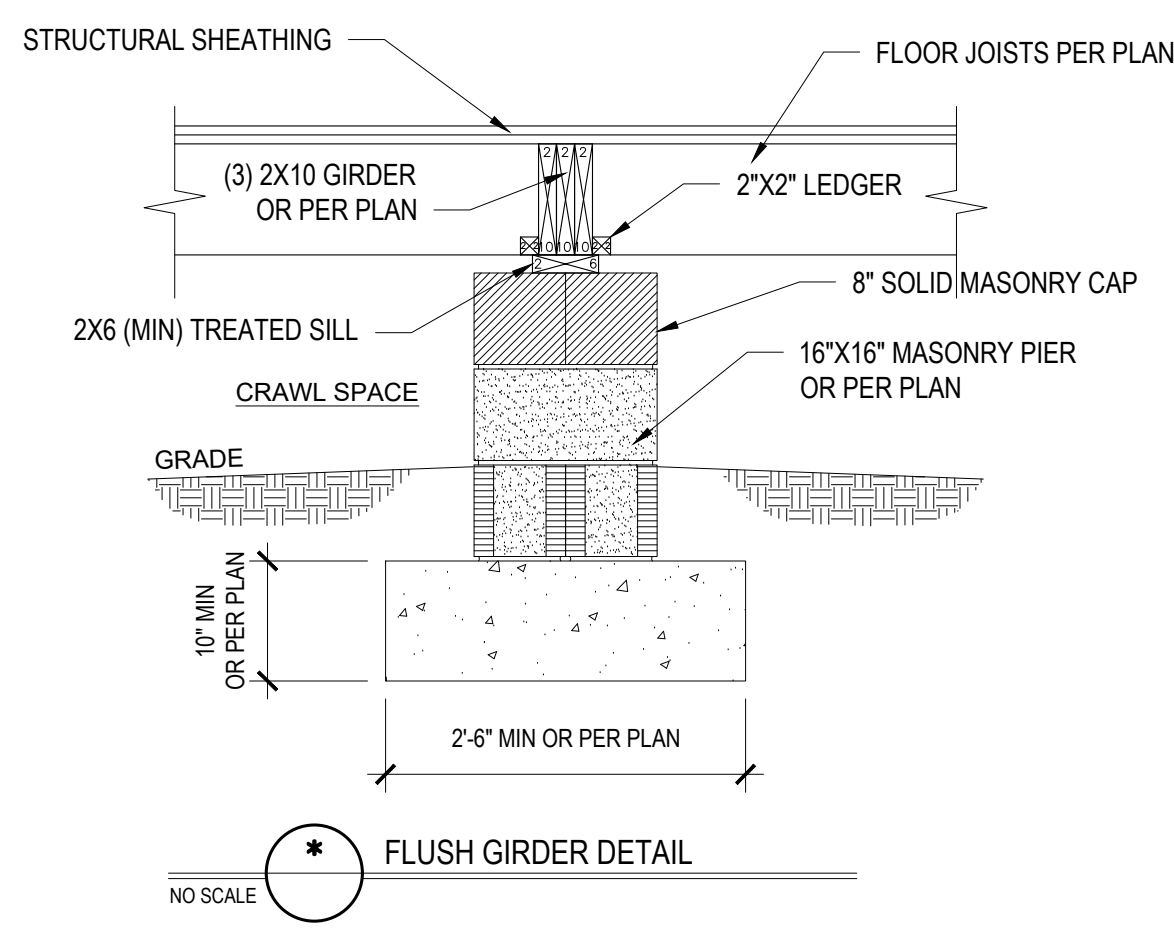
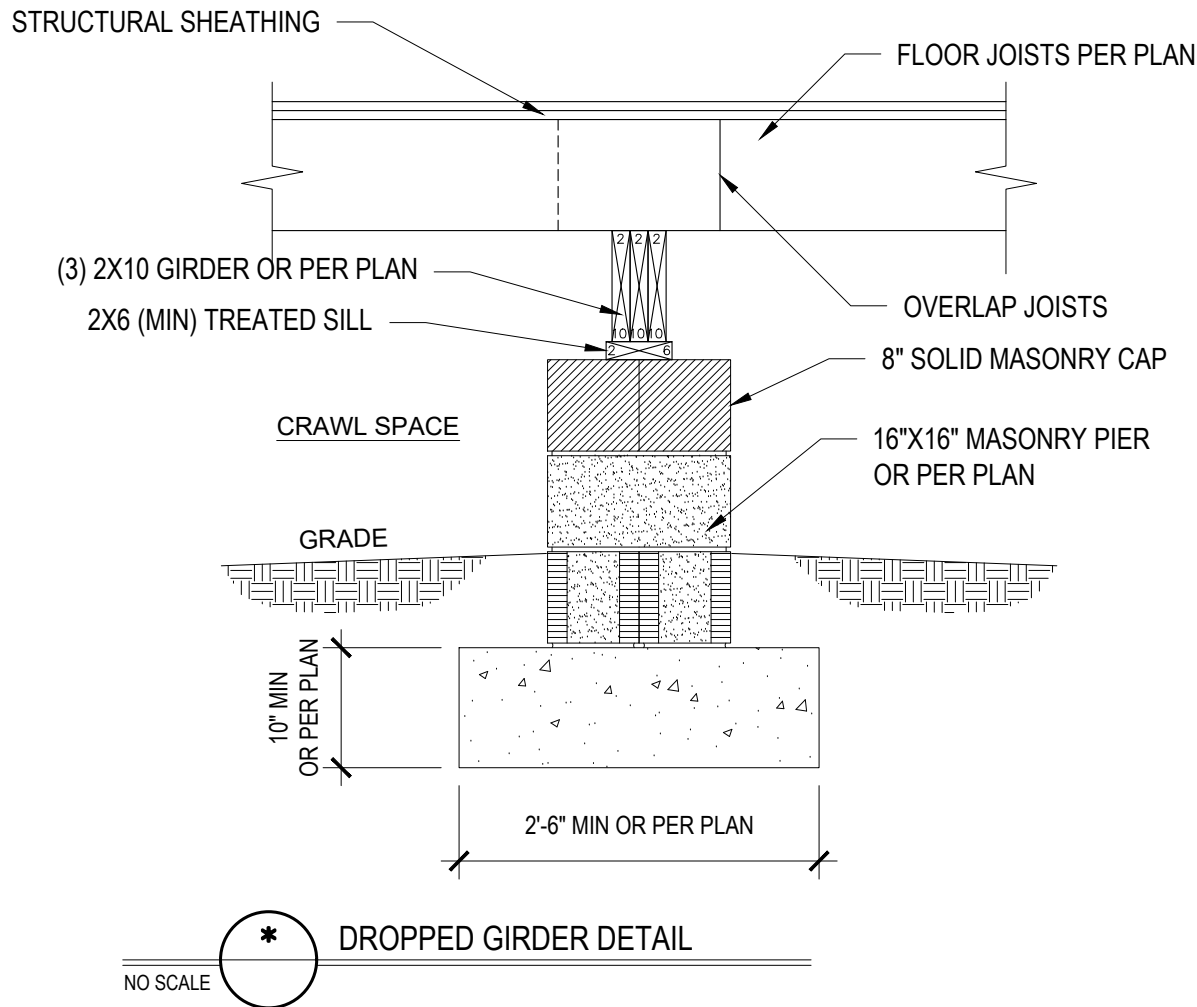
- * THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET WHICH MAY BE LOCATED AT DIFFERENT LEVELS.
- ** FROM TOP OF FOOTING TO BOTTOM OF GIRDER
- *** DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

- 2) DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THESE METHODS:

- A. THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION (4) ABOVE. LATERAL BRACING IS NOT REQUIRED.
- B. 4 x 4 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 1/3 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 BOLTED TO THE POST AND GIRDER WITH ONE 5/8"Ø 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:

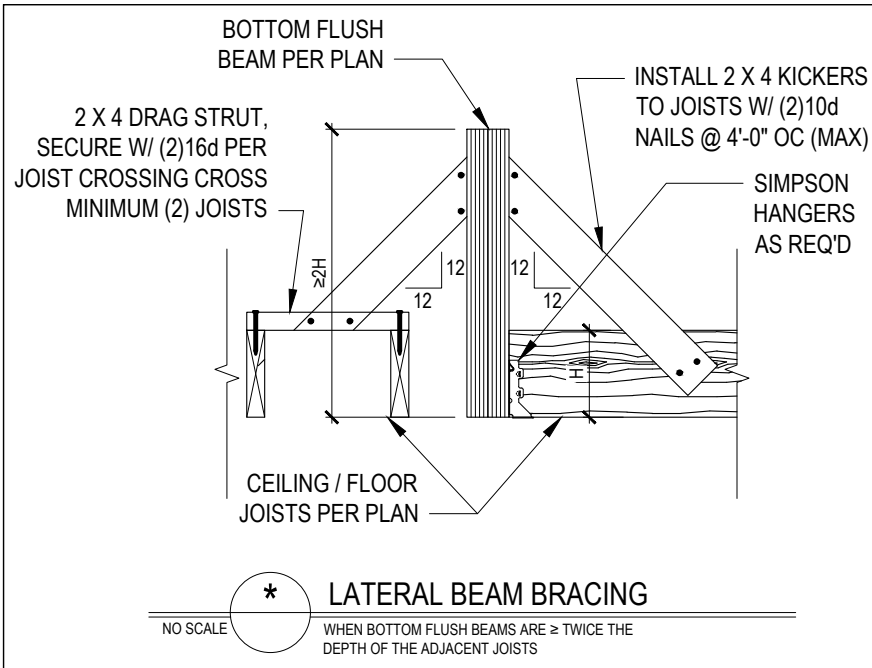
POST SIZE	MAX. TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 x 4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6 x 6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

- D. 2 x 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO (2) PERPENDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE 2 x 6s SHALL BE ATTACHED TO THE POSTS WITH ONE 5/8"Ø HOT DIPPED GALVANIZED BOLT AT EACH END OF EACH BRACING MEMBER.
- E. FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 46.



CLIMATE ZONES	FENESTRATION U-FACTOR ^{a, j}	SKYLIGHT U-FACTOR ^b	GLAZED FENESTRATION SHGC ^{a, k}	CEILING R-VALUE ⁽¹⁾	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE ⁽¹⁾	FLOOR R-VALUE	BASEMENT WALL R-VALUE ⁽¹⁾	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE ^c WALL R-VALUE
3	0.35	0.55	0.30	38 or 30 cont	15 or 13 + 2.5 ^h	5/13 or 5/10 cont	19	5/13 ^f	0	5/13
4	0.35	0.55	0.30	38 or 30 cont ⁽¹⁾	15 or 13 + 2.5 ^h	5/13 or 5/10 cont	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30 cont ⁽¹⁾	19, or 13 + 5 ^h or 15 + 3 ^h	13/17 or 13/12.5 cont	30 ^g	10/15	10	10/19

- * TABLE N1102.1 CLIMATE ZONES 3-5
- a. R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.
- b. THE FENESTRATION U-FACTOR COLUMN EXCLUDES WINDOW TYPE: THE SOLAR HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.
- c. "10/15" MEANS R-10 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-15 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.
- d. FOR MONOLITHIC SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MINIMUM OF 2" BELOW GRADE AND OVER SLABS. FOR CASTING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24" WHICHEVER IS LESS. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.
- e. DELETED
- f. BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.2 AND TABLE N1101.2.
- g. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-19 MINIMUM.
- h. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION. 50 "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. "15+3" MEANS R-15 CAVITY INSULATION PLUS R-3 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR, INSULATING SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. IF STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT OF THE EXTERIOR, SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. "13 + 2.5" MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.
- i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.
- j. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.1, A MINIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.55 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- k. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.1, A MAXIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.70 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- l. R-50 SHALL BE DEEMED TO SATISFY THE CEILING INSULATION REQUIREMENT WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. OTHERWISE, R-30 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION BAFFLE OR WITHIN 1"CH OF THE ATTIC ROOF DECK.
- m. TABLE VALUE REQUIRED EXCEPT FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF. THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BAFFLE.
- n. R-19 FIBERGLASS BATTS COMPRESSED AND INSTALLED IN A NOMINAL 2 x 6 FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTS RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2x4 WALL IS NOT DEEMED TO COMPLY.
- o. BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.



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Project #: DRB2401-0297

Date: 03/25/2025

Engineered By: JA

DWG. Checked By: PAT

Scale: SEE PLAN

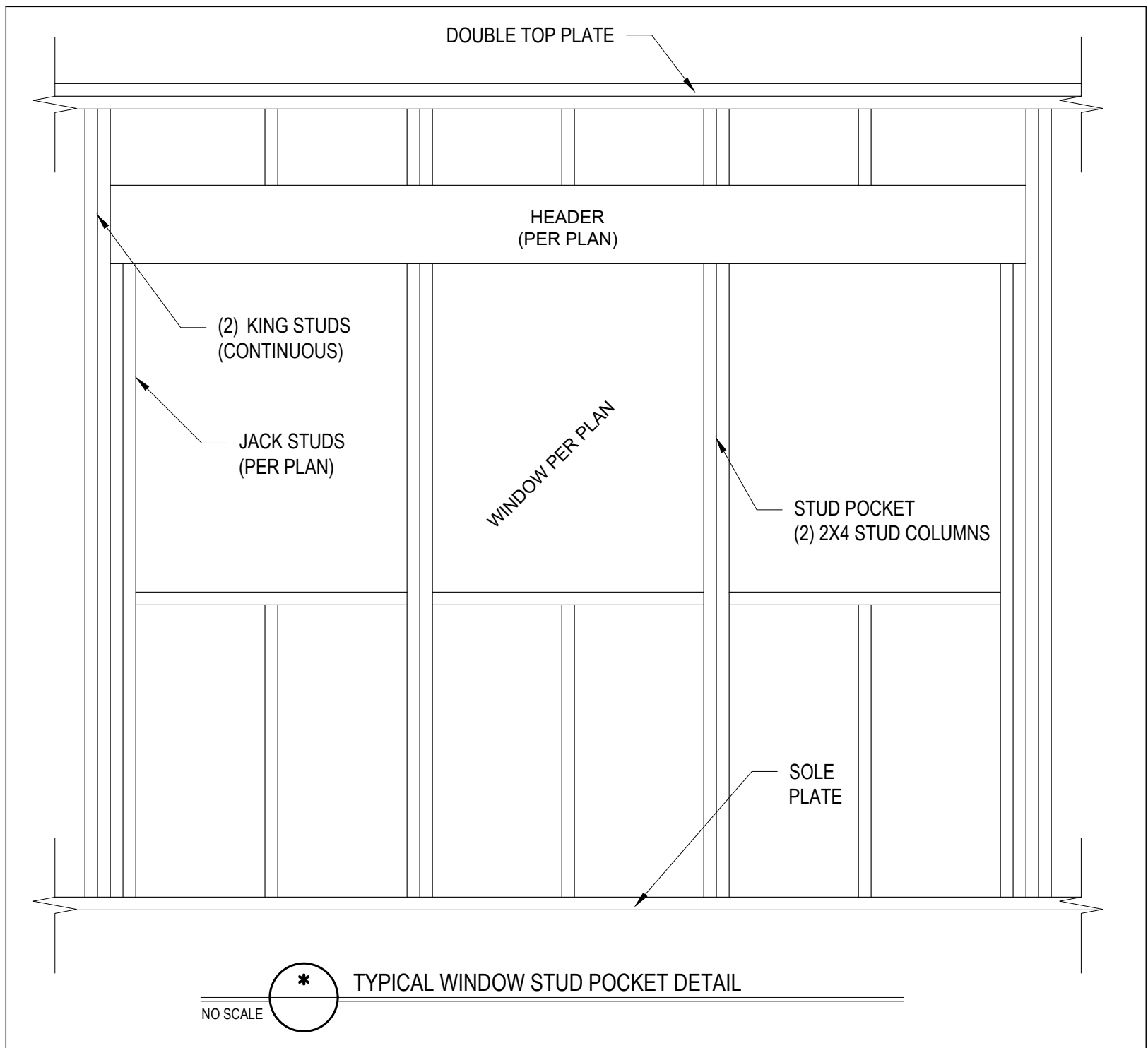
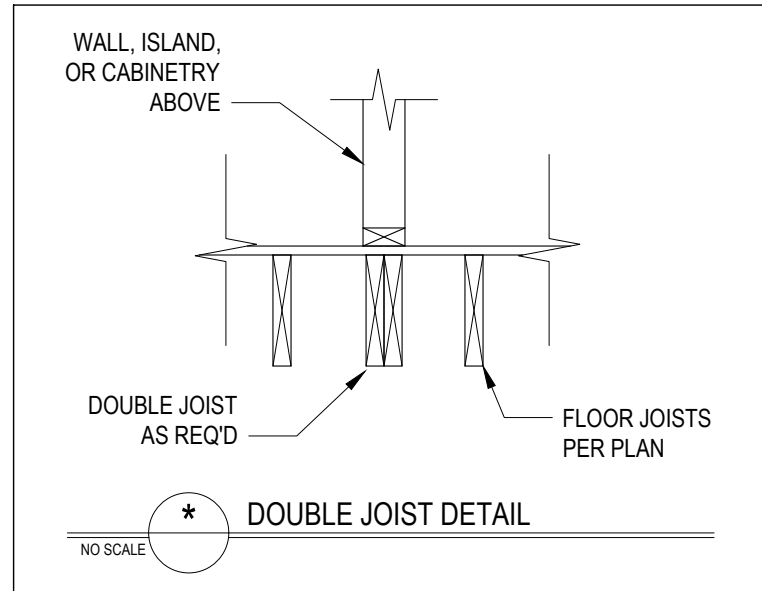
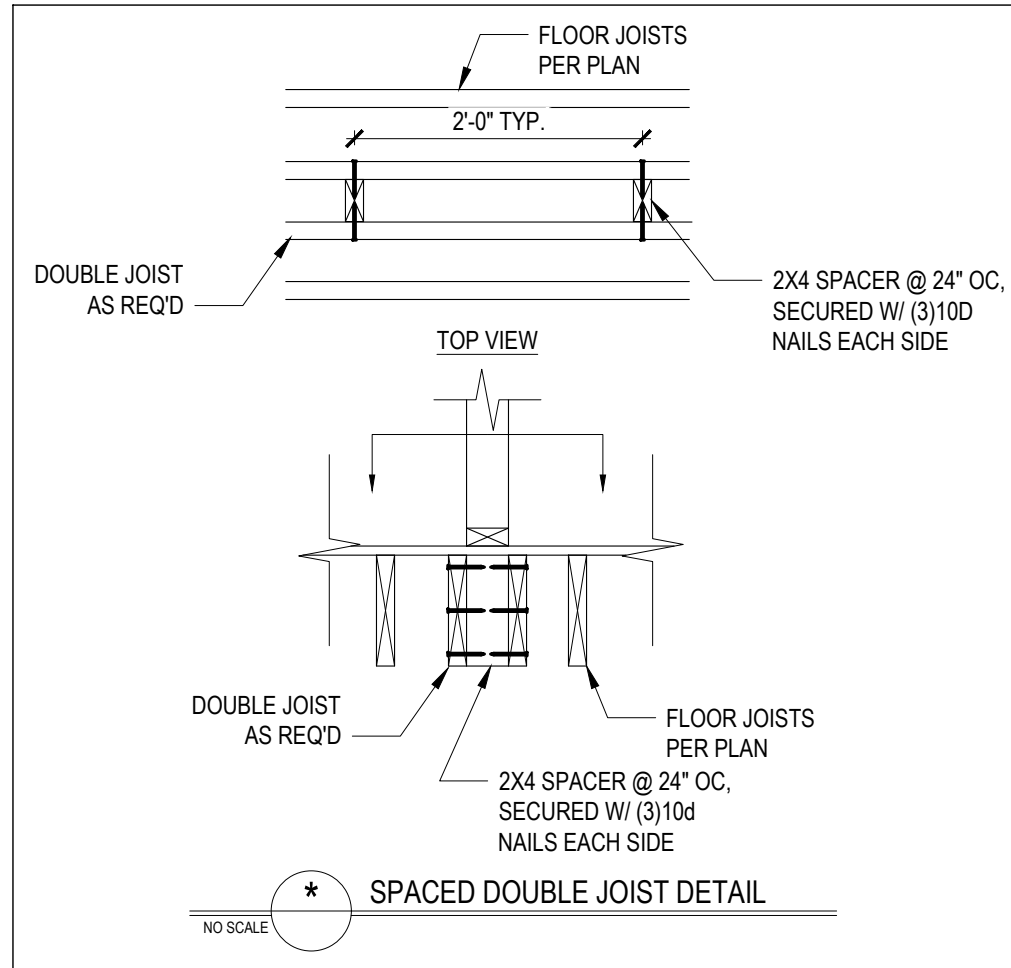
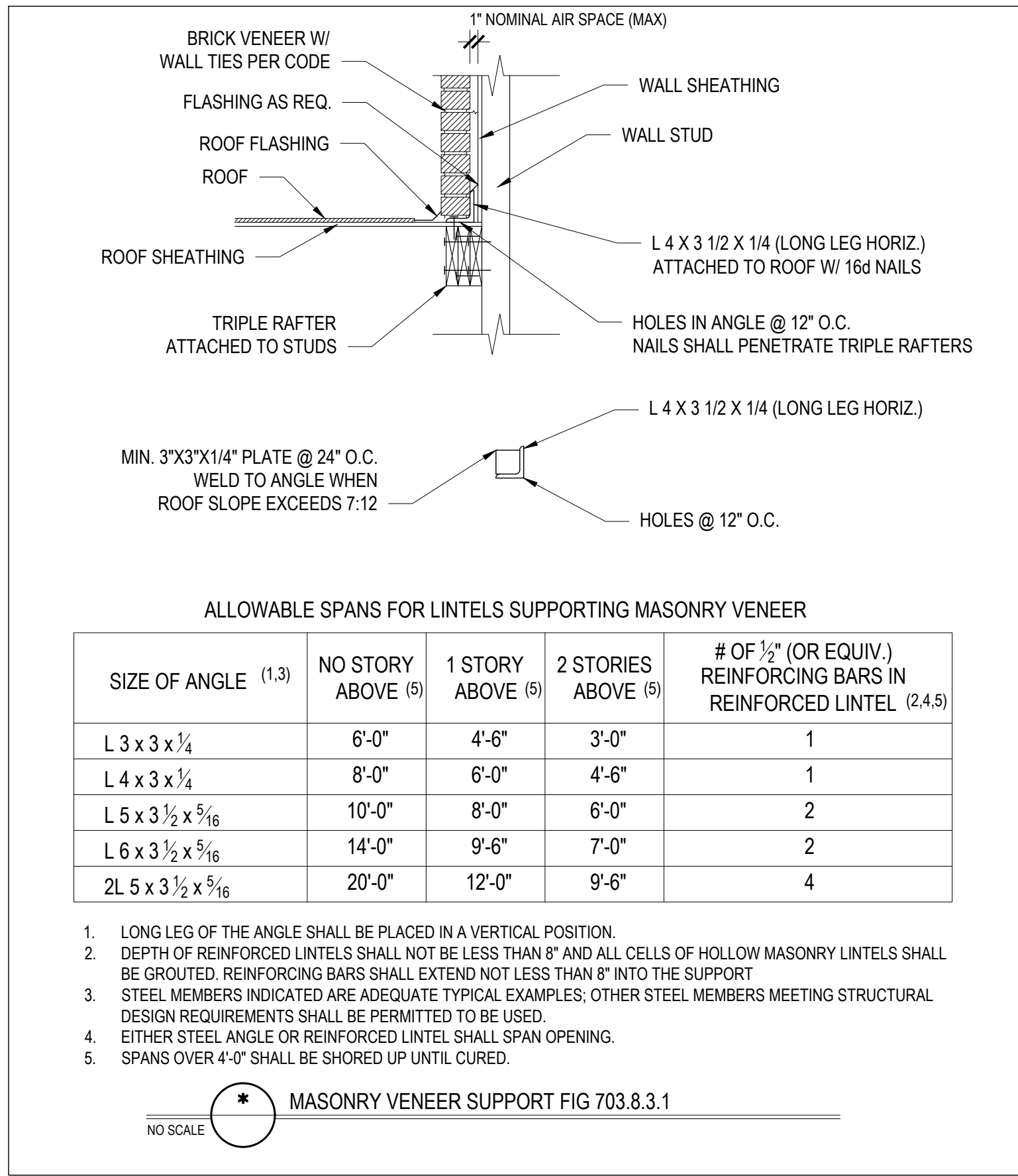
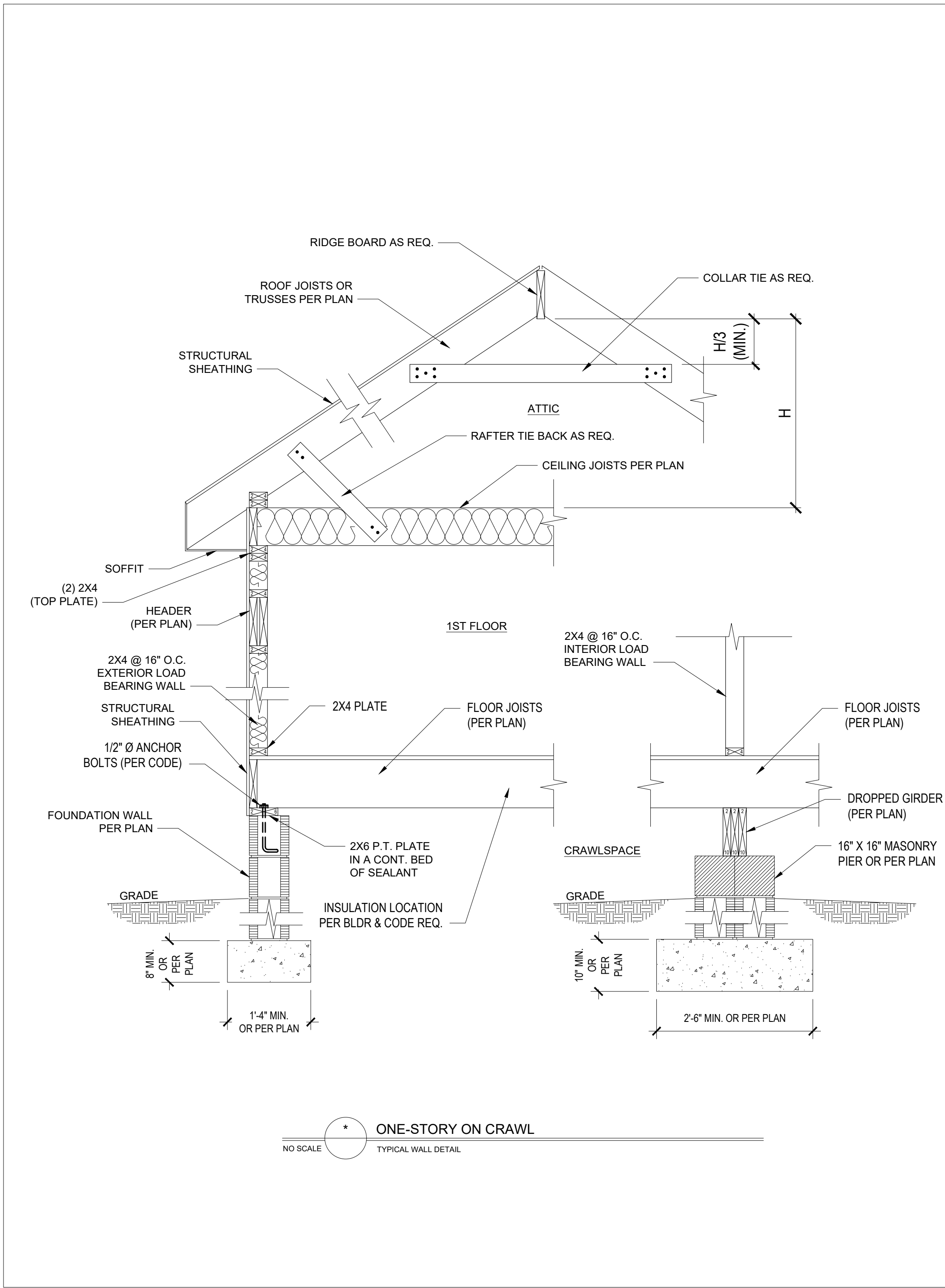
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STANDARD DETAILS

Project #: DRB2401-0297
Date: 03/25/2025
Engineered By: JA
DWG. Checked By: PAT
Scale: SEE PLAN

REVISIONS

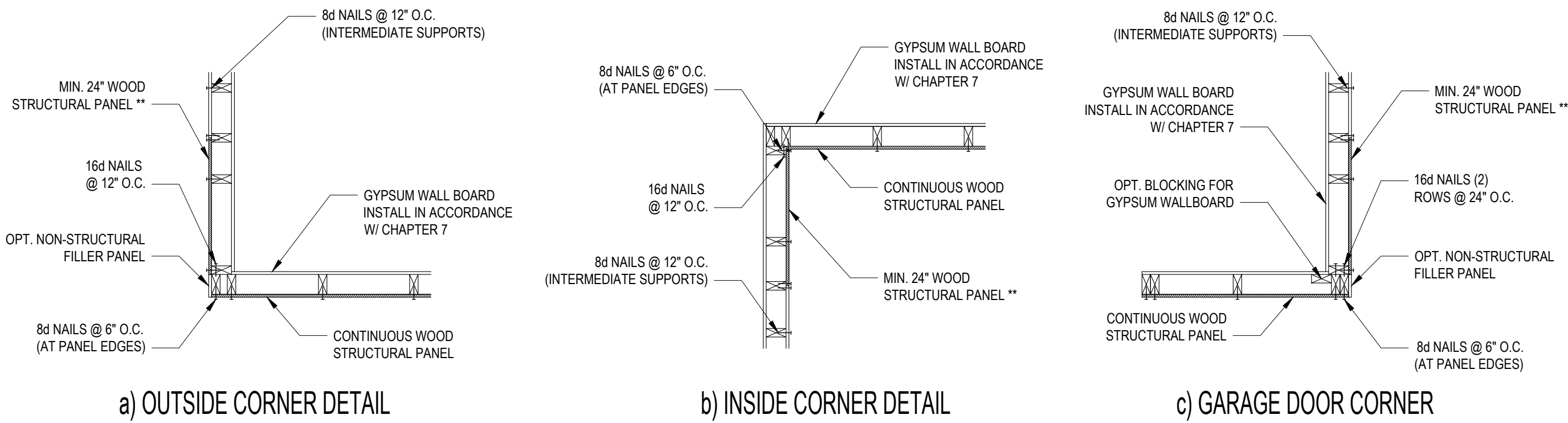
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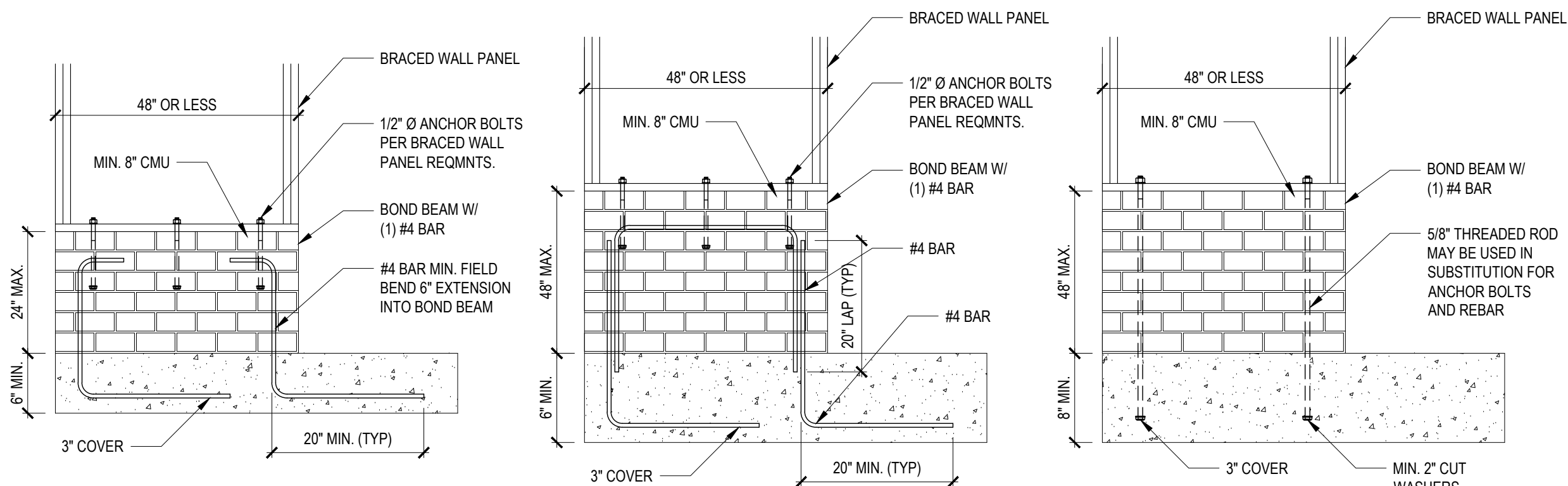
B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

STRUCTURAL SHEATHING NOTES

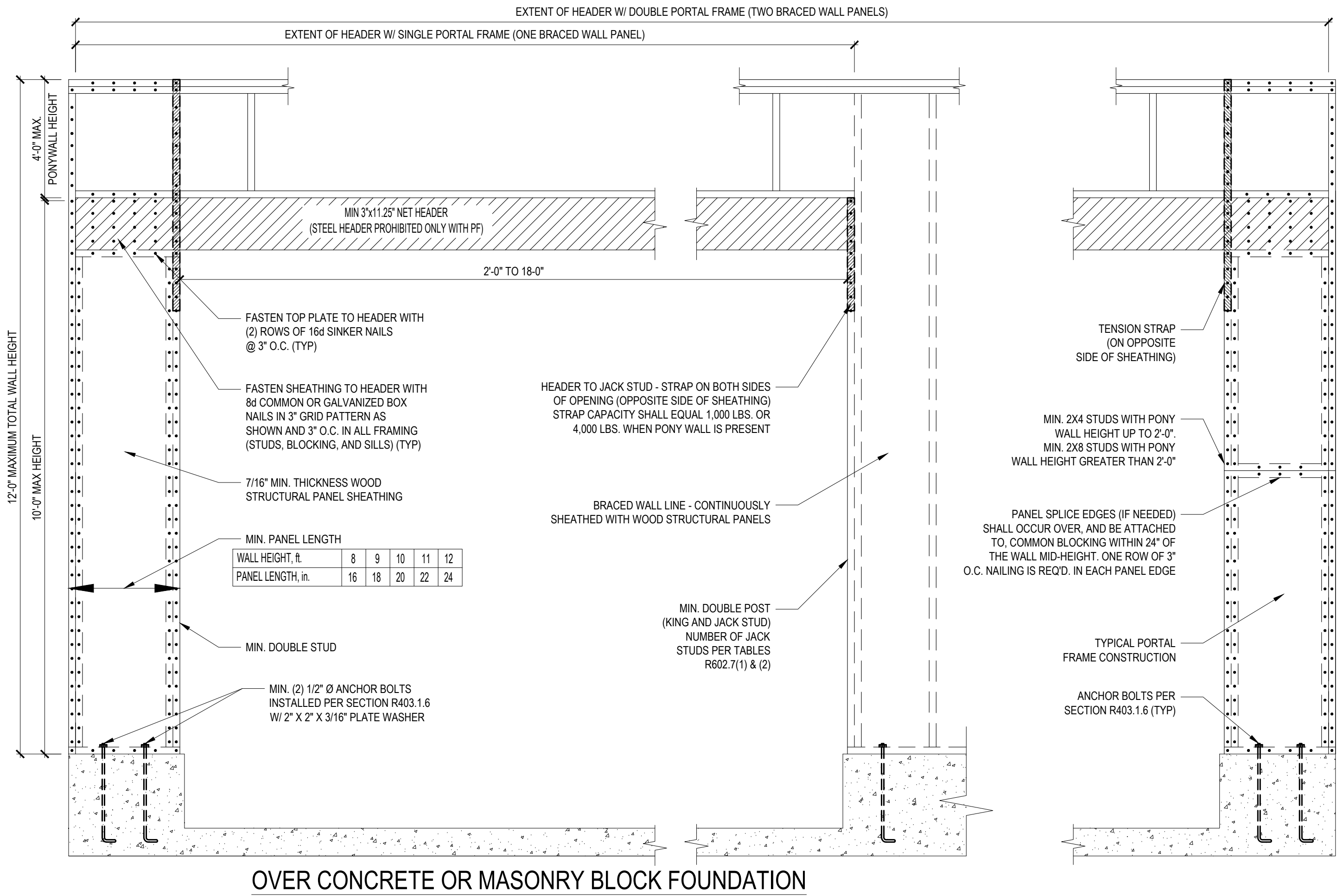
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.4 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO).
- EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO).
- ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8". SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS.
- MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
 - 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
 - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT
 - 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
- SHEATH INTERIOR AND EXTERIOR
- FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3 (d). IN LIEU OF A CORNER RETURN, EITHER A MINIMUM 48" BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
- MINIMUM 800# HOLD-DOWN DEVICE

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			@ PANEL EDGES	@ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAIL** @ 7" O.C.	5d COOLER NAIL** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.

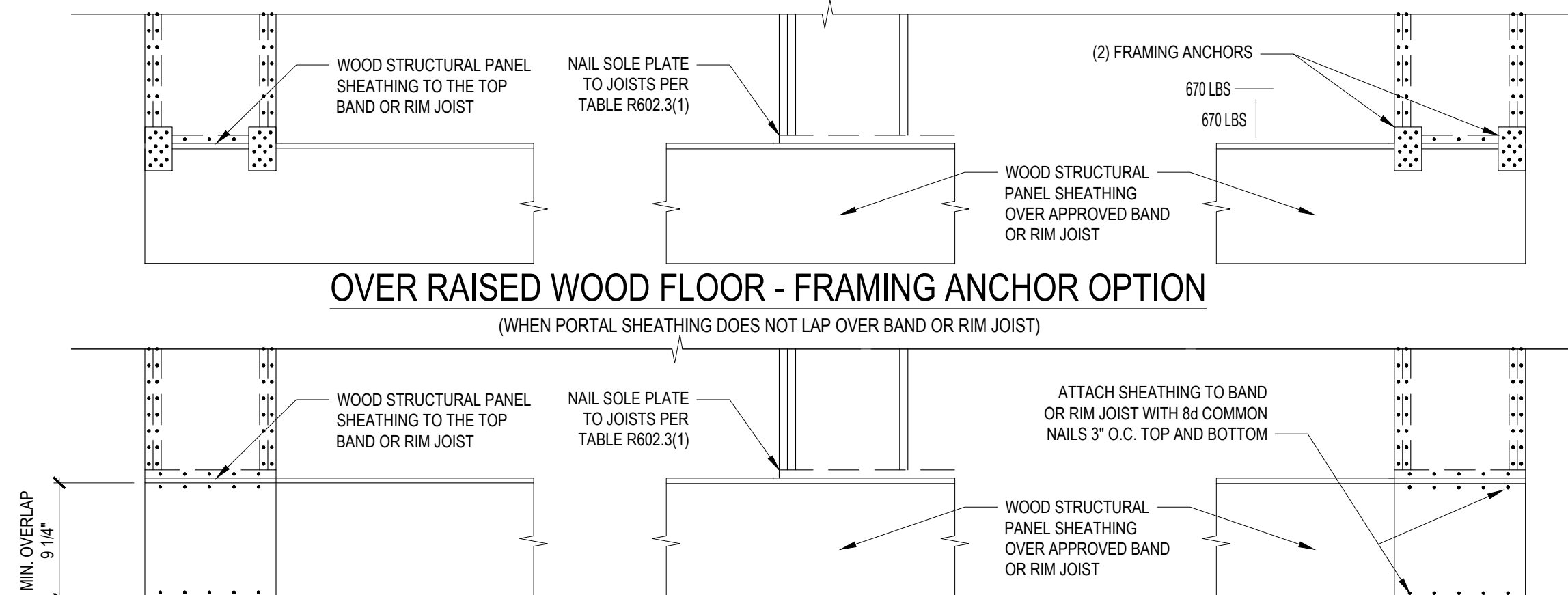
**OR EQUIVALENT PER TABLE R702.3.5
B3: BRACE WALL PANEL CONNECTIONS
NO SCALE



B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS
FIGURE R602.10.4.3 OF THE 2018 NCRC
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



OVER CONCRETE OR MASONRY BLOCK FOUNDATION

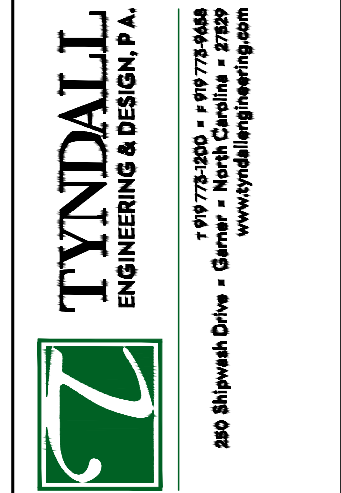
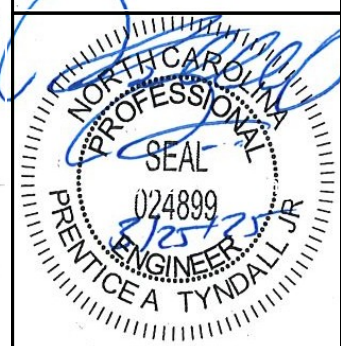


OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION
(WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST)

OVER RAISED WOOD FLOOR - OVERLAP OPTION
(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM JOIST)

B2: METHOD PF: PORTAL FRAME CONSTRUCTION
FIGURE R602.10.1

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution. Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability. *Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



CLIENT: WESLEY BUCHANAN
2195 MT. PISGAH CHURCH RD.
BROADWAY, NC 27505
FIRM: BUCHANAN RESIDENCE
1141 MT. PISGAH CHURCH RD.
BROADWAY, NC 27505

SHEATHING
DETAILS

Project #: DRB2401-0297
Date: 03/25/2025
Engineered By: JA
DWG. Checked By: PAT
Scale: SEE PLAN

REVISIONS		
No.	Date:	Remarks
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Δ		
Δ		
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Sheet Number

D3